

LP5812 4 × 3 Matrix RGB LED Driver Register Map

Technical Reference Manual



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About This Manual

This Technical Reference Manual (TRM) details the register maps of LP5812.

The TRM should not be considered a substitute for the data sheet, rather a companion guide that should be used alongside the device-specific data sheet to understand the details to program the device. The primary purpose of the TRM is to abstract the programming registers of the device from the data manual. This allows the data sheet to outline the high-level features of the device without unnecessary information about register descriptions.

Notational Conventions

This document uses the following conventions.

- Hexadecimal numbers can be shown with the suffix h or the prefix 0x. For example, the following number is 40 hexadecimal (decimal 64): 40h or 0x40.
- Registers in this document are shown in figures and described in tables.
 - Each register figure shows a rectangle divided into fields that represent the fields of the register. Each field is labeled with its bit name, its beginning and ending bit numbers above, and its read/write properties with default reset value below. A legend explains the notation used for the properties.
 - Reserved bits in a register figure can have one of multiple meanings:
 - Not implemented on the device
 - Reserved for future device expansion
 - Reserved for TI testing
 - Reserved configurations of the device that are not supported
 - Writing nondefault values to the Reserved bits could cause unexpected behavior and should be avoided.

Glossary

[TI Glossary](#) This glossary lists and explains terms, acronyms, and definitions.

Related Documentation

For a complete listing of related documentation and development-support tools, visit the Texas Instruments website at <http://www.ti.com>.

SNVSCC9A *LP5812 4 × 3 Matrix RGB LED Driver With Autonomous Control* describes the data sheet of the LP5812 device.

Support Resources

[TI E2E™ support forums](#) are an engineer's go-to source for fast, verified answers and design help — straight from the experts. Search existing answers or ask your own question to get the quick design help you need.

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1.1 Overview

The LP5812 is a 4 × 3 matrix RGB LED driver with autonomous animation engine control. Time-cross-multiplexing (TCM) scheme can support up to 4×3 matrix for 12 LEDs or 4 RGB LEDs, by ¼ multiplexing ratio of the scan switches.

The LP5812 has ultra-low operation current at active mode, consuming 0.4 mA when LED maximum current setting is 25.5 mA. If all LEDs are turned off, the device enters standby state to reduce power consumption with data retained. When 'chip_enable' bit setting is 0, initial state is entered with minimum power consumption to save power.

The LP5812 supports both analog dimming and PWM dimming. In analog dimming, the output current of each LED can be adjusted with 256 steps. In PWM dimming, the integrated 8-bit configurable PWM generator enables smooth brightness dimming control. Optional exponential PWM dimming can be activated for individual LED to achieve a human-eye-friendly visual performance.

The LP5812 integrates autonomous animation engine, with no need for brightness control commands from controller. Each LED has an individual animation engine which can be configured through the related registers. The device can generate a 6 MHz clock signal, which synchronizes the lighting effects among multiple devices.

The LP5812 has 4 different material versions with different I2C chip address. Up to 4 LP581x devices can be connected to the same I2C bus and controlled individually.

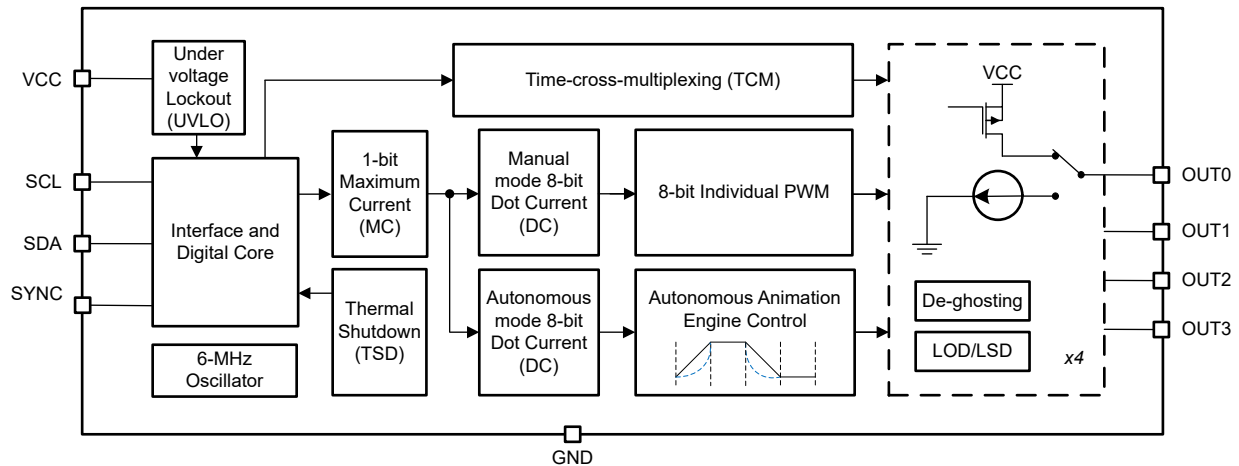


Figure 1-1. Device Block Diagram



This section shows the detailed register maps of LP5813.

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2.18 LED_B0_Autonomous_Animation Registers.....	186
2.19 LED_B1_Autonomous_Animation Registers.....	202
2.20 LED_B2_Autonomous_Animation Registers.....	218
2.21 LED_C0_Autonomous_Animation Registers.....	234
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2.1 Register Map Table

This section provides a summary of the register maps.

Table 2-1. Register Section/Block Access Type Codes

Access Type	Code	Description
Read Type		
R	R	Read
RC	R C	Read to Clear
R-0	R -0	Read Returns 0
Write Type		
W	W	Write
W1C	W 1C	W 1 to clear
Reset or Default Value		
-n		Value after reset or the default value

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default
Device_Enable Register											
Chip_en	000h	R/W	Reserved							chip_en	00h
Config Registers											
Dev_Config_0	001h	R/W	Reserved							max_curr ent	00h
Dev_Config_1	002h	R/W	pwm_fre			led_mode		mix_sel_led			00h
Dev_Config_2	003h	R/W	scan_order_3		scan_order_2		scan_order_1		scan_order_0		E4h
Dev_Config_3	004h	R/W	auto_en_ b0	auto_en_ a2	auto_en_ a1	auto_en_ a0	auto_en_ 3	auto_en_ 2	auto_en_ 1	auto_en_ 0	00h
Dev_Config_4	005h	R/W	auto_en_ d2	auto_en_ d1	auto_en_ d0	auto_en_ c2	auto_en_ c1	auto_en_ c0	auto_en_ b2	auto_en_ b1	00h
Dev_Config_5	006h	R/W	exp_en_b 0	exp_en_a 2	exp_en_a 1	exp_en_a 0	exp_en_3	exp_en_2	exp_en_1	exp_en_0	00h
Dev_Config_6	007h	R/W	exp_en_d 2	exp_en_d 1	exp_en_d 0	exp_en_c 2	exp_en_c 1	exp_en_c 0	exp_en_b 2	exp_en_b 1	00h
Dev_Config_7	008h	R/W	phase_align_3		phase_align_2		phase_align_1		phase_align_0		00h
Dev_Config_8	009h	R/W	phase_align_b0		phase_align_a2		phase_align_a1		phase_align_a0		00h
Dev_Config_9	00Ah	R/W	phase_align_c1		phase_align_c0		phase_align_b2		phase_align_b1		00h
Dev_Config_10	00Bh	R/W	phase_align_d2		phase_align_d1		phase_align_d0		phase_align_c2		00h
Dev_Config_11	00Ch	R/W	Reserved					vsync_ou t_en	blank_time		00h
Dev_Config_12	00Dh	R/W	vmid_sel		clamp_se l	clamp_di s	lod_actio n	lsd_actio n	lsd_threshold		08h
Command Registers											
CMD_Update	010h	W1C	update_command								00h
CMD_Start	011h	W1C	start_command								00h
CMD_Stop	012h	W1C	stop_command								00h
CMD_Pause	013h	W1C	pause_command								00h
CMD_Continue	014h	W1C	continue_command								00h
led_enable Registers											

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
led_en_1	020h	R/W	led_en_b 0	led_en_a 2	led_en_a 1	led_en_a 0	led_en_3	led_en_2	led_en_1	led_en_0	00h	
led_en_2	021h	R/W	led_en_d 2	led_en_d 1	led_en_d 0	led_en_c 2	led_en_c 1	led_en_c 0	led_en_b 2	led_en_b 1	00h	
Fault_Clear Register												
Fault_Clear	022h	W1C	Reserved					tsd_clear	lsd_clear	lod_clear		00h
Reset Register												
Reset	023h	W1C	sw_reset									00h
Manual_DC Registers												
Manual_DC_0	030h	R/W	manual_dc_0									00h
Manual_DC_1	031h	R/W	manual_dc_1									00h
Manual_DC_2	032h	R/W	manual_dc_2									00h
Manual_DC_3	033h	R/W	manual_dc_3									00h
Manual_DC_4	034h	R/W	manual_dc_a0									00h
Manual_DC_5	035h	R/W	manual_dc_a1									00h
Manual_DC_6	036h	R/W	manual_dc_a2									00h
Manual_DC_7	037h	R/W	manual_dc_b0									00h
Manual_DC_8	038h	R/W	manual_dc_b1									00h
Manual_DC_9	039h	R/W	manual_dc_b2									00h
Manual_DC_10	03Ah	R/W	manual_dc_c0									00h
Manual_DC_11	03Bh	R/W	manual_dc_c1									00h
Manual_DC_12	03Ch	R/W	manual_dc_c2									00h
Manual_DC_13	03Dh	R/W	manual_dc_d0									00h
Manual_DC_14	03Eh	R/W	manual_dc_d1									00h
Manual_DC_15	03Fh	R/W	manual_dc_d2									00h
Manual_PWM Registers												
Manual_PWM_0	040h	R/W	manual_pwm_0									00h
Manual_PWM_1	041h	R/W	manual_pwm_1									00h
Manual_PWM_2	042h	R/W	manual_pwm_2									00h
Manual_PWM_3	043h	R/W	manual_pwm_3									00h
Manual_PWM_4	044h	R/W	manual_pwm_a0									00h
Manual_PWM_5	045h	R/W	manual_pwm_a1									00h
Manual_PWM_6	046h	R/W	manual_pwm_a2									00h
Manual_PWM_7	047h	R/W	manual_pwm_b0									00h
Manual_PWM_8	048h	R/W	manual_pwm_b1									00h
Manual_PWM_9	049h	R/W	manual_pwm_b2									00h
Manual_PWM_10	04Ah	R/W	manual_pwm_c0									00h
Manual_PWM_11	04Bh	R/W	manual_pwm_c1									00h
Manual_PWM_12	04Ch	R/W	manual_pwm_c2									00h
Manual_PWM_13	04Dh	R/W	manual_pwm_d0									00h
Manual_PWM_14	04Eh	R/W	manual_pwm_d1									00h
Manual_PWM_15	04Fh	R/W	manual_pwm_d2									00h
Autonomous_DC Registers												
Auto_DC_0	050h	R/W	auto_dc_0									00h
Auto_DC_1	051h	R/W	auto_dc_1									00h
Auto_DC_2	052h	R/W	auto_dc_2									00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
Auto_DC_3	053h	R/W	auto_dc_3									00h
Auto_DC_4	054h	R/W	auto_dc_a0									00h
Auto_DC_5	055h	R/W	auto_dc_a1									00h
Auto_DC_6	056h	R/W	auto_dc_a2									00h
Auto_DC_7	057h	R/W	auto_dc_b0									00h
Auto_DC_8	058h	R/W	auto_dc_b1									00h
Auto_DC_9	059h	R/W	auto_dc_b2									00h
Auto_DC_10	05Ah	R/W	auto_dc_c0									00h
Auto_DC_11	05Bh	R/W	auto_dc_c1									00h
Auto_DC_12	05Ch	R/W	auto_dc_c2									00h
Auto_DC_13	05Dh	R/W	auto_dc_d0									00h
Auto_DC_14	05Eh	R/W	auto_dc_d1									00h
Auto_DC_15	05Fh	R/W	auto_dc_d2									00h
LED_0_Autonomous_Animation Registers												
LED_0_Auto_Pause	080h	R/W	led_0_pause_start				led_0_pause_stop				00h	
LED_0_Auto_Playback	081h	R/W	Reserved		led_0_aeu_num		LED_0_pt			00h		
LED_0_AEU1_PWM_1	082h	R/W	led_0_aeu1_pwm1									00h
LED_0_AEU1_PWM_2	083h	R/W	led_0_aeu1_pwm2									00h
LED_0_AEU1_PWM_3	084h	R/W	led_0_aeu1_pwm3									00h
LED_0_AEU1_PWM_4	085h	R/W	led_0_aeu1_pwm4									00h
LED_0_AEU1_PWM_5	086h	R/W	led_0_aeu1_pwm5									00h
LED_0_AEU1_T12	087h	R/W	led_0_aeu1_t2				led_0_aeu1_t1				00h	
LED_0_AEU1_T34	088h	R/W	led_0_aeu1_t4				led_0_aeu1_t3				00h	
LED_0_AEU1_Playback	089h	R/W	Reserved							led_0_aeu1_pt		00h
LED_0_AEU2_PWM_1	08Ah	R/W	led_0_aeu2_pwm1									00h
LED_0_AEU2_PWM_2	08Bh	R/W	led_0_aeu2_pwm2									00h
LED_0_AEU2_PWM_3	08Ch	R/W	led_0_aeu2_pwm3									00h
LED_0_AEU2_PWM_4	08Dh	R/W	led_0_aeu2_pwm4									00h
LED_0_AEU2_PWM_5	08Eh	R/W	led_0_aeu2_pwm5									00h
LED_0_AEU2_T12	08Fh	R/W	led_0_aeu2_t2				led_0_aeu2_t1				00h	
LED_0_AEU2_T34	090h	R/W	led_0_aeu2_t4				led_0_aeu2_t3				00h	
LED_0_AEU2_Playback	091h	R/W	Reserved							led_0_aeu2_pt		00h
LED_0_AEU3_PWM_1	092h	R/W	led_0_aeu3_pwm1									00h
LED_0_AEU3_PWM_2	093h	R/W	led_0_aeu3_pwm2									00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
LED_0_AEU3_PWM_3	094h	R/W	led_0_aeu3_pwm3									00h
LED_0_AEU3_PWM_4	095h	R/W	led_0_aeu3_pwm4									00h
LED_0_AEU3_PWM_5	096h	R/W	led_0_aeu3_pwm5									00h
LED_0_AEU3_T12	097h	R/W	led_0_aeu3_t2				led_0_aeu3_t1				00h	
LED_0_AEU3_T34	098h	R/W	led_0_aeu3_t4				led_0_aeu3_t3				00h	
LED_0_AEU3_Play back	099h	R/W	Reserved							led_0_aeu3_pt		00h
LED_1 Autonomous Animation Registers												
LED_1_Auto_Pause	09Ah	R/W	led_1_pause_start				led_1_pause_stop				00h	
LED_1_Auto_Playback	09Bh	R/W	Reserved		led_1_aeu_num		led_1_pt			00h		
LED_1_AEU1_PWM_1	09Ch	R/W	led_1_aeu1_pwm1									00h
LED_1_AEU1_PWM_2	09Dh	R/W	led_1_aeu1_pwm2									00h
LED_1_AEU1_PWM_3	09Eh	R/W	led_1_aeu1_pwm3									00h
LED_1_AEU1_PWM_4	09Fh	R/W	led_1_aeu1_pwm4									00h
LED_1_AEU1_PWM_5	0A0h	R/W	led_1_aeu1_pwm5									00h
LED_1_AEU1_T12	0A1h	R/W	led_1_aeu1_t2				led_1_aeu1_t1				00h	
LED_1_AEU1_T34	0A2h	R/W	led_1_aeu1_t4				led_1_aeu1_t3				00h	
LED_1_AEU1_Play back	0A3h	R/W	Reserved							led_1_aeu1_pt		00h
LED_1_AEU2_PWM_1	0A4h	R/W	led_1_aeu2_pwm1									00h
LED_1_AEU2_PWM_2	0A5h	R/W	led_1_aeu2_pwm2									00h
LED_1_AEU2_PWM_3	0A6h	R/W	led_1_aeu2_pwm3									00h
LED_1_AEU2_PWM_4	0A7h	R/W	led_1_aeu2_pwm4									00h
LED_1_AEU2_PWM_5	0A8h	R/W	led_1_aeu2_pwm5									00h
LED_1_AEU2_T12	0A9h	R/W	led_1_aeu1_t2				led_1_aeu1_t1				00h	
LED_1_AEU2_T34	0AAh	R/W	led_1_aeu1_t4				led_1_aeu1_t3				00h	
LED_1_AEU2_Play back	0ABh	R/W	Reserved							led_1_aeu2_pt		00h
LED_1_AEU3_PWM_1	0ACh	R/W	led_1_aeu3_pwm1									00h
LED_1_AEU3_PWM_2	0ADh	R/W	led_1_aeu3_pwm2									00h
LED_1_AEU3_PWM_3	0AEh	R/W	led_1_aeu3_pwm3									00h
LED_1_AEU3_PWM_4	0AFh	R/W	led_1_aeu3_pwm4									00h
LED_1_AEU3_PWM_5	0B0h	R/W	led_1_aeu3_pwm5									00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
LED_1_AEU3_T12	0B1h	R/W	led_1_aeu3_t2				led_1_aeu3_t1					00h
LED_1_AEU3_T34	0B2h	R/W	led_1_aeu3_t4				led_1_aeu3_t3					00h
LED_1_AEU3_Play back	0B3h	R/W	Reserved							led_1_aeu3_pt		00h
LED_2 Autonomous Animation Registers												
LED_2_Auto_Paus e	0B4h	R/W	led_2_pause_start				led_2_pause_stop					00h
LED_2_Auto_Playb ack	0B5h	R/W	Reserved		led_2_aeu_num		led_2_pt				00h	
LED_2_AEU1_PWM _1	0B6h	R/W	led_2_aeu1_pwm1									00h
LED_2_AEU1_PWM _2	0B7h	R/W	led_2_aeu1_pwm2									00h
LED_2_AEU1_PWM _3	0B7h	R/W	led_2_aeu1_pwm3									00h
LED_2_AEU1_PWM _4	0B9h	R/W	led_2_aeu1_pwm4									00h
LED_2_AEU1_PWM _5	0BAh	R/W	led_2_aeu1_pwm5									00h
LED_2_AEU1_T12	0BBh	R/W	led_2_aeu1_t2				led_2_aeu1_t1					00h
LED_2_AEU1_T34	0BCh	R/W	led_2_aeu1_t4				led_2_aeu1_t3					00h
LED_2_AEU1_Play back	0BDh	R/W	Reserved							led_2_aeu1_pt		00h
LED_2_AEU2_PWM _1	0BEh	R/W	led_2_aeu2_pwm1									00h
LED_2_AEU2_PWM _2	0BFh	R/W	led_2_aeu2_pwm2									00h
LED_2_AEU2_PWM _3	0C0h	R/W	led_2_aeu2_pwm3									00h
LED_2_AEU2_PWM _4	0C1h	R/W	led_2_aeu2_pwm4									00h
LED_2_AEU2_PWM _5	0C2h	R/W	led_2_aeu2_pwm5									00h
LED_2_AEU2_T12	0C3h	R/W	led_2_aeu2_t2				led_2_aeu2_t1					00h
LED_2_AEU2_T34	0C4h	R/W	led_2_aeu2_t4				led_2_aeu2_t3					00h
LED_2_AEU2_Play back	0C5h	R/W	Reserved							led_2_aeu2_pt		00h
LED_2_AEU3_PWM _1	0C6h	R/W	led_2_aeu3_pwm1									00h
LED_2_AEU3_PWM _2	0C7h	R/W	led_2_aeu3_pwm2									00h
LED_2_AEU3_PWM _3	0C8h	R/W	led_2_aeu3_pwm3									00h
LED_2_AEU3_PWM _4	0C9h	R/W	led_2_aeu3_pwm4									00h
LED_2_AEU3_PWM _5	0CAh	R/W	led_2_aeu3_pwm5									00h
LED_2_AEU3_T12	0CBh	R/W	led_2_aeu3_t2				led_2_aeu3_t1					00h
LED_2_AEU3_T34	0CCh	R/W	led_2_aeu3_t4				led_2_aeu3_t3					00h
LED_2_AEU3_Play back	0CDh	R/W	Reserved							led_2_aeu3_pt		00h
LED_3 Autonomous Animation Registers												

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default
LED_3_Auto_Pause	0CEh	R/W	led_3_pause_start				led_3_pause_stop				00h
LED_3_Auto_Playback	0CFh	R/W	Reserved		led_3_aeu_num	led_3_pt				00h	
LED_3_AEU1_PWM_1	0D0h	R/W	led_3_aeu1_pwm1								00h
LED_3_AEU1_PWM_2	0D1h	R/W	led_3_aeu1_pwm2								00h
LED_3_AEU1_PWM_3	0D2h	R/W	led_3_aeu1_pwm3								00h
LED_3_AEU1_PWM_4	0D3h	R/W	led_3_aeu1_pwm4								00h
LED_3_AEU1_PWM_5	0D4h	R/W	led_3_aeu1_pwm5								00h
LED_3_AEU1_T12	0D5h	R/W	led_3_aeu1_t2				led_3_aeu1_t1				00h
LED_3_AEU1_T34	0D6h	R/W	led_3_aeu1_t4				led_3_aeu1_t3				00h
LED_3_AEU1_Playback	0D7h	R/W	Reserved						led_3_aeu1_pt		00h
LED_3_AEU2_PWM_1	0D8h	R/W	led_3_aeu2_pwm1								00h
LED_3_AEU2_PWM_2	0D9h	R/W	led_3_aeu2_pwm2								00h
LED_3_AEU2_PWM_3	0DAh	R/W	led_3_aeu2_pwm3								00h
LED_3_AEU2_PWM_4	0DBh	R/W	led_3_aeu2_pwm4								00h
LED_3_AEU2_PWM_5	0DCh	R/W	led_3_aeu2_pwm5								00h
LED_3_AEU2_T12	0DDh	R/W	led_3_aeu2_t2				led_3_aeu2_t1				00h
LED_3_AEU2_T34	0DEh	R/W	led_3_aeu2_t4				led_3_aeu2_t3				00h
LED_3_AEU2_Playback	0DFh	R/W	Reserved						led_3_aeu2_pt		00h
LED_3_AEU3_PWM_1	0E0h	R/W	led_3_aeu3_pwm1								00h
LED_3_AEU3_PWM_2	0E1h	R/W	led_3_aeu3_pwm2								00h
LED_3_AEU3_PWM_3	0E2h	R/W	led_3_aeu3_pwm3								00h
LED_3_AEU3_PWM_4	0E3h	R/W	led_3_aeu3_pwm4								00h
LED_3_AEU3_PWM_5	0E4h	R/W	led_3_aeu3_pwm5								00h
LED_3_AEU3_T12	0E5h	R/W	led_3_aeu3_t2				led_3_aeu3_t1				00h
LED_3_AEU3_T34	0E6h	R/W	led_3_aeu3_t4				led_3_aeu3_t3				00h
LED_3_AEU3_Playback	0E7h	R/W	Reserved						led_3_aeu3_pt		00h
LED_A0 Autonomous Animation Registers											
LED_A0_Auto_Pause	0E8h	R/W	led_a0_pause_start				led_a0_pause_stop				00h
LED_A0_Auto_Playback	0E9h	R/W	Reserved		led_a0_aeu_num	led_a0_pt				00h	
LED_A0_AEU1_PWM_1	0EAh	R/W	led_a0_aeu1_pwm1								00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
LED_A0_AEU1_PWM_2	0EBh	R/W	led_a0_aeu1_pwm2									00h
LED_A0_AEU1_PWM_3	0ECh	R/W	led_a0_aeu1_pwm3									00h
LED_A0_AEU1_PWM_4	0EDh	R/W	led_a0_aeu1_pwm4									00h
LED_A0_AEU1_PWM_5	0EEh	R/W	led_a0_aeu1_pwm5									00h
LED_A0_AEU1_T12	0EFh	R/W	led_a0_aeu1_t2				led_a0_aeu1_t1				00h	
LED_A0_AEU1_T34	0F0h	R/W	led_a0_aeu1_t4				led_a0_aeu1_t3				00h	
LED_A0_AEU1_Playback	0F1h	R/W	Reserved							LED_a0_aeu1_pt		00h
LED_A0_AEU2_PWM_1	0F2h	R/W	led_a0_aeu2_pwm1									00h
LED_A0_AEU2_PWM_2	0F3h	R/W	led_a0_aeu2_pwm2									00h
LED_A0_AEU2_PWM_3	0F4h	R/W	led_a0_aeu2_pwm3									00h
LED_A0_AEU2_PWM_4	0F5h	R/W	led_a0_aeu2_pwm4									00h
LED_A0_AEU2_PWM_5	0F6h	R/W	led_a0_aeu2_pwm5									00h
LED_A0_AEU2_T12	0F7h	R/W	led_a0_aeu2_t2				led_a0_aeu2_t1				00h	
LED_A0_AEU2_T34	0F8h	R/W	led_a0_aeu2_t4				led_a0_aeu2_t3				00h	
LED_A0_AEU2_Playback	0F9h	R/W	Reserved							LED_a0_aeu2_pt		00h
LED_A0_AEU3_PWM_1	0FAh	R/W	led_a0_aeu3_pwm1									00h
LED_A0_AEU3_PWM_2	0FBh	R/W	led_a0_aeu3_pwm2									00h
LED_A0_AEU3_PWM_3	0FCh	R/W	led_a0_aeu3_pwm3									00h
LED_A0_AEU3_PWM_4	0FDh	R/W	led_a0_aeu3_pwm4									00h
LED_A0_AEU3_PWM_5	0FEh	R/W	led_a0_aeu3_pwm5									00h
LED_A0_AEU3_T12	0FFh	R/W	led_a0_aeu3_t2				led_a0_aeu3_t1				00h	
LED_A0_AEU3_T34	100h	R/W	led_a0_aeu3_t4				led_a0_aeu3_t3				00h	
LED_A0_AEU3_Playback	101h	R/W	Reserved							LED_a0_aeu3_pt		00h
LED_A1 Autonomous Animation Registers												
LED_A1_Auto_Pause	102h	R/W	led_a1_pause_start				led_a1_pause_stop				00h	
LED_A1_Auto_Playback	103h	R/W	Reserved			led_a1_aeu_num		led_a1_pt			00h	
LED_A1_AEU1_PWM_1	104h	R/W	led_a1_aeu1_pwm1									00h
LED_A1_AEU1_PWM_2	105h	R/W	led_a1_aeu1_pwm2									00h
LED_A1_AEU1_PWM_3	106h	R/W	led_a1_aeu1_pwm3									00h
LED_A1_AEU1_PWM_4	107h	R/W	led_a1_aeu1_pwm4									00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default
LED_A1_AEU1_PWM_5	108h	R/W	led_a1_aeu1_pwm5								00h
LED_A1_AEU1_T12	109h	R/W	led_a1_aeu1_t2				led_a1_aeu1_t1				00h
LED_A1_AEU1_T34	10Ah	R/W	led_a1_aeu1_t4				led_a1_aeu1_t3				00h
LED_A1_AEU1_Playback	10Bh	R/W	Reserved						led_a1_aeu1_pt		00h
LED_A1_AEU2_PWM_1	10Ch	R/W	led_a1_aeu2_pwm1								00h
LED_A1_AEU2_PWM_2	10Dh	R/W	led_a1_aeu2_pwm2								00h
LED_A1_AEU2_PWM_3	10Eh	R/W	led_a1_aeu2_pwm3								00h
LED_A1_AEU2_PWM_4	10Fh	R/W	led_a1_aeu2_pwm4								00h
LED_A1_AEU2_PWM_5	110h	R/W	led_a1_aeu2_pwm5								00h
LED_A1_AEU2_T12	111h	R/W	led_a1_aeu2_t2				led_a1_aeu2_t1				00h
LED_A1_AEU2_T34	112h	R/W	led_a1_aeu2_t4				led_a1_aeu2_t3				00h
LED_A1_AEU2_Playback	113h	R/W	Reserved						led_a1_aeu2_pt		00h
LED_A1_AEU3_PWM_1	114h	R/W	led_a1_aeu3_pwm1								00h
LED_A1_AEU3_PWM_2	115h	R/W	led_a1_aeu3_pwm2								00h
LED_A1_AEU3_PWM_3	116h	R/W	led_a1_aeu3_pwm3								00h
LED_A1_AEU3_PWM_4	117h	R/W	led_a1_aeu3_pwm4								00h
LED_A1_AEU3_PWM_5	118h	R/W	led_a1_aeu3_pwm5								00h
LED_A1_AEU3_T12	119h	R/W	led_a1_aeu3_t2				led_a1_aeu3_t1				00h
LED_A1_AEU3_T34	11Ah	R/W	led_a1_aeu3_t4				led_a1_aeu3_t3				00h
LED_A1_AEU3_Playback	11Bh	R/W	Reserved						led_a1_aeu3_pt		00h
LED_A2 Autonomous Animation Registers											
LED_A2_Auto_Pause	11Ch	R/W	led_a2_pause_start				led_a2_pause_stop				00h
LED_A2_Auto_Playback	11Dh	R/W	Reserved		led_a2_aeu_num		led_a2_pt			00h	
LED_A2_AEU1_PWM_1	11Eh	R/W	led_a2_aeu1_pwm1								00h
LED_A2_AEU1_PWM_2	11Fh	R/W	led_a2_aeu1_pwm2								00h
LED_A2_AEU1_PWM_3	120h	R/W	led_a2_aeu1_pwm3								00h
LED_A2_AEU1_PWM_4	121h	R/W	led_a2_aeu1_pwm4								00h
LED_A2_AEU1_PWM_5	122h	R/W	led_a2_aeu1_pwm5								00h
LED_A2_AEU1_T12	123h	R/W	led_a2_aeu1_t2				led_a2_aeu1_t1				00h
LED_A2_AEU1_T34	124h	R/W	led_a2_aeu1_t4				led_a2_aeu1_t3				00h
LED_A2_AEU1_Playback	125h	R/W	Reserved						led_a2_aeu1_pt		00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
LED_A2_AEU2_PWM_1	126h	R/W	led_a2_aeu2_pwm1									00h
LED_A2_AEU2_PWM_2	127h	R/W	led_a2_aeu2_pwm2									00h
LED_A2_AEU2_PWM_3	128h	R/W	led_a2_aeu2_pwm3									00h
LED_A2_AEU2_PWM_4	129h	R/W	led_a2_aeu2_pwm4									00h
LED_A2_AEU2_PWM_5	12Ah	R/W	led_a2_aeu2_pwm5									00h
LED_A2_AEU2_T12	12Bh	R/W	led_a2_aeu2_t2				led_a2_aeu2_t1				00h	
LED_A2_AEU2_T34	12Ch	R/W	led_a2_aeu2_t4				led_a2_aeu2_t3				00h	
LED_A2_AEU2_Playback	12Dh	R/W	Reserved							led_a2_aeu2_pt		00h
LED_A2_AEU3_PWM_1	12Eh	R/W	led_a2_aeu3_pwm1									00h
LED_A2_AEU3_PWM_2	12Fh	R/W	led_a2_aeu3_pwm2									00h
LED_A2_AEU3_PWM_3	130h	R/W	led_a2_aeu3_pwm3									00h
LED_A2_AEU3_PWM_4	131h	R/W	led_a2_aeu3_pwm4									00h
LED_A2_AEU3_PWM_5	132h	R/W	led_a2_aeu3_pwm5									00h
LED_A2_AEU3_T12	133h	R/W	led_a2_aeu3_t2				led_a2_aeu3_t1				00h	
LED_A2_AEU3_T34	134h	R/W	led_a2_aeu3_t4				led_a2_aeu3_t3				00h	
LED_A2_AEU3_Playback	135h	R/W	Reserved							led_a2_aeu3_pt		00h
LED_B0 Autonomous Animation Registers												
LED_B0_Auto_Pause	136h	R/W	led_b0_pause_start				led_b0_pause_stop				00h	
LED_B0_Auto_Playback	137h	R/W	Reserved			led_b0_aeu_num		led_b0_pt			00h	
LED_B0_AEU1_PWM_1	138h	R/W	led_b0_aeu1_pwm1									00h
LED_B0_AEU1_PWM_2	139h	R/W	led_b0_aeu1_pwm2									00h
LED_B0_AEU1_PWM_3	13Ah	R/W	led_b0_aeu1_pwm3									00h
LED_B0_AEU1_PWM_4	13Bh	R/W	led_b0_aeu1_pwm4									00h
LED_B0_AEU1_PWM_5	13Ch	R/W	led_b0_aeu1_pwm5									00h
LED_B0_AEU1_T12	13Dh	R/W	led_b0_aeu1_2				led_b0_aeu1_1				00h	
LED_B0_AEU1_T34	13Eh	R/W	led_b0_aeu1_4				led_b0_aeu1_3				00h	
LED_B0_AEU1_Playback	13Fh	R/W	Reserved							led_b0_aeu1_pt		00h
LED_B0_AEU2_PWM_1	140h	R/W	led_b0_aeu2_pwm1									00h
LED_B0_AEU2_PWM_2	141h	R/W	led_b0_aeu2_pwm2									00h
LED_B0_AEU2_PWM_3	142h	R/W	led_b0_aeu2_pwm3									00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
LED_B0_AEU2_PWM_4	143h	R/W	led_b0_aeu2_pwm4									00h
LED_B0_AEU2_PWM_5	144h	R/W	led_b0_aeu2_pwm5									00h
LED_B0_AEU2_T12	145h	R/W	led_b0_aeu2_2				led_b0_aeu2_1				00h	
LED_B0_AEU2_T34	146h	R/W	led_b0_aeu2_4				led_b0_aeu2_3				00h	
LED_B0_AEU2_Playback	147h	R/W	Reserved							led_b0_aeu2_pt		00h
LED_B0_AEU3_PWM_1	148h	R/W	led_b0_aeu3_pwm1									00h
LED_B0_AEU3_PWM_2	149h	R/W	led_b0_aeu3_pwm2									00h
LED_B0_AEU3_PWM_3	14Ah	R/W	led_b0_aeu3_pwm3									00h
LED_B0_AEU3_PWM_4	14Bh	R/W	led_b0_aeu3_pwm4									00h
LED_B0_AEU3_PWM_5	14Ch	R/W	led_b0_aeu3_pwm5									00h
LED_B0_AEU3_T12	14Dh	R/W	led_b0_aeu3_2				led_b0_aeu3_1				00h	
LED_B0_AEU3_T34	14Eh	R/W	led_b0_aeu3_4				led_b0_aeu3_3				00h	
LED_B0_AEU3_Playback	14Fh	R/W	Reserved							led_b0_aeu3_pt		00h
LED_B1 Autonomous Animation Registers												
LED_B1_Auto_Pause	150h	R/W	led_b1_pause_start				led_b1_pause_stop				00h	
LED_B1_Auto_Playback	151h	R/W	Reserved			led_b1_aeu_num		led_b1_pt			00h	
LED_B1_AEU1_PWM_1	152h	R/W	led_b1_aeu1_pwm1									00h
LED_B1_AEU1_PWM_2	153h	R/W	led_b1_aeu1_pwm2									00h
LED_B1_AEU1_PWM_3	154h	R/W	led_b1_aeu1_pwm3									00h
LED_B1_AEU1_PWM_4	155h	R/W	led_b1_aeu1_pwm4									00h
LED_B1_AEU1_PWM_5	156h	R/W	led_b1_aeu1_pwm5									00h
LED_B1_AEU1_T12	157h	R/W	led_b1_aeu1_t2				led_b1_aeu1_t1				00h	
LED_B1_AEU1_T34	158h	R/W	led_b1_aeu1_t4				led_b1_aeu1_t3				00h	
LED_B1_AEU1_Playback	159h	R/W	Reserved							led_b1_aeu1_pt		00h
LED_B1_AEU2_PWM_1	15Ah	R/W	led_b1_aeu2_pwm1									00h
LED_B1_AEU2_PWM_2	15Bh	R/W	led_b1_aeu2_pwm2									00h
LED_B1_AEU2_PWM_3	15Ch	R/W	led_b1_aeu2_pwm3									00h
LED_B1_AEU2_PWM_4	15Dh	R/W	led_b1_aeu2_pwm4									00h
LED_B1_AEU2_PWM_5	15Eh	R/W	led_b1_aeu2_pwm5									00h
LED_B1_AEU2_T12	15Fh	R/W	led_b1_aeu2_t2				led_b1_aeu2_t1				00h	
LED_B1_AEU2_T34	160h	R/W	led_b1_aeu2_t4				led_b1_aeu2_t3				00h	

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
LED_B1_AEU2_Playback	161h	R/W	Reserved						led_b1_aeu2_pt		00h	
LED_B1_AEU3_PWM_1	162h	R/W	led_b1_aeu3_pwm1									00h
LED_B1_AEU3_PWM_2	163h	R/W	led_b1_aeu3_pwm2									00h
LED_B1_AEU3_PWM_3	164h	R/W	led_b1_aeu3_pwm3									00h
LED_B1_AEU3_PWM_4	165h	R/W	led_b1_aeu3_pwm4									00h
LED_B1_AEU3_PWM_5	166h	R/W	led_b1_aeu3_pwm5									00h
LED_B1_AEU3_T12	167h	R/W	led_b1_aeu3_t2				led_b1_aeu3_t1				00h	
LED_B1_AEU3_T34	168h	R/W	led_b1_aeu3_t4				led_b1_aeu3_t3				00h	
LED_B1_AEU3_Playback	169h	R/W	Reserved						led_b1_aeu3_pt		00h	
LED_B2 Autonomous Animation Registers												
LED_B2_Auto_Pause	16Ah	R/W	led_b2_pause_start				led_b2_pause_stop				00h	
LED_B2_Auto_Playback	16Bh	R/W	Reserved		led_b2_aeu_num		led_b2_pt			00h		
LED_B2_AEU1_PWM_1	16Ch	R/W	led_b2_aeu1_pwm1									00h
LED_B2_AEU1_PWM_2	16Dh	R/W	led_b2_aeu1_pwm2									00h
LED_B2_AEU1_PWM_3	16Eh	R/W	led_b2_aeu1_pwm3									00h
LED_B2_AEU1_PWM_4	16Fh	R/W	led_b2_aeu1_pwm4									00h
LED_B2_AEU1_PWM_5	170h	R/W	led_b2_aeu1_pwm5									00h
LED_B2_AEU1_T12	171h	R/W	led_b2_aeu1_t2				led_b2_aeu1_t1				00h	
LED_B2_AEU1_T34	172h	R/W	led_b2_aeu1_t4				led_b2_aeu1_t3				00h	
LED_B2_AEU1_Playback	173h	R/W	Reserved						led_b2_aeu1_pt		00h	
LED_B2_AEU2_PWM_1	174h	R/W	led_b2_aeu2_pwm1									00h
LED_B2_AEU2_PWM_2	175h	R/W	led_b2_aeu2_pwm2									00h
LED_B2_AEU2_PWM_3	176h	R/W	led_b2_aeu2_pwm3									00h
LED_B2_AEU2_PWM_4	177h	R/W	led_b2_aeu2_pwm4									00h
LED_B2_AEU2_PWM_5	178h	R/W	led_b2_aeu2_pwm5									00h
LED_B2_AEU2_T12	179h	R/W	led_b2_aeu2_t2				led_b2_aeu2_t1				00h	
LED_B2_AEU2_T34	17Ah	R/W	led_b2_aeu2_t4				led_b2_aeu2_t3				00h	
LED_B2_AEU2_Playback	17Bh	R/W	Reserved						led_b2_aeu2_pt		00h	
LED_B2_AEU3_PWM_1	17Ch	R/W	led_b2_aeu3_pwm1									00h
LED_B2_AEU3_PWM_2	17Dh	R/W	led_b2_aeu3_pwm2									00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
LED_B2_AEU3_PWM_3	17Eh	R/W	led_b2_aeu3_pwm3									00h
LED_B2_AEU3_PWM_4	17Fh	R/W	led_b2_aeu3_pwm4									00h
LED_B2_AEU3_PWM_5	180h	R/W	led_b2_aeu3_pwm5									00h
LED_B2_AEU3_T12	181h	R/W	led_b2_aeu3_t2				led_b2_aeu3_t1				00h	
LED_B2_AEU3_T34	182h	R/W	led_b2_aeu3_t4				led_b2_aeu3_t3				00h	
LED_B2_AEU3_Playback	183h	R/W	Reserved							led_b2_aeu3_pt		00h
LED_C0 Autonomous Animation Registers												
LED_C0_Auto_Pause	184h	R/W	led_c0_pause_start				led_c0_pause_stop				00h	
LED_C0_Auto_Playback	185h	R/W	Reserved		led_c0_aeu_num		led_c0_pt			00h		
LED_C0_AEU1_PWM_1	186h	R/W	led_c0_aeu1_pwm1									00h
LED_C0_AEU1_PWM_2	187h	R/W	led_c0_aeu1_pwm2									00h
LED_C0_AEU1_PWM_3	188h	R/W	led_c0_aeu1_pwm3									00h
LED_C0_AEU1_PWM_4	189h	R/W	led_c0_aeu1_pwm4									00h
LED_C0_AEU1_PWM_5	18Ah	R/W	led_c0_aeu1_pwm5									00h
LED_C0_AEU1_T12	18Bh	R/W	led_c0_aeu1_t2				led_c0_aeu1_t1				00h	
LED_C0_AEU1_T34	18Ch	R/W	led_c0_aeu1_t4				led_c0_aeu1_t3				00h	
LED_C0_AEU1_Playback	18Dh	R/W	Reserved							led_c0_aeu1_pt		00h
LED_C0_AEU2_PWM_1	18Eh	R/W	led_c0_aeu2_pwm1									00h
LED_C0_AEU2_PWM_2	18Fh	R/W	led_c0_aeu2_pwm2									00h
LED_C0_AEU2_PWM_3	190h	R/W	led_c0_aeu2_pwm3									00h
LED_C0_AEU2_PWM_4	191h	R/W	led_c0_aeu2_pwm4									00h
LED_C0_AEU2_PWM_5	192h	R/W	led_c0_aeu2_pwm5									00h
LED_C0_AEU2_T12	193h	R/W	led_c0_aeu2_t2				led_c0_aeu2_t1				00h	
LED_C0_AEU2_T34	194h	R/W	led_c0_aeu2_t4				led_c0_aeu2_t3				00h	
LED_C0_AEU2_Playback	195h	R/W	Reserved							led_c0_aeu2_pt		00h
LED_C0_AEU3_PWM_1	196h	R/W	led_c0_aeu3_pwm1									00h
LED_C0_AEU3_PWM_2	197h	R/W	led_c0_aeu3_pwm2									00h
LED_C0_AEU3_PWM_3	198h	R/W	led_c0_aeu3_pwm3									00h
LED_C0_AEU3_PWM_4	199h	R/W	led_c0_aeu3_pwm4									00h
LED_C0_AEU3_PWM_5	19Ah	R/W	led_c0_aeu3_pwm5									00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default
LED_C0_AEU3_T12	19Bh	R/W	led_c0_aeu3_t2				led_c0_aeu3_t1				00h
LED_C0_AEU3_T34	19Ch	R/W	led_c0_aeu3_t4				led_c0_aeu3_t3				00h
LED_C0_AEU3_Playback	19Dh	R/W	Reserved							led_c0_aeu3_pt	00h
LED_C1 Autonomous Animation Registers											
LED_C1_Auto_Pause	19Eh	R/W	led_c1_pause_start				led_c1_pause_stop				00h
LED_C1_Auto_Playback	19Fh	R/W	Reserved		led_c1_aeu_num		led_c1_pt			00h	
LED_C1_AEU1_PWM_1	1A0h	R/W	led_c1_aeu1_pwm1								00h
LED_C1_AEU1_PWM_2	1A1h	R/W	led_c1_aeu1_pwm2								00h
LED_C1_AEU1_PWM_3	1A2h	R/W	led_c1_aeu1_pwm3								00h
LED_C1_AEU1_PWM_4	1A3h	R/W	led_c1_aeu1_pwm4								00h
LED_C1_AEU1_PWM_5	1A4h	R/W	led_c1_aeu1_pwm5								00h
LED_C1_AEU1_T12	1A5h	R/W	led_c1_aeu1_t2				led_c1_aeu1_t1				00h
LED_C1_AEU1_T34	1A6h	R/W	led_c1_aeu1_t4				led_c1_aeu1_t3				00h
LED_C1_AEU1_Playback	1A7h	R/W	Reserved							led_c1_aeu1_pt	00h
LED_C1_AEU2_PWM_1	1A8h	R/W	led_c1_aeu2_pwm1								00h
LED_C1_AEU2_PWM_2	1A9h	R/W	led_c1_aeu2_pwm2								00h
LED_C1_AEU2_PWM_3	1AAh	R/W	led_c1_aeu2_pwm3								00h
LED_C1_AEU2_PWM_4	1ABh	R/W	led_c1_aeu2_pwm4								00h
LED_C1_AEU2_PWM_5	1ACh	R/W	led_c1_aeu2_pwm5								00h
LED_C1_AEU2_T12	1ADh	R/W	led_c1_aeu2_t2				led_c1_aeu2_t1				00h
LED_C1_AEU2_T34	1AEh	R/W	led_c1_aeu2_t4				led_c1_aeu2_t3				00h
LED_C1_AEU2_Playback	1AFh	R/W	Reserved							led_c1_aeu2_pt	00h
LED_C1_AEU3_PWM_1	1B0h	R/W	led_c1_aeu3_pwm1								00h
LED_C1_AEU3_PWM_2	1B1h	R/W	led_c1_aeu3_pwm2								00h
LED_C1_AEU3_PWM_3	1B2h	R/W	led_c1_aeu3_pwm3								00h
LED_C1_AEU3_PWM_4	1B3h	R/W	led_c1_aeu3_pwm4								00h
LED_C1_AEU3_PWM_5	1B4h	R/W	led_c1_aeu3_pwm5								00h
LED_C1_AEU3_T12	1B5h	R/W	led_c1_aeu3_t2				led_c1_aeu3_t1				00h
LED_C1_AEU3_T34	1B6h	R/W	led_c1_aeu3_t4				led_c1_aeu3_t3				00h
LED_C1_AEU3_Playback	1B7h	R/W	Reserved							led_c1_aeu3_pt	00h
LED_C2 Autonomous Animation Registers											

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default
LED_C2_Auto_Pause	1B8h	R/W	led_c2_pause_start				led_c2_pause_stop				00h
LED_C2_Auto_Playback	1B9h	R/W	Reserved		led_c2_aeu_num	led_c2_pt				00h	
LED_C2_AEU1_PWM_1	1BAh	R/W	led_c2_aeu1_pwm1								00h
LED_C2_AEU1_PWM_2	1BBh	R/W	led_c2_aeu1_pwm2								00h
LED_C2_AEU1_PWM_3	1BCh	R/W	led_c2_aeu1_pwm3								00h
LED_C2_AEU1_PWM_4	1BDh	R/W	led_c2_aeu1_pwm4								00h
LED_C2_AEU1_PWM_5	1BEh	R/W	led_c2_aeu1_pwm5								00h
LED_C2_AEU1_T12	1BFh	R/W	led_c2_aeu1_t2				led_c2_aeu1_t1				00h
LED_C2_AEU1_T34	1C0h	R/W	led_c2_aeu1_t4				led_c2_aeu1_t3				00h
LED_C2_AEU1_Playback	1C1h	R/W	Reserved							led_c2_aeu1_pt	00h
LED_C2_AEU2_PWM_1	1C2h	R/W	led_c2_aeu2_pwm1								00h
LED_C2_AEU2_PWM_2	1C3h	R/W	led_c2_aeu2_pwm2								00h
LED_C2_AEU2_PWM_3	1C4h	R/W	led_c2_aeu2_pwm3								00h
LED_C2_AEU2_PWM_4	1C5h	R/W	led_c2_aeu2_pwm4								00h
LED_C2_AEU2_PWM_5	1C6h	R/W	led_c2_aeu2_pwm5								00h
LED_C2_AEU2_T12	1C7h	R/W	led_c2_aeu2_t2				led_c2_aeu2_t1				00h
LED_C2_AEU2_T34	1C8h	R/W	led_c2_aeu2_t4				led_c2_aeu2_t3				00h
LED_C2_AEU2_Playback	1C9h	R/W	Reserved							led_c2_aeu2_pt	00h
LED_C2_AEU3_PWM_1	1CAh	R/W	led_c2_aeu3_pwm1								00h
LED_C2_AEU3_PWM_2	1CBh	R/W	led_c2_aeu3_pwm2								00h
LED_C2_AEU3_PWM_3	1CCh	R/W	led_c2_aeu3_pwm3								00h
LED_C2_AEU3_PWM_4	1CDh	R/W	led_c2_aeu3_pwm4								00h
LED_C2_AEU3_PWM_5	1CEh	R/W	led_c2_aeu3_pwm5								00h
LED_C2_AEU3_T12	1CFh	R/W	led_c2_aeu3_t2				led_c2_aeu3_t1				00h
LED_C2_AEU3_T34	1D0h	R/W	led_c2_aeu3_t4				led_c2_aeu3_t3				00h
LED_C2_AEU3_Playback	1D1h	R/W	Reserved							led_c2_aeu3_pt	00h
LED_D0 Autonomous Animation Registers											
LED_D0_Auto_Pause	1D2h	R/W	led_d0_pause_start				led_d0_pause_stop				00h
LED_D0_Auto_Playback	1D3h	R/W	Reserved		led_d0_aeu_num	led_d0_pt				00h	
LED_D0_AEU1_PWM_1	1D4h	R/W	led_d0_aeu1_pwm1								00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
LED_D0_AEU1_PWM_2	1D5h	R/W	led_d0_aeu1_pwm2									00h
LED_D0_AEU1_PWM_3	1D6h	R/W	led_d0_aeu1_pwm3									00h
LED_D0_AEU1_PWM_4	1D7h	R/W	led_d0_aeu1_pwm4									00h
LED_D0_AEU1_PWM_5	1D8h	R/W	led_d0_aeu1_pwm5									00h
LED_D0_AEU1_T12	1D9h	R/W	led_d0_aeu1_t2				led_d0_aeu1_t1				00h	
LED_D0_AEU1_T34	1DAh	R/W	led_d0_aeu1_t4				led_d0_aeu1_t3				00h	
LED_D0_AEU1_Playback	1DBh	R/W	Reserved						led_d0_aeu1_pt		00h	
LED_D0_AEU2_PWM_1	1DCh	R/W	led_d0_aeu2_pwm1									00h
LED_D0_AEU2_PWM_2	1DDh	R/W	led_d0_aeu2_pwm2									00h
LED_D0_AEU2_PWM_3	1DEh	R/W	led_d0_aeu2_pwm3									00h
LED_D0_AEU2_PWM_4	1DFh	R/W	led_d0_aeu2_pwm4									00h
LED_D0_AEU2_PWM_5	1E0h	R/W	led_d0_aeu2_pwm5									00h
LED_D0_AEU2_T12	1E1h	R/W	led_d0_aeu2_t2				led_d0_aeu2_t1				00h	
LED_D0_AEU2_T34	1E2h	R/W	led_d0_aeu2_t4				led_d0_aeu2_t3				00h	
LED_D0_AEU2_Playback	1E3h	R/W	Reserved						led_d0_aeu2_pt		00h	
LED_D0_AEU3_PWM_1	1E4h	R/W	led_d0_aeu3_pwm1									00h
LED_D0_AEU3_PWM_2	1E5h	R/W	led_d0_aeu3_pwm2									00h
LED_D0_AEU3_PWM_3	1E6h	R/W	led_d0_aeu3_pwm3									00h
LED_D0_AEU3_PWM_4	1E7h	R/W	led_d0_aeu3_pwm4									00h
LED_D0_AEU3_PWM_5	1E8h	R/W	led_d0_aeu3_pwm5									00h
LED_D0_AEU3_T12	1E9h	R/W	led_d0_aeu3_t2				led_d0_aeu3_t1				00h	
LED_D0_AEU3_T34	1EAh	R/W	led_d0_aeu3_t4				led_d0_aeu3_t3				00h	
LED_D0_AEU3_Playback	1EBh	R/W	Reserved						led_d0_aeu3_pt		00h	
LED_D1 Autonomous Animation Registers												
LED_D1_Auto_Pause	1ECh	R/W	led_d1_pause_start				led_d1_pause_stop				00h	
LED_D1_Auto_Playback	1EDh	R/W	Reserved			led_d1_aeu_num		led_d1_pt			00h	
LED_D1_AEU1_PWM_1	1EEh	R/W	led_d1_aeu1_pwm1									00h
LED_D1_AEU1_PWM_2	1EFh	R/W	led_d1_aeu1_pwm2									00h
LED_D1_AEU1_PWM_3	1F0h	R/W	led_d1_aeu1_pwm3									00h
LED_D1_AEU1_PWM_4	1F1h	R/W	led_d1_aeu1_pwm4									00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default
LED_D1_AEU1_PWM_5	1F2h	R/W	led_d1_aeu1_pwm5								00h
LED_D1_AEU1_T12	1F3h	R/W	led_d1_aeu1_t2				led_d1_aeu1_t1				00h
LED_D1_AEU1_T34	1F4h	R/W	led_d1_aeu1_t4				led_d1_aeu1_t3				00h
LED_D1_AEU1_Playback	1F5h	R/W	Reserved						led_d1_aeu1_pt		00h
LED_D1_AEU2_PWM_1	1F6h	R/W	led_d1_aeu2_pwm1								00h
LED_D1_AEU2_PWM_2	1F7h	R/W	led_d1_aeu2_pwm2								00h
LED_D1_AEU2_PWM_3	1F8h	R/W	led_d1_aeu2_pwm3								00h
LED_D1_AEU2_PWM_4	1F9h	R/W	led_d1_aeu2_pwm4								00h
LED_D1_AEU2_PWM_5	1FAh	R/W	led_d1_aeu2_pwm5								00h
LED_D1_AEU2_T12	1FBh	R/W	led_d1_aeu2_t2				led_d1_aeu2_t1				00h
LED_D1_AEU2_T34	1FCh	R/W	led_d1_aeu2_t4				led_d1_aeu2_t3				00h
LED_D1_AEU2_Playback	1FDh	R/W	Reserved						led_d1_aeu2_pt		00h
LED_D1_AEU3_PWM_1	1FEh	R/W	led_d1_aeu3_pwm1								00h
LED_D1_AEU3_PWM_2	1FFh	R/W	led_d1_aeu3_pwm2								00h
LED_D1_AEU3_PWM_3	200h	R/W	led_d1_aeu3_pwm3								00h
LED_D1_AEU3_PWM_4	201h	R/W	led_d1_aeu3_pwm4								00h
LED_D1_AEU3_PWM_5	202h	R/W	led_d1_aeu3_pwm5								00h
LED_D1_AEU3_T12	203h	R/W	led_d1_aeu3_t2				led_d1_aeu3_t1				00h
LED_D1_AEU3_T34	204h	R/W	led_d1_aeu3_t4				led_d1_aeu3_t3				00h
LED_D1_AEU3_Playback	205h	R/W	Reserved						led_d1_aeu3_pt		00h
LED_D2 Autonomous Animation Registers											
LED_D2_Auto_Pause	206h	R/W	led_d2_pause_start				led_d2_pause_stop				00h
LED_D2_Auto_Playback	207h	R/W	Reserved		led_d2_aeu_num		led_d2_pt			00h	
LED_D2_AEU1_PWM_1	208h	R/W	led_d2_aeu1_pwm1								00h
LED_D2_AEU1_PWM_2	209h	R/W	led_d2_aeu1_pwm2								00h
LED_D2_AEU1_PWM_3	20Ah	R/W	led_d2_aeu1_pwm3								00h
LED_D2_AEU1_PWM_4	20Bh	R/W	led_d2_aeu1_pwm4								00h
LED_D2_AEU1_PWM_5	20Ch	R/W	led_d2_aeu1_pwm5								00h
LED_D2_AEU1_T12	20Dh	R/W	led_d2_aeu1_t2				led_d2_aeu1_t1				00h
LED_D2_AEU1_T34	20Eh	R/W	led_d2_aeu1_t4				led_d2_aeu1_t3				00h
LED_D2_AEU1_Playback	20Fh	R/W	Reserved						led_d2_aeu1_pt		00h

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
LED_D2_AEU2_PWM_1	210h	R/W	led_d2_aeu2_pwm1								00h	
LED_D2_AEU2_PWM_2	211h	R/W	led_d2_aeu2_pwm2								00h	
LED_D2_AEU2_PWM_3	212h	R/W	led_d2_aeu2_pwm3								00h	
LED_D2_AEU2_PWM_4	213h	R/W	led_d2_aeu2_pwm4								00h	
LED_D2_AEU2_PWM_5	214h	R/W	led_d2_aeu2_pwm5								00h	
LED_D2_AEU2_T12	215h	R/W	led_d2_aeu2_t2				led_d2_aeu2_t1				00h	
LED_D2_AEU2_T34	216h	R/W	led_d2_aeu2_t4				led_d2_aeu2_t3				00h	
LED_D2_AEU2_Pla yback	217h	R/W	Reserved							led_d2_aeu2_pt	00h	
LED_D2_AEU3_PWM_1	218h	R/W	led_d2_aeu3_pwm1								00h	
LED_D2_AEU3_PWM_2	219h	R/W	led_d2_aeu3_pwm2								00h	
LED_D2_AEU3_PWM_3	21Ah	R/W	led_d2_aeu3_pwm3								00h	
LED_D2_AEU3_PWM_4	21Bh	R/W	led_d2_aeu3_pwm4								00h	
LED_D2_AEU3_PWM_5	21Ch	R/W	led_d2_aeu3_pwm5								00h	
LED_D2_AEU3_T12	21Dh	R/W	led_d2_aeu3_t2				led_d2_aeu3_t1				00h	
LED_D2_AEU3_T34	21Eh	R/W	led_d2_aeu3_t4				led_d2_aeu3_t3				00h	
LED_D2_AEU3_Pla yback	21Fh	R/W	Reserved							led_d2_aeu3_pt	00h	
Flag Registers												
TSD_Config_Status	300h	R	Reserved							tsd_Status	config_er status	00h
LOD_Status_0	301h	R	lod_status_b0	lod_status_a2	lod_status_a1	lod_status_a0	lod_status_3	lod_status_2	lod_status_1	lod_status_0	00h	
LOD_Status_1	302h	R	lod_status_d0	lod_status_d1	lod_status_d0	lod_status_c2	lod_status_c1	lod_status_c0	lod_status_b2	lod_status_b1	00h	
LSD_Status_0	303h	R	lsd_status_b0	lsd_status_a2	lsd_status_a1	lsd_status_a0	lsd_status_3	lsd_status_2	lsd_status_1	lsd_status_0	00h	
LSD_Status_1	304h	R	lsd_status_d0	lsd_status_d1	lsd_status_d0	lsd_status_c2	lsd_status_c1	lsd_status_c0	lsd_status_b2	lsd_status_b1	00h	
Auto_PWM_0	305h	R	pwm_auto_0								00h	
Auto_PWM_1	306h	R	pwm_auto_1								00h	
Auto_PWM_2	307h	R	pwm_auto_2								00h	
Auto_PWM_3	308h	R	pwm_auto_3								00h	
Auto_PWM_4	309h	R	pwm_auto_a0								00h	
Auto_PWM_5	30Ah	R	pwm_auto_a1								00h	
Auto_PWM_6	30Bh	R	pwm_auto_a2								00h	
Auto_PWM_7	30Ch	R	pwm_auto_b0								00h	
Auto_PWM_8	30Dh	R	pwm_auto_b1								00h	
Auto_PWM_9	30Eh	R	pwm_auto_b2								00h	
Auto_PWM_10	30Fh	R	pwm_auto_c0								00h	
Auto_PWM_11	310h	R	pwm_auto_c1								00h	

Register Acronym	Address	Type	D7	D6	D5	D4	D3	D2	D1	D0	Default	
Auto_PWM_12	311h	R	pwm_auto_c2									00h
Auto_PWM_13	312h	R	pwm_auto_d0									00h
Auto_PWM_14	313h	R	pwm_auto_d1									00h
Auto_PWM_15	314h	R	pwm_auto_d2									00h
AEP_Status_0	315h	R	Reserved		aep_status_1		aep_status_0				3Fh	
AEP_Status_1	316h	R	Reserved		aep_status_3		aep_status_2				3Fh	
AEP_Status_2	317h	R	Reserved		aep_status_a1		aep_status_a0				3Fh	
AEP_Status_3	318h	R	Reserved		aep_status_b0		aep_status_a2				3Fh	
AEP_Status_4	319h	R	Reserved		aep_status_b2		aep_status_b1				3Fh	
AEP_Status_5	31Ah	R	Reserved		aep_status_c1		aep_status_c0				3Fh	
AEP_Status_6	31Bh	R	Reserved		aep_status_d0		aep_status_c2				3Fh	
AEP_Status_7	31Ch	R	Reserved		aep_status_d2		aep_status_d1				3Fh	

2.2 Device_Enable Registers

Table 2-2 lists the memory-mapped registers for the Device_Enable registers. All register offset addresses not listed in Table 2-2 should be considered as reserved locations and the register contents should not be modified.

Table 2-2. DEVICE_ENABLE Registers

Address	Acronym	Register Name	Section
0h	Chip_EN	Enable the internal circuits	Go

2.2.1 Chip_EN Register (Address = 0h) [Reset = 00h]

Chip_EN is shown in Figure 2-1 and described in Table 2-3.

Return to the [Summary Table](#).

Figure 2-1. Chip_EN Register

7	6	5	4	3	2	1	0
RESERVED							chip_en
R/W-0h							R/W-0h

Table 2-3. Chip_EN Register Field Descriptions

Bit	Field	Type	Reset	Description
7-1	RESERVED	R/W	0h	Reserved
0	chip_en	R/W	0h	Enable the internal circuits 0h = Disable 1h = Enable

2.3 Config Registers

Table 2-4 lists the memory-mapped registers for the Config registers. All register offset addresses not listed in Table 2-4 should be considered as reserved locations and the register contents should not be modified.

Table 2-4. CONFIG Registers

Offset	Acronym	Register Name	Section
1h	Dev_Config_0	Device configuration register 0, including max current sinks current settings	Go
2h	Dev_Config_1	Device configuration register 1, including LED configuration and PWM frequency settings	Go
3h	Dev_Config_2	Device configuration register 2, including scan order settings	Go
4h	Dev_Config_3	Device configuration register 3, including autonomous enable settings for LED_0 to LED_3, LED_A0 to LEDA2 and LED_B0	Go
5h	Dev_Config_4	Device configuration register 4, including autonomous enable settings for LED_B1 to LED_B2, LED_C0 to LEDC2 and LED_D0 to LED_D2	Go
6h	Dev_Config_5	Device configuration register 5, including exponential curve enable settings for LED_0 to LED_3, LED_A0 to LEDA2 and LED_B0	Go
7h	Dev_Config_6	Device configuration register 6, including exponential curve enable settings for LED_B1 to LED_B2, LED_C0 to LEDC2 and LED_D0 to LED_D2	Go
8h	Dev_Config_7	Device configuration register 7, including phase shift settings for LED_0 to LED_3	Go
9h	Dev_Config_8	Device configuration register 8, including phase shift settings for LED_A0 to LED_A2 and LED_B0	Go
Ah	Dev_Config_9	Device configuration register 9, including phase shift settings for LED_B1 to LED_B2 and LED_C0 to LED_C1	Go
Bh	Dev_Config_10	Device configuration register 10, including phase shift settings for LED_C2 and LED_D0 to LED_D2	Go
Ch	Dev_Config_11	Device configuration register 11, including line change time and VSYNC settings	Go
Dh	Dev_Config_12	Device configuration register 12, including threshold and action settings for LOD, LSD and clamp	Go

2.3.1 Dev_Config_0 Register (Offset = 1h) [Reset = 00h]

Dev_Config_0 is shown in [Figure 2-2](#) and described in [Table 2-5](#).

Return to the [Summary Table](#).

Figure 2-2. Dev_Config_0 Register

7	6	5	4	3	2	1	0
RESERVED							max_current
R-0h							R/W-0h

Table 2-5. Dev_Config_0 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-1	RESERVED	R	0h	Reserved
0	max_current	R/W	0h	Max output current setting 0h = 25.5mA 1h = 51mA

2.3.2 Dev_Config_1 Register (Offset = 2h) [Reset = 00h]

Dev_Config_1 is shown in [Figure 2-3](#) and described in [Table 2-6](#).

Return to the [Summary Table](#).

Figure 2-3. Dev_Config_1 Register

7	6	5	4	3	2	1	0
pwm_fre	led_mode			mix_sel_led			
R/W-0h	R/W-0h			R/W-0h			

Table 2-6. Dev_Config_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	pwm_fre	R/W	0h	PWM dimming frequency setting 0h = 24kHz 1h = 12kHz
6-4	led_mode	R/W	0h	LED mode configuration 0h = Direct drive mode 1h = Scan drive mode with 1 scan 2h = Scan drive mode with 2 scans 3h = Scan drive mode with 3 scans 4h = Scan drive mode with 4 scans 5h = Mix drive mode with 1 scan 6h = Mix drive mode with 2 scans 7h = Mix drive mode with 3 scans
3-0	mix_sel_led	R/W	0h	Outputs in direct drive mode (Only effective when configured to mix drive mode) mix_sel_led[0] = 1h, OUT0 is selected as direct drive output mix_sel_led[1] = 1h, OUT1 is selected as direct drive output mix_sel_led[2] = 1h, OUT2 is selected as direct drive output mix_sel_led[3] = 1h, OUT3 is selected as direct drive output

2.3.3 Dev_Config_2 Register (Offset = 3h) [Reset = E4h]

Dev_Config_2 is shown in [Figure 2-4](#) and described in [Table 2-7](#).

Return to the [Summary Table](#).

Figure 2-4. Dev_Config_2 Register

7	6	5	4	3	2	1	0
scan_order_3		scan_order_2		scan_order_1		scan_order_0	
R/W-3h		R/W-2h		R/W-1h		R/W-0h	

Table 2-7. Dev_Config_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	scan_order_3	R/W	3h	The 4th scan line FET number in matrix mode when total scan line number is greater than 3 lines 0h = OUT0 1h = OUT1 2h = OUT2 3h = OUT3
5-4	scan_order_2	R/W	2h	The 3rd scan line FET number in matrix mode when total scan line number is greater than 2 lines 0h = OUT0 1h = OUT1 2h = OUT2 3h = OUT3
3-2	scan_order_1	R/W	1h	The 2nd scan line FET number in matrix mode when total scan line number is greater than 1 line 0h = OUT0 1h = OUT1 2h = OUT2 3h = OUT3
1-0	scan_order_0	R/W	0h	The 1st scan line FET number in matrix mode 0h = OUT0 1h = OUT1 2h = OUT2 3h = OUT3

2.3.4 Dev_Config_3 Register (Offset = 4h) [Reset = 00h]

Dev_Config_3 is shown in [Figure 2-5](#) and described in [Table 2-8](#).

Return to the [Summary Table](#).

Figure 2-5. Dev_Config_3 Register

7	6	5	4	3	2	1	0
auto_en_b0	auto_en_a2	auto_en_a1	auto_en_a0	auto_en_3	auto_en_2	auto_en_1	auto_en_0
R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h

Table 2-8. Dev_Config_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	auto_en_b0	R/W	0h	LED_B0 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
6	auto_en_a2	R/W	0h	LED_A2 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
5	auto_en_a1	R/W	0h	LED_A1 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
4	auto_en_a0	R/W	0h	LED_A0 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
3	auto_en_3	R/W	0h	LED_3 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
2	auto_en_2	R/W	0h	LED_2 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
1	auto_en_1	R/W	0h	LED_1 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
0	auto_en_0	R/W	0h	LED_0 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode

2.3.5 Dev_Config_4 Register (Offset = 5h) [Reset = 00h]

Dev_Config_4 is shown in [Figure 2-6](#) and described in [Table 2-9](#).

Return to the [Summary Table](#).

Figure 2-6. Dev_Config_4 Register

7	6	5	4	3	2	1	0
auto_en_d2	auto_en_d1	auto_en_d0	auto_en_c2	auto_en_c1	auto_en_c0	auto_en_b2	auto_en_b1
R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h

Table 2-9. Dev_Config_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	auto_en_d2	R/W	0h	LED_D2 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
6	auto_en_d1	R/W	0h	LED_D1 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
5	auto_en_d0	R/W	0h	LED_D0 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
4	auto_en_c2	R/W	0h	LED_C2 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
3	auto_en_c1	R/W	0h	LED_C1 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
2	auto_en_c0	R/W	0h	LED_C0 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
1	auto_en_b2	R/W	0h	LED_B2 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode
0	auto_en_b1	R/W	0h	LED_B1 autonomous control enable 0h = Disabled, LED in manual mode 1h = Enabled, LED in autonomous mode

2.3.6 Dev_Config_5 Register (Offset = 6h) [Reset = 00h]

Dev_Config_5 is shown in [Figure 2-7](#) and described in [Table 2-10](#).

Return to the [Summary Table](#).

Figure 2-7. Dev_Config_5 Register

7	6	5	4	3	2	1	0
exp_en_b0	exp_en_a2	exp_en_a1	exp_en_a0	exp_en_3	exp_en_2	exp_en_1	exp_en_0
R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h

Table 2-10. Dev_Config_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	exp_en_b0	R/W	0h	LED_B0 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
6	exp_en_a2	R/W	0h	LED_A2 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
5	exp_en_a1	R/W	0h	LED_A1 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
4	exp_en_a0	R/W	0h	LED_A0 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
3	exp_en_3	R/W	0h	LED_3 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
2	exp_en_2	R/W	0h	LED_2 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
1	exp_en_1	R/W	0h	LED_1 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
0	exp_en_0	R/W	0h	LED_0 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve

2.3.7 Dev_Config_6 Register (Offset = 7h) [Reset = 00h]

Dev_Config_6 is shown in [Figure 2-8](#) and described in [Table 2-11](#).

Return to the [Summary Table](#).

Figure 2-8. Dev_Config_6 Register

7	6	5	4	3	2	1	0
exp_en_d2	exp_en_d1	exp_en_d0	exp_en_c2	exp_en_c1	exp_en_c0	exp_en_b2	exp_en_b1
R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h

Table 2-11. Dev_Config_6 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	exp_en_d2	R/W	0h	LED_D2 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
6	exp_en_d1	R/W	0h	LED_D1 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
5	exp_en_d0	R/W	0h	LED_D0 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
4	exp_en_c2	R/W	0h	LED_C2 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
3	exp_en_c1	R/W	0h	LED_C1 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
2	exp_en_c0	R/W	0h	LED_C0 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
1	exp_en_b2	R/W	0h	LED_B2 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve
0	exp_en_b1	R/W	0h	LED_B1 exponential dimming enable 0h = Disabled, LED PWM dimming with linear curve 1h = Enabled, LED PWM dimming with exponential curve

2.3.8 Dev_Config_7 Register (Offset = 8h) [Reset = 00h]

Dev_Config_7 is shown in [Figure 2-9](#) and described in [Table 2-12](#).

Return to the [Summary Table](#).

Figure 2-9. Dev_Config_7 Register

7	6	5	4	3	2	1	0
phase_align_3		phase_align_2		phase_align_1		phase_align_0	
R/W-0h		R/W-0h		R/W-0h		R/W-0h	

Table 2-12. Dev_Config_7 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	phase_align_3	R/W	0h	LED_3 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
5-4	phase_align_2	R/W	0h	LED_2 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
3-2	phase_align_1	R/W	0h	LED_1 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
1-0	phase_align_0	R/W	0h	LED_0 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align

2.3.9 Dev_Config_8 Register (Offset = 9h) [Reset = 00h]

Dev_Config_8 is shown in [Figure 2-10](#) and described in [Table 2-13](#).

Return to the [Summary Table](#).

Figure 2-10. Dev_Config_8 Register

7	6	5	4	3	2	1	0
phase_align_b0		phase_align_a2		phase_align_a1		phase_align_a0	
R/W-0h		R/W-0h		R/W-0h		R/W-0h	

Table 2-13. Dev_Config_8 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	phase_align_b0	R/W	0h	LED_B0 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
5-4	phase_align_a2	R/W	0h	LED_A2 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
3-2	phase_align_a1	R/W	0h	LED_A1 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
1-0	phase_align_a0	R/W	0h	LED_A0 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align

2.3.10 Dev_Config_9 Register (Offset = Ah) [Reset = 00h]

Dev_Config_9 is shown in [Figure 2-11](#) and described in [Table 2-14](#).

Return to the [Summary Table](#).

Figure 2-11. Dev_Config_9 Register

7	6	5	4	3	2	1	0
phase_align_c1		phase_align_c0		phase_align_b2		phase_align_b1	
R/W-0h		R/W-0h		R/W-0h		R/W-0h	

Table 2-14. Dev_Config_9 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	phase_align_c1	R/W	0h	LED_C1 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
5-4	phase_align_c0	R/W	0h	LED_C0 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
3-2	phase_align_b2	R/W	0h	LED_B2 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
1-0	phase_align_b1	R/W	0h	LED_B1 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align

2.3.11 Dev_Config_10 Register (Offset = Bh) [Reset = 00h]

Dev_Config_10 is shown in [Figure 2-12](#) and described in [Table 2-15](#).

Return to the [Summary Table](#).

Figure 2-12. Dev_Config_10 Register

7	6	5	4	3	2	1	0
phase_align_d2		phase_align_d1		phase_align_d0		phase_align_c2	
R/W-0h		R/W-0h		R/W-0h		R/W-0h	

Table 2-15. Dev_Config_10 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	phase_align_d2	R/W	0h	LED_D2 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
5-4	phase_align_d1	R/W	0h	LED_D1 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
3-2	phase_align_d0	R/W	0h	LED_D0 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align
1-0	phase_align_c2	R/W	0h	LED_C2 PWM phase align method 0h = Forward align 1h = Forward align 2h = Middle align 3h = Backward align

2.3.12 Dev_Config_11 Register (Offset = Ch) [Reset = 00h]

Dev_Config_11 is shown in [Figure 2-13](#) and described in [Table 2-16](#).

Return to the [Summary Table](#).

Figure 2-13. Dev_Config_11 Register

7	6	5	4	3	2	1	0
RESERVED					vsync_out_en	blank_time	
R-0h					R/W-0h	R/W-0h	

Table 2-16. Dev_Config_11 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-3	RESERVED	R	0h	Reserved
2	vsync_out_en	R/W	0h	Vsync used as output to export internal oscillator clock 0h = Vsync is input 1h = Vsync is output
1-0	blank_time	R/W	0h	Line change time 0h = 1us 1h = 1.3us 2h = 1.7us 3h = 2us

2.3.13 Dev_Config_12 Register (Offset = Dh) [Reset = 08h]

Dev_Config_12 is shown in [Figure 2-14](#) and described in [Table 2-17](#).

Return to the [Summary Table](#).

Figure 2-14. Dev_Config_12 Register

7	6	5	4	3	2	1	0
vmid_sel	clamp_sel	clamp_dis	lod_action	lsd_action	lsd_threshold		
R/W-0h	R/W-0h	R/W-0h	R/W-1h	R/W-0h	R/W-0h		

Table 2-17. Dev_Config_12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	vmid_sel	R/W	0h	Clamp voltage selection 0h = VCC-1.1V 1h = VCC-1.3V 2h = VCC-1.5V 3h = VCC-1.7V
5	clamp_sel	R/W	0h	Clamp behavior selection 0h = Clamp the OUTs only during line change time 1h = Clamp the OUTs once current sink turns off
4	clamp_dis	R/W	0h	Clamp behavior disable 0h = Enable clamp 1h = Disable clamp
3	lod_action	R/W	1h	Action when LED open fault happens 0h = No action 1h = Shutdown current sink
2	lsd_action	R/W	0h	Action when LED short fault happens 0h = No action 1h = All OUTs shut down
1-0	lsd_threshold	R/W	0h	LSD threshold 0h = 0.35 * VCC 1h = 0.45 * VCC 2h = 0.55 * VCC 3h = 0.65 * VCC

2.4 Command Registers

Table 2-18 lists the memory-mapped registers for the Command registers. All register offset addresses not listed in Table 2-18 should be considered as reserved locations and the register contents should not be modified.

Table 2-18. COMMAND Registers

Address	Acronym	Register Name	Section
10h	CMD_Update	Configuration update command	Go
11h	CMD_Start	Autonomous animation start command	Go
12h	CMD_Stop	Autonomous animation stop command	Go
13h	CMD_Pause	Autonomous animation pause command	Go
14h	CMD_Continue	Autonomous animation continue command	Go

2.4.1 CMD_Update Register (Address = 10h) [Reset = 00h]

CMD_Update is shown in Figure 2-15 and described in Table 2-19.

Return to the [Summary Table](#).

Figure 2-15. CMD_Update Register

7	6	5	4	3	2	1	0
update_cmd							
W1C-0h							

Table 2-19. CMD_Update Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	update_cmd	W1C	0h	Configuration update command: registers001h to 00Bh will ONLY be effective by sending this command Write 55h to send this command

2.4.2 CMD_Start Register (Address = 11h) [Reset = 00h]

CMD_Start is shown in Figure 2-16 and described in Table 2-20.

Return to the [Summary Table](#).

Figure 2-16. CMD_Start Register

7	6	5	4	3	2	1	0
start_cmd							
W1C-0h							

Table 2-20. CMD_Start Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	start_cmd	W1C	0h	Send start_command to start autonomous control or restart with the latest setting Write FFh to send this command

2.4.3 CMD_Stop Register (Address = 12h) [Reset = 00h]

CMD_Stop is shown in Figure 2-17 and described in Table 2-21.

Return to the [Summary Table](#).

Figure 2-17. CMD_Stop Register

7	6	5	4	3	2	1	0
stop_cmd							
W1C-0h							

Table 2-21. CMD_Stop Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	stop_cmd	W1C	0h	Stop LED current status immediately, and go back to INITIAL state Write AAh to send this command

2.4.4 CMD_Pause Register (Address = 13h) [Reset = 00h]

CMD_Pause is shown in [Figure 2-18](#) and described in [Table 2-22](#).

Return to the [Summary Table](#).

Figure 2-18. CMD_Pause Register

7	6	5	4	3	2	1	0
pause_cmd							
W1C-0h							

Table 2-22. CMD_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pause_cmd	W1C	0h	Pause autonomous control at the current state, keep Internal sloper register unchanged, but the scan keeps going-on using the previous calculated pwm data Write 33h to send this command

2.4.5 CMD_Continue Register (Address = 14h) [Reset = 00h]

CMD_Continue is shown in [Figure 2-19](#) and described in [Table 2-23](#).

Return to the [Summary Table](#).

Figure 2-19. CMD_Continue Register

7	6	5	4	3	2	1	0
continue_cmd							
W1C-0h							

Table 2-23. CMD_Continue Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	continue_cmd	W1C	0h	Continue autonomous control Write CCh to send this command

2.5 LED_Enable Registers

Table 2-24 lists the memory-mapped registers for the LED_Enable registers. All register offset addresses not listed in Table 2-24 should be considered as reserved locations and the register contents should not be modified.

Table 2-24. LED_ENABLE Registers

Address	Acronym	Register Name	Section
20h	LED_EN_1	Enable the LEDs of LED_0 to LED_3, LED_A0 to LED_A2 and LED_B0	Go
21h	LED_EN_2	Enable the LEDs of LED_B1 to LED_B2, LED_C0 to LED_C2 and LED_D0 to LED_D2	Go

2.5.1 LED_EN_1 Register (Address = 20h) [Reset = 00h]

LED_EN_1 is shown in Figure 2-20 and described in Table 2-25.

Return to the [Summary Table](#).

Figure 2-20. LED_EN_1 Register

7	6	5	4	3	2	1	0
led_en_b0	led_en_a2	led_en_a1	led_en_a0	led_en_3	led_en_2	led_en_1	led_en_0
R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h

Table 2-25. LED_EN_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	led_en_b0	R/W	0h	LED_B0 Enable 0h = Disabled 1h = Enabled
6	led_en_a2	R/W	0h	LED_A2 Enable 0h = Disabled 1h = Enabled
5	led_en_a1	R/W	0h	LED_A1 Enable 0h = Disabled 1h = Enabled
4	led_en_a0	R/W	0h	LED_A0 Enable 0h = Disabled 1h = Enabled
3	led_en_3	R/W	0h	LED_3 Enable 0h = Disabled 1h = Enabled
2	led_en_2	R/W	0h	LED_2 Enable 0h = Disabled 1h = Enabled
1	led_en_1	R/W	0h	LED_1 Enable 0h = Disabled 1h = Enabled
0	led_en_0	R/W	0h	LED_0 Enable 0h = Disabled 1h = Enabled

2.5.2 LED_EN_2 Register (Address = 21h) [Reset = 00h]

LED_EN_2 is shown in Figure 2-21 and described in Table 2-26.

Return to the [Summary Table](#).

Figure 2-21. LED_EN_2 Register

7	6	5	4	3	2	1	0
led_en_d2	led_en_d1	led_en_d0	led_en_c2	led_en_c1	led_en_c0	led_en_b2	led_en_b1
R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h	R/W-0h

Table 2-26. LED_EN_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	led_en_d2	R/W	0h	LED_D2 Enable 0h = Disabled 1h = Enabled
6	led_en_d1	R/W	0h	LED_D1 Enable 0h = Disabled 1h = Enabled
5	led_en_d0	R/W	0h	LED_D0 Enable 0h = Disabled 1h = Enabled
4	led_en_c2	R/W	0h	LED_C2 Enable 0h = Disabled 1h = Enabled
3	led_en_c1	R/W	0h	LED_C1 Enable 0h = Disabled 1h = Enabled
2	led_en_c0	R/W	0h	LED_C0 Enable 0h = Disabled 1h = Enabled
1	led_en_b2	R/W	0h	LED_B2 Enable 0h = Disabled 1h = Enabled
0	led_en_b1	R/W	0h	LED_B1 Enable 0h = Disabled 1h = Enabled

2.6 Fault_Clear Registers

Table 2-27 lists the memory-mapped registers for the Fault_Clear registers. All register offset addresses not listed in Table 2-27 should be considered as reserved locations and the register contents should not be modified.

Table 2-27. FAULT_CLEAR Registers

Address	Acronym	Register Name	Section
22h	Fault_Clear	Clear the LOD/LSD/TSD flats	Go

2.6.1 Fault_Clear Register (Address = 22h) [Reset = 00h]

Fault_Clear is shown in Figure 2-22 and described in Table 2-28.

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Figure 2-22. Fault_Clear Register

7	6	5	4	3	2	1	0
RESERVED					tsd_clear	lsd_clear	lod_clear
R/W-0h					W1C-0h	W1C-0h	W1C-0h

Table 2-28. Fault_Clear Register Field Descriptions

Bit	Field	Type	Reset	Description
7-3	RESERVED	R/W	0h	Reserved
2	tsd_clear	W1C	0h	TSD Fault Status Clear Write 1 to clear and read back 0
1	lsd_clear	W1C	0h	LSD Fault Status Clear Write 1 to clear and read back 0
0	lod_clear	W1C	0h	LOD Fault Status Clear Write 1 to clear and read back 0

2.7 Reset Registers

Table 2-29 lists the memory-mapped registers for the Reset registers. All register offset addresses not listed in Table 2-29 should be considered as reserved locations and the register contents should not be modified.

Table 2-29. RESET Registers

Address	Acronym	Register Name	Section
23h	Reset	Software reset	Go

2.7.1 Reset Register (Address = 23h) [Reset = 00h]

Reset is shown in Figure 2-23 and described in Table 2-30.

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Figure 2-23. Reset Register

7	6	5	4	3	2	1	0
sw_reset							
W1C-0h							

Table 2-30. Reset Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	sw_reset	W1C	0h	Software reset Write 66h to reset

2.8 Manual_DC Registers

Table 2-31 lists the memory-mapped registers for the Manual_DC registers. All register offset addresses not listed in Table 2-31 should be considered as reserved locations and the register contents should not be modified.

Table 2-31. MANUAL_DC Registers

Address	Acronym	Register Name	Section
30h	Manual_DC_0	LED_0 current setting in manual mode	Go
31h	Manual_DC_1	LED_1 current setting in manual mode	Go
32h	Manual_DC_2	LED_2 current setting in manual mode	Go
33h	Manual_DC_3	LED_3 current setting in manual mode	Go
34h	Manual_DC_4	LED_A0 current setting in manual mode	Go
35h	Manual_DC_5	LED_A1 current setting in manual mode	Go
36h	Manual_DC_6	LED_A2 current setting in manual mode	Go
37h	Manual_DC_7	LED_B0 current setting in manual mode	Go
38h	Manual_DC_8	LED_B1 current setting in manual mode	Go
39h	Manual_DC_9	LED_B2 current setting in manual mode	Go
3Ah	Manual_DC_10	LED_C0 current setting in manual mode	Go
3Bh	Manual_DC_11	LED_C1 current setting in manual mode	Go
3Ch	Manual_DC_12	LED_C2 current setting in manual mode	Go
3Dh	Manual_DC_13	LED_D0 current setting in manual mode	Go
3Eh	Manual_DC_14	LED_D1 current setting in manual mode	Go
3Fh	Manual_DC_15	LED_D2 current setting in manual mode	Go

2.8.1 Manual_DC_0 Register (Address = 30h) [Reset = 00h]

Manual_DC_0 is shown in Figure 2-24 and described in Table 2-32.

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Figure 2-24. Manual_DC_0 Register

7	6	5	4	3	2	1	0
manual_dc_0							
R/W-0h							

Table 2-32. Manual_DC_0 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_0	R/W	0h	LED_0 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.2 Manual_DC_1 Register (Address = 31h) [Reset = 00h]

Manual_DC_1 is shown in Figure 2-25 and described in Table 2-33.

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Figure 2-25. Manual_DC_1 Register

7	6	5	4	3	2	1	0
manual_dc_1							
R/W-0h							

Table 2-33. Manual_DC_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_1	R/W	0h	LED_1 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.3 Manual_DC_2 Register (Address = 32h) [Reset = 00h]

Manual_DC_2 is shown in [Figure 2-26](#) and described in [Table 2-34](#).

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Figure 2-26. Manual_DC_2 Register

7	6	5	4	3	2	1	0
manual_dc_2							
R/W-0h							

Table 2-34. Manual_DC_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_2	R/W	0h	LED_2 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.4 Manual_DC_3 Register (Address = 33h) [Reset = 00h]

Manual_DC_3 is shown in [Figure 2-27](#) and described in [Table 2-35](#).

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Figure 2-27. Manual_DC_3 Register

7	6	5	4	3	2	1	0
manual_dc_3							
R/W-0h							

Table 2-35. Manual_DC_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_3	R/W	0h	LED_3 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.5 Manual_DC_4 Register (Address = 34h) [Reset = 00h]

Manual_DC_4 is shown in [Figure 2-28](#) and described in [Table 2-36](#).

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Figure 2-28. Manual_DC_4 Register

7	6	5	4	3	2	1	0
manual_dc_a0							
R/W-0h							

Table 2-36. Manual_DC_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_a0	R/W	0h	LED_A0 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.6 Manual_DC_5 Register (Address = 35h) [Reset = 00h]

Manual_DC_5 is shown in [Figure 2-29](#) and described in [Table 2-37](#).

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Figure 2-29. Manual_DC_5 Register

7	6	5	4	3	2	1	0
manual_dc_a1							
R/W-0h							

Table 2-37. Manual_DC_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_a1	R/W	0h	LED_A1 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.7 Manual_DC_6 Register (Address = 36h) [Reset = 00h]

Manual_DC_6 is shown in [Figure 2-30](#) and described in [Table 2-38](#).

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Figure 2-30. Manual_DC_6 Register

7	6	5	4	3	2	1	0
manual_dc_a2							
R/W-0h							

Table 2-38. Manual_DC_6 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_a2	R/W	0h	LED_A2 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.8 Manual_DC_7 Register (Address = 37h) [Reset = 00h]

Manual_DC_7 is shown in [Figure 2-31](#) and described in [Table 2-39](#).

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Figure 2-31. Manual_DC_7 Register

7	6	5	4	3	2	1	0
manual_dc_b0							
R/W-0h							

Table 2-39. Manual_DC_7 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_b0	R/W	0h	LED_B0 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.9 Manual_DC_8 Register (Address = 38h) [Reset = 00h]

Manual_DC_8 is shown in [Figure 2-32](#) and described in [Table 2-40](#).

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Figure 2-32. Manual_DC_8 Register

7	6	5	4	3	2	1	0
manual_dc_b1							
R/W-0h							

Table 2-40. Manual_DC_8 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_b1	R/W	0h	LED_B1 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.10 Manual_DC_9 Register (Address = 39h) [Reset = 00h]

Manual_DC_9 is shown in [Figure 2-33](#) and described in [Table 2-41](#).

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Figure 2-33. Manual_DC_9 Register

7	6	5	4	3	2	1	0
manual_dc_b2							
R/W-0h							

Table 2-41. Manual_DC_9 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_b2	R/W	0h	LED_B2 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.11 Manual_DC_10 Register (Address = 3Ah) [Reset = 00h]

Manual_DC_10 is shown in [Figure 2-34](#) and described in [Table 2-42](#).

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Figure 2-34. Manual_DC_10 Register

7	6	5	4	3	2	1	0
manual_dc_c0							
R/W-0h							

Table 2-42. Manual_DC_10 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_c0	R/W	0h	LED_C0 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.12 Manual_DC_11 Register (Address = 3Bh) [Reset = 00h]

Manual_DC_11 is shown in [Figure 2-35](#) and described in [Table 2-43](#).

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Figure 2-35. Manual_DC_11 Register

7	6	5	4	3	2	1	0
manual_dc_c1							
R/W-0h							

Table 2-43. Manual_DC_11 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_c1	R/W	0h	LED_C1 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.13 Manual_DC_12 Register (Address = 3Ch) [Reset = 00h]

Manual_DC_12 is shown in [Figure 2-36](#) and described in [Table 2-44](#).

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Figure 2-36. Manual_DC_12 Register

7	6	5	4	3	2	1	0
manual_dc_c2							
R/W-0h							

Table 2-44. Manual_DC_12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_c2	R/W	0h	LED_C2 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.14 Manual_DC_13 Register (Address = 3Dh) [Reset = 00h]

Manual_DC_13 is shown in [Figure 2-37](#) and described in [Table 2-45](#).

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Figure 2-37. Manual_DC_13 Register

7	6	5	4	3	2	1	0
manual_dc_d0							
R/W-0h							

Table 2-45. Manual_DC_13 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_d0	R/W	0h	LED_D0 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.15 Manual_DC_14 Register (Address = 3Eh) [Reset = 00h]

Manual_DC_14 is shown in [Figure 2-38](#) and described in [Table 2-46](#).

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Figure 2-38. Manual_DC_14 Register

7	6	5	4	3	2	1	0
manual_dc_d1							
R/W-0h							

Table 2-46. Manual_DC_14 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_d1	R/W	0h	LED_D1 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.8.16 Manual_DC_15 Register (Address = 3Fh) [Reset = 00h]

Manual_DC_15 is shown in [Figure 2-39](#) and described in [Table 2-47](#).

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Figure 2-39. Manual_DC_15 Register

7	6	5	4	3	2	1	0
manual_dc_d2							
R/W-0h							

Table 2-47. Manual_DC_15 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_dc_d2	R/W	0h	LED_D2 current setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9 Manual_PWM Registers

Table 2-48 lists the memory-mapped registers for the Manual_PWM registers. All register offset addresses not listed in Table 2-48 should be considered as reserved locations and the register contents should not be modified.

Table 2-48. MANUAL_PWM Registers

Address	Acronym	Register Name	Section
40h	Manual_PWM_0	LED_0 PWM setting in manual mode	Go
41h	Manual_PWM_1	LED_1 PWM setting in manual mode	Go
42h	Manual_PWM_2	LED_2 PWM setting in manual mode	Go
43h	Manual_PWM_3	LED_3 PWM setting in manual mode	Go
44h	Manual_PWM_4	LED_A0 PWM setting in manual mode	Go
45h	Manual_PWM_5	LED_A1 PWM setting in manual mode	Go
46h	Manual_PWM_6	LED_A2 PWM setting in manual mode	Go
47h	Manual_PWM_7	LED_B0 PWM setting in manual mode	Go
48h	Manual_PWM_8	LED_B1 PWM setting in manual mode	Go
49h	Manual_PWM_9	LED_B2 PWM setting in manual mode	Go
4Ah	Manual_PWM_10	LED_C0 PWM setting in manual mode	Go
4Bh	Manual_PWM_11	LED_C1 PWM setting in manual mode	Go
4Ch	Manual_PWM_12	LED_C2 PWM setting in manual mode	Go
4Dh	Manual_PWM_13	LED_D0 PWM setting in manual mode	Go
4Eh	Manual_PWM_14	LED_D1 PWM setting in manual mode	Go
4Fh	Manual_PWM_15	LED_D2 PWM setting in manual mode	Go

2.9.1 Manual_PWM_0 Register (Address = 40h) [Reset = 00h]

Manual_PWM_0 is shown in Figure 2-40 and described in Table 2-49.

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Figure 2-40. Manual_PWM_0 Register

7	6	5	4	3	2	1	0
manual_pwm_0							
R/W-0h							

Table 2-49. Manual_PWM_0 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_0	R/W	0h	LED_0 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.2 Manual_PWM_1 Register (Address = 41h) [Reset = 00h]

Manual_PWM_1 is shown in Figure 2-41 and described in Table 2-50.

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Figure 2-41. Manual_PWM_1 Register

7	6	5	4	3	2	1	0
manual_pwm_1							
R/W-0h							

Table 2-50. Manual_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_1	R/W	0h	LED_1 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.3 Manual_PWM_2 Register (Address = 42h) [Reset = 00h]

Manual_PWM_2 is shown in [Figure 2-42](#) and described in [Table 2-51](#).

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Figure 2-42. Manual_PWM_2 Register

7	6	5	4	3	2	1	0
manual_pwm_2							
R/W-0h							

Table 2-51. Manual_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_2	R/W	0h	LED_2 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.4 Manual_PWM_3 Register (Address = 43h) [Reset = 00h]

Manual_PWM_3 is shown in [Figure 2-43](#) and described in [Table 2-52](#).

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Figure 2-43. Manual_PWM_3 Register

7	6	5	4	3	2	1	0
manual_pwm_3							
R/W-0h							

Table 2-52. Manual_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_3	R/W	0h	LED_3 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.5 Manual_PWM_4 Register (Address = 44h) [Reset = 00h]

Manual_PWM_4 is shown in [Figure 2-44](#) and described in [Table 2-53](#).

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Figure 2-44. Manual_PWM_4 Register

7	6	5	4	3	2	1	0
manual_pwm_a0							
R/W-0h							

Table 2-53. Manual_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_a0	R/W	0h	LED_A0 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.6 Manual_PWM_5 Register (Address = 45h) [Reset = 00h]

Manual_PWM_5 is shown in [Figure 2-45](#) and described in [Table 2-54](#).

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Figure 2-45. Manual_PWM_5 Register

7	6	5	4	3	2	1	0
manual_pwm_a1							
R/W-0h							

Table 2-54. Manual_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_a1	R/W	0h	LED_A1 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.7 Manual_PWM_6 Register (Address = 46h) [Reset = 00h]

Manual_PWM_6 is shown in [Figure 2-46](#) and described in [Table 2-55](#).

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Figure 2-46. Manual_PWM_6 Register

7	6	5	4	3	2	1	0
manual_pwm_a2							
R/W-0h							

Table 2-55. Manual_PWM_6 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_a2	R/W	0h	LED_A2 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.8 Manual_PWM_7 Register (Address = 47h) [Reset = 00h]

Manual_PWM_7 is shown in [Figure 2-47](#) and described in [Table 2-56](#).

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Figure 2-47. Manual_PWM_7 Register

7	6	5	4	3	2	1	0
manual_pwm_b0							
R/W-0h							

Table 2-56. Manual_PWM_7 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_b0	R/W	0h	LED_B0 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.9 Manual_PWM_8 Register (Address = 48h) [Reset = 00h]

Manual_PWM_8 is shown in [Figure 2-48](#) and described in [Table 2-57](#).

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Figure 2-48. Manual_PWM_8 Register

7	6	5	4	3	2	1	0
manual_pwm_b1							
R/W-0h							

Table 2-57. Manual_PWM_8 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_b1	R/W	0h	LED_B1 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.10 Manual_PWM_9 Register (Address = 49h) [Reset = 00h]

Manual_PWM_9 is shown in [Figure 2-49](#) and described in [Table 2-58](#).

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Figure 2-49. Manual_PWM_9 Register

7	6	5	4	3	2	1	0
manual_pwm_b2							
R/W-0h							

Table 2-58. Manual_PWM_9 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_b2	R/W	0h	LED_B2 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.11 Manual_PWM_10 Register (Address = 4Ah) [Reset = 00h]

Manual_PWM_10 is shown in [Figure 2-50](#) and described in [Table 2-59](#).

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Figure 2-50. Manual_PWM_10 Register

7	6	5	4	3	2	1	0
manual_pwm_c0							
R/W-0h							

Table 2-59. Manual_PWM_10 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_c0	R/W	0h	LED_C0 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.12 Manual_PWM_11 Register (Address = 4Bh) [Reset = 00h]

Manual_PWM_11 is shown in [Figure 2-51](#) and described in [Table 2-60](#).

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Figure 2-51. Manual_PWM_11 Register

7	6	5	4	3	2	1	0
manual_pwm_c1							
R/W-0h							

Table 2-60. Manual_PWM_11 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_c1	R/W	0h	LED_C1 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.13 Manual_PWM_12 Register (Address = 4Ch) [Reset = 00h]

Manual_PWM_12 is shown in [Figure 2-52](#) and described in [Table 2-61](#).

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Figure 2-52. Manual_PWM_12 Register

7	6	5	4	3	2	1	0
manual_pwm_c2							
R/W-0h							

Table 2-61. Manual_PWM_12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_c2	R/W	0h	LED_C2 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.14 Manual_PWM_13 Register (Address = 4Dh) [Reset = 00h]

Manual_PWM_13 is shown in [Figure 2-53](#) and described in [Table 2-62](#).

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Figure 2-53. Manual_PWM_13 Register

7	6	5	4	3	2	1	0
manual_pwm_d0							
R/W-0h							

Table 2-62. Manual_PWM_13 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_d0	R/W	0h	LED_D0 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.15 Manual_PWM_14 Register (Address = 4Eh) [Reset = 00h]

Manual_PWM_14 is shown in [Figure 2-54](#) and described in [Table 2-63](#).

Return to the [Summary Table](#).

Figure 2-54. Manual_PWM_14 Register

7	6	5	4	3	2	1	0
manual_pwm_d1							
R/W-0h							

Table 2-63. Manual_PWM_14 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_d1	R/W	0h	LED_D1 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.9.16 Manual_PWM_15 Register (Address = 4Fh) [Reset = 00h]

Manual_PWM_15 is shown in [Figure 2-55](#) and described in [Table 2-64](#).

Return to the [Summary Table](#).

Figure 2-55. Manual_PWM_15 Register

7	6	5	4	3	2	1	0
manual_pwm_d2							
R/W-0h							

Table 2-64. Manual_PWM_15 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	manual_pwm_d2	R/W	0h	LED_D2 PWM setting in manual mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10 Autonomous_DC Registers

Table 2-65 lists the memory-mapped registers for the Autonomous_DC registers. All register offset addresses not listed in Table 2-65 should be considered as reserved locations and the register contents should not be modified.

Table 2-65. AUTONOMOUS_DC Registers

Address	Acronym	Register Name	Section
50h	Auto_DC_0	LED_0 current setting in autonomous mode	Go
51h	Auto_DC_1	LED_1 current setting in autonomous mode	Go
52h	Auto_DC_2	LED_2 current setting in autonomous mode	Go
53h	Auto_DC_3	LED_3 current setting in autonomous mode	Go
54h	Auto_DC_4	LED_A0 current setting in autonomous mode	Go
55h	Auto_DC_5	LED_A1 current setting in autonomous mode	Go
56h	Auto_DC_6	LED_A2 current setting in autonomous mode	Go
57h	Auto_DC_7	LED_B0 current setting in autonomous mode	Go
58h	Auto_DC_8	LED_B1 current setting in autonomous mode	Go
59h	Auto_DC_9	LED_B2 current setting in autonomous mode	Go
5Ah	Auto_DC_10	LED_C0 current setting in autonomous mode	Go
5Bh	Auto_DC_11	LED_C1 current setting in autonomous mode	Go
5Ch	Auto_DC_12	LED_C2 current setting in autonomous mode	Go
5Dh	Auto_DC_13	LED_D0 current setting in autonomous mode	Go
5Eh	Auto_DC_14	LED_D1 current setting in autonomous mode	Go
5Fh	Auto_DC_15	LED_D2 current setting in autonomous mode	Go

2.10.1 Auto_DC_0 Register (Address = 50h) [Reset = 00h]

Auto_DC_0 is shown in Figure 2-56 and described in Table 2-66.

Return to the [Summary Table](#).

Figure 2-56. Auto_DC_0 Register

7	6	5	4	3	2	1	0
auto_dc_0							
R/W-0h							

Table 2-66. Auto_DC_0 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_0	R/W	0h	LED_0 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.2 Auto_DC_1 Register (Address = 51h) [Reset = 00h]

Auto_DC_1 is shown in Figure 2-57 and described in Table 2-67.

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Figure 2-57. Auto_DC_1 Register

7	6	5	4	3	2	1	0
auto_dc_1							
R/W-0h							

Table 2-67. Auto_DC_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_1	R/W	0h	LED_1 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.3 Auto_DC_2 Register (Address = 52h) [Reset = 00h]

Auto_DC_2 is shown in [Figure 2-58](#) and described in [Table 2-68](#).

Return to the [Summary Table](#).

Figure 2-58. Auto_DC_2 Register

7	6	5	4	3	2	1	0
auto_dc_2							
R/W-0h							

Table 2-68. Auto_DC_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_2	R/W	0h	LED_2 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.4 Auto_DC_3 Register (Address = 53h) [Reset = 00h]

Auto_DC_3 is shown in [Figure 2-59](#) and described in [Table 2-69](#).

Return to the [Summary Table](#).

Figure 2-59. Auto_DC_3 Register

7	6	5	4	3	2	1	0
auto_dc_3							
R/W-0h							

Table 2-69. Auto_DC_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_3	R/W	0h	LED_3 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.5 Auto_DC_4 Register (Address = 54h) [Reset = 00h]

Auto_DC_4 is shown in [Figure 2-60](#) and described in [Table 2-70](#).

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Figure 2-60. Auto_DC_4 Register

7	6	5	4	3	2	1	0
auto_dc_a0							
R/W-0h							

Table 2-70. Auto_DC_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_a0	R/W	0h	LED_A0 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.6 Auto_DC_5 Register (Address = 55h) [Reset = 00h]

Auto_DC_5 is shown in [Figure 2-61](#) and described in [Table 2-71](#).

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Figure 2-61. Auto_DC_5 Register

7	6	5	4	3	2	1	0
auto_dc_a1							
R/W-0h							

Table 2-71. Auto_DC_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_a1	R/W	0h	LED_A1 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.7 Auto_DC_6 Register (Address = 56h) [Reset = 00h]

Auto_DC_6 is shown in [Figure 2-62](#) and described in [Table 2-72](#).

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Figure 2-62. Auto_DC_6 Register

7	6	5	4	3	2	1	0
auto_dc_a2							
R/W-0h							

Table 2-72. Auto_DC_6 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_a2	R/W	0h	LED_A2 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.8 Auto_DC_7 Register (Address = 57h) [Reset = 00h]

Auto_DC_7 is shown in [Figure 2-63](#) and described in [Table 2-73](#).

Return to the [Summary Table](#).

Figure 2-63. Auto_DC_7 Register

7	6	5	4	3	2	1	0
auto_dc_b0							
R/W-0h							

Table 2-73. Auto_DC_7 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_b0	R/W	0h	LED_B0 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.9 Auto_DC_8 Register (Address = 58h) [Reset = 00h]

Auto_DC_8 is shown in [Figure 2-64](#) and described in [Table 2-74](#).

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Figure 2-64. Auto_DC_8 Register

7	6	5	4	3	2	1	0
auto_dc_b1							
R/W-0h							

Table 2-74. Auto_DC_8 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_b1	R/W	0h	LED_B1 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.10 Auto_DC_9 Register (Address = 59h) [Reset = 00h]

Auto_DC_9 is shown in [Figure 2-65](#) and described in [Table 2-75](#).

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Figure 2-65. Auto_DC_9 Register

7	6	5	4	3	2	1	0
auto_dc_b2							
R/W-0h							

Table 2-75. Auto_DC_9 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_b2	R/W	0h	LED_B2 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.11 Auto_DC_10 Register (Address = 5Ah) [Reset = 00h]

Auto_DC_10 is shown in [Figure 2-66](#) and described in [Table 2-76](#).

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Figure 2-66. Auto_DC_10 Register

7	6	5	4	3	2	1	0
auto_dc_c0							
R/W-0h							

Table 2-76. Auto_DC_10 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_c0	R/W	0h	LED_C0 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.12 Auto_DC_11 Register (Address = 5Bh) [Reset = 00h]

Auto_DC_11 is shown in [Figure 2-67](#) and described in [Table 2-77](#).

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Figure 2-67. Auto_DC_11 Register

7	6	5	4	3	2	1	0
auto_dc_c1							
R/W-0h							

Table 2-77. Auto_DC_11 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_c1	R/W	0h	LED_C1 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.13 Auto_DC_12 Register (Address = 5Ch) [Reset = 00h]

Auto_DC_12 is shown in [Figure 2-68](#) and described in [Table 2-78](#).

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Figure 2-68. Auto_DC_12 Register

7	6	5	4	3	2	1	0
auto_dc_c2							
R/W-0h							

Table 2-78. Auto_DC_12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_c2	R/W	0h	LED_C2 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.14 Auto_DC_13 Register (Address = 5Dh) [Reset = 00h]

Auto_DC_13 is shown in [Figure 2-69](#) and described in [Table 2-79](#).

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Figure 2-69. Auto_DC_13 Register

7	6	5	4	3	2	1	0
auto_dc_d0							
R/W-0h							

Table 2-79. Auto_DC_13 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_d0	R/W	0h	LED_D0 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.15 Auto_DC_14 Register (Address = 5Eh) [Reset = 00h]

Auto_DC_14 is shown in [Figure 2-70](#) and described in [Table 2-80](#).

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Figure 2-70. Auto_DC_14 Register

7	6	5	4	3	2	1	0
auto_dc_d1							
R/W-0h							

Table 2-80. Auto_DC_14 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_d1	R/W	0h	LED_D1 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.10.16 Auto_DC_15 Register (Address = 5Fh) [Reset = 00h]

Auto_DC_15 is shown in [Figure 2-71](#) and described in [Table 2-81](#).

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Figure 2-71. Auto_DC_15 Register

7	6	5	4	3	2	1	0
auto_dc_d2							
R/W-0h							

Table 2-81. Auto_DC_15 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	auto_dc_d2	R/W	0h	LED_D2 current setting in autonomous mode 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11 LED_0_Autonomous_Animation Registers

Table 2-82 lists the memory-mapped registers for the LED_0_Autonomous_Animation registers. All register offset addresses not listed in Table 2-82 should be considered as reserved locations and the register contents should not be modified.

Table 2-82. LED_0_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
80h	LED_0_Auto_Pause	Animation pause time at the start and the end of LED_0	Go
81h	LED_0_Auto_Playback	Animation pattern playback times of LED_0 and active AEU number setting	Go
82h	LED_0_AEU1_PWM_1	PWM setting of LED_0 AEU1_PWM1	Go
83h	LED_0_AEU1_PWM_2	PWM setting of LED_0 AEU1_PWM2	Go
84h	LED_0_AEU1_PWM_3	PWM setting of LED_0 AEU1_PWM3	Go
85h	LED_0_AEU1_PWM_4	PWM setting of LED_0 AEU1_PWM4	Go
86h	LED_0_AEU1_PWM_5	PWM setting of LED_0 AEU1_PWM5	Go
87h	LED_0_AEU1_T12	Slope time setting of LED_0 AEU1_T1 and AEU1_T2	Go
88h	LED_0_AEU1_T34	Slope time setting of LED_0 AEU1_T3 and AEU1_T4	Go
89h	LED_0_AEU1_Playback	AEU1 pattern playback times of LED_0	Go
8Ah	LED_0_AEU2_PWM_1	PWM setting of LED_0 AEU2_PWM1	Go
8Bh	LED_0_AEU2_PWM_2	PWM setting of LED_0 AEU2_PWM2	Go
8Ch	LED_0_AEU2_PWM_3	PWM setting of LED_0 AEU2_PWM3	Go
8Dh	LED_0_AEU2_PWM_4	PWM setting of LED_0 AEU2_PWM4	Go
8Eh	LED_0_AEU2_PWM_5	PWM setting of LED_0 AEU2_PWM5	Go
8Fh	LED_0_AEU2_T12	Slope time setting of LED_0 AEU2_T1 and AEU2_T2	Go
90h	LED_0_AEU2_T34	Slope time setting of LED_0 AEU2_T3 and AEU2_T4	Go
91h	LED_0_AEU2_Playback	AEU2 pattern playback times of LED_0	Go
92h	LED_0_AEU3_PWM_1	PWM setting of LED_0 AEU3_PWM1	Go
93h	LED_0_AEU3_PWM_2	PWM setting of LED_0 AEU3_PWM2	Go
94h	LED_0_AEU3_PWM_3	PWM setting of LED_0 AEU3_PWM3	Go
95h	LED_0_AEU3_PWM_4	PWM setting of LED_0 AEU3_PWM4	Go
96h	LED_0_AEU3_PWM_5	PWM setting of LED_0 AEU3_PWM5	Go
97h	LED_0_AEU3_T12	Slope time setting of LED_0 AEU3_T1 and AEU3_T2	Go
98h	LED_0_AEU3_T34	Slope time setting of LED_0 AEU3_T3 and AEU3_T4	Go
99h	LED_0_AEU3_Playback	AEU3 pattern playback times of LED_0	Go

2.11.1 LED_0_Auto_Pause Register (Address = 80h) [Reset = 00h]

LED_0_Auto_Pause is shown in Figure 2-72 and described in Table 2-83.

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Figure 2-72. LED_0_Auto_Pause Register

7	6	5	4	3	2	1	0
led_0_tp_ts				led_0_tp_te			

Figure 2-72. LED_0_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-83. LED_0_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_0_tp_ts	R/W	0h	Animation pause time at the start of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_0_tp_te	R/W	0h	Animation pause time at the end of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.11.2 LED_0_Auto_Playback Register (Address = 81h) [Reset = 00h]

LED_0_Auto_Playback is shown in [Figure 2-73](#) and described in [Table 2-84](#).

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Figure 2-73. LED_0_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_0_aeu_num			led_0_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-84. LED_0_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_0_aeu_num	R/W	0h	Active AEU number of LED_0 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-84. LED_0_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_0_pt	R/W	0h	Animation pattern playback times of LED_0 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.11.3 LED_0_AEU1_PWM_1 Register (Address = 82h) [Reset = 00h]

LED_0_AEU1_PWM_1 is shown in [Figure 2-74](#) and described in [Table 2-85](#).

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Figure 2-74. LED_0_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_0_aeu1_pwm1							
R/W-0h							

Table 2-85. LED_0_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.4 LED_0_AEU1_PWM_2 Register (Address = 83h) [Reset = 00h]

LED_0_AEU1_PWM_2 is shown in [Figure 2-75](#) and described in [Table 2-86](#).

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Figure 2-75. LED_0_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_0_aeu1_pwm2							
R/W-0h							

Table 2-86. LED_0_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.5 LED_0_AEU1_PWM_3 Register (Address = 84h) [Reset = 00h]

LED_0_AEU1_PWM_3 is shown in [Figure 2-76](#) and described in [Table 2-87](#).

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Figure 2-76. LED_0_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_0_aeu1_pwm3							
R/W-0h							

Table 2-87. LED_0_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.6 LED_0_AEU1_PWM_4 Register (Address = 85h) [Reset = 00h]

LED_0_AEU1_PWM_4 is shown in [Figure 2-77](#) and described in [Table 2-88](#).

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Figure 2-77. LED_0_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_0_aeu1_pwm4							
R/W-0h							

Table 2-88. LED_0_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.7 LED_0_AEU1_PWM_5 Register (Address = 86h) [Reset = 00h]

LED_0_AEU1_PWM_5 is shown in [Figure 2-78](#) and described in [Table 2-89](#).

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Figure 2-78. LED_0_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_0_aeu1_pwm5							
R/W-0h							

Table 2-89. LED_0_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.8 LED_0_AEU1_T12 Register (Address = 87h) [Reset = 00h]

LED_0_AEU1_T12 is shown in [Figure 2-79](#) and described in [Table 2-90](#).

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Figure 2-79. LED_0_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_0_aeu1_t2				led_0_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-90. LED_0_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_0_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_0_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.11.9 LED_0_AEU1_T34 Register (Address = 88h) [Reset = 00h]

LED_0_AEU1_T34 is shown in [Figure 2-80](#) and described in [Table 2-91](#).

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Figure 2-80. LED_0_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_0_aeu1_t4				led_0_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-91. LED_0_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_0_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_0_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.11.10 LED_0_AEU1_Playback Register (Address = 89h) [Reset = 00h]

LED_0_AEU1_Playback is shown in [Figure 2-81](#) and described in [Table 2-92](#).

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Figure 2-81. LED_0_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_0_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-92. LED_0_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_0_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.11.11 LED_0_AEU2_PWM_1 Register (Address = 8Ah) [Reset = 00h]

LED_0_AEU2_PWM_1 is shown in [Figure 2-82](#) and described in [Table 2-93](#).

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Figure 2-82. LED_0_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_0_aeu2_pwm1							
R/W-0h							

Table 2-93. LED_0_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.12 LED_0_AEU2_PWM_2 Register (Address = 8Bh) [Reset = 00h]

LED_0_AEU2_PWM_2 is shown in [Figure 2-83](#) and described in [Table 2-94](#).

Return to the [Summary Table](#).

Figure 2-83. LED_0_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_0_aeu2_pwm2							
R/W-0h							

Table 2-94. LED_0_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.13 LED_0_AEU2_PWM_3 Register (Address = 8Ch) [Reset = 00h]

LED_0_AEU2_PWM_3 is shown in [Figure 2-84](#) and described in [Table 2-95](#).

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Figure 2-84. LED_0_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_0_aeu2_pwm3							
R/W-0h							

Table 2-95. LED_0_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.14 LED_0_AEU2_PWM_4 Register (Address = 8Dh) [Reset = 00h]

LED_0_AEU2_PWM_4 is shown in [Figure 2-85](#) and described in [Table 2-96](#).

Return to the [Summary Table](#).

Figure 2-85. LED_0_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_0_aeu2_pwm4							
R/W-0h							

Table 2-96. LED_0_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.15 LED_0_AEU2_PWM_5 Register (Address = 8Eh) [Reset = 00h]

LED_0_AEU2_PWM_5 is shown in [Figure 2-86](#) and described in [Table 2-97](#).

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Figure 2-86. LED_0_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_0_aeu2_pwm5							
R/W-0h							

Table 2-97. LED_0_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.16 LED_0_AEU2_T12 Register (Address = 8Fh) [Reset = 00h]

LED_0_AEU2_T12 is shown in [Figure 2-87](#) and described in [Table 2-98](#).

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Figure 2-87. LED_0_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_0_aeu2_t2				led_0_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-98. LED_0_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_0_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_0_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.11.17 LED_0_AEU2_T34 Register (Address = 90h) [Reset = 00h]

LED_0_AEU2_T34 is shown in [Figure 2-88](#) and described in [Table 2-99](#).

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Figure 2-88. LED_0_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_0_aeu2_t4				led_0_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-99. LED_0_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_0_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_0_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.11.18 LED_0_AEU2_Playback Register (Address = 91h) [Reset = 00h]

LED_0_AEU2_Playback is shown in [Figure 2-89](#) and described in [Table 2-100](#).

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Figure 2-89. LED_0_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_0_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-100. LED_0_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_0_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.11.19 LED_0_AEU3_PWM_1 Register (Address = 92h) [Reset = 00h]

LED_0_AEU3_PWM_1 is shown in [Figure 2-90](#) and described in [Table 2-101](#).

Return to the [Summary Table](#).

Figure 2-90. LED_0_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_0_aeu3_pwm1							
R/W-0h							

Table 2-101. LED_0_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.20 LED_0_AEU3_PWM_2 Register (Address = 93h) [Reset = 00h]

LED_0_AEU3_PWM_2 is shown in [Figure 2-91](#) and described in [Table 2-102](#).

Return to the [Summary Table](#).

Figure 2-91. LED_0_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_0_aeu3_pwm2							
R/W-0h							

Table 2-102. LED_0_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.21 LED_0_AEU3_PWM_3 Register (Address = 94h) [Reset = 00h]

LED_0_AEU3_PWM_3 is shown in [Figure 2-92](#) and described in [Table 2-103](#).

Return to the [Summary Table](#).

Figure 2-92. LED_0_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_0_aeu3_pwm3							
R/W-0h							

Table 2-103. LED_0_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.22 LED_0_AEU3_PWM_4 Register (Address = 95h) [Reset = 00h]

LED_0_AEU3_PWM_4 is shown in [Figure 2-93](#) and described in [Table 2-104](#).

Return to the [Summary Table](#).

Figure 2-93. LED_0_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_0_aeu3_pwm4							
R/W-0h							

Table 2-104. LED_0_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.23 LED_0_AEU3_PWM_5 Register (Address = 96h) [Reset = 00h]

LED_0_AEU3_PWM_5 is shown in [Figure 2-94](#) and described in [Table 2-105](#).

Return to the [Summary Table](#).

Figure 2-94. LED_0_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_0_aeu3_pwm5							
R/W-0h							

Figure 2-94. LED_0_AEU3_PWM_5 Register (continued)
Table 2-105. LED_0_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_0_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.11.24 LED_0_AEU3_T12 Register (Address = 97h) [Reset = 00h]

LED_0_AEU3_T12 is shown in [Figure 2-95](#) and described in [Table 2-106](#).

Return to the [Summary Table](#).

Figure 2-95. LED_0_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_0_aeu3_t2				led_0_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-106. LED_0_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_0_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-106. LED_0_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_0_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.11.25 LED_0_AEU3_T34 Register (Address = 98h) [Reset = 00h]

LED_0_AEU3_T34 is shown in [Figure 2-96](#) and described in [Table 2-107](#).

Return to the [Summary Table](#).

Figure 2-96. LED_0_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_0_aeu3_t4				led_0_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-107. LED_0_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_0_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-107. LED_0_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_0_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.11.26 LED_0_AEU3_Playback Register (Address = 99h) [Reset = 00h]

LED_0_AEU3_Playback is shown in [Figure 2-97](#) and described in [Table 2-108](#).

Return to the [Summary Table](#).

Figure 2-97. LED_0_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_0_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-108. LED_0_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_0_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.12 LED_1_Autonomous_Animation Registers

Table 2-109 lists the memory-mapped registers for the LED_1_Autonomous_Animation registers. All register offset addresses not listed in Table 2-109 should be considered as reserved locations and the register contents should not be modified.

Table 2-109. LED_1_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
9Ah	LED_1_Auto_Pause	Animation pause time at the start and the end of LED_1	Go
9Bh	LED_1_Auto_Playback	Animation pattern playback times of LED_1 and active AEU number setting	Go
9Ch	LED_1_AEU1_PWM_1	PWM setting of LED_1 AEU1_PWM1	Go
9Dh	LED_1_AEU1_PWM_2	PWM setting of LED_1 AEU1_PWM2	Go
9Eh	LED_1_AEU1_PWM_3	PWM setting of LED_1 AEU1_PWM3	Go
9Fh	LED_1_AEU1_PWM_4	PWM setting of LED_1 AEU1_PWM4	Go
A0h	LED_1_AEU1_PWM_5	PWM setting of LED_1 AEU1_PWM5	Go
A1h	LED_1_AEU1_T12	Slope time setting of LED_1 AEU1_T1 and AEU1_T2	Go
A2h	LED_1_AEU1_T34	Slope time setting of LED_1 AEU1_T3 and AEU1_T4	Go
A3h	LED_1_AEU1_Playback	AEU1 pattern playback times of LED_1	Go
A4h	LED_1_AEU2_PWM_1	PWM setting of LED_1 AEU2_PWM1	Go
A5h	LED_1_AEU2_PWM_2	PWM setting of LED_1 AEU2_PWM2	Go
A6h	LED_1_AEU2_PWM_3	PWM setting of LED_1 AEU2_PWM3	Go
A7h	LED_1_AEU2_PWM_4	PWM setting of LED_1 AEU2_PWM4	Go
A8h	LED_1_AEU2_PWM_5	PWM setting of LED_1 AEU2_PWM5	Go
A9h	LED_1_AEU2_T12	Slope time setting of LED_1 AEU2_T1 and AEU2_T2	Go
AAh	LED_1_AEU2_T34	Slope time setting of LED_1 AEU2_T3 and AEU2_T4	Go
ABh	LED_1_AEU2_Playback	AEU2 pattern playback times of LED_1	Go
ACh	LED_1_AEU3_PWM_1	PWM setting of LED_1 AEU3_PWM1	Go
ADh	LED_1_AEU3_PWM_2	PWM setting of LED_1 AEU3_PWM2	Go
AEh	LED_1_AEU3_PWM_3	PWM setting of LED_1 AEU3_PWM3	Go
AFh	LED_1_AEU3_PWM_4	PWM setting of LED_1 AEU3_PWM4	Go
B0h	LED_1_AEU3_PWM_5	PWM setting of LED_1 AEU3_PWM5	Go
B1h	LED_1_AEU3_T12	Slope time setting of LED_1 AEU3_T1 and AEU3_T2	Go
B2h	LED_1_AEU3_T34	Slope time setting of LED_1 AEU3_T3 and AEU3_T4	Go
B3h	LED_1_AEU3_Playback	AEU3 pattern playback times of LED_1	Go

2.12.1 LED_1_Auto_Pause Register (Address = 9Ah) [Reset = 00h]

LED_1_Auto_Pause is shown in Figure 2-98 and described in Table 2-110.

Return to the [Summary Table](#).

Figure 2-98. LED_1_Auto_Pause Register

7	6	5	4	3	2	1	0
led_1_tp_ts				led_1_tp_te			

Figure 2-98. LED_1_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-110. LED_1_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_1_tp_ts	R/W	0h	Animation pause time at the start of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_1_tp_te	R/W	0h	Animation pause time at the end of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.12.2 LED_1_Auto_Playback Register (Address = 9Bh) [Reset = 00h]

LED_1_Auto_Playback is shown in [Figure 2-99](#) and described in [Table 2-111](#).

Return to the [Summary Table](#).

Figure 2-99. LED_1_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_1_aeu_num			led_1_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-111. LED_1_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_1_aeu_num	R/W	0h	Active AEU number of LED_1 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-111. LED_1_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_1_pt	R/W	0h	Animation pattern playback times of LED_1 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.12.3 LED_1_AEU1_PWM_1 Register (Address = 9Ch) [Reset = 00h]

LED_1_AEU1_PWM_1 is shown in [Figure 2-100](#) and described in [Table 2-112](#).

Return to the [Summary Table](#).

Figure 2-100. LED_1_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_1_aeu1_pwm1							
R/W-0h							

Table 2-112. LED_1_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.4 LED_1_AEU1_PWM_2 Register (Address = 9Dh) [Reset = 00h]

LED_1_AEU1_PWM_2 is shown in [Figure 2-101](#) and described in [Table 2-113](#).

Return to the [Summary Table](#).

Figure 2-101. LED_1_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_1_aeu1_pwm2							
R/W-0h							

Table 2-113. LED_1_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.5 LED_1_AEU1_PWM_3 Register (Address = 9Eh) [Reset = 00h]

LED_1_AEU1_PWM_3 is shown in [Figure 2-102](#) and described in [Table 2-114](#).

Return to the [Summary Table](#).

Figure 2-102. LED_1_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_1_aeu1_pwm3							
R/W-0h							

Table 2-114. LED_1_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.6 LED_1_AEU1_PWM_4 Register (Address = 9Fh) [Reset = 00h]

LED_1_AEU1_PWM_4 is shown in [Figure 2-103](#) and described in [Table 2-115](#).

Return to the [Summary Table](#).

Figure 2-103. LED_1_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_1_aeu1_pwm4							
R/W-0h							

Table 2-115. LED_1_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.7 LED_1_AEU1_PWM_5 Register (Address = A0h) [Reset = 00h]

LED_1_AEU1_PWM_5 is shown in [Figure 2-104](#) and described in [Table 2-116](#).

Return to the [Summary Table](#).

Figure 2-104. LED_1_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_1_aeu1_pwm5							
R/W-0h							

Table 2-116. LED_1_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.8 LED_1_AEU1_T12 Register (Address = A1h) [Reset = 00h]

LED_1_AEU1_T12 is shown in [Figure 2-105](#) and described in [Table 2-117](#).

Return to the [Summary Table](#).

Figure 2-105. LED_1_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_1_aeu1_t2				led_1_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-117. LED_1_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_1_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_1_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.12.9 LED_1_AEU1_T34 Register (Address = A2h) [Reset = 00h]

LED_1_AEU1_T34 is shown in [Figure 2-106](#) and described in [Table 2-118](#).

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Figure 2-106. LED_1_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_1_aeu1_t4				led_1_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-118. LED_1_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_1_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_1_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.12.10 LED_1_AEU1_Playback Register (Address = A3h) [Reset = 00h]

LED_1_AEU1_Playback is shown in [Figure 2-107](#) and described in [Table 2-119](#).

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Figure 2-107. LED_1_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_1_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-119. LED_1_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_1_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.12.11 LED_1_AEU2_PWM_1 Register (Address = A4h) [Reset = 00h]

LED_1_AEU2_PWM_1 is shown in [Figure 2-108](#) and described in [Table 2-120](#).

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Figure 2-108. LED_1_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_1_aeu2_pwm1							
R/W-0h							

Table 2-120. LED_1_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.12 LED_1_AEU2_PWM_2 Register (Address = A5h) [Reset = 00h]

LED_1_AEU2_PWM_2 is shown in [Figure 2-109](#) and described in [Table 2-121](#).

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Figure 2-109. LED_1_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_1_aeu2_pwm2							
R/W-0h							

Table 2-121. LED_1_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.13 LED_1_AEU2_PWM_3 Register (Address = A6h) [Reset = 00h]

LED_1_AEU2_PWM_3 is shown in [Figure 2-110](#) and described in [Table 2-122](#).

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Figure 2-110. LED_1_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_1_aeu2_pwm3							
R/W-0h							

Table 2-122. LED_1_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.14 LED_1_AEU2_PWM_4 Register (Address = A7h) [Reset = 00h]

LED_1_AEU2_PWM_4 is shown in [Figure 2-111](#) and described in [Table 2-123](#).

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Figure 2-111. LED_1_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_1_aeu2_pwm4							
R/W-0h							

Table 2-123. LED_1_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.15 LED_1_AEU2_PWM_5 Register (Address = A8h) [Reset = 00h]

LED_1_AEU2_PWM_5 is shown in [Figure 2-112](#) and described in [Table 2-124](#).

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Figure 2-112. LED_1_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_1_aeu2_pwm5							
R/W-0h							

Table 2-124. LED_1_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.16 LED_1_AEU2_T12 Register (Address = A9h) [Reset = 00h]

LED_1_AEU2_T12 is shown in [Figure 2-113](#) and described in [Table 2-125](#).

Return to the [Summary Table](#).

Figure 2-113. LED_1_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_1_aeu2_t2				led_1_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-125. LED_1_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_1_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_1_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.12.17 LED_1_AEU2_T34 Register (Address = AAh) [Reset = 00h]

LED_1_AEU2_T34 is shown in [Figure 2-114](#) and described in [Table 2-126](#).

Return to the [Summary Table](#).

Figure 2-114. LED_1_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_1_aeu2_t4				led_1_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-126. LED_1_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_1_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_1_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.12.18 LED_1_AEU2_Playback Register (Address = ABh) [Reset = 00h]

LED_1_AEU2_Playback is shown in [Figure 2-115](#) and described in [Table 2-127](#).

Return to the [Summary Table](#).

Figure 2-115. LED_1_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_1_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-127. LED_1_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_1_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.12.19 LED_1_AEU3_PWM_1 Register (Address = ACh) [Reset = 00h]

LED_1_AEU3_PWM_1 is shown in [Figure 2-116](#) and described in [Table 2-128](#).

Return to the [Summary Table](#).

Figure 2-116. LED_1_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_1_aeu3_pwm1							
R/W-0h							

Table 2-128. LED_1_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.20 LED_1_AEU3_PWM_2 Register (Address = ADh) [Reset = 00h]

LED_1_AEU3_PWM_2 is shown in [Figure 2-117](#) and described in [Table 2-129](#).

Return to the [Summary Table](#).

Figure 2-117. LED_1_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_1_aeu3_pwm2							
R/W-0h							

Table 2-129. LED_1_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.21 LED_1_AEU3_PWM_3 Register (Address = AEh) [Reset = 00h]

LED_1_AEU3_PWM_3 is shown in [Figure 2-118](#) and described in [Table 2-130](#).

Return to the [Summary Table](#).

Figure 2-118. LED_1_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_1_aeu3_pwm3							
R/W-0h							

Table 2-130. LED_1_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.22 LED_1_AEU3_PWM_4 Register (Address = AFh) [Reset = 00h]

LED_1_AEU3_PWM_4 is shown in [Figure 2-119](#) and described in [Table 2-131](#).

Return to the [Summary Table](#).

Figure 2-119. LED_1_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_1_aeu3_pwm4							
R/W-0h							

Table 2-131. LED_1_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.23 LED_1_AEU3_PWM_5 Register (Address = B0h) [Reset = 00h]

LED_1_AEU3_PWM_5 is shown in [Figure 2-120](#) and described in [Table 2-132](#).

Return to the [Summary Table](#).

Figure 2-120. LED_1_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_1_aeu3_pwm5							
R/W-0h							

Figure 2-120. LED_1_AEU3_PWM_5 Register (continued)
Table 2-132. LED_1_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_1_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.12.24 LED_1_AEU3_T12 Register (Address = B1h) [Reset = 00h]

LED_1_AEU3_T12 is shown in [Figure 2-121](#) and described in [Table 2-133](#).

Return to the [Summary Table](#).

Figure 2-121. LED_1_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_1_aeu3_t2				led_1_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-133. LED_1_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_1_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-133. LED_1_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_1_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.12.25 LED_1_AEU3_T34 Register (Address = B2h) [Reset = 00h]

LED_1_AEU3_T34 is shown in [Figure 2-122](#) and described in [Table 2-134](#).

Return to the [Summary Table](#).

Figure 2-122. LED_1_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_1_aeu3_t4				led_1_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-134. LED_1_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_1_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-134. LED_1_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_1_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.12.26 LED_1_AEU3_Playback Register (Address = B3h) [Reset = 00h]

LED_1_AEU3_Playback is shown in [Figure 2-123](#) and described in [Table 2-135](#).

Return to the [Summary Table](#).

Figure 2-123. LED_1_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_1_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-135. LED_1_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_1_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.13 LED_2_Autonomous_Animation Registers

Table 2-136 lists the memory-mapped registers for the LED_2_Autonomous_Animation registers. All register offset addresses not listed in Table 2-136 should be considered as reserved locations and the register contents should not be modified.

Table 2-136. LED_2_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
B4h	LED_2_Auto_Pause	Animation pause time at the start and the end of LED_2	Go
B5h	LED_2_Auto_Playback	Animation pattern playback times of LED_2 and active AEU number setting	Go
B6h	LED_2_AEU1_PWM_1	PWM setting of LED_2 AEU1_PWM1	Go
B7h	LED_2_AEU1_PWM_2	PWM setting of LED_2 AEU1_PWM2	Go
B8h	LED_2_AEU1_PWM_3	PWM setting of LED_2 AEU1_PWM3	Go
B9h	LED_2_AEU1_PWM_4	PWM setting of LED_2 AEU1_PWM4	Go
BAh	LED_2_AEU1_PWM_5	PWM setting of LED_2 AEU1_PWM5	Go
BBh	LED_2_AEU1_T12	Slope time setting of LED_2 AEU1_T1 and AEU1_T2	Go
BCh	LED_2_AEU1_T34	Slope time setting of LED_2 AEU1_T3 and AEU1_T4	Go
BDh	LED_2_AEU1_Playback	AEU1 pattern playback times of LED_2	Go
BEh	LED_2_AEU2_PWM_1	PWM setting of LED_2 AEU2_PWM1	Go
BFh	LED_2_AEU2_PWM_2	PWM setting of LED_2 AEU2_PWM2	Go
C0h	LED_2_AEU2_PWM_3	PWM setting of LED_2 AEU2_PWM3	Go
C1h	LED_2_AEU2_PWM_4	PWM setting of LED_2 AEU2_PWM4	Go
C2h	LED_2_AEU2_PWM_5	PWM setting of LED_2 AEU2_PWM5	Go
C3h	LED_2_AEU2_T12	Slope time setting of LED_2 AEU2_T1 and AEU2_T2	Go
C4h	LED_2_AEU2_T34	Slope time setting of LED_2 AEU2_T3 and AEU2_T4	Go
C5h	LED_2_AEU2_Playback	AEU2 pattern playback times of LED_2	Go
C6h	LED_2_AEU3_PWM_1	PWM setting of LED_2 AEU3_PWM1	Go
C7h	LED_2_AEU3_PWM_2	PWM setting of LED_2 AEU3_PWM2	Go
C8h	LED_2_AEU3_PWM_3	PWM setting of LED_2 AEU3_PWM3	Go
C9h	LED_2_AEU3_PWM_4	PWM setting of LED_2 AEU3_PWM4	Go
CAh	LED_2_AEU3_PWM_5	PWM setting of LED_2 AEU3_PWM5	Go
CBh	LED_2_AEU3_T12	Slope time setting of LED_2 AEU3_T1 and AEU3_T2	Go
CCh	LED_2_AEU3_T34	Slope time setting of LED_2 AEU3_T3 and AEU3_T4	Go
CDh	LED_2_AEU3_Playback	AEU3 pattern playback times of LED_2	Go

2.13.1 LED_2_Auto_Pause Register (Address = B4h) [Reset = 00h]

LED_2_Auto_Pause is shown in Figure 2-124 and described in Table 2-137.

Return to the [Summary Table](#).

Figure 2-124. LED_2_Auto_Pause Register

7	6	5	4	3	2	1	0
led_2_tp_ts				led_2_tp_te			

Figure 2-124. LED_2_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-137. LED_2_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_2_tp_ts	R/W	0h	Animation pause time at the start of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_2_tp_te	R/W	0h	Animation pause time at the end of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.13.2 LED_2_Auto_Playback Register (Address = B5h) [Reset = 00h]

LED_2_Auto_Playback is shown in [Figure 2-125](#) and described in [Table 2-138](#).

Return to the [Summary Table](#).

Figure 2-125. LED_2_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_2_aeu_num			led_2_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-138. LED_2_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_2_aeu_num	R/W	0h	Active AEU number of LED_2 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-138. LED_2_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_2_pt	R/W	0h	Animation pattern playback times of LED_2 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.13.3 LED_2_AEU1_PWM_1 Register (Address = B6h) [Reset = 00h]

LED_2_AEU1_PWM_1 is shown in [Figure 2-126](#) and described in [Table 2-139](#).

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Figure 2-126. LED_2_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_2_aeu1_pwm1							
R/W-0h							

Table 2-139. LED_2_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.4 LED_2_AEU1_PWM_2 Register (Address = B7h) [Reset = 00h]

LED_2_AEU1_PWM_2 is shown in [Figure 2-127](#) and described in [Table 2-140](#).

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Figure 2-127. LED_2_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_2_aeu1_pwm2							
R/W-0h							

Table 2-140. LED_2_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.5 LED_2_AEU1_PWM_3 Register (Address = B8h) [Reset = 00h]

LED_2_AEU1_PWM_3 is shown in [Figure 2-128](#) and described in [Table 2-141](#).

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Figure 2-128. LED_2_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_2_aeu1_pwm3							
R/W-0h							

Table 2-141. LED_2_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.6 LED_2_AEU1_PWM_4 Register (Address = B9h) [Reset = 00h]

LED_2_AEU1_PWM_4 is shown in [Figure 2-129](#) and described in [Table 2-142](#).

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Figure 2-129. LED_2_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_2_aeu1_pwm4							
R/W-0h							

Table 2-142. LED_2_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.7 LED_2_AEU1_PWM_5 Register (Address = BAh) [Reset = 00h]

LED_2_AEU1_PWM_5 is shown in [Figure 2-130](#) and described in [Table 2-143](#).

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Figure 2-130. LED_2_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_2_aeu1_pwm5							
R/W-0h							

Table 2-143. LED_2_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.8 LED_2_AEU1_T12 Register (Address = BBh) [Reset = 00h]

LED_2_AEU1_T12 is shown in [Figure 2-131](#) and described in [Table 2-144](#).

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Figure 2-131. LED_2_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_2_aeu1_t2				led_2_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-144. LED_2_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_2_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_2_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.13.9 LED_2_AEU1_T34 Register (Address = BCh) [Reset = 00h]

LED_2_AEU1_T34 is shown in [Figure 2-132](#) and described in [Table 2-145](#).

Return to the [Summary Table](#).

Figure 2-132. LED_2_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_2_aeu1_t4				led_2_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-145. LED_2_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_2_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_2_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.13.10 LED_2_AEU1_Playback Register (Address = BDh) [Reset = 00h]

LED_2_AEU1_Playback is shown in [Figure 2-133](#) and described in [Table 2-146](#).

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Figure 2-133. LED_2_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_2_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-146. LED_2_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_2_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.13.11 LED_2_AEU2_PWM_1 Register (Address = BEh) [Reset = 00h]

LED_2_AEU2_PWM_1 is shown in [Figure 2-134](#) and described in [Table 2-147](#).

Return to the [Summary Table](#).

Figure 2-134. LED_2_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_2_aeu2_pwm1							
R/W-0h							

Table 2-147. LED_2_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.12 LED_2_AEU2_PWM_2 Register (Address = BFh) [Reset = 00h]

LED_2_AEU2_PWM_2 is shown in [Figure 2-135](#) and described in [Table 2-148](#).

Return to the [Summary Table](#).

Figure 2-135. LED_2_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_2_aeu2_pwm2							
R/W-0h							

Table 2-148. LED_2_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.13 LED_2_AEU2_PWM_3 Register (Address = C0h) [Reset = 00h]

LED_2_AEU2_PWM_3 is shown in [Figure 2-136](#) and described in [Table 2-149](#).

Return to the [Summary Table](#).

Figure 2-136. LED_2_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_2_aeu2_pwm3							
R/W-0h							

Table 2-149. LED_2_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.14 LED_2_AEU2_PWM_4 Register (Address = C1h) [Reset = 00h]

LED_2_AEU2_PWM_4 is shown in [Figure 2-137](#) and described in [Table 2-150](#).

Return to the [Summary Table](#).

Figure 2-137. LED_2_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_2_aeu2_pwm4							
R/W-0h							

Table 2-150. LED_2_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.15 LED_2_AEU2_PWM_5 Register (Address = C2h) [Reset = 00h]

LED_2_AEU2_PWM_5 is shown in [Figure 2-138](#) and described in [Table 2-151](#).

Return to the [Summary Table](#).

Figure 2-138. LED_2_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_2_aeu2_pwm5							
R/W-0h							

Table 2-151. LED_2_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.16 LED_2_AEU2_T12 Register (Address = C3h) [Reset = 00h]

LED_2_AEU2_T12 is shown in [Figure 2-139](#) and described in [Table 2-152](#).

Return to the [Summary Table](#).

Figure 2-139. LED_2_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_2_aeu2_t2				led_2_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-152. LED_2_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_2_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_2_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.13.17 LED_2_AEU2_T34 Register (Address = C4h) [Reset = 00h]

LED_2_AEU2_T34 is shown in [Figure 2-140](#) and described in [Table 2-153](#).

Return to the [Summary Table](#).

Figure 2-140. LED_2_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_2_aeu2_t4				led_2_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-153. LED_2_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_2_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_2_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.13.18 LED_2_AEU2_Playback Register (Address = C5h) [Reset = 00h]

LED_2_AEU2_Playback is shown in [Figure 2-141](#) and described in [Table 2-154](#).

Return to the [Summary Table](#).

Figure 2-141. LED_2_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_2_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-154. LED_2_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_2_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.13.19 LED_2_AEU3_PWM_1 Register (Address = C6h) [Reset = 00h]

LED_2_AEU3_PWM_1 is shown in [Figure 2-142](#) and described in [Table 2-155](#).

Return to the [Summary Table](#).

Figure 2-142. LED_2_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_2_aeu3_pwm1							
R/W-0h							

Table 2-155. LED_2_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.20 LED_2_AEU3_PWM_2 Register (Address = C7h) [Reset = 00h]

LED_2_AEU3_PWM_2 is shown in [Figure 2-143](#) and described in [Table 2-156](#).

Return to the [Summary Table](#).

Figure 2-143. LED_2_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_2_aeu3_pwm2							
R/W-0h							

Table 2-156. LED_2_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.21 LED_2_AEU3_PWM_3 Register (Address = C8h) [Reset = 00h]

LED_2_AEU3_PWM_3 is shown in [Figure 2-144](#) and described in [Table 2-157](#).

Return to the [Summary Table](#).

Figure 2-144. LED_2_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_2_aeu3_pwm3							
R/W-0h							

Table 2-157. LED_2_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.22 LED_2_AEU3_PWM_4 Register (Address = C9h) [Reset = 00h]

LED_2_AEU3_PWM_4 is shown in [Figure 2-145](#) and described in [Table 2-158](#).

Return to the [Summary Table](#).

Figure 2-145. LED_2_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_2_aeu3_pwm4							
R/W-0h							

Table 2-158. LED_2_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.23 LED_2_AEU3_PWM_5 Register (Address = CAh) [Reset = 00h]

LED_2_AEU3_PWM_5 is shown in [Figure 2-146](#) and described in [Table 2-159](#).

Return to the [Summary Table](#).

Figure 2-146. LED_2_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_2_aeu3_pwm5							
R/W-0h							

Figure 2-146. LED_2_AEU3_PWM_5 Register (continued)
Table 2-159. LED_2_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_2_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.13.24 LED_2_AEU3_T12 Register (Address = CBh) [Reset = 00h]

LED_2_AEU3_T12 is shown in [Figure 2-147](#) and described in [Table 2-160](#).

Return to the [Summary Table](#).

Figure 2-147. LED_2_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_2_aeu3_t2				led_2_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-160. LED_2_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_2_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-160. LED_2_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_2_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.13.25 LED_2_AEU3_T34 Register (Address = CCh) [Reset = 00h]

LED_2_AEU3_T34 is shown in [Figure 2-148](#) and described in [Table 2-161](#).

Return to the [Summary Table](#).

Figure 2-148. LED_2_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_2_aeu3_t4				led_2_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-161. LED_2_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_2_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-161. LED_2_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_2_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.13.26 LED_2_AEU3_Playback Register (Address = CDh) [Reset = 00h]

LED_2_AEU3_Playback is shown in [Figure 2-149](#) and described in [Table 2-162](#).

Return to the [Summary Table](#).

Figure 2-149. LED_2_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_2_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-162. LED_2_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_2_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.14 LED_3_Autonomous_Animation Registers

Table 2-163 lists the memory-mapped registers for the LED_3_Autonomous_Animation registers. All register offset addresses not listed in Table 2-163 should be considered as reserved locations and the register contents should not be modified.

Table 2-163. LED_3_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
CEh	LED_3_Auto_Pause	Animation pause time at the start and the end of LED_3	Go
CFh	LED_3_Auto_Playback	Animation pattern playback times of LED_3 and active AEU number setting	Go
D0h	LED_3_AEU1_PWM_1	PWM setting of LED_3 AEU1_PWM1	Go
D1h	LED_3_AEU1_PWM_2	PWM setting of LED_3 AEU1_PWM2	Go
D2h	LED_3_AEU1_PWM_3	PWM setting of LED_3 AEU1_PWM3	Go
D3h	LED_3_AEU1_PWM_4	PWM setting of LED_3 AEU1_PWM4	Go
D4h	LED_3_AEU1_PWM_5	PWM setting of LED_3 AEU1_PWM5	Go
D5h	LED_3_AEU1_T12	Slope time setting of LED_3 AEU1_T1 and AEU1_T2	Go
D6h	LED_3_AEU1_T34	Slope time setting of LED_3 AEU1_T3 and AEU1_T4	Go
D7h	LED_3_AEU1_Playback	AEU1 pattern playback times of LED_3	Go
D8h	LED_3_AEU2_PWM_1	PWM setting of LED_3 AEU2_PWM1	Go
D9h	LED_3_AEU2_PWM_2	PWM setting of LED_3 AEU2_PWM2	Go
DAh	LED_3_AEU2_PWM_3	PWM setting of LED_3 AEU2_PWM3	Go
DBh	LED_3_AEU2_PWM_4	PWM setting of LED_3 AEU2_PWM4	Go
DCh	LED_3_AEU2_PWM_5	PWM setting of LED_3 AEU2_PWM5	Go
DDh	LED_3_AEU2_T12	Slope time setting of LED_3 AEU2_T1 and AEU2_T2	Go
DEh	LED_3_AEU2_T34	Slope time setting of LED_3 AEU2_T3 and AEU2_T4	Go
DFh	LED_3_AEU2_Playback	AEU2 pattern playback times of LED_3	Go
E0h	LED_3_AEU3_PWM_1	PWM setting of LED_3 AEU3_PWM1	Go
E1h	LED_3_AEU3_PWM_2	PWM setting of LED_3 AEU3_PWM2	Go
E2h	LED_3_AEU3_PWM_3	PWM setting of LED_3 AEU3_PWM3	Go
E3h	LED_3_AEU3_PWM_4	PWM setting of LED_3 AEU3_PWM4	Go
E4h	LED_3_AEU3_PWM_5	PWM setting of LED_3 AEU3_PWM5	Go
E5h	LED_3_AEU3_T12	Slope time setting of LED_3 AEU3_T1 and AEU3_T2	Go
E6h	LED_3_AEU3_T34	Slope time setting of LED_3 AEU3_T3 and AEU3_T4	Go
E7h	LED_3_AEU3_Playback	AEU3 pattern playback times of LED_3	Go

2.14.1 LED_3_Auto_Pause Register (Address = CEh) [Reset = 00h]

LED_3_Auto_Pause is shown in Figure 2-150 and described in Table 2-164.

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Figure 2-150. LED_3_Auto_Pause Register

7	6	5	4	3	2	1	0
led_3_tp_ts				led_3_tp_te			

Figure 2-150. LED_3_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-164. LED_3_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_3_tp_ts	R/W	0h	Animation pause time at the start of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_3_tp_te	R/W	0h	Animation pause time at the end of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.14.2 LED_3_Auto_Playback Register (Address = CFh) [Reset = 00h]

LED_3_Auto_Playback is shown in [Figure 2-151](#) and described in [Table 2-165](#).

Return to the [Summary Table](#).

Figure 2-151. LED_3_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_3_aeu_num			led_3_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-165. LED_3_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_3_aeu_num	R/W	0h	Active AEU number of LED_3 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-165. LED_3_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_3_pt	R/W	0h	Animation pattern playback times of LED_3 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.14.3 LED_3_AEU1_PWM_1 Register (Address = D0h) [Reset = 00h]

LED_3_AEU1_PWM_1 is shown in [Figure 2-152](#) and described in [Table 2-166](#).

Return to the [Summary Table](#).

Figure 2-152. LED_3_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_3_aeu1_pwm1							
R/W-0h							

Table 2-166. LED_3_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.4 LED_3_AEU1_PWM_2 Register (Address = D1h) [Reset = 00h]

LED_3_AEU1_PWM_2 is shown in [Figure 2-153](#) and described in [Table 2-167](#).

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Figure 2-153. LED_3_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_3_aeu1_pwm2							
R/W-0h							

Table 2-167. LED_3_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.5 LED_3_AEU1_PWM_3 Register (Address = D2h) [Reset = 00h]

LED_3_AEU1_PWM_3 is shown in [Figure 2-154](#) and described in [Table 2-168](#).

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Figure 2-154. LED_3_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_3_aeu1_pwm3							
R/W-0h							

Table 2-168. LED_3_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.6 LED_3_AEU1_PWM_4 Register (Address = D3h) [Reset = 00h]

LED_3_AEU1_PWM_4 is shown in [Figure 2-155](#) and described in [Table 2-169](#).

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Figure 2-155. LED_3_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_3_aeu1_pwm4							
R/W-0h							

Table 2-169. LED_3_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.7 LED_3_AEU1_PWM_5 Register (Address = D4h) [Reset = 00h]

LED_3_AEU1_PWM_5 is shown in [Figure 2-156](#) and described in [Table 2-170](#).

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Figure 2-156. LED_3_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_3_aeu1_pwm5							
R/W-0h							

Table 2-170. LED_3_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.8 LED_3_AEU1_T12 Register (Address = D5h) [Reset = 00h]

LED_3_AEU1_T12 is shown in [Figure 2-157](#) and described in [Table 2-171](#).

Return to the [Summary Table](#).

Figure 2-157. LED_3_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_3_aeu1_t2				led_3_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-171. LED_3_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_3_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_3_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.14.9 LED_3_AEU1_T34 Register (Address = D6h) [Reset = 00h]

LED_3_AEU1_T34 is shown in [Figure 2-158](#) and described in [Table 2-172](#).

Return to the [Summary Table](#).

Figure 2-158. LED_3_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_3_aeu1_t4				led_3_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-172. LED_3_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_3_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_3_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.14.10 LED_3_AEU1_Playback Register (Address = D7h) [Reset = 00h]

LED_3_AEU1_Playback is shown in [Figure 2-159](#) and described in [Table 2-173](#).

Return to the [Summary Table](#).

Figure 2-159. LED_3_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_3_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-173. LED_3_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_3_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_3 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.14.11 LED_3_AEU2_PWM_1 Register (Address = D8h) [Reset = 00h]

LED_3_AEU2_PWM_1 is shown in [Figure 2-160](#) and described in [Table 2-174](#).

Return to the [Summary Table](#).

Figure 2-160. LED_3_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_3_aeu2_pwm1							
R/W-0h							

Table 2-174. LED_3_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.12 LED_3_AEU2_PWM_2 Register (Address = D9h) [Reset = 00h]

LED_3_AEU2_PWM_2 is shown in [Figure 2-161](#) and described in [Table 2-175](#).

Return to the [Summary Table](#).

Figure 2-161. LED_3_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_3_aeu2_pwm2							
R/W-0h							

Table 2-175. LED_3_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.13 LED_3_AEU2_PWM_3 Register (Address = DAh) [Reset = 00h]

LED_3_AEU2_PWM_3 is shown in [Figure 2-162](#) and described in [Table 2-176](#).

Return to the [Summary Table](#).

Figure 2-162. LED_3_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_3_aeu2_pwm3							
R/W-0h							

Table 2-176. LED_3_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.14 LED_3_AEU2_PWM_4 Register (Address = DBh) [Reset = 00h]

LED_3_AEU2_PWM_4 is shown in [Figure 2-163](#) and described in [Table 2-177](#).

Return to the [Summary Table](#).

Figure 2-163. LED_3_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_3_aeu2_pwm4							
R/W-0h							

Table 2-177. LED_3_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.15 LED_3_AEU2_PWM_5 Register (Address = DCh) [Reset = 00h]

LED_3_AEU2_PWM_5 is shown in [Figure 2-164](#) and described in [Table 2-178](#).

Return to the [Summary Table](#).

Figure 2-164. LED_3_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_3_aeu2_pwm5							
R/W-0h							

Table 2-178. LED_3_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.16 LED_3_AEU2_T12 Register (Address = DDh) [Reset = 00h]

LED_3_AEU2_T12 is shown in [Figure 2-165](#) and described in [Table 2-179](#).

Return to the [Summary Table](#).

Figure 2-165. LED_3_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_3_aeu2_t2				led_3_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-179. LED_3_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_3_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_3_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.14.17 LED_3_AEU2_T34 Register (Address = DEh) [Reset = 00h]

LED_3_AEU2_T34 is shown in [Figure 2-166](#) and described in [Table 2-180](#).

Return to the [Summary Table](#).

Figure 2-166. LED_3_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_3_aeu2_t4				led_3_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-180. LED_3_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_3_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_3_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.14.18 LED_3_AEU2_Playback Register (Address = DFh) [Reset = 00h]

LED_3_AEU2_Playback is shown in [Figure 2-167](#) and described in [Table 2-181](#).

Return to the [Summary Table](#).

Figure 2-167. LED_3_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_3_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-181. LED_3_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_3_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_3 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.14.19 LED_3_AEU3_PWM_1 Register (Address = E0h) [Reset = 00h]

LED_3_AEU3_PWM_1 is shown in [Figure 2-168](#) and described in [Table 2-182](#).

Return to the [Summary Table](#).

Figure 2-168. LED_3_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_3_aeu3_pwm1							
R/W-0h							

Table 2-182. LED_3_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.20 LED_3_AEU3_PWM_2 Register (Address = E1h) [Reset = 00h]

LED_3_AEU3_PWM_2 is shown in [Figure 2-169](#) and described in [Table 2-183](#).

Return to the [Summary Table](#).

Figure 2-169. LED_3_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_3_aeu3_pwm2							
R/W-0h							

Table 2-183. LED_3_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.21 LED_3_AEU3_PWM_3 Register (Address = E2h) [Reset = 00h]

LED_3_AEU3_PWM_3 is shown in [Figure 2-170](#) and described in [Table 2-184](#).

Return to the [Summary Table](#).

Figure 2-170. LED_3_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_3_aeu3_pwm3							
R/W-0h							

Table 2-184. LED_3_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.22 LED_3_AEU3_PWM_4 Register (Address = E3h) [Reset = 00h]

LED_3_AEU3_PWM_4 is shown in [Figure 2-171](#) and described in [Table 2-185](#).

Return to the [Summary Table](#).

Figure 2-171. LED_3_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_3_aeu3_pwm4							
R/W-0h							

Table 2-185. LED_3_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.23 LED_3_AEU3_PWM_5 Register (Address = E4h) [Reset = 00h]

LED_3_AEU3_PWM_5 is shown in [Figure 2-172](#) and described in [Table 2-186](#).

Return to the [Summary Table](#).

Figure 2-172. LED_3_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_3_aeu3_pwm5							
R/W-0h							

Figure 2-172. LED_3_AEU3_PWM_5 Register (continued)
Table 2-186. LED_3_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_3_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_3 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.14.24 LED_3_AEU3_T12 Register (Address = E5h) [Reset = 00h]

LED_3_AEU3_T12 is shown in [Figure 2-173](#) and described in [Table 2-187](#).

Return to the [Summary Table](#).

Figure 2-173. LED_3_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_3_aeu3_t2				led_3_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-187. LED_3_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_3_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-187. LED_3_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_3_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.14.25 LED_3_AEU3_T34 Register (Address = E6h) [Reset = 00h]

 LED_3_AEU3_T34 is shown in [Figure 2-174](#) and described in [Table 2-188](#).

 Return to the [Summary Table](#).

Figure 2-174. LED_3_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_3_aeu3_t4				led_3_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-188. LED_3_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_3_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-188. LED_3_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_3_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_3 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.14.26 LED_3_AEU3_Playback Register (Address = E7h) [Reset = 00h]

LED_3_AEU3_Playback is shown in [Figure 2-175](#) and described in [Table 2-189](#).

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Figure 2-175. LED_3_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_3_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-189. LED_3_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_3_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_3 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.15 LED_A0_Autonomous_Animation Registers

Table 2-190 lists the memory-mapped registers for the LED_A0_Autonomous_Animation registers. All register offset addresses not listed in Table 2-190 should be considered as reserved locations and the register contents should not be modified.

Table 2-190. LED_A0_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
E8h	LED_A0_Auto_Pause	Animation pause time at the start and the end of LED_A0	Go
E9h	LED_A0_Auto_Playback	Animation pattern playback times of LED_A0 and active AEU number setting	Go
EAh	LED_A0_AEU1_PWM_1	PWM setting of LED_A0 AEU1_PWM1	Go
EBh	LED_A0_AEU1_PWM_2	PWM setting of LED_A0 AEU1_PWM2	Go
ECh	LED_A0_AEU1_PWM_3	PWM setting of LED_A0 AEU1_PWM3	Go
EDh	LED_A0_AEU1_PWM_4	PWM setting of LED_A0 AEU1_PWM4	Go
EEh	LED_A0_AEU1_PWM_5	PWM setting of LED_A0 AEU1_PWM5	Go
EFh	LED_A0_AEU1_T12	Slope time setting of LED_A0 AEU1_T1 and AEU1_T2	Go
F0h	LED_A0_AEU1_T34	Slope time setting of LED_A0 AEU1_T3 and AEU1_T4	Go
F1h	LED_A0_AEU1_Playback	AEU1 pattern playback times of LED_A0	Go
F2h	LED_A0_AEU2_PWM_1	PWM setting of LED_A0 AEU2_PWM1	Go
F3h	LED_A0_AEU2_PWM_2	PWM setting of LED_A0 AEU2_PWM2	Go
F4h	LED_A0_AEU2_PWM_3	PWM setting of LED_A0 AEU2_PWM3	Go
F5h	LED_A0_AEU2_PWM_4	PWM setting of LED_A0 AEU2_PWM4	Go
F6h	LED_A0_AEU2_PWM_5	PWM setting of LED_A0 AEU2_PWM5	Go
F7h	LED_A0_AEU2_T12	Slope time setting of LED_A0 AEU2_T1 and AEU2_T2	Go
F8h	LED_A0_AEU2_T34	Slope time setting of LED_A0 AEU2_T3 and AEU2_T4	Go
F9h	LED_A0_AEU2_Playback	AEU2 pattern playback times of LED_A0	Go
FAh	LED_A0_AEU3_PWM_1	PWM setting of LED_A0 AEU3_PWM1	Go
FBh	LED_A0_AEU3_PWM_2	PWM setting of LED_A0 AEU3_PWM2	Go
FCh	LED_A0_AEU3_PWM_3	PWM setting of LED_A0 AEU3_PWM3	Go
FDh	LED_A0_AEU3_PWM_4	PWM setting of LED_A0 AEU3_PWM4	Go
FEh	LED_A0_AEU3_PWM_5	PWM setting of LED_A0 AEU3_PWM5	Go
FFh	LED_A0_AEU3_T12	Slope time setting of LED_A0 AEU3_T1 and AEU3_T2	Go
100h	LED_A0_AEU3_T34	Slope time setting of LED_A0 AEU3_T3 and AEU3_T4	Go
101h	LED_A0_AEU3_Playback	AEU3 pattern playback times of LED_A0	Go

2.15.1 LED_A0_Auto_Pause Register (Address = E8h) [Reset = 00h]

LED_A0_Auto_Pause is shown in Figure 2-176 and described in Table 2-191.

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Figure 2-176. LED_A0_Auto_Pause Register

7	6	5	4	3	2	1	0
led_a0_tp_ts				led_a0_tp_te			

Figure 2-176. LED_A0_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-191. LED_A0_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a0_tp_ts	R/W	0h	Animation pause time at the start of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a0_tp_te	R/W	0h	Animation pause time at the end of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.15.2 LED_A0_Auto_Playback Register (Address = E9h) [Reset = 00h]

LED_A0_Auto_Playback is shown in [Figure 2-177](#) and described in [Table 2-192](#).

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Figure 2-177. LED_A0_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_a0_aeu_num			led_a0_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-192. LED_A0_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_a0_aeu_num	R/W	0h	Active AEU number of LED_A0 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-192. LED_A0_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_a0_pt	R/W	0h	Animation pattern playback times of LED_A0 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.15.3 LED_A0_AEU1_PWM_1 Register (Address = EAh) [Reset = 00h]

LED_A0_AEU1_PWM_1 is shown in [Figure 2-178](#) and described in [Table 2-193](#).

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Figure 2-178. LED_A0_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_a0_aeu1_pwm1							
R/W-0h							

Table 2-193. LED_A0_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.4 LED_A0_AEU1_PWM_2 Register (Address = EBh) [Reset = 00h]

LED_A0_AEU1_PWM_2 is shown in [Figure 2-179](#) and described in [Table 2-194](#).

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Figure 2-179. LED_A0_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_a0_aeu1_pwm2							
R/W-0h							

Table 2-194. LED_A0_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.5 LED_A0_AEU1_PWM_3 Register (Address = ECh) [Reset = 00h]

LED_A0_AEU1_PWM_3 is shown in [Figure 2-180](#) and described in [Table 2-195](#).

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Figure 2-180. LED_A0_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_a0_aeu1_pwm3							
R/W-0h							

Table 2-195. LED_A0_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.6 LED_A0_AEU1_PWM_4 Register (Address = EDh) [Reset = 00h]

LED_A0_AEU1_PWM_4 is shown in [Figure 2-181](#) and described in [Table 2-196](#).

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Figure 2-181. LED_A0_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_a0_aeu1_pwm4							
R/W-0h							

Table 2-196. LED_A0_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.7 LED_A0_AEU1_PWM_5 Register (Address = EEh) [Reset = 00h]

LED_A0_AEU1_PWM_5 is shown in [Figure 2-182](#) and described in [Table 2-197](#).

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Figure 2-182. LED_A0_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_a0_aeu1_pwm5							
R/W-0h							

Table 2-197. LED_A0_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.8 LED_A0_AEU1_T12 Register (Address = EFh) [Reset = 00h]

LED_A0_AEU1_T12 is shown in [Figure 2-183](#) and described in [Table 2-198](#).

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Figure 2-183. LED_A0_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_a0_aeu1_t2				led_a0_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-198. LED_A0_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a0_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a0_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.15.9 LED_A0_AEU1_T34 Register (Address = F0h) [Reset = 00h]

LED_A0_AEU1_T34 is shown in [Figure 2-184](#) and described in [Table 2-199](#).

Return to the [Summary Table](#).

Figure 2-184. LED_A0_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_a0_aeu1_t4				led_a0_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-199. LED_A0_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a0_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a0_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.15.10 LED_A0_AEU1_Playback Register (Address = F1h) [Reset = 00h]

LED_A0_AEU1_Playback is shown in [Figure 2-185](#) and described in [Table 2-200](#).

Return to the [Summary Table](#).

Figure 2-185. LED_A0_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_a0_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-200. LED_A0_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_a0_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_A0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.15.11 LED_A0_AEU2_PWM_1 Register (Address = F2h) [Reset = 00h]

LED_A0_AEU2_PWM_1 is shown in [Figure 2-186](#) and described in [Table 2-201](#).

Return to the [Summary Table](#).

Figure 2-186. LED_A0_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_a0_aeu2_pwm1							
R/W-0h							

Table 2-201. LED_A0_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.12 LED_A0_AEU2_PWM_2 Register (Address = F3h) [Reset = 00h]

LED_A0_AEU2_PWM_2 is shown in [Figure 2-187](#) and described in [Table 2-202](#).

Return to the [Summary Table](#).

Figure 2-187. LED_A0_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_a0_aeu2_pwm2							
R/W-0h							

Table 2-202. LED_A0_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.13 LED_A0_AEU2_PWM_3 Register (Address = F4h) [Reset = 00h]

LED_A0_AEU2_PWM_3 is shown in [Figure 2-188](#) and described in [Table 2-203](#).

Return to the [Summary Table](#).

Figure 2-188. LED_A0_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_a0_aeu2_pwm3							
R/W-0h							

Table 2-203. LED_A0_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.14 LED_A0_AEU2_PWM_4 Register (Address = F5h) [Reset = 00h]

LED_A0_AEU2_PWM_4 is shown in [Figure 2-189](#) and described in [Table 2-204](#).

Return to the [Summary Table](#).

Figure 2-189. LED_A0_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_a0_aeu2_pwm4							
R/W-0h							

Table 2-204. LED_A0_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.15 LED_A0_AEU2_PWM_5 Register (Address = F6h) [Reset = 00h]

LED_A0_AEU2_PWM_5 is shown in [Figure 2-190](#) and described in [Table 2-205](#).

Return to the [Summary Table](#).

Figure 2-190. LED_A0_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_a0_aeu2_pwm5							
R/W-0h							

Table 2-205. LED_A0_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.16 LED_A0_AEU2_T12 Register (Address = F7h) [Reset = 00h]

LED_A0_AEU2_T12 is shown in [Figure 2-191](#) and described in [Table 2-206](#).

Return to the [Summary Table](#).

Figure 2-191. LED_A0_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_a0_aeu2_t2				led_a0_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-206. LED_A0_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a0_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a0_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.15.17 LED_A0_AEU2_T34 Register (Address = F8h) [Reset = 00h]

LED_A0_AEU2_T34 is shown in [Figure 2-192](#) and described in [Table 2-207](#).

Return to the [Summary Table](#).

Figure 2-192. LED_A0_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_a0_aeu2_t4				led_a0_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-207. LED_A0_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a0_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a0_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.15.18 LED_A0_AEU2_Playback Register (Address = F9h) [Reset = 00h]

LED_A0_AEU2_Playback is shown in [Figure 2-193](#) and described in [Table 2-208](#).

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Figure 2-193. LED_A0_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_a0_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-208. LED_A0_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_a0_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_A0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.15.19 LED_A0_AEU3_PWM_1 Register (Address = FAh) [Reset = 00h]

LED_A0_AEU3_PWM_1 is shown in [Figure 2-194](#) and described in [Table 2-209](#).

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Figure 2-194. LED_A0_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_a0_aeu3_pwm1							
R/W-0h							

Table 2-209. LED_A0_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.20 LED_A0_AEU3_PWM_2 Register (Address = FBh) [Reset = 00h]

LED_A0_AEU3_PWM_2 is shown in [Figure 2-195](#) and described in [Table 2-210](#).

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Figure 2-195. LED_A0_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_a0_aeu3_pwm2							
R/W-0h							

Table 2-210. LED_A0_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.21 LED_A0_AEU3_PWM_3 Register (Address = FCh) [Reset = 00h]

LED_A0_AEU3_PWM_3 is shown in [Figure 2-196](#) and described in [Table 2-211](#).

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Figure 2-196. LED_A0_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_a0_aeu3_pwm3							
R/W-0h							

Table 2-211. LED_A0_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.22 LED_A0_AEU3_PWM_4 Register (Address = FDh) [Reset = 00h]

LED_A0_AEU3_PWM_4 is shown in [Figure 2-197](#) and described in [Table 2-212](#).

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Figure 2-197. LED_A0_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_a0_aeu3_pwm4							
R/W-0h							

Table 2-212. LED_A0_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.23 LED_A0_AEU3_PWM_5 Register (Address = FEh) [Reset = 00h]

LED_A0_AEU3_PWM_5 is shown in [Figure 2-198](#) and described in [Table 2-213](#).

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Figure 2-198. LED_A0_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_a0_aeu3_pwm5							
R/W-0h							

Figure 2-198. LED_A0_AEU3_PWM_5 Register (continued)
Table 2-213. LED_A0_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a0_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_A0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.15.24 LED_A0_AEU3_T12 Register (Address = FFh) [Reset = 00h]

LED_A0_AEU3_T12 is shown in [Figure 2-199](#) and described in [Table 2-214](#).

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Figure 2-199. LED_A0_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_a0_aeu3_t2				led_a0_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-214. LED_A0_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a0_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-214. LED_A0_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_a0_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.15.25 LED_A0_AEU3_T34 Register (Address = 100h) [Reset = 00h]

LED_A0_AEU3_T34 is shown in [Figure 2-200](#) and described in [Table 2-215](#).

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Figure 2-200. LED_A0_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_a0_aeu3_t4				led_a0_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-215. LED_A0_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a0_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-215. LED_A0_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_a0_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_A0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.15.26 LED_A0_AEU3_Playback Register (Address = 101h) [Reset = 00h]

LED_A0_AEU3_Playback is shown in [Figure 2-201](#) and described in [Table 2-216](#).

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Figure 2-201. LED_A0_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_a0_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-216. LED_A0_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_a0_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_A0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.16 LED_A1_Autonomous_Animation Registers

Table 2-217 lists the memory-mapped registers for the LED_A1_Autonomous_Animation registers. All register offset addresses not listed in Table 2-217 should be considered as reserved locations and the register contents should not be modified.

Table 2-217. LED_A1_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
102h	LED_A1_Auto_Pause	Animation pause time at the start and the end of LED_A1	Go
103h	LED_A1_Auto_Playback	Animation pattern playback times of LED_A1 and active AEU number setting	Go
104h	LED_A1_AEU1_PWM_1	PWM setting of LED_A1 AEU1_PWM1	Go
105h	LED_A1_AEU1_PWM_2	PWM setting of LED_A1 AEU1_PWM2	Go
106h	LED_A1_AEU1_PWM_3	PWM setting of LED_A1 AEU1_PWM3	Go
107h	LED_A1_AEU1_PWM_4	PWM setting of LED_A1 AEU1_PWM4	Go
108h	LED_A1_AEU1_PWM_5	PWM setting of LED_A1 AEU1_PWM5	Go
109h	LED_A1_AEU1_T12	Slope time setting of LED_A1 AEU1_T1 and AEU1_T2	Go
10Ah	LED_A1_AEU1_T34	Slope time setting of LED_A1 AEU1_T3 and AEU1_T4	Go
10Bh	LED_A1_AEU1_Playback	AEU1 pattern playback times of LED_A1	Go
10Ch	LED_A1_AEU2_PWM_1	PWM setting of LED_A1 AEU2_PWM1	Go
10Dh	LED_A1_AEU2_PWM_2	PWM setting of LED_A1 AEU2_PWM2	Go
10Eh	LED_A1_AEU2_PWM_3	PWM setting of LED_A1 AEU2_PWM3	Go
10Fh	LED_A1_AEU2_PWM_4	PWM setting of LED_A1 AEU2_PWM4	Go
110h	LED_A1_AEU2_PWM_5	PWM setting of LED_A1 AEU2_PWM5	Go
111h	LED_A1_AEU2_T12	Slope time setting of LED_A1 AEU2_T1 and AEU2_T2	Go
112h	LED_A1_AEU2_T34	Slope time setting of LED_A1 AEU2_T3 and AEU2_T4	Go
113h	LED_A1_AEU2_Playback	AEU2 pattern playback times of LED_A1	Go
114h	LED_A1_AEU3_PWM_1	PWM setting of LED_A1 AEU3_PWM1	Go
115h	LED_A1_AEU3_PWM_2	PWM setting of LED_A1 AEU3_PWM2	Go
116h	LED_A1_AEU3_PWM_3	PWM setting of LED_A1 AEU3_PWM3	Go
117h	LED_A1_AEU3_PWM_4	PWM setting of LED_A1 AEU3_PWM4	Go
118h	LED_A1_AEU3_PWM_5	PWM setting of LED_A1 AEU3_PWM5	Go
119h	LED_A1_AEU3_T12	Slope time setting of LED_A1 AEU3_T1 and AEU3_T2	Go
11Ah	LED_A1_AEU3_T34	Slope time setting of LED_A1 AEU3_T3 and AEU3_T4	Go
11Bh	LED_A1_AEU3_Playback	AEU3 pattern playback times of LED_A1	Go

2.16.1 LED_A1_Auto_Pause Register (Address = 102h) [Reset = 00h]

LED_A1_Auto_Pause is shown in Figure 2-202 and described in Table 2-218.

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Figure 2-202. LED_A1_Auto_Pause Register

7	6	5	4	3	2	1	0
led_a1_tp_ts				led_a1_tp_te			

Figure 2-202. LED_A1_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-218. LED_A1_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a1_tp_ts	R/W	0h	Animation pause time at the start of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a1_tp_te	R/W	0h	Animation pause time at the end of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.16.2 LED_A1_Auto_Playback Register (Address = 103h) [Reset = 00h]

LED_A1_Auto_Playback is shown in [Figure 2-203](#) and described in [Table 2-219](#).

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Figure 2-203. LED_A1_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_a1_aeu_num			led_a1_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-219. LED_A1_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_a1_aeu_num	R/W	0h	Active AEU number of LED_A1 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-219. LED_A1_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_a1_pt	R/W	0h	Animation pattern playback times of LED_A1 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.16.3 LED_A1_AEU1_PWM_1 Register (Address = 104h) [Reset = 00h]

LED_A1_AEU1_PWM_1 is shown in [Figure 2-204](#) and described in [Table 2-220](#).

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Figure 2-204. LED_A1_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_a1_aeu1_pwm1							
R/W-0h							

Table 2-220. LED_A1_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.4 LED_A1_AEU1_PWM_2 Register (Address = 105h) [Reset = 00h]

LED_A1_AEU1_PWM_2 is shown in [Figure 2-205](#) and described in [Table 2-221](#).

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Figure 2-205. LED_A1_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_a1_aeu1_pwm2							
R/W-0h							

Table 2-221. LED_A1_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.5 LED_A1_AEU1_PWM_3 Register (Address = 106h) [Reset = 00h]

LED_A1_AEU1_PWM_3 is shown in [Figure 2-206](#) and described in [Table 2-222](#).

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Figure 2-206. LED_A1_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_a1_aeu1_pwm3							
R/W-0h							

Table 2-222. LED_A1_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.6 LED_A1_AEU1_PWM_4 Register (Address = 107h) [Reset = 00h]

LED_A1_AEU1_PWM_4 is shown in [Figure 2-207](#) and described in [Table 2-223](#).

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Figure 2-207. LED_A1_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_a1_aeu1_pwm4							
R/W-0h							

Table 2-223. LED_A1_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.7 LED_A1_AEU1_PWM_5 Register (Address = 108h) [Reset = 00h]

LED_A1_AEU1_PWM_5 is shown in [Figure 2-208](#) and described in [Table 2-224](#).

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Figure 2-208. LED_A1_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_a1_aeu1_pwm5							
R/W-0h							

Table 2-224. LED_A1_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.8 LED_A1_AEU1_T12 Register (Address = 109h) [Reset = 00h]

LED_A1_AEU1_T12 is shown in [Figure 2-209](#) and described in [Table 2-225](#).

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Figure 2-209. LED_A1_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_a1_aeu1_t2				led_a1_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-225. LED_A1_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a1_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a1_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.16.9 LED_A1_AEU1_T34 Register (Address = 10Ah) [Reset = 00h]

LED_A1_AEU1_T34 is shown in [Figure 2-210](#) and described in [Table 2-226](#).

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Figure 2-210. LED_A1_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_a1_aeu1_t4				led_a1_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-226. LED_A1_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a1_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a1_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.16.10 LED_A1_AEU1_Playback Register (Address = 10Bh) [Reset = 00h]

LED_A1_AEU1_Playback is shown in [Figure 2-211](#) and described in [Table 2-227](#).

Return to the [Summary Table](#).

Figure 2-211. LED_A1_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_a1_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-227. LED_A1_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_a1_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_A1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.16.11 LED_A1_AEU2_PWM_1 Register (Address = 10Ch) [Reset = 00h]

LED_A1_AEU2_PWM_1 is shown in [Figure 2-212](#) and described in [Table 2-228](#).

Return to the [Summary Table](#).

Figure 2-212. LED_A1_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_a1_aeu2_pwm1							
R/W-0h							

Table 2-228. LED_A1_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.12 LED_A1_AEU2_PWM_2 Register (Address = 10Dh) [Reset = 00h]

LED_A1_AEU2_PWM_2 is shown in [Figure 2-213](#) and described in [Table 2-229](#).

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Figure 2-213. LED_A1_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_a1_aeu2_pwm2							
R/W-0h							

Table 2-229. LED_A1_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.13 LED_A1_AEU2_PWM_3 Register (Address = 10Eh) [Reset = 00h]

LED_A1_AEU2_PWM_3 is shown in [Figure 2-214](#) and described in [Table 2-230](#).

Return to the [Summary Table](#).

Figure 2-214. LED_A1_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_a1_aeu2_pwm3							
R/W-0h							

Table 2-230. LED_A1_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.14 LED_A1_AEU2_PWM_4 Register (Address = 10Fh) [Reset = 00h]

LED_A1_AEU2_PWM_4 is shown in [Figure 2-215](#) and described in [Table 2-231](#).

Return to the [Summary Table](#).

Figure 2-215. LED_A1_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_a1_aeu2_pwm4							
R/W-0h							

Table 2-231. LED_A1_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.15 LED_A1_AEU2_PWM_5 Register (Address = 110h) [Reset = 00h]

LED_A1_AEU2_PWM_5 is shown in [Figure 2-216](#) and described in [Table 2-232](#).

Return to the [Summary Table](#).

Figure 2-216. LED_A1_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_a1_aeu2_pwm5							
R/W-0h							

Table 2-232. LED_A1_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.16 LED_A1_AEU2_T12 Register (Address = 111h) [Reset = 00h]

LED_A1_AEU2_T12 is shown in [Figure 2-217](#) and described in [Table 2-233](#).

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Figure 2-217. LED_A1_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_a1_aeu2_t2				led_a1_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-233. LED_A1_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a1_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a1_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.16.17 LED_A1_AEU2_T34 Register (Address = 112h) [Reset = 00h]

LED_A1_AEU2_T34 is shown in [Figure 2-218](#) and described in [Table 2-234](#).

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Figure 2-218. LED_A1_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_a1_aeu2_t4				led_a1_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-234. LED_A1_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a1_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a1_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.16.18 LED_A1_AEU2_Playback Register (Address = 113h) [Reset = 00h]

LED_A1_AEU2_Playback is shown in [Figure 2-219](#) and described in [Table 2-235](#).

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Figure 2-219. LED_A1_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_a1_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-235. LED_A1_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_a1_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_A1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.16.19 LED_A1_AEU3_PWM_1 Register (Address = 114h) [Reset = 00h]

LED_A1_AEU3_PWM_1 is shown in [Figure 2-220](#) and described in [Table 2-236](#).

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Figure 2-220. LED_A1_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_a1_aeu3_pwm1							
R/W-0h							

Table 2-236. LED_A1_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.20 LED_A1_AEU3_PWM_2 Register (Address = 115h) [Reset = 00h]

LED_A1_AEU3_PWM_2 is shown in [Figure 2-221](#) and described in [Table 2-237](#).

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Figure 2-221. LED_A1_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_a1_aeu3_pwm2							
R/W-0h							

Table 2-237. LED_A1_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.21 LED_A1_AEU3_PWM_3 Register (Address = 116h) [Reset = 00h]

LED_A1_AEU3_PWM_3 is shown in [Figure 2-222](#) and described in [Table 2-238](#).

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Figure 2-222. LED_A1_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_a1_aeu3_pwm3							
R/W-0h							

Table 2-238. LED_A1_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.22 LED_A1_AEU3_PWM_4 Register (Address = 117h) [Reset = 00h]

LED_A1_AEU3_PWM_4 is shown in [Figure 2-223](#) and described in [Table 2-239](#).

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Figure 2-223. LED_A1_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_a1_aeu3_pwm4							
R/W-0h							

Table 2-239. LED_A1_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.23 LED_A1_AEU3_PWM_5 Register (Address = 118h) [Reset = 00h]

LED_A1_AEU3_PWM_5 is shown in [Figure 2-224](#) and described in [Table 2-240](#).

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Figure 2-224. LED_A1_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_a1_aeu3_pwm5							
R/W-0h							

Figure 2-224. LED_A1_AEU3_PWM_5 Register (continued)
Table 2-240. LED_A1_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a1_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_A1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.16.24 LED_A1_AEU3_T12 Register (Address = 119h) [Reset = 00h]

LED_A1_AEU3_T12 is shown in [Figure 2-225](#) and described in [Table 2-241](#).

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Figure 2-225. LED_A1_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_a1_aeu3_t2				led_a1_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-241. LED_A1_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a1_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-241. LED_A1_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_a1_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.16.25 LED_A1_AEU3_T34 Register (Address = 11Ah) [Reset = 00h]

LED_A1_AEU3_T34 is shown in [Figure 2-226](#) and described in [Table 2-242](#).

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Figure 2-226. LED_A1_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_a1_aeu3_t4				led_a1_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-242. LED_A1_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a1_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-242. LED_A1_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_a1_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_A1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.16.26 LED_A1_AEU3_Playback Register (Address = 11Bh) [Reset = 00h]

LED_A1_AEU3_Playback is shown in [Figure 2-227](#) and described in [Table 2-243](#).

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Figure 2-227. LED_A1_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_a1_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-243. LED_A1_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_a1_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_A1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.17 LED_A2_Autonomous_Animation Registers

Table 2-244 lists the memory-mapped registers for the LED_A2_Autonomous_Animation registers. All register offset addresses not listed in Table 2-244 should be considered as reserved locations and the register contents should not be modified.

Table 2-244. LED_A2_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
11Ch	LED_A2_Auto_Pause	Animation pause time at the start and the end of LED_A2	Go
11Dh	LED_A2_Auto_Playback	Animation pattern playback times of LED_A2 and active AEU number setting	Go
11Eh	LED_A2_AEU1_PWM_1	PWM setting of LED_A2 AEU1_PWM1	Go
11Fh	LED_A2_AEU1_PWM_2	PWM setting of LED_A2 AEU1_PWM2	Go
120h	LED_A2_AEU1_PWM_3	PWM setting of LED_A2 AEU1_PWM3	Go
121h	LED_A2_AEU1_PWM_4	PWM setting of LED_A2 AEU1_PWM4	Go
122h	LED_A2_AEU1_PWM_5	PWM setting of LED_A2 AEU1_PWM5	Go
123h	LED_A2_AEU1_T12	Slope time setting of LED_A2 AEU1_T1 and AEU1_T2	Go
124h	LED_A2_AEU1_T34	Slope time setting of LED_A2 AEU1_T3 and AEU1_T4	Go
125h	LED_A2_AEU1_Playback	AEU1 pattern playback times of LED_A2	Go
126h	LED_A2_AEU2_PWM_1	PWM setting of LED_A2 AEU2_PWM1	Go
127h	LED_A2_AEU2_PWM_2	PWM setting of LED_A2 AEU2_PWM2	Go
128h	LED_A2_AEU2_PWM_3	PWM setting of LED_A2 AEU2_PWM3	Go
129h	LED_A2_AEU2_PWM_4	PWM setting of LED_A2 AEU2_PWM4	Go
12Ah	LED_A2_AEU2_PWM_5	PWM setting of LED_A2 AEU2_PWM5	Go
12Bh	LED_A2_AEU2_T12	Slope time setting of LED_A2 AEU2_T1 and AEU2_T2	Go
12Ch	LED_A2_AEU2_T34	Slope time setting of LED_A2 AEU2_T3 and AEU2_T4	Go
12Dh	LED_A2_AEU2_Playback	AEU2 pattern playback times of LED_A2	Go
12Eh	LED_A2_AEU3_PWM_1	PWM setting of LED_A2 AEU3_PWM1	Go
12Fh	LED_A2_AEU3_PWM_2	PWM setting of LED_A2 AEU3_PWM2	Go
130h	LED_A2_AEU3_PWM_3	PWM setting of LED_A2 AEU3_PWM3	Go
131h	LED_A2_AEU3_PWM_4	PWM setting of LED_A2 AEU3_PWM4	Go
132h	LED_A2_AEU3_PWM_5	PWM setting of LED_A2 AEU3_PWM5	Go
133h	LED_A2_AEU3_T12	Slope time setting of LED_A2 AEU3_T1 and AEU3_T2	Go
134h	LED_A2_AEU3_T34	Slope time setting of LED_A2 AEU3_T3 and AEU3_T4	Go
135h	LED_A2_AEU3_Playback	AEU3 pattern playback times of LED_A2	Go

2.17.1 LED_A2_Auto_Pause Register (Address = 11Ch) [Reset = 00h]

LED_A2_Auto_Pause is shown in Figure 2-228 and described in Table 2-245.

Return to the [Summary Table](#).

Figure 2-228. LED_A2_Auto_Pause Register

7	6	5	4	3	2	1	0
led_a2_tp_ts				led_a2_tp_te			

Figure 2-228. LED_A2_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-245. LED_A2_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a2_tp_ts	R/W	0h	Animation pause time at the start of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a2_tp_te	R/W	0h	Animation pause time at the end of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.17.2 LED_A2_Auto_Playback Register (Address = 11Dh) [Reset = 00h]

LED_A2_Auto_Playback is shown in [Figure 2-229](#) and described in [Table 2-246](#).

Return to the [Summary Table](#).

Figure 2-229. LED_A2_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_a2_aeu_num		led_a2_pt			
R/W-0h		R/W-0h		R/W-0h			

Table 2-246. LED_A2_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_a2_aeu_num	R/W	0h	Active AEU number of LED_A2 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-246. LED_A2_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_a2_pt	R/W	0h	Animation pattern playback times of LED_A2 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.17.3 LED_A2_AEU1_PWM_1 Register (Address = 11Eh) [Reset = 00h]

LED_A2_AEU1_PWM_1 is shown in [Figure 2-230](#) and described in [Table 2-247](#).

Return to the [Summary Table](#).

Figure 2-230. LED_A2_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_a2_aeu1_pwm1							
R/W-0h							

Table 2-247. LED_A2_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.4 LED_A2_AEU1_PWM_2 Register (Address = 11Fh) [Reset = 00h]

LED_A2_AEU1_PWM_2 is shown in [Figure 2-231](#) and described in [Table 2-248](#).

Return to the [Summary Table](#).

Figure 2-231. LED_A2_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_a2_aeu1_pwm2							
R/W-0h							

Table 2-248. LED_A2_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.5 LED_A2_AEU1_PWM_3 Register (Address = 120h) [Reset = 00h]

LED_A2_AEU1_PWM_3 is shown in [Figure 2-232](#) and described in [Table 2-249](#).

Return to the [Summary Table](#).

Figure 2-232. LED_A2_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_a2_aeu1_pwm3							
R/W-0h							

Table 2-249. LED_A2_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.6 LED_A2_AEU1_PWM_4 Register (Address = 121h) [Reset = 00h]

LED_A2_AEU1_PWM_4 is shown in [Figure 2-233](#) and described in [Table 2-250](#).

Return to the [Summary Table](#).

Figure 2-233. LED_A2_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_a2_aeu1_pwm4							
R/W-0h							

Table 2-250. LED_A2_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.7 LED_A2_AEU1_PWM_5 Register (Address = 122h) [Reset = 00h]

LED_A2_AEU1_PWM_5 is shown in [Figure 2-234](#) and described in [Table 2-251](#).

Return to the [Summary Table](#).

Figure 2-234. LED_A2_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_a2_aeu1_pwm5							
R/W-0h							

Table 2-251. LED_A2_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.8 LED_A2_AEU1_T12 Register (Address = 123h) [Reset = 00h]

LED_A2_AEU1_T12 is shown in [Figure 2-235](#) and described in [Table 2-252](#).

Return to the [Summary Table](#).

Figure 2-235. LED_A2_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_a2_aeu1_t2				led_a2_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-252. LED_A2_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a2_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a2_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.17.9 LED_A2_AEU1_T34 Register (Address = 124h) [Reset = 00h]

LED_A2_AEU1_T34 is shown in [Figure 2-236](#) and described in [Table 2-253](#).

Return to the [Summary Table](#).

Figure 2-236. LED_A2_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_a2_aeu1_t4				led_a2_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-253. LED_A2_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a2_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a2_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.17.10 LED_A2_AEU1_Playback Register (Address = 125h) [Reset = 00h]

LED_A2_AEU1_Playback is shown in [Figure 2-237](#) and described in [Table 2-254](#).

Return to the [Summary Table](#).

Figure 2-237. LED_A2_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_a2_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-254. LED_A2_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_a2_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_A2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.17.11 LED_A2_AEU2_PWM_1 Register (Address = 126h) [Reset = 00h]

LED_A2_AEU2_PWM_1 is shown in [Figure 2-238](#) and described in [Table 2-255](#).

Return to the [Summary Table](#).

Figure 2-238. LED_A2_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_a2_aeu2_pwm1							
R/W-0h							

Table 2-255. LED_A2_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.12 LED_A2_AEU2_PWM_2 Register (Address = 127h) [Reset = 00h]

LED_A2_AEU2_PWM_2 is shown in [Figure 2-239](#) and described in [Table 2-256](#).

Return to the [Summary Table](#).

Figure 2-239. LED_A2_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_a2_aeu2_pwm2							
R/W-0h							

Table 2-256. LED_A2_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.13 LED_A2_AEU2_PWM_3 Register (Address = 128h) [Reset = 00h]

LED_A2_AEU2_PWM_3 is shown in [Figure 2-240](#) and described in [Table 2-257](#).

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Figure 2-240. LED_A2_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_a2_aeu2_pwm3							
R/W-0h							

Table 2-257. LED_A2_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.14 LED_A2_AEU2_PWM_4 Register (Address = 129h) [Reset = 00h]

LED_A2_AEU2_PWM_4 is shown in [Figure 2-241](#) and described in [Table 2-258](#).

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Figure 2-241. LED_A2_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_a2_aeu2_pwm4							
R/W-0h							

Table 2-258. LED_A2_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.15 LED_A2_AEU2_PWM_5 Register (Address = 12Ah) [Reset = 00h]

LED_A2_AEU2_PWM_5 is shown in [Figure 2-242](#) and described in [Table 2-259](#).

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Figure 2-242. LED_A2_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_a2_aeu2_pwm5							
R/W-0h							

Table 2-259. LED_A2_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.16 LED_A2_AEU2_T12 Register (Address = 12Bh) [Reset = 00h]

LED_A2_AEU2_T12 is shown in [Figure 2-243](#) and described in [Table 2-260](#).

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Figure 2-243. LED_A2_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_a2_aeu2_t2				led_a2_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-260. LED_A2_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a2_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a2_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.17.17 LED_A2_AEU2_T34 Register (Address = 12Ch) [Reset = 00h]

LED_A2_AEU2_T34 is shown in [Figure 2-244](#) and described in [Table 2-261](#).

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Figure 2-244. LED_A2_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_a2_aeu2_t4				led_a2_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-261. LED_A2_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a2_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_a2_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.17.18 LED_A2_AEU2_Playback Register (Address = 12Dh) [Reset = 00h]

LED_A2_AEU2_Playback is shown in [Figure 2-245](#) and described in [Table 2-262](#).

Return to the [Summary Table](#).

Figure 2-245. LED_A2_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_a2_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-262. LED_A2_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_a2_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_A2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.17.19 LED_A2_AEU3_PWM_1 Register (Address = 12Eh) [Reset = 00h]

LED_A2_AEU3_PWM_1 is shown in [Figure 2-246](#) and described in [Table 2-263](#).

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Figure 2-246. LED_A2_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_a2_aeu3_pwm1							
R/W-0h							

Table 2-263. LED_A2_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.20 LED_A2_AEU3_PWM_2 Register (Address = 12Fh) [Reset = 00h]

LED_A2_AEU3_PWM_2 is shown in [Figure 2-247](#) and described in [Table 2-264](#).

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Figure 2-247. LED_A2_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_a2_aeu3_pwm2							
R/W-0h							

Table 2-264. LED_A2_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.21 LED_A2_AEU3_PWM_3 Register (Address = 130h) [Reset = 00h]

LED_A2_AEU3_PWM_3 is shown in [Figure 2-248](#) and described in [Table 2-265](#).

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Figure 2-248. LED_A2_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_a2_aeu3_pwm3							
R/W-0h							

Table 2-265. LED_A2_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.22 LED_A2_AEU3_PWM_4 Register (Address = 131h) [Reset = 00h]

LED_A2_AEU3_PWM_4 is shown in [Figure 2-249](#) and described in [Table 2-266](#).

Return to the [Summary Table](#).

Figure 2-249. LED_A2_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_a2_aeu3_pwm4							
R/W-0h							

Table 2-266. LED_A2_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.23 LED_A2_AEU3_PWM_5 Register (Address = 132h) [Reset = 00h]

LED_A2_AEU3_PWM_5 is shown in [Figure 2-250](#) and described in [Table 2-267](#).

Return to the [Summary Table](#).

Figure 2-250. LED_A2_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_a2_aeu3_pwm5							
R/W-0h							

Figure 2-250. LED_A2_AEU3_PWM_5 Register (continued)
Table 2-267. LED_A2_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_a2_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_A2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.17.24 LED_A2_AEU3_T12 Register (Address = 133h) [Reset = 00h]

LED_A2_AEU3_T12 is shown in [Figure 2-251](#) and described in [Table 2-268](#).

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Figure 2-251. LED_A2_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_a2_aeu3_t2				led_a2_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-268. LED_A2_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a2_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-268. LED_A2_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_a2_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.17.25 LED_A2_AEU3_T34 Register (Address = 134h) [Reset = 00h]

LED_A2_AEU3_T34 is shown in [Figure 2-252](#) and described in [Table 2-269](#).

Return to the [Summary Table](#).

Figure 2-252. LED_A2_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_a2_aeu3_t4				led_a2_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-269. LED_A2_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_a2_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-269. LED_A2_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_a2_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_A2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.17.26 LED_A2_AEU3_Playback Register (Address = 135h) [Reset = 00h]

LED_A2_AEU3_Playback is shown in [Figure 2-253](#) and described in [Table 2-270](#).

Return to the [Summary Table](#).

Figure 2-253. LED_A2_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_a2_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-270. LED_A2_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_a2_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_A2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.18 LED_B0_Autonomous_Animation Registers

Table 2-271 lists the memory-mapped registers for the LED_B0_Autonomous_Animation registers. All register offset addresses not listed in Table 2-271 should be considered as reserved locations and the register contents should not be modified.

Table 2-271. LED_B0_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
136h	LED_B0_Auto_Pause	Animation pause time at the start and the end of LED_B0	Go
137h	LED_B0_Auto_Playback	Animation pattern playback times of LED_B0 and active AEU number setting	Go
138h	LED_B0_AEU1_PWM_1	PWM setting of LED_B0 AEU1_PWM1	Go
139h	LED_B0_AEU1_PWM_2	PWM setting of LED_B0 AEU1_PWM2	Go
13Ah	LED_B0_AEU1_PWM_3	PWM setting of LED_B0 AEU1_PWM3	Go
13Bh	LED_B0_AEU1_PWM_4	PWM setting of LED_B0 AEU1_PWM4	Go
13Ch	LED_B0_AEU1_PWM_5	PWM setting of LED_B0 AEU1_PWM5	Go
13Dh	LED_B0_AEU1_T12	Slope time setting of LED_B0 AEU1_T1 and AEU1_T2	Go
13Eh	LED_B0_AEU1_T34	Slope time setting of LED_B0 AEU1_T3 and AEU1_T4	Go
13Fh	LED_B0_AEU1_Playback	AEU1 pattern playback times of LED_B0	Go
140h	LED_B0_AEU2_PWM_1	PWM setting of LED_B0 AEU2_PWM1	Go
141h	LED_B0_AEU2_PWM_2	PWM setting of LED_B0 AEU2_PWM2	Go
142h	LED_B0_AEU2_PWM_3	PWM setting of LED_B0 AEU2_PWM3	Go
143h	LED_B0_AEU2_PWM_4	PWM setting of LED_B0 AEU2_PWM4	Go
144h	LED_B0_AEU2_PWM_5	PWM setting of LED_B0 AEU2_PWM5	Go
145h	LED_B0_AEU2_T12	Slope time setting of LED_B0 AEU2_T1 and AEU2_T2	Go
146h	LED_B0_AEU2_T34	Slope time setting of LED_B0 AEU2_T3 and AEU2_T4	Go
147h	LED_B0_AEU2_Playback	AEU2 pattern playback times of LED_B0	Go
148h	LED_B0_AEU3_PWM_1	PWM setting of LED_B0 AEU3_PWM1	Go
149h	LED_B0_AEU3_PWM_2	PWM setting of LED_B0 AEU3_PWM2	Go
14Ah	LED_B0_AEU3_PWM_3	PWM setting of LED_B0 AEU3_PWM3	Go
14Bh	LED_B0_AEU3_PWM_4	PWM setting of LED_B0 AEU3_PWM4	Go
14Ch	LED_B0_AEU3_PWM_5	PWM setting of LED_B0 AEU3_PWM5	Go
14Dh	LED_B0_AEU3_T12	Slope time setting of LED_B0 AEU3_T1 and AEU3_T2	Go
14Eh	LED_B0_AEU3_T34	Slope time setting of LED_B0 AEU3_T3 and AEU3_T4	Go
14Fh	LED_B0_AEU3_Playback	AEU3 pattern playback times of LED_B0	Go

2.18.1 LED_B0_Auto_Pause Register (Address = 136h) [Reset = 00h]

LED_B0_Auto_Pause is shown in Figure 2-254 and described in Table 2-272.

Return to the [Summary Table](#).

Figure 2-254. LED_B0_Auto_Pause Register

7	6	5	4	3	2	1	0
led_b0_tp_ts				led_b0_tp_te			

Figure 2-254. LED_B0_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-272. LED_B0_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b0_tp_ts	R/W	0h	Animation pause time at the start of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b0_tp_te	R/W	0h	Animation pause time at the end of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.18.2 LED_B0_Auto_Playback Register (Address = 137h) [Reset = 00h]

LED_B0_Auto_Playback is shown in [Figure 2-255](#) and described in [Table 2-273](#).

Return to the [Summary Table](#).

Figure 2-255. LED_B0_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_b0_aeu_num			led_b0_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-273. LED_B0_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_b0_aeu_num	R/W	0h	Active AEU number of LED_B0 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-273. LED_B0_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_b0_pt	R/W	0h	Animation pattern playback times of LED_B0 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.18.3 LED_B0_AEU1_PWM_1 Register (Address = 138h) [Reset = 00h]

LED_B0_AEU1_PWM_1 is shown in [Figure 2-256](#) and described in [Table 2-274](#).

Return to the [Summary Table](#).

Figure 2-256. LED_B0_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_b0_aeu1_pwm1							
R/W-0h							

Table 2-274. LED_B0_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.4 LED_B0_AEU1_PWM_2 Register (Address = 139h) [Reset = 00h]

LED_B0_AEU1_PWM_2 is shown in [Figure 2-257](#) and described in [Table 2-275](#).

Return to the [Summary Table](#).

Figure 2-257. LED_B0_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_b0_aeu1_pwm2							
R/W-0h							

Table 2-275. LED_B0_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.5 LED_B0_AEU1_PWM_3 Register (Address = 13Ah) [Reset = 00h]

LED_B0_AEU1_PWM_3 is shown in [Figure 2-258](#) and described in [Table 2-276](#).

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Figure 2-258. LED_B0_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_b0_aeu1_pwm3							
R/W-0h							

Table 2-276. LED_B0_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.6 LED_B0_AEU1_PWM_4 Register (Address = 13Bh) [Reset = 00h]

LED_B0_AEU1_PWM_4 is shown in [Figure 2-259](#) and described in [Table 2-277](#).

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Figure 2-259. LED_B0_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_b0_aeu1_pwm4							
R/W-0h							

Table 2-277. LED_B0_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.7 LED_B0_AEU1_PWM_5 Register (Address = 13Ch) [Reset = 00h]

LED_B0_AEU1_PWM_5 is shown in [Figure 2-260](#) and described in [Table 2-278](#).

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Figure 2-260. LED_B0_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_b0_aeu1_pwm5							
R/W-0h							

Table 2-278. LED_B0_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.8 LED_B0_AEU1_T12 Register (Address = 13Dh) [Reset = 00h]

LED_B0_AEU1_T12 is shown in [Figure 2-261](#) and described in [Table 2-279](#).

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Figure 2-261. LED_B0_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_b0_aeu1_t2				led_b0_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-279. LED_B0_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b0_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b0_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.18.9 LED_B0_AEU1_T34 Register (Address = 13Eh) [Reset = 00h]

LED_B0_AEU1_T34 is shown in [Figure 2-262](#) and described in [Table 2-280](#).

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Figure 2-262. LED_B0_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_b0_aeu1_t4				led_b0_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-280. LED_B0_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b0_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b0_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.18.10 LED_B0_AEU1_Playback Register (Address = 13Fh) [Reset = 00h]

LED_B0_AEU1_Playback is shown in [Figure 2-263](#) and described in [Table 2-281](#).

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Figure 2-263. LED_B0_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_b0_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-281. LED_B0_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_b0_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_B0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.18.11 LED_B0_AEU2_PWM_1 Register (Address = 140h) [Reset = 00h]

LED_B0_AEU2_PWM_1 is shown in [Figure 2-264](#) and described in [Table 2-282](#).

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Figure 2-264. LED_B0_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_b0_aeu2_pwm1							
R/W-0h							

Table 2-282. LED_B0_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.12 LED_B0_AEU2_PWM_2 Register (Address = 141h) [Reset = 00h]

LED_B0_AEU2_PWM_2 is shown in [Figure 2-265](#) and described in [Table 2-283](#).

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Figure 2-265. LED_B0_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_b0_aeu2_pwm2							
R/W-0h							

Table 2-283. LED_B0_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.13 LED_B0_AEU2_PWM_3 Register (Address = 142h) [Reset = 00h]

LED_B0_AEU2_PWM_3 is shown in [Figure 2-266](#) and described in [Table 2-284](#).

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Figure 2-266. LED_B0_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_b0_aeu2_pwm3							
R/W-0h							

Table 2-284. LED_B0_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.14 LED_B0_AEU2_PWM_4 Register (Address = 143h) [Reset = 00h]

LED_B0_AEU2_PWM_4 is shown in [Figure 2-267](#) and described in [Table 2-285](#).

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Figure 2-267. LED_B0_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_b0_aeu2_pwm4							
R/W-0h							

Table 2-285. LED_B0_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.15 LED_B0_AEU2_PWM_5 Register (Address = 144h) [Reset = 00h]

LED_B0_AEU2_PWM_5 is shown in [Figure 2-268](#) and described in [Table 2-286](#).

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Figure 2-268. LED_B0_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_b0_aeu2_pwm5							
R/W-0h							

Table 2-286. LED_B0_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.16 LED_B0_AEU2_T12 Register (Address = 145h) [Reset = 00h]

LED_B0_AEU2_T12 is shown in [Figure 2-269](#) and described in [Table 2-287](#).

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Figure 2-269. LED_B0_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_b0_aeu2_t2				led_b0_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-287. LED_B0_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b0_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b0_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.18.17 LED_B0_AEU2_T34 Register (Address = 146h) [Reset = 00h]

LED_B0_AEU2_T34 is shown in [Figure 2-270](#) and described in [Table 2-288](#).

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Figure 2-270. LED_B0_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_b0_aeu2_t4				led_b0_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-288. LED_B0_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b0_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b0_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.18.18 LED_B0_AEU2_Playback Register (Address = 147h) [Reset = 00h]

LED_B0_AEU2_Playback is shown in [Figure 2-271](#) and described in [Table 2-289](#).

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Figure 2-271. LED_B0_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_b0_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-289. LED_B0_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_b0_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_B0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.18.19 LED_B0_AEU3_PWM_1 Register (Address = 148h) [Reset = 00h]

LED_B0_AEU3_PWM_1 is shown in [Figure 2-272](#) and described in [Table 2-290](#).

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Figure 2-272. LED_B0_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_b0_aeu3_pwm1							
R/W-0h							

Table 2-290. LED_B0_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.20 LED_B0_AEU3_PWM_2 Register (Address = 149h) [Reset = 00h]

LED_B0_AEU3_PWM_2 is shown in [Figure 2-273](#) and described in [Table 2-291](#).

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Figure 2-273. LED_B0_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_b0_aeu3_pwm2							
R/W-0h							

Table 2-291. LED_B0_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.21 LED_B0_AEU3_PWM_3 Register (Address = 14Ah) [Reset = 00h]

LED_B0_AEU3_PWM_3 is shown in [Figure 2-274](#) and described in [Table 2-292](#).

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Figure 2-274. LED_B0_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_b0_aeu3_pwm3							
R/W-0h							

Table 2-292. LED_B0_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.22 LED_B0_AEU3_PWM_4 Register (Address = 14Bh) [Reset = 00h]

LED_B0_AEU3_PWM_4 is shown in [Figure 2-275](#) and described in [Table 2-293](#).

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Figure 2-275. LED_B0_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_b0_aeu3_pwm4							
R/W-0h							

Table 2-293. LED_B0_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.23 LED_B0_AEU3_PWM_5 Register (Address = 14Ch) [Reset = 00h]

LED_B0_AEU3_PWM_5 is shown in [Figure 2-276](#) and described in [Table 2-294](#).

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Figure 2-276. LED_B0_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_b0_aeu3_pwm5							
R/W-0h							

Figure 2-276. LED_B0_AEU3_PWM_5 Register (continued)
Table 2-294. LED_B0_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b0_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_B0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.18.24 LED_B0_AEU3_T12 Register (Address = 14Dh) [Reset = 00h]

LED_B0_AEU3_T12 is shown in [Figure 2-277](#) and described in [Table 2-295](#).

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Figure 2-277. LED_B0_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_b0_aeu3_t2				led_b0_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-295. LED_B0_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b0_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-295. LED_B0_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_b0_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.18.25 LED_B0_AEU3_T34 Register (Address = 14Eh) [Reset = 00h]

LED_B0_AEU3_T34 is shown in [Figure 2-278](#) and described in [Table 2-296](#).

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Figure 2-278. LED_B0_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_b0_aeu3_t4				led_b0_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-296. LED_B0_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b0_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-296. LED_B0_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_b0_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_B0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.18.26 LED_B0_AEU3_Playback Register (Address = 14Fh) [Reset = 00h]

LED_B0_AEU3_Playback is shown in [Figure 2-279](#) and described in [Table 2-297](#).

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Figure 2-279. LED_B0_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_b0_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-297. LED_B0_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_b0_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_B0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.19 LED_B1_Autonomous_Animation Registers

Table 2-298 lists the memory-mapped registers for the LED_B1_Autonomous_Animation registers. All register offset addresses not listed in Table 2-298 should be considered as reserved locations and the register contents should not be modified.

Table 2-298. LED_B1_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
150h	LED_B1_Auto_Pause	Animation pause time at the start and the end of LED_B1	Go
151h	LED_B1_Auto_Playback	Animation pattern playback times of LED_B1 and active AEU number setting	Go
152h	LED_B1_AEU1_PWM_1	PWM setting of LED_B1 AEU1_PWM1	Go
153h	LED_B1_AEU1_PWM_2	PWM setting of LED_B1 AEU1_PWM2	Go
154h	LED_B1_AEU1_PWM_3	PWM setting of LED_B1 AEU1_PWM3	Go
155h	LED_B1_AEU1_PWM_4	PWM setting of LED_B1 AEU1_PWM4	Go
156h	LED_B1_AEU1_PWM_5	PWM setting of LED_B1 AEU1_PWM5	Go
157h	LED_B1_AEU1_T12	Slope time setting of LED_B1 AEU1_T1 and AEU1_T2	Go
158h	LED_B1_AEU1_T34	Slope time setting of LED_B1 AEU1_T3 and AEU1_T4	Go
159h	LED_B1_AEU1_Playback	AEU1 pattern playback times of LED_B1	Go
15Ah	LED_B1_AEU2_PWM_1	PWM setting of LED_B1 AEU2_PWM1	Go
15Bh	LED_B1_AEU2_PWM_2	PWM setting of LED_B1 AEU2_PWM2	Go
15Ch	LED_B1_AEU2_PWM_3	PWM setting of LED_B1 AEU2_PWM3	Go
15Dh	LED_B1_AEU2_PWM_4	PWM setting of LED_B1 AEU2_PWM4	Go
15Eh	LED_B1_AEU2_PWM_5	PWM setting of LED_B1 AEU2_PWM5	Go
15Fh	LED_B1_AEU2_T12	Slope time setting of LED_B1 AEU2_T1 and AEU2_T2	Go
160h	LED_B1_AEU2_T34	Slope time setting of LED_B1 AEU2_T3 and AEU2_T4	Go
161h	LED_B1_AEU2_Playback	AEU2 pattern playback times of LED_B1	Go
162h	LED_B1_AEU3_PWM_1	PWM setting of LED_B1 AEU3_PWM1	Go
163h	LED_B1_AEU3_PWM_2	PWM setting of LED_B1 AEU3_PWM2	Go
164h	LED_B1_AEU3_PWM_3	PWM setting of LED_B1 AEU3_PWM3	Go
165h	LED_B1_AEU3_PWM_4	PWM setting of LED_B1 AEU3_PWM4	Go
166h	LED_B1_AEU3_PWM_5	PWM setting of LED_B1 AEU3_PWM5	Go
167h	LED_B1_AEU3_T12	Slope time setting of LED_B1 AEU3_T1 and AEU3_T2	Go
168h	LED_B1_AEU3_T34	Slope time setting of LED_B1 AEU3_T3 and AEU3_T4	Go
169h	LED_B1_AEU3_Playback	AEU3 pattern playback times of LED_B1	Go

2.19.1 LED_B1_Auto_Pause Register (Address = 150h) [Reset = 00h]

LED_B1_Auto_Pause is shown in Figure 2-280 and described in Table 2-299.

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Figure 2-280. LED_B1_Auto_Pause Register

7	6	5	4	3	2	1	0
led_b1_tp_ts				led_b1_tp_te			

Figure 2-280. LED_B1_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-299. LED_B1_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b1_tp_ts	R/W	0h	Animation pause time at the start of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b1_tp_te	R/W	0h	Animation pause time at the end of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.19.2 LED_B1_Auto_Playback Register (Address = 151h) [Reset = 00h]LED_B1_Auto_Playback is shown in [Figure 2-281](#) and described in [Table 2-300](#).Return to the [Summary Table](#).**Figure 2-281. LED_B1_Auto_Playback Register**

7	6	5	4	3	2	1	0
RESERVED		led_b1_aeu_num			led_b1_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-300. LED_B1_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_b1_aeu_num	R/W	0h	Active AEU number of LED_B1 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-300. LED_B1_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_b1_pt	R/W	0h	Animation pattern playback times of LED_B1 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.19.3 LED_B1_AEU1_PWM_1 Register (Address = 152h) [Reset = 00h]

LED_B1_AEU1_PWM_1 is shown in [Figure 2-282](#) and described in [Table 2-301](#).

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Figure 2-282. LED_B1_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_b1_aeu1_pwm1							
R/W-0h							

Table 2-301. LED_B1_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.4 LED_B1_AEU1_PWM_2 Register (Address = 153h) [Reset = 00h]

LED_B1_AEU1_PWM_2 is shown in [Figure 2-283](#) and described in [Table 2-302](#).

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Figure 2-283. LED_B1_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_b1_aeu1_pwm2							
R/W-0h							

Table 2-302. LED_B1_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.5 LED_B1_AEU1_PWM_3 Register (Address = 154h) [Reset = 00h]

LED_B1_AEU1_PWM_3 is shown in [Figure 2-284](#) and described in [Table 2-303](#).

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Figure 2-284. LED_B1_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_b1_aeu1_pwm3							
R/W-0h							

Table 2-303. LED_B1_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.6 LED_B1_AEU1_PWM_4 Register (Address = 155h) [Reset = 00h]

LED_B1_AEU1_PWM_4 is shown in [Figure 2-285](#) and described in [Table 2-304](#).

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Figure 2-285. LED_B1_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_b1_aeu1_pwm4							
R/W-0h							

Table 2-304. LED_B1_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.7 LED_B1_AEU1_PWM_5 Register (Address = 156h) [Reset = 00h]

LED_B1_AEU1_PWM_5 is shown in [Figure 2-286](#) and described in [Table 2-305](#).

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Figure 2-286. LED_B1_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_b1_aeu1_pwm5							
R/W-0h							

Table 2-305. LED_B1_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.8 LED_B1_AEU1_T12 Register (Address = 157h) [Reset = 00h]

LED_B1_AEU1_T12 is shown in [Figure 2-287](#) and described in [Table 2-306](#).

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Figure 2-287. LED_B1_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_b1_aeu1_t2				led_b1_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-306. LED_B1_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b1_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b1_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.19.9 LED_B1_AEU1_T34 Register (Address = 158h) [Reset = 00h]

LED_B1_AEU1_T34 is shown in [Figure 2-288](#) and described in [Table 2-307](#).

Return to the [Summary Table](#).

Figure 2-288. LED_B1_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_b1_aeu1_t4				led_b1_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-307. LED_B1_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b1_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b1_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.19.10 LED_B1_AEU1_Playback Register (Address = 159h) [Reset = 00h]

LED_B1_AEU1_Playback is shown in [Figure 2-289](#) and described in [Table 2-308](#).

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Figure 2-289. LED_B1_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_b1_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-308. LED_B1_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_b1_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_B1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.19.11 LED_B1_AEU2_PWM_1 Register (Address = 15Ah) [Reset = 00h]

LED_B1_AEU2_PWM_1 is shown in [Figure 2-290](#) and described in [Table 2-309](#).

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Figure 2-290. LED_B1_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_b1_aeu2_pwm1							
R/W-0h							

Table 2-309. LED_B1_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.12 LED_B1_AEU2_PWM_2 Register (Address = 15Bh) [Reset = 00h]

LED_B1_AEU2_PWM_2 is shown in [Figure 2-291](#) and described in [Table 2-310](#).

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Figure 2-291. LED_B1_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_b1_aeu2_pwm2							
R/W-0h							

Table 2-310. LED_B1_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.13 LED_B1_AEU2_PWM_3 Register (Address = 15Ch) [Reset = 00h]

LED_B1_AEU2_PWM_3 is shown in [Figure 2-292](#) and described in [Table 2-311](#).

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Figure 2-292. LED_B1_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_b1_aeu2_pwm3							
R/W-0h							

Table 2-311. LED_B1_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.14 LED_B1_AEU2_PWM_4 Register (Address = 15Dh) [Reset = 00h]

 LED_B1_AEU2_PWM_4 is shown in [Figure 2-293](#) and described in [Table 2-312](#).

 Return to the [Summary Table](#).

Figure 2-293. LED_B1_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_b1_aeu2_pwm4							
R/W-0h							

Table 2-312. LED_B1_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.15 LED_B1_AEU2_PWM_5 Register (Address = 15Eh) [Reset = 00h]

 LED_B1_AEU2_PWM_5 is shown in [Figure 2-294](#) and described in [Table 2-313](#).

 Return to the [Summary Table](#).

Figure 2-294. LED_B1_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_b1_aeu2_pwm5							
R/W-0h							

Table 2-313. LED_B1_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.16 LED_B1_AEU2_T12 Register (Address = 15Fh) [Reset = 00h]

LED_B1_AEU2_T12 is shown in [Figure 2-295](#) and described in [Table 2-314](#).

Return to the [Summary Table](#).

Figure 2-295. LED_B1_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_b1_aeu2_t2				led_b1_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-314. LED_B1_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b1_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b1_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.19.17 LED_B1_AEU2_T34 Register (Address = 160h) [Reset = 00h]

LED_B1_AEU2_T34 is shown in [Figure 2-296](#) and described in [Table 2-315](#).

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Figure 2-296. LED_B1_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_b1_aeu2_t4				led_b1_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-315. LED_B1_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b1_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b1_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.19.18 LED_B1_AEU2_Playback Register (Address = 161h) [Reset = 00h]

LED_B1_AEU2_Playback is shown in [Figure 2-297](#) and described in [Table 2-316](#).

Return to the [Summary Table](#).

Figure 2-297. LED_B1_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_b1_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-316. LED_B1_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_b1_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_B1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.19.19 LED_B1_AEU3_PWM_1 Register (Address = 162h) [Reset = 00h]

LED_B1_AEU3_PWM_1 is shown in [Figure 2-298](#) and described in [Table 2-317](#).

Return to the [Summary Table](#).

Figure 2-298. LED_B1_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_b1_aeu3_pwm1							
R/W-0h							

Table 2-317. LED_B1_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.20 LED_B1_AEU3_PWM_2 Register (Address = 163h) [Reset = 00h]

LED_B1_AEU3_PWM_2 is shown in [Figure 2-299](#) and described in [Table 2-318](#).

Return to the [Summary Table](#).

Figure 2-299. LED_B1_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_b1_aeu3_pwm2							
R/W-0h							

Table 2-318. LED_B1_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.21 LED_B1_AEU3_PWM_3 Register (Address = 164h) [Reset = 00h]

LED_B1_AEU3_PWM_3 is shown in [Figure 2-300](#) and described in [Table 2-319](#).

Return to the [Summary Table](#).

Figure 2-300. LED_B1_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_b1_aeu3_pwm3							
R/W-0h							

Table 2-319. LED_B1_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.22 LED_B1_AEU3_PWM_4 Register (Address = 165h) [Reset = 00h]

LED_B1_AEU3_PWM_4 is shown in [Figure 2-301](#) and described in [Table 2-320](#).

Return to the [Summary Table](#).

Figure 2-301. LED_B1_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_b1_aeu3_pwm4							
R/W-0h							

Table 2-320. LED_B1_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.23 LED_B1_AEU3_PWM_5 Register (Address = 166h) [Reset = 00h]

LED_B1_AEU3_PWM_5 is shown in [Figure 2-302](#) and described in [Table 2-321](#).

Return to the [Summary Table](#).

Figure 2-302. LED_B1_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_b1_aeu3_pwm5							
R/W-0h							

Figure 2-302. LED_B1_AEU3_PWM_5 Register (continued)
Table 2-321. LED_B1_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b1_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_B1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.19.24 LED_B1_AEU3_T12 Register (Address = 167h) [Reset = 00h]

LED_B1_AEU3_T12 is shown in [Figure 2-303](#) and described in [Table 2-322](#).

Return to the [Summary Table](#).

Figure 2-303. LED_B1_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_b1_aeu3_t2				led_b1_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-322. LED_B1_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b1_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-322. LED_B1_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_b1_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.19.25 LED_B1_AEU3_T34 Register (Address = 168h) [Reset = 00h]

LED_B1_AEU3_T34 is shown in [Figure 2-304](#) and described in [Table 2-323](#).

Return to the [Summary Table](#).

Figure 2-304. LED_B1_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_b1_aeu3_t4				led_b1_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-323. LED_B1_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b1_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-323. LED_B1_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_b1_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_B1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.19.26 LED_B1_AEU3_Playback Register (Address = 169h) [Reset = 00h]

LED_B1_AEU3_Playback is shown in [Figure 2-305](#) and described in [Table 2-324](#).

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Figure 2-305. LED_B1_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_b1_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-324. LED_B1_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_b1_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_B1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.20 LED_B2_Autonomous_Animation Registers

Table 2-325 lists the memory-mapped registers for the LED_B2_Autonomous_Animation registers. All register offset addresses not listed in Table 2-325 should be considered as reserved locations and the register contents should not be modified.

Table 2-325. LED_B2_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
16Ah	LED_B2_Auto_Pause	Animation pause time at the start and the end of LED_B2	Go
16Bh	LED_B2_Auto_Playback	Animation pattern playback times of LED_B2 and active AEU number setting	Go
16Ch	LED_B2_AEU1_PWM_1	PWM setting of LED_B2 AEU1_PWM1	Go
16Dh	LED_B2_AEU1_PWM_2	PWM setting of LED_B2 AEU1_PWM2	Go
16Eh	LED_B2_AEU1_PWM_3	PWM setting of LED_B2 AEU1_PWM3	Go
16Fh	LED_B2_AEU1_PWM_4	PWM setting of LED_B2 AEU1_PWM4	Go
170h	LED_B2_AEU1_PWM_5	PWM setting of LED_B2 AEU1_PWM5	Go
171h	LED_B2_AEU1_T12	Slope time setting of LED_B2 AEU1_T1 and AEU1_T2	Go
172h	LED_B2_AEU1_T34	Slope time setting of LED_B2 AEU1_T3 and AEU1_T4	Go
173h	LED_B2_AEU1_Playback	AEU1 pattern playback times of LED_B2	Go
174h	LED_B2_AEU2_PWM_1	PWM setting of LED_B2 AEU2_PWM1	Go
175h	LED_B2_AEU2_PWM_2	PWM setting of LED_B2 AEU2_PWM2	Go
176h	LED_B2_AEU2_PWM_3	PWM setting of LED_B2 AEU2_PWM3	Go
177h	LED_B2_AEU2_PWM_4	PWM setting of LED_B2 AEU2_PWM4	Go
178h	LED_B2_AEU2_PWM_5	PWM setting of LED_B2 AEU2_PWM5	Go
179h	LED_B2_AEU2_T12	Slope time setting of LED_B2 AEU2_T1 and AEU2_T2	Go
17Ah	LED_B2_AEU2_T34	Slope time setting of LED_B2 AEU2_T3 and AEU2_T4	Go
17Bh	LED_B2_AEU2_Playback	AEU2 pattern playback times of LED_B2	Go
17Ch	LED_B2_AEU3_PWM_1	PWM setting of LED_B2 AEU3_PWM1	Go
17Dh	LED_B2_AEU3_PWM_2	PWM setting of LED_B2 AEU3_PWM2	Go
17Eh	LED_B2_AEU3_PWM_3	PWM setting of LED_B2 AEU3_PWM3	Go
17Fh	LED_B2_AEU3_PWM_4	PWM setting of LED_B2 AEU3_PWM4	Go
180h	LED_B2_AEU3_PWM_5	PWM setting of LED_B2 AEU3_PWM5	Go
181h	LED_B2_AEU3_T12	Slope time setting of LED_B2 AEU3_T1 and AEU3_T2	Go
182h	LED_B2_AEU3_T34	Slope time setting of LED_B2 AEU3_T3 and AEU3_T4	Go
183h	LED_B2_AEU3_Playback	AEU3 pattern playback times of LED_B2	Go

2.20.1 LED_B2_Auto_Pause Register (Address = 16Ah) [Reset = 00h]

LED_B2_Auto_Pause is shown in Figure 2-306 and described in Table 2-326.

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Figure 2-306. LED_B2_Auto_Pause Register

7	6	5	4	3	2	1	0
led_b2_tp_ts				led_b2_tp_te			

Figure 2-306. LED_B2_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-326. LED_B2_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b2_tp_ts	R/W	0h	Animation pause time at the start of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b2_tp_te	R/W	0h	Animation pause time at the end of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.20.2 LED_B2_Auto_Playback Register (Address = 16Bh) [Reset = 00h]

LED_B2_Auto_Playback is shown in [Figure 2-307](#) and described in [Table 2-327](#).

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Figure 2-307. LED_B2_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_b2_aeu_num			led_b2_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-327. LED_B2_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_b2_aeu_num	R/W	0h	Active AEU number of LED_B2 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-327. LED_B2_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_b2_pt	R/W	0h	Animation pattern playback times of LED_B2 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.20.3 LED_B2_AEU1_PWM_1 Register (Address = 16Ch) [Reset = 00h]

LED_B2_AEU1_PWM_1 is shown in [Figure 2-308](#) and described in [Table 2-328](#).

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Figure 2-308. LED_B2_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_b2_aeu1_pwm1							
R/W-0h							

Table 2-328. LED_B2_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.4 LED_B2_AEU1_PWM_2 Register (Address = 16Dh) [Reset = 00h]

LED_B2_AEU1_PWM_2 is shown in [Figure 2-309](#) and described in [Table 2-329](#).

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Figure 2-309. LED_B2_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_b2_aeu1_pwm2							
R/W-0h							

Table 2-329. LED_B2_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.5 LED_B2_AEU1_PWM_3 Register (Address = 16Eh) [Reset = 00h]

LED_B2_AEU1_PWM_3 is shown in [Figure 2-310](#) and described in [Table 2-330](#).

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Figure 2-310. LED_B2_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_b2_aeu1_pwm3							
R/W-0h							

Table 2-330. LED_B2_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.6 LED_B2_AEU1_PWM_4 Register (Address = 16Fh) [Reset = 00h]

LED_B2_AEU1_PWM_4 is shown in [Figure 2-311](#) and described in [Table 2-331](#).

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Figure 2-311. LED_B2_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_b2_aeu1_pwm4							
R/W-0h							

Table 2-331. LED_B2_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.7 LED_B2_AEU1_PWM_5 Register (Address = 170h) [Reset = 00h]

LED_B2_AEU1_PWM_5 is shown in [Figure 2-312](#) and described in [Table 2-332](#).

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Figure 2-312. LED_B2_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_b2_aeu1_pwm5							
R/W-0h							

Table 2-332. LED_B2_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.8 LED_B2_AEU1_T12 Register (Address = 171h) [Reset = 00h]

LED_B2_AEU1_T12 is shown in [Figure 2-313](#) and described in [Table 2-333](#).

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Figure 2-313. LED_B2_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_b2_aeu1_t2				led_b2_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-333. LED_B2_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b2_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b2_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.20.9 LED_B2_AEU1_T34 Register (Address = 172h) [Reset = 00h]

LED_B2_AEU1_T34 is shown in [Figure 2-314](#) and described in [Table 2-334](#).

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Figure 2-314. LED_B2_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_b2_aeu1_t4				led_b2_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-334. LED_B2_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b2_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b2_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.20.10 LED_B2_AEU1_Playback Register (Address = 173h) [Reset = 00h]

LED_B2_AEU1_Playback is shown in [Figure 2-315](#) and described in [Table 2-335](#).

Return to the [Summary Table](#).

Figure 2-315. LED_B2_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_b2_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-335. LED_B2_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_b2_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_B2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.20.11 LED_B2_AEU2_PWM_1 Register (Address = 174h) [Reset = 00h]

LED_B2_AEU2_PWM_1 is shown in [Figure 2-316](#) and described in [Table 2-336](#).

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Figure 2-316. LED_B2_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_b2_aeu2_pwm1							
R/W-0h							

Table 2-336. LED_B2_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.12 LED_B2_AEU2_PWM_2 Register (Address = 175h) [Reset = 00h]

LED_B2_AEU2_PWM_2 is shown in [Figure 2-317](#) and described in [Table 2-337](#).

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Figure 2-317. LED_B2_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_b2_aeu2_pwm2							
R/W-0h							

Table 2-337. LED_B2_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.13 LED_B2_AEU2_PWM_3 Register (Address = 176h) [Reset = 00h]

LED_B2_AEU2_PWM_3 is shown in [Figure 2-318](#) and described in [Table 2-338](#).

Return to the [Summary Table](#).

Figure 2-318. LED_B2_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_b2_aeu2_pwm3							
R/W-0h							

Table 2-338. LED_B2_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.14 LED_B2_AEU2_PWM_4 Register (Address = 177h) [Reset = 00h]

LED_B2_AEU2_PWM_4 is shown in [Figure 2-319](#) and described in [Table 2-339](#).

Return to the [Summary Table](#).

Figure 2-319. LED_B2_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_b2_aeu2_pwm4							
R/W-0h							

Table 2-339. LED_B2_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.15 LED_B2_AEU2_PWM_5 Register (Address = 178h) [Reset = 00h]

LED_B2_AEU2_PWM_5 is shown in [Figure 2-320](#) and described in [Table 2-340](#).

Return to the [Summary Table](#).

Figure 2-320. LED_B2_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_b2_aeu2_pwm5							
R/W-0h							

Table 2-340. LED_B2_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.16 LED_B2_AEU2_T12 Register (Address = 179h) [Reset = 00h]

LED_B2_AEU2_T12 is shown in [Figure 2-321](#) and described in [Table 2-341](#).

Return to the [Summary Table](#).

Figure 2-321. LED_B2_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_b2_aeu2_t2				led_b2_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-341. LED_B2_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b2_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b2_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.20.17 LED_B2_AEU2_T34 Register (Address = 17Ah) [Reset = 00h]

LED_B2_AEU2_T34 is shown in [Figure 2-322](#) and described in [Table 2-342](#).

Return to the [Summary Table](#).

Figure 2-322. LED_B2_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_b2_aeu2_t4				led_b2_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-342. LED_B2_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b2_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_b2_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.20.18 LED_B2_AEU2_Playback Register (Address = 17Bh) [Reset = 00h]

LED_B2_AEU2_Playback is shown in [Figure 2-323](#) and described in [Table 2-343](#).

Return to the [Summary Table](#).

Figure 2-323. LED_B2_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_b2_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-343. LED_B2_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_b2_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_B2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.20.19 LED_B2_AEU3_PWM_1 Register (Address = 17Ch) [Reset = 00h]

LED_B2_AEU3_PWM_1 is shown in [Figure 2-324](#) and described in [Table 2-344](#).

Return to the [Summary Table](#).

Figure 2-324. LED_B2_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_b2_aeu3_pwm1							
R/W-0h							

Table 2-344. LED_B2_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.20 LED_B2_AEU3_PWM_2 Register (Address = 17Dh) [Reset = 00h]

LED_B2_AEU3_PWM_2 is shown in [Figure 2-325](#) and described in [Table 2-345](#).

Return to the [Summary Table](#).

Figure 2-325. LED_B2_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_b2_aeu3_pwm2							
R/W-0h							

Table 2-345. LED_B2_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.21 LED_B2_AEU3_PWM_3 Register (Address = 17Eh) [Reset = 00h]

LED_B2_AEU3_PWM_3 is shown in [Figure 2-326](#) and described in [Table 2-346](#).

Return to the [Summary Table](#).

Figure 2-326. LED_B2_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_b2_aeu3_pwm3							
R/W-0h							

Table 2-346. LED_B2_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.22 LED_B2_AEU3_PWM_4 Register (Address = 17Fh) [Reset = 00h]

LED_B2_AEU3_PWM_4 is shown in [Figure 2-327](#) and described in [Table 2-347](#).

Return to the [Summary Table](#).

Figure 2-327. LED_B2_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_b2_aeu3_pwm4							
R/W-0h							

Table 2-347. LED_B2_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.23 LED_B2_AEU3_PWM_5 Register (Address = 180h) [Reset = 00h]

LED_B2_AEU3_PWM_5 is shown in [Figure 2-328](#) and described in [Table 2-348](#).

Return to the [Summary Table](#).

Figure 2-328. LED_B2_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_b2_aeu3_pwm5							
R/W-0h							

Figure 2-328. LED_B2_AEU3_PWM_5 Register (continued)
Table 2-348. LED_B2_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_b2_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_B2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.20.24 LED_B2_AEU3_T12 Register (Address = 181h) [Reset = 00h]

LED_B2_AEU3_T12 is shown in [Figure 2-329](#) and described in [Table 2-349](#).

Return to the [Summary Table](#).

Figure 2-329. LED_B2_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_b2_aeu3_t2				led_b2_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-349. LED_B2_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b2_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-349. LED_B2_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_b2_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.20.25 LED_B2_AEU3_T34 Register (Address = 182h) [Reset = 00h]

LED_B2_AEU3_T34 is shown in [Figure 2-330](#) and described in [Table 2-350](#).

Return to the [Summary Table](#).

Figure 2-330. LED_B2_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_b2_aeu3_t4				led_b2_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-350. LED_B2_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_b2_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-350. LED_B2_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_b2_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_B2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.20.26 LED_B2_AEU3_Playback Register (Address = 183h) [Reset = 00h]

 LED_B2_AEU3_Playback is shown in [Figure 2-331](#) and described in [Table 2-351](#).

 Return to the [Summary Table](#).

Figure 2-331. LED_B2_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_b2_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-351. LED_B2_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_b2_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_B2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.21 LED_C0_Autonomous_Animation Registers

Table 2-352 lists the memory-mapped registers for the LED_C0_Autonomous_Animation registers. All register offset addresses not listed in Table 2-352 should be considered as reserved locations and the register contents should not be modified.

Table 2-352. LED_C0_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
184h	LED_C0_Auto_Pause	Animation pause time at the start and the end of LED_C0	Go
185h	LED_C0_Auto_Playback	Animation pattern playback times of LED_C0 and active AEU number setting	Go
186h	LED_C0_AEU1_PWM_1	PWM setting of LED_C0 AEU1_PWM1	Go
187h	LED_C0_AEU1_PWM_2	PWM setting of LED_C0 AEU1_PWM2	Go
188h	LED_C0_AEU1_PWM_3	PWM setting of LED_C0 AEU1_PWM3	Go
189h	LED_C0_AEU1_PWM_4	PWM setting of LED_C0 AEU1_PWM4	Go
18Ah	LED_C0_AEU1_PWM_5	PWM setting of LED_C0 AEU1_PWM5	Go
18Bh	LED_C0_AEU1_T12	Slope time setting of LED_C0 AEU1_T1 and AEU1_T2	Go
18Ch	LED_C0_AEU1_T34	Slope time setting of LED_C0 AEU1_T3 and AEU1_T4	Go
18Dh	LED_C0_AEU1_Playback	AEU1 pattern playback times of LED_C0	Go
18Eh	LED_C0_AEU2_PWM_1	PWM setting of LED_C0 AEU2_PWM1	Go
18Fh	LED_C0_AEU2_PWM_2	PWM setting of LED_C0 AEU2_PWM2	Go
190h	LED_C0_AEU2_PWM_3	PWM setting of LED_C0 AEU2_PWM3	Go
191h	LED_C0_AEU2_PWM_4	PWM setting of LED_C0 AEU2_PWM4	Go
192h	LED_C0_AEU2_PWM_5	PWM setting of LED_C0 AEU2_PWM5	Go
193h	LED_C0_AEU2_T12	Slope time setting of LED_C0 AEU2_T1 and AEU2_T2	Go
194h	LED_C0_AEU2_T34	Slope time setting of LED_C0 AEU2_T3 and AEU2_T4	Go
195h	LED_C0_AEU2_Playback	AEU2 pattern playback times of LED_C0	Go
196h	LED_C0_AEU3_PWM_1	PWM setting of LED_C0 AEU3_PWM1	Go
197h	LED_C0_AEU3_PWM_2	PWM setting of LED_C0 AEU3_PWM2	Go
198h	LED_C0_AEU3_PWM_3	PWM setting of LED_C0 AEU3_PWM3	Go
199h	LED_C0_AEU3_PWM_4	PWM setting of LED_C0 AEU3_PWM4	Go
19Ah	LED_C0_AEU3_PWM_5	PWM setting of LED_C0 AEU3_PWM5	Go
19Bh	LED_C0_AEU3_T12	Slope time setting of LED_C0 AEU3_T1 and AEU3_T2	Go
19Ch	LED_C0_AEU3_T34	Slope time setting of LED_C0 AEU3_T3 and AEU3_T4	Go
19Dh	LED_C0_AEU3_Playback	AEU3 pattern playback times of LED_C0	Go

2.21.1 LED_C0_Auto_Pause Register (Address = 184h) [Reset = 00h]

LED_C0_Auto_Pause is shown in Figure 2-332 and described in Table 2-353.

Return to the [Summary Table](#).

Figure 2-332. LED_C0_Auto_Pause Register

7	6	5	4	3	2	1	0
led_c0_tp_ts				led_c0_tp_te			

Figure 2-332. LED_C0_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-353. LED_C0_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c0_tp_ts	R/W	0h	Animation pause time at the start of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c0_tp_te	R/W	0h	Animation pause time at the end of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.21.2 LED_C0_Auto_Playback Register (Address = 185h) [Reset = 00h]

LED_C0_Auto_Playback is shown in [Figure 2-333](#) and described in [Table 2-354](#).

Return to the [Summary Table](#).

Figure 2-333. LED_C0_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_c0_aeu_num			led_c0_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-354. LED_C0_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_c0_aeu_num	R/W	0h	Active AEU number of LED_C0 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-354. LED_C0_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_c0_pt	R/W	0h	Animation pattern playback times of LED_C0 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.21.3 LED_C0_AEU1_PWM_1 Register (Address = 186h) [Reset = 00h]

LED_C0_AEU1_PWM_1 is shown in [Figure 2-334](#) and described in [Table 2-355](#).

Return to the [Summary Table](#).

Figure 2-334. LED_C0_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_c0_aeu1_pwm1							
R/W-0h							

Table 2-355. LED_C0_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.4 LED_C0_AEU1_PWM_2 Register (Address = 187h) [Reset = 00h]

LED_C0_AEU1_PWM_2 is shown in [Figure 2-335](#) and described in [Table 2-356](#).

Return to the [Summary Table](#).

Figure 2-335. LED_C0_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_c0_aeu1_pwm2							
R/W-0h							

Table 2-356. LED_C0_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.5 LED_C0_AEU1_PWM_3 Register (Address = 188h) [Reset = 00h]

LED_C0_AEU1_PWM_3 is shown in [Figure 2-336](#) and described in [Table 2-357](#).

Return to the [Summary Table](#).

Figure 2-336. LED_C0_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_c0_aeu1_pwm3							
R/W-0h							

Table 2-357. LED_C0_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.6 LED_C0_AEU1_PWM_4 Register (Address = 189h) [Reset = 00h]

LED_C0_AEU1_PWM_4 is shown in [Figure 2-337](#) and described in [Table 2-358](#).

Return to the [Summary Table](#).

Figure 2-337. LED_C0_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_c0_aeu1_pwm4							
R/W-0h							

Table 2-358. LED_C0_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.7 LED_C0_AEU1_PWM_5 Register (Address = 18Ah) [Reset = 00h]

LED_C0_AEU1_PWM_5 is shown in [Figure 2-338](#) and described in [Table 2-359](#).

Return to the [Summary Table](#).

Figure 2-338. LED_C0_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_c0_aeu1_pwm5							
R/W-0h							

Table 2-359. LED_C0_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.8 LED_C0_AEU1_T12 Register (Address = 18Bh) [Reset = 00h]

LED_C0_AEU1_T12 is shown in [Figure 2-339](#) and described in [Table 2-360](#).

Return to the [Summary Table](#).

Figure 2-339. LED_C0_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_c0_aeu1_t2				led_c0_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-360. LED_C0_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c0_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c0_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.21.9 LED_C0_AEU1_T34 Register (Address = 18Ch) [Reset = 00h]

LED_C0_AEU1_T34 is shown in [Figure 2-340](#) and described in [Table 2-361](#).

Return to the [Summary Table](#).

Figure 2-340. LED_C0_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_c0_aeu1_t4				led_c0_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-361. LED_C0_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c0_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c0_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.21.10 LED_C0_AEU1_Playback Register (Address = 18Dh) [Reset = 00h]

LED_C0_AEU1_Playback is shown in [Figure 2-341](#) and described in [Table 2-362](#).

Return to the [Summary Table](#).

Figure 2-341. LED_C0_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_c0_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-362. LED_C0_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_c0_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_C0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.21.11 LED_C0_AEU2_PWM_1 Register (Address = 18Eh) [Reset = 00h]

LED_C0_AEU2_PWM_1 is shown in [Figure 2-342](#) and described in [Table 2-363](#).

Return to the [Summary Table](#).

Figure 2-342. LED_C0_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_c0_aeu2_pwm1							
R/W-0h							

Table 2-363. LED_C0_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.12 LED_C0_AEU2_PWM_2 Register (Address = 18Fh) [Reset = 00h]

LED_C0_AEU2_PWM_2 is shown in [Figure 2-343](#) and described in [Table 2-364](#).

Return to the [Summary Table](#).

Figure 2-343. LED_C0_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_c0_aeu2_pwm2							
R/W-0h							

Table 2-364. LED_C0_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.13 LED_C0_AEU2_PWM_3 Register (Address = 190h) [Reset = 00h]

LED_C0_AEU2_PWM_3 is shown in [Figure 2-344](#) and described in [Table 2-365](#).

Return to the [Summary Table](#).

Figure 2-344. LED_C0_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_c0_aeu2_pwm3							
R/W-0h							

Table 2-365. LED_C0_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.14 LED_C0_AEU2_PWM_4 Register (Address = 191h) [Reset = 00h]

LED_C0_AEU2_PWM_4 is shown in [Figure 2-345](#) and described in [Table 2-366](#).

Return to the [Summary Table](#).

Figure 2-345. LED_C0_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_c0_aeu2_pwm4							
R/W-0h							

Table 2-366. LED_C0_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.15 LED_C0_AEU2_PWM_5 Register (Address = 192h) [Reset = 00h]

LED_C0_AEU2_PWM_5 is shown in [Figure 2-346](#) and described in [Table 2-367](#).

Return to the [Summary Table](#).

Figure 2-346. LED_C0_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_c0_aeu2_pwm5							
R/W-0h							

Table 2-367. LED_C0_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.16 LED_C0_AEU2_T12 Register (Address = 193h) [Reset = 00h]

LED_C0_AEU2_T12 is shown in [Figure 2-347](#) and described in [Table 2-368](#).

Return to the [Summary Table](#).

Figure 2-347. LED_C0_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_c0_aeu2_t2				led_c0_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-368. LED_C0_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c0_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c0_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.21.17 LED_C0_AEU2_T34 Register (Address = 194h) [Reset = 00h]

LED_C0_AEU2_T34 is shown in [Figure 2-348](#) and described in [Table 2-369](#).

Return to the [Summary Table](#).

Figure 2-348. LED_C0_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_c0_aeu2_t4				led_c0_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-369. LED_C0_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c0_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c0_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.21.18 LED_C0_AEU2_Playback Register (Address = 195h) [Reset = 00h]

LED_C0_AEU2_Playback is shown in [Figure 2-349](#) and described in [Table 2-370](#).

Return to the [Summary Table](#).

Figure 2-349. LED_C0_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_c0_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-370. LED_C0_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_c0_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_C0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.21.19 LED_C0_AEU3_PWM_1 Register (Address = 196h) [Reset = 00h]

LED_C0_AEU3_PWM_1 is shown in [Figure 2-350](#) and described in [Table 2-371](#).

Return to the [Summary Table](#).

Figure 2-350. LED_C0_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_c0_aeu3_pwm1							
R/W-0h							

Table 2-371. LED_C0_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.20 LED_C0_AEU3_PWM_2 Register (Address = 197h) [Reset = 00h]

LED_C0_AEU3_PWM_2 is shown in [Figure 2-351](#) and described in [Table 2-372](#).

Return to the [Summary Table](#).

Figure 2-351. LED_C0_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_c0_aeu3_pwm2							
R/W-0h							

Table 2-372. LED_C0_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.21 LED_C0_AEU3_PWM_3 Register (Address = 198h) [Reset = 00h]

LED_C0_AEU3_PWM_3 is shown in [Figure 2-352](#) and described in [Table 2-373](#).

Return to the [Summary Table](#).

Figure 2-352. LED_C0_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_c0_aeu3_pwm3							
R/W-0h							

Table 2-373. LED_C0_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.22 LED_C0_AEU3_PWM_4 Register (Address = 199h) [Reset = 00h]

LED_C0_AEU3_PWM_4 is shown in [Figure 2-353](#) and described in [Table 2-374](#).

Return to the [Summary Table](#).

Figure 2-353. LED_C0_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_c0_aeu3_pwm4							
R/W-0h							

Table 2-374. LED_C0_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.23 LED_C0_AEU3_PWM_5 Register (Address = 19Ah) [Reset = 00h]

LED_C0_AEU3_PWM_5 is shown in [Figure 2-354](#) and described in [Table 2-375](#).

Return to the [Summary Table](#).

Figure 2-354. LED_C0_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_c0_aeu3_pwm5							
R/W-0h							

Figure 2-354. LED_C0_AEU3_PWM_5 Register (continued)
Table 2-375. LED_C0_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c0_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_C0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.21.24 LED_C0_AEU3_T12 Register (Address = 19Bh) [Reset = 00h]

LED_C0_AEU3_T12 is shown in [Figure 2-355](#) and described in [Table 2-376](#).

Return to the [Summary Table](#).

Figure 2-355. LED_C0_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_c0_aeu3_t2				led_c0_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-376. LED_C0_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c0_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-376. LED_C0_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_c0_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.21.25 LED_C0_AEU3_T34 Register (Address = 19Ch) [Reset = 00h]

LED_C0_AEU3_T34 is shown in [Figure 2-356](#) and described in [Table 2-377](#).

Return to the [Summary Table](#).

Figure 2-356. LED_C0_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_c0_aeu3_t4				led_c0_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-377. LED_C0_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c0_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-377. LED_C0_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_c0_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_C0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.21.26 LED_C0_AEU3_Playback Register (Address = 19Dh) [Reset = 00h]

 LED_C0_AEU3_Playback is shown in [Figure 2-357](#) and described in [Table 2-378](#).

 Return to the [Summary Table](#).

Figure 2-357. LED_C0_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_c0_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-378. LED_C0_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_c0_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_C0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.22 LED_C1_Autonomous_Animation Registers

Table 2-379 lists the memory-mapped registers for the LED_C1_Autonomous_Animation registers. All register offset addresses not listed in Table 2-379 should be considered as reserved locations and the register contents should not be modified.

Table 2-379. LED_C1_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
19Eh	LED_C1_Auto_Pause	Animation pause time at the start and the end of LED_C1	Go
19Fh	LED_C1_Auto_Playback	Animation pattern playback times of LED_C1 and active AEU number setting	Go
1A0h	LED_C1_AEU1_PWM_1	PWM setting of LED_C1 AEU1_PWM1	Go
1A1h	LED_C1_AEU1_PWM_2	PWM setting of LED_C1 AEU1_PWM2	Go
1A2h	LED_C1_AEU1_PWM_3	PWM setting of LED_C1 AEU1_PWM3	Go
1A3h	LED_C1_AEU1_PWM_4	PWM setting of LED_C1 AEU1_PWM4	Go
1A4h	LED_C1_AEU1_PWM_5	PWM setting of LED_C1 AEU1_PWM5	Go
1A5h	LED_C1_AEU1_T12	Slope time setting of LED_C1 AEU1_T1 and AEU1_T2	Go
1A6h	LED_C1_AEU1_T34	Slope time setting of LED_C1 AEU1_T3 and AEU1_T4	Go
1A7h	LED_C1_AEU1_Playback	AEU1 pattern playback times of LED_C1	Go
1A8h	LED_C1_AEU2_PWM_1	PWM setting of LED_C1 AEU2_PWM1	Go
1A9h	LED_C1_AEU2_PWM_2	PWM setting of LED_C1 AEU2_PWM2	Go
1AAh	LED_C1_AEU2_PWM_3	PWM setting of LED_C1 AEU2_PWM3	Go
1ABh	LED_C1_AEU2_PWM_4	PWM setting of LED_C1 AEU2_PWM4	Go
1ACh	LED_C1_AEU2_PWM_5	PWM setting of LED_C1 AEU2_PWM5	Go
1ADh	LED_C1_AEU2_T12	Slope time setting of LED_C1 AEU2_T1 and AEU2_T2	Go
1AEh	LED_C1_AEU2_T34	Slope time setting of LED_C1 AEU2_T3 and AEU2_T4	Go
1AFh	LED_C1_AEU2_Playback	AEU2 pattern playback times of LED_C1	Go
1B0h	LED_C1_AEU3_PWM_1	PWM setting of LED_C1 AEU3_PWM1	Go
1B1h	LED_C1_AEU3_PWM_2	PWM setting of LED_C1 AEU3_PWM2	Go
1B2h	LED_C1_AEU3_PWM_3	PWM setting of LED_C1 AEU3_PWM3	Go
1B3h	LED_C1_AEU3_PWM_4	PWM setting of LED_C1 AEU3_PWM4	Go
1B4h	LED_C1_AEU3_PWM_5	PWM setting of LED_C1 AEU3_PWM5	Go
1B5h	LED_C1_AEU3_T12	Slope time setting of LED_C1 AEU3_T1 and AEU3_T2	Go
1B6h	LED_C1_AEU3_T34	Slope time setting of LED_C1 AEU3_T3 and AEU3_T4	Go
1B7h	LED_C1_AEU3_Playback	AEU3 pattern playback times of LED_C1	Go

2.22.1 LED_C1_Auto_Pause Register (Address = 19Eh) [Reset = 00h]

LED_C1_Auto_Pause is shown in Figure 2-358 and described in Table 2-380.

Return to the [Summary Table](#).

Figure 2-358. LED_C1_Auto_Pause Register

7	6	5	4	3	2	1	0
led_c1_tp_ts				led_c1_tp_te			

Figure 2-358. LED_C1_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-380. LED_C1_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c1_tp_ts	R/W	0h	Animation pause time at the start of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c1_tp_te	R/W	0h	Animation pause time at the end of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.2.2.2 LED_C1_Auto_Playback Register (Address = 19Fh) [Reset = 00h]

LED_C1_Auto_Playback is shown in [Figure 2-359](#) and described in [Table 2-381](#).

Return to the [Summary Table](#).

Figure 2-359. LED_C1_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_c1_aeu_num			led_c1_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-381. LED_C1_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_c1_aeu_num	R/W	0h	Active AEU number of LED_C1 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-381. LED_C1_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_c1_pt	R/W	0h	Animation pattern playback times of LED_C1 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.22.3 LED_C1_AEU1_PWM_1 Register (Address = 1A0h) [Reset = 00h]

LED_C1_AEU1_PWM_1 is shown in [Figure 2-360](#) and described in [Table 2-382](#).

Return to the [Summary Table](#).

Figure 2-360. LED_C1_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_c1_aeu1_pwm1							
R/W-0h							

Table 2-382. LED_C1_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.4 LED_C1_AEU1_PWM_2 Register (Address = 1A1h) [Reset = 00h]

LED_C1_AEU1_PWM_2 is shown in [Figure 2-361](#) and described in [Table 2-383](#).

Return to the [Summary Table](#).

Figure 2-361. LED_C1_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_c1_aeu1_pwm2							
R/W-0h							

Table 2-383. LED_C1_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.5 LED_C1_AEU1_PWM_3 Register (Address = 1A2h) [Reset = 00h]

LED_C1_AEU1_PWM_3 is shown in [Figure 2-362](#) and described in [Table 2-384](#).

Return to the [Summary Table](#).

Figure 2-362. LED_C1_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_c1_aeu1_pwm3							
R/W-0h							

Table 2-384. LED_C1_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.6 LED_C1_AEU1_PWM_4 Register (Address = 1A3h) [Reset = 00h]

LED_C1_AEU1_PWM_4 is shown in [Figure 2-363](#) and described in [Table 2-385](#).

Return to the [Summary Table](#).

Figure 2-363. LED_C1_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_c1_aeu1_pwm4							
R/W-0h							

Table 2-385. LED_C1_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.7 LED_C1_AEU1_PWM_5 Register (Address = 1A4h) [Reset = 00h]

LED_C1_AEU1_PWM_5 is shown in [Figure 2-364](#) and described in [Table 2-386](#).

Return to the [Summary Table](#).

Figure 2-364. LED_C1_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_c1_aeu1_pwm5							
R/W-0h							

Table 2-386. LED_C1_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.8 LED_C1_AEU1_T12 Register (Address = 1A5h) [Reset = 00h]

LED_C1_AEU1_T12 is shown in [Figure 2-365](#) and described in [Table 2-387](#).

Return to the [Summary Table](#).

Figure 2-365. LED_C1_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_c1_aeu1_t2				led_c1_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-387. LED_C1_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c1_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c1_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.22.9 LED_C1_AEU1_T34 Register (Address = 1A6h) [Reset = 00h]

LED_C1_AEU1_T34 is shown in [Figure 2-366](#) and described in [Table 2-388](#).

Return to the [Summary Table](#).

Figure 2-366. LED_C1_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_c1_aeu1_t4				led_c1_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-388. LED_C1_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c1_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c1_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.22.10 LED_C1_AEU1_Playback Register (Address = 1A7h) [Reset = 00h]

LED_C1_AEU1_Playback is shown in [Figure 2-367](#) and described in [Table 2-389](#).

Return to the [Summary Table](#).

Figure 2-367. LED_C1_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_c1_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-389. LED_C1_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_c1_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_C1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.22.11 LED_C1_AEU2_PWM_1 Register (Address = 1A8h) [Reset = 00h]

LED_C1_AEU2_PWM_1 is shown in [Figure 2-368](#) and described in [Table 2-390](#).

Return to the [Summary Table](#).

Figure 2-368. LED_C1_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_c1_aeu2_pwm1							
R/W-0h							

Table 2-390. LED_C1_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.12 LED_C1_AEU2_PWM_2 Register (Address = 1A9h) [Reset = 00h]

LED_C1_AEU2_PWM_2 is shown in [Figure 2-369](#) and described in [Table 2-391](#).

Return to the [Summary Table](#).

Figure 2-369. LED_C1_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_c1_aeu2_pwm2							
R/W-0h							

Table 2-391. LED_C1_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.13 LED_C1_AEU2_PWM_3 Register (Address = 1AAh) [Reset = 00h]

LED_C1_AEU2_PWM_3 is shown in [Figure 2-370](#) and described in [Table 2-392](#).

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Figure 2-370. LED_C1_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_c1_aeu2_pwm3							
R/W-0h							

Table 2-392. LED_C1_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.14 LED_C1_AEU2_PWM_4 Register (Address = 1ABh) [Reset = 00h]

LED_C1_AEU2_PWM_4 is shown in [Figure 2-371](#) and described in [Table 2-393](#).

Return to the [Summary Table](#).

Figure 2-371. LED_C1_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_c1_aeu2_pwm4							
R/W-0h							

Table 2-393. LED_C1_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.15 LED_C1_AEU2_PWM_5 Register (Address = 1ACh) [Reset = 00h]

LED_C1_AEU2_PWM_5 is shown in [Figure 2-372](#) and described in [Table 2-394](#).

Return to the [Summary Table](#).

Figure 2-372. LED_C1_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_c1_aeu2_pwm5							
R/W-0h							

Table 2-394. LED_C1_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.16 LED_C1_AEU2_T12 Register (Address = 1ADh) [Reset = 00h]

LED_C1_AEU2_T12 is shown in [Figure 2-373](#) and described in [Table 2-395](#).

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Figure 2-373. LED_C1_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_c1_aeu2_t2				led_c1_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-395. LED_C1_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c1_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c1_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.22.17 LED_C1_AEU2_T34 Register (Address = 1AEh) [Reset = 00h]

LED_C1_AEU2_T34 is shown in [Figure 2-374](#) and described in [Table 2-396](#).

Return to the [Summary Table](#).

Figure 2-374. LED_C1_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_c1_aeu2_t4				led_c1_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-396. LED_C1_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c1_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c1_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.22.18 LED_C1_AEU2_Playback Register (Address = 1AFh) [Reset = 00h]

LED_C1_AEU2_Playback is shown in [Figure 2-375](#) and described in [Table 2-397](#).

Return to the [Summary Table](#).

Figure 2-375. LED_C1_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_c1_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-397. LED_C1_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_c1_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_C1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.22.19 LED_C1_AEU3_PWM_1 Register (Address = 1B0h) [Reset = 00h]

LED_C1_AEU3_PWM_1 is shown in [Figure 2-376](#) and described in [Table 2-398](#).

Return to the [Summary Table](#).

Figure 2-376. LED_C1_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_c1_aeu3_pwm1							
R/W-0h							

Table 2-398. LED_C1_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.20 LED_C1_AEU3_PWM_2 Register (Address = 1B1h) [Reset = 00h]

LED_C1_AEU3_PWM_2 is shown in [Figure 2-377](#) and described in [Table 2-399](#).

Return to the [Summary Table](#).

Figure 2-377. LED_C1_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_c1_aeu3_pwm2							
R/W-0h							

Table 2-399. LED_C1_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.21 LED_C1_AEU3_PWM_3 Register (Address = 1B2h) [Reset = 00h]

LED_C1_AEU3_PWM_3 is shown in [Figure 2-378](#) and described in [Table 2-400](#).

Return to the [Summary Table](#).

Figure 2-378. LED_C1_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_c1_aeu3_pwm3							
R/W-0h							

Table 2-400. LED_C1_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.22 LED_C1_AEU3_PWM_4 Register (Address = 1B3h) [Reset = 00h]

LED_C1_AEU3_PWM_4 is shown in [Figure 2-379](#) and described in [Table 2-401](#).

Return to the [Summary Table](#).

Figure 2-379. LED_C1_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_c1_aeu3_pwm4							
R/W-0h							

Table 2-401. LED_C1_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.23 LED_C1_AEU3_PWM_5 Register (Address = 1B4h) [Reset = 00h]

LED_C1_AEU3_PWM_5 is shown in [Figure 2-380](#) and described in [Table 2-402](#).

Return to the [Summary Table](#).

Figure 2-380. LED_C1_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_c1_aeu3_pwm5							
R/W-0h							

Figure 2-380. LED_C1_AEU3_PWM_5 Register (continued)
Table 2-402. LED_C1_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c1_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_C1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.22.24 LED_C1_AEU3_T12 Register (Address = 1B5h) [Reset = 00h]

LED_C1_AEU3_T12 is shown in [Figure 2-381](#) and described in [Table 2-403](#).

Return to the [Summary Table](#).

Figure 2-381. LED_C1_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_c1_aeu3_t2				led_c1_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-403. LED_C1_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c1_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-403. LED_C1_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_c1_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.2.2.25 LED_C1_AEU3_T34 Register (Address = 1B6h) [Reset = 00h]

LED_C1_AEU3_T34 is shown in [Figure 2-382](#) and described in [Table 2-404](#).

Return to the [Summary Table](#).

Figure 2-382. LED_C1_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_c1_aeu3_t4				led_c1_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-404. LED_C1_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c1_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-404. LED_C1_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_c1_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_C1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.22.26 LED_C1_AEU3_Playback Register (Address = 1B7h) [Reset = 00h]

LED_C1_AEU3_Playback is shown in [Figure 2-383](#) and described in [Table 2-405](#).

Return to the [Summary Table](#).

Figure 2-383. LED_C1_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_c1_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-405. LED_C1_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_c1_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_C1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.23 LED_C2_Autonomous_Animation Registers

Table 2-406 lists the memory-mapped registers for the LED_C2_Autonomous_Animation registers. All register offset addresses not listed in Table 2-406 should be considered as reserved locations and the register contents should not be modified.

Table 2-406. LED_C2_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
1B8h	LED_C2_Auto_Pause	Animation pause time at the start and the end of LED_C2	Go
1B9h	LED_C2_Auto_Playback	Animation pattern playback times of LED_C2 and active AEU number setting	Go
1BAh	LED_C2_AEU1_PWM_1	PWM setting of LED_C2 AEU1_PWM1	Go
1BBh	LED_C2_AEU1_PWM_2	PWM setting of LED_C2 AEU1_PWM2	Go
1BCCh	LED_C2_AEU1_PWM_3	PWM setting of LED_C2 AEU1_PWM3	Go
1BDh	LED_C2_AEU1_PWM_4	PWM setting of LED_C2 AEU1_PWM4	Go
1BEh	LED_C2_AEU1_PWM_5	PWM setting of LED_C2 AEU1_PWM5	Go
1BFh	LED_C2_AEU1_T12	Slope time setting of LED_C2 AEU1_T1 and AEU1_T2	Go
1C0h	LED_C2_AEU1_T34	Slope time setting of LED_C2 AEU1_T3 and AEU1_T4	Go
1C1h	LED_C2_AEU1_Playback	AEU1 pattern playback times of LED_C2	Go
1C2h	LED_C2_AEU2_PWM_1	PWM setting of LED_C2 AEU2_PWM1	Go
1C3h	LED_C2_AEU2_PWM_2	PWM setting of LED_C2 AEU2_PWM2	Go
1C4h	LED_C2_AEU2_PWM_3	PWM setting of LED_C2 AEU2_PWM3	Go
1C5h	LED_C2_AEU2_PWM_4	PWM setting of LED_C2 AEU2_PWM4	Go
1C6h	LED_C2_AEU2_PWM_5	PWM setting of LED_C2 AEU2_PWM5	Go
1C7h	LED_C2_AEU2_T12	Slope time setting of LED_C2 AEU2_T1 and AEU2_T2	Go
1C8h	LED_C2_AEU2_T34	Slope time setting of LED_C2 AEU2_T3 and AEU2_T4	Go
1C9h	LED_C2_AEU2_Playback	AEU2 pattern playback times of LED_C2	Go
1CAh	LED_C2_AEU3_PWM_1	PWM setting of LED_C2 AEU3_PWM1	Go
1CBh	LED_C2_AEU3_PWM_2	PWM setting of LED_C2 AEU3_PWM2	Go
1CCh	LED_C2_AEU3_PWM_3	PWM setting of LED_C2 AEU3_PWM3	Go
1CDh	LED_C2_AEU3_PWM_4	PWM setting of LED_C2 AEU3_PWM4	Go
1CEh	LED_C2_AEU3_PWM_5	PWM setting of LED_C2 AEU3_PWM5	Go
1CFh	LED_C2_AEU3_T12	Slope time setting of LED_C2 AEU3_T1 and AEU3_T2	Go
1D0h	LED_C2_AEU3_T34	Slope time setting of LED_C2 AEU3_T3 and AEU3_T4	Go
1D1h	LED_C2_AEU3_Playback	AEU3 pattern playback times of LED_C2	Go

2.23.1 LED_C2_Auto_Pause Register (Address = 1B8h) [Reset = 00h]

LED_C2_Auto_Pause is shown in Figure 2-384 and described in Table 2-407.

Return to the [Summary Table](#).

Figure 2-384. LED_C2_Auto_Pause Register

7	6	5	4	3	2	1	0
led_c2_tp_ts				led_c2_tp_te			

Figure 2-384. LED_C2_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-407. LED_C2_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c2_tp_ts	R/W	0h	Animation pause time at the start of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c2_tp_te	R/W	0h	Animation pause time at the end of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.23.2 LED_C2_Auto_Playback Register (Address = 1B9h) [Reset = 00h]

LED_C2_Auto_Playback is shown in [Figure 2-385](#) and described in [Table 2-408](#).

Return to the [Summary Table](#).

Figure 2-385. LED_C2_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_c2_aeu_num			led_c2_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-408. LED_C2_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_c2_aeu_num	R/W	0h	Active AEU number of LED_C2 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-408. LED_C2_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_c2_pt	R/W	0h	Animation pattern playback times of LED_C2 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.23.3 LED_C2_AEU1_PWM_1 Register (Address = 1BAh) [Reset = 00h]

LED_C2_AEU1_PWM_1 is shown in [Figure 2-386](#) and described in [Table 2-409](#).

Return to the [Summary Table](#).

Figure 2-386. LED_C2_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_c2_aeu1_pwm1							
R/W-0h							

Table 2-409. LED_C2_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.4 LED_C2_AEU1_PWM_2 Register (Address = 1Bh) [Reset = 00h]

LED_C2_AEU1_PWM_2 is shown in [Figure 2-387](#) and described in [Table 2-410](#).

Return to the [Summary Table](#).

Figure 2-387. LED_C2_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_c2_aeu1_pwm2							
R/W-0h							

Table 2-410. LED_C2_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.5 LED_C2_AEU1_PWM_3 Register (Address = 1BCh) [Reset = 00h]

LED_C2_AEU1_PWM_3 is shown in [Figure 2-388](#) and described in [Table 2-411](#).

Return to the [Summary Table](#).

Figure 2-388. LED_C2_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_c2_aeu1_pwm3							
R/W-0h							

Table 2-411. LED_C2_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.6 LED_C2_AEU1_PWM_4 Register (Address = 1BDh) [Reset = 00h]

LED_C2_AEU1_PWM_4 is shown in [Figure 2-389](#) and described in [Table 2-412](#).

Return to the [Summary Table](#).

Figure 2-389. LED_C2_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_c2_aeu1_pwm4							
R/W-0h							

Table 2-412. LED_C2_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.7 LED_C2_AEU1_PWM_5 Register (Address = 1BEh) [Reset = 00h]

LED_C2_AEU1_PWM_5 is shown in [Figure 2-390](#) and described in [Table 2-413](#).

Return to the [Summary Table](#).

Figure 2-390. LED_C2_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_c2_aeu1_pwm5							
R/W-0h							

Table 2-413. LED_C2_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.8 LED_C2_AEU1_T12 Register (Address = 1BFh) [Reset = 00h]

LED_C2_AEU1_T12 is shown in [Figure 2-391](#) and described in [Table 2-414](#).

Return to the [Summary Table](#).

Figure 2-391. LED_C2_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_c2_aeu1_t2				led_c2_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-414. LED_C2_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c2_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c2_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.23.9 LED_C2_AEU1_T34 Register (Address = 1C0h) [Reset = 00h]

LED_C2_AEU1_T34 is shown in [Figure 2-392](#) and described in [Table 2-415](#).

Return to the [Summary Table](#).

Figure 2-392. LED_C2_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_c2_aeu1_t4				led_c2_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-415. LED_C2_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c2_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c2_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.23.10 LED_C2_AEU1_Playback Register (Address = 1C1h) [Reset = 00h]

LED_C2_AEU1_Playback is shown in [Figure 2-393](#) and described in [Table 2-416](#).

Return to the [Summary Table](#).

Figure 2-393. LED_C2_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_c2_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-416. LED_C2_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_c2_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_C2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.23.11 LED_C2_AEU2_PWM_1 Register (Address = 1C2h) [Reset = 00h]

LED_C2_AEU2_PWM_1 is shown in [Figure 2-394](#) and described in [Table 2-417](#).

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Figure 2-394. LED_C2_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_c2_aeu2_pwm1							
R/W-0h							

Table 2-417. LED_C2_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.12 LED_C2_AEU2_PWM_2 Register (Address = 1C3h) [Reset = 00h]

LED_C2_AEU2_PWM_2 is shown in [Figure 2-395](#) and described in [Table 2-418](#).

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Figure 2-395. LED_C2_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_c2_aeu2_pwm2							
R/W-0h							

Table 2-418. LED_C2_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.13 LED_C2_AEU2_PWM_3 Register (Address = 1C4h) [Reset = 00h]

LED_C2_AEU2_PWM_3 is shown in [Figure 2-396](#) and described in [Table 2-419](#).

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Figure 2-396. LED_C2_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_c2_aeu2_pwm3							
R/W-0h							

Table 2-419. LED_C2_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.14 LED_C2_AEU2_PWM_4 Register (Address = 1C5h) [Reset = 00h]

LED_C2_AEU2_PWM_4 is shown in [Figure 2-397](#) and described in [Table 2-420](#).

Return to the [Summary Table](#).

Figure 2-397. LED_C2_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_c2_aeu2_pwm4							
R/W-0h							

Table 2-420. LED_C2_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.15 LED_C2_AEU2_PWM_5 Register (Address = 1C6h) [Reset = 00h]

LED_C2_AEU2_PWM_5 is shown in [Figure 2-398](#) and described in [Table 2-421](#).

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Figure 2-398. LED_C2_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_c2_aeu2_pwm5							
R/W-0h							

Table 2-421. LED_C2_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.16 LED_C2_AEU2_T12 Register (Address = 1C7h) [Reset = 00h]

LED_C2_AEU2_T12 is shown in [Figure 2-399](#) and described in [Table 2-422](#).

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Figure 2-399. LED_C2_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_c2_aeu2_t2				led_c2_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-422. LED_C2_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c2_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c2_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.23.17 LED_C2_AEU2_T34 Register (Address = 1C8h) [Reset = 00h]

LED_C2_AEU2_T34 is shown in [Figure 2-400](#) and described in [Table 2-423](#).

Return to the [Summary Table](#).

Figure 2-400. LED_C2_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_c2_aeu2_t4				led_c2_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-423. LED_C2_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c2_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_c2_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.23.18 LED_C2_AEU2_Playback Register (Address = 1C9h) [Reset = 00h]

LED_C2_AEU2_Playback is shown in [Figure 2-401](#) and described in [Table 2-424](#).

Return to the [Summary Table](#).

Figure 2-401. LED_C2_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_c2_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-424. LED_C2_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_c2_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_C2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.23.19 LED_C2_AEU3_PWM_1 Register (Address = 1CAh) [Reset = 00h]

LED_C2_AEU3_PWM_1 is shown in [Figure 2-402](#) and described in [Table 2-425](#).

Return to the [Summary Table](#).

Figure 2-402. LED_C2_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_c2_aeu3_pwm1							
R/W-0h							

Table 2-425. LED_C2_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.20 LED_C2_AEU3_PWM_2 Register (Address = 1CBh) [Reset = 00h]

LED_C2_AEU3_PWM_2 is shown in [Figure 2-403](#) and described in [Table 2-426](#).

Return to the [Summary Table](#).

Figure 2-403. LED_C2_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_c2_aeu3_pwm2							
R/W-0h							

Table 2-426. LED_C2_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.21 LED_C2_AEU3_PWM_3 Register (Address = 1CCh) [Reset = 00h]

LED_C2_AEU3_PWM_3 is shown in [Figure 2-404](#) and described in [Table 2-427](#).

Return to the [Summary Table](#).

Figure 2-404. LED_C2_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_c2_aeu3_pwm3							
R/W-0h							

Table 2-427. LED_C2_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.22 LED_C2_AEU3_PWM_4 Register (Address = 1CDh) [Reset = 00h]

LED_C2_AEU3_PWM_4 is shown in [Figure 2-405](#) and described in [Table 2-428](#).

Return to the [Summary Table](#).

Figure 2-405. LED_C2_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_c2_aeu3_pwm4							
R/W-0h							

Table 2-428. LED_C2_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.23 LED_C2_AEU3_PWM_5 Register (Address = 1CEh) [Reset = 00h]

LED_C2_AEU3_PWM_5 is shown in [Figure 2-406](#) and described in [Table 2-429](#).

Return to the [Summary Table](#).

Figure 2-406. LED_C2_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_c2_aeu3_pwm5							
R/W-0h							

Figure 2-406. LED_C2_AEU3_PWM_5 Register (continued)
Table 2-429. LED_C2_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_c2_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_C2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.23.24 LED_C2_AEU3_T12 Register (Address = 1CFh) [Reset = 00h]

LED_C2_AEU3_T12 is shown in [Figure 2-407](#) and described in [Table 2-430](#).

Return to the [Summary Table](#).

Figure 2-407. LED_C2_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_c2_aeu3_t2				led_c2_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-430. LED_C2_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c2_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-430. LED_C2_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_c2_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.23.25 LED_C2_AEU3_T34 Register (Address = 1D0h) [Reset = 00h]

LED_C2_AEU3_T34 is shown in [Figure 2-408](#) and described in [Table 2-431](#).

Return to the [Summary Table](#).

Figure 2-408. LED_C2_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_c2_aeu3_t4				led_c2_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-431. LED_C2_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_c2_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-431. LED_C2_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_c2_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_C2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.23.26 LED_C2_AEU3_Playback Register (Address = 1D1h) [Reset = 00h]

 LED_C2_AEU3_Playback is shown in [Figure 2-409](#) and described in [Table 2-432](#).

 Return to the [Summary Table](#).

Figure 2-409. LED_C2_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_c2_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-432. LED_C2_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_c2_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_C2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.24 LED_D0_Autonomous_Animation Registers

Table 2-433 lists the memory-mapped registers for the LED_D0_Autonomous_Animation registers. All register offset addresses not listed in Table 2-433 should be considered as reserved locations and the register contents should not be modified.

Table 2-433. LED_D0_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
1D2h	LED_D0_Auto_Pause	Animation pause time at the start and the end of LED_D0	Go
1D3h	LED_D0_Auto_Playback	Animation pattern playback times of LED_D0 and active AEU number setting	Go
1D4h	LED_D0_AEU1_PWM_1	PWM setting of LED_D0 AEU1_PWM1	Go
1D5h	LED_D0_AEU1_PWM_2	PWM setting of LED_D0 AEU1_PWM2	Go
1D6h	LED_D0_AEU1_PWM_3	PWM setting of LED_D0 AEU1_PWM3	Go
1D7h	LED_D0_AEU1_PWM_4	PWM setting of LED_D0 AEU1_PWM4	Go
1D8h	LED_D0_AEU1_PWM_5	PWM setting of LED_D0 AEU1_PWM5	Go
1D9h	LED_D0_AEU1_T12	Slope time setting of LED_D0 AEU1_T1 and AEU1_T2	Go
1DAh	LED_D0_AEU1_T34	Slope time setting of LED_D0 AEU1_T3 and AEU1_T4	Go
1DBh	LED_D0_AEU1_Playback	AEU1 pattern playback times of LED_D0	Go
1DCh	LED_D0_AEU2_PWM_1	PWM setting of LED_D0 AEU2_PWM1	Go
1DDh	LED_D0_AEU2_PWM_2	PWM setting of LED_D0 AEU2_PWM2	Go
1DEh	LED_D0_AEU2_PWM_3	PWM setting of LED_D0 AEU2_PWM3	Go
1DFh	LED_D0_AEU2_PWM_4	PWM setting of LED_D0 AEU2_PWM4	Go
1E0h	LED_D0_AEU2_PWM_5	PWM setting of LED_D0 AEU2_PWM5	Go
1E1h	LED_D0_AEU2_T12	Slope time setting of LED_D0 AEU2_T1 and AEU2_T2	Go
1E2h	LED_D0_AEU2_T34	Slope time setting of LED_D0 AEU2_T3 and AEU2_T4	Go
1E3h	LED_D0_AEU2_Playback	AEU2 pattern playback times of LED_D0	Go
1E4h	LED_D0_AEU3_PWM_1	PWM setting of LED_D0 AEU3_PWM1	Go
1E5h	LED_D0_AEU3_PWM_2	PWM setting of LED_D0 AEU3_PWM2	Go
1E6h	LED_D0_AEU3_PWM_3	PWM setting of LED_D0 AEU3_PWM3	Go
1E7h	LED_D0_AEU3_PWM_4	PWM setting of LED_D0 AEU3_PWM4	Go
1E8h	LED_D0_AEU3_PWM_5	PWM setting of LED_D0 AEU3_PWM5	Go
1E9h	LED_D0_AEU3_T12	Slope time setting of LED_D0 AEU3_T1 and AEU3_T2	Go
1EAh	LED_D0_AEU3_T34	Slope time setting of LED_D0 AEU3_T3 and AEU3_T4	Go
1EBh	LED_D0_AEU3_Playback	AEU3 pattern playback times of LED_D0	Go

2.24.1 LED_D0_Auto_Pause Register (Address = 1D2h) [Reset = 00h]

LED_D0_Auto_Pause is shown in Figure 2-410 and described in Table 2-434.

Return to the [Summary Table](#).

Figure 2-410. LED_D0_Auto_Pause Register

7	6	5	4	3	2	1	0
led_d0_tp_ts				led_d0_tp_te			

Figure 2-410. LED_D0_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-434. LED_D0_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d0_tp_ts	R/W	0h	Animation pause time at the start of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d0_tp_te	R/W	0h	Animation pause time at the end of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.2.4.2 LED_D0_Auto_Playback Register (Address = 1D3h) [Reset = 00h]

LED_D0_Auto_Playback is shown in [Figure 2-411](#) and described in [Table 2-435](#).

Return to the [Summary Table](#).

Figure 2-411. LED_D0_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_d0_aeu_num			led_d0_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-435. LED_D0_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_d0_aeu_num	R/W	0h	Active AEU number of LED_D0 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-435. LED_D0_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_d0_pt	R/W	0h	Animation pattern playback times of LED_D0 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.24.3 LED_D0_AEU1_PWM_1 Register (Address = 1D4h) [Reset = 00h]

LED_D0_AEU1_PWM_1 is shown in [Figure 2-412](#) and described in [Table 2-436](#).

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Figure 2-412. LED_D0_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_d0_aeu1_pwm1							
R/W-0h							

Table 2-436. LED_D0_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.4 LED_D0_AEU1_PWM_2 Register (Address = 1D5h) [Reset = 00h]

LED_D0_AEU1_PWM_2 is shown in [Figure 2-413](#) and described in [Table 2-437](#).

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Figure 2-413. LED_D0_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_d0_aeu1_pwm2							
R/W-0h							

Table 2-437. LED_D0_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.5 LED_D0_AEU1_PWM_3 Register (Address = 1D6h) [Reset = 00h]

LED_D0_AEU1_PWM_3 is shown in [Figure 2-414](#) and described in [Table 2-438](#).

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Figure 2-414. LED_D0_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_d0_aeu1_pwm3							
R/W-0h							

Table 2-438. LED_D0_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.6 LED_D0_AEU1_PWM_4 Register (Address = 1D7h) [Reset = 00h]

LED_D0_AEU1_PWM_4 is shown in [Figure 2-415](#) and described in [Table 2-439](#).

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Figure 2-415. LED_D0_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_d0_aeu1_pwm4							
R/W-0h							

Table 2-439. LED_D0_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.7 LED_D0_AEU1_PWM_5 Register (Address = 1D8h) [Reset = 00h]

LED_D0_AEU1_PWM_5 is shown in [Figure 2-416](#) and described in [Table 2-440](#).

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Figure 2-416. LED_D0_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_d0_aeu1_pwm5							
R/W-0h							

Table 2-440. LED_D0_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.8 LED_D0_AEU1_T12 Register (Address = 1D9h) [Reset = 00h]

LED_D0_AEU1_T12 is shown in [Figure 2-417](#) and described in [Table 2-441](#).

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Figure 2-417. LED_D0_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_d0_aeu1_t2				led_d0_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-441. LED_D0_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d0_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d0_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.24.9 LED_D0_AEU1_T34 Register (Address = 1DAh) [Reset = 00h]

LED_D0_AEU1_T34 is shown in [Figure 2-418](#) and described in [Table 2-442](#).

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Figure 2-418. LED_D0_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_d0_aeu1_t4				led_d0_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-442. LED_D0_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d0_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d0_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.24.10 LED_D0_AEU1_Playback Register (Address = 1DBh) [Reset = 00h]

LED_D0_AEU1_Playback is shown in [Figure 2-419](#) and described in [Table 2-443](#).

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Figure 2-419. LED_D0_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_d0_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-443. LED_D0_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_d0_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_D0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.24.11 LED_D0_AEU2_PWM_1 Register (Address = 1DCh) [Reset = 00h]

LED_D0_AEU2_PWM_1 is shown in [Figure 2-420](#) and described in [Table 2-444](#).

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Figure 2-420. LED_D0_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_d0_aeu2_pwm1							
R/W-0h							

Table 2-444. LED_D0_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.12 LED_D0_AEU2_PWM_2 Register (Address = 1DDh) [Reset = 00h]

LED_D0_AEU2_PWM_2 is shown in [Figure 2-421](#) and described in [Table 2-445](#).

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Figure 2-421. LED_D0_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_d0_aeu2_pwm2							
R/W-0h							

Table 2-445. LED_D0_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.13 LED_D0_AEU2_PWM_3 Register (Address = 1DEh) [Reset = 00h]

LED_D0_AEU2_PWM_3 is shown in [Figure 2-422](#) and described in [Table 2-446](#).

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Figure 2-422. LED_D0_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_d0_aeu2_pwm3							
R/W-0h							

Table 2-446. LED_D0_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.14 LED_D0_AEU2_PWM_4 Register (Address = 1DFh) [Reset = 00h]

LED_D0_AEU2_PWM_4 is shown in [Figure 2-423](#) and described in [Table 2-447](#).

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Figure 2-423. LED_D0_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_d0_aeu2_pwm4							
R/W-0h							

Table 2-447. LED_D0_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.15 LED_D0_AEU2_PWM_5 Register (Address = 1E0h) [Reset = 00h]

LED_D0_AEU2_PWM_5 is shown in [Figure 2-424](#) and described in [Table 2-448](#).

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Figure 2-424. LED_D0_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_d0_aeu2_pwm5							
R/W-0h							

Table 2-448. LED_D0_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.16 LED_D0_AEU2_T12 Register (Address = 1E1h) [Reset = 00h]

LED_D0_AEU2_T12 is shown in [Figure 2-425](#) and described in [Table 2-449](#).

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Figure 2-425. LED_D0_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_d0_aeu2_t2				led_d0_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-449. LED_D0_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d0_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d0_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.24.17 LED_D0_AEU2_T34 Register (Address = 1E2h) [Reset = 00h]

LED_D0_AEU2_T34 is shown in [Figure 2-426](#) and described in [Table 2-450](#).

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Figure 2-426. LED_D0_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_d0_aeu2_t4				led_d0_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-450. LED_D0_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d0_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d0_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.24.18 LED_D0_AEU2_Playback Register (Address = 1E3h) [Reset = 00h]

LED_D0_AEU2_Playback is shown in [Figure 2-427](#) and described in [Table 2-451](#).

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Figure 2-427. LED_D0_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_d0_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-451. LED_D0_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_d0_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_D0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.24.19 LED_D0_AEU3_PWM_1 Register (Address = 1E4h) [Reset = 00h]

LED_D0_AEU3_PWM_1 is shown in [Figure 2-428](#) and described in [Table 2-452](#).

Return to the [Summary Table](#).

Figure 2-428. LED_D0_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_d0_aeu3_pwm1							
R/W-0h							

Table 2-452. LED_D0_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.20 LED_D0_AEU3_PWM_2 Register (Address = 1E5h) [Reset = 00h]

LED_D0_AEU3_PWM_2 is shown in [Figure 2-429](#) and described in [Table 2-453](#).

Return to the [Summary Table](#).

Figure 2-429. LED_D0_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_d0_aeu3_pwm2							
R/W-0h							

Table 2-453. LED_D0_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.21 LED_D0_AEU3_PWM_3 Register (Address = 1E6h) [Reset = 00h]

LED_D0_AEU3_PWM_3 is shown in [Figure 2-430](#) and described in [Table 2-454](#).

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Figure 2-430. LED_D0_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_d0_aeu3_pwm3							
R/W-0h							

Table 2-454. LED_D0_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.22 LED_D0_AEU3_PWM_4 Register (Address = 1E7h) [Reset = 00h]

LED_D0_AEU3_PWM_4 is shown in [Figure 2-431](#) and described in [Table 2-455](#).

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Figure 2-431. LED_D0_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_d0_aeu3_pwm4							
R/W-0h							

Table 2-455. LED_D0_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.23 LED_D0_AEU3_PWM_5 Register (Address = 1E8h) [Reset = 00h]

LED_D0_AEU3_PWM_5 is shown in [Figure 2-432](#) and described in [Table 2-456](#).

Return to the [Summary Table](#).

Figure 2-432. LED_D0_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_d0_aeu3_pwm5							
R/W-0h							

Figure 2-432. LED_D0_AEU3_PWM_5 Register (continued)
Table 2-456. LED_D0_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d0_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_D0 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.24.24 LED_D0_AEU3_T12 Register (Address = 1E9h) [Reset = 00h]

LED_D0_AEU3_T12 is shown in [Figure 2-433](#) and described in [Table 2-457](#).

Return to the [Summary Table](#).

Figure 2-433. LED_D0_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_d0_aeu3_t2				led_d0_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-457. LED_D0_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d0_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-457. LED_D0_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_d0_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.24.25 LED_D0_AEU3_T34 Register (Address = 1EAh) [Reset = 00h]

LED_D0_AEU3_T34 is shown in [Figure 2-434](#) and described in [Table 2-458](#).

Return to the [Summary Table](#).

Figure 2-434. LED_D0_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_d0_aeu3_t4				led_d0_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-458. LED_D0_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d0_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-458. LED_D0_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_d0_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_D0 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.24.26 LED_D0_AEU3_Playback Register (Address = 1EBh) [Reset = 00h]

 LED_D0_AEU3_Playback is shown in [Figure 2-435](#) and described in [Table 2-459](#).

 Return to the [Summary Table](#).

Figure 2-435. LED_D0_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_d0_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-459. LED_D0_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_d0_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_D0 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.25 LED_D1_Autonomous_Animation Registers

Table 2-460 lists the memory-mapped registers for the LED_D1_Autonomous_Animation registers. All register offset addresses not listed in Table 2-460 should be considered as reserved locations and the register contents should not be modified.

Table 2-460. LED_D1_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
1ECh	LED_D1_Auto_Pause	Animation pause time at the start and the end of LED_D1	Go
1EDh	LED_D1_Auto_Playback	Animation pattern playback times of LED_D1 and active AEU number setting	Go
1EEh	LED_D1_AEU1_PWM_1	PWM setting of LED_D1 AEU1_PWM1	Go
1EFh	LED_D1_AEU1_PWM_2	PWM setting of LED_D1 AEU1_PWM2	Go
1F0h	LED_D1_AEU1_PWM_3	PWM setting of LED_D1 AEU1_PWM3	Go
1F1h	LED_D1_AEU1_PWM_4	PWM setting of LED_D1 AEU1_PWM4	Go
1F2h	LED_D1_AEU1_PWM_5	PWM setting of LED_D1 AEU1_PWM5	Go
1F3h	LED_D1_AEU1_T12	Slope time setting of LED_D1 AEU1_T1 and AEU1_T2	Go
1F4h	LED_D1_AEU1_T34	Slope time setting of LED_D1 AEU1_T3 and AEU1_T4	Go
1F5h	LED_D1_AEU1_Playback	AEU1 pattern playback times of LED_D1	Go
1F6h	LED_D1_AEU2_PWM_1	PWM setting of LED_D1 AEU2_PWM1	Go
1F7h	LED_D1_AEU2_PWM_2	PWM setting of LED_D1 AEU2_PWM2	Go
1F8h	LED_D1_AEU2_PWM_3	PWM setting of LED_D1 AEU2_PWM3	Go
1F9h	LED_D1_AEU2_PWM_4	PWM setting of LED_D1 AEU2_PWM4	Go
1FAh	LED_D1_AEU2_PWM_5	PWM setting of LED_D1 AEU2_PWM5	Go
1FBh	LED_D1_AEU2_T12	Slope time setting of LED_D1 AEU2_T1 and AEU2_T2	Go
1FCh	LED_D1_AEU2_T34	Slope time setting of LED_D1 AEU2_T3 and AEU2_T4	Go
1FDh	LED_D1_AEU2_Playback	AEU2 pattern playback times of LED_D1	Go
1FEh	LED_D1_AEU3_PWM_1	PWM setting of LED_D1 AEU3_PWM1	Go
1FFh	LED_D1_AEU3_PWM_2	PWM setting of LED_D1 AEU3_PWM2	Go
200h	LED_D1_AEU3_PWM_3	PWM setting of LED_D1 AEU3_PWM3	Go
201h	LED_D1_AEU3_PWM_4	PWM setting of LED_D1 AEU3_PWM4	Go
202h	LED_D1_AEU3_PWM_5	PWM setting of LED_D1 AEU3_PWM5	Go
203h	LED_D1_AEU3_T12	Slope time setting of LED_D1 AEU3_T1 and AEU3_T2	Go
204h	LED_D1_AEU3_T34	Slope time setting of LED_D1 AEU3_T3 and AEU3_T4	Go
205h	LED_D1_AEU3_Playback	AEU3 pattern playback times of LED_D1	Go

2.25.1 LED_D1_Auto_Pause Register (Address = 1ECh) [Reset = 00h]

LED_D1_Auto_Pause is shown in Figure 2-436 and described in Table 2-461.

Return to the [Summary Table](#).

Figure 2-436. LED_D1_Auto_Pause Register

7	6	5	4	3	2	1	0
led_d1_tp_ts				led_d1_tp_te			

Figure 2-436. LED_D1_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-461. LED_D1_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d1_tp_ts	R/W	0h	Animation pause time at the start of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d1_tp_te	R/W	0h	Animation pause time at the end of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.25.2 LED_D1_Auto_Playback Register (Address = 1EDh) [Reset = 00h]

LED_D1_Auto_Playback is shown in [Figure 2-437](#) and described in [Table 2-462](#).

Return to the [Summary Table](#).

Figure 2-437. LED_D1_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_d1_aeu_num			led_d1_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-462. LED_D1_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_d1_aeu_num	R/W	0h	Active AEU number of LED_D1 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-462. LED_D1_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_d1_pt	R/W	0h	Animation pattern playback times of LED_D1 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.25.3 LED_D1_AEU1_PWM_1 Register (Address = 1EEh) [Reset = 00h]

LED_D1_AEU1_PWM_1 is shown in [Figure 2-438](#) and described in [Table 2-463](#).

Return to the [Summary Table](#).

Figure 2-438. LED_D1_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_d1_aeu1_pwm1							
R/W-0h							

Table 2-463. LED_D1_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.4 LED_D1_AEU1_PWM_2 Register (Address = 1EFh) [Reset = 00h]

LED_D1_AEU1_PWM_2 is shown in [Figure 2-439](#) and described in [Table 2-464](#).

Return to the [Summary Table](#).

Figure 2-439. LED_D1_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_d1_aeu1_pwm2							
R/W-0h							

Table 2-464. LED_D1_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.5 LED_D1_AEU1_PWM_3 Register (Address = 1F0h) [Reset = 00h]

LED_D1_AEU1_PWM_3 is shown in [Figure 2-440](#) and described in [Table 2-465](#).

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Figure 2-440. LED_D1_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_d1_aeu1_pwm3							
R/W-0h							

Table 2-465. LED_D1_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.6 LED_D1_AEU1_PWM_4 Register (Address = 1F1h) [Reset = 00h]

LED_D1_AEU1_PWM_4 is shown in [Figure 2-441](#) and described in [Table 2-466](#).

Return to the [Summary Table](#).

Figure 2-441. LED_D1_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_d1_aeu1_pwm4							
R/W-0h							

Table 2-466. LED_D1_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.7 LED_D1_AEU1_PWM_5 Register (Address = 1F2h) [Reset = 00h]

LED_D1_AEU1_PWM_5 is shown in [Figure 2-442](#) and described in [Table 2-467](#).

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Figure 2-442. LED_D1_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_d1_aeu1_pwm5							
R/W-0h							

Table 2-467. LED_D1_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.8 LED_D1_AEU1_T12 Register (Address = 1F3h) [Reset = 00h]

LED_D1_AEU1_T12 is shown in [Figure 2-443](#) and described in [Table 2-468](#).

Return to the [Summary Table](#).

Figure 2-443. LED_D1_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_d1_aeu1_t2				led_d1_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-468. LED_D1_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d1_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d1_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.25.9 LED_D1_AEU1_T34 Register (Address = 1F4h) [Reset = 00h]

LED_D1_AEU1_T34 is shown in [Figure 2-444](#) and described in [Table 2-469](#).

Return to the [Summary Table](#).

Figure 2-444. LED_D1_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_d1_aeu1_t4				led_d1_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-469. LED_D1_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d1_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d1_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.25.10 LED_D1_AEU1_Playback Register (Address = 1F5h) [Reset = 00h]

LED_D1_AEU1_Playback is shown in [Figure 2-445](#) and described in [Table 2-470](#).

Return to the [Summary Table](#).

Figure 2-445. LED_D1_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_d1_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-470. LED_D1_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_d1_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_D1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.25.11 LED_D1_AEU2_PWM_1 Register (Address = 1F6h) [Reset = 00h]

LED_D1_AEU2_PWM_1 is shown in [Figure 2-446](#) and described in [Table 2-471](#).

Return to the [Summary Table](#).

Figure 2-446. LED_D1_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_d1_aeu2_pwm1							
R/W-0h							

Table 2-471. LED_D1_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.12 LED_D1_AEU2_PWM_2 Register (Address = 1F7h) [Reset = 00h]

LED_D1_AEU2_PWM_2 is shown in [Figure 2-447](#) and described in [Table 2-472](#).

Return to the [Summary Table](#).

Figure 2-447. LED_D1_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_d1_aeu2_pwm2							
R/W-0h							

Table 2-472. LED_D1_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.13 LED_D1_AEU2_PWM_3 Register (Address = 1F8h) [Reset = 00h]

LED_D1_AEU2_PWM_3 is shown in [Figure 2-448](#) and described in [Table 2-473](#).

Return to the [Summary Table](#).

Figure 2-448. LED_D1_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_d1_aeu2_pwm3							
R/W-0h							

Table 2-473. LED_D1_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.14 LED_D1_AEU2_PWM_4 Register (Address = 1F9h) [Reset = 00h]

LED_D1_AEU2_PWM_4 is shown in [Figure 2-449](#) and described in [Table 2-474](#).

Return to the [Summary Table](#).

Figure 2-449. LED_D1_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_d1_aeu2_pwm4							
R/W-0h							

Table 2-474. LED_D1_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.15 LED_D1_AEU2_PWM_5 Register (Address = 1FAh) [Reset = 00h]

LED_D1_AEU2_PWM_5 is shown in [Figure 2-450](#) and described in [Table 2-475](#).

Return to the [Summary Table](#).

Figure 2-450. LED_D1_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_d1_aeu2_pwm5							
R/W-0h							

Table 2-475. LED_D1_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.16 LED_D1_AEU2_T12 Register (Address = 1FBh) [Reset = 00h]

LED_D1_AEU2_T12 is shown in [Figure 2-451](#) and described in [Table 2-476](#).

Return to the [Summary Table](#).

Figure 2-451. LED_D1_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_d1_aeu2_t2				led_d1_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-476. LED_D1_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d1_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d1_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.25.17 LED_D1_AEU2_T34 Register (Address = 1FCh) [Reset = 00h]

LED_D1_AEU2_T34 is shown in [Figure 2-452](#) and described in [Table 2-477](#).

Return to the [Summary Table](#).

Figure 2-452. LED_D1_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_d1_aeu2_t4				led_d1_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-477. LED_D1_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d1_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d1_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.25.18 LED_D1_AEU2_Playback Register (Address = 1FDh) [Reset = 00h]

LED_D1_AEU2_Playback is shown in [Figure 2-453](#) and described in [Table 2-478](#).

Return to the [Summary Table](#).

Figure 2-453. LED_D1_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_d1_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-478. LED_D1_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_d1_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_D1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.25.19 LED_D1_AEU3_PWM_1 Register (Address = 1FEh) [Reset = 00h]

LED_D1_AEU3_PWM_1 is shown in [Figure 2-454](#) and described in [Table 2-479](#).

Return to the [Summary Table](#).

Figure 2-454. LED_D1_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_d1_aeu3_pwm1							
R/W-0h							

Table 2-479. LED_D1_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.20 LED_D1_AEU3_PWM_2 Register (Address = 1FFh) [Reset = 00h]

LED_D1_AEU3_PWM_2 is shown in [Figure 2-455](#) and described in [Table 2-480](#).

Return to the [Summary Table](#).

Figure 2-455. LED_D1_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_d1_aeu3_pwm2							
R/W-0h							

Table 2-480. LED_D1_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.21 LED_D1_AEU3_PWM_3 Register (Address = 200h) [Reset = 00h]

LED_D1_AEU3_PWM_3 is shown in [Figure 2-456](#) and described in [Table 2-481](#).

Return to the [Summary Table](#).

Figure 2-456. LED_D1_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_d1_aeu3_pwm3							
R/W-0h							

Table 2-481. LED_D1_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.22 LED_D1_AEU3_PWM_4 Register (Address = 201h) [Reset = 00h]

LED_D1_AEU3_PWM_4 is shown in [Figure 2-457](#) and described in [Table 2-482](#).

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Figure 2-457. LED_D1_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_d1_aeu3_pwm4							
R/W-0h							

Table 2-482. LED_D1_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.23 LED_D1_AEU3_PWM_5 Register (Address = 202h) [Reset = 00h]

LED_D1_AEU3_PWM_5 is shown in [Figure 2-458](#) and described in [Table 2-483](#).

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Figure 2-458. LED_D1_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_d1_aeu3_pwm5							
R/W-0h							

Figure 2-458. LED_D1_AEU3_PWM_5 Register (continued)
Table 2-483. LED_D1_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d1_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_D1 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.25.24 LED_D1_AEU3_T12 Register (Address = 203h) [Reset = 00h]

LED_D1_AEU3_T12 is shown in [Figure 2-459](#) and described in [Table 2-484](#).

Return to the [Summary Table](#).

Figure 2-459. LED_D1_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_d1_aeu3_t2				led_d1_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-484. LED_D1_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d1_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-484. LED_D1_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_d1_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.25.25 LED_D1_AEU3_T34 Register (Address = 204h) [Reset = 00h]

LED_D1_AEU3_T34 is shown in [Figure 2-460](#) and described in [Table 2-485](#).

Return to the [Summary Table](#).

Figure 2-460. LED_D1_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_d1_aeu3_t4				led_d1_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-485. LED_D1_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d1_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-485. LED_D1_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_d1_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_D1 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.25.26 LED_D1_AEU3_Playback Register (Address = 205h) [Reset = 00h]

LED_D1_AEU3_Playback is shown in [Figure 2-461](#) and described in [Table 2-486](#).

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Figure 2-461. LED_D1_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_d1_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-486. LED_D1_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_d1_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_D1 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.26 LED_D2_Autonomous_Animation Registers

Table 2-487 lists the memory-mapped registers for the LED_D2_Autonomous_Animation registers. All register offset addresses not listed in Table 2-487 should be considered as reserved locations and the register contents should not be modified.

Table 2-487. LED_D2_AUTONOMOUS_ANIMATION Registers

Address	Acronym	Register Name	Section
206h	LED_D2_Auto_Pause	Animation pause time at the start and the end of LED_D2	Go
207h	LED_D2_Auto_Playback	Animation pattern playback times of LED_D2 and active AEU number setting	Go
208h	LED_D2_AEU1_PWM_1	PWM setting of LED_D2 AEU1_PWM1	Go
209h	LED_D2_AEU1_PWM_2	PWM setting of LED_D2 AEU1_PWM2	Go
20Ah	LED_D2_AEU1_PWM_3	PWM setting of LED_D2 AEU1_PWM3	Go
20Bh	LED_D2_AEU1_PWM_4	PWM setting of LED_D2 AEU1_PWM4	Go
20Ch	LED_D2_AEU1_PWM_5	PWM setting of LED_D2 AEU1_PWM5	Go
20Dh	LED_D2_AEU1_T12	Slope time setting of LED_D2 AEU1_T1 and AEU1_T2	Go
20Eh	LED_D2_AEU1_T34	Slope time setting of LED_D2 AEU1_T3 and AEU1_T4	Go
20Fh	LED_D2_AEU1_Playback	AEU1 pattern playback times of LED_D2	Go
210h	LED_D2_AEU2_PWM_1	PWM setting of LED_D2 AEU2_PWM1	Go
211h	LED_D2_AEU2_PWM_2	PWM setting of LED_D2 AEU2_PWM2	Go
212h	LED_D2_AEU2_PWM_3	PWM setting of LED_D2 AEU2_PWM3	Go
213h	LED_D2_AEU2_PWM_4	PWM setting of LED_D2 AEU2_PWM4	Go
214h	LED_D2_AEU2_PWM_5	PWM setting of LED_D2 AEU2_PWM5	Go
215h	LED_D2_AEU2_T12	Slope time setting of LED_D2 AEU2_T1 and AEU2_T2	Go
216h	LED_D2_AEU2_T34	Slope time setting of LED_D2 AEU2_T3 and AEU2_T4	Go
217h	LED_D2_AEU2_Playback	AEU2 pattern playback times of LED_D2	Go
218h	LED_D2_AEU3_PWM_1	PWM setting of LED_D2 AEU3_PWM1	Go
219h	LED_D2_AEU3_PWM_2	PWM setting of LED_D2 AEU3_PWM2	Go
21Ah	LED_D2_AEU3_PWM_3	PWM setting of LED_D2 AEU3_PWM3	Go
21Bh	LED_D2_AEU3_PWM_4	PWM setting of LED_D2 AEU3_PWM4	Go
21Ch	LED_D2_AEU3_PWM_5	PWM setting of LED_D2 AEU3_PWM5	Go
21Dh	LED_D2_AEU3_T12	Slope time setting of LED_D2 AEU3_T1 and AEU3_T2	Go
21Eh	LED_D2_AEU3_T34	Slope time setting of LED_D2 AEU3_T3 and AEU3_T4	Go
21Fh	LED_D2_AEU3_Playback	AEU3 pattern playback times of LED_D2	Go

2.26.1 LED_D2_Auto_Pause Register (Address = 206h) [Reset = 00h]

LED_D2_Auto_Pause is shown in Figure 2-462 and described in Table 2-488.

Return to the [Summary Table](#).

Figure 2-462. LED_D2_Auto_Pause Register

7	6	5	4	3	2	1	0
led_d2_tp_ts				led_d2_tp_te			

Figure 2-462. LED_D2_Auto_Pause Register (continued)

R/W-0h

R/W-0h

Table 2-488. LED_D2_Auto_Pause Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d2_tp_ts	R/W	0h	Animation pause time at the start of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d2_tp_te	R/W	0h	Animation pause time at the end of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.26.2 LED_D2_Auto_Playback Register (Address = 207h) [Reset = 00h]

LED_D2_Auto_Playback is shown in [Figure 2-463](#) and described in [Table 2-489](#).

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Figure 2-463. LED_D2_Auto_Playback Register

7	6	5	4	3	2	1	0
RESERVED		led_d2_aeu_num			led_d2_pt		
R/W-0h		R/W-0h			R/W-0h		

Table 2-489. LED_D2_Auto_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R/W	0h	Reserved
5-4	led_d2_aeu_num	R/W	0h	Active AEU number of LED_D2 selection 0h = only use AEU1 1h = use AEU1 and AEU2 2h = use AEU1, AEU2 and AEU3 3h = use AEU1, AEU2 and AEU3 (the same as 2h)

Table 2-489. LED_D2_Auto_Playback Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_d2_pt	R/W	0h	Animation pattern playback times of LED_D2 0h = 0 times 1h = 1 times 2h = 2 times 3h = 3 times 4h = 4 times 5h = 5 times 6h = 6 times 7h = 7 times 8h = 8 times 9h = 9 times Ah = 10 times Bh = 11 times Ch = 12 times Dh = 13 times Eh = 14 times Fh = infinite times

2.26.3 LED_D2_AEU1_PWM_1 Register (Address = 208h) [Reset = 00h]

LED_D2_AEU1_PWM_1 is shown in [Figure 2-464](#) and described in [Table 2-490](#).

Return to the [Summary Table](#).

Figure 2-464. LED_D2_AEU1_PWM_1 Register

7	6	5	4	3	2	1	0
led_d2_aeu1_pwm1							
R/W-0h							

Table 2-490. LED_D2_AEU1_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu1_pwm1	R/W	0h	AEU1_PWM1 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.4 LED_D2_AEU1_PWM_2 Register (Address = 209h) [Reset = 00h]

LED_D2_AEU1_PWM_2 is shown in [Figure 2-465](#) and described in [Table 2-491](#).

Return to the [Summary Table](#).

Figure 2-465. LED_D2_AEU1_PWM_2 Register

7	6	5	4	3	2	1	0
led_d2_aeu1_pwm2							
R/W-0h							

Table 2-491. LED_D2_AEU1_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu1_pwm2	R/W	0h	AEU1_PWM2 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.5 LED_D2_AEU1_PWM_3 Register (Address = 20Ah) [Reset = 00h]

LED_D2_AEU1_PWM_3 is shown in [Figure 2-466](#) and described in [Table 2-492](#).

Return to the [Summary Table](#).

Figure 2-466. LED_D2_AEU1_PWM_3 Register

7	6	5	4	3	2	1	0
led_d2_aeu1_pwm3							
R/W-0h							

Table 2-492. LED_D2_AEU1_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu1_pwm3	R/W	0h	AEU1_PWM3 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.6 LED_D2_AEU1_PWM_4 Register (Address = 20Bh) [Reset = 00h]

LED_D2_AEU1_PWM_4 is shown in [Figure 2-467](#) and described in [Table 2-493](#).

Return to the [Summary Table](#).

Figure 2-467. LED_D2_AEU1_PWM_4 Register

7	6	5	4	3	2	1	0
led_d2_aeu1_pwm4							
R/W-0h							

Table 2-493. LED_D2_AEU1_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu1_pwm4	R/W	0h	AEU1_PWM4 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.7 LED_D2_AEU1_PWM_5 Register (Address = 20Ch) [Reset = 00h]

LED_D2_AEU1_PWM_5 is shown in [Figure 2-468](#) and described in [Table 2-494](#).

Return to the [Summary Table](#).

Figure 2-468. LED_D2_AEU1_PWM_5 Register

7	6	5	4	3	2	1	0
led_d2_aeu1_pwm5							
R/W-0h							

Table 2-494. LED_D2_AEU1_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu1_pwm5	R/W	0h	AEU1_PWM5 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.8 LED_D2_AEU1_T12 Register (Address = 20Dh) [Reset = 00h]

LED_D2_AEU1_T12 is shown in [Figure 2-469](#) and described in [Table 2-495](#).

Return to the [Summary Table](#).

Figure 2-469. LED_D2_AEU1_T12 Register

7	6	5	4	3	2	1	0
led_d2_aeu1_t2				led_d2_aeu1_t1			
R/W-0h				R/W-0h			

Table 2-495. LED_D2_AEU1_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d2_aeu1_t2	R/W	0h	AEU1_T2 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d2_aeu1_t1	R/W	0h	AEU1_T1 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.26.9 LED_D2_AEU1_T34 Register (Address = 20Eh) [Reset = 00h]

LED_D2_AEU1_T34 is shown in [Figure 2-470](#) and described in [Table 2-496](#).

Return to the [Summary Table](#).

Figure 2-470. LED_D2_AEU1_T34 Register

7	6	5	4	3	2	1	0
led_d2_aeu1_t4				led_d2_aeu1_t3			
R/W-0h				R/W-0h			

Table 2-496. LED_D2_AEU1_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d2_aeu1_t4	R/W	0h	AEU1_T4 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d2_aeu1_t3	R/W	0h	AEU1_T3 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.26.10 LED_D2_AEU1_Playback Register (Address = 20Fh) [Reset = 00h]

LED_D2_AEU1_Playback is shown in [Figure 2-471](#) and described in [Table 2-497](#).

Return to the [Summary Table](#).

Figure 2-471. LED_D2_AEU1_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_d2_aeu1_pt	
R/W-0h						R/W-0h	

Table 2-497. LED_D2_AEU1_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_d2_aeu1_pt	R/W	0h	AEU1 pattern playback times of LED_D2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.26.11 LED_D2_AEU2_PWM_1 Register (Address = 210h) [Reset = 00h]

LED_D2_AEU2_PWM_1 is shown in [Figure 2-472](#) and described in [Table 2-498](#).

Return to the [Summary Table](#).

Figure 2-472. LED_D2_AEU2_PWM_1 Register

7	6	5	4	3	2	1	0
led_d2_aeu2_pwm1							
R/W-0h							

Table 2-498. LED_D2_AEU2_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu2_pwm1	R/W	0h	AEU2_PWM1 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.12 LED_D2_AEU2_PWM_2 Register (Address = 211h) [Reset = 00h]

LED_D2_AEU2_PWM_2 is shown in [Figure 2-473](#) and described in [Table 2-499](#).

Return to the [Summary Table](#).

Figure 2-473. LED_D2_AEU2_PWM_2 Register

7	6	5	4	3	2	1	0
led_d2_aeu2_pwm2							
R/W-0h							

Table 2-499. LED_D2_AEU2_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu2_pwm2	R/W	0h	AEU2_PWM2 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.13 LED_D2_AEU2_PWM_3 Register (Address = 212h) [Reset = 00h]

LED_D2_AEU2_PWM_3 is shown in [Figure 2-474](#) and described in [Table 2-500](#).

Return to the [Summary Table](#).

Figure 2-474. LED_D2_AEU2_PWM_3 Register

7	6	5	4	3	2	1	0
led_d2_aeu2_pwm3							
R/W-0h							

Table 2-500. LED_D2_AEU2_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu2_pwm3	R/W	0h	AEU2_PWM3 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.14 LED_D2_AEU2_PWM_4 Register (Address = 213h) [Reset = 00h]

LED_D2_AEU2_PWM_4 is shown in [Figure 2-475](#) and described in [Table 2-501](#).

Return to the [Summary Table](#).

Figure 2-475. LED_D2_AEU2_PWM_4 Register

7	6	5	4	3	2	1	0
led_d2_aeu2_pwm4							
R/W-0h							

Table 2-501. LED_D2_AEU2_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu2_pwm4	R/W	0h	AEU2_PWM4 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.15 LED_D2_AEU2_PWM_5 Register (Address = 214h) [Reset = 00h]

LED_D2_AEU2_PWM_5 is shown in [Figure 2-476](#) and described in [Table 2-502](#).

Return to the [Summary Table](#).

Figure 2-476. LED_D2_AEU2_PWM_5 Register

7	6	5	4	3	2	1	0
led_d2_aeu2_pwm5							
R/W-0h							

Table 2-502. LED_D2_AEU2_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu2_pwm5	R/W	0h	AEU2_PWM5 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.16 LED_D2_AEU2_T12 Register (Address = 215h) [Reset = 00h]

LED_D2_AEU2_T12 is shown in [Figure 2-477](#) and described in [Table 2-503](#).

Return to the [Summary Table](#).

Figure 2-477. LED_D2_AEU2_T12 Register

7	6	5	4	3	2	1	0
led_d2_aeu2_t2				led_d2_aeu2_t1			
R/W-0h				R/W-0h			

Table 2-503. LED_D2_AEU2_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d2_aeu2_t2	R/W	0h	AEU2_T2 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d2_aeu2_t1	R/W	0h	AEU2_T1 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.26.17 LED_D2_AEU2_T34 Register (Address = 216h) [Reset = 00h]

LED_D2_AEU2_T34 is shown in [Figure 2-478](#) and described in [Table 2-504](#).

Return to the [Summary Table](#).

Figure 2-478. LED_D2_AEU2_T34 Register

7	6	5	4	3	2	1	0
led_d2_aeu2_t4				led_d2_aeu2_t3			
R/W-0h				R/W-0h			

Table 2-504. LED_D2_AEU2_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d2_aeu2_t4	R/W	0h	AEU2_T4 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s
3-0	led_d2_aeu2_t3	R/W	0h	AEU2_T3 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.26.18 LED_D2_AEU2_Playback Register (Address = 217h) [Reset = 00h]

LED_D2_AEU2_Playback is shown in [Figure 2-479](#) and described in [Table 2-505](#).

Return to the [Summary Table](#).

Figure 2-479. LED_D2_AEU2_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_d2_aeu2_pt	
R/W-0h						R/W-0h	

Table 2-505. LED_D2_AEU2_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_d2_aeu2_pt	R/W	0h	AEU2 pattern playback times of LED_D2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.26.19 LED_D2_AEU3_PWM_1 Register (Address = 218h) [Reset = 00h]

LED_D2_AEU3_PWM_1 is shown in [Figure 2-480](#) and described in [Table 2-506](#).

Return to the [Summary Table](#).

Figure 2-480. LED_D2_AEU3_PWM_1 Register

7	6	5	4	3	2	1	0
led_d2_aeu3_pwm1							
R/W-0h							

Table 2-506. LED_D2_AEU3_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu3_pwm1	R/W	0h	AEU3_PWM1 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.20 LED_D2_AEU3_PWM_2 Register (Address = 219h) [Reset = 00h]

LED_D2_AEU3_PWM_2 is shown in [Figure 2-481](#) and described in [Table 2-507](#).

Return to the [Summary Table](#).

Figure 2-481. LED_D2_AEU3_PWM_2 Register

7	6	5	4	3	2	1	0
led_d2_aeu3_pwm2							
R/W-0h							

Table 2-507. LED_D2_AEU3_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu3_pwm2	R/W	0h	AEU3_PWM2 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.21 LED_D2_AEU3_PWM_3 Register (Address = 21Ah) [Reset = 00h]

LED_D2_AEU3_PWM_3 is shown in [Figure 2-482](#) and described in [Table 2-508](#).

Return to the [Summary Table](#).

Figure 2-482. LED_D2_AEU3_PWM_3 Register

7	6	5	4	3	2	1	0
led_d2_aeu3_pwm3							
R/W-0h							

Table 2-508. LED_D2_AEU3_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu3_pwm3	R/W	0h	AEU3_PWM3 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.22 LED_D2_AEU3_PWM_4 Register (Address = 21Bh) [Reset = 00h]

LED_D2_AEU3_PWM_4 is shown in [Figure 2-483](#) and described in [Table 2-509](#).

Return to the [Summary Table](#).

Figure 2-483. LED_D2_AEU3_PWM_4 Register

7	6	5	4	3	2	1	0
led_d2_aeu3_pwm4							
R/W-0h							

Table 2-509. LED_D2_AEU3_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu3_pwm4	R/W	0h	AEU3_PWM4 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.23 LED_D2_AEU3_PWM_5 Register (Address = 21Ch) [Reset = 00h]

LED_D2_AEU3_PWM_5 is shown in [Figure 2-484](#) and described in [Table 2-510](#).

Return to the [Summary Table](#).

Figure 2-484. LED_D2_AEU3_PWM_5 Register

7	6	5	4	3	2	1	0
led_d2_aeu3_pwm5							
R/W-0h							

Figure 2-484. LED_D2_AEU3_PWM_5 Register (continued)
Table 2-510. LED_D2_AEU3_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	led_d2_aeu3_pwm5	R/W	0h	AEU3_PWM5 setting of LED_D2 0h = 0 1h = 0.39% 2h = 0.78% ... 80h = 50.2% ... FDh = 99.2% FEh = 99.6% FFh = 100%

2.26.24 LED_D2_AEU3_T12 Register (Address = 21Dh) [Reset = 00h]

LED_D2_AEU3_T12 is shown in [Figure 2-485](#) and described in [Table 2-511](#).

Return to the [Summary Table](#).

Figure 2-485. LED_D2_AEU3_T12 Register

7	6	5	4	3	2	1	0
led_d2_aeu3_t2				led_d2_aeu3_t1			
R/W-0h				R/W-0h			

Table 2-511. LED_D2_AEU3_T12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d2_aeu3_t2	R/W	0h	AEU3_T2 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-511. LED_D2_AEU3_T12 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_d2_aeu3_t1	R/W	0h	AEU3_T1 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.26.25 LED_D2_AEU3_T34 Register (Address = 21Eh) [Reset = 00h]

 LED_D2_AEU3_T34 is shown in [Figure 2-486](#) and described in [Table 2-512](#).

 Return to the [Summary Table](#).

Figure 2-486. LED_D2_AEU3_T34 Register

7	6	5	4	3	2	1	0
led_d2_aeu3_t4				led_d2_aeu3_t3			
R/W-0h				R/W-0h			

Table 2-512. LED_D2_AEU3_T34 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-4	led_d2_aeu3_t4	R/W	0h	AEU3_T4 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

Table 2-512. LED_D2_AEU3_T34 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
3-0	led_d2_aeu3_t3	R/W	0h	AEU3_T3 slope time setting of LED_D2 0h = no pause time 1h = 0.09s 2h = 0.18s 3h = 0.36s 4h = 0.54s 5h = 0.80s 6h = 1.07s 7h = 1.52s 8h = 2.06s 9h = 2.50s Ah = 3.04s Bh = 4.02s Ch = 5.01s Dh = 5.99s Eh = 7.06s Fh = 8.05s

2.26.26 LED_D2_AEU3_Playback Register (Address = 21Fh) [Reset = 00h]

 LED_D2_AEU3_Playback is shown in [Figure 2-487](#) and described in [Table 2-513](#).

 Return to the [Summary Table](#).

Figure 2-487. LED_D2_AEU3_Playback Register

7	6	5	4	3	2	1	0
RESERVED						led_d2_aeu3_pt	
R/W-0h						R/W-0h	

Table 2-513. LED_D2_AEU3_Playback Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R/W	0h	Reserved
1-0	led_d2_aeu3_pt	R/W	0h	AEU3 pattern playback times of LED_D2 0h = 0 time 1h = 1 time 2h = 2 times 3h = Infinite times

2.27 Flag Registers

Table 2-514 lists the memory-mapped registers for the Flag registers. All register offset addresses not listed in Table 2-514 should be considered as reserved locations and the register contents should not be modified.

Table 2-514. FLAG Registers

Address	Acronym	Register Name	Section
300h	TSD_Config_Status	Configuration fault and TSD flags	Go
301h	LOD_Status_0	LOD flags of LED_0 to LED_3, LED_A0 to LED_A2 and LED_B0	Go
302h	LOD_Status_1	LOD flags of LED_B1 to LED_B2, LED_C0 to LED_C2 and LED_D0 to LED_D2	Go
303h	LSD_Status_0	LSD flags of LED_0 to LED_3, LED_A0 to LED_A2 and LED_B0	Go
304h	LSD_Status_1	LSD flags of LED_B1 to LED_B2, LED_C0 to LED_C2 and LED_D0 to LED_D2	Go
305h	Auto_PWM_0	PWM value in autonomous mode of LED_0	Go
306h	Auto_PWM_1	PWM value in autonomous mode of LED_1	Go
307h	Auto_PWM_2	PWM value in autonomous mode of LED_2	Go
308h	Auto_PWM_3	PWM value in autonomous mode of LED_3	Go
309h	Auto_PWM_4	PWM value in autonomous mode of LED_A0	Go
30Ah	Auto_PWM_5	PWM value in autonomous mode of LED_A1	Go
30Bh	Auto_PWM_6	PWM value in autonomous mode of LED_A2	Go
30Ch	Auto_PWM_7	PWM value in autonomous mode of LED_B0	Go
30Dh	Auto_PWM_8	PWM value in autonomous mode of LED_B1	Go
30Eh	Auto_PWM_9	PWM value in autonomous mode of LED_B2	Go
30Fh	Auto_PWM_10	PWM value in autonomous mode of LED_C0	Go
310h	Auto_PWM_11	PWM value in autonomous mode of LED_C1	Go
311h	Auto_PWM_12	PWM value in autonomous mode of LED_C2	Go
312h	Auto_PWM_13	PWM value in autonomous mode of LED_D0	Go
313h	Auto_PWM_14	PWM value in autonomous mode of LED_D1	Go
314h	Auto_PWM_15	PWM value in autonomous mode of LED_D2	Go
315h	AEP_Status_0	Autonomous engine pattern status of LED_0 and LED_1	Go
316h	AEP_Status_1	Autonomous engine pattern status of LED_2 and LED_3	Go
317h	AEP_Status_2	Autonomous engine pattern status of LED_A0 and LED_A1	Go
318h	AEP_Status_3	Autonomous engine pattern status of LED_A2 and LED_B0	Go
319h	AEP_Status_4	Autonomous engine pattern status of LED_B1 and LED_B2	Go
31Ah	AEP_Status_5	Autonomous engine pattern status of LED_C0 and LED_C1	Go
31Bh	AEP_Status_6	Autonomous engine pattern status of LED_C2 and LED_D0	Go
31Ch	AEP_Status_7	Autonomous engine pattern status of LED_D1 and LED_D2	Go

2.27.1 TSD_Config_Status Register (Address = 300h) [Reset = 00h]

TSD_Config_Status is shown in [Figure 2-488](#) and described in [Table 2-515](#).

Return to the [Summary Table](#).

Figure 2-488. TSD_Config_Status Register

7	6	5	4	3	2	1	0
RESERVED						tsd_status	config_err_status
R-0h						R-0h	R-0h

Table 2-515. TSD_Config_Status Register Field Descriptions

Bit	Field	Type	Reset	Description
7-2	RESERVED	R	0h	Reserved
1	tsd_status	R	0h	Boost/Linear TSD fault flag 0h = Boost/Linear TSD are not detected 1h = Boost/Linear TSD are detected
0	config_err_status	R	0h	Configuration fault flag 0h = LED_CONFIG and SCAN_ORDERx registers are properly set 1h = LED_CONFIG and SCAN_ORDERx registers are improperly set

2.27.2 LOD_Status_0 Register (Address = 301h) [Reset = 00h]

LOD_Status_0 is shown in [Figure 2-489](#) and described in [Table 2-516](#).

Return to the [Summary Table](#).

Figure 2-489. LOD_Status_0 Register

7	6	5	4	3	2	1	0
lod_status_b0	lod_status_a2	lod_status_a1	lod_status_a0	lod_status_3	lod_status_2	lod_status_1	lod_status_0
R-0h	R-0h	R-0h	R-0h	R-0h	R-0h	R-0h	R-0h

Table 2-516. LOD_Status_0 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	lod_status_b0	R	0h	LED_B0 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
6	lod_status_a2	R	0h	LED_A2 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
5	lod_status_a1	R	0h	LED_A1 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
4	lod_status_a0	R	0h	LED_A0 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
3	lod_status_3	R	0h	LED_3 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
2	lod_status_2	R	0h	LED_2 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
1	lod_status_1	R	0h	LED_1 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected

Table 2-516. LOD_Status_0 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
0	lod_status_0	R	0h	LED_0 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected

2.27.3 LOD_Status_1 Register (Address = 302h) [Reset = 00h]

LOD_Status_1 is shown in [Figure 2-490](#) and described in [Table 2-517](#).

Return to the [Summary Table](#).

Figure 2-490. LOD_Status_1 Register

7	6	5	4	3	2	1	0
lod_status_d2	lod_status_d1	lod_status_d0	lod_status_c2	lod_status_c1	lod_status_c0	lod_status_b2	lod_status_b1
R-0h	R-0h	R-0h	R-0h	R-0h	R-0h	R-0h	R-0h

Table 2-517. LOD_Status_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	lod_status_d2	R	0h	LED_D2 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
6	lod_status_d1	R	0h	LED_D1 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
5	lod_status_d0	R	0h	LED_D0 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
4	lod_status_c2	R	0h	LED_C2 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
3	lod_status_c1	R	0h	LED_C1 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
2	lod_status_c0	R	0h	LED_C0 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
1	lod_status_b2	R	0h	LED_B2 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected
0	lod_status_b1	R	0h	LED_B1 LOD status flag 0h = LOD fault is not detected 1h = LOD fault is detected

2.27.4 LSD_Status_0 Register (Address = 303h) [Reset = 00h]

LSD_Status_0 is shown in [Figure 2-491](#) and described in [Table 2-518](#).

Return to the [Summary Table](#).

Figure 2-491. LSD_Status_0 Register

7	6	5	4	3	2	1	0
lsd_status_b0	lsd_status_a2	lsd_status_a1	lsd_status_a0	lsd_status_3	lsd_status_2	lsd_status_1	lsd_status_0
R-0h	R-0h	R-0h	R-0h	R-0h	R-0h	R-0h	R-0h

Table 2-518. LSD_Status_0 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	lsd_status_b0	R	0h	LED_B0 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
6	lsd_status_a2	R	0h	LED_A2 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
5	lsd_status_a1	R	0h	LED_A1 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
4	lsd_status_a0	R	0h	LED_A0 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
3	lsd_status_3	R	0h	LED_3 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
2	lsd_status_2	R	0h	LED_2 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
1	lsd_status_1	R	0h	LED_1 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
0	lsd_status_0	R	0h	LED_0 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected

2.27.5 LSD_Status_1 Register (Address = 304h) [Reset = 00h]

LSD_Status_1 is shown in [Figure 2-492](#) and described in [Table 2-519](#).

Return to the [Summary Table](#).

Figure 2-492. LSD_Status_1 Register

7	6	5	4	3	2	1	0
lsd_status_d2	lsd_status_d1	lsd_status_d0	lsd_status_c2	lsd_status_c1	lsd_status_c0	lsd_status_b2	lsd_status_b1
R-0h	R-0h	R-0h	R-0h	R-0h	R-0h	R-0h	R-0h

Table 2-519. LSD_Status_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7	lsd_status_d2	R	0h	LED_D2 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
6	lsd_status_d1	R	0h	LED_D1 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
5	lsd_status_d0	R	0h	LED_D0 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
4	lsd_status_c2	R	0h	LED_C2 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
3	lsd_status_c1	R	0h	LED_C1 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected

Table 2-519. LSD_Status_1 Register Field Descriptions (continued)

Bit	Field	Type	Reset	Description
2	lsd_status_c0	R	0h	LED_C0 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
1	lsd_status_b2	R	0h	LED_B2 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected
0	lsd_status_b1	R	0h	LED_B1 LSD status flag 0h = LSD fault is not detected 1h = LSD fault is detected

2.27.6 Auto_PWM_0 Register (Address = 305h) [Reset = 00h]

Auto_PWM_0 is shown in [Figure 2-493](#) and described in [Table 2-520](#).

Return to the [Summary Table](#).

Figure 2-493. Auto_PWM_0 Register

7	6	5	4	3	2	1	0
pwm_auto_0							
R-0h							

Table 2-520. Auto_PWM_0 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_0	R	0h	PWM value in autonomous mode of LED_0, precise when pause the animation

2.27.7 Auto_PWM_1 Register (Address = 306h) [Reset = 00h]

Auto_PWM_1 is shown in [Figure 2-494](#) and described in [Table 2-521](#).

Return to the [Summary Table](#).

Figure 2-494. Auto_PWM_1 Register

7	6	5	4	3	2	1	0
pwm_auto_1							
R-0h							

Table 2-521. Auto_PWM_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_1	R	0h	PWM value in autonomous mode of LED_1, precise when pause the animation

2.27.8 Auto_PWM_2 Register (Address = 307h) [Reset = 00h]

Auto_PWM_2 is shown in [Figure 2-495](#) and described in [Table 2-522](#).

Return to the [Summary Table](#).

Figure 2-495. Auto_PWM_2 Register

7	6	5	4	3	2	1	0
pwm_auto_2							
R-0h							

Table 2-522. Auto_PWM_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_2	R	0h	PWM value in autonomous mode of LED_2, precise when pause the animation

2.27.9 Auto_PWM_3 Register (Address = 308h) [Reset = 00h]

Auto_PWM_3 is shown in [Figure 2-496](#) and described in [Table 2-523](#).

Return to the [Summary Table](#).

Figure 2-496. Auto_PWM_3 Register

7	6	5	4	3	2	1	0
pwm_auto_3							
R-0h							

Table 2-523. Auto_PWM_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_3	R	0h	PWM value in autonomous mode of LED_3, precise when pause the animation

2.27.10 Auto_PWM_4 Register (Address = 309h) [Reset = 00h]

Auto_PWM_4 is shown in [Figure 2-497](#) and described in [Table 2-524](#).

Return to the [Summary Table](#).

Figure 2-497. Auto_PWM_4 Register

7	6	5	4	3	2	1	0
pwm_auto_a0							
R-0h							

Table 2-524. Auto_PWM_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_a0	R	0h	PWM value in autonomous mode of LED_A0, precise when pause the animation

2.27.11 Auto_PWM_5 Register (Address = 30Ah) [Reset = 00h]

Auto_PWM_5 is shown in [Figure 2-498](#) and described in [Table 2-525](#).

Return to the [Summary Table](#).

Figure 2-498. Auto_PWM_5 Register

7	6	5	4	3	2	1	0
pwm_auto_a1							
R-0h							

Table 2-525. Auto_PWM_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_a1	R	0h	PWM value in autonomous mode of LED_A1, precise when pause the animation

2.27.12 Auto_PWM_6 Register (Address = 30Bh) [Reset = 00h]

Auto_PWM_6 is shown in [Figure 2-499](#) and described in [Table 2-526](#).

Return to the [Summary Table](#).

Figure 2-499. Auto_PWM_6 Register

7	6	5	4	3	2	1	0
pwm_auto_a2							
R-0h							

Table 2-526. Auto_PWM_6 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_a2	R	0h	PWM value in autonomous mode of LED_A2, precise when pause the animation

2.27.13 Auto_PWM_7 Register (Address = 30Ch) [Reset = 00h]

Auto_PWM_7 is shown in [Figure 2-500](#) and described in [Table 2-527](#).

Return to the [Summary Table](#).

Figure 2-500. Auto_PWM_7 Register

7	6	5	4	3	2	1	0
pwm_auto_b0							
R-0h							

Table 2-527. Auto_PWM_7 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_b0	R	0h	PWM value in autonomous mode of LED_B0, precise when pause the animation

2.27.14 Auto_PWM_8 Register (Address = 30Dh) [Reset = 00h]

Auto_PWM_8 is shown in [Figure 2-501](#) and described in [Table 2-528](#).

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Figure 2-501. Auto_PWM_8 Register

7	6	5	4	3	2	1	0
pwm_auto_b1							
R-0h							

Table 2-528. Auto_PWM_8 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_b1	R	0h	PWM value in autonomous mode of LED_B1, precise when pause the animation

2.27.15 Auto_PWM_9 Register (Address = 30Eh) [Reset = 00h]

Auto_PWM_9 is shown in [Figure 2-502](#) and described in [Table 2-529](#).

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Figure 2-502. Auto_PWM_9 Register

7	6	5	4	3	2	1	0
pwm_auto_b2							
R-0h							

Table 2-529. Auto_PWM_9 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_b2	R	0h	PWM value in autonomous mode of LED_B2, precise when pause the animation

2.27.16 Auto_PWM_10 Register (Address = 30Fh) [Reset = 00h]

Auto_PWM_10 is shown in [Figure 2-503](#) and described in [Table 2-530](#).

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Figure 2-503. Auto_PWM_10 Register

7	6	5	4	3	2	1	0
pwm_auto_c0							
R-0h							

Table 2-530. Auto_PWM_10 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_c0	R	0h	PWM value in autonomous mode of LED_C0, precise when pause the animation

2.27.17 Auto_PWM_11 Register (Address = 310h) [Reset = 00h]

Auto_PWM_11 is shown in [Figure 2-504](#) and described in [Table 2-531](#).

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Figure 2-504. Auto_PWM_11 Register

7	6	5	4	3	2	1	0
pwm_auto_c1							
R-0h							

Table 2-531. Auto_PWM_11 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_c1	R	0h	PWM value in autonomous mode of LED_C1, precise when pause the animation

2.27.18 Auto_PWM_12 Register (Address = 311h) [Reset = 00h]

Auto_PWM_12 is shown in [Figure 2-505](#) and described in [Table 2-532](#).

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Figure 2-505. Auto_PWM_12 Register

7	6	5	4	3	2	1	0
pwm_auto_c2							
R-0h							

Table 2-532. Auto_PWM_12 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_c2	R	0h	PWM value in autonomous mode of LED_C2, precise when pause the animation

2.27.19 Auto_PWM_13 Register (Address = 312h) [Reset = 00h]

Auto_PWM_13 is shown in [Figure 2-506](#) and described in [Table 2-533](#).

Return to the [Summary Table](#).

Figure 2-506. Auto_PWM_13 Register

7	6	5	4	3	2	1	0
pwm_auto_d0							
R-0h							

Table 2-533. Auto_PWM_13 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_d0	R	0h	PWM value in autonomous mode of LED_D0, precise when pause the animation

2.27.20 Auto_PWM_14 Register (Address = 313h) [Reset = 00h]

Auto_PWM_14 is shown in [Figure 2-507](#) and described in [Table 2-534](#).

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Figure 2-507. Auto_PWM_14 Register

7	6	5	4	3	2	1	0
pwm_auto_d1							
R-0h							

Table 2-534. Auto_PWM_14 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_d1	R	0h	PWM value in autonomous mode of LED_D1, precise when pause the animation

2.27.21 Auto_PWM_15 Register (Address = 314h) [Reset = 00h]

Auto_PWM_15 is shown in [Figure 2-508](#) and described in [Table 2-535](#).

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Figure 2-508. Auto_PWM_15 Register

7	6	5	4	3	2	1	0
pwm_auto_d2							
R-0h							

Table 2-535. Auto_PWM_15 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-0	pwm_auto_d2	R	0h	PWM value in autonomous mode of LED_D2, precise when pause the animation

2.27.22 AEP_Status_0 Register (Address = 315h) [Reset = 3Fh]

AEP_Status_0 is shown in [Figure 2-509](#) and described in [Table 2-536](#).

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Figure 2-509. AEP_Status_0 Register

7	6	5	4	3	2	1	0
RESERVED		aep_status_1			aep_status_0		
R-0h		R-7h			R-7h		

Table 2-536. AEP_Status_0 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R	0h	Reserved
5-3	aep_status_1	R	7h	Autonomous engine pattern status of LED_1 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error
2-0	aep_status_0	R	7h	Autonomous engine pattern status of LED_0 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error

2.27.23 AEP_Status_1 Register (Address = 316h) [Reset = 3Fh]

AEP_Status_1 is shown in [Figure 2-510](#) and described in [Table 2-537](#).

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Figure 2-510. AEP_Status_1 Register

7	6	5	4	3	2	1	0
RESERVED		aep_status_3			aep_status_2		
R-0h		R-7h			R-7h		

Table 2-537. AEP_Status_1 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R	0h	Reserved
5-3	aep_status_3	R	7h	Autonomous engine pattern status of LED_3 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error
2-0	aep_status_2	R	7h	Autonomous engine pattern status of LED_2 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error

2.27.24 AEP_Status_2 Register (Address = 317h) [Reset = 3Fh]

AEP_Status_2 is shown in [Figure 2-511](#) and described in [Table 2-538](#).

Return to the [Summary Table](#).

Figure 2-511. AEP_Status_2 Register

7	6	5	4	3	2	1	0
RESERVED		aep_status_A1			aep_status_A0		
R-0h		R-7h			R-7h		

Table 2-538. AEP_Status_2 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R	0h	Reserved
5-3	aep_status_A1	R	7h	Autonomous engine pattern status of LED_A1 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error
2-0	aep_status_A0	R	7h	Autonomous engine pattern status of LED_A0 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error

2.27.25 AEP_Status_3 Register (Address = 318h) [Reset = 3Fh]

AEP_Status_3 is shown in [Figure 2-512](#) and described in [Table 2-539](#).

Return to the [Summary Table](#).

Figure 2-512. AEP_Status_3 Register

7	6	5	4	3	2	1	0
RESERVED		aep_status_B0			aep_status_A2		
R-0h		R-7h			R-7h		

Table 2-539. AEP_Status_3 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R	0h	Reserved
5-3	aep_status_B0	R	7h	Autonomous engine pattern status of LED_B0 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error
2-0	aep_status_A2	R	7h	Autonomous engine pattern status of LED_A2 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error

2.27.26 AEP_Status_4 Register (Address = 319h) [Reset = 3Fh]

AEP_Status_4 is shown in [Figure 2-513](#) and described in [Table 2-540](#).

Return to the [Summary Table](#).

Figure 2-513. AEP_Status_4 Register

7	6	5	4	3	2	1	0
RESERVED		aep_status_B2			aep_status_B1		
R-0h		R-7h			R-7h		

Table 2-540. AEP_Status_4 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R	0h	Reserved
5-3	aep_status_B2	R	7h	Autonomous engine pattern status of LED_B2 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error
2-0	aep_status_B1	R	7h	Autonomous engine pattern status of LED_B1 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error

2.27.27 AEP_Status_5 Register (Address = 31Ah) [Reset = 3Fh]

AEP_Status_5 is shown in [Figure 2-514](#) and described in [Table 2-541](#).

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Figure 2-514. AEP_Status_5 Register

7	6	5	4	3	2	1	0
RESERVED		aep_status_C1			aep_status_C0		
R-0h		R-7h			R-7h		

Table 2-541. AEP_Status_5 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R	0h	Reserved
5-3	aep_status_C1	R	7h	Autonomous engine pattern status of LED_C1 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error
2-0	aep_status_C0	R	7h	Autonomous engine pattern status of LED_C0 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error

2.27.28 AEP_Status_6 Register (Address = 31Bh) [Reset = 3Fh]

AEP_Status_6 is shown in [Figure 2-515](#) and described in [Table 2-542](#).

Return to the [Summary Table](#).

Figure 2-515. AEP_Status_6 Register

7	6	5	4	3	2	1	0
RESERVED		aep_status_D0			aep_status_C2		
R-0h		R-7h			R-7h		

Table 2-542. AEP_Status_6 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R	0h	Reserved
5-3	aep_status_D0	R	7h	Autonomous engine pattern status of LED_D0 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error
2-0	aep_status_C2	R	7h	Autonomous engine pattern status of LED_C2 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error

2.27.29 AEP_Status_7 Register (Address = 31Ch) [Reset = 3Fh]

AEP_Status_7 is shown in [Figure 2-516](#) and described in [Table 2-543](#).

Return to the [Summary Table](#).

Figure 2-516. AEP_Status_7 Register

7	6	5	4	3	2	1	0
RESERVED		aep_status_D2			aep_status_D1		
R-0h		R-7h			R-7h		

Table 2-543. AEP_Status_7 Register Field Descriptions

Bit	Field	Type	Reset	Description
7-6	RESERVED	R	0h	Reserved
5-3	aep_status_D2	R	7h	Autonomous engine pattern status of LED_D2 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error
2-0	aep_status_D1	R	7h	Autonomous engine pattern status of LED_D1 0h = During APU1 1h = During AEU1 2h = During AEU2 3h = During AEU3 4h = During APU2 5/6/7h = Error

Revision History



NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

DATE	REVISION	NOTES
October 2024	*	Initial Release

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