

Contents of MSP430F42x0, MSP430FG42x0 Code Examples (slac077.zip) - asm (CCS), .s43 (IAR), and .c (CCS & IAR)

Link to zip file: <http://www.ti.com/lit/zip/slac077>

Applicable Devices: MSP430F4250, MSP430F4260, MSP430F4270, MSP430FG4250, MSP430FG4260, MSP430FG4270

Consult readme.txt included in the zip file for disclaimer and coding style guidelines

Contents:

- [Assembly Code Examples \(.asm, CCS compatible\)](#)
- [Assembly Code Examples \(.s43, IAR compatible\)](#)
- [C Code Examples \(.c, IAR & CCS compatible\)](#)

.asm code examples – CCS	
File name	Description
msp430x42x0_1.asm	Software Toggle P1.0
msp430x42x0_bt_01.asm	Basic Timer, Toggle P1.0 Inside ISR, DCO SMCLK
msp430x42x0_bt_02.asm	Basic Timer, Toggle P1.0 Inside ISR, 32kHz ACLK
msp430x42x0_clks_01.asm	FLL+, Output MCLK, ACLK Using 32kHz XTAL and DCO
msp430x42x0_dac_01.asm	DAC0 1V output
msp430x42x0_dac_02.asm	DAC0 1V output with 3x reference
msp430x42x0_dac_03.asm	DAC0 1V output with AVcc (3v) ref
msp430x42x0_fll_01.asm	FLL+, Runs Internal DCO at 2.45MHz
msp430x42x0_fll_02.asm	FLL+, Runs Internal DCO at 8MHz
msp430x42x0_isp.asm	Flash In-System Program Memory
msp430x42x0_lcda_04.asm	LCD_A Put "0123456" on SBLCDA4 LCD
msp430x42x0_lcda_05.asm	LCD_A Put "0123456" on SBLCDA4 LCD
msp430x42x0_lcda_07.asm	LCD_A run a 0-9 counter on TI LCD
msp430x42x0_lcda_07.asm	LCD_A run a 0-9 counter on SBLCDA4 LCD
msp430x42x0_LFxtal_nmi.asm	LFXT1 Oscillator Fault Detection
msp430x42x0_lpm3.asm	FLL+, LPM3 Using Basic Timer ISR, 32kHz ACLK
msp430x42x0_sd16a_03.asm	SD16_A, Continuous Conversion on a Single Channel
msp430x42x0_sd16a_04.asm	SD16_A, Single Conversion on Single Channel Polling IFG
msp430x42x0_sd16a_05.asm	SD16_A, Single Conversion on Single Channel Using ISR
msp430x42x0_sd16a_07.asm	SD16_A, Using the Integrated Battery Sensor
msp430x42x0_sd16a_08.asm	SD16_A, Single Conversion on a Channel using buffered input
msp430x42x0_sd16a_09.asm	SD16_A, Single Conversion on a Single Channel Using ISR
msp430x42x0_sd16a_10.asm	SD16_A, Single Conversion on Single Channel Using ISR 1024 Extended Oversampling Rate
msp430x42x0_sd16a_11.asm	SD16_A, Single Conversion on Single Channel Using ISR ACLK input to SD16_A
msp430x42x0_sd16a_12.asm	SD16_A, Single Conversion on Single Channel Using ISR SMCLK input is divided by 32
msp430x42x0_ta_01.asm	Timer_A, Toggle P1.0, CCR0 Cont. Mode ISR, DCO SMCLK
msp430x42x0_ta_02.asm	Timer_A, Toggle P1.0, CCR0 Up Mode ISR, DCO SMCLK
msp430x42x0_ta_03.asm	Timer_A, Toggle P1.0, Overflow ISR, DCO SMCLK
msp430x42x0_ta_04.asm	Timer_A, Toggle P1.0, Overflow ISR, 32kHz ACLK
msp430x42x0_ta_05.asm	Timer_A, Toggle P1.0, CCR0 Up Mode ISR, 32kHz ACLK
msp430x42x0_ta_16.asm	Timer_A, PWM TA1-2 Up Mode, DCO SMCLK
msp430x42x0_ta_17.asm	Timer_A, PWM TA1-2 Up Mode, 32kHz ACLK

msp430x42x0_ta_22.asm	Timer_A, Output 40kHz Square Wave, Up Mode, SMCLK DCO
msp430x42x0_ta_25.asm	Timer_A, Output DTMF, Cont. Mode, DCO SMCLK
msp430x42x0_ta_uart115k.asm	Timer_A, UART 115200 Echo, DCO SMCLK
msp430x42x0_ta_uart2400.asm	Timer_A, UART 2400 Ultra-low Power Echo, 32kHz ACLK
msp430x42x0_ta_uart9600.asm	Timer_A, UART 9600 Echo, DCO SMCLK
msp430x42x0_wdt_01.asm	WDT, Toggle P1.0, Interval Overflow ISR, DCO SMCLK
msp430x42x0_wdt_02.asm	WDT, Toggle P1.0, Interval Overflow ISR, 32kHz ACLK
msp430xG42x0_oa_02.asm	OA0, Comparator in General-Purpose Mode
msp430xG42x0_oa_06.asm	OA0, Unity-Gain Buffer Mode
msp430xG42x0_oa_15.asm	OA0, Offset Calibration

.s43 code examples – IAR	
File name	Description
msp430x42x0_1.s43	Software Toggle P1.0
msp430x42x0_bt_01.s43	Basic Timer, Toggle P1.0 Inside ISR, DCO SMCLK
msp430x42x0_bt_02.s43	Basic Timer, Toggle P1.0 Inside ISR, 32kHz ACLK
msp430x42x0_clks_01.s43	FLL+, Output MCLK, ACLK Using 32kHz XTAL and DCO
msp430x42x0_dac_01.s43	DAC0 1V output
msp430x42x0_dac_02.s43	DAC0 1V output with 3x reference
msp430x42x0_dac_03.s43	DAC0 1V output with AVcc (3v) ref
msp430x42x0_fll_01.s43	FLL+, Runs Internal DCO at 2.45MHz
msp430x42x0_fll_02.s43	FLL+, Runs Internal DCO at 8MHz
msp430x42x0_isp.s43	Flash In-System Program Memory
msp430x42x0_lcda_04.s43	LCD_A Put "0123456" on SBLCDA4 LCD
msp430x42x0_lcda_05.s43	LCD_A Put "0123456" on SBLCDA4 LCD
msp430x42x0_lcda_06.s43	LCD_A run a 0-9 counter on TI LCD
msp430x42x0_LFxtal_nmi.s43	LFXT1 Oscillator Fault Detection
msp430x42x0_lpm3.s43	FLL+, LPM3 Using Basic Timer ISR, 32kHz ACLK
msp430x42x0_sd16a_03.s43	SD16_A, Continuous Conversion on a Single Channel
msp430x42x0_sd16a_04.s43	SD16_A, Single Conversion on Single Channel Polling IFG
msp430x42x0_sd16a_05.s43	SD16_A, Single Conversion on Single Channel Using ISR
msp430x42x0_sd16a_07.s43	SD16_A, Using the Integrated Battery Sensor
msp430x42x0_sd16a_08.s43	SD16_A, Single Conversion on a Channel using buffered input
msp430x42x0_sd16a_09.s43	SD16_A, Single Conversion on a Single Channel Using ISR
msp430x42x0_sd16a_10.s43	SD16_A, Single Conversion on Single Channel Using ISR 1024 Extended Oversampling Rate
msp430x42x0_sd16a_11.s43	SD16_A, Single Conversion on Single Channel Using ISR ACLK input to SD16_A
msp430x42x0_sd16a_12.s43	SD16_A, Single Conversion on Single Channel Using ISR SMCLK input is divided by 32
msp430x42x0_ta_01.s43	Timer_A, Toggle P1.0, CCR0 Cont. Mode ISR, DCO SMCLK
msp430x42x0_ta_02.s43	Timer_A, Toggle P1.0, CCR0 Up Mode ISR, DCO SMCLK
msp430x42x0_ta_03.s43	Timer_A, Toggle P1.0, Overflow ISR, DCO SMCLK
msp430x42x0_ta_04.s43	Timer_A, Toggle P1.0, Overflow ISR, 32kHz ACLK
msp430x42x0_ta_05.s43	Timer_A, Toggle P1.0, CCR0 Up Mode ISR, 32kHz ACLK
msp430x42x0_ta_16.s43	Timer_A, PWM TA1-2 Up Mode, DCO SMCLK

msp430x42x0_ta_17.s43	Timer_A, PWM TA1-2 Up Mode, 32kHz ACLK
msp430x42x0_ta_22.s43	Timer_A, Output 40kHz Square Wave, Up Mode, SMCLK DCO
msp430x42x0_ta_25.s43	Timer_A, Output DTMF, Cont. Mode, DCO SMCLK
msp430x42x0_ta_uart115k.s43	Timer_A, UART 115200 Echo, DCO SMCLK
msp430x42x0_ta_uart2400.s43	Timer_A, UART 2400 Ultra-low Power Echo, 32kHz ACLK
msp430x42x0_ta_uart9600.s43	Timer_A, UART 9600 Echo, DCO SMCLK
msp430x42x0_wdt_01.s43	WDT, Toggle P1.0, Interval Overflow ISR, DCO SMCLK
msp430x42x0_wdt_02.s43	WDT, Toggle P1.0, Interval Overflow ISR, 32kHz ACLK
msp430xG42x0_oa_02.s43	OA0, Comparator in General-Purpose Mode
msp430xG42x0_oa_06.s43	OA0, Unity-Gain Buffer Mode
msp430xG42x0_oa_15.s43	OA0, Offset Calibration

C code examples – IAR & CCS	
File name	Description
msp430x42x0_1	Software Toggle P1.0
msp430x42x0_bt_01	Basic Timer, Toggle P1.0 Inside ISR, DCO SMCLK
msp430x42x0_bt_02	Basic Timer, Toggle P1.0 Inside ISR, 32kHz ACLK
msp430x42x0_clks_01	FLL+, Output MCLK, ACLK Using 32kHz XTAL and DCO
msp430x42x0_dac_01	DAC0 1V output
msp430x42x0_dac_02	DAC0 1V output with 3x reference
msp430x42x0_dac_03	DAC0 1V output with AVcc (3v) ref
msp430x42x0_fll_01	FLL+, Runs Internal DCO at 2.45MHz
msp430x42x0_fll_02	FLL+, Runs Internal DCO at 8MHz
msp430x42x0_isp	Flash In-System Program Memory
msp430x42x0_lcda_04	LCD_A Put "0123456" on SBLCD4 LCD
msp430x42x0_lcda_05	LCD_A Put "0123456" on SBLCD4 LCD
msp430x42x0_lcda_06	LCD_A run a 0-9 counter on TI LCD
msp430x42x0_LFxtal_nmi.s	LFXT1 Oscillator Fault Detection
msp430x42x0_lpm3	FLL+, LPM3 Using Basic Timer ISR, 32kHz ACLK
msp430x42x0_sd16a_03	SD16_A, Continuous Conversion on a Single Channel
msp430x42x0_sd16a_04	SD16_A, Single Conversion on Single Channel Polling IFG
msp430x42x0_sd16a_05	SD16_A, Single Conversion on Single Channel Using ISR
msp430x42x0_sd16a_07	SD16_A, Using the Integrated Battery Sensor
msp430x42x0_sd16a_08	SD16_A, Single Conversion on a Channel using buffered input
msp430x42x0_sd16a_09	SD16_A, Single Conversion on a Single Channel Using ISR
msp430x42x0_sd16a_10	SD16_A, Single Conversion on Single Channel Using ISR 1024 Extended Oversampling Rate
msp430x42x0_sd16a_11	SD16_A, Single Conversion on Single Channel Using ISR ACLK input to SD16_A
msp430x42x0_sd16a_12	SD16_A, Single Conversion on Single Channel Using ISR SMCLK input is divided by 32
msp430x42x0_ta_01	Timer_A, Toggle P1.0, CCR0 Cont. Mode ISR, DCO SMCLK
msp430x42x0_ta_02	Timer_A, Toggle P1.0, CCR0 Up Mode ISR, DCO SMCLK
msp430x42x0_ta_03	Timer_A, Toggle P1.0, Overflow ISR, DCO SMCLK
msp430x42x0_ta_04	Timer_A, Toggle P1.0, Overflow ISR, 32kHz ACLK
msp430x42x0_ta_05	Timer_A, Toggle P1.0, CCR0 Up Mode ISR, 32kHz ACLK

msp430x42x0_ta_16	Timer_A, PWM TA1-2 Up Mode, DCO SMCLK
msp430x42x0_ta_17	Timer_A, PWM TA1-2 Up Mode, 32kHz ACLK
msp430x42x0_ta_22	Timer_A, Output 40kHz Square Wave, Up Mode, SMCLK DCO
msp430x42x0_ta_25	Timer_A, Output DTMF, Cont. Mode, DCO SMCLK
msp430x42x0_ta_uart115k	Timer_A, UART 115200 Echo, DCO SMCLK
msp430x42x0_ta_uart2400	Timer_A, UART 2400 Ultra-low Power Echo, 32kHz ACLK
msp430x42x0_ta_uart9600	Timer_A, UART 9600 Echo, DCO SMCLK
msp430x42x0_wdt_01	WDT, Toggle P1.0, Interval Overflow ISR, DCO SMCLK
msp430x42x0_wdt_02	WDT, Toggle P1.0, Interval Overflow ISR, 32kHz ACLK

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