

Contents of MSP430F43x, MSP430F44x Code Examples (slac019.zip) - asm (CCS), .s43 (IAR), and .c (CCS & IAR)

Link to zip file: <http://www.ti.com/lit/zip/slac019>

Applicable Devices: MSP430F435, MSP430F436, MSP430F43, MSP430F447, MSP430F448, MSP430F449

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
fet440_1.asm	Software Toggle P5.1
fet440_LFxtal_nmi.asm	LFXT1 Oscillator Fault Detection
fet440_adc12_01.asm	ADC12, Sample A0, Set P5.1 if A0 > 0.5*AVcc
fet440_adc12_02.asm	ADC12, Using the Internal Reference
fet440_adc12_03.asm	ADC12, Sample A10 Temp, Set P5.1 if temp ++ ~2c
fet440_adc12_04.asm	ADC12, Extend Sampling Period With SHT Bits
fet440_adc12_05.asm	ADC12, Using an External Reference
fet440_adc12_06.asm	ADC12, Repeated Sequence of Conversions
fet440_adc12_07.asm	ADC12, Repeated Single Channel Conversions
fet440_adc12_08.asm	ADC12, Using 10 External Channels of Conversion
fet440_adc12_09.asm	ADC12, Sequence of Conversions (non-repeated)
fet440_adc12_10.asm	ADC12, Sample A10 Temp and Convert to oC and oF
fet440_bt_01.asm	Basic Timer, Toggle P5.1 Inside ISR, DCO SMCLK
fet440_bt_02.asm	Basic Timer, Toggle P5.1 Inside ISR, 32kHz ACLK
fet440_clks_01.asm	FLL+, Output MCLK, SMCLK, ACLK Using 32kHz XTAL
fet440_clks_02.asm	FLL+, Output 32kHz Xtal + HF Xtal + Internal DCO
fet440_fil_01.asm	FLL+, Runs Internal DCO at 2.45MHz
fet440_fil_02.asm	FLL+, Runs Internal DCO at 8MHz
fet440_hfxt2.asm	FLL+, MCLK Configured to Operate from XT2 HF XTAL
fet440_isp.asm	Flash In-System Program Memory
fet440_lcd_01.asm	LCD, Display "6543210" on STK/EVK LCD
fet440_lcd_02.asm	LCD, Display Numbers on a Static LCD
fet440_lcd_03.asm	LCD, Display Numbers on a 4-Mux LCD
fet440_lpm3.asm	FLL+, LPM3 Using Basic Timer ISR, 32kHz ACLK
fet440_spi0_016x.asm	USART0, SPI Interface to HC165/164 Shift Registers
fet440_svs_01.asm	SVS, POR @ 2.5V Vcc
fet440_ta_01.asm	Timer_A, Toggle P5.1, CCR0 Cont. Mode ISR, DCO SMCLK
fet440_ta_02.asm	Timer_A, Toggle P5.1, CCR0 Up Mode ISR, DCO SMCLK
fet440_ta_03.asm	Timer_A, Toggle P5.1, Overflow ISR, DCO SMCLK
fet440_ta_04.asm	Timer_A, Toggle P5.1, Overflow ISR, 32kHz ACLK
fet440_ta_05.asm	Timer_A, Toggle P5.1, CCR0 Up Mode ISR, 32kHz ACLK
fet440_ta_16.asm	Timer_A, PWM TA1-2 Up Mode, DCO SMCLK

fet440_ta_17.asm	Timer_A, PWM TA1-2 Up Mode, 32kHz ACLK
fet440_tb_01.asm	Timer_B, Toggle P5.1, CCR0 Cont. Mode ISR, DCO SMCLK
fet440_tb_02.asm	Timer_B, Toggle P5.1, CCR0 Up Mode ISR, DCO SMCLK
fet440_tb_03.asm	Timer_B, Toggle P5.1, Overflow ISR, DCO SMCLK
fet440_tb_04.asm	Timer_B, Toggle P5.1, Overflow ISR, 32kHz ACLK
fet440_tb_05.asm	Timer_B Toggle P5.1, CCR0 Up Mode ISR, 32kHz ACLK
fet440_tb_10.asm	Timer_B, PWM TB1-6 Up Mode, DCO SMCLK
fet440_tb_11.asm	Timer_B, PWM TB1-6 Up Mode, 32kHz ACLK
fet440_uart01_0115k.asm	USART0, 115200 UART Echo ISR, DCO SMCLK
fet440_uart01_02400.asm	USART0, 2400 UART Ultra-low Pwr Echo ISR, 32kHz ACLK
fet440_uart01_09600.asm	USART0, 9600 UART Echo ISR, DCO SMCLK
fet440_uart01_19200.asm	USART0, 19200 UART Echo ISR, DCO SMCLK
fet440_uart02_19200.asm	USART0, 19200 UART Ultra-low Pwr Echo ISR, DCO SMCLK
fet440_uart11_19200.asm	USART1, 19200 UART Echo ISR, DCO SMCLK
fet440_uart11_38400.asm	USART1, 38400 UART Echo ISR, DCO SMCLK
fet440_wdt_01.asm	WDT, Toggle P5.1, Interval Overflow ISR, DCO SMCLK
fet440_wdt_02.asm	WDT, Toggle P5.1, Interval Overflow ISR, 32kHz ACLK

.s43 code examples – IAR

File name	Description
fet440_1.s43	Software Toggle P5.1
fet440_LFxtal_nmi.s43	LFXT1 Oscillator Fault Detection
fet440_adc12_01.s43	ADC12, Sample A0, Set P5.1 if $A0 > 0.5 \cdot AV_{CC}$
fet440_adc12_02.s43	ADC12, Using the Internal Reference
fet440_adc12_03.s43	ADC12, Sample A10 Temp, Set P5.1 if temp $++ \sim 2c$
fet440_adc12_04.s43	ADC12, Extend Sampling Period With SHT Bits
fet440_adc12_05.s43	ADC12, Using an External Reference
fet440_adc12_06.s43	ADC12, Repeated Sequence of Conversions
fet440_adc12_07.s43	ADC12, Repeated Single Channel Conversions
fet440_adc12_08.s43	ADC12, Using 10 External Channels of Conversion
fet440_adc12_09.s43	ADC12, Sequence of Conversions (non-repeated)
fet440_adc12_10.s43	ADC12, Sample A10 Temp and Convert to oC and oF
fet440_bt_01.s43	Basic Timer, Toggle P5.1 Inside ISR, DCO SMCLK
fet440_bt_02.s43	Basic Timer, Toggle P5.1 Inside ISR, 32kHz ACLK
fet440_clks_01.s43	FLL+, Output MCLK, SMCLK, ACLK Using 32kHz XTAL
fet440_clks_02.s43	FLL+, Output 32kHz Xtal + HF Xtal + Internal DCO
fet440_fll_01.s43	FLL+, Runs Internal DCO at 2.45MHz
fet440_fll_02.s43	FLL+, Runs Internal DCO at 8MHz
fet440_hfxt2.s43	FLL+, MCLK Configured to Operate from XT2 HF XTAL
fet440_isp.s43	Flash In-System Program Memory
fet440_lcd_01.s43	LCD, Display "6543210" on STK/EVK LCD
fet440_lcd_02.s43	LCD, Display Numbers on a Static LCD
fet440_lcd_03.s43	LCD, Display Numbers on a 4-Mux LCD

fet440_lpm3.s43	FLL+, LPM3 Using Basic Timer ISR, 32kHz ACLK
fet440_spi0_016x.s43	USART0, SPI Interface to HC165/164 Shift Registers
fet440_svs_01.s43	SVS, POR @ 2.5V Vcc
fet440_ta_01.s43	Timer_A, Toggle P5.1, CCR0 Cont. Mode ISR, DCO SMCLK
fet440_ta_02.s43	Timer_A, Toggle P5.1, CCR0 Up Mode ISR, DCO SMCLK
fet440_ta_03.s43	Timer_A, Toggle P5.1, Overflow ISR, DCO SMCLK
fet440_ta_04.s43	Timer_A, Toggle P5.1, Overflow ISR, 32kHz ACLK
fet440_ta_05.s43	Timer_A, Toggle P5.1, CCR0 Up Mode ISR, 32kHz ACLK
fet440_ta_16.s43	Timer_A, PWM TA1-2 Up Mode, DCO SMCLK
fet440_ta_17.s43	Timer_A, PWM TA1-2 Up Mode, 32kHz ACLK
fet440_tb_01.s43	Timer_B, Toggle P5.1, CCR0 Cont. Mode ISR, DCO SMCLK
fet440_tb_02.s43	Timer_B, Toggle P5.1, CCR0 Up Mode ISR, DCO SMCLK
fet440_tb_03.s43	Timer_B, Toggle P5.1, Overflow ISR, DCO SMCLK
fet440_tb_04.s43	Timer_B, Toggle P5.1, Overflow ISR, 32kHz ACLK
fet440_tb_05.s43	Timer_B Toggle P5.1, CCR0 Up Mode ISR, 32kHz ACLK
fet440_tb_10.s43	Timer_B, PWM TB1-6 Up Mode, DCO SMCLK
fet440_tb_11.s43	Timer_B, PWM TB1-6 Up Mode, 32kHz ACLK
fet440_uart01_0115k.s43	USART0, 115200 UART Echo ISR, DCO SMCLK
fet440_uart01_02400.s43	USART0, 2400 UART Ultra-low Pwr Echo ISR, 32kHz ACLK
fet440_uart01_09600.s43	USART0, 9600 UART Echo ISR, DCO SMCLK
fet440_uart01_19200.s43	USART0, 19200 UART Echo ISR, DCO SMCLK
fet440_uart02_19200.s43	USART0, 19200 UART Ultra-low Pwr Echo ISR, DCO SMCLK
fet440_uart11_19200.s43	USART1, 19200 UART Echo ISR, DCO SMCLK
fet440_uart11_38400.s43	USART1, 38400 UART Echo ISR, DCO SMCLK
fet440_wdt_01.s43	WDT, Toggle P5.1, Interval Overflow ISR, DCO SMCLK
fet440_wdt_02.s43	WDT, Toggle P5.1, Interval Overflow ISR, 32kHz ACLK

C code examples – IAR & CCS	
File name	Description
fet440_1.c	Software Toggle P5.1
fet440_LFxtal_nmi.c	LFXT1 Oscillator Fault Detection
fet440_adc12_01.c	ADC12, Sample A0, Set P5.1 if A0 > 0.5*AVcc
fet440_adc12_02.c	ADC12, Single Conversion on Single Channel
fet440_adc12_03.c	ADC12, Using an External Reference
fet440_adc12_04.c	ADC12, Extend Sampling Period with SHT Bits
fet440_adc12_05.c	ADC12, Using the Internal Reference
fet440_adc12_06.c	ADC12, Repeated Sequence of Conversions
fet440_adc12_07.c	ADC12, Repeated Single Channel Conversions
fet440_adc12_08.c	ADC12, Using 10 External Channels for Conversion
fet440_adc12_09.c	ADC12, Sequence of Conversions (non-repeated)
fet440_adc12_10.c	ADC12, Using the Temperature Sensor
fet440_adc12_11.c	ADC12, Sample A10 Temp and Convert to oC, TA1 Trigger
fet440_bt_01.c	Basic Timer, Toggle P5.1 Inside ISR, DCO SMCLK

fet440_bt_02.c	Basic Timer, Toggle P5.1 Inside ISR, 32kHz ACLK
fet440_clks_02.c	FLL+, Output 32kHz Xtal + HF Xtal + Internal DCO
fet440_fll_01.c	FLL+, Runs Internal DCO at 2.45MHz
fet440_fll_02.c	FLL+, Runs Internal DCO at 8MHz
fet440_lcd_01.c	LCD, Display "6543210" on STK/EVK LCD
fet440_lcd_02.c	LCD, Displays Numbers on a Static LCD
fet440_lcd_03.c	LCD, Displays Numbers on a 4Mux LCD
fet440_lpm3.c	FLL+, LPM3 Using Basic Timer ISR, 32kHz ACLK
fet440_spi0_016x.c	USART0, SPI Interface with HC165/164 Shift Registers
fet440_svs_01.c	SVS, POR @ 2.5V Vcc
fet440_ta_01.c	Timer_A, Toggle P5.1, CCR0 Cont. Mode ISR, DCO SMCLK
fet440_ta_02.c	Timer_A, Toggle P5.1, CCR0 Up Mode ISR, DCO SMCLK
fet440_ta_03.c	Timer_A, Toggle P5.1, Overflow ISR, DCO SMCLK
fet440_ta_04.c	Timer_A, Toggle P5.1, Overflow ISR, 32kHz ACLK
fet440_ta_05.c	Timer_A, Toggle P5.1, CCR0 Up Mode ISR, 32kHz ACLK
fet440_ta_16.c	Timer_A, PWM TA12 Up Mode, DCO SMCLK
fet440_ta_17.c	Timer_A, PWM TA12 Up Mode, 32kHz ACLK
fet440_tb_01.c	Timer_B, Toggle P5.1, CCR0 Cont. Mode ISR, DCO SMCLK
fet440_tb_02.c	Timer_B, Toggle P5.1, CCR0 Up Mode ISR, DCO SMCLK
fet440_tb_03.c	Timer_B, Toggle P5.1, Overflow ISR, DCO SMCLK
fet440_tb_04.c	Timer_B, Toggle P5.1, Overflow ISR, 32kHz ACLK
fet440_tb_05.c	Timer_B, Toggle P5.1, CCR0 Up Mode ISR, 32kHz ACLK
fet440_tb_10.c	Timer_B, PWM TB16 Up Mode, DCO SMCLK
fet440_tb_11.c	Timer_B, PWM TB16 Up Mode, 32kHz ACLK
fet440_uart01_0115k.c	USART0, 115200 UART Echo ISR, DCO SMCLK
fet440_uart01_02400.c	USART0, 2400 UART Ultra-low Pwr Echo ISR, 32kHz ACLK
fet440_uart01_09600.c	USART0, 9600 UART Echo ISR, DCO SMCLK
fet440_uart01_19200.c	USART0, 19200 UART Echo ISR, DCO SMCLK
fet440_uart02_19200.c	USART0, 19200 UART Ultra-low Pwr Echo ISR, 32kHz ACLK
fet440_uart11_19200.c	USART1, 19200 UART Echo ISR, DCO SMCLK
fet440_uart11_38400.c	USART1, 38400 UART Echo ISR, DCO SMCLK
fet440_wdt_01.c	WDT, Toggle P5.1, Interval Overflow ISR, DCO SMCLK
fet440_wdt_02.c	WDT, Toggle P5.1, Interval Overflow ISR, 32kHz ACLK

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Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
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