;------------------------------------------------------------------------------

; Copyright 2014 Silicon Laboratories, Inc.

; All rights reserved. This program and the accompanying materials

; are made available under the terms of the Silicon Laboratories End User

; License Agreement which accompanies this distribution, and is available at

; http://developer.silabs.com/legal/version/v11/Silicon\_Labs\_Software\_License\_Agreement.txt

; Original content and implementation provided by Silicon Laboratories.

;------------------------------------------------------------------------------

;Supported Devices:

; EFM8SB10F2G

; EFM8SB10F4G

; EFM8SB10F8G

; EFM8SB10F8G

; EFM8SB10F8G

;------------------------------------------------------------------------------

; ADC0AC Enums (ADC0 Accumulator Configuration @ 0xBA)

;------------------------------------------------------------------------------

ADC0AC\_ADRPT\_\_FMASK EQU 007H ; Repeat Count

ADC0AC\_ADRPT\_\_SHIFT EQU 000H ; Repeat Count

ADC0AC\_ADRPT\_\_ACC\_1 EQU 000H ; Perform and Accumulate 1 conversion (not used in

; 12-bit mode).

ADC0AC\_ADRPT\_\_ACC\_4 EQU 001H ; Perform and Accumulate 4 conversions (1 conversion

; in 12-bit mode).

ADC0AC\_ADRPT\_\_ACC\_8 EQU 002H ; Perform and Accumulate 8 conversions (2

; conversions in 12-bit mode).

ADC0AC\_ADRPT\_\_ACC\_16 EQU 003H ; Perform and Accumulate 16 conversions (4

; conversions in 12-bit mode).

ADC0AC\_ADRPT\_\_ACC\_32 EQU 004H ; Perform and Accumulate 32 conversions (8

; conversions in 12-bit mode).

ADC0AC\_ADRPT\_\_ACC\_64 EQU 005H ; Perform and Accumulate 64 conversions (16

; conversions in 12-bit mode).

ADC0AC\_ADSJST\_\_FMASK EQU 038H ; Accumulator Shift and Justify

ADC0AC\_ADSJST\_\_SHIFT EQU 003H ; Accumulator Shift and Justify

ADC0AC\_ADSJST\_\_RIGHT\_NO\_SHIFT EQU 000H ; Right justified. No shifting applied.

ADC0AC\_ADSJST\_\_RIGHT\_SHIFT\_1 EQU 008H ; Right justified. Shifted right by 1 bit.

ADC0AC\_ADSJST\_\_RIGHT\_SHIFT\_2 EQU 010H ; Right justified. Shifted right by 2 bits.

ADC0AC\_ADSJST\_\_RIGHT\_SHIFT\_3 EQU 018H ; Right justified. Shifted right by 3 bits.

ADC0AC\_ADSJST\_\_LEFT\_NO\_SHIFT EQU 020H ; Left justified. No shifting applied.

ADC0AC\_ADAE\_\_BMASK EQU 040H ; Accumulate Enable

ADC0AC\_ADAE\_\_SHIFT EQU 006H ; Accumulate Enable

ADC0AC\_ADAE\_\_ACC\_DISABLED EQU 000H ; ADC0H:ADC0L contain the result of the latest

; conversion when Burst Mode is disabled.

ADC0AC\_ADAE\_\_ACC\_ENABLED EQU 040H ; ADC0H:ADC0L contain the accumulated conversion

; results when Burst Mode is disabled. Firmware must

; write 0x0000 to ADC0H:ADC0L to clear the

; accumulated result.

ADC0AC\_AD12BE\_\_BMASK EQU 080H ; 12-Bit Mode Enable

ADC0AC\_AD12BE\_\_SHIFT EQU 007H ; 12-Bit Mode Enable

ADC0AC\_AD12BE\_\_12\_BIT\_DISABLED EQU 000H ; Disable 12-bit mode.

ADC0AC\_AD12BE\_\_12\_BIT\_ENABLED EQU 080H ; Enable 12-bit mode.

;------------------------------------------------------------------------------

; ADC0CF Enums (ADC0 Configuration @ 0x97)

;------------------------------------------------------------------------------

ADC0CF\_ADGN\_\_BMASK EQU 001H ; Gain Control

ADC0CF\_ADGN\_\_SHIFT EQU 000H ; Gain Control

ADC0CF\_ADGN\_\_GAIN\_0P5 EQU 000H ; The on-chip PGA gain is 0.5.

ADC0CF\_ADGN\_\_GAIN\_1 EQU 001H ; The on-chip PGA gain is 1.

ADC0CF\_ADTM\_\_BMASK EQU 002H ; Track Mode

ADC0CF\_ADTM\_\_SHIFT EQU 001H ; Track Mode

ADC0CF\_ADTM\_\_TRACK\_NORMAL EQU 000H ; Normal Track Mode. When ADC0 is enabled,

; conversion begins immediately following the start-

; of-conversion signal.

ADC0CF\_ADTM\_\_TRACK\_DELAYED EQU 002H ; Delayed Track Mode. When ADC0 is enabled,

; conversion begins 3 SAR clock cycles following the

; start-of-conversion signal. The ADC is allowed to

; track during this time.

ADC0CF\_AD8BE\_\_BMASK EQU 004H ; 8-Bit Mode Enable

ADC0CF\_AD8BE\_\_SHIFT EQU 002H ; 8-Bit Mode Enable

ADC0CF\_AD8BE\_\_NORMAL EQU 000H ; ADC0 operates in 10-bit or 12-bit mode (normal

; operation).

ADC0CF\_AD8BE\_\_8\_BIT EQU 004H ; ADC0 operates in 8-bit mode.

ADC0CF\_ADSC\_\_FMASK EQU 0F8H ; SAR Clock Divider

ADC0CF\_ADSC\_\_SHIFT EQU 003H ; SAR Clock Divider

;------------------------------------------------------------------------------

; ADC0CN0 Enums (ADC0 Control 0 @ 0xE8)

;------------------------------------------------------------------------------

ADC0CN0\_ADCM\_\_FMASK EQU 007H ; Start of Conversion Mode Select

ADC0CN0\_ADCM\_\_SHIFT EQU 000H ; Start of Conversion Mode Select

ADC0CN0\_ADCM\_\_ADBUSY EQU 000H ; ADC0 conversion initiated on write of 1 to ADBUSY.

ADC0CN0\_ADCM\_\_TIMER0 EQU 001H ; ADC0 conversion initiated on overflow of Timer 0.

ADC0CN0\_ADCM\_\_TIMER2 EQU 002H ; ADC0 conversion initiated on overflow of Timer 2.

ADC0CN0\_ADCM\_\_TIMER3 EQU 003H ; ADC0 conversion initiated on overflow of Timer 3.

ADC0CN0\_ADCM\_\_CNVSTR EQU 004H ; ADC0 conversion initiated on rising edge of

; CNVSTR.

ADC0CN0\_ADWINT\_\_BMASK EQU 008H ; Window Compare Interrupt Flag

ADC0CN0\_ADWINT\_\_SHIFT EQU 003H ; Window Compare Interrupt Flag

ADC0CN0\_ADWINT\_\_NOT\_SET EQU 000H ; An ADC window compare event did not occur.

ADC0CN0\_ADWINT\_\_SET EQU 008H ; An ADC window compare event occurred.

ADC0CN0\_ADBUSY\_\_BMASK EQU 010H ; ADC Busy

ADC0CN0\_ADBUSY\_\_SHIFT EQU 004H ; ADC Busy

ADC0CN0\_ADBUSY\_\_NOT\_SET EQU 000H ; An ADC0 conversion is not currently in progress.

ADC0CN0\_ADBUSY\_\_SET EQU 010H ; ADC0 conversion is in progress or start an ADC0

; conversion.

ADC0CN0\_ADINT\_\_BMASK EQU 020H ; Conversion Complete Interrupt Flag

ADC0CN0\_ADINT\_\_SHIFT EQU 005H ; Conversion Complete Interrupt Flag

ADC0CN0\_ADINT\_\_NOT\_SET EQU 000H ; ADC0 has not completed a conversion since the last

; time ADINT was cleared.

ADC0CN0\_ADINT\_\_SET EQU 020H ; ADC0 completed a data conversion.

ADC0CN0\_ADBMEN\_\_BMASK EQU 040H ; Burst Mode Enable

ADC0CN0\_ADBMEN\_\_SHIFT EQU 006H ; Burst Mode Enable

ADC0CN0\_ADBMEN\_\_BURST\_DISABLED EQU 000H ; Disable ADC0 burst mode.

ADC0CN0\_ADBMEN\_\_BURST\_ENABLED EQU 040H ; Enable ADC0 burst mode.

ADC0CN0\_ADEN\_\_BMASK EQU 080H ; ADC Enable

ADC0CN0\_ADEN\_\_SHIFT EQU 007H ; ADC Enable

ADC0CN0\_ADEN\_\_DISABLED EQU 000H ; Disable ADC0 (low-power shutdown).

ADC0CN0\_ADEN\_\_ENABLED EQU 080H ; Enable ADC0 (active and ready for data

; conversions).

;------------------------------------------------------------------------------

; ADC0GTH Enums (ADC0 Greater-Than High Byte @ 0xC4)

;------------------------------------------------------------------------------

ADC0GTH\_ADC0GTH\_\_FMASK EQU 0FFH ; Greater-Than High Byte

ADC0GTH\_ADC0GTH\_\_SHIFT EQU 000H ; Greater-Than High Byte

;------------------------------------------------------------------------------

; ADC0GTL Enums (ADC0 Greater-Than Low Byte @ 0xC3)

;------------------------------------------------------------------------------

ADC0GTL\_ADC0GTL\_\_FMASK EQU 0FFH ; Greater-Than Low Byte

ADC0GTL\_ADC0GTL\_\_SHIFT EQU 000H ; Greater-Than Low Byte

;------------------------------------------------------------------------------

; ADC0H Enums (ADC0 Data Word High Byte @ 0xBE)

;------------------------------------------------------------------------------

ADC0H\_ADC0H\_\_FMASK EQU 0FFH ; Data Word High Byte

ADC0H\_ADC0H\_\_SHIFT EQU 000H ; Data Word High Byte

;------------------------------------------------------------------------------

; ADC0L Enums (ADC0 Data Word Low Byte @ 0xBD)

;------------------------------------------------------------------------------

ADC0L\_ADC0L\_\_FMASK EQU 0FFH ; Data Word Low Byte

ADC0L\_ADC0L\_\_SHIFT EQU 000H ; Data Word Low Byte

;------------------------------------------------------------------------------

; ADC0LTH Enums (ADC0 Less-Than High Byte @ 0xC6)

;------------------------------------------------------------------------------

ADC0LTH\_ADC0LTH\_\_FMASK EQU 0FFH ; Less-Than High Byte

ADC0LTH\_ADC0LTH\_\_SHIFT EQU 000H ; Less-Than High Byte

;------------------------------------------------------------------------------

; ADC0LTL Enums (ADC0 Less-Than Low Byte @ 0xC5)

;------------------------------------------------------------------------------

ADC0LTL\_ADC0LTL\_\_FMASK EQU 0FFH ; Less-Than Low Byte

ADC0LTL\_ADC0LTL\_\_SHIFT EQU 000H ; Less-Than Low Byte

;------------------------------------------------------------------------------

; ADC0MX Enums (ADC0 Multiplexer Selection @ 0x96)

;------------------------------------------------------------------------------

ADC0MX\_ADC0MX\_\_FMASK EQU 01FH ; AMUX0 Positive Input Selection

ADC0MX\_ADC0MX\_\_SHIFT EQU 000H ; AMUX0 Positive Input Selection

ADC0MX\_ADC0MX\_\_ADC0P1 EQU 001H ; Select channel ADC0.1.

ADC0MX\_ADC0MX\_\_ADC0P2 EQU 002H ; Select channel ADC0.2.

ADC0MX\_ADC0MX\_\_ADC0P3 EQU 003H ; Select channel ADC0.3.

ADC0MX\_ADC0MX\_\_ADC0P4 EQU 004H ; Select channel ADC0.4.

ADC0MX\_ADC0MX\_\_ADC0P5 EQU 005H ; Select channel ADC0.5.

ADC0MX\_ADC0MX\_\_ADC0P6 EQU 006H ; Select channel ADC0.6.

ADC0MX\_ADC0MX\_\_ADC0P7 EQU 007H ; Select channel ADC0.7.

ADC0MX\_ADC0MX\_\_ADC0P10 EQU 00AH ; Select channel ADC0.10.

ADC0MX\_ADC0MX\_\_ADC0P11 EQU 00BH ; Select channel ADC0.11.

ADC0MX\_ADC0MX\_\_ADC0P12 EQU 00CH ; Select channel ADC0.12.

ADC0MX\_ADC0MX\_\_TEMP EQU 01BH ; Select channel ADC0.27.

ADC0MX\_ADC0MX\_\_VDD EQU 01CH ; Select channel ADC0.28.

ADC0MX\_ADC0MX\_\_LDO\_OUT EQU 01DH ; Select channel ADC0.29.

ADC0MX\_ADC0MX\_\_GND EQU 01FH ; Select channel ADC0.31.

;------------------------------------------------------------------------------

; ADC0PWR Enums (ADC0 Power Control @ 0xBB)

;------------------------------------------------------------------------------

ADC0PWR\_ADPWR\_\_FMASK EQU 00FH ; Burst Mode Power Up Time

ADC0PWR\_ADPWR\_\_SHIFT EQU 000H ; Burst Mode Power Up Time

ADC0PWR\_ADLPM\_\_BMASK EQU 080H ; Low Power Mode Enable

ADC0PWR\_ADLPM\_\_SHIFT EQU 007H ; Low Power Mode Enable

ADC0PWR\_ADLPM\_\_LOW\_POWER\_DISABLED EQU 000H ; Disable low power mode.

ADC0PWR\_ADLPM\_\_LOW\_POWER\_ENABLED EQU 080H ; Enable low power mode (requires extended tracking

; time).

;------------------------------------------------------------------------------

; ADC0TK Enums (ADC0 Burst Mode Track Time @ 0xBC)

;------------------------------------------------------------------------------

ADC0TK\_ADTK\_\_FMASK EQU 03FH ; Burst Mode Tracking Time

ADC0TK\_ADTK\_\_SHIFT EQU 000H ; Burst Mode Tracking Time

;------------------------------------------------------------------------------

; ACC Enums (Accumulator @ 0xE0)

;------------------------------------------------------------------------------

ACC\_ACC\_\_FMASK EQU 0FFH ; Accumulator

ACC\_ACC\_\_SHIFT EQU 000H ; Accumulator

;------------------------------------------------------------------------------

; B Enums (B Register @ 0xF0)

;------------------------------------------------------------------------------

B\_B\_\_FMASK EQU 0FFH ; B Register

B\_B\_\_SHIFT EQU 000H ; B Register

;------------------------------------------------------------------------------

; DPH Enums (Data Pointer High @ 0x83)

;------------------------------------------------------------------------------

DPH\_DPH\_\_FMASK EQU 0FFH ; Data Pointer High

DPH\_DPH\_\_SHIFT EQU 000H ; Data Pointer High

;------------------------------------------------------------------------------

; DPL Enums (Data Pointer Low @ 0x82)

;------------------------------------------------------------------------------

DPL\_DPL\_\_FMASK EQU 0FFH ; Data Pointer Low

DPL\_DPL\_\_SHIFT EQU 000H ; Data Pointer Low

;------------------------------------------------------------------------------

; PSW Enums (Program Status Word @ 0xD0)

;------------------------------------------------------------------------------

PSW\_PARITY\_\_BMASK EQU 001H ; Parity Flag

PSW\_PARITY\_\_SHIFT EQU 000H ; Parity Flag

PSW\_PARITY\_\_NOT\_SET EQU 000H ; The sum of the 8 bits in the accumulator is even.

PSW\_PARITY\_\_SET EQU 001H ; The sum of the 8 bits in the accumulator is odd.

PSW\_F1\_\_BMASK EQU 002H ; User Flag 1

PSW\_F1\_\_SHIFT EQU 001H ; User Flag 1

PSW\_F1\_\_NOT\_SET EQU 000H ; Flag is not set.

PSW\_F1\_\_SET EQU 002H ; Flag is set.

PSW\_OV\_\_BMASK EQU 004H ; Overflow Flag

PSW\_OV\_\_SHIFT EQU 002H ; Overflow Flag

PSW\_OV\_\_NOT\_SET EQU 000H ; An overflow did not occur.

PSW\_OV\_\_SET EQU 004H ; An overflow occurred.

PSW\_RS\_\_FMASK EQU 018H ; Register Bank Select

PSW\_RS\_\_SHIFT EQU 003H ; Register Bank Select

PSW\_RS\_\_BANK0 EQU 000H ; Bank 0, Addresses 0x00-0x07

PSW\_RS\_\_BANK1 EQU 008H ; Bank 1, Addresses 0x08-0x0F

PSW\_RS\_\_BANK2 EQU 010H ; Bank 2, Addresses 0x10-0x17

PSW\_RS\_\_BANK3 EQU 018H ; Bank 3, Addresses 0x18-0x1F

PSW\_F0\_\_BMASK EQU 020H ; User Flag 0

PSW\_F0\_\_SHIFT EQU 005H ; User Flag 0

PSW\_F0\_\_NOT\_SET EQU 000H ; Flag is not set.

PSW\_F0\_\_SET EQU 020H ; Flag is set.

PSW\_AC\_\_BMASK EQU 040H ; Auxiliary Carry Flag

PSW\_AC\_\_SHIFT EQU 006H ; Auxiliary Carry Flag

PSW\_AC\_\_NOT\_SET EQU 000H ; A carry into (addition) or borrow from

; (subtraction) the high order nibble did not occur.

PSW\_AC\_\_SET EQU 040H ; A carry into (addition) or borrow from

; (subtraction) the high order nibble occurred.

PSW\_CY\_\_BMASK EQU 080H ; Carry Flag

PSW\_CY\_\_SHIFT EQU 007H ; Carry Flag

PSW\_CY\_\_NOT\_SET EQU 000H ; A carry (addition) or borrow (subtraction) did not

; occur.

PSW\_CY\_\_SET EQU 080H ; A carry (addition) or borrow (subtraction)

; occurred.

;------------------------------------------------------------------------------

; SP Enums (Stack Pointer @ 0x81)

;------------------------------------------------------------------------------

SP\_SP\_\_FMASK EQU 0FFH ; Stack Pointer

SP\_SP\_\_SHIFT EQU 000H ; Stack Pointer

;------------------------------------------------------------------------------

; CLKSEL Enums (Clock Select @ 0xA9)

;------------------------------------------------------------------------------

CLKSEL\_CLKSL\_\_FMASK EQU 007H ; Clock Source Select

CLKSEL\_CLKSL\_\_SHIFT EQU 000H ; Clock Source Select

CLKSEL\_CLKSL\_\_HFOSC EQU 000H ; Clock derived from the internal precision High-

; Frequency Oscillator.

CLKSEL\_CLKSL\_\_EXTOSC EQU 001H ; Clock derived from the External Oscillator

; circuit.

CLKSEL\_CLKSL\_\_LPO\_DIV\_8 EQU 002H ; Clock derived from the Internal Low Power

; Oscillator divided by 8.

CLKSEL\_CLKSL\_\_RTC EQU 003H ; Clock derived from the RTC.

CLKSEL\_CLKSL\_\_LPOSC EQU 004H ; Clock derived from the Internal Low Power

; Oscillator.

CLKSEL\_CLKDIV\_\_FMASK EQU 070H ; Clock Source Divider

CLKSEL\_CLKDIV\_\_SHIFT EQU 004H ; Clock Source Divider

CLKSEL\_CLKDIV\_\_SYSCLK\_DIV\_1 EQU 000H ; SYSCLK is equal to selected clock source divided

; by 1.

CLKSEL\_CLKDIV\_\_SYSCLK\_DIV\_2 EQU 010H ; SYSCLK is equal to selected clock source divided

; by 2.

CLKSEL\_CLKDIV\_\_SYSCLK\_DIV\_4 EQU 020H ; SYSCLK is equal to selected clock source divided

; by 4.

CLKSEL\_CLKDIV\_\_SYSCLK\_DIV\_8 EQU 030H ; SYSCLK is equal to selected clock source divided

; by 8.

CLKSEL\_CLKDIV\_\_SYSCLK\_DIV\_16 EQU 040H ; SYSCLK is equal to selected clock source divided

; by 16.

CLKSEL\_CLKDIV\_\_SYSCLK\_DIV\_32 EQU 050H ; SYSCLK is equal to selected clock source divided

; by 32.

CLKSEL\_CLKDIV\_\_SYSCLK\_DIV\_64 EQU 060H ; SYSCLK is equal to selected clock source divided

; by 64.

CLKSEL\_CLKDIV\_\_SYSCLK\_DIV\_128 EQU 070H ; SYSCLK is equal to selected clock source divided

; by 128.

CLKSEL\_CLKRDY\_\_BMASK EQU 080H ; System Clock Divider Clock Ready Flag

CLKSEL\_CLKRDY\_\_SHIFT EQU 007H ; System Clock Divider Clock Ready Flag

CLKSEL\_CLKRDY\_\_NOT\_SET EQU 000H ; The selected clock divide setting has not been

; applied to the system clock.

CLKSEL\_CLKRDY\_\_SET EQU 080H ; The selected clock divide setting has been applied

; to the system clock.

;------------------------------------------------------------------------------

; CMP0CN0 Enums (Comparator 0 Control 0 @ 0x9B)

;------------------------------------------------------------------------------

CMP0CN0\_CPHYN\_\_FMASK EQU 003H ; Comparator Negative Hysteresis Control

CMP0CN0\_CPHYN\_\_SHIFT EQU 000H ; Comparator Negative Hysteresis Control

CMP0CN0\_CPHYN\_\_DISABLED EQU 000H ; Negative Hysteresis disabled.

CMP0CN0\_CPHYN\_\_ENABLED\_MODE1 EQU 001H ; Negative Hysteresis = Hysteresis 1.

CMP0CN0\_CPHYN\_\_ENABLED\_MODE2 EQU 002H ; Negative Hysteresis = Hysteresis 2.

CMP0CN0\_CPHYN\_\_ENABLED\_MODE3 EQU 003H ; Negative Hysteresis = Hysteresis 3 (Maximum).

CMP0CN0\_CPHYP\_\_FMASK EQU 00CH ; Comparator Positive Hysteresis Control

CMP0CN0\_CPHYP\_\_SHIFT EQU 002H ; Comparator Positive Hysteresis Control

CMP0CN0\_CPHYP\_\_DISABLED EQU 000H ; Positive Hysteresis disabled.

CMP0CN0\_CPHYP\_\_ENABLED\_MODE1 EQU 004H ; Positive Hysteresis = Hysteresis 1.

CMP0CN0\_CPHYP\_\_ENABLED\_MODE2 EQU 008H ; Positive Hysteresis = Hysteresis 2.

CMP0CN0\_CPHYP\_\_ENABLED\_MODE3 EQU 00CH ; Positive Hysteresis = Hysteresis 3 (Maximum).

CMP0CN0\_CPFIF\_\_BMASK EQU 010H ; Comparator Falling-Edge Flag

CMP0CN0\_CPFIF\_\_SHIFT EQU 004H ; Comparator Falling-Edge Flag

CMP0CN0\_CPFIF\_\_NOT\_SET EQU 000H ; No comparator falling edge has occurred since this

; flag was last cleared.

CMP0CN0\_CPFIF\_\_FALLING\_EDGE EQU 010H ; Comparator falling edge has occurred.

CMP0CN0\_CPRIF\_\_BMASK EQU 020H ; Comparator Rising-Edge Flag

CMP0CN0\_CPRIF\_\_SHIFT EQU 005H ; Comparator Rising-Edge Flag

CMP0CN0\_CPRIF\_\_NOT\_SET EQU 000H ; No comparator rising edge has occurred since this

; flag was last cleared.

CMP0CN0\_CPRIF\_\_RISING\_EDGE EQU 020H ; Comparator rising edge has occurred.

CMP0CN0\_CPOUT\_\_BMASK EQU 040H ; Comparator Output State Flag

CMP0CN0\_CPOUT\_\_SHIFT EQU 006H ; Comparator Output State Flag

CMP0CN0\_CPOUT\_\_POS\_LESS\_THAN\_NEG EQU 000H ; Voltage on CP0P < CP0N.

CMP0CN0\_CPOUT\_\_POS\_GREATER\_THAN\_NEG EQU 040H ; Voltage on CP0P > CP0N.

CMP0CN0\_CPEN\_\_BMASK EQU 080H ; Comparator Enable

CMP0CN0\_CPEN\_\_SHIFT EQU 007H ; Comparator Enable

CMP0CN0\_CPEN\_\_DISABLED EQU 000H ; Comparator disabled.

CMP0CN0\_CPEN\_\_ENABLED EQU 080H ; Comparator enabled.

;------------------------------------------------------------------------------

; CMP0MD Enums (Comparator 0 Mode @ 0x9D)

;------------------------------------------------------------------------------

CMP0MD\_CPMD\_\_FMASK EQU 003H ; Comparator Mode Select

CMP0MD\_CPMD\_\_SHIFT EQU 000H ; Comparator Mode Select

CMP0MD\_CPMD\_\_MODE0 EQU 000H ; Mode 0 (Fastest Response Time, Highest Power

; Consumption)

CMP0MD\_CPMD\_\_MODE1 EQU 001H ; Mode 1

CMP0MD\_CPMD\_\_MODE2 EQU 002H ; Mode 2

CMP0MD\_CPMD\_\_MODE3 EQU 003H ; Mode 3 (Slowest Response Time, Lowest Power

; Consumption)

CMP0MD\_CPFIE\_\_BMASK EQU 010H ; Comparator Falling-Edge Interrupt Enable

CMP0MD\_CPFIE\_\_SHIFT EQU 004H ; Comparator Falling-Edge Interrupt Enable

CMP0MD\_CPFIE\_\_FALL\_INT\_DISABLED EQU 000H ; Comparator falling-edge interrupt disabled.

CMP0MD\_CPFIE\_\_FALL\_INT\_ENABLED EQU 010H ; Comparator falling-edge interrupt enabled.

CMP0MD\_CPRIE\_\_BMASK EQU 020H ; Comparator Rising-Edge Interrupt Enable

CMP0MD\_CPRIE\_\_SHIFT EQU 005H ; Comparator Rising-Edge Interrupt Enable

CMP0MD\_CPRIE\_\_RISE\_INT\_DISABLED EQU 000H ; Comparator rising-edge interrupt disabled.

CMP0MD\_CPRIE\_\_RISE\_INT\_ENABLED EQU 020H ; Comparator rising-edge interrupt enabled.

;------------------------------------------------------------------------------

; CMP0MX Enums (Comparator 0 Multiplexer Selection @ 0x9F)

;------------------------------------------------------------------------------

CMP0MX\_CMXP\_\_FMASK EQU 00FH ; Comparator Positive Input MUX Selection

CMP0MX\_CMXP\_\_SHIFT EQU 000H ; Comparator Positive Input MUX Selection

CMP0MX\_CMXP\_\_CMP0P4 EQU 004H ; External pin CMP0P.4.

CMP0MX\_CMXP\_\_CS\_COMPARE EQU 00CH ; Capacitive Sense Compare.

CMP0MX\_CMXP\_\_VDD\_DIV\_2 EQU 00DH ; VDD divided by 2.

CMP0MX\_CMXP\_\_VDD EQU 00EH ; VDD Supply Voltage.

CMP0MX\_CMXP\_\_NONE EQU 00FH ; No input selected.

CMP0MX\_CMXN\_\_FMASK EQU 0F0H ; Comparator Negative Input MUX Selection

CMP0MX\_CMXN\_\_SHIFT EQU 004H ; Comparator Negative Input MUX Selection

CMP0MX\_CMXN\_\_CMP0N4 EQU 040H ; External pin CMP0N.4.

CMP0MX\_CMXN\_\_CS\_COMPARE EQU 0C0H ; Capacitive Sense Compare.

CMP0MX\_CMXN\_\_VDD\_DIV\_2 EQU 0D0H ; VDD divided by 2.

CMP0MX\_CMXN\_\_LDO\_OUT EQU 0E0H ; Internal LDO output.

CMP0MX\_CMXN\_\_GND EQU 0F0H ; Ground.

;------------------------------------------------------------------------------

; CRC0AUTO Enums (CRC0 Automatic Control @ 0x9E)

;------------------------------------------------------------------------------

CRC0AUTO\_CRCST\_\_FMASK EQU 01FH ; Automatic CRC Calculation Starting Block

CRC0AUTO\_CRCST\_\_SHIFT EQU 000H ; Automatic CRC Calculation Starting Block

CRC0AUTO\_CRCDN\_\_BMASK EQU 040H ; Automatic CRC Calculation Complete

CRC0AUTO\_CRCDN\_\_SHIFT EQU 006H ; Automatic CRC Calculation Complete

CRC0AUTO\_CRCDN\_\_NOT\_SET EQU 000H ; A CRC calculation is in progress.

CRC0AUTO\_CRCDN\_\_SET EQU 040H ; A CRC calculation is not in progress.

CRC0AUTO\_AUTOEN\_\_BMASK EQU 080H ; Automatic CRC Calculation Enable

CRC0AUTO\_AUTOEN\_\_SHIFT EQU 007H ; Automatic CRC Calculation Enable

CRC0AUTO\_AUTOEN\_\_DISABLED EQU 000H ; Disable automatic CRC operations on flash.

CRC0AUTO\_AUTOEN\_\_ENABLED EQU 080H ; Enable automatic CRC operations on flash.

;------------------------------------------------------------------------------

; CRC0CN0 Enums (CRC0 Control 0 @ 0x84)

;------------------------------------------------------------------------------

CRC0CN0\_CRCPNT\_\_BMASK EQU 001H ; CRC Result Pointer

CRC0CN0\_CRCPNT\_\_SHIFT EQU 000H ; CRC Result Pointer

CRC0CN0\_CRCPNT\_\_ACCESS\_LOWER EQU 000H ; CRC0DAT accesses bits 7-0 of the 16-bit CRC

; result.

CRC0CN0\_CRCPNT\_\_ACCESS\_UPPER EQU 001H ; CRC0DAT accesses bits 15-8 of the 16-bit CRC

; result.

CRC0CN0\_CRCVAL\_\_BMASK EQU 004H ; CRC Initialization Value

CRC0CN0\_CRCVAL\_\_SHIFT EQU 002H ; CRC Initialization Value

CRC0CN0\_CRCVAL\_\_SET\_ZEROES EQU 000H ; CRC result is set to 0x0000 on write of 1 to

; CRCINIT.

CRC0CN0\_CRCVAL\_\_SET\_ONES EQU 004H ; CRC result is set to 0xFFFF on write of 1 to

; CRCINIT.

CRC0CN0\_CRCINIT\_\_BMASK EQU 008H ; CRC Initialization Enable

CRC0CN0\_CRCINIT\_\_SHIFT EQU 003H ; CRC Initialization Enable

CRC0CN0\_CRCINIT\_\_DO\_NOT\_INIT EQU 000H ; Do not initialize the CRC result.

CRC0CN0\_CRCINIT\_\_INIT EQU 008H ; Initialize the CRC result to ones or zeroes vased

; on the value of CRCVAL.

;------------------------------------------------------------------------------

; CRC0CNT Enums (CRC0 Automatic Flash Sector Count @ 0x9A)

;------------------------------------------------------------------------------

CRC0CNT\_CRCCNT\_\_FMASK EQU 01FH ; Automatic CRC Calculation Block Count

CRC0CNT\_CRCCNT\_\_SHIFT EQU 000H ; Automatic CRC Calculation Block Count

;------------------------------------------------------------------------------

; CRC0DAT Enums (CRC0 Data Output @ 0x86)

;------------------------------------------------------------------------------

CRC0DAT\_CRC0DAT\_\_FMASK EQU 0FFH ; CRC Data Output

CRC0DAT\_CRC0DAT\_\_SHIFT EQU 000H ; CRC Data Output

;------------------------------------------------------------------------------

; CRC0FLIP Enums (CRC0 Bit Flip @ 0x9C)

;------------------------------------------------------------------------------

CRC0FLIP\_CRC0FLIP\_\_FMASK EQU 0FFH ; CRC0 Bit Flip

CRC0FLIP\_CRC0FLIP\_\_SHIFT EQU 000H ; CRC0 Bit Flip

;------------------------------------------------------------------------------

; CRC0IN Enums (CRC0 Data Input @ 0x85)

;------------------------------------------------------------------------------

CRC0IN\_CRC0IN\_\_FMASK EQU 0FFH ; CRC Data Input

CRC0IN\_CRC0IN\_\_SHIFT EQU 000H ; CRC Data Input

;------------------------------------------------------------------------------

; CS0CF Enums (Capacitive Sense 0 Configuration @ 0xAA)

;------------------------------------------------------------------------------

CS0CF\_CS0ACU\_\_FMASK EQU 007H ; CS0 Accumulator Mode Select

CS0CF\_CS0ACU\_\_SHIFT EQU 000H ; CS0 Accumulator Mode Select

CS0CF\_CS0ACU\_\_ACC\_1 EQU 000H ; Accumulate 1 sample.

CS0CF\_CS0ACU\_\_ACC\_4 EQU 001H ; Accumulate 4 samples.

CS0CF\_CS0ACU\_\_ACC\_8 EQU 002H ; Accumulate 8 samples.

CS0CF\_CS0ACU\_\_ACC\_16 EQU 003H ; Accumulate 16 samples

CS0CF\_CS0ACU\_\_ACC\_32 EQU 004H ; Accumulate 32 samples.

CS0CF\_CS0ACU\_\_ACC\_64 EQU 005H ; Accumulate 64 samples.

CS0CF\_CS0MCEN\_\_BMASK EQU 008H ; CS0 Multiple Channel Enable

CS0CF\_CS0MCEN\_\_SHIFT EQU 003H ; CS0 Multiple Channel Enable

CS0CF\_CS0MCEN\_\_MULT\_CHAN\_DISABLED EQU 000H ; Multiple channel feature is disabled.

CS0CF\_CS0MCEN\_\_MULT\_CHAN\_ENABLED EQU 008H ; Channels selected by CS0SCAN0/1 are internally

; shorted together and the combined node is selected

; as the CS0 input. This mode can be used to detect

; a capacitance change on multiple channels using a

; single conversion.

CS0CF\_CS0CM\_\_FMASK EQU 070H ; CS0 Start of Conversion Mode Select

CS0CF\_CS0CM\_\_SHIFT EQU 004H ; CS0 Start of Conversion Mode Select

CS0CF\_CS0CM\_\_CS0BUSY EQU 000H ; Conversion initiated on every write of 1 to

; CS0BUSY.

CS0CF\_CS0CM\_\_TIMER0 EQU 010H ; Conversion initiated on overflow of Timer 0.

CS0CF\_CS0CM\_\_TIMER2 EQU 020H ; Conversion initiated on overflow of Timer 2.

CS0CF\_CS0CM\_\_TIMER1 EQU 030H ; Conversion initiated on overflow of Timer 1.

CS0CF\_CS0CM\_\_TIMER3 EQU 040H ; Conversion initiated on overflow of Timer 3.

CS0CF\_CS0CM\_\_SINGLE\_SCAN EQU 050H ; When CS0SMEN is set to 1, the converter completes

; a Single Scan of the channels selected by

; CS0SCAN0/1. This setting is invalid when CS0SMEN

; is cleared to 0.

CS0CF\_CS0CM\_\_SINGLE\_CONTINUOUS EQU 060H ; Conversion initiated continuously on the channel

; selected by CS0MX after writing 1 to CS0BUSY.

CS0CF\_CS0CM\_\_AUTO\_SCAN EQU 070H ; When CS0SMEN is set to 1, the converter enters

; Auto Scan Mode and continuously scans the channels

; selected by CS0SCAN0/1. When CS0SMEN is cleared to

; 0, the converter scans continuously on channels

; from CS0SS to CS0SE after firmware writes 1 to

; CS0BUSY.

CS0CF\_CS0SMEN\_\_BMASK EQU 080H ; CS0 Channel Scan Masking Enable

CS0CF\_CS0SMEN\_\_SHIFT EQU 007H ; CS0 Channel Scan Masking Enable

CS0CF\_CS0SMEN\_\_SCAN\_MASK\_DISABLED EQU 000H ; The CS0SCAN0 and CS0SCAN1 register contents are

; ignored.

CS0CF\_CS0SMEN\_\_SCAN\_MASK\_ENABLED EQU 080H ; The CS0SCAN0 and CS0SCAN1 registers determine

; which channels will be included in the scan.

;------------------------------------------------------------------------------

; CS0CN0 Enums (Capacitive Sense 0 Control @ 0xB0)

;------------------------------------------------------------------------------

CS0CN0\_CSCMPF\_\_BMASK EQU 001H ; CS0 Digital Comparator Interrupt Flag

CS0CN0\_CSCMPF\_\_SHIFT EQU 000H ; CS0 Digital Comparator Interrupt Flag

CS0CN0\_CSCMPF\_\_NOT\_SET EQU 000H ; CS0 result is smaller than the value set by CS0THH

; and CS0THL since the last time CS0CMPF was

; cleared.

CS0CN0\_CSCMPF\_\_SET EQU 001H ; CS0 result is greater than the value set by CS0THH

; and CS0THL since the last time CS0CMPF was

; cleared.

CS0CN0\_CSPME\_\_BMASK EQU 002H ; CS0 Pin Monitor Event

CS0CN0\_CSPME\_\_SHIFT EQU 001H ; CS0 Pin Monitor Event

CS0CN0\_CSPME\_\_NO\_RETRIES EQU 000H ; Converter re-tries have not occurred.

CS0CN0\_CSPME\_\_RETRIES EQU 002H ; Converter re-tries occurred.

CS0CN0\_CSCMPEN\_\_BMASK EQU 008H ; CS0 Digital Comparator Enable

CS0CN0\_CSCMPEN\_\_SHIFT EQU 003H ; CS0 Digital Comparator Enable

CS0CN0\_CSCMPEN\_\_DISABLED EQU 000H ; Disable CS0 digital comparator.

CS0CN0\_CSCMPEN\_\_ENABLED EQU 008H ; Enable CS0 digital comparator.

CS0CN0\_CSBUSY\_\_BMASK EQU 010H ; CS0 Busy

CS0CN0\_CSBUSY\_\_SHIFT EQU 004H ; CS0 Busy

CS0CN0\_CSBUSY\_\_NOT\_SET EQU 000H ; A CS0 conversion is not currently in progress.

CS0CN0\_CSBUSY\_\_SET EQU 010H ; CS0 conversion is in progress or start a CS0

; conversion.

CS0CN0\_CSINT\_\_BMASK EQU 020H ; CS0 Interrupt Flag

CS0CN0\_CSINT\_\_SHIFT EQU 005H ; CS0 Interrupt Flag

CS0CN0\_CSINT\_\_NOT\_SET EQU 000H ; CS0 has not completed a data conversion since the

; last time CS0INT was cleared.

CS0CN0\_CSINT\_\_SET EQU 020H ; CS0 has completed a data conversion.

CS0CN0\_CSEOS\_\_BMASK EQU 040H ; CS0 End of Scan Interrupt Flag

CS0CN0\_CSEOS\_\_SHIFT EQU 006H ; CS0 End of Scan Interrupt Flag

CS0CN0\_CSEOS\_\_NOT\_SET EQU 000H ; CS0 has not completed a scan since the last time

; CS0EOS was cleared.

CS0CN0\_CSEOS\_\_SET EQU 040H ; CS0 has completed a scan.

CS0CN0\_CSEN\_\_BMASK EQU 080H ; CS0 Enable

CS0CN0\_CSEN\_\_SHIFT EQU 007H ; CS0 Enable

CS0CN0\_CSEN\_\_DISABLED EQU 000H ; CS0 disabled and in low-power mode.

CS0CN0\_CSEN\_\_ENABLED EQU 080H ; CS0 enabled and ready to convert.

;------------------------------------------------------------------------------

; CS0DH Enums (Capacitive Sense 0 Data High Byte @ 0xEE)

;------------------------------------------------------------------------------

CS0DH\_CS0DH\_\_FMASK EQU 0FFH ; CS0 Data High Byte

CS0DH\_CS0DH\_\_SHIFT EQU 000H ; CS0 Data High Byte

;------------------------------------------------------------------------------

; CS0DL Enums (Capacitive Sense 0 Data Low Byte @ 0xED)

;------------------------------------------------------------------------------

CS0DL\_CS0DL\_\_FMASK EQU 0FFH ; CS0 Data Low Byte

CS0DL\_CS0DL\_\_SHIFT EQU 000H ; CS0 Data Low Byte

;------------------------------------------------------------------------------

; CS0MD1 Enums (Capacitive Sense 0 Mode 1 @ 0xAF)

;------------------------------------------------------------------------------

CS0MD1\_CS0CG\_\_FMASK EQU 007H ; CS0 Capacitance Gain Select

CS0MD1\_CS0CG\_\_SHIFT EQU 000H ; CS0 Capacitance Gain Select

CS0MD1\_CS0CG\_\_GAIN\_1 EQU 000H ; Gain = 1x

CS0MD1\_CS0CG\_\_GAIN\_2 EQU 001H ; Gain = 2x

CS0MD1\_CS0CG\_\_GAIN\_3 EQU 002H ; Gain = 3x

CS0MD1\_CS0CG\_\_GAIN\_4 EQU 003H ; Gain = 4x

CS0MD1\_CS0CG\_\_GAIN\_5 EQU 004H ; Gain = 5x

CS0MD1\_CS0CG\_\_GAIN\_6 EQU 005H ; Gain = 6x

CS0MD1\_CS0CG\_\_GAIN\_7 EQU 006H ; Gain = 7x

CS0MD1\_CS0CG\_\_GAIN\_8 EQU 007H ; Gain = 8x

CS0MD1\_CS0WOI\_\_BMASK EQU 008H ; CS0 Wake on Interrupt Configuration

CS0MD1\_CS0WOI\_\_SHIFT EQU 003H ; CS0 Wake on Interrupt Configuration

CS0MD1\_CS0WOI\_\_COMPARATOR\_ONLY EQU 000H ; Wake-up event generated on digital comparator

; interrupt only.

CS0MD1\_CS0WOI\_\_EOS\_OR\_COMPARATOR EQU 008H ; Wake-up event generated on end of scan or digital

; comparator interrupt.

CS0MD1\_CS0DR\_\_FMASK EQU 030H ; CS0 Double Reset Select

CS0MD1\_CS0DR\_\_SHIFT EQU 004H ; CS0 Double Reset Select

CS0MD1\_CS0DR\_\_DOUBLE\_RESET\_DISABLED EQU 000H ; No additional time is used for secondary reset.

CS0MD1\_CS0DR\_\_ADD\_0P75 EQU 010H ; An additional 0.75 us is used for secondary reset.

CS0MD1\_CS0DR\_\_ADD\_1P5 EQU 020H ; An additional 1.5 us is used for secondary reset.

CS0MD1\_CS0DR\_\_ADD\_2P25 EQU 030H ; An additional 2.25 us is used for secondary reset.

CS0MD1\_CS0POL\_\_BMASK EQU 040H ; CS0 Digital Comparator Polarity Select

CS0MD1\_CS0POL\_\_SHIFT EQU 006H ; CS0 Digital Comparator Polarity Select

CS0MD1\_CS0POL\_\_GREATER\_THAN EQU 000H ; The digital comparator generates an interrupt if

; the conversion is greater than the threshold.

CS0MD1\_CS0POL\_\_LESS\_THAN\_OR\_EQUAL EQU 040H ; The digital comparator generates an interrupt if

; the conversion is less than or equal to the

; threshold.

;------------------------------------------------------------------------------

; CS0MD2 Enums (Capacitive Sense 0 Mode 2 @ 0xF3)

;------------------------------------------------------------------------------

CS0MD2\_CS0IA\_\_FMASK EQU 007H ; CS0 Output Current Adjustment

CS0MD2\_CS0IA\_\_SHIFT EQU 000H ; CS0 Output Current Adjustment

CS0MD2\_CS0IA\_\_CURRENT\_MODE0 EQU 000H ; Full current.

CS0MD2\_CS0IA\_\_CURRENT\_MODE1 EQU 001H ; 1/8 current.

CS0MD2\_CS0IA\_\_CURRENT\_MODE2 EQU 002H ; 1/4 current.

CS0MD2\_CS0IA\_\_CURRENT\_MODE3 EQU 003H ; 3/8 current.

CS0MD2\_CS0IA\_\_CURRENT\_MODE4 EQU 004H ; 1/2 current.

CS0MD2\_CS0IA\_\_CURRENT\_MODE5 EQU 005H ; 5/8 current.

CS0MD2\_CS0IA\_\_CURRENT\_MODE6 EQU 006H ; 3/4 current.

CS0MD2\_CS0IA\_\_CURRENT\_MODE7 EQU 007H ; 7/8 current.

CS0MD2\_CS0DT\_\_FMASK EQU 038H ; CS0 Discharge Time

CS0MD2\_CS0DT\_\_SHIFT EQU 003H ; CS0 Discharge Time

CS0MD2\_CS0DT\_\_DISCHARGE\_MODE0 EQU 000H ; Discharge time is 0.75 us (recommended for most

; switches).

CS0MD2\_CS0DT\_\_DISCHARGE\_MODE1 EQU 008H ; Discharge time is 1.0 us.

CS0MD2\_CS0DT\_\_DISCHARGE\_MODE2 EQU 010H ; Discharge time is 1.2 us.

CS0MD2\_CS0DT\_\_DISCHARGE\_MODE3 EQU 018H ; Discharge time is 1.5 us.

CS0MD2\_CS0DT\_\_DISCHARGE\_MODE4 EQU 020H ; Discharge time is 2 us.

CS0MD2\_CS0DT\_\_DISCHARGE\_MODE5 EQU 028H ; Discharge time is 3 us.

CS0MD2\_CS0DT\_\_DISCHARGE\_MODE6 EQU 030H ; Discharge time is 6 us.

CS0MD2\_CS0DT\_\_DISCHARGE\_MODE7 EQU 038H ; Discharge time is 12 us.

CS0MD2\_CS0CR\_\_FMASK EQU 0C0H ; CS0 Conversion Rate

CS0MD2\_CS0CR\_\_SHIFT EQU 006H ; CS0 Conversion Rate

CS0MD2\_CS0CR\_\_12\_BITS EQU 000H ; Conversions last 12 internal CS0 clocks and are 12

; bits in length.

CS0MD2\_CS0CR\_\_13\_BITS EQU 040H ; Conversions last 13 internal CS0 clocks and are 13

; bits in length.

CS0MD2\_CS0CR\_\_14\_BITS EQU 080H ; Conversions last 14 internal CS0 clocks and are 14

; bits in length.

CS0MD2\_CS0CR\_\_16\_BITS EQU 0C0H ; Conversions last 16 internal CS0 clocks.and are 16

; bits in length.

;------------------------------------------------------------------------------

; CS0MD3 Enums (Capacitive Sense 0 Mode 3 @ 0xF3)

;------------------------------------------------------------------------------

CS0MD3\_CS0LP\_\_FMASK EQU 007H ; CS0 Low Pass Filter Selection

CS0MD3\_CS0LP\_\_SHIFT EQU 000H ; CS0 Low Pass Filter Selection

CS0MD3\_CS0RP\_\_FMASK EQU 018H ; CS0 Ramp Selection

CS0MD3\_CS0RP\_\_SHIFT EQU 003H ; CS0 Ramp Selection

CS0MD3\_CS0RP\_\_RAMP\_MODE0 EQU 000H ; Ramp time is less than 1.5 us.

CS0MD3\_CS0RP\_\_RAMP\_MODE1 EQU 008H ; Ramp time is between 1.5 us and 3 us.

CS0MD3\_CS0RP\_\_RAMP\_MODE2 EQU 010H ; Ramp time is between 3 us and 6 us.

CS0MD3\_CS0RP\_\_RAMP\_MODE3 EQU 018H ; Ramp time is greater than 6 us.

;------------------------------------------------------------------------------

; CS0MX Enums (Capacitive Sense 0 Mux Channel Select @ 0xAB)

;------------------------------------------------------------------------------

CS0MX\_CS0MX\_\_FMASK EQU 00FH ; CS0 Mux Channel Select

CS0MX\_CS0MX\_\_SHIFT EQU 000H ; CS0 Mux Channel Select

CS0MX\_CS0MX\_\_CS0P0 EQU 000H ; Select CS0.0.

CS0MX\_CS0MX\_\_CS0P1 EQU 001H ; Select CS0.1.

CS0MX\_CS0MX\_\_CS0P2 EQU 002H ; Select CS0.2.

CS0MX\_CS0MX\_\_CS0P3 EQU 003H ; Select CS0.3.

CS0MX\_CS0MX\_\_CS0P4 EQU 004H ; Select CS0.4.

CS0MX\_CS0MX\_\_CS0P5 EQU 005H ; Select CS0.5.

CS0MX\_CS0MX\_\_CS0P6 EQU 006H ; Select CS0.6.

CS0MX\_CS0MX\_\_CS0P7 EQU 007H ; Select CS0.7.

CS0MX\_CS0MX\_\_CS0P8 EQU 008H ; Select CS0.8.

CS0MX\_CS0MX\_\_CS0P9 EQU 009H ; Select CS0.9.

CS0MX\_CS0MX\_\_CS0P10 EQU 00AH ; Select CS0.10.

CS0MX\_CS0MX\_\_CS0P11 EQU 00BH ; Select CS0.11.

CS0MX\_CS0MX\_\_CS0P12 EQU 00CH ; Select CS0.12.

CS0MX\_CS0MX\_\_CS0P13 EQU 00DH ; Select CS0.13.

CS0MX\_CS0MX\_\_NONE EQU 00FH ; No input selected.

;------------------------------------------------------------------------------

; CS0PM Enums (Capacitive Sense 0 Pin Monitor @ 0xDE)

;------------------------------------------------------------------------------

CS0PM\_CSPMMD\_\_FMASK EQU 003H ; CS0 Pin Monitor Mode

CS0PM\_CSPMMD\_\_SHIFT EQU 000H ; CS0 Pin Monitor Mode

CS0PM\_CSPMMD\_\_ALWAYS\_RETRY EQU 000H ; Always retry bit cycles on a pin state change.

CS0PM\_CSPMMD\_\_RETRY\_TWO\_TIMES EQU 001H ; Retry up to twice on consecutive bit cycles.

CS0PM\_CSPMMD\_\_RETRY\_FOUR\_TIMES EQU 002H ; Retry up to four times on consecutive bit cycles.

CS0PM\_CP0PM\_\_BMASK EQU 004H ; CP0 Pin Monitor Enable

CS0PM\_CP0PM\_\_SHIFT EQU 002H ; CP0 Pin Monitor Enable

CS0PM\_CP0PM\_\_CMP\_MONITOR\_DISABLED EQU 000H ; Disable monitoring on the CP0 output.

CS0PM\_CP0PM\_\_CMP\_MONITOR\_ENABLED EQU 004H ; Enable monitoring on the CP0 output.

CS0PM\_PIOPM\_\_BMASK EQU 008H ; Port I/O Pin Monitor Enable

CS0PM\_PIOPM\_\_SHIFT EQU 003H ; Port I/O Pin Monitor Enable

CS0PM\_PIOPM\_\_PORT\_MONITOR\_DISABLED EQU 000H ; Disable monitoring of writes to the port latches.

CS0PM\_PIOPM\_\_PORT\_MONITOR\_ENABLED EQU 008H ; Enable monitoring of writes to the port latches.

CS0PM\_PCAPM\_\_BMASK EQU 010H ; PCA Pin Monitor Enable

CS0PM\_PCAPM\_\_SHIFT EQU 004H ; PCA Pin Monitor Enable

CS0PM\_PCAPM\_\_PCA\_MONITOR\_DISABLED EQU 000H ; Disable monitoring on the PCA output pins.

CS0PM\_PCAPM\_\_PCA\_MONITOR\_ENABLED EQU 010H ; Enable monitoring on the PCA output pins.

CS0PM\_SMBPM\_\_BMASK EQU 020H ; SMBus Pin Monitor Enable

CS0PM\_SMBPM\_\_SHIFT EQU 005H ; SMBus Pin Monitor Enable

CS0PM\_SMBPM\_\_SMBUS\_MONITOR\_DISABLED EQU 000H ; Disable monitoring on the SMBus pins.

CS0PM\_SMBPM\_\_SMBUS\_MONITOR\_ENABLED EQU 020H ; Enable monitoring on the SMBus pins.

CS0PM\_SPIPM\_\_BMASK EQU 040H ; SPI Pin Monitor Enable

CS0PM\_SPIPM\_\_SHIFT EQU 006H ; SPI Pin Monitor Enable

CS0PM\_SPIPM\_\_SPI\_MONITOR\_DISABLED EQU 000H ; Disable monitoring on the SPI output pins.

CS0PM\_SPIPM\_\_SPI\_MONITOR\_ENABLED EQU 040H ; Enable monitoring on the SPI output pins.

CS0PM\_UAPM\_\_BMASK EQU 080H ; UART Pin Monitor Enable

CS0PM\_UAPM\_\_SHIFT EQU 007H ; UART Pin Monitor Enable

CS0PM\_UAPM\_\_UART\_MONITOR\_DISABLED EQU 000H ; Disable monitoring on the UART TX pin.

CS0PM\_UAPM\_\_UART\_MONITOR\_ENABLED EQU 080H ; Enable monitoring on the UART TX pin.

;------------------------------------------------------------------------------

; CS0SCAN0 Enums (Capacitive Sense 0 Channel Scan Mask 0 @ 0xD2)

;------------------------------------------------------------------------------

CS0SCAN0\_CS0SCAN0\_\_FMASK EQU 0FFH ; Channel Scan Mask for Port 0

CS0SCAN0\_CS0SCAN0\_\_SHIFT EQU 000H ; Channel Scan Mask for Port 0

;------------------------------------------------------------------------------

; CS0SCAN1 Enums (Capacitive Sense 0 Channel Scan Mask 1 @ 0xD3)

;------------------------------------------------------------------------------

CS0SCAN1\_CS0SCAN1\_\_FMASK EQU 03FH ; Channel Scan Mask for Port 1

CS0SCAN1\_CS0SCAN1\_\_SHIFT EQU 000H ; Channel Scan Mask for Port 1

;------------------------------------------------------------------------------

; CS0SE Enums (Capacitive Sense 0 Auto Scan End Channel @ 0xDE)

;------------------------------------------------------------------------------

CS0SE\_CS0SE\_\_FMASK EQU 01FH ; Ending Channel for Auto Scan

CS0SE\_CS0SE\_\_SHIFT EQU 000H ; Ending Channel for Auto Scan

;------------------------------------------------------------------------------

; CS0SS Enums (Capacitive Sense 0 Auto Scan Start Channel @ 0xDD)

;------------------------------------------------------------------------------

CS0SS\_CS0SS\_\_FMASK EQU 01FH ; Starting Channel for Auto Scan

CS0SS\_CS0SS\_\_SHIFT EQU 000H ; Starting Channel for Auto Scan

;------------------------------------------------------------------------------

; CS0THH Enums (Capacitive Sense 0 Comparator Threshold High Byte @ 0xFE)

;------------------------------------------------------------------------------

CS0THH\_CS0THH\_\_FMASK EQU 0FFH ; CS0 Comparator Threshold High Byte

CS0THH\_CS0THH\_\_SHIFT EQU 000H ; CS0 Comparator Threshold High Byte

;------------------------------------------------------------------------------

; CS0THL Enums (Capacitive Sense 0 Comparator Threshold Low Byte @ 0xFD)

;------------------------------------------------------------------------------

CS0THL\_CS0THL\_\_FMASK EQU 0FFH ; CS0 Comparator Threshold Low Byte

CS0THL\_CS0THL\_\_SHIFT EQU 000H ; CS0 Comparator Threshold Low Byte

;------------------------------------------------------------------------------

; DERIVID Enums (Device Identification @ 0xE3)

;------------------------------------------------------------------------------

DERIVID\_DERIVID\_\_FMASK EQU 0FFH ; Derivative ID

DERIVID\_DERIVID\_\_SHIFT EQU 000H ; Derivative ID

DERIVID\_DERIVID\_\_EFM8SB10F8G\_QFN24 EQU 001H ; EFM8SB10F8G-{R}-QFN24.

DERIVID\_DERIVID\_\_EFM8SB10F8G\_QSOP24 EQU 002H ; EFM8SB10F8G-{R}-QSOP24.

DERIVID\_DERIVID\_\_EFM8SB10F8G\_QFN20 EQU 003H ; EFM8SB10F8G-{R}-QFN20.

DERIVID\_DERIVID\_\_EFM8SB10F4G\_QFN20 EQU 006H ; EFM8SB10F4G-{R}-QFN20.

DERIVID\_DERIVID\_\_EFM8SB10F2G\_QFN20 EQU 009H ; EFM8SB10F2G-{R}-QFN20.

;------------------------------------------------------------------------------

; REVID Enums (Revision Identifcation @ 0xE2)

;------------------------------------------------------------------------------

REVID\_REVID\_\_FMASK EQU 0FFH ; Revision ID

REVID\_REVID\_\_SHIFT EQU 000H ; Revision ID

REVID\_REVID\_\_REV\_A EQU 000H ; Revision A

;------------------------------------------------------------------------------

; IT01CF Enums (INT0/INT1 Configuration @ 0xE4)

;------------------------------------------------------------------------------

IT01CF\_IN0SL\_\_FMASK EQU 007H ; INT0 Port Pin Selection

IT01CF\_IN0SL\_\_SHIFT EQU 000H ; INT0 Port Pin Selection

IT01CF\_IN0SL\_\_P0\_0 EQU 000H ; Select P0.0.

IT01CF\_IN0SL\_\_P0\_1 EQU 001H ; Select P0.1.

IT01CF\_IN0SL\_\_P0\_2 EQU 002H ; Select P0.2.

IT01CF\_IN0SL\_\_P0\_3 EQU 003H ; Select P0.3.

IT01CF\_IN0SL\_\_P0\_4 EQU 004H ; Select P0.4.

IT01CF\_IN0SL\_\_P0\_5 EQU 005H ; Select P0.5.

IT01CF\_IN0SL\_\_P0\_6 EQU 006H ; Select P0.6.

IT01CF\_IN0SL\_\_P0\_7 EQU 007H ; Select P0.7.

IT01CF\_IN0PL\_\_BMASK EQU 008H ; INT0 Polarity

IT01CF\_IN0PL\_\_SHIFT EQU 003H ; INT0 Polarity

IT01CF\_IN0PL\_\_ACTIVE\_LOW EQU 000H ; INT0 input is active low.

IT01CF\_IN0PL\_\_ACTIVE\_HIGH EQU 008H ; INT0 input is active high.

IT01CF\_IN1SL\_\_FMASK EQU 070H ; INT1 Port Pin Selection

IT01CF\_IN1SL\_\_SHIFT EQU 004H ; INT1 Port Pin Selection

IT01CF\_IN1SL\_\_P0\_0 EQU 000H ; Select P0.0.

IT01CF\_IN1SL\_\_P0\_1 EQU 010H ; Select P0.1.

IT01CF\_IN1SL\_\_P0\_2 EQU 020H ; Select P0.2.

IT01CF\_IN1SL\_\_P0\_3 EQU 030H ; Select P0.3.

IT01CF\_IN1SL\_\_P0\_4 EQU 040H ; Select P0.4.

IT01CF\_IN1SL\_\_P0\_5 EQU 050H ; Select P0.5.

IT01CF\_IN1SL\_\_P0\_6 EQU 060H ; Select P0.6.

IT01CF\_IN1SL\_\_P0\_7 EQU 070H ; Select P0.7.

IT01CF\_IN1PL\_\_BMASK EQU 080H ; INT1 Polarity

IT01CF\_IN1PL\_\_SHIFT EQU 007H ; INT1 Polarity

IT01CF\_IN1PL\_\_ACTIVE\_LOW EQU 000H ; INT1 input is active low.

IT01CF\_IN1PL\_\_ACTIVE\_HIGH EQU 080H ; INT1 input is active high.

;------------------------------------------------------------------------------

; XOSC0CN Enums (External Oscillator Control @ 0xB1)

;------------------------------------------------------------------------------

XOSC0CN\_XFCN\_\_FMASK EQU 007H ; External Oscillator Frequency Control

XOSC0CN\_XFCN\_\_SHIFT EQU 000H ; External Oscillator Frequency Control

XOSC0CN\_XFCN\_\_MODE0 EQU 000H ; Select external oscillator mode 0: Crystal

; frequency <= 20 kHz, RC/C frequency <= 25 kHz, C

; mode K factor = 0.87.

XOSC0CN\_XFCN\_\_MODE1 EQU 001H ; Select external oscillator mode 1: 20 kHz <

; Crystal frequency <= 58 kHz, 25 kHz < RC/C

; frequency <= 50 kHz, C mode K factor = 2.6.

XOSC0CN\_XFCN\_\_MODE2 EQU 002H ; Select external oscillator mode 2: 58 kHz <

; Crystal frequency <= 155 kHz, 50 kHz < RC/C

; frequency <= 100 kHz, C mode K factor = 7.7.

XOSC0CN\_XFCN\_\_MODE3 EQU 003H ; Select external oscillator mode 3: 155 kHz <

; Crystal frequency <= 415 kHz, 100 kHz < RC/C

; frequency <= 200 kHz, C mode K factor = 22.

XOSC0CN\_XFCN\_\_MODE4 EQU 004H ; Select external oscillator mode 4: 415 kHz <

; Crystal frequency <= 1.1 MHz, 200 kHz < RC/C

; frequency <= 400 kHz, C mode K factor = 65.

XOSC0CN\_XFCN\_\_MODE5 EQU 005H ; Select external oscillator mode 5: 1.1 MHz <

; Crystal frequency <= 3.1 MHz, 400 kHz < RC/C

; frequency <= 800 kHz, C mode K factor = 180.

XOSC0CN\_XFCN\_\_MODE6 EQU 006H ; Select external oscillator mode 6: 3.1 MHz <

; Crystal frequency <= 8.2 kHz, 800 kHz < RC/C

; frequency <= 1.6 MHz, C mode K factor = 664.

XOSC0CN\_XFCN\_\_MODE7 EQU 007H ; Select external oscillator mode 7: 8.2 MHz <

; Crystal frequency <= 25 MHz, 1.6 MHz < RC/C

; frequency <= 3.2 MHz, C mode K factor = 1590.

XOSC0CN\_XOSCMD\_\_FMASK EQU 070H ; External Oscillator Mode

XOSC0CN\_XOSCMD\_\_SHIFT EQU 004H ; External Oscillator Mode

XOSC0CN\_XOSCMD\_\_DISABLED EQU 000H ; External Oscillator circuit disabled.

XOSC0CN\_XOSCMD\_\_CMOS EQU 020H ; External CMOS Clock Mode.

XOSC0CN\_XOSCMD\_\_CMOS\_DIV\_2 EQU 030H ; External CMOS Clock Mode with divide by 2 stage.

XOSC0CN\_XOSCMD\_\_RC EQU 040H ; RC Oscillator Mode.

XOSC0CN\_XOSCMD\_\_C EQU 050H ; Capacitor Oscillator Mode.

XOSC0CN\_XOSCMD\_\_CRYSTAL EQU 060H ; Crystal Oscillator Mode.

XOSC0CN\_XOSCMD\_\_CRYSTAL\_DIV\_2 EQU 070H ; Crystal Oscillator Mode with divide by 2 stage.

XOSC0CN\_XCLKVLD\_\_BMASK EQU 080H ; External Oscillator Valid Flag

XOSC0CN\_XCLKVLD\_\_SHIFT EQU 007H ; External Oscillator Valid Flag

XOSC0CN\_XCLKVLD\_\_NOT\_SET EQU 000H ; External Oscillator is unused or not yet stable.

XOSC0CN\_XCLKVLD\_\_SET EQU 080H ; External Oscillator is running and stable.

;------------------------------------------------------------------------------

; FLKEY Enums (Flash Lock and Key @ 0xB7)

;------------------------------------------------------------------------------

FLKEY\_FLKEY\_\_FMASK EQU 0FFH ; Flash Lock and Key Register

FLKEY\_FLKEY\_\_SHIFT EQU 000H ; Flash Lock and Key Register

FLKEY\_FLKEY\_\_LOCKED EQU 000H ; Flash is write/erase locked.

FLKEY\_FLKEY\_\_FIRST EQU 001H ; The first key code has been written (0xA5).

FLKEY\_FLKEY\_\_UNLOCKED EQU 002H ; Flash is unlocked (writes/erases allowed).

FLKEY\_FLKEY\_\_DISABLED EQU 003H ; Flash writes/erases disabled until the next reset.

FLKEY\_FLKEY\_\_KEY1 EQU 0A5H ; Flash writes and erases are enabled by writing

; 0xA5 followed by 0xF1 to the FLKEY register.

FLKEY\_FLKEY\_\_KEY2 EQU 0F1H ; Flash writes and erases are enabled by writing

; 0xA5 followed by 0xF1 to the FLKEY register.

;------------------------------------------------------------------------------

; FLSCL Enums (Flash Scale @ 0xB6)

;------------------------------------------------------------------------------

FLSCL\_BYPASS\_\_BMASK EQU 040H ; Flash Read Timing One-Shot Bypass

FLSCL\_BYPASS\_\_SHIFT EQU 006H ; Flash Read Timing One-Shot Bypass

FLSCL\_BYPASS\_\_ONE\_SHOT EQU 000H ; The one-shot determines the flash read time. This

; setting should be used for operating frequencies

; less than 14 MHz.

FLSCL\_BYPASS\_\_SYSCLK EQU 040H ; The system clock determines the flash read time.

; This setting should be used for frequencies

; greater than 14 MHz.

;------------------------------------------------------------------------------

; PSCTL Enums (Program Store Control @ 0x8F)

;------------------------------------------------------------------------------

PSCTL\_PSWE\_\_BMASK EQU 001H ; Program Store Write Enable

PSCTL\_PSWE\_\_SHIFT EQU 000H ; Program Store Write Enable

PSCTL\_PSWE\_\_WRITE\_DISABLED EQU 000H ; Writes to flash program memory disabled.

PSCTL\_PSWE\_\_WRITE\_ENABLED EQU 001H ; Writes to flash program memory enabled; the MOVX

; write instruction targets flash memory.

PSCTL\_PSEE\_\_BMASK EQU 002H ; Program Store Erase Enable

PSCTL\_PSEE\_\_SHIFT EQU 001H ; Program Store Erase Enable

PSCTL\_PSEE\_\_ERASE\_DISABLED EQU 000H ; Flash program memory erasure disabled.

PSCTL\_PSEE\_\_ERASE\_ENABLED EQU 002H ; Flash program memory erasure enabled.

;------------------------------------------------------------------------------

; HFO0CAL Enums (High Frequency Oscillator Calibration @ 0xB3)

;------------------------------------------------------------------------------

HFO0CAL\_HFO0CAL\_\_FMASK EQU 07FH ; Oscillator Calibration

HFO0CAL\_HFO0CAL\_\_SHIFT EQU 000H ; Oscillator Calibration

HFO0CAL\_SSE\_\_BMASK EQU 080H ; Spread Spectrum Enable

HFO0CAL\_SSE\_\_SHIFT EQU 007H ; Spread Spectrum Enable

HFO0CAL\_SSE\_\_DISABLED EQU 000H ; Spread Spectrum clock dithering disabled.

HFO0CAL\_SSE\_\_ENABLED EQU 080H ; Spread Spectrum clock dithering enabled.

;------------------------------------------------------------------------------

; HFO0CN Enums (High Frequency Oscillator Control @ 0xB2)

;------------------------------------------------------------------------------

HFO0CN\_IFRDY\_\_BMASK EQU 040H ; Internal Oscillator Frequency Ready Flag

HFO0CN\_IFRDY\_\_SHIFT EQU 006H ; Internal Oscillator Frequency Ready Flag

HFO0CN\_IFRDY\_\_NOT\_SET EQU 000H ; High Frequency Oscillator is not running at its

; programmed frequency.

HFO0CN\_IFRDY\_\_SET EQU 040H ; High Frequency Oscillator is running at its

; programmed frequency.

HFO0CN\_IOSCEN\_\_BMASK EQU 080H ; High Frequency Oscillator Enable

HFO0CN\_IOSCEN\_\_SHIFT EQU 007H ; High Frequency Oscillator Enable

HFO0CN\_IOSCEN\_\_DISABLED EQU 000H ; High Frequency Oscillator disabled.

HFO0CN\_IOSCEN\_\_ENABLED EQU 080H ; High Frequency Oscillator enabled.

;------------------------------------------------------------------------------

; EIE1 Enums (Extended Interrupt Enable 1 @ 0xE6)

;------------------------------------------------------------------------------

EIE1\_ESMB0\_\_BMASK EQU 001H ; SMBus (SMB0) Interrupt Enable

EIE1\_ESMB0\_\_SHIFT EQU 000H ; SMBus (SMB0) Interrupt Enable

EIE1\_ESMB0\_\_DISABLED EQU 000H ; Disable all SMB0 interrupts.

EIE1\_ESMB0\_\_ENABLED EQU 001H ; Enable interrupt requests generated by SMB0.

EIE1\_ERTC0A\_\_BMASK EQU 002H ; RTC Alarm Interrupt Enable

EIE1\_ERTC0A\_\_SHIFT EQU 001H ; RTC Alarm Interrupt Enable

EIE1\_ERTC0A\_\_DISABLED EQU 000H ; Disable RTC Alarm interrupts.

EIE1\_ERTC0A\_\_ENABLED EQU 002H ; Enable interrupt requests generated by a RTC

; Alarm.

EIE1\_EWADC0\_\_BMASK EQU 004H ; ADC0 Window Comparison Interrupt Enable

EIE1\_EWADC0\_\_SHIFT EQU 002H ; ADC0 Window Comparison Interrupt Enable

EIE1\_EWADC0\_\_DISABLED EQU 000H ; Disable ADC0 Window Comparison interrupt.

EIE1\_EWADC0\_\_ENABLED EQU 004H ; Enable interrupt requests generated by ADC0 Window

; Compare flag (ADWINT).

EIE1\_EADC0\_\_BMASK EQU 008H ; ADC0 Conversion Complete Interrupt Enable

EIE1\_EADC0\_\_SHIFT EQU 003H ; ADC0 Conversion Complete Interrupt Enable

EIE1\_EADC0\_\_DISABLED EQU 000H ; Disable ADC0 Conversion Complete interrupt.

EIE1\_EADC0\_\_ENABLED EQU 008H ; Enable interrupt requests generated by the ADINT

; flag.

EIE1\_EPCA0\_\_BMASK EQU 010H ; Programmable Counter Array (PCA0) Interrupt Enable

EIE1\_EPCA0\_\_SHIFT EQU 004H ; Programmable Counter Array (PCA0) Interrupt Enable

EIE1\_EPCA0\_\_DISABLED EQU 000H ; Disable all PCA0 interrupts.

EIE1\_EPCA0\_\_ENABLED EQU 010H ; Enable interrupt requests generated by PCA0.

EIE1\_ECP0\_\_BMASK EQU 020H ; Comparator0 (CP0) Interrupt Enable

EIE1\_ECP0\_\_SHIFT EQU 005H ; Comparator0 (CP0) Interrupt Enable

EIE1\_ECP0\_\_DISABLED EQU 000H ; Disable CP0 interrupts.

EIE1\_ECP0\_\_ENABLED EQU 020H ; Enable interrupt requests generated by the

; comparator 0 CPRIF or CPFIF flags.

EIE1\_ET3\_\_BMASK EQU 080H ; Timer 3 Interrupt Enable

EIE1\_ET3\_\_SHIFT EQU 007H ; Timer 3 Interrupt Enable

EIE1\_ET3\_\_DISABLED EQU 000H ; Disable Timer 3 interrupts.

EIE1\_ET3\_\_ENABLED EQU 080H ; Enable interrupt requests generated by the TF3L or

; TF3H flags.

;------------------------------------------------------------------------------

; EIE2 Enums (Extended Interrupt Enable 2 @ 0xE7)

;------------------------------------------------------------------------------

EIE2\_EWARN\_\_BMASK EQU 001H ; Supply Monitor Early Warning Interrupt Enable

EIE2\_EWARN\_\_SHIFT EQU 000H ; Supply Monitor Early Warning Interrupt Enable

EIE2\_EWARN\_\_DISABLED EQU 000H ; Disable the Supply Monitor Early Warning

; interrupt.

EIE2\_EWARN\_\_ENABLED EQU 001H ; Enable interrupt requests generated by the Supply

; Monitor.

EIE2\_EMAT\_\_BMASK EQU 002H ; Port Match Interrupts Enable

EIE2\_EMAT\_\_SHIFT EQU 001H ; Port Match Interrupts Enable

EIE2\_EMAT\_\_DISABLED EQU 000H ; Disable all Port Match interrupts.

EIE2\_EMAT\_\_ENABLED EQU 002H ; Enable interrupt requests generated by a Port

; Match.

EIE2\_ERTC0F\_\_BMASK EQU 004H ; RTC Oscillator Fail Interrupt Enable

EIE2\_ERTC0F\_\_SHIFT EQU 002H ; RTC Oscillator Fail Interrupt Enable

EIE2\_ERTC0F\_\_DISABLED EQU 000H ; Disable RTC Oscillator Fail interrupts.

EIE2\_ERTC0F\_\_ENABLED EQU 004H ; Enable interrupt requests generated by the RTC

; Oscillator Fail event.

EIE2\_ECSCPT\_\_BMASK EQU 010H ; Capacitive Sense Conversion Complete Interrupt Enable

EIE2\_ECSCPT\_\_SHIFT EQU 004H ; Capacitive Sense Conversion Complete Interrupt Enable

EIE2\_ECSCPT\_\_DISABLED EQU 000H ; Disable Capacitive Sense Conversion Complete

; interrupt.

EIE2\_ECSCPT\_\_ENABLED EQU 010H ; Enable interrupt requests generated by CS0INT.

EIE2\_ECSDC\_\_BMASK EQU 020H ; Capacitive Sense Digital Comparator Interrupt Enable

EIE2\_ECSDC\_\_SHIFT EQU 005H ; Capacitive Sense Digital Comparator Interrupt Enable

EIE2\_ECSDC\_\_DISABLED EQU 000H ; Disable Capacitive Sense Digital Comparator

; interrupt.

EIE2\_ECSDC\_\_ENABLED EQU 020H ; Enable interrupt requests generated by the

; Capacitive Sense Digital Comparator.

EIE2\_ECSEOS\_\_BMASK EQU 040H ; Capacitive Sense End of Scan Interrupt Enable

EIE2\_ECSEOS\_\_SHIFT EQU 006H ; Capacitive Sense End of Scan Interrupt Enable

EIE2\_ECSEOS\_\_DISABLED EQU 000H ; Disable Capacitive Sense End of Scan interrupt.

EIE2\_ECSEOS\_\_ENABLED EQU 040H ; Enable interrupt requests generated by the

; Capacitive Sense End of Scan.

;------------------------------------------------------------------------------

; EIP1 Enums (Extended Interrupt Priority 1 @ 0xF6)

;------------------------------------------------------------------------------

EIP1\_PSMB0\_\_BMASK EQU 001H ; SMBus (SMB0) Interrupt Priority Control

EIP1\_PSMB0\_\_SHIFT EQU 000H ; SMBus (SMB0) Interrupt Priority Control

EIP1\_PSMB0\_\_LOW EQU 000H ; SMB0 interrupt set to low priority level.

EIP1\_PSMB0\_\_HIGH EQU 001H ; SMB0 interrupt set to high priority level.

EIP1\_PRTC0A\_\_BMASK EQU 002H ; RTC Alarm Interrupt Priority Control

EIP1\_PRTC0A\_\_SHIFT EQU 001H ; RTC Alarm Interrupt Priority Control

EIP1\_PRTC0A\_\_LOW EQU 000H ; RTC Alarm interrupt set to low priority level.

EIP1\_PRTC0A\_\_HIGH EQU 002H ; RTC Alarm interrupt set to high priority level.

EIP1\_PWADC0\_\_BMASK EQU 004H ; ADC0 Window Comparator Interrupt Priority Control

EIP1\_PWADC0\_\_SHIFT EQU 002H ; ADC0 Window Comparator Interrupt Priority Control

EIP1\_PWADC0\_\_LOW EQU 000H ; ADC0 Window interrupt set to low priority level.

EIP1\_PWADC0\_\_HIGH EQU 004H ; ADC0 Window interrupt set to high priority level.

EIP1\_PADC0\_\_BMASK EQU 008H ; ADC0 Conversion Complete Interrupt Priority Control

EIP1\_PADC0\_\_SHIFT EQU 003H ; ADC0 Conversion Complete Interrupt Priority Control

EIP1\_PADC0\_\_LOW EQU 000H ; ADC0 Conversion Complete interrupt set to low

; priority level.

EIP1\_PADC0\_\_HIGH EQU 008H ; ADC0 Conversion Complete interrupt set to high

; priority level.

EIP1\_PPCA0\_\_BMASK EQU 010H ; Programmable Counter Array (PCA0) Interrupt Priority Control

EIP1\_PPCA0\_\_SHIFT EQU 004H ; Programmable Counter Array (PCA0) Interrupt Priority Control

EIP1\_PPCA0\_\_LOW EQU 000H ; PCA0 interrupt set to low priority level.

EIP1\_PPCA0\_\_HIGH EQU 010H ; PCA0 interrupt set to high priority level.

EIP1\_PCP0\_\_BMASK EQU 020H ; Comparator0 (CP0) Interrupt Priority Control

EIP1\_PCP0\_\_SHIFT EQU 005H ; Comparator0 (CP0) Interrupt Priority Control

EIP1\_PCP0\_\_LOW EQU 000H ; CP0 interrupt set to low priority level.

EIP1\_PCP0\_\_HIGH EQU 020H ; CP0 interrupt set to high priority level.

EIP1\_PT3\_\_BMASK EQU 080H ; Timer 3 Interrupt Priority Control

EIP1\_PT3\_\_SHIFT EQU 007H ; Timer 3 Interrupt Priority Control

EIP1\_PT3\_\_LOW EQU 000H ; Timer 3 interrupts set to low priority level.

EIP1\_PT3\_\_HIGH EQU 080H ; Timer 3 interrupts set to high priority level.

;------------------------------------------------------------------------------

; EIP2 Enums (Extended Interrupt Priority 2 @ 0xF7)

;------------------------------------------------------------------------------

EIP2\_PWARN\_\_BMASK EQU 001H ; Supply Monitor Early Warning Interrupt Priority Control

EIP2\_PWARN\_\_SHIFT EQU 000H ; Supply Monitor Early Warning Interrupt Priority Control

EIP2\_PWARN\_\_LOW EQU 000H ; Supply Monitor Early Warning interrupt set to low

; priority level.

EIP2\_PWARN\_\_HIGH EQU 001H ; Supply Monitor Early Warning interrupt set to high

; priority level.

EIP2\_PMAT\_\_BMASK EQU 002H ; Port Match Interrupt Priority Control

EIP2\_PMAT\_\_SHIFT EQU 001H ; Port Match Interrupt Priority Control

EIP2\_PMAT\_\_LOW EQU 000H ; Port Match interrupt set to low priority level.

EIP2\_PMAT\_\_HIGH EQU 002H ; Port Match interrupt set to high priority level.

EIP2\_PRTC0F\_\_BMASK EQU 004H ; RTC Oscillator Fail Interrupt Priority Control

EIP2\_PRTC0F\_\_SHIFT EQU 002H ; RTC Oscillator Fail Interrupt Priority Control

EIP2\_PRTC0F\_\_LOW EQU 000H ; RTC Oscillator Fail interrupt set to low priority

; level.

EIP2\_PRTC0F\_\_HIGH EQU 004H ; RTC Oscillator Fail interrupt set to high priority

; level.

EIP2\_PCSCPT\_\_BMASK EQU 010H ; Capacitive Sense Conversion Complete Interrupt Priority Control

EIP2\_PCSCPT\_\_SHIFT EQU 004H ; Capacitive Sense Conversion Complete Interrupt Priority Control

EIP2\_PCSCPT\_\_LOW EQU 000H ; Capacitive Sense Conversion Complete interrupt set

; to low priority level.

EIP2\_PCSCPT\_\_HIGH EQU 010H ; Capacitive Sense Conversion Complete interrupt set

; to high priority level.

EIP2\_PCSDC\_\_BMASK EQU 020H ; Capacitive Sense Digital Comparator Interrupt Priority Control

EIP2\_PCSDC\_\_SHIFT EQU 005H ; Capacitive Sense Digital Comparator Interrupt Priority Control

EIP2\_PCSDC\_\_LOW EQU 000H ; Capacitive Sense Digital Comparator interrupt set

; to low priority level.

EIP2\_PCSDC\_\_HIGH EQU 020H ; Capacitive Sense Digital Comparator interrupt set

; to high priority level.

EIP2\_PCSEOS\_\_BMASK EQU 040H ; Capacitive Sense End of Scan Interrupt Priority Control

EIP2\_PCSEOS\_\_SHIFT EQU 006H ; Capacitive Sense End of Scan Interrupt Priority Control

EIP2\_PCSEOS\_\_LOW EQU 000H ; Capacitive Sense End of Scan interrupt set to low

; priority level.

EIP2\_PCSEOS\_\_HIGH EQU 040H ; Capacitive Sense End of Scan interrupt set to high

; priority level.

;------------------------------------------------------------------------------

; IE Enums (Interrupt Enable @ 0xA8)

;------------------------------------------------------------------------------

IE\_EX0\_\_BMASK EQU 001H ; External Interrupt 0 Enable

IE\_EX0\_\_SHIFT EQU 000H ; External Interrupt 0 Enable

IE\_EX0\_\_DISABLED EQU 000H ; Disable external interrupt 0.

IE\_EX0\_\_ENABLED EQU 001H ; Enable interrupt requests generated by the INT0

; input.

IE\_ET0\_\_BMASK EQU 002H ; Timer 0 Interrupt Enable

IE\_ET0\_\_SHIFT EQU 001H ; Timer 0 Interrupt Enable

IE\_ET0\_\_DISABLED EQU 000H ; Disable all Timer 0 interrupt.

IE\_ET0\_\_ENABLED EQU 002H ; Enable interrupt requests generated by the TF0

; flag.

IE\_EX1\_\_BMASK EQU 004H ; External Interrupt 1 Enable

IE\_EX1\_\_SHIFT EQU 002H ; External Interrupt 1 Enable

IE\_EX1\_\_DISABLED EQU 000H ; Disable external interrupt 1.

IE\_EX1\_\_ENABLED EQU 004H ; Enable interrupt requests generated by the INT1

; input.

IE\_ET1\_\_BMASK EQU 008H ; Timer 1 Interrupt Enable

IE\_ET1\_\_SHIFT EQU 003H ; Timer 1 Interrupt Enable

IE\_ET1\_\_DISABLED EQU 000H ; Disable all Timer 1 interrupt.

IE\_ET1\_\_ENABLED EQU 008H ; Enable interrupt requests generated by the TF1

; flag.

IE\_ES0\_\_BMASK EQU 010H ; UART0 Interrupt Enable

IE\_ES0\_\_SHIFT EQU 004H ; UART0 Interrupt Enable

IE\_ES0\_\_DISABLED EQU 000H ; Disable UART0 interrupt.

IE\_ES0\_\_ENABLED EQU 010H ; Enable UART0 interrupt.

IE\_ET2\_\_BMASK EQU 020H ; Timer 2 Interrupt Enable

IE\_ET2\_\_SHIFT EQU 005H ; Timer 2 Interrupt Enable

IE\_ET2\_\_DISABLED EQU 000H ; Disable Timer 2 interrupt.

IE\_ET2\_\_ENABLED EQU 020H ; Enable interrupt requests generated by the TF2L or

; TF2H flags.

IE\_ESPI0\_\_BMASK EQU 040H ; SPI0 Interrupt Enable

IE\_ESPI0\_\_SHIFT EQU 006H ; SPI0 Interrupt Enable

IE\_ESPI0\_\_DISABLED EQU 000H ; Disable all SPI0 interrupts.

IE\_ESPI0\_\_ENABLED EQU 040H ; Enable interrupt requests generated by SPI0.

IE\_EA\_\_BMASK EQU 080H ; All Interrupts Enable

IE\_EA\_\_SHIFT EQU 007H ; All Interrupts Enable

IE\_EA\_\_DISABLED EQU 000H ; Disable all interrupt sources.

IE\_EA\_\_ENABLED EQU 080H ; Enable each interrupt according to its individual

; mask setting.

;------------------------------------------------------------------------------

; IP Enums (Interrupt Priority @ 0xB8)

;------------------------------------------------------------------------------

IP\_PX0\_\_BMASK EQU 001H ; External Interrupt 0 Priority Control

IP\_PX0\_\_SHIFT EQU 000H ; External Interrupt 0 Priority Control

IP\_PX0\_\_LOW EQU 000H ; External Interrupt 0 set to low priority level.

IP\_PX0\_\_HIGH EQU 001H ; External Interrupt 0 set to high priority level.

IP\_PT0\_\_BMASK EQU 002H ; Timer 0 Interrupt Priority Control

IP\_PT0\_\_SHIFT EQU 001H ; Timer 0 Interrupt Priority Control

IP\_PT0\_\_LOW EQU 000H ; Timer 0 interrupt set to low priority level.

IP\_PT0\_\_HIGH EQU 002H ; Timer 0 interrupt set to high priority level.

IP\_PX1\_\_BMASK EQU 004H ; External Interrupt 1 Priority Control

IP\_PX1\_\_SHIFT EQU 002H ; External Interrupt 1 Priority Control

IP\_PX1\_\_LOW EQU 000H ; External Interrupt 1 set to low priority level.

IP\_PX1\_\_HIGH EQU 004H ; External Interrupt 1 set to high priority level.

IP\_PT1\_\_BMASK EQU 008H ; Timer 1 Interrupt Priority Control

IP\_PT1\_\_SHIFT EQU 003H ; Timer 1 Interrupt Priority Control

IP\_PT1\_\_LOW EQU 000H ; Timer 1 interrupt set to low priority level.

IP\_PT1\_\_HIGH EQU 008H ; Timer 1 interrupt set to high priority level.

IP\_PS0\_\_BMASK EQU 010H ; UART0 Interrupt Priority Control

IP\_PS0\_\_SHIFT EQU 004H ; UART0 Interrupt Priority Control

IP\_PS0\_\_LOW EQU 000H ; UART0 interrupt set to low priority level.

IP\_PS0\_\_HIGH EQU 010H ; UART0 interrupt set to high priority level.

IP\_PT2\_\_BMASK EQU 020H ; Timer 2 Interrupt Priority Control

IP\_PT2\_\_SHIFT EQU 005H ; Timer 2 Interrupt Priority Control

IP\_PT2\_\_LOW EQU 000H ; Timer 2 interrupt set to low priority level.

IP\_PT2\_\_HIGH EQU 020H ; Timer 2 interrupt set to high priority level.

IP\_PSPI0\_\_BMASK EQU 040H ; Serial Peripheral Interface (SPI0) Interrupt Priority Control

IP\_PSPI0\_\_SHIFT EQU 006H ; Serial Peripheral Interface (SPI0) Interrupt Priority Control

IP\_PSPI0\_\_LOW EQU 000H ; SPI0 interrupt set to low priority level.

IP\_PSPI0\_\_HIGH EQU 040H ; SPI0 interrupt set to high priority level.

;------------------------------------------------------------------------------

; IREF0CF Enums (Current Reference Configuration @ 0xB9)

;------------------------------------------------------------------------------

IREF0CF\_PWMSS\_\_FMASK EQU 007H ; PWM Source Select

IREF0CF\_PWMSS\_\_SHIFT EQU 000H ; PWM Source Select

IREF0CF\_PWMSS\_\_FINE\_TUNE\_CEX0 EQU 000H ; CEX0 selected as the fine-tuning control signal.

IREF0CF\_PWMSS\_\_FINE\_TUNE\_CEX1 EQU 001H ; CEX1 selected as the fine-tuning control signal.

IREF0CF\_PWMSS\_\_FINE\_TUNE\_CEX2 EQU 002H ; CEX2 selected as the fine-tuning control signal.

IREF0CF\_PWMEN\_\_BMASK EQU 080H ; PWM Enhanced Mode Enable

IREF0CF\_PWMEN\_\_SHIFT EQU 007H ; PWM Enhanced Mode Enable

IREF0CF\_PWMEN\_\_ENHANCED\_DISABLED EQU 000H ; Disable PWM Enhanced Mode.

IREF0CF\_PWMEN\_\_ENHANCED\_ENABLED EQU 080H ; Enable PWM Enhanced Mode.

;------------------------------------------------------------------------------

; IREF0CN0 Enums (Current Reference Control 0 @ 0xD6)

;------------------------------------------------------------------------------

IREF0CN0\_IREF0DAT\_\_FMASK EQU 03FH ; IREF0 Data Word

IREF0CN0\_IREF0DAT\_\_SHIFT EQU 000H ; IREF0 Data Word

IREF0CN0\_MDSEL\_\_BMASK EQU 040H ; IREF0 Output Mode Select

IREF0CN0\_MDSEL\_\_SHIFT EQU 006H ; IREF0 Output Mode Select

IREF0CN0\_MDSEL\_\_LOW\_POWER EQU 000H ; Low Current Mode is selected (step size = 1 uA).

IREF0CN0\_MDSEL\_\_HIGH\_CURRENT EQU 040H ; High Current Mode is selected (step size = 8 uA).

IREF0CN0\_SINK\_\_BMASK EQU 080H ; IREF0 Current Sink Enable

IREF0CN0\_SINK\_\_SHIFT EQU 007H ; IREF0 Current Sink Enable

IREF0CN0\_SINK\_\_DISABLED EQU 000H ; IREF0 is a current source.

IREF0CN0\_SINK\_\_ENABLED EQU 080H ; IREF0 is a current sink.

;------------------------------------------------------------------------------

; XBR0 Enums (Port I/O Crossbar 0 @ 0xE1)

;------------------------------------------------------------------------------

XBR0\_URT0E\_\_BMASK EQU 001H ; UART I/O Output Enable

XBR0\_URT0E\_\_SHIFT EQU 000H ; UART I/O Output Enable

XBR0\_URT0E\_\_DISABLED EQU 000H ; UART I/O unavailable at Port pin.

XBR0\_URT0E\_\_ENABLED EQU 001H ; UART TX, RX routed to Port pins P0.4 and P0.5.

XBR0\_SPI0E\_\_BMASK EQU 002H ; SPI I/O Enable

XBR0\_SPI0E\_\_SHIFT EQU 001H ; SPI I/O Enable

XBR0\_SPI0E\_\_DISABLED EQU 000H ; SPI I/O unavailable at Port pins.

XBR0\_SPI0E\_\_ENABLED EQU 002H ; SPI I/O routed to Port pins. The SPI can be

; assigned either 3 or 4 GPIO pins.

XBR0\_SMB0E\_\_BMASK EQU 004H ; SMBus0 I/O Enable

XBR0\_SMB0E\_\_SHIFT EQU 002H ; SMBus0 I/O Enable

XBR0\_SMB0E\_\_DISABLED EQU 000H ; SMBus0 I/O unavailable at Port pins.

XBR0\_SMB0E\_\_ENABLED EQU 004H ; SMBus0 I/O routed to Port pins.

XBR0\_SYSCKE\_\_BMASK EQU 008H ; SYSCLK Output Enable

XBR0\_SYSCKE\_\_SHIFT EQU 003H ; SYSCLK Output Enable

XBR0\_SYSCKE\_\_DISABLED EQU 000H ; SYSCLK unavailable at Port pin.

XBR0\_SYSCKE\_\_ENABLED EQU 008H ; SYSCLK output routed to Port pin.

XBR0\_CP0E\_\_BMASK EQU 010H ; Comparator0 Output Enable

XBR0\_CP0E\_\_SHIFT EQU 004H ; Comparator0 Output Enable

XBR0\_CP0E\_\_DISABLED EQU 000H ; CP0 unavailable at Port pin.

XBR0\_CP0E\_\_ENABLED EQU 010H ; CP0 routed to Port pin.

XBR0\_CP0AE\_\_BMASK EQU 020H ; Comparator0 Asynchronous Output Enable

XBR0\_CP0AE\_\_SHIFT EQU 005H ; Comparator0 Asynchronous Output Enable

XBR0\_CP0AE\_\_DISABLED EQU 000H ; Asynchronous CP0 unavailable at Port pin.

XBR0\_CP0AE\_\_ENABLED EQU 020H ; Asynchronous CP0 routed to Port pin.

;------------------------------------------------------------------------------

; XBR1 Enums (Port I/O Crossbar 1 @ 0xE2)

;------------------------------------------------------------------------------

XBR1\_PCA0ME\_\_FMASK EQU 007H ; PCA Module I/O Enable

XBR1\_PCA0ME\_\_SHIFT EQU 000H ; PCA Module I/O Enable

XBR1\_PCA0ME\_\_DISABLED EQU 000H ; All PCA I/O unavailable at Port pins.

XBR1\_PCA0ME\_\_CEX0 EQU 001H ; CEX0 routed to Port pin.

XBR1\_PCA0ME\_\_CEX0\_CEX1 EQU 002H ; CEX0, CEX1 routed to Port pins.

XBR1\_PCA0ME\_\_CEX0\_CEX1\_CEX2 EQU 003H ; CEX0, CEX1, CEX2 routed to Port pins.

XBR1\_ECIE\_\_BMASK EQU 008H ; PCA0 External Counter Input Enable

XBR1\_ECIE\_\_SHIFT EQU 003H ; PCA0 External Counter Input Enable

XBR1\_ECIE\_\_DISABLED EQU 000H ; ECI unavailable at Port pin.

XBR1\_ECIE\_\_ENABLED EQU 008H ; ECI routed to Port pin.

XBR1\_T0E\_\_BMASK EQU 010H ; T0 Enable

XBR1\_T0E\_\_SHIFT EQU 004H ; T0 Enable

XBR1\_T0E\_\_DISABLED EQU 000H ; T0 unavailable at Port pin.

XBR1\_T0E\_\_ENABLED EQU 010H ; T0 routed to Port pin.

XBR1\_T1E\_\_BMASK EQU 020H ; T1 Enable

XBR1\_T1E\_\_SHIFT EQU 005H ; T1 Enable

XBR1\_T1E\_\_DISABLED EQU 000H ; T1 unavailable at Port pin.

XBR1\_T1E\_\_ENABLED EQU 020H ; T1 routed to Port pin.

;------------------------------------------------------------------------------

; XBR2 Enums (Port I/O Crossbar 2 @ 0xE3)

;------------------------------------------------------------------------------

XBR2\_XBARE\_\_BMASK EQU 040H ; Crossbar Enable

XBR2\_XBARE\_\_SHIFT EQU 006H ; Crossbar Enable

XBR2\_XBARE\_\_DISABLED EQU 000H ; Crossbar disabled.

XBR2\_XBARE\_\_ENABLED EQU 040H ; Crossbar enabled.

XBR2\_WEAKPUD\_\_BMASK EQU 080H ; Port I/O Weak Pullup Disable

XBR2\_WEAKPUD\_\_SHIFT EQU 007H ; Port I/O Weak Pullup Disable

XBR2\_WEAKPUD\_\_PULL\_UPS\_ENABLED EQU 000H ; Weak Pullups enabled (except for Ports whose I/O

; are configured for analog mode).

XBR2\_WEAKPUD\_\_PULL\_UPS\_DISABLED EQU 080H ; Weak Pullups disabled.

;------------------------------------------------------------------------------

; PCA0CPH0 Enums (PCA Channel 0 Capture Module High Byte @ 0xFC)

;------------------------------------------------------------------------------

PCA0CPH0\_PCA0CPH0\_\_FMASK EQU 0FFH ; PCA Channel 0 Capture Module High Byte

PCA0CPH0\_PCA0CPH0\_\_SHIFT EQU 000H ; PCA Channel 0 Capture Module High Byte

;------------------------------------------------------------------------------

; PCA0CPL0 Enums (PCA Channel 0 Capture Module Low Byte @ 0xFB)

;------------------------------------------------------------------------------

PCA0CPL0\_PCA0CPL0\_\_FMASK EQU 0FFH ; PCA Channel 0 Capture Module Low Byte

PCA0CPL0\_PCA0CPL0\_\_SHIFT EQU 000H ; PCA Channel 0 Capture Module Low Byte

;------------------------------------------------------------------------------

; PCA0CPM0 Enums (PCA Channel 0 Capture/Compare Mode @ 0xDA)

;------------------------------------------------------------------------------

PCA0CPM0\_ECCF\_\_BMASK EQU 001H ; Channel 0 Capture/Compare Flag Interrupt Enable

PCA0CPM0\_ECCF\_\_SHIFT EQU 000H ; Channel 0 Capture/Compare Flag Interrupt Enable

PCA0CPM0\_ECCF\_\_DISABLED EQU 000H ; Disable CCF0 interrupts.

PCA0CPM0\_ECCF\_\_ENABLED EQU 001H ; Enable a Capture/Compare Flag interrupt request

; when CCF0 is set.

PCA0CPM0\_PWM\_\_BMASK EQU 002H ; Channel 0 Pulse Width Modulation Mode Enable

PCA0CPM0\_PWM\_\_SHIFT EQU 001H ; Channel 0 Pulse Width Modulation Mode Enable

PCA0CPM0\_PWM\_\_DISABLED EQU 000H ; Disable PWM function.

PCA0CPM0\_PWM\_\_ENABLED EQU 002H ; Enable PWM function.

PCA0CPM0\_TOG\_\_BMASK EQU 004H ; Channel 0 Toggle Function Enable

PCA0CPM0\_TOG\_\_SHIFT EQU 002H ; Channel 0 Toggle Function Enable

PCA0CPM0\_TOG\_\_DISABLED EQU 000H ; Disable toggle function.

PCA0CPM0\_TOG\_\_ENABLED EQU 004H ; Enable toggle function.

PCA0CPM0\_MAT\_\_BMASK EQU 008H ; Channel 0 Match Function Enable

PCA0CPM0\_MAT\_\_SHIFT EQU 003H ; Channel 0 Match Function Enable

PCA0CPM0\_MAT\_\_DISABLED EQU 000H ; Disable match function.

PCA0CPM0\_MAT\_\_ENABLED EQU 008H ; Enable match function.

PCA0CPM0\_CAPN\_\_BMASK EQU 010H ; Channel 0 Capture Negative Function Enable

PCA0CPM0\_CAPN\_\_SHIFT EQU 004H ; Channel 0 Capture Negative Function Enable

PCA0CPM0\_CAPN\_\_DISABLED EQU 000H ; Disable negative edge capture.

PCA0CPM0\_CAPN\_\_ENABLED EQU 010H ; Enable negative edge capture.

PCA0CPM0\_CAPP\_\_BMASK EQU 020H ; Channel 0 Capture Positive Function Enable

PCA0CPM0\_CAPP\_\_SHIFT EQU 005H ; Channel 0 Capture Positive Function Enable

PCA0CPM0\_CAPP\_\_DISABLED EQU 000H ; Disable positive edge capture.

PCA0CPM0\_CAPP\_\_ENABLED EQU 020H ; Enable positive edge capture.

PCA0CPM0\_ECOM\_\_BMASK EQU 040H ; Channel 0 Comparator Function Enable

PCA0CPM0\_ECOM\_\_SHIFT EQU 006H ; Channel 0 Comparator Function Enable

PCA0CPM0\_ECOM\_\_DISABLED EQU 000H ; Disable comparator function.

PCA0CPM0\_ECOM\_\_ENABLED EQU 040H ; Enable comparator function.

PCA0CPM0\_PWM16\_\_BMASK EQU 080H ; Channel 0 16-bit Pulse Width Modulation Enable

PCA0CPM0\_PWM16\_\_SHIFT EQU 007H ; Channel 0 16-bit Pulse Width Modulation Enable

PCA0CPM0\_PWM16\_\_8\_BIT EQU 000H ; 8 to 11-bit PWM selected.

PCA0CPM0\_PWM16\_\_16\_BIT EQU 080H ; 16-bit PWM selected.

;------------------------------------------------------------------------------

; PCA0CPH1 Enums (PCA Channel 1 Capture Module High Byte @ 0xEA)

;------------------------------------------------------------------------------

PCA0CPH1\_PCA0CPH1\_\_FMASK EQU 0FFH ; PCA Channel 1 Capture Module High Byte

PCA0CPH1\_PCA0CPH1\_\_SHIFT EQU 000H ; PCA Channel 1 Capture Module High Byte

;------------------------------------------------------------------------------

; PCA0CPL1 Enums (PCA Channel 1 Capture Module Low Byte @ 0xE9)

;------------------------------------------------------------------------------

PCA0CPL1\_PCA0CPL1\_\_FMASK EQU 0FFH ; PCA Channel 1 Capture Module Low Byte

PCA0CPL1\_PCA0CPL1\_\_SHIFT EQU 000H ; PCA Channel 1 Capture Module Low Byte

;------------------------------------------------------------------------------

; PCA0CPM1 Enums (PCA Channel 1 Capture/Compare Mode @ 0xDB)

;------------------------------------------------------------------------------

PCA0CPM1\_ECCF\_\_BMASK EQU 001H ; Channel 1 Capture/Compare Flag Interrupt Enable

PCA0CPM1\_ECCF\_\_SHIFT EQU 000H ; Channel 1 Capture/Compare Flag Interrupt Enable

PCA0CPM1\_ECCF\_\_DISABLED EQU 000H ; Disable CCF1 interrupts.

PCA0CPM1\_ECCF\_\_ENABLED EQU 001H ; Enable a Capture/Compare Flag interrupt request

; when CCF1 is set.

PCA0CPM1\_PWM\_\_BMASK EQU 002H ; Channel 1 Pulse Width Modulation Mode Enable

PCA0CPM1\_PWM\_\_SHIFT EQU 001H ; Channel 1 Pulse Width Modulation Mode Enable

PCA0CPM1\_PWM\_\_DISABLED EQU 000H ; Disable PWM function.

PCA0CPM1\_PWM\_\_ENABLED EQU 002H ; Enable PWM function.

PCA0CPM1\_TOG\_\_BMASK EQU 004H ; Channel 1 Toggle Function Enable

PCA0CPM1\_TOG\_\_SHIFT EQU 002H ; Channel 1 Toggle Function Enable

PCA0CPM1\_TOG\_\_DISABLED EQU 000H ; Disable toggle function.

PCA0CPM1\_TOG\_\_ENABLED EQU 004H ; Enable toggle function.

PCA0CPM1\_MAT\_\_BMASK EQU 008H ; Channel 1 Match Function Enable

PCA0CPM1\_MAT\_\_SHIFT EQU 003H ; Channel 1 Match Function Enable

PCA0CPM1\_MAT\_\_DISABLED EQU 000H ; Disable match function.

PCA0CPM1\_MAT\_\_ENABLED EQU 008H ; Enable match function.

PCA0CPM1\_CAPN\_\_BMASK EQU 010H ; Channel 1 Capture Negative Function Enable

PCA0CPM1\_CAPN\_\_SHIFT EQU 004H ; Channel 1 Capture Negative Function Enable

PCA0CPM1\_CAPN\_\_DISABLED EQU 000H ; Disable negative edge capture.

PCA0CPM1\_CAPN\_\_ENABLED EQU 010H ; Enable negative edge capture.

PCA0CPM1\_CAPP\_\_BMASK EQU 020H ; Channel 1 Capture Positive Function Enable

PCA0CPM1\_CAPP\_\_SHIFT EQU 005H ; Channel 1 Capture Positive Function Enable

PCA0CPM1\_CAPP\_\_DISABLED EQU 000H ; Disable positive edge capture.

PCA0CPM1\_CAPP\_\_ENABLED EQU 020H ; Enable positive edge capture.

PCA0CPM1\_ECOM\_\_BMASK EQU 040H ; Channel 1 Comparator Function Enable

PCA0CPM1\_ECOM\_\_SHIFT EQU 006H ; Channel 1 Comparator Function Enable

PCA0CPM1\_ECOM\_\_DISABLED EQU 000H ; Disable comparator function.

PCA0CPM1\_ECOM\_\_ENABLED EQU 040H ; Enable comparator function.

PCA0CPM1\_PWM16\_\_BMASK EQU 080H ; Channel 1 16-bit Pulse Width Modulation Enable

PCA0CPM1\_PWM16\_\_SHIFT EQU 007H ; Channel 1 16-bit Pulse Width Modulation Enable

PCA0CPM1\_PWM16\_\_8\_BIT EQU 000H ; 8 to 11-bit PWM selected.

PCA0CPM1\_PWM16\_\_16\_BIT EQU 080H ; 16-bit PWM selected.

;------------------------------------------------------------------------------

; PCA0CPH2 Enums (PCA Channel 2 Capture Module High Byte @ 0xEC)

;------------------------------------------------------------------------------

PCA0CPH2\_PCA0CPH2\_\_FMASK EQU 0FFH ; PCA Channel 2 Capture Module High Byte

PCA0CPH2\_PCA0CPH2\_\_SHIFT EQU 000H ; PCA Channel 2 Capture Module High Byte

;------------------------------------------------------------------------------

; PCA0CPL2 Enums (PCA Channel 2 Capture Module Low Byte @ 0xEB)

;------------------------------------------------------------------------------

PCA0CPL2\_PCA0CPL2\_\_FMASK EQU 0FFH ; PCA Channel 2 Capture Module Low Byte

PCA0CPL2\_PCA0CPL2\_\_SHIFT EQU 000H ; PCA Channel 2 Capture Module Low Byte

;------------------------------------------------------------------------------

; PCA0CPM2 Enums (PCA Channel 2 Capture/Compare Mode @ 0xDC)

;------------------------------------------------------------------------------

PCA0CPM2\_ECCF\_\_BMASK EQU 001H ; Channel 2 Capture/Compare Flag Interrupt Enable

PCA0CPM2\_ECCF\_\_SHIFT EQU 000H ; Channel 2 Capture/Compare Flag Interrupt Enable

PCA0CPM2\_ECCF\_\_DISABLED EQU 000H ; Disable CCF2 interrupts.

PCA0CPM2\_ECCF\_\_ENABLED EQU 001H ; Enable a Capture/Compare Flag interrupt request

; when CCF2 is set.

PCA0CPM2\_PWM\_\_BMASK EQU 002H ; Channel 2 Pulse Width Modulation Mode Enable

PCA0CPM2\_PWM\_\_SHIFT EQU 001H ; Channel 2 Pulse Width Modulation Mode Enable

PCA0CPM2\_PWM\_\_DISABLED EQU 000H ; Disable PWM function.

PCA0CPM2\_PWM\_\_ENABLED EQU 002H ; Enable PWM function.

PCA0CPM2\_TOG\_\_BMASK EQU 004H ; Channel 2 Toggle Function Enable

PCA0CPM2\_TOG\_\_SHIFT EQU 002H ; Channel 2 Toggle Function Enable

PCA0CPM2\_TOG\_\_DISABLED EQU 000H ; Disable toggle function.

PCA0CPM2\_TOG\_\_ENABLED EQU 004H ; Enable toggle function.

PCA0CPM2\_MAT\_\_BMASK EQU 008H ; Channel 2 Match Function Enable

PCA0CPM2\_MAT\_\_SHIFT EQU 003H ; Channel 2 Match Function Enable

PCA0CPM2\_MAT\_\_DISABLED EQU 000H ; Disable match function.

PCA0CPM2\_MAT\_\_ENABLED EQU 008H ; Enable match function.

PCA0CPM2\_CAPN\_\_BMASK EQU 010H ; Channel 2 Capture Negative Function Enable

PCA0CPM2\_CAPN\_\_SHIFT EQU 004H ; Channel 2 Capture Negative Function Enable

PCA0CPM2\_CAPN\_\_DISABLED EQU 000H ; Disable negative edge capture.

PCA0CPM2\_CAPN\_\_ENABLED EQU 010H ; Enable negative edge capture.

PCA0CPM2\_CAPP\_\_BMASK EQU 020H ; Channel 2 Capture Positive Function Enable

PCA0CPM2\_CAPP\_\_SHIFT EQU 005H ; Channel 2 Capture Positive Function Enable

PCA0CPM2\_CAPP\_\_DISABLED EQU 000H ; Disable positive edge capture.

PCA0CPM2\_CAPP\_\_ENABLED EQU 020H ; Enable positive edge capture.

PCA0CPM2\_ECOM\_\_BMASK EQU 040H ; Channel 2 Comparator Function Enable

PCA0CPM2\_ECOM\_\_SHIFT EQU 006H ; Channel 2 Comparator Function Enable

PCA0CPM2\_ECOM\_\_DISABLED EQU 000H ; Disable comparator function.

PCA0CPM2\_ECOM\_\_ENABLED EQU 040H ; Enable comparator function.

PCA0CPM2\_PWM16\_\_BMASK EQU 080H ; Channel 2 16-bit Pulse Width Modulation Enable

PCA0CPM2\_PWM16\_\_SHIFT EQU 007H ; Channel 2 16-bit Pulse Width Modulation Enable

PCA0CPM2\_PWM16\_\_8\_BIT EQU 000H ; 8 to 11-bit PWM selected.

PCA0CPM2\_PWM16\_\_16\_BIT EQU 080H ; 16-bit PWM selected.

;------------------------------------------------------------------------------

; PCA0CN0 Enums (PCA Control 0 @ 0xD8)

;------------------------------------------------------------------------------

PCA0CN0\_CCF0\_\_BMASK EQU 001H ; PCA Module 0 Capture/Compare Flag

PCA0CN0\_CCF0\_\_SHIFT EQU 000H ; PCA Module 0 Capture/Compare Flag

PCA0CN0\_CCF0\_\_NOT\_SET EQU 000H ; A match or capture did not occur on channel 0.

PCA0CN0\_CCF0\_\_SET EQU 001H ; A match or capture occurred on channel 0.

PCA0CN0\_CCF1\_\_BMASK EQU 002H ; PCA Module 1 Capture/Compare Flag

PCA0CN0\_CCF1\_\_SHIFT EQU 001H ; PCA Module 1 Capture/Compare Flag

PCA0CN0\_CCF1\_\_NOT\_SET EQU 000H ; A match or capture did not occur on channel 1.

PCA0CN0\_CCF1\_\_SET EQU 002H ; A match or capture occurred on channel 1.

PCA0CN0\_CCF2\_\_BMASK EQU 004H ; PCA Module 2 Capture/Compare Flag

PCA0CN0\_CCF2\_\_SHIFT EQU 002H ; PCA Module 2 Capture/Compare Flag

PCA0CN0\_CCF2\_\_NOT\_SET EQU 000H ; A match or capture did not occur on channel 2.

PCA0CN0\_CCF2\_\_SET EQU 004H ; A match or capture occurred on channel 2.

PCA0CN0\_CR\_\_BMASK EQU 040H ; PCA Counter/Timer Run Control

PCA0CN0\_CR\_\_SHIFT EQU 006H ; PCA Counter/Timer Run Control

PCA0CN0\_CR\_\_STOP EQU 000H ; Stop the PCA Counter/Timer.

PCA0CN0\_CR\_\_RUN EQU 040H ; Start the PCA Counter/Timer running.

PCA0CN0\_CF\_\_BMASK EQU 080H ; PCA Counter/Timer Overflow Flag

PCA0CN0\_CF\_\_SHIFT EQU 007H ; PCA Counter/Timer Overflow Flag

PCA0CN0\_CF\_\_NOT\_SET EQU 000H ; The PCA counter/timer did not overflow.

PCA0CN0\_CF\_\_SET EQU 080H ; The PCA counter/timer overflowed.

;------------------------------------------------------------------------------

; PCA0H Enums (PCA Counter/Timer High Byte @ 0xFA)

;------------------------------------------------------------------------------

PCA0H\_PCA0H\_\_FMASK EQU 0FFH ; PCA Counter/Timer High Byte

PCA0H\_PCA0H\_\_SHIFT EQU 000H ; PCA Counter/Timer High Byte

;------------------------------------------------------------------------------

; PCA0L Enums (PCA Counter/Timer Low Byte @ 0xF9)

;------------------------------------------------------------------------------

PCA0L\_PCA0L\_\_FMASK EQU 0FFH ; PCA Counter/Timer Low Byte

PCA0L\_PCA0L\_\_SHIFT EQU 000H ; PCA Counter/Timer Low Byte

;------------------------------------------------------------------------------

; PCA0MD Enums (PCA Mode @ 0xD9)

;------------------------------------------------------------------------------

PCA0MD\_ECF\_\_BMASK EQU 001H ; PCA Counter/Timer Overflow Interrupt Enable

PCA0MD\_ECF\_\_SHIFT EQU 000H ; PCA Counter/Timer Overflow Interrupt Enable

PCA0MD\_ECF\_\_OVF\_INT\_DISABLED EQU 000H ; Disable the CF interrupt.

PCA0MD\_ECF\_\_OVF\_INT\_ENABLED EQU 001H ; Enable a PCA Counter/Timer Overflow interrupt

; request when CF is set.

PCA0MD\_CPS\_\_FMASK EQU 00EH ; PCA Counter/Timer Pulse Select

PCA0MD\_CPS\_\_SHIFT EQU 001H ; PCA Counter/Timer Pulse Select

PCA0MD\_CPS\_\_SYSCLK\_DIV\_12 EQU 000H ; System clock divided by 12.

PCA0MD\_CPS\_\_SYSCLK\_DIV\_4 EQU 002H ; System clock divided by 4.

PCA0MD\_CPS\_\_T0\_OVERFLOW EQU 004H ; Timer 0 overflow.

PCA0MD\_CPS\_\_ECI EQU 006H ; High-to-low transitions on ECI (max rate = system

; clock divided by 4).

PCA0MD\_CPS\_\_SYSCLK EQU 008H ; System clock.

PCA0MD\_CPS\_\_EXTOSC\_DIV\_8 EQU 00AH ; External clock divided by 8 (synchronized with the

; system clock).

PCA0MD\_CPS\_\_RTC\_DIV\_8 EQU 00CH ; RTC divided by 8.

PCA0MD\_WDLCK\_\_BMASK EQU 020H ; Watchdog Timer Lock

PCA0MD\_WDLCK\_\_SHIFT EQU 005H ; Watchdog Timer Lock

PCA0MD\_WDLCK\_\_UNLOCKED EQU 000H ; Watchdog Timer Enable unlocked.

PCA0MD\_WDLCK\_\_LOCKED EQU 020H ; Watchdog Timer Enable locked.

PCA0MD\_WDTE\_\_BMASK EQU 040H ; Watchdog Timer Enable

PCA0MD\_WDTE\_\_SHIFT EQU 006H ; Watchdog Timer Enable

PCA0MD\_WDTE\_\_DISABLED EQU 000H ; Disable Watchdog Timer.

PCA0MD\_WDTE\_\_ENABLED EQU 040H ; Enable PCA Module 2 as the Watchdog Timer.

PCA0MD\_CIDL\_\_BMASK EQU 080H ; PCA Counter/Timer Idle Control

PCA0MD\_CIDL\_\_SHIFT EQU 007H ; PCA Counter/Timer Idle Control

PCA0MD\_CIDL\_\_NORMAL EQU 000H ; PCA continues to function normally while the

; system controller is in Idle Mode.

PCA0MD\_CIDL\_\_SUSPEND EQU 080H ; PCA operation is suspended while the system

; controller is in Idle Mode.

;------------------------------------------------------------------------------

; PCA0PWM Enums (PCA PWM Configuration @ 0xDF)

;------------------------------------------------------------------------------

PCA0PWM\_CLSEL\_\_FMASK EQU 003H ; Cycle Length Select

PCA0PWM\_CLSEL\_\_SHIFT EQU 000H ; Cycle Length Select

PCA0PWM\_CLSEL\_\_8\_BITS EQU 000H ; 8 bits.

PCA0PWM\_CLSEL\_\_9\_BITS EQU 001H ; 9 bits.

PCA0PWM\_CLSEL\_\_10\_BITS EQU 002H ; 10 bits.

PCA0PWM\_CLSEL\_\_11\_BITS EQU 003H ; 11 bits.

PCA0PWM\_COVF\_\_BMASK EQU 020H ; Cycle Overflow Flag

PCA0PWM\_COVF\_\_SHIFT EQU 005H ; Cycle Overflow Flag

PCA0PWM\_COVF\_\_NO\_OVERFLOW EQU 000H ; No overflow has occurred since the last time this

; bit was cleared.

PCA0PWM\_COVF\_\_OVERFLOW EQU 020H ; An overflow has occurred since the last time this

; bit was cleared.

PCA0PWM\_ECOV\_\_BMASK EQU 040H ; Cycle Overflow Interrupt Enable

PCA0PWM\_ECOV\_\_SHIFT EQU 006H ; Cycle Overflow Interrupt Enable

PCA0PWM\_ECOV\_\_COVF\_MASK\_DISABLED EQU 000H ; COVF will not generate PCA interrupts.

PCA0PWM\_ECOV\_\_COVF\_MASK\_ENABLED EQU 040H ; A PCA interrupt will be generated when COVF is

; set.

PCA0PWM\_ARSEL\_\_BMASK EQU 080H ; Auto-Reload Register Select

PCA0PWM\_ARSEL\_\_SHIFT EQU 007H ; Auto-Reload Register Select

PCA0PWM\_ARSEL\_\_CAPTURE\_COMPARE EQU 000H ; Read/Write Capture/Compare Registers at PCA0CPHn

; and PCA0CPLn.

PCA0PWM\_ARSEL\_\_AUTORELOAD EQU 080H ; Read/Write Auto-Reload Registers at PCA0CPHn and

; PCA0CPLn.

;------------------------------------------------------------------------------

; PCON0 Enums (Power Control 0 @ 0x87)

;------------------------------------------------------------------------------

PCON0\_IDLE\_\_BMASK EQU 001H ; Idle Mode Select

PCON0\_IDLE\_\_SHIFT EQU 000H ; Idle Mode Select

PCON0\_IDLE\_\_NORMAL EQU 000H ; Idle mode not activated.

PCON0\_IDLE\_\_IDLE EQU 001H ; CPU goes into Idle mode (shuts off clock to CPU,

; but clocks to enabled peripherals are still

; active).

PCON0\_STOP\_\_BMASK EQU 002H ; Stop Mode Select

PCON0\_STOP\_\_SHIFT EQU 001H ; Stop Mode Select

PCON0\_STOP\_\_NORMAL EQU 000H ; Stop mode not activated.

PCON0\_STOP\_\_STOP EQU 002H ; CPU goes into Stop mode (internal oscillator

; stopped).

PCON0\_GF0\_\_BMASK EQU 004H ; General Purpose Flag 0

PCON0\_GF0\_\_SHIFT EQU 002H ; General Purpose Flag 0

PCON0\_GF0\_\_NOT\_SET EQU 000H ; The GF0 flag is not set. Clear the GF0 flag.

PCON0\_GF0\_\_SET EQU 004H ; The GF0 flag is set. Set the GF0 flag.

PCON0\_GF1\_\_BMASK EQU 008H ; General Purpose Flag 1

PCON0\_GF1\_\_SHIFT EQU 003H ; General Purpose Flag 1

PCON0\_GF1\_\_NOT\_SET EQU 000H ; The GF0 flag is not set. Clear the GF0 flag.

PCON0\_GF1\_\_SET EQU 008H ; The GF0 flag is set. Set the GF0 flag.

PCON0\_GF2\_\_BMASK EQU 010H ; General Purpose Flag 2

PCON0\_GF2\_\_SHIFT EQU 004H ; General Purpose Flag 2

PCON0\_GF2\_\_NOT\_SET EQU 000H ; The GF0 flag is not set. Clear the GF0 flag.

PCON0\_GF2\_\_SET EQU 010H ; The GF0 flag is set. Set the GF0 flag.

PCON0\_GF3\_\_BMASK EQU 020H ; General Purpose Flag 3

PCON0\_GF3\_\_SHIFT EQU 005H ; General Purpose Flag 3

PCON0\_GF3\_\_NOT\_SET EQU 000H ; The GF0 flag is not set. Clear the GF0 flag.

PCON0\_GF3\_\_SET EQU 020H ; The GF0 flag is set. Set the GF0 flag.

PCON0\_GF4\_\_BMASK EQU 040H ; General Purpose Flag 4

PCON0\_GF4\_\_SHIFT EQU 006H ; General Purpose Flag 4

PCON0\_GF4\_\_NOT\_SET EQU 000H ; The GF0 flag is not set. Clear the GF0 flag.

PCON0\_GF4\_\_SET EQU 040H ; The GF0 flag is set. Set the GF0 flag.

PCON0\_GF5\_\_BMASK EQU 080H ; General Purpose Flag 5

PCON0\_GF5\_\_SHIFT EQU 007H ; General Purpose Flag 5

PCON0\_GF5\_\_NOT\_SET EQU 000H ; The GF0 flag is not set. Clear the GF0 flag.

PCON0\_GF5\_\_SET EQU 080H ; The GF0 flag is set. Set the GF0 flag.

;------------------------------------------------------------------------------

; PMU0CF Enums (Power Management Unit Configuration @ 0xB5)

;------------------------------------------------------------------------------

PMU0CF\_CPT0WK\_\_BMASK EQU 001H ; Comparator0 Wake-up Source Enable and Flag

PMU0CF\_CPT0WK\_\_SHIFT EQU 000H ; Comparator0 Wake-up Source Enable and Flag

PMU0CF\_CPT0WK\_\_NOT\_SET EQU 000H ; Comparator 0 rising edge did not cause the last

; wake-up.

PMU0CF\_CPT0WK\_\_SET EQU 001H ; Comparator 0 rising edge caused the last wake-up.

PMU0CF\_PMATWK\_\_BMASK EQU 002H ; Port Match Wake-up Source Enable and Flag

PMU0CF\_PMATWK\_\_SHIFT EQU 001H ; Port Match Wake-up Source Enable and Flag

PMU0CF\_PMATWK\_\_NOT\_SET EQU 000H ; A Port Match event did not cause the last wake-up.

PMU0CF\_PMATWK\_\_SET EQU 002H ; A Port Match event caused the last wake-up.

PMU0CF\_RTCAWK\_\_BMASK EQU 004H ; RTC Alarm Wake-up Source Enable and Flag

PMU0CF\_RTCAWK\_\_SHIFT EQU 002H ; RTC Alarm Wake-up Source Enable and Flag

PMU0CF\_RTCAWK\_\_NOT\_SET EQU 000H ; A RTC Alarm did not cause the last wake-up.

PMU0CF\_RTCAWK\_\_SET EQU 004H ; A RTC Alarm caused the last wake-up.

PMU0CF\_RTCFWK\_\_BMASK EQU 008H ; RTC Oscillator Fail Wake-up Source Enable and Flag

PMU0CF\_RTCFWK\_\_SHIFT EQU 003H ; RTC Oscillator Fail Wake-up Source Enable and Flag

PMU0CF\_RTCFWK\_\_NOT\_SET EQU 000H ; An RTC oscillator fail event did not cause the

; last wake-up.

PMU0CF\_RTCFWK\_\_SET EQU 008H ; An RTC oscillator fail event caused the last wake-

; up.

PMU0CF\_RSTWK\_\_BMASK EQU 010H ; Reset Pin Wake-up Flag

PMU0CF\_RSTWK\_\_SHIFT EQU 004H ; Reset Pin Wake-up Flag

PMU0CF\_RSTWK\_\_NOT\_SET EQU 000H ; No glitch detected on RSTb.

PMU0CF\_RSTWK\_\_SET EQU 010H ; Glitch detected on RSTb.

PMU0CF\_CLEAR\_\_BMASK EQU 020H ; Wake-up Flag Clear

PMU0CF\_CLEAR\_\_SHIFT EQU 005H ; Wake-up Flag Clear

PMU0CF\_CLEAR\_\_ALL\_FLAGS EQU 020H ; Clear all wake-up flags.

PMU0CF\_SUSPEND\_\_BMASK EQU 040H ; Suspend Mode Select

PMU0CF\_SUSPEND\_\_SHIFT EQU 006H ; Suspend Mode Select

PMU0CF\_SUSPEND\_\_NORMAL EQU 000H ; Suspend mode not activated.

PMU0CF\_SUSPEND\_\_START EQU 040H ; Place the device in Suspend mode.

PMU0CF\_SLEEP\_\_BMASK EQU 080H ; Sleep Mode Select

PMU0CF\_SLEEP\_\_SHIFT EQU 007H ; Sleep Mode Select

PMU0CF\_SLEEP\_\_NORMAL EQU 000H ; Sleep mode not activated.

PMU0CF\_SLEEP\_\_START EQU 080H ; Place the device in Sleep mode.

;------------------------------------------------------------------------------

; PMU0FL Enums (Power Management Unit Flag @ 0xCE)

;------------------------------------------------------------------------------

PMU0FL\_CS0WK\_\_BMASK EQU 001H ; CS0 Wake-up Source Enable and Flag

PMU0FL\_CS0WK\_\_SHIFT EQU 000H ; CS0 Wake-up Source Enable and Flag

PMU0FL\_CS0WK\_\_NOT\_SET EQU 000H ; A Capacitive Sensing event did not cause the last

; wake-up.

PMU0FL\_CS0WK\_\_SET EQU 001H ; A Capacitive Sensing event caused the last wake-

; up.

;------------------------------------------------------------------------------

; PMU0MD Enums (Power Management Unit Mode @ 0xB5)

;------------------------------------------------------------------------------

PMU0MD\_WAKEOE\_\_BMASK EQU 040H ; Wakeup Request Output Enable

PMU0MD\_WAKEOE\_\_SHIFT EQU 006H ; Wakeup Request Output Enable

PMU0MD\_WAKEOE\_\_DISABLED EQU 000H ; Disable the wake-up request signal.

PMU0MD\_WAKEOE\_\_ENABLED EQU 040H ; Enable the wake-up request signal.

PMU0MD\_RTCOE\_\_BMASK EQU 080H ; Buffered RTC Output Enable

PMU0MD\_RTCOE\_\_SHIFT EQU 007H ; Buffered RTC Output Enable

PMU0MD\_RTCOE\_\_DISABLED EQU 000H ; Disable the buffered RTC output.

PMU0MD\_RTCOE\_\_ENABLED EQU 080H ; Enable the buffered RTC output.

;------------------------------------------------------------------------------

; P0 Enums (Port 0 Pin Latch @ 0x80)

;------------------------------------------------------------------------------

P0\_B0\_\_BMASK EQU 001H ; Port 0 Bit 0 Latch

P0\_B0\_\_SHIFT EQU 000H ; Port 0 Bit 0 Latch

P0\_B0\_\_LOW EQU 000H ; P0.0 is low. Set P0.0 to drive low.

P0\_B0\_\_HIGH EQU 001H ; P0.0 is high. Set P0.0 to drive or float high.

P0\_B1\_\_BMASK EQU 002H ; Port 0 Bit 1 Latch

P0\_B1\_\_SHIFT EQU 001H ; Port 0 Bit 1 Latch

P0\_B1\_\_LOW EQU 000H ; P0.1 is low. Set P0.1 to drive low.

P0\_B1\_\_HIGH EQU 002H ; P0.1 is high. Set P0.1 to drive or float high.

P0\_B2\_\_BMASK EQU 004H ; Port 0 Bit 2 Latch

P0\_B2\_\_SHIFT EQU 002H ; Port 0 Bit 2 Latch

P0\_B2\_\_LOW EQU 000H ; P0.2 is low. Set P0.2 to drive low.

P0\_B2\_\_HIGH EQU 004H ; P0.2 is high. Set P0.2 to drive or float high.

P0\_B3\_\_BMASK EQU 008H ; Port 0 Bit 3 Latch

P0\_B3\_\_SHIFT EQU 003H ; Port 0 Bit 3 Latch

P0\_B3\_\_LOW EQU 000H ; P0.3 is low. Set P0.3 to drive low.

P0\_B3\_\_HIGH EQU 008H ; P0.3 is high. Set P0.3 to drive or float high.

P0\_B4\_\_BMASK EQU 010H ; Port 0 Bit 4 Latch

P0\_B4\_\_SHIFT EQU 004H ; Port 0 Bit 4 Latch

P0\_B4\_\_LOW EQU 000H ; P0.4 is low. Set P0.4 to drive low.

P0\_B4\_\_HIGH EQU 010H ; P0.4 is high. Set P0.4 to drive or float high.

P0\_B5\_\_BMASK EQU 020H ; Port 0 Bit 5 Latch

P0\_B5\_\_SHIFT EQU 005H ; Port 0 Bit 5 Latch

P0\_B5\_\_LOW EQU 000H ; P0.5 is low. Set P0.5 to drive low.

P0\_B5\_\_HIGH EQU 020H ; P0.5 is high. Set P0.5 to drive or float high.

P0\_B6\_\_BMASK EQU 040H ; Port 0 Bit 6 Latch

P0\_B6\_\_SHIFT EQU 006H ; Port 0 Bit 6 Latch

P0\_B6\_\_LOW EQU 000H ; P0.6 is low. Set P0.6 to drive low.

P0\_B6\_\_HIGH EQU 040H ; P0.6 is high. Set P0.6 to drive or float high.

P0\_B7\_\_BMASK EQU 080H ; Port 0 Bit 7 Latch

P0\_B7\_\_SHIFT EQU 007H ; Port 0 Bit 7 Latch

P0\_B7\_\_LOW EQU 000H ; P0.7 is low. Set P0.7 to drive low.

P0\_B7\_\_HIGH EQU 080H ; P0.7 is high. Set P0.7 to drive or float high.

;------------------------------------------------------------------------------

; P0DRV Enums (Port 0 Drive Strength @ 0x99)

;------------------------------------------------------------------------------

P0DRV\_B0\_\_BMASK EQU 001H ; Port 0 Bit 0 Drive Strength

P0DRV\_B0\_\_SHIFT EQU 000H ; Port 0 Bit 0 Drive Strength

P0DRV\_B0\_\_LOW\_DRIVE EQU 000H ; P0.0 output has low output drive strength.

P0DRV\_B0\_\_HIGH\_DRIVE EQU 001H ; P0.0 output has high output drive strength.

P0DRV\_B1\_\_BMASK EQU 002H ; Port 0 Bit 1 Drive Strength

P0DRV\_B1\_\_SHIFT EQU 001H ; Port 0 Bit 1 Drive Strength

P0DRV\_B1\_\_LOW\_DRIVE EQU 000H ; P0.1 output has low output drive strength.

P0DRV\_B1\_\_HIGH\_DRIVE EQU 002H ; P0.1 output has high output drive strength.

P0DRV\_B2\_\_BMASK EQU 004H ; Port 0 Bit 2 Drive Strength

P0DRV\_B2\_\_SHIFT EQU 002H ; Port 0 Bit 2 Drive Strength

P0DRV\_B2\_\_LOW\_DRIVE EQU 000H ; P0.2 output has low output drive strength.

P0DRV\_B2\_\_HIGH\_DRIVE EQU 004H ; P0.2 output has high output drive strength.

P0DRV\_B3\_\_BMASK EQU 008H ; Port 0 Bit 3 Drive Strength

P0DRV\_B3\_\_SHIFT EQU 003H ; Port 0 Bit 3 Drive Strength

P0DRV\_B3\_\_LOW\_DRIVE EQU 000H ; P0.3 output has low output drive strength.

P0DRV\_B3\_\_HIGH\_DRIVE EQU 008H ; P0.3 output has high output drive strength.

P0DRV\_B4\_\_BMASK EQU 010H ; Port 0 Bit 4 Drive Strength

P0DRV\_B4\_\_SHIFT EQU 004H ; Port 0 Bit 4 Drive Strength

P0DRV\_B4\_\_LOW\_DRIVE EQU 000H ; P0.4 output has low output drive strength.

P0DRV\_B4\_\_HIGH\_DRIVE EQU 010H ; P0.4 output has high output drive strength.

P0DRV\_B5\_\_BMASK EQU 020H ; Port 0 Bit 5 Drive Strength

P0DRV\_B5\_\_SHIFT EQU 005H ; Port 0 Bit 5 Drive Strength

P0DRV\_B5\_\_LOW\_DRIVE EQU 000H ; P0.5 output has low output drive strength.

P0DRV\_B5\_\_HIGH\_DRIVE EQU 020H ; P0.5 output has high output drive strength.

P0DRV\_B6\_\_BMASK EQU 040H ; Port 0 Bit 6 Drive Strength

P0DRV\_B6\_\_SHIFT EQU 006H ; Port 0 Bit 6 Drive Strength

P0DRV\_B6\_\_LOW\_DRIVE EQU 000H ; P0.6 output has low output drive strength.

P0DRV\_B6\_\_HIGH\_DRIVE EQU 040H ; P0.6 output has high output drive strength.

P0DRV\_B7\_\_BMASK EQU 080H ; Port 0 Bit 7 Drive Strength

P0DRV\_B7\_\_SHIFT EQU 007H ; Port 0 Bit 7 Drive Strength

P0DRV\_B7\_\_LOW\_DRIVE EQU 000H ; P0.7 output has low output drive strength.

P0DRV\_B7\_\_HIGH\_DRIVE EQU 080H ; P0.7 output has high output drive strength.

;------------------------------------------------------------------------------

; P0MASK Enums (Port 0 Mask @ 0xC7)

;------------------------------------------------------------------------------

P0MASK\_B0\_\_BMASK EQU 001H ; Port 0 Bit 0 Mask Value

P0MASK\_B0\_\_SHIFT EQU 000H ; Port 0 Bit 0 Mask Value

P0MASK\_B0\_\_IGNORED EQU 000H ; P0.0 pin logic value is ignored and will not cause

; a port mismatch event.

P0MASK\_B0\_\_COMPARED EQU 001H ; P0.0 pin logic value is compared to P0MAT.0.

P0MASK\_B1\_\_BMASK EQU 002H ; Port 0 Bit 1 Mask Value

P0MASK\_B1\_\_SHIFT EQU 001H ; Port 0 Bit 1 Mask Value

P0MASK\_B1\_\_IGNORED EQU 000H ; P0.1 pin logic value is ignored and will not cause

; a port mismatch event.

P0MASK\_B1\_\_COMPARED EQU 002H ; P0.1 pin logic value is compared to P0MAT.1.

P0MASK\_B2\_\_BMASK EQU 004H ; Port 0 Bit 2 Mask Value

P0MASK\_B2\_\_SHIFT EQU 002H ; Port 0 Bit 2 Mask Value

P0MASK\_B2\_\_IGNORED EQU 000H ; P0.2 pin logic value is ignored and will not cause

; a port mismatch event.

P0MASK\_B2\_\_COMPARED EQU 004H ; P0.2 pin logic value is compared to P0MAT.2.

P0MASK\_B3\_\_BMASK EQU 008H ; Port 0 Bit 3 Mask Value

P0MASK\_B3\_\_SHIFT EQU 003H ; Port 0 Bit 3 Mask Value

P0MASK\_B3\_\_IGNORED EQU 000H ; P0.3 pin logic value is ignored and will not cause

; a port mismatch event.

P0MASK\_B3\_\_COMPARED EQU 008H ; P0.3 pin logic value is compared to P0MAT.3.

P0MASK\_B4\_\_BMASK EQU 010H ; Port 0 Bit 4 Mask Value

P0MASK\_B4\_\_SHIFT EQU 004H ; Port 0 Bit 4 Mask Value

P0MASK\_B4\_\_IGNORED EQU 000H ; P0.4 pin logic value is ignored and will not cause

; a port mismatch event.

P0MASK\_B4\_\_COMPARED EQU 010H ; P0.4 pin logic value is compared to P0MAT.4.

P0MASK\_B5\_\_BMASK EQU 020H ; Port 0 Bit 5 Mask Value

P0MASK\_B5\_\_SHIFT EQU 005H ; Port 0 Bit 5 Mask Value

P0MASK\_B5\_\_IGNORED EQU 000H ; P0.5 pin logic value is ignored and will not cause

; a port mismatch event.

P0MASK\_B5\_\_COMPARED EQU 020H ; P0.5 pin logic value is compared to P0MAT.5.

P0MASK\_B6\_\_BMASK EQU 040H ; Port 0 Bit 6 Mask Value

P0MASK\_B6\_\_SHIFT EQU 006H ; Port 0 Bit 6 Mask Value

P0MASK\_B6\_\_IGNORED EQU 000H ; P0.6 pin logic value is ignored and will not cause

; a port mismatch event.

P0MASK\_B6\_\_COMPARED EQU 040H ; P0.6 pin logic value is compared to P0MAT.6.

P0MASK\_B7\_\_BMASK EQU 080H ; Port 0 Bit 7 Mask Value

P0MASK\_B7\_\_SHIFT EQU 007H ; Port 0 Bit 7 Mask Value

P0MASK\_B7\_\_IGNORED EQU 000H ; P0.7 pin logic value is ignored and will not cause

; a port mismatch event.

P0MASK\_B7\_\_COMPARED EQU 080H ; P0.7 pin logic value is compared to P0MAT.7.

;------------------------------------------------------------------------------

; P0MAT Enums (Port 0 Match @ 0xD7)

;------------------------------------------------------------------------------

P0MAT\_B0\_\_BMASK EQU 001H ; Port 0 Bit 0 Match Value

P0MAT\_B0\_\_SHIFT EQU 000H ; Port 0 Bit 0 Match Value

P0MAT\_B0\_\_LOW EQU 000H ; P0.0 pin logic value is compared with logic LOW.

P0MAT\_B0\_\_HIGH EQU 001H ; P0.0 pin logic value is compared with logic HIGH.

P0MAT\_B1\_\_BMASK EQU 002H ; Port 0 Bit 1 Match Value

P0MAT\_B1\_\_SHIFT EQU 001H ; Port 0 Bit 1 Match Value

P0MAT\_B1\_\_LOW EQU 000H ; P0.1 pin logic value is compared with logic LOW.

P0MAT\_B1\_\_HIGH EQU 002H ; P0.1 pin logic value is compared with logic HIGH.

P0MAT\_B2\_\_BMASK EQU 004H ; Port 0 Bit 2 Match Value

P0MAT\_B2\_\_SHIFT EQU 002H ; Port 0 Bit 2 Match Value

P0MAT\_B2\_\_LOW EQU 000H ; P0.2 pin logic value is compared with logic LOW.

P0MAT\_B2\_\_HIGH EQU 004H ; P0.2 pin logic value is compared with logic HIGH.

P0MAT\_B3\_\_BMASK EQU 008H ; Port 0 Bit 3 Match Value

P0MAT\_B3\_\_SHIFT EQU 003H ; Port 0 Bit 3 Match Value

P0MAT\_B3\_\_LOW EQU 000H ; P0.3 pin logic value is compared with logic LOW.

P0MAT\_B3\_\_HIGH EQU 008H ; P0.3 pin logic value is compared with logic HIGH.

P0MAT\_B4\_\_BMASK EQU 010H ; Port 0 Bit 4 Match Value

P0MAT\_B4\_\_SHIFT EQU 004H ; Port 0 Bit 4 Match Value

P0MAT\_B4\_\_LOW EQU 000H ; P0.4 pin logic value is compared with logic LOW.

P0MAT\_B4\_\_HIGH EQU 010H ; P0.4 pin logic value is compared with logic HIGH.

P0MAT\_B5\_\_BMASK EQU 020H ; Port 0 Bit 5 Match Value

P0MAT\_B5\_\_SHIFT EQU 005H ; Port 0 Bit 5 Match Value

P0MAT\_B5\_\_LOW EQU 000H ; P0.5 pin logic value is compared with logic LOW.

P0MAT\_B5\_\_HIGH EQU 020H ; P0.5 pin logic value is compared with logic HIGH.

P0MAT\_B6\_\_BMASK EQU 040H ; Port 0 Bit 6 Match Value

P0MAT\_B6\_\_SHIFT EQU 006H ; Port 0 Bit 6 Match Value

P0MAT\_B6\_\_LOW EQU 000H ; P0.6 pin logic value is compared with logic LOW.

P0MAT\_B6\_\_HIGH EQU 040H ; P0.6 pin logic value is compared with logic HIGH.

P0MAT\_B7\_\_BMASK EQU 080H ; Port 0 Bit 7 Match Value

P0MAT\_B7\_\_SHIFT EQU 007H ; Port 0 Bit 7 Match Value

P0MAT\_B7\_\_LOW EQU 000H ; P0.7 pin logic value is compared with logic LOW.

P0MAT\_B7\_\_HIGH EQU 080H ; P0.7 pin logic value is compared with logic HIGH.

;------------------------------------------------------------------------------

; P0MDIN Enums (Port 0 Input Mode @ 0xF1)

;------------------------------------------------------------------------------

P0MDIN\_B0\_\_BMASK EQU 001H ; Port 0 Bit 0 Input Mode

P0MDIN\_B0\_\_SHIFT EQU 000H ; Port 0 Bit 0 Input Mode

P0MDIN\_B0\_\_ANALOG EQU 000H ; P0.0 pin is configured for analog mode.

P0MDIN\_B0\_\_DIGITAL EQU 001H ; P0.0 pin is configured for digital mode.

P0MDIN\_B1\_\_BMASK EQU 002H ; Port 0 Bit 1 Input Mode

P0MDIN\_B1\_\_SHIFT EQU 001H ; Port 0 Bit 1 Input Mode

P0MDIN\_B1\_\_ANALOG EQU 000H ; P0.1 pin is configured for analog mode.

P0MDIN\_B1\_\_DIGITAL EQU 002H ; P0.1 pin is configured for digital mode.

P0MDIN\_B2\_\_BMASK EQU 004H ; Port 0 Bit 2 Input Mode

P0MDIN\_B2\_\_SHIFT EQU 002H ; Port 0 Bit 2 Input Mode

P0MDIN\_B2\_\_ANALOG EQU 000H ; P0.2 pin is configured for analog mode.

P0MDIN\_B2\_\_DIGITAL EQU 004H ; P0.2 pin is configured for digital mode.

P0MDIN\_B3\_\_BMASK EQU 008H ; Port 0 Bit 3 Input Mode

P0MDIN\_B3\_\_SHIFT EQU 003H ; Port 0 Bit 3 Input Mode

P0MDIN\_B3\_\_ANALOG EQU 000H ; P0.3 pin is configured for analog mode.

P0MDIN\_B3\_\_DIGITAL EQU 008H ; P0.3 pin is configured for digital mode.

P0MDIN\_B4\_\_BMASK EQU 010H ; Port 0 Bit 4 Input Mode

P0MDIN\_B4\_\_SHIFT EQU 004H ; Port 0 Bit 4 Input Mode

P0MDIN\_B4\_\_ANALOG EQU 000H ; P0.4 pin is configured for analog mode.

P0MDIN\_B4\_\_DIGITAL EQU 010H ; P0.4 pin is configured for digital mode.

P0MDIN\_B5\_\_BMASK EQU 020H ; Port 0 Bit 5 Input Mode

P0MDIN\_B5\_\_SHIFT EQU 005H ; Port 0 Bit 5 Input Mode

P0MDIN\_B5\_\_ANALOG EQU 000H ; P0.5 pin is configured for analog mode.

P0MDIN\_B5\_\_DIGITAL EQU 020H ; P0.5 pin is configured for digital mode.

P0MDIN\_B6\_\_BMASK EQU 040H ; Port 0 Bit 6 Input Mode

P0MDIN\_B6\_\_SHIFT EQU 006H ; Port 0 Bit 6 Input Mode

P0MDIN\_B6\_\_ANALOG EQU 000H ; P0.6 pin is configured for analog mode.

P0MDIN\_B6\_\_DIGITAL EQU 040H ; P0.6 pin is configured for digital mode.

P0MDIN\_B7\_\_BMASK EQU 080H ; Port 0 Bit 7 Input Mode

P0MDIN\_B7\_\_SHIFT EQU 007H ; Port 0 Bit 7 Input Mode

P0MDIN\_B7\_\_ANALOG EQU 000H ; P0.7 pin is configured for analog mode.

P0MDIN\_B7\_\_DIGITAL EQU 080H ; P0.7 pin is configured for digital mode.

;------------------------------------------------------------------------------

; P0MDOUT Enums (Port 0 Output Mode @ 0xA4)

;------------------------------------------------------------------------------

P0MDOUT\_B0\_\_BMASK EQU 001H ; Port 0 Bit 0 Output Mode

P0MDOUT\_B0\_\_SHIFT EQU 000H ; Port 0 Bit 0 Output Mode

P0MDOUT\_B0\_\_OPEN\_DRAIN EQU 000H ; P0.0 output is open-drain.

P0MDOUT\_B0\_\_PUSH\_PULL EQU 001H ; P0.0 output is push-pull.

P0MDOUT\_B1\_\_BMASK EQU 002H ; Port 0 Bit 1 Output Mode

P0MDOUT\_B1\_\_SHIFT EQU 001H ; Port 0 Bit 1 Output Mode

P0MDOUT\_B1\_\_OPEN\_DRAIN EQU 000H ; P0.1 output is open-drain.

P0MDOUT\_B1\_\_PUSH\_PULL EQU 002H ; P0.1 output is push-pull.

P0MDOUT\_B2\_\_BMASK EQU 004H ; Port 0 Bit 2 Output Mode

P0MDOUT\_B2\_\_SHIFT EQU 002H ; Port 0 Bit 2 Output Mode

P0MDOUT\_B2\_\_OPEN\_DRAIN EQU 000H ; P0.2 output is open-drain.

P0MDOUT\_B2\_\_PUSH\_PULL EQU 004H ; P0.2 output is push-pull.

P0MDOUT\_B3\_\_BMASK EQU 008H ; Port 0 Bit 3 Output Mode

P0MDOUT\_B3\_\_SHIFT EQU 003H ; Port 0 Bit 3 Output Mode

P0MDOUT\_B3\_\_OPEN\_DRAIN EQU 000H ; P0.3 output is open-drain.

P0MDOUT\_B3\_\_PUSH\_PULL EQU 008H ; P0.3 output is push-pull.

P0MDOUT\_B4\_\_BMASK EQU 010H ; Port 0 Bit 4 Output Mode

P0MDOUT\_B4\_\_SHIFT EQU 004H ; Port 0 Bit 4 Output Mode

P0MDOUT\_B4\_\_OPEN\_DRAIN EQU 000H ; P0.4 output is open-drain.

P0MDOUT\_B4\_\_PUSH\_PULL EQU 010H ; P0.4 output is push-pull.

P0MDOUT\_B5\_\_BMASK EQU 020H ; Port 0 Bit 5 Output Mode

P0MDOUT\_B5\_\_SHIFT EQU 005H ; Port 0 Bit 5 Output Mode

P0MDOUT\_B5\_\_OPEN\_DRAIN EQU 000H ; P0.5 output is open-drain.

P0MDOUT\_B5\_\_PUSH\_PULL EQU 020H ; P0.5 output is push-pull.

P0MDOUT\_B6\_\_BMASK EQU 040H ; Port 0 Bit 6 Output Mode

P0MDOUT\_B6\_\_SHIFT EQU 006H ; Port 0 Bit 6 Output Mode

P0MDOUT\_B6\_\_OPEN\_DRAIN EQU 000H ; P0.6 output is open-drain.

P0MDOUT\_B6\_\_PUSH\_PULL EQU 040H ; P0.6 output is push-pull.

P0MDOUT\_B7\_\_BMASK EQU 080H ; Port 0 Bit 7 Output Mode

P0MDOUT\_B7\_\_SHIFT EQU 007H ; Port 0 Bit 7 Output Mode

P0MDOUT\_B7\_\_OPEN\_DRAIN EQU 000H ; P0.7 output is open-drain.

P0MDOUT\_B7\_\_PUSH\_PULL EQU 080H ; P0.7 output is push-pull.

;------------------------------------------------------------------------------

; P0SKIP Enums (Port 0 Skip @ 0xD4)

;------------------------------------------------------------------------------

P0SKIP\_B0\_\_BMASK EQU 001H ; Port 0 Bit 0 Skip

P0SKIP\_B0\_\_SHIFT EQU 000H ; Port 0 Bit 0 Skip

P0SKIP\_B0\_\_NOT\_SKIPPED EQU 000H ; P0.0 pin is not skipped by the crossbar.

P0SKIP\_B0\_\_SKIPPED EQU 001H ; P0.0 pin is skipped by the crossbar.

P0SKIP\_B1\_\_BMASK EQU 002H ; Port 0 Bit 1 Skip

P0SKIP\_B1\_\_SHIFT EQU 001H ; Port 0 Bit 1 Skip

P0SKIP\_B1\_\_NOT\_SKIPPED EQU 000H ; P0.1 pin is not skipped by the crossbar.

P0SKIP\_B1\_\_SKIPPED EQU 002H ; P0.1 pin is skipped by the crossbar.

P0SKIP\_B2\_\_BMASK EQU 004H ; Port 0 Bit 2 Skip

P0SKIP\_B2\_\_SHIFT EQU 002H ; Port 0 Bit 2 Skip

P0SKIP\_B2\_\_NOT\_SKIPPED EQU 000H ; P0.2 pin is not skipped by the crossbar.

P0SKIP\_B2\_\_SKIPPED EQU 004H ; P0.2 pin is skipped by the crossbar.

P0SKIP\_B3\_\_BMASK EQU 008H ; Port 0 Bit 3 Skip

P0SKIP\_B3\_\_SHIFT EQU 003H ; Port 0 Bit 3 Skip

P0SKIP\_B3\_\_NOT\_SKIPPED EQU 000H ; P0.3 pin is not skipped by the crossbar.

P0SKIP\_B3\_\_SKIPPED EQU 008H ; P0.3 pin is skipped by the crossbar.

P0SKIP\_B4\_\_BMASK EQU 010H ; Port 0 Bit 4 Skip

P0SKIP\_B4\_\_SHIFT EQU 004H ; Port 0 Bit 4 Skip

P0SKIP\_B4\_\_NOT\_SKIPPED EQU 000H ; P0.4 pin is not skipped by the crossbar.

P0SKIP\_B4\_\_SKIPPED EQU 010H ; P0.4 pin is skipped by the crossbar.

P0SKIP\_B5\_\_BMASK EQU 020H ; Port 0 Bit 5 Skip

P0SKIP\_B5\_\_SHIFT EQU 005H ; Port 0 Bit 5 Skip

P0SKIP\_B5\_\_NOT\_SKIPPED EQU 000H ; P0.5 pin is not skipped by the crossbar.

P0SKIP\_B5\_\_SKIPPED EQU 020H ; P0.5 pin is skipped by the crossbar.

P0SKIP\_B6\_\_BMASK EQU 040H ; Port 0 Bit 6 Skip

P0SKIP\_B6\_\_SHIFT EQU 006H ; Port 0 Bit 6 Skip

P0SKIP\_B6\_\_NOT\_SKIPPED EQU 000H ; P0.6 pin is not skipped by the crossbar.

P0SKIP\_B6\_\_SKIPPED EQU 040H ; P0.6 pin is skipped by the crossbar.

P0SKIP\_B7\_\_BMASK EQU 080H ; Port 0 Bit 7 Skip

P0SKIP\_B7\_\_SHIFT EQU 007H ; Port 0 Bit 7 Skip

P0SKIP\_B7\_\_NOT\_SKIPPED EQU 000H ; P0.7 pin is not skipped by the crossbar.

P0SKIP\_B7\_\_SKIPPED EQU 080H ; P0.7 pin is skipped by the crossbar.

;------------------------------------------------------------------------------

; P1 Enums (Port 1 Pin Latch @ 0x90)

;------------------------------------------------------------------------------

P1\_B0\_\_BMASK EQU 001H ; Port 1 Bit 0 Latch

P1\_B0\_\_SHIFT EQU 000H ; Port 1 Bit 0 Latch

P1\_B0\_\_LOW EQU 000H ; P1.0 is low. Set P1.0 to drive low.

P1\_B0\_\_HIGH EQU 001H ; P1.0 is high. Set P1.0 to drive or float high.

P1\_B1\_\_BMASK EQU 002H ; Port 1 Bit 1 Latch

P1\_B1\_\_SHIFT EQU 001H ; Port 1 Bit 1 Latch

P1\_B1\_\_LOW EQU 000H ; P1.1 is low. Set P1.1 to drive low.

P1\_B1\_\_HIGH EQU 002H ; P1.1 is high. Set P1.1 to drive or float high.

P1\_B2\_\_BMASK EQU 004H ; Port 1 Bit 2 Latch

P1\_B2\_\_SHIFT EQU 002H ; Port 1 Bit 2 Latch

P1\_B2\_\_LOW EQU 000H ; P1.2 is low. Set P1.2 to drive low.

P1\_B2\_\_HIGH EQU 004H ; P1.2 is high. Set P1.2 to drive or float high.

P1\_B3\_\_BMASK EQU 008H ; Port 1 Bit 3 Latch

P1\_B3\_\_SHIFT EQU 003H ; Port 1 Bit 3 Latch

P1\_B3\_\_LOW EQU 000H ; P1.3 is low. Set P1.3 to drive low.

P1\_B3\_\_HIGH EQU 008H ; P1.3 is high. Set P1.3 to drive or float high.

P1\_B4\_\_BMASK EQU 010H ; Port 1 Bit 4 Latch

P1\_B4\_\_SHIFT EQU 004H ; Port 1 Bit 4 Latch

P1\_B4\_\_LOW EQU 000H ; P1.4 is low. Set P1.4 to drive low.

P1\_B4\_\_HIGH EQU 010H ; P1.4 is high. Set P1.4 to drive or float high.

P1\_B5\_\_BMASK EQU 020H ; Port 1 Bit 5 Latch

P1\_B5\_\_SHIFT EQU 005H ; Port 1 Bit 5 Latch

P1\_B5\_\_LOW EQU 000H ; P1.5 is low. Set P1.5 to drive low.

P1\_B5\_\_HIGH EQU 020H ; P1.5 is high. Set P1.5 to drive or float high.

P1\_B6\_\_BMASK EQU 040H ; Port 1 Bit 6 Latch

P1\_B6\_\_SHIFT EQU 006H ; Port 1 Bit 6 Latch

P1\_B6\_\_LOW EQU 000H ; P1.6 is low. Set P1.6 to drive low.

P1\_B6\_\_HIGH EQU 040H ; P1.6 is high. Set P1.6 to drive or float high.

P1\_B7\_\_BMASK EQU 080H ; Port 1 Bit 7 Latch

P1\_B7\_\_SHIFT EQU 007H ; Port 1 Bit 7 Latch

P1\_B7\_\_LOW EQU 000H ; P1.7 is low. Set P1.7 to drive low.

P1\_B7\_\_HIGH EQU 080H ; P1.7 is high. Set P1.7 to drive or float high.

;------------------------------------------------------------------------------

; P1DRV Enums (Port 1 Drive Strength @ 0x9B)

;------------------------------------------------------------------------------

P1DRV\_B0\_\_BMASK EQU 001H ; Port 1 Bit 0 Drive Strength

P1DRV\_B0\_\_SHIFT EQU 000H ; Port 1 Bit 0 Drive Strength

P1DRV\_B0\_\_LOW\_DRIVE EQU 000H ; P1.0 output has low output drive strength.

P1DRV\_B0\_\_HIGH\_DRIVE EQU 001H ; P1.0 output has high output drive strength.

P1DRV\_B1\_\_BMASK EQU 002H ; Port 1 Bit 1 Drive Strength

P1DRV\_B1\_\_SHIFT EQU 001H ; Port 1 Bit 1 Drive Strength

P1DRV\_B1\_\_LOW\_DRIVE EQU 000H ; P1.1 output has low output drive strength.

P1DRV\_B1\_\_HIGH\_DRIVE EQU 002H ; P1.1 output has high output drive strength.

P1DRV\_B2\_\_BMASK EQU 004H ; Port 1 Bit 2 Drive Strength

P1DRV\_B2\_\_SHIFT EQU 002H ; Port 1 Bit 2 Drive Strength

P1DRV\_B2\_\_LOW\_DRIVE EQU 000H ; P1.2 output has low output drive strength.

P1DRV\_B2\_\_HIGH\_DRIVE EQU 004H ; P1.2 output has high output drive strength.

P1DRV\_B3\_\_BMASK EQU 008H ; Port 1 Bit 3 Drive Strength

P1DRV\_B3\_\_SHIFT EQU 003H ; Port 1 Bit 3 Drive Strength

P1DRV\_B3\_\_LOW\_DRIVE EQU 000H ; P1.3 output has low output drive strength.

P1DRV\_B3\_\_HIGH\_DRIVE EQU 008H ; P1.3 output has high output drive strength.

P1DRV\_B4\_\_BMASK EQU 010H ; Port 1 Bit 4 Drive Strength

P1DRV\_B4\_\_SHIFT EQU 004H ; Port 1 Bit 4 Drive Strength

P1DRV\_B4\_\_LOW\_DRIVE EQU 000H ; P1.4 output has low output drive strength.

P1DRV\_B4\_\_HIGH\_DRIVE EQU 010H ; P1.4 output has high output drive strength.

P1DRV\_B5\_\_BMASK EQU 020H ; Port 1 Bit 5 Drive Strength

P1DRV\_B5\_\_SHIFT EQU 005H ; Port 1 Bit 5 Drive Strength

P1DRV\_B5\_\_LOW\_DRIVE EQU 000H ; P1.5 output has low output drive strength.

P1DRV\_B5\_\_HIGH\_DRIVE EQU 020H ; P1.5 output has high output drive strength.

P1DRV\_B6\_\_BMASK EQU 040H ; Port 1 Bit 6 Drive Strength

P1DRV\_B6\_\_SHIFT EQU 006H ; Port 1 Bit 6 Drive Strength

P1DRV\_B6\_\_LOW\_DRIVE EQU 000H ; P1.6 output has low output drive strength.

P1DRV\_B6\_\_HIGH\_DRIVE EQU 040H ; P1.6 output has high output drive strength.

P1DRV\_B7\_\_BMASK EQU 080H ; Port 1 Bit 7 Drive Strength

P1DRV\_B7\_\_SHIFT EQU 007H ; Port 1 Bit 7 Drive Strength

P1DRV\_B7\_\_LOW\_DRIVE EQU 000H ; P1.7 output has low output drive strength.

P1DRV\_B7\_\_HIGH\_DRIVE EQU 080H ; P1.7 output has high output drive strength.

;------------------------------------------------------------------------------

; P1MASK Enums (Port 1 Mask @ 0xBF)

;------------------------------------------------------------------------------

P1MASK\_B0\_\_BMASK EQU 001H ; Port 1 Bit 0 Mask Value

P1MASK\_B0\_\_SHIFT EQU 000H ; Port 1 Bit 0 Mask Value

P1MASK\_B0\_\_IGNORED EQU 000H ; P1.0 pin logic value is ignored and will not cause

; a port mismatch event.

P1MASK\_B0\_\_COMPARED EQU 001H ; P1.0 pin logic value is compared to P1MAT.0.

P1MASK\_B1\_\_BMASK EQU 002H ; Port 1 Bit 1 Mask Value

P1MASK\_B1\_\_SHIFT EQU 001H ; Port 1 Bit 1 Mask Value

P1MASK\_B1\_\_IGNORED EQU 000H ; P1.1 pin logic value is ignored and will not cause

; a port mismatch event.

P1MASK\_B1\_\_COMPARED EQU 002H ; P1.1 pin logic value is compared to P1MAT.1.

P1MASK\_B2\_\_BMASK EQU 004H ; Port 1 Bit 2 Mask Value

P1MASK\_B2\_\_SHIFT EQU 002H ; Port 1 Bit 2 Mask Value

P1MASK\_B2\_\_IGNORED EQU 000H ; P1.2 pin logic value is ignored and will not cause

; a port mismatch event.

P1MASK\_B2\_\_COMPARED EQU 004H ; P1.2 pin logic value is compared to P1MAT.2.

P1MASK\_B3\_\_BMASK EQU 008H ; Port 1 Bit 3 Mask Value

P1MASK\_B3\_\_SHIFT EQU 003H ; Port 1 Bit 3 Mask Value

P1MASK\_B3\_\_IGNORED EQU 000H ; P1.3 pin logic value is ignored and will not cause

; a port mismatch event.

P1MASK\_B3\_\_COMPARED EQU 008H ; P1.3 pin logic value is compared to P1MAT.3.

P1MASK\_B4\_\_BMASK EQU 010H ; Port 1 Bit 4 Mask Value

P1MASK\_B4\_\_SHIFT EQU 004H ; Port 1 Bit 4 Mask Value

P1MASK\_B4\_\_IGNORED EQU 000H ; P1.4 pin logic value is ignored and will not cause

; a port mismatch event.

P1MASK\_B4\_\_COMPARED EQU 010H ; P1.4 pin logic value is compared to P1MAT.4.

P1MASK\_B5\_\_BMASK EQU 020H ; Port 1 Bit 5 Mask Value

P1MASK\_B5\_\_SHIFT EQU 005H ; Port 1 Bit 5 Mask Value

P1MASK\_B5\_\_IGNORED EQU 000H ; P1.5 pin logic value is ignored and will not cause

; a port mismatch event.

P1MASK\_B5\_\_COMPARED EQU 020H ; P1.5 pin logic value is compared to P1MAT.5.

P1MASK\_B6\_\_BMASK EQU 040H ; Port 1 Bit 6 Mask Value

P1MASK\_B6\_\_SHIFT EQU 006H ; Port 1 Bit 6 Mask Value

P1MASK\_B6\_\_IGNORED EQU 000H ; P1.6 pin logic value is ignored and will not cause

; a port mismatch event.

P1MASK\_B6\_\_COMPARED EQU 040H ; P1.6 pin logic value is compared to P1MAT.6.

P1MASK\_B7\_\_BMASK EQU 080H ; Port 1 Bit 7 Mask Value

P1MASK\_B7\_\_SHIFT EQU 007H ; Port 1 Bit 7 Mask Value

P1MASK\_B7\_\_IGNORED EQU 000H ; P1.7 pin logic value is ignored and will not cause

; a port mismatch event.

P1MASK\_B7\_\_COMPARED EQU 080H ; P1.7 pin logic value is compared to P1MAT.7.

;------------------------------------------------------------------------------

; P1MAT Enums (Port 1 Match @ 0xCF)

;------------------------------------------------------------------------------

P1MAT\_B0\_\_BMASK EQU 001H ; Port 1 Bit 0 Match Value

P1MAT\_B0\_\_SHIFT EQU 000H ; Port 1 Bit 0 Match Value

P1MAT\_B0\_\_LOW EQU 000H ; P1.0 pin logic value is compared with logic LOW.

P1MAT\_B0\_\_HIGH EQU 001H ; P1.0 pin logic value is compared with logic HIGH.

P1MAT\_B1\_\_BMASK EQU 002H ; Port 1 Bit 1 Match Value

P1MAT\_B1\_\_SHIFT EQU 001H ; Port 1 Bit 1 Match Value

P1MAT\_B1\_\_LOW EQU 000H ; P1.1 pin logic value is compared with logic LOW.

P1MAT\_B1\_\_HIGH EQU 002H ; P1.1 pin logic value is compared with logic HIGH.

P1MAT\_B2\_\_BMASK EQU 004H ; Port 1 Bit 2 Match Value

P1MAT\_B2\_\_SHIFT EQU 002H ; Port 1 Bit 2 Match Value

P1MAT\_B2\_\_LOW EQU 000H ; P1.2 pin logic value is compared with logic LOW.

P1MAT\_B2\_\_HIGH EQU 004H ; P1.2 pin logic value is compared with logic HIGH.

P1MAT\_B3\_\_BMASK EQU 008H ; Port 1 Bit 3 Match Value

P1MAT\_B3\_\_SHIFT EQU 003H ; Port 1 Bit 3 Match Value

P1MAT\_B3\_\_LOW EQU 000H ; P1.3 pin logic value is compared with logic LOW.

P1MAT\_B3\_\_HIGH EQU 008H ; P1.3 pin logic value is compared with logic HIGH.

P1MAT\_B4\_\_BMASK EQU 010H ; Port 1 Bit 4 Match Value

P1MAT\_B4\_\_SHIFT EQU 004H ; Port 1 Bit 4 Match Value

P1MAT\_B4\_\_LOW EQU 000H ; P1.4 pin logic value is compared with logic LOW.

P1MAT\_B4\_\_HIGH EQU 010H ; P1.4 pin logic value is compared with logic HIGH.

P1MAT\_B5\_\_BMASK EQU 020H ; Port 1 Bit 5 Match Value

P1MAT\_B5\_\_SHIFT EQU 005H ; Port 1 Bit 5 Match Value

P1MAT\_B5\_\_LOW EQU 000H ; P1.5 pin logic value is compared with logic LOW.

P1MAT\_B5\_\_HIGH EQU 020H ; P1.5 pin logic value is compared with logic HIGH.

P1MAT\_B6\_\_BMASK EQU 040H ; Port 1 Bit 6 Match Value

P1MAT\_B6\_\_SHIFT EQU 006H ; Port 1 Bit 6 Match Value

P1MAT\_B6\_\_LOW EQU 000H ; P1.6 pin logic value is compared with logic LOW.

P1MAT\_B6\_\_HIGH EQU 040H ; P1.6 pin logic value is compared with logic HIGH.

P1MAT\_B7\_\_BMASK EQU 080H ; Port 1 Bit 7 Match Value

P1MAT\_B7\_\_SHIFT EQU 007H ; Port 1 Bit 7 Match Value

P1MAT\_B7\_\_LOW EQU 000H ; P1.7 pin logic value is compared with logic LOW.

P1MAT\_B7\_\_HIGH EQU 080H ; P1.7 pin logic value is compared with logic HIGH.

;------------------------------------------------------------------------------

; P1MDIN Enums (Port 1 Input Mode @ 0xF2)

;------------------------------------------------------------------------------

P1MDIN\_B0\_\_BMASK EQU 001H ; Port 1 Bit 0 Input Mode

P1MDIN\_B0\_\_SHIFT EQU 000H ; Port 1 Bit 0 Input Mode

P1MDIN\_B0\_\_ANALOG EQU 000H ; P1.0 pin is configured for analog mode.

P1MDIN\_B0\_\_DIGITAL EQU 001H ; P1.0 pin is configured for digital mode.

P1MDIN\_B1\_\_BMASK EQU 002H ; Port 1 Bit 1 Input Mode

P1MDIN\_B1\_\_SHIFT EQU 001H ; Port 1 Bit 1 Input Mode

P1MDIN\_B1\_\_ANALOG EQU 000H ; P1.1 pin is configured for analog mode.

P1MDIN\_B1\_\_DIGITAL EQU 002H ; P1.1 pin is configured for digital mode.

P1MDIN\_B2\_\_BMASK EQU 004H ; Port 1 Bit 2 Input Mode

P1MDIN\_B2\_\_SHIFT EQU 002H ; Port 1 Bit 2 Input Mode

P1MDIN\_B2\_\_ANALOG EQU 000H ; P1.2 pin is configured for analog mode.

P1MDIN\_B2\_\_DIGITAL EQU 004H ; P1.2 pin is configured for digital mode.

P1MDIN\_B3\_\_BMASK EQU 008H ; Port 1 Bit 3 Input Mode

P1MDIN\_B3\_\_SHIFT EQU 003H ; Port 1 Bit 3 Input Mode

P1MDIN\_B3\_\_ANALOG EQU 000H ; P1.3 pin is configured for analog mode.

P1MDIN\_B3\_\_DIGITAL EQU 008H ; P1.3 pin is configured for digital mode.

P1MDIN\_B4\_\_BMASK EQU 010H ; Port 1 Bit 4 Input Mode

P1MDIN\_B4\_\_SHIFT EQU 004H ; Port 1 Bit 4 Input Mode

P1MDIN\_B4\_\_ANALOG EQU 000H ; P1.4 pin is configured for analog mode.

P1MDIN\_B4\_\_DIGITAL EQU 010H ; P1.4 pin is configured for digital mode.

P1MDIN\_B5\_\_BMASK EQU 020H ; Port 1 Bit 5 Input Mode

P1MDIN\_B5\_\_SHIFT EQU 005H ; Port 1 Bit 5 Input Mode

P1MDIN\_B5\_\_ANALOG EQU 000H ; P1.5 pin is configured for analog mode.

P1MDIN\_B5\_\_DIGITAL EQU 020H ; P1.5 pin is configured for digital mode.

P1MDIN\_B6\_\_BMASK EQU 040H ; Port 1 Bit 6 Input Mode

P1MDIN\_B6\_\_SHIFT EQU 006H ; Port 1 Bit 6 Input Mode

P1MDIN\_B6\_\_ANALOG EQU 000H ; P1.6 pin is configured for analog mode.

P1MDIN\_B6\_\_DIGITAL EQU 040H ; P1.6 pin is configured for digital mode.

P1MDIN\_B7\_\_BMASK EQU 080H ; Port 1 Bit 7 Input Mode

P1MDIN\_B7\_\_SHIFT EQU 007H ; Port 1 Bit 7 Input Mode

P1MDIN\_B7\_\_ANALOG EQU 000H ; P1.7 pin is configured for analog mode.

P1MDIN\_B7\_\_DIGITAL EQU 080H ; P1.7 pin is configured for digital mode.

;------------------------------------------------------------------------------

; P1MDOUT Enums (Port 1 Output Mode @ 0xA5)

;------------------------------------------------------------------------------

P1MDOUT\_B0\_\_BMASK EQU 001H ; Port 1 Bit 0 Output Mode

P1MDOUT\_B0\_\_SHIFT EQU 000H ; Port 1 Bit 0 Output Mode

P1MDOUT\_B0\_\_OPEN\_DRAIN EQU 000H ; P1.0 output is open-drain.

P1MDOUT\_B0\_\_PUSH\_PULL EQU 001H ; P1.0 output is push-pull.

P1MDOUT\_B1\_\_BMASK EQU 002H ; Port 1 Bit 1 Output Mode

P1MDOUT\_B1\_\_SHIFT EQU 001H ; Port 1 Bit 1 Output Mode

P1MDOUT\_B1\_\_OPEN\_DRAIN EQU 000H ; P1.1 output is open-drain.

P1MDOUT\_B1\_\_PUSH\_PULL EQU 002H ; P1.1 output is push-pull.

P1MDOUT\_B2\_\_BMASK EQU 004H ; Port 1 Bit 2 Output Mode

P1MDOUT\_B2\_\_SHIFT EQU 002H ; Port 1 Bit 2 Output Mode

P1MDOUT\_B2\_\_OPEN\_DRAIN EQU 000H ; P1.2 output is open-drain.

P1MDOUT\_B2\_\_PUSH\_PULL EQU 004H ; P1.2 output is push-pull.

P1MDOUT\_B3\_\_BMASK EQU 008H ; Port 1 Bit 3 Output Mode

P1MDOUT\_B3\_\_SHIFT EQU 003H ; Port 1 Bit 3 Output Mode

P1MDOUT\_B3\_\_OPEN\_DRAIN EQU 000H ; P1.3 output is open-drain.

P1MDOUT\_B3\_\_PUSH\_PULL EQU 008H ; P1.3 output is push-pull.

P1MDOUT\_B4\_\_BMASK EQU 010H ; Port 1 Bit 4 Output Mode

P1MDOUT\_B4\_\_SHIFT EQU 004H ; Port 1 Bit 4 Output Mode

P1MDOUT\_B4\_\_OPEN\_DRAIN EQU 000H ; P1.4 output is open-drain.

P1MDOUT\_B4\_\_PUSH\_PULL EQU 010H ; P1.4 output is push-pull.

P1MDOUT\_B5\_\_BMASK EQU 020H ; Port 1 Bit 5 Output Mode

P1MDOUT\_B5\_\_SHIFT EQU 005H ; Port 1 Bit 5 Output Mode

P1MDOUT\_B5\_\_OPEN\_DRAIN EQU 000H ; P1.5 output is open-drain.

P1MDOUT\_B5\_\_PUSH\_PULL EQU 020H ; P1.5 output is push-pull.

P1MDOUT\_B6\_\_BMASK EQU 040H ; Port 1 Bit 6 Output Mode

P1MDOUT\_B6\_\_SHIFT EQU 006H ; Port 1 Bit 6 Output Mode

P1MDOUT\_B6\_\_OPEN\_DRAIN EQU 000H ; P1.6 output is open-drain.

P1MDOUT\_B6\_\_PUSH\_PULL EQU 040H ; P1.6 output is push-pull.

P1MDOUT\_B7\_\_BMASK EQU 080H ; Port 1 Bit 7 Output Mode

P1MDOUT\_B7\_\_SHIFT EQU 007H ; Port 1 Bit 7 Output Mode

P1MDOUT\_B7\_\_OPEN\_DRAIN EQU 000H ; P1.7 output is open-drain.

P1MDOUT\_B7\_\_PUSH\_PULL EQU 080H ; P1.7 output is push-pull.

;------------------------------------------------------------------------------

; P1SKIP Enums (Port 1 Skip @ 0xD5)

;------------------------------------------------------------------------------

P1SKIP\_B0\_\_BMASK EQU 001H ; Port 1 Bit 0 Skip

P1SKIP\_B0\_\_SHIFT EQU 000H ; Port 1 Bit 0 Skip

P1SKIP\_B0\_\_NOT\_SKIPPED EQU 000H ; P1.0 pin is not skipped by the crossbar.

P1SKIP\_B0\_\_SKIPPED EQU 001H ; P1.0 pin is skipped by the crossbar.

P1SKIP\_B1\_\_BMASK EQU 002H ; Port 1 Bit 1 Skip

P1SKIP\_B1\_\_SHIFT EQU 001H ; Port 1 Bit 1 Skip

P1SKIP\_B1\_\_NOT\_SKIPPED EQU 000H ; P1.1 pin is not skipped by the crossbar.

P1SKIP\_B1\_\_SKIPPED EQU 002H ; P1.1 pin is skipped by the crossbar.

P1SKIP\_B2\_\_BMASK EQU 004H ; Port 1 Bit 2 Skip

P1SKIP\_B2\_\_SHIFT EQU 002H ; Port 1 Bit 2 Skip

P1SKIP\_B2\_\_NOT\_SKIPPED EQU 000H ; P1.2 pin is not skipped by the crossbar.

P1SKIP\_B2\_\_SKIPPED EQU 004H ; P1.2 pin is skipped by the crossbar.

P1SKIP\_B3\_\_BMASK EQU 008H ; Port 1 Bit 3 Skip

P1SKIP\_B3\_\_SHIFT EQU 003H ; Port 1 Bit 3 Skip

P1SKIP\_B3\_\_NOT\_SKIPPED EQU 000H ; P1.3 pin is not skipped by the crossbar.

P1SKIP\_B3\_\_SKIPPED EQU 008H ; P1.3 pin is skipped by the crossbar.

P1SKIP\_B4\_\_BMASK EQU 010H ; Port 1 Bit 4 Skip

P1SKIP\_B4\_\_SHIFT EQU 004H ; Port 1 Bit 4 Skip

P1SKIP\_B4\_\_NOT\_SKIPPED EQU 000H ; P1.4 pin is not skipped by the crossbar.

P1SKIP\_B4\_\_SKIPPED EQU 010H ; P1.4 pin is skipped by the crossbar.

P1SKIP\_B5\_\_BMASK EQU 020H ; Port 1 Bit 5 Skip

P1SKIP\_B5\_\_SHIFT EQU 005H ; Port 1 Bit 5 Skip

P1SKIP\_B5\_\_NOT\_SKIPPED EQU 000H ; P1.5 pin is not skipped by the crossbar.

P1SKIP\_B5\_\_SKIPPED EQU 020H ; P1.5 pin is skipped by the crossbar.

P1SKIP\_B6\_\_BMASK EQU 040H ; Port 1 Bit 6 Skip

P1SKIP\_B6\_\_SHIFT EQU 006H ; Port 1 Bit 6 Skip

P1SKIP\_B6\_\_NOT\_SKIPPED EQU 000H ; P1.6 pin is not skipped by the crossbar.

P1SKIP\_B6\_\_SKIPPED EQU 040H ; P1.6 pin is skipped by the crossbar.

P1SKIP\_B7\_\_BMASK EQU 080H ; Port 1 Bit 7 Skip

P1SKIP\_B7\_\_SHIFT EQU 007H ; Port 1 Bit 7 Skip

P1SKIP\_B7\_\_NOT\_SKIPPED EQU 000H ; P1.7 pin is not skipped by the crossbar.

P1SKIP\_B7\_\_SKIPPED EQU 080H ; P1.7 pin is skipped by the crossbar.

;------------------------------------------------------------------------------

; P2 Enums (Port 2 Pin Latch @ 0xA0)

;------------------------------------------------------------------------------

P2\_B7\_\_BMASK EQU 080H ; Port 2 Bit 7 Latch

P2\_B7\_\_SHIFT EQU 007H ; Port 2 Bit 7 Latch

P2\_B7\_\_LOW EQU 000H ; P2.7 is low. Set P2.7 to drive low.

P2\_B7\_\_HIGH EQU 080H ; P2.7 is high. Set P2.7 to drive or float high.

;------------------------------------------------------------------------------

; P2DRV Enums (Port 2 Drive Strength @ 0x9D)

;------------------------------------------------------------------------------

P2DRV\_B7\_\_BMASK EQU 080H ; Port 2 Bit 7 Drive Strength

P2DRV\_B7\_\_SHIFT EQU 007H ; Port 2 Bit 7 Drive Strength

P2DRV\_B7\_\_LOW\_DRIVE EQU 000H ; P2.7 output has low output drive strength.

P2DRV\_B7\_\_HIGH\_DRIVE EQU 080H ; P2.7 output has high output drive strength.

;------------------------------------------------------------------------------

; P2MDOUT Enums (Port 2 Output Mode @ 0xA6)

;------------------------------------------------------------------------------

P2MDOUT\_B7\_\_BMASK EQU 080H ; Port 2 Bit 7 Output Mode

P2MDOUT\_B7\_\_SHIFT EQU 007H ; Port 2 Bit 7 Output Mode

P2MDOUT\_B7\_\_OPEN\_DRAIN EQU 000H ; P2.7 output is open-drain.

P2MDOUT\_B7\_\_PUSH\_PULL EQU 080H ; P2.7 output is push-pull.

;------------------------------------------------------------------------------

; RSTSRC Enums (Reset Source @ 0xEF)

;------------------------------------------------------------------------------

RSTSRC\_PINRSF\_\_BMASK EQU 001H ; HW Pin Reset Flag

RSTSRC\_PINRSF\_\_SHIFT EQU 000H ; HW Pin Reset Flag

RSTSRC\_PINRSF\_\_NOT\_SET EQU 000H ; The RSTb pin did not cause the last reset.

RSTSRC\_PINRSF\_\_SET EQU 001H ; The RSTb pin caused the last reset.

RSTSRC\_PORSF\_\_BMASK EQU 002H ; Power-On / Supply Monitor Reset Flag, and Supply Monitor Reset Enable

RSTSRC\_PORSF\_\_SHIFT EQU 001H ; Power-On / Supply Monitor Reset Flag, and Supply Monitor Reset Enable

RSTSRC\_PORSF\_\_NOT\_SET EQU 000H ; A power-on or supply monitor reset did not occur.

RSTSRC\_PORSF\_\_SET EQU 002H ; A power-on or supply monitor reset occurred.

RSTSRC\_MCDRSF\_\_BMASK EQU 004H ; Missing Clock Detector Enable and Flag

RSTSRC\_MCDRSF\_\_SHIFT EQU 002H ; Missing Clock Detector Enable and Flag

RSTSRC\_MCDRSF\_\_NOT\_SET EQU 000H ; A missing clock detector reset did not occur.

RSTSRC\_MCDRSF\_\_SET EQU 004H ; A missing clock detector reset occurred.

RSTSRC\_WDTRSF\_\_BMASK EQU 008H ; Watchdog Timer Reset Flag

RSTSRC\_WDTRSF\_\_SHIFT EQU 003H ; Watchdog Timer Reset Flag

RSTSRC\_WDTRSF\_\_NOT\_SET EQU 000H ; A watchdog timer overflow reset did not occur.

RSTSRC\_WDTRSF\_\_SET EQU 008H ; A watchdog timer overflow reset occurred.

RSTSRC\_SWRSF\_\_BMASK EQU 010H ; Software Reset Force and Flag

RSTSRC\_SWRSF\_\_SHIFT EQU 004H ; Software Reset Force and Flag

RSTSRC\_SWRSF\_\_NOT\_SET EQU 000H ; A software reset did not occur.

RSTSRC\_SWRSF\_\_SET EQU 010H ; A software reset occurred.

RSTSRC\_C0RSEF\_\_BMASK EQU 020H ; Comparator0 Reset Enable and Flag

RSTSRC\_C0RSEF\_\_SHIFT EQU 005H ; Comparator0 Reset Enable and Flag

RSTSRC\_C0RSEF\_\_NOT\_SET EQU 000H ; A Comparator 0 reset did not occur.

RSTSRC\_C0RSEF\_\_SET EQU 020H ; A Comparator 0 reset occurred.

RSTSRC\_FERROR\_\_BMASK EQU 040H ; Flash Error Reset Flag

RSTSRC\_FERROR\_\_SHIFT EQU 006H ; Flash Error Reset Flag

RSTSRC\_FERROR\_\_NOT\_SET EQU 000H ; A flash error reset did not occur.

RSTSRC\_FERROR\_\_SET EQU 040H ; A flash error reset occurred.

RSTSRC\_RTC0RE\_\_BMASK EQU 080H ; RTC Reset Enable and Flag

RSTSRC\_RTC0RE\_\_SHIFT EQU 007H ; RTC Reset Enable and Flag

RSTSRC\_RTC0RE\_\_NOT\_SET EQU 000H ; A RTC alarm or oscillator fail reset did not

; occur.

RSTSRC\_RTC0RE\_\_SET EQU 080H ; A RTC alarm or oscillator fail reset occurred.

;------------------------------------------------------------------------------

; ALARM0 Enums (RTC Alarm Programmed Value 0 @ 0x08)

;------------------------------------------------------------------------------

ALARM0\_ALARM0\_\_FMASK EQU 0FFH ; RTC Alarm Programmed Value 0

ALARM0\_ALARM0\_\_SHIFT EQU 000H ; RTC Alarm Programmed Value 0

;------------------------------------------------------------------------------

; ALARM1 Enums (RTC Alarm Programmed Value 1 @ 0x09)

;------------------------------------------------------------------------------

ALARM1\_ALARM1\_\_FMASK EQU 0FFH ; RTC Alarm Programmed Value 1

ALARM1\_ALARM1\_\_SHIFT EQU 000H ; RTC Alarm Programmed Value 1

;------------------------------------------------------------------------------

; ALARM2 Enums (RTC Alarm Programmed Value 2 @ 0x0A)

;------------------------------------------------------------------------------

ALARM2\_ALARM2\_\_FMASK EQU 0FFH ; RTC Alarm Programmed Value 2

ALARM2\_ALARM2\_\_SHIFT EQU 000H ; RTC Alarm Programmed Value 2

;------------------------------------------------------------------------------

; ALARM3 Enums (RTC Alarm Programmed Value 3 @ 0x0B)

;------------------------------------------------------------------------------

ALARM3\_ALARM3\_\_FMASK EQU 0FFH ; RTC Alarm Programmed Value 3

ALARM3\_ALARM3\_\_SHIFT EQU 000H ; RTC Alarm Programmed Value 3

;------------------------------------------------------------------------------

; CAPTURE0 Enums (RTC Timer Capture 0 @ 0x00)

;------------------------------------------------------------------------------

CAPTURE0\_CAPTURE0\_\_FMASK EQU 0FFH ; RTC Timer Capture 0

CAPTURE0\_CAPTURE0\_\_SHIFT EQU 000H ; RTC Timer Capture 0

;------------------------------------------------------------------------------

; CAPTURE1 Enums (RTC Timer Capture 1 @ 0x01)

;------------------------------------------------------------------------------

CAPTURE1\_CAPTURE1\_\_FMASK EQU 0FFH ; RTC Timer Capture 1

CAPTURE1\_CAPTURE1\_\_SHIFT EQU 000H ; RTC Timer Capture 1

;------------------------------------------------------------------------------

; CAPTURE2 Enums (RTC Timer Capture 2 @ 0x02)

;------------------------------------------------------------------------------

CAPTURE2\_CAPTURE2\_\_FMASK EQU 0FFH ; RTC Timer Capture 2

CAPTURE2\_CAPTURE2\_\_SHIFT EQU 000H ; RTC Timer Capture 2

;------------------------------------------------------------------------------

; CAPTURE3 Enums (RTC Timer Capture 3 @ 0x03)

;------------------------------------------------------------------------------

CAPTURE3\_CAPTURE3\_\_FMASK EQU 0FFH ; RTC Timer Capture 3

CAPTURE3\_CAPTURE3\_\_SHIFT EQU 000H ; RTC Timer Capture 3

;------------------------------------------------------------------------------

; RTC0ADR Enums (RTC Address @ 0xAC)

;------------------------------------------------------------------------------

RTC0ADR\_ADDR\_\_FMASK EQU 00FH ; RTC Indirect Register Address

RTC0ADR\_ADDR\_\_SHIFT EQU 000H ; RTC Indirect Register Address

RTC0ADR\_ADDR\_\_CAPTURE0 EQU 000H ; Select the CAPTURE0 register.

RTC0ADR\_ADDR\_\_CAPTURE1 EQU 001H ; Select the CAPTURE1 register.

RTC0ADR\_ADDR\_\_CAPTURE2 EQU 002H ; Select the CAPTURE2 register.

RTC0ADR\_ADDR\_\_CAPTURE3 EQU 003H ; Select the CAPTURE3 register.

RTC0ADR\_ADDR\_\_RTC0CN0 EQU 004H ; Select the RTC0CN register.

RTC0ADR\_ADDR\_\_RTC0XCN0 EQU 005H ; Select the RTC0XCN register.

RTC0ADR\_ADDR\_\_RTC0XCF EQU 006H ; Select the RTC0XCF register.

RTC0ADR\_ADDR\_\_ALARM0 EQU 008H ; Select the ALARM0 register.

RTC0ADR\_ADDR\_\_ALARM1 EQU 009H ; Select the ALARM1 register.

RTC0ADR\_ADDR\_\_ALARM2 EQU 00AH ; Select the ALARM2 register.

RTC0ADR\_ADDR\_\_ALARM3 EQU 00BH ; Select the ALARM3 register.

RTC0ADR\_SHORT\_\_BMASK EQU 010H ; Short Strobe Enable

RTC0ADR\_SHORT\_\_SHIFT EQU 004H ; Short Strobe Enable

RTC0ADR\_SHORT\_\_DISABLED EQU 000H ; Disable short strobe.

RTC0ADR\_SHORT\_\_ENABLED EQU 010H ; Enable short strobe.

RTC0ADR\_AUTORD\_\_BMASK EQU 040H ; RTC Interface Autoread Enable

RTC0ADR\_AUTORD\_\_SHIFT EQU 006H ; RTC Interface Autoread Enable

RTC0ADR\_AUTORD\_\_DISABLED EQU 000H ; Disable autoread. Firmware must write the BUSY bit

; for each RTC indirect read operation.

RTC0ADR\_AUTORD\_\_ENABLED EQU 040H ; Enable autoread. The next RTC indirect read

; operation is initiated when firmware reads the

; RTC0DAT register.

RTC0ADR\_BUSY\_\_BMASK EQU 080H ; RTC Interface Busy Indicator

RTC0ADR\_BUSY\_\_SHIFT EQU 007H ; RTC Interface Busy Indicator

RTC0ADR\_BUSY\_\_NOT\_SET EQU 000H ; The RTC interface is not busy.

RTC0ADR\_BUSY\_\_SET EQU 080H ; The RTC interface is busy.

;------------------------------------------------------------------------------

; RTC0CN0 Enums (RTC Control 0 @ 0x04)

;------------------------------------------------------------------------------

RTC0CN0\_RTC0CAP\_\_BMASK EQU 001H ; RTC Timer Capture

RTC0CN0\_RTC0CAP\_\_SHIFT EQU 000H ; RTC Timer Capture

RTC0CN0\_RTC0CAP\_\_NOT\_SET EQU 000H ; Do not start a capture operation.

RTC0CN0\_RTC0CAP\_\_SET EQU 001H ; Start a capture operation.

RTC0CN0\_RTC0SET\_\_BMASK EQU 002H ; RTC Timer Set

RTC0CN0\_RTC0SET\_\_SHIFT EQU 001H ; RTC Timer Set

RTC0CN0\_RTC0SET\_\_NOT\_SET EQU 000H ; Do not start a set operation.

RTC0CN0\_RTC0SET\_\_SET EQU 002H ; Start a set operation.

RTC0CN0\_ALRM\_\_BMASK EQU 004H ; RTC Alarm Event Flag and Auto Reset Enable

RTC0CN0\_ALRM\_\_SHIFT EQU 002H ; RTC Alarm Event Flag and Auto Reset Enable

RTC0CN0\_ALRM\_\_NOT\_SET EQU 000H ; Alarm event flag is not set or disable the auto

; reset function.

RTC0CN0\_ALRM\_\_SET EQU 004H ; Alarm event flag is set or enable the auto reset

; function.

RTC0CN0\_RTC0AEN\_\_BMASK EQU 008H ; RTC Alarm Enable

RTC0CN0\_RTC0AEN\_\_SHIFT EQU 003H ; RTC Alarm Enable

RTC0CN0\_RTC0AEN\_\_DISABLED EQU 000H ; Disable RTC alarm.

RTC0CN0\_RTC0AEN\_\_ENABLED EQU 008H ; Enable RTC alarm.

RTC0CN0\_RTC0TR\_\_BMASK EQU 010H ; RTC Timer Run Control

RTC0CN0\_RTC0TR\_\_SHIFT EQU 004H ; RTC Timer Run Control

RTC0CN0\_RTC0TR\_\_STOP EQU 000H ; RTC timer is stopped.

RTC0CN0\_RTC0TR\_\_RUN EQU 010H ; RTC timer is running.

RTC0CN0\_OSCFAIL\_\_BMASK EQU 020H ; RTC Oscillator Fail Event Flag

RTC0CN0\_OSCFAIL\_\_SHIFT EQU 005H ; RTC Oscillator Fail Event Flag

RTC0CN0\_OSCFAIL\_\_NOT\_SET EQU 000H ; Missing RTC detector timeout did not occur.

RTC0CN0\_OSCFAIL\_\_SET EQU 020H ; Missing RTC detector timeout occurred.

RTC0CN0\_MCLKEN\_\_BMASK EQU 040H ; Missing RTC Detector Enable

RTC0CN0\_MCLKEN\_\_SHIFT EQU 006H ; Missing RTC Detector Enable

RTC0CN0\_MCLKEN\_\_DISABLED EQU 000H ; Disable missing RTC detector.

RTC0CN0\_MCLKEN\_\_ENABLED EQU 040H ; Enable missing RTC detector.

RTC0CN0\_RTC0EN\_\_BMASK EQU 080H ; RTC Enable

RTC0CN0\_RTC0EN\_\_SHIFT EQU 007H ; RTC Enable

RTC0CN0\_RTC0EN\_\_DISABLED EQU 000H ; Disable RTC oscillator.

RTC0CN0\_RTC0EN\_\_ENABLED EQU 080H ; Enable RTC oscillator.

;------------------------------------------------------------------------------

; RTC0DAT Enums (RTC Data @ 0xAD)

;------------------------------------------------------------------------------

RTC0DAT\_RTC0DAT\_\_FMASK EQU 0FFH ; RTC Data

RTC0DAT\_RTC0DAT\_\_SHIFT EQU 000H ; RTC Data

;------------------------------------------------------------------------------

; RTC0KEY Enums (RTC Lock and Key @ 0xAE)

;------------------------------------------------------------------------------

RTC0KEY\_RTC0ST\_\_FMASK EQU 0FFH ; RTC Interface Status

RTC0KEY\_RTC0ST\_\_SHIFT EQU 000H ; RTC Interface Status

RTC0KEY\_RTC0ST\_\_UNLOCKED EQU 002H ; RTC Interface is unlocked.

;------------------------------------------------------------------------------

; RTC0XCF Enums (RTC Oscillator Configuration @ 0x06)

;------------------------------------------------------------------------------

RTC0XCF\_LOADCAP\_\_FMASK EQU 00FH ; Load Capacitance Programmed Value

RTC0XCF\_LOADCAP\_\_SHIFT EQU 000H ; Load Capacitance Programmed Value

RTC0XCF\_LOADRDY\_\_BMASK EQU 040H ; Load Capacitance Ready Indicator

RTC0XCF\_LOADRDY\_\_SHIFT EQU 006H ; Load Capacitance Ready Indicator

RTC0XCF\_LOADRDY\_\_NOT\_SET EQU 000H ; Load capacitance is currently stepping.

RTC0XCF\_LOADRDY\_\_SET EQU 040H ; Load capacitance has reached it programmed value.

RTC0XCF\_AUTOSTP\_\_BMASK EQU 080H ; Automatic Load Capacitance Stepping Enable

RTC0XCF\_AUTOSTP\_\_SHIFT EQU 007H ; Automatic Load Capacitance Stepping Enable

RTC0XCF\_AUTOSTP\_\_DISABLED EQU 000H ; Disable load capacitance stepping.

RTC0XCF\_AUTOSTP\_\_ENABLED EQU 080H ; Enable load capacitance stepping.

;------------------------------------------------------------------------------

; RTC0XCN0 Enums (RTC Oscillator Control 0 @ 0x05)

;------------------------------------------------------------------------------

RTC0XCN0\_LFOEN\_\_BMASK EQU 008H ; Low Frequency Oscillator Enable and Select

RTC0XCN0\_LFOEN\_\_SHIFT EQU 003H ; Low Frequency Oscillator Enable and Select

RTC0XCN0\_LFOEN\_\_DISABLED EQU 000H ; XMODE determines RTC oscillator source.

RTC0XCN0\_LFOEN\_\_ENABLED EQU 008H ; LFOSC0 enabled and selected as RTC oscillator

; source.

RTC0XCN0\_CLKVLD\_\_BMASK EQU 010H ; RTC Oscillator Crystal Valid Indicator

RTC0XCN0\_CLKVLD\_\_SHIFT EQU 004H ; RTC Oscillator Crystal Valid Indicator

RTC0XCN0\_CLKVLD\_\_NOT\_SET EQU 000H ; Oscillation has not started or oscillation

; amplitude is too low to maintain oscillation.

RTC0XCN0\_CLKVLD\_\_SET EQU 010H ; Sufficient oscillation amplitude detected.

RTC0XCN0\_BIASX2\_\_BMASK EQU 020H ; RTC Oscillator Bias Double Enable

RTC0XCN0\_BIASX2\_\_SHIFT EQU 005H ; RTC Oscillator Bias Double Enable

RTC0XCN0\_BIASX2\_\_DISABLED EQU 000H ; Disable the Bias Double feature.

RTC0XCN0\_BIASX2\_\_ENABLED EQU 020H ; Enable the Bias Double feature.

RTC0XCN0\_XMODE\_\_BMASK EQU 040H ; RTC Oscillator Mode

RTC0XCN0\_XMODE\_\_SHIFT EQU 006H ; RTC Oscillator Mode

RTC0XCN0\_XMODE\_\_SELF\_OSCILLATE EQU 000H ; Self-Oscillate Mode selected.

RTC0XCN0\_XMODE\_\_CRYSTAL EQU 040H ; Crystal Mode selected.

RTC0XCN0\_AGCEN\_\_BMASK EQU 080H ; RTC Oscillator Automatic Gain Control (AGC) Enable

RTC0XCN0\_AGCEN\_\_SHIFT EQU 007H ; RTC Oscillator Automatic Gain Control (AGC) Enable

RTC0XCN0\_AGCEN\_\_DISABLED EQU 000H ; Disable AGC.

RTC0XCN0\_AGCEN\_\_ENABLED EQU 080H ; Enable AGC.

;------------------------------------------------------------------------------

; SFRPAGE Enums (SFR Page @ 0xA7)

;------------------------------------------------------------------------------

SFRPAGE\_SFRPAGE\_\_FMASK EQU 0FFH ; SFR Page

SFRPAGE\_SFRPAGE\_\_SHIFT EQU 000H ; SFR Page

;------------------------------------------------------------------------------

; SMB0ADM Enums (SMBus 0 Slave Address Mask @ 0xF5)

;------------------------------------------------------------------------------

SMB0ADM\_EHACK\_\_BMASK EQU 001H ; Hardware Acknowledge Enable

SMB0ADM\_EHACK\_\_SHIFT EQU 000H ; Hardware Acknowledge Enable

SMB0ADM\_EHACK\_\_ADR\_ACK\_MANUAL EQU 000H ; Firmware must manually acknowledge all incoming

; address and data bytes.

SMB0ADM\_EHACK\_\_ADR\_ACK\_AUTOMATIC EQU 001H ; Automatic slave address recognition and hardware

; acknowledge is enabled.

SMB0ADM\_SLVM\_\_FMASK EQU 0FEH ; SMBus Slave Address Mask

SMB0ADM\_SLVM\_\_SHIFT EQU 001H ; SMBus Slave Address Mask

;------------------------------------------------------------------------------

; SMB0ADR Enums (SMBus 0 Slave Address @ 0xF4)

;------------------------------------------------------------------------------

SMB0ADR\_GC\_\_BMASK EQU 001H ; General Call Address Enable

SMB0ADR\_GC\_\_SHIFT EQU 000H ; General Call Address Enable

SMB0ADR\_GC\_\_IGNORED EQU 000H ; General Call Address is ignored.

SMB0ADR\_GC\_\_RECOGNIZED EQU 001H ; General Call Address is recognized.

SMB0ADR\_SLV\_\_FMASK EQU 0FEH ; SMBus Hardware Slave Address

SMB0ADR\_SLV\_\_SHIFT EQU 001H ; SMBus Hardware Slave Address

;------------------------------------------------------------------------------

; SMB0CF Enums (SMBus 0 Configuration @ 0xC1)

;------------------------------------------------------------------------------

SMB0CF\_SMBCS\_\_FMASK EQU 003H ; SMBus Clock Source Selection

SMB0CF\_SMBCS\_\_SHIFT EQU 000H ; SMBus Clock Source Selection

SMB0CF\_SMBCS\_\_TIMER0 EQU 000H ; Timer 0 Overflow.

SMB0CF\_SMBCS\_\_TIMER1 EQU 001H ; Timer 1 Overflow.

SMB0CF\_SMBCS\_\_TIMER2\_HIGH EQU 002H ; Timer 2 High Byte Overflow.

SMB0CF\_SMBCS\_\_TIMER2\_LOW EQU 003H ; Timer 2 Low Byte Overflow.

SMB0CF\_SMBFTE\_\_BMASK EQU 004H ; SMBus Free Timeout Detection Enable

SMB0CF\_SMBFTE\_\_SHIFT EQU 002H ; SMBus Free Timeout Detection Enable

SMB0CF\_SMBFTE\_\_FREE\_TO\_DISABLED EQU 000H ; Disable bus free timeouts.

SMB0CF\_SMBFTE\_\_FREE\_TO\_ENABLED EQU 004H ; Enable bus free timeouts. The bus the bus will be

; considered free if SCL and SDA remain high for

; more than 10 SMBus clock source periods.

SMB0CF\_SMBTOE\_\_BMASK EQU 008H ; SMBus SCL Timeout Detection Enable

SMB0CF\_SMBTOE\_\_SHIFT EQU 003H ; SMBus SCL Timeout Detection Enable

SMB0CF\_SMBTOE\_\_SCL\_TO\_DISABLED EQU 000H ; Disable SCL low timeouts.

SMB0CF\_SMBTOE\_\_SCL\_TO\_ENABLED EQU 008H ; Enable SCL low timeouts.

SMB0CF\_EXTHOLD\_\_BMASK EQU 010H ; SMBus Setup and Hold Time Extension Enable

SMB0CF\_EXTHOLD\_\_SHIFT EQU 004H ; SMBus Setup and Hold Time Extension Enable

SMB0CF\_EXTHOLD\_\_DISABLED EQU 000H ; Disable SDA extended setup and hold times.

SMB0CF\_EXTHOLD\_\_ENABLED EQU 010H ; Enable SDA extended setup and hold times.

SMB0CF\_BUSY\_\_BMASK EQU 020H ; SMBus Busy Indicator

SMB0CF\_BUSY\_\_SHIFT EQU 005H ; SMBus Busy Indicator

SMB0CF\_BUSY\_\_NOT\_SET EQU 000H ; The bus is not busy.

SMB0CF\_BUSY\_\_SET EQU 020H ; The bus is busy and a transfer is currently in

; progress.

SMB0CF\_INH\_\_BMASK EQU 040H ; SMBus Slave Inhibit

SMB0CF\_INH\_\_SHIFT EQU 006H ; SMBus Slave Inhibit

SMB0CF\_INH\_\_SLAVE\_ENABLED EQU 000H ; Slave states are enabled.

SMB0CF\_INH\_\_SLAVE\_DISABLED EQU 040H ; Slave states are inhibited.

SMB0CF\_ENSMB\_\_BMASK EQU 080H ; SMBus Enable

SMB0CF\_ENSMB\_\_SHIFT EQU 007H ; SMBus Enable

SMB0CF\_ENSMB\_\_DISABLED EQU 000H ; Disable the SMBus module.

SMB0CF\_ENSMB\_\_ENABLED EQU 080H ; Enable the SMBus module.

;------------------------------------------------------------------------------

; SMB0CN0 Enums (SMBus 0 Control @ 0xC0)

;------------------------------------------------------------------------------

SMB0CN0\_SI\_\_BMASK EQU 001H ; SMBus Interrupt Flag

SMB0CN0\_SI\_\_SHIFT EQU 000H ; SMBus Interrupt Flag

SMB0CN0\_SI\_\_NOT\_SET EQU 000H ;

SMB0CN0\_SI\_\_SET EQU 001H ;

SMB0CN0\_ACK\_\_BMASK EQU 002H ; SMBus Acknowledge

SMB0CN0\_ACK\_\_SHIFT EQU 001H ; SMBus Acknowledge

SMB0CN0\_ACK\_\_NOT\_SET EQU 000H ; Generate a NACK, or the response was a NACK.

SMB0CN0\_ACK\_\_SET EQU 002H ; Generate an ACK, or the response was an ACK.

SMB0CN0\_ARBLOST\_\_BMASK EQU 004H ; SMBus Arbitration Lost Indicator

SMB0CN0\_ARBLOST\_\_SHIFT EQU 002H ; SMBus Arbitration Lost Indicator

SMB0CN0\_ARBLOST\_\_NOT\_SET EQU 000H ; No arbitration error.

SMB0CN0\_ARBLOST\_\_ERROR EQU 004H ; Arbitration error occurred.

SMB0CN0\_ACKRQ\_\_BMASK EQU 008H ; SMBus Acknowledge Request

SMB0CN0\_ACKRQ\_\_SHIFT EQU 003H ; SMBus Acknowledge Request

SMB0CN0\_ACKRQ\_\_NOT\_SET EQU 000H ; No ACK requested.

SMB0CN0\_ACKRQ\_\_REQUESTED EQU 008H ; ACK requested.

SMB0CN0\_STO\_\_BMASK EQU 010H ; SMBus Stop Flag

SMB0CN0\_STO\_\_SHIFT EQU 004H ; SMBus Stop Flag

SMB0CN0\_STO\_\_NOT\_SET EQU 000H ; A STOP is not pending.

SMB0CN0\_STO\_\_SET EQU 010H ; Generate a STOP or a STOP is currently pending.

SMB0CN0\_STA\_\_BMASK EQU 020H ; SMBus Start Flag

SMB0CN0\_STA\_\_SHIFT EQU 005H ; SMBus Start Flag

SMB0CN0\_STA\_\_NOT\_SET EQU 000H ; A START was not detected.

SMB0CN0\_STA\_\_SET EQU 020H ; Generate a START, repeated START, or a START is

; currently pending.

SMB0CN0\_TXMODE\_\_BMASK EQU 040H ; SMBus Transmit Mode Indicator

SMB0CN0\_TXMODE\_\_SHIFT EQU 006H ; SMBus Transmit Mode Indicator

SMB0CN0\_TXMODE\_\_RECEIVER EQU 000H ; SMBus in Receiver Mode.

SMB0CN0\_TXMODE\_\_TRANSMITTER EQU 040H ; SMBus in Transmitter Mode.

SMB0CN0\_MASTER\_\_BMASK EQU 080H ; SMBus Master/Slave Indicator

SMB0CN0\_MASTER\_\_SHIFT EQU 007H ; SMBus Master/Slave Indicator

SMB0CN0\_MASTER\_\_SLAVE EQU 000H ; SMBus operating in slave mode.

SMB0CN0\_MASTER\_\_MASTER EQU 080H ; SMBus operating in master mode.

;------------------------------------------------------------------------------

; SMB0DAT Enums (SMBus 0 Data @ 0xC2)

;------------------------------------------------------------------------------

SMB0DAT\_SMB0DAT\_\_FMASK EQU 0FFH ; SMBus 0 Data

SMB0DAT\_SMB0DAT\_\_SHIFT EQU 000H ; SMBus 0 Data

;------------------------------------------------------------------------------

; SPI0CFG Enums (SPI0 Configuration @ 0xA1)

;------------------------------------------------------------------------------

SPI0CFG\_RXBMT\_\_BMASK EQU 001H ; Receive Buffer Empty

SPI0CFG\_RXBMT\_\_SHIFT EQU 000H ; Receive Buffer Empty

SPI0CFG\_RXBMT\_\_NOT\_SET EQU 000H ; New data is available in the receive buffer (Slave

; mode).

SPI0CFG\_RXBMT\_\_SET EQU 001H ; No new data in the receive buffer (Slave mode).

SPI0CFG\_SRMT\_\_BMASK EQU 002H ; Shift Register Empty

SPI0CFG\_SRMT\_\_SHIFT EQU 001H ; Shift Register Empty

SPI0CFG\_SRMT\_\_NOT\_SET EQU 000H ; The shift register is not empty.

SPI0CFG\_SRMT\_\_SET EQU 002H ; The shift register is empty.

SPI0CFG\_NSSIN\_\_BMASK EQU 004H ; NSS Instantaneous Pin Input

SPI0CFG\_NSSIN\_\_SHIFT EQU 002H ; NSS Instantaneous Pin Input

SPI0CFG\_NSSIN\_\_LOW EQU 000H ; The NSS pin is low.

SPI0CFG\_NSSIN\_\_HIGH EQU 004H ; The NSS pin is high.

SPI0CFG\_SLVSEL\_\_BMASK EQU 008H ; Slave Selected Flag

SPI0CFG\_SLVSEL\_\_SHIFT EQU 003H ; Slave Selected Flag

SPI0CFG\_SLVSEL\_\_NOT\_SELECTED EQU 000H ; The Slave is not selected (NSS is high).

SPI0CFG\_SLVSEL\_\_SELECTED EQU 008H ; The Slave is selected (NSS is low).

SPI0CFG\_CKPOL\_\_BMASK EQU 010H ; SPI0 Clock Polarity

SPI0CFG\_CKPOL\_\_SHIFT EQU 004H ; SPI0 Clock Polarity

SPI0CFG\_CKPOL\_\_IDLE\_LOW EQU 000H ; SCK line low in idle state.

SPI0CFG\_CKPOL\_\_IDLE\_HIGH EQU 010H ; SCK line high in idle state.

SPI0CFG\_CKPHA\_\_BMASK EQU 020H ; SPI0 Clock Phase

SPI0CFG\_CKPHA\_\_SHIFT EQU 005H ; SPI0 Clock Phase

SPI0CFG\_CKPHA\_\_DATA\_CENTERED\_FIRST EQU 000H ; Data centered on first edge of SCK period.

SPI0CFG\_CKPHA\_\_DATA\_CENTERED\_SECOND EQU 020H ; Data centered on second edge of SCK period.

SPI0CFG\_MSTEN\_\_BMASK EQU 040H ; Master Mode Enable

SPI0CFG\_MSTEN\_\_SHIFT EQU 006H ; Master Mode Enable

SPI0CFG\_MSTEN\_\_MASTER\_DISABLED EQU 000H ; Disable master mode. Operate in slave mode.

SPI0CFG\_MSTEN\_\_MASTER\_ENABLED EQU 040H ; Enable master mode. Operate as a master.

SPI0CFG\_SPIBSY\_\_BMASK EQU 080H ; SPI Busy

SPI0CFG\_SPIBSY\_\_SHIFT EQU 007H ; SPI Busy

SPI0CFG\_SPIBSY\_\_NOT\_SET EQU 000H ; A SPI transfer is not in progress.

SPI0CFG\_SPIBSY\_\_SET EQU 080H ; A SPI transfer is in progress.

;------------------------------------------------------------------------------

; SPI0CKR Enums (SPI0 Clock Rate @ 0xA2)

;------------------------------------------------------------------------------

SPI0CKR\_SPI0CKR\_\_FMASK EQU 0FFH ; SPI0 Clock Rate

SPI0CKR\_SPI0CKR\_\_SHIFT EQU 000H ; SPI0 Clock Rate

;------------------------------------------------------------------------------

; SPI0CN0 Enums (SPI0 Control @ 0xF8)

;------------------------------------------------------------------------------

SPI0CN0\_SPIEN\_\_BMASK EQU 001H ; SPI0 Enable

SPI0CN0\_SPIEN\_\_SHIFT EQU 000H ; SPI0 Enable

SPI0CN0\_SPIEN\_\_DISABLED EQU 000H ; Disable the SPI module.

SPI0CN0\_SPIEN\_\_ENABLED EQU 001H ; Enable the SPI module.

SPI0CN0\_TXBMT\_\_BMASK EQU 002H ; Transmit Buffer Empty

SPI0CN0\_TXBMT\_\_SHIFT EQU 001H ; Transmit Buffer Empty

SPI0CN0\_TXBMT\_\_NOT\_SET EQU 000H ; The transmit buffer is not empty.

SPI0CN0\_TXBMT\_\_SET EQU 002H ; The transmit buffer is empty.

SPI0CN0\_NSSMD\_\_FMASK EQU 00CH ; Slave Select Mode

SPI0CN0\_NSSMD\_\_SHIFT EQU 002H ; Slave Select Mode

SPI0CN0\_NSSMD\_\_3\_WIRE EQU 000H ; 3-Wire Slave or 3-Wire Master Mode. NSS signal is

; not routed to a port pin.

SPI0CN0\_NSSMD\_\_4\_WIRE\_SLAVE EQU 004H ; 4-Wire Slave or Multi-Master Mode. NSS is an input

; to the device.

SPI0CN0\_NSSMD\_\_4\_WIRE\_MASTER\_NSS\_LOW EQU 008H ; 4-Wire Single-Master Mode. NSS is an output and

; logic low.

SPI0CN0\_NSSMD\_\_4\_WIRE\_MASTER\_NSS\_HIGH EQU 00CH ; 4-Wire Single-Master Mode. NSS is an output and

; logic high.

SPI0CN0\_RXOVRN\_\_BMASK EQU 010H ; Receive Overrun Flag

SPI0CN0\_RXOVRN\_\_SHIFT EQU 004H ; Receive Overrun Flag

SPI0CN0\_RXOVRN\_\_NOT\_SET EQU 000H ; A receive overrun did not occur.

SPI0CN0\_RXOVRN\_\_SET EQU 010H ; A receive overrun occurred.

SPI0CN0\_MODF\_\_BMASK EQU 020H ; Mode Fault Flag

SPI0CN0\_MODF\_\_SHIFT EQU 005H ; Mode Fault Flag

SPI0CN0\_MODF\_\_NOT\_SET EQU 000H ; A master collision did not occur.

SPI0CN0\_MODF\_\_SET EQU 020H ; A master collision occurred.

SPI0CN0\_WCOL\_\_BMASK EQU 040H ; Write Collision Flag

SPI0CN0\_WCOL\_\_SHIFT EQU 006H ; Write Collision Flag

SPI0CN0\_WCOL\_\_NOT\_SET EQU 000H ; A write collision did not occur.

SPI0CN0\_WCOL\_\_SET EQU 040H ; A write collision occurred.

SPI0CN0\_SPIF\_\_BMASK EQU 080H ; SPI0 Interrupt Flag

SPI0CN0\_SPIF\_\_SHIFT EQU 007H ; SPI0 Interrupt Flag

SPI0CN0\_SPIF\_\_NOT\_SET EQU 000H ; A data transfer has not completed since the last

; time SPIF was cleared.

SPI0CN0\_SPIF\_\_SET EQU 080H ; A data transfer completed.

;------------------------------------------------------------------------------

; SPI0DAT Enums (SPI0 Data @ 0xA3)

;------------------------------------------------------------------------------

SPI0DAT\_SPI0DAT\_\_FMASK EQU 0FFH ; SPI0 Transmit and Receive Data

SPI0DAT\_SPI0DAT\_\_SHIFT EQU 000H ; SPI0 Transmit and Receive Data

;------------------------------------------------------------------------------

; TOFFH Enums (Temperature Sensor Offset High @ 0x8E)

;------------------------------------------------------------------------------

TOFFH\_TOFF\_\_FMASK EQU 0FFH ; Temperature Sensor Offset High

TOFFH\_TOFF\_\_SHIFT EQU 000H ; Temperature Sensor Offset High

;------------------------------------------------------------------------------

; TOFFL Enums (Temperature Sensor Offset Low @ 0x8D)

;------------------------------------------------------------------------------

TOFFL\_TOFF\_\_FMASK EQU 0C0H ; Temperature Sensor Offset Low

TOFFL\_TOFF\_\_SHIFT EQU 006H ; Temperature Sensor Offset Low

;------------------------------------------------------------------------------

; TH0 Enums (Timer 0 High Byte @ 0x8C)

;------------------------------------------------------------------------------

TH0\_TH0\_\_FMASK EQU 0FFH ; Timer 0 High Byte

TH0\_TH0\_\_SHIFT EQU 000H ; Timer 0 High Byte

;------------------------------------------------------------------------------

; TH1 Enums (Timer 1 High Byte @ 0x8D)

;------------------------------------------------------------------------------

TH1\_TH1\_\_FMASK EQU 0FFH ; Timer 1 High Byte

TH1\_TH1\_\_SHIFT EQU 000H ; Timer 1 High Byte

;------------------------------------------------------------------------------

; TL0 Enums (Timer 0 Low Byte @ 0x8A)

;------------------------------------------------------------------------------

TL0\_TL0\_\_FMASK EQU 0FFH ; Timer 0 Low Byte

TL0\_TL0\_\_SHIFT EQU 000H ; Timer 0 Low Byte

;------------------------------------------------------------------------------

; TL1 Enums (Timer 1 Low Byte @ 0x8B)

;------------------------------------------------------------------------------

TL1\_TL1\_\_FMASK EQU 0FFH ; Timer 1 Low Byte

TL1\_TL1\_\_SHIFT EQU 000H ; Timer 1 Low Byte

;------------------------------------------------------------------------------

; TMR2CN0 Enums (Timer 2 Control 0 @ 0xC8)

;------------------------------------------------------------------------------

TMR2CN0\_T2XCLK\_\_FMASK EQU 003H ; Timer 2 External Clock Select

TMR2CN0\_T2XCLK\_\_SHIFT EQU 000H ; Timer 2 External Clock Select

TMR2CN0\_T2XCLK\_\_SYSCLK\_DIV\_12\_CAP\_RTC EQU 000H ; External Clock is SYSCLK/12. Capture trigger is

; RTC/8.

TMR2CN0\_T2XCLK\_\_CMP\_0\_CAP\_RTC EQU 001H ; External Clock is Comparator 0. Capture trigger is

; RTC/8.

TMR2CN0\_T2XCLK\_\_SYSCLK\_DIV\_12\_CAP\_CMP EQU 002H ; External Clock is SYSCLK/12. Capture trigger is

; Comparator 0.

TMR2CN0\_T2XCLK\_\_RTC\_DIV\_8\_CAP\_CMP EQU 003H ; External Clock is RTC/8. Capture trigger is

; Comparator 0.

TMR2CN0\_TR2\_\_BMASK EQU 004H ; Timer 2 Run Control

TMR2CN0\_TR2\_\_SHIFT EQU 002H ; Timer 2 Run Control

TMR2CN0\_TR2\_\_STOP EQU 000H ; Stop Timer 2.

TMR2CN0\_TR2\_\_RUN EQU 004H ; Start Timer 2 running.

TMR2CN0\_T2SPLIT\_\_BMASK EQU 008H ; Timer 2 Split Mode Enable

TMR2CN0\_T2SPLIT\_\_SHIFT EQU 003H ; Timer 2 Split Mode Enable

TMR2CN0\_T2SPLIT\_\_16\_BIT\_RELOAD EQU 000H ; Timer 2 operates in 16-bit auto-reload mode.

TMR2CN0\_T2SPLIT\_\_8\_BIT\_RELOAD EQU 008H ; Timer 2 operates as two 8-bit auto-reload timers.

TMR2CN0\_TF2CEN\_\_BMASK EQU 010H ; Timer 2 Capture Enable

TMR2CN0\_TF2CEN\_\_SHIFT EQU 004H ; Timer 2 Capture Enable

TMR2CN0\_TF2CEN\_\_DISABLED EQU 000H ; Disable capture mode.

TMR2CN0\_TF2CEN\_\_ENABLED EQU 010H ; Enable capture mode.

TMR2CN0\_TF2LEN\_\_BMASK EQU 020H ; Timer 2 Low Byte Interrupt Enable

TMR2CN0\_TF2LEN\_\_SHIFT EQU 005H ; Timer 2 Low Byte Interrupt Enable

TMR2CN0\_TF2LEN\_\_DISABLED EQU 000H ; Disable low byte interrupts.

TMR2CN0\_TF2LEN\_\_ENABLED EQU 020H ; Enable low byte interrupts.

TMR2CN0\_TF2L\_\_BMASK EQU 040H ; Timer 2 Low Byte Overflow Flag

TMR2CN0\_TF2L\_\_SHIFT EQU 006H ; Timer 2 Low Byte Overflow Flag

TMR2CN0\_TF2L\_\_NOT\_SET EQU 000H ; Timer 2 low byte did not overflow.

TMR2CN0\_TF2L\_\_SET EQU 040H ; Timer 2 low byte overflowed.

TMR2CN0\_TF2H\_\_BMASK EQU 080H ; Timer 2 High Byte Overflow Flag

TMR2CN0\_TF2H\_\_SHIFT EQU 007H ; Timer 2 High Byte Overflow Flag

TMR2CN0\_TF2H\_\_NOT\_SET EQU 000H ; Timer 2 8-bit high byte or 16-bit value did not

; overflow.

TMR2CN0\_TF2H\_\_SET EQU 080H ; Timer 2 8-bit high byte or 16-bit value

; overflowed.

;------------------------------------------------------------------------------

; TMR2H Enums (Timer 2 High Byte @ 0xCD)

;------------------------------------------------------------------------------

TMR2H\_TMR2H\_\_FMASK EQU 0FFH ; Timer 2 High Byte

TMR2H\_TMR2H\_\_SHIFT EQU 000H ; Timer 2 High Byte

;------------------------------------------------------------------------------

; TMR2L Enums (Timer 2 Low Byte @ 0xCC)

;------------------------------------------------------------------------------

TMR2L\_TMR2L\_\_FMASK EQU 0FFH ; Timer 2 Low Byte

TMR2L\_TMR2L\_\_SHIFT EQU 000H ; Timer 2 Low Byte

;------------------------------------------------------------------------------

; TMR2RLH Enums (Timer 2 Reload High Byte @ 0xCB)

;------------------------------------------------------------------------------

TMR2RLH\_TMR2RLH\_\_FMASK EQU 0FFH ; Timer 2 Reload High Byte

TMR2RLH\_TMR2RLH\_\_SHIFT EQU 000H ; Timer 2 Reload High Byte

;------------------------------------------------------------------------------

; TMR2RLL Enums (Timer 2 Reload Low Byte @ 0xCA)

;------------------------------------------------------------------------------

TMR2RLL\_TMR2RLL\_\_FMASK EQU 0FFH ; Timer 2 Reload Low Byte

TMR2RLL\_TMR2RLL\_\_SHIFT EQU 000H ; Timer 2 Reload Low Byte

;------------------------------------------------------------------------------

; TMR3CN0 Enums (Timer 3 Control 0 @ 0x91)

;------------------------------------------------------------------------------

TMR3CN0\_T3XCLK\_\_FMASK EQU 003H ; Timer 3 External Clock Select

TMR3CN0\_T3XCLK\_\_SHIFT EQU 000H ; Timer 3 External Clock Select

TMR3CN0\_T3XCLK\_\_SYSCLK\_DIV\_12\_CAP\_RTC EQU 000H ; External Clock is SYSCLK/12. Capture trigger is

; RTC.

TMR3CN0\_T3XCLK\_\_EXTOSC\_DIV\_8\_CAP\_RTC EQU 001H ; External Clock is External Oscillator/8. Capture

; trigger is RTC.

TMR3CN0\_T3XCLK\_\_SYSCLK\_DIV\_12\_CAP\_EXTOSC EQU 002H ; External Clock is SYSCLK/12. Capture trigger is

; External Oscillator/8.

TMR3CN0\_T3XCLK\_\_RTC\_CAP\_EXTOSC EQU 003H ; External Clock is RTC. Capture trigger is External

; Oscillator/8.

TMR3CN0\_TR3\_\_BMASK EQU 004H ; Timer 3 Run Control

TMR3CN0\_TR3\_\_SHIFT EQU 002H ; Timer 3 Run Control

TMR3CN0\_TR3\_\_STOP EQU 000H ; Stop Timer 3.

TMR3CN0\_TR3\_\_RUN EQU 004H ; Start Timer 3 running.

TMR3CN0\_T3SPLIT\_\_BMASK EQU 008H ; Timer 3 Split Mode Enable

TMR3CN0\_T3SPLIT\_\_SHIFT EQU 003H ; Timer 3 Split Mode Enable

TMR3CN0\_T3SPLIT\_\_16\_BIT\_RELOAD EQU 000H ; Timer 3 operates in 16-bit auto-reload mode.

TMR3CN0\_T3SPLIT\_\_8\_BIT\_RELOAD EQU 008H ; Timer 3 operates as two 8-bit auto-reload timers.

TMR3CN0\_TF3CEN\_\_BMASK EQU 010H ; Timer 3 Capture Enable

TMR3CN0\_TF3CEN\_\_SHIFT EQU 004H ; Timer 3 Capture Enable

TMR3CN0\_TF3CEN\_\_DISABLED EQU 000H ; Disable capture mode.

TMR3CN0\_TF3CEN\_\_ENABLED EQU 010H ; Enable capture mode.

TMR3CN0\_TF3LEN\_\_BMASK EQU 020H ; Timer 3 Low Byte Interrupt Enable

TMR3CN0\_TF3LEN\_\_SHIFT EQU 005H ; Timer 3 Low Byte Interrupt Enable

TMR3CN0\_TF3LEN\_\_DISABLED EQU 000H ; Disable low byte interrupts.

TMR3CN0\_TF3LEN\_\_ENABLED EQU 020H ; Enable low byte interrupts.

TMR3CN0\_TF3L\_\_BMASK EQU 040H ; Timer 3 Low Byte Overflow Flag

TMR3CN0\_TF3L\_\_SHIFT EQU 006H ; Timer 3 Low Byte Overflow Flag

TMR3CN0\_TF3L\_\_NOT\_SET EQU 000H ; Timer 3 low byte did not overflow.

TMR3CN0\_TF3L\_\_SET EQU 040H ; Timer 3 low byte overflowed.

TMR3CN0\_TF3H\_\_BMASK EQU 080H ; Timer 3 High Byte Overflow Flag

TMR3CN0\_TF3H\_\_SHIFT EQU 007H ; Timer 3 High Byte Overflow Flag

TMR3CN0\_TF3H\_\_NOT\_SET EQU 000H ; Timer 3 8-bit high byte or 16-bit value did not

; overflow.

TMR3CN0\_TF3H\_\_SET EQU 080H ; Timer 3 8-bit high byte or 16-bit value

; overflowed.

;------------------------------------------------------------------------------

; TMR3H Enums (Timer 3 High Byte @ 0x95)

;------------------------------------------------------------------------------

TMR3H\_TMR3H\_\_FMASK EQU 0FFH ; Timer 3 High Byte

TMR3H\_TMR3H\_\_SHIFT EQU 000H ; Timer 3 High Byte

;------------------------------------------------------------------------------

; TMR3L Enums (Timer 3 Low Byte @ 0x94)

;------------------------------------------------------------------------------

TMR3L\_TMR3L\_\_FMASK EQU 0FFH ; Timer 3 Low Byte

TMR3L\_TMR3L\_\_SHIFT EQU 000H ; Timer 3 Low Byte

;------------------------------------------------------------------------------

; TMR3RLH Enums (Timer 3 Reload High Byte @ 0x93)

;------------------------------------------------------------------------------

TMR3RLH\_TMR3RLH\_\_FMASK EQU 0FFH ; Timer 3 Reload High Byte

TMR3RLH\_TMR3RLH\_\_SHIFT EQU 000H ; Timer 3 Reload High Byte

;------------------------------------------------------------------------------

; TMR3RLL Enums (Timer 3 Reload Low Byte @ 0x92)

;------------------------------------------------------------------------------

TMR3RLL\_TMR3RLL\_\_FMASK EQU 0FFH ; Timer 3 Reload Low Byte

TMR3RLL\_TMR3RLL\_\_SHIFT EQU 000H ; Timer 3 Reload Low Byte

;------------------------------------------------------------------------------

; CKCON0 Enums (Clock Control 0 @ 0x8E)

;------------------------------------------------------------------------------

CKCON0\_SCA\_\_FMASK EQU 003H ; Timer 0/1 Prescale

CKCON0\_SCA\_\_SHIFT EQU 000H ; Timer 0/1 Prescale

CKCON0\_SCA\_\_SYSCLK\_DIV\_12 EQU 000H ; System clock divided by 12.

CKCON0\_SCA\_\_SYSCLK\_DIV\_4 EQU 001H ; System clock divided by 4.

CKCON0\_SCA\_\_SYSCLK\_DIV\_48 EQU 002H ; System clock divided by 48.

CKCON0\_SCA\_\_EXTOSC\_DIV\_8 EQU 003H ; External oscillator divided by 8 (synchronized

; with the system clock).

CKCON0\_T0M\_\_BMASK EQU 004H ; Timer 0 Clock Select

CKCON0\_T0M\_\_SHIFT EQU 002H ; Timer 0 Clock Select

CKCON0\_T0M\_\_PRESCALE EQU 000H ; Counter/Timer 0 uses the clock defined by the

; prescale field, SCA.

CKCON0\_T0M\_\_SYSCLK EQU 004H ; Counter/Timer 0 uses the system clock.

CKCON0\_T1M\_\_BMASK EQU 008H ; Timer 1 Clock Select

CKCON0\_T1M\_\_SHIFT EQU 003H ; Timer 1 Clock Select

CKCON0\_T1M\_\_PRESCALE EQU 000H ; Timer 1 uses the clock defined by the prescale

; field, SCA.

CKCON0\_T1M\_\_SYSCLK EQU 008H ; Timer 1 uses the system clock.

CKCON0\_T2ML\_\_BMASK EQU 010H ; Timer 2 Low Byte Clock Select

CKCON0\_T2ML\_\_SHIFT EQU 004H ; Timer 2 Low Byte Clock Select

CKCON0\_T2ML\_\_EXTERNAL\_CLOCK EQU 000H ; Timer 2 low byte uses the clock defined by T2XCLK

; in TMR2CN0.

CKCON0\_T2ML\_\_SYSCLK EQU 010H ; Timer 2 low byte uses the system clock.

CKCON0\_T2MH\_\_BMASK EQU 020H ; Timer 2 High Byte Clock Select

CKCON0\_T2MH\_\_SHIFT EQU 005H ; Timer 2 High Byte Clock Select

CKCON0\_T2MH\_\_EXTERNAL\_CLOCK EQU 000H ; Timer 2 high byte uses the clock defined by T2XCLK

; in TMR2CN0.

CKCON0\_T2MH\_\_SYSCLK EQU 020H ; Timer 2 high byte uses the system clock.

CKCON0\_T3ML\_\_BMASK EQU 040H ; Timer 3 Low Byte Clock Select

CKCON0\_T3ML\_\_SHIFT EQU 006H ; Timer 3 Low Byte Clock Select

CKCON0\_T3ML\_\_EXTERNAL\_CLOCK EQU 000H ; Timer 3 low byte uses the clock defined by T3XCLK

; in TMR3CN0.

CKCON0\_T3ML\_\_SYSCLK EQU 040H ; Timer 3 low byte uses the system clock.

CKCON0\_T3MH\_\_BMASK EQU 080H ; Timer 3 High Byte Clock Select

CKCON0\_T3MH\_\_SHIFT EQU 007H ; Timer 3 High Byte Clock Select

CKCON0\_T3MH\_\_EXTERNAL\_CLOCK EQU 000H ; Timer 3 high byte uses the clock defined by T3XCLK

; in TMR3CN0.

CKCON0\_T3MH\_\_SYSCLK EQU 080H ; Timer 3 high byte uses the system clock.

;------------------------------------------------------------------------------

; TCON Enums (Timer 0/1 Control @ 0x88)

;------------------------------------------------------------------------------

TCON\_IT0\_\_BMASK EQU 001H ; Interrupt 0 Type Select

TCON\_IT0\_\_SHIFT EQU 000H ; Interrupt 0 Type Select

TCON\_IT0\_\_LEVEL EQU 000H ; INT0 is level triggered.

TCON\_IT0\_\_EDGE EQU 001H ; INT0 is edge triggered.

TCON\_IE0\_\_BMASK EQU 002H ; External Interrupt 0

TCON\_IE0\_\_SHIFT EQU 001H ; External Interrupt 0

TCON\_IE0\_\_NOT\_SET EQU 000H ; Edge/level not detected.

TCON\_IE0\_\_SET EQU 002H ; Edge/level detected

TCON\_IT1\_\_BMASK EQU 004H ; Interrupt 1 Type Select

TCON\_IT1\_\_SHIFT EQU 002H ; Interrupt 1 Type Select

TCON\_IT1\_\_LEVEL EQU 000H ; INT1 is level triggered.

TCON\_IT1\_\_EDGE EQU 004H ; INT1 is edge triggered.

TCON\_IE1\_\_BMASK EQU 008H ; External Interrupt 1

TCON\_IE1\_\_SHIFT EQU 003H ; External Interrupt 1

TCON\_IE1\_\_NOT\_SET EQU 000H ; Edge/level not detected.

TCON\_IE1\_\_SET EQU 008H ; Edge/level detected

TCON\_TR0\_\_BMASK EQU 010H ; Timer 0 Run Control

TCON\_TR0\_\_SHIFT EQU 004H ; Timer 0 Run Control

TCON\_TR0\_\_STOP EQU 000H ; Stop Timer 0.

TCON\_TR0\_\_RUN EQU 010H ; Start Timer 0 running.

TCON\_TF0\_\_BMASK EQU 020H ; Timer 0 Overflow Flag

TCON\_TF0\_\_SHIFT EQU 005H ; Timer 0 Overflow Flag

TCON\_TF0\_\_NOT\_SET EQU 000H ; Timer 0 did not overflow.

TCON\_TF0\_\_SET EQU 020H ; Timer 0 overflowed.

TCON\_TR1\_\_BMASK EQU 040H ; Timer 1 Run Control

TCON\_TR1\_\_SHIFT EQU 006H ; Timer 1 Run Control

TCON\_TR1\_\_STOP EQU 000H ; Stop Timer 1.

TCON\_TR1\_\_RUN EQU 040H ; Start Timer 1 running.

TCON\_TF1\_\_BMASK EQU 080H ; Timer 1 Overflow Flag

TCON\_TF1\_\_SHIFT EQU 007H ; Timer 1 Overflow Flag

TCON\_TF1\_\_NOT\_SET EQU 000H ; Timer 1 did not overflow.

TCON\_TF1\_\_SET EQU 080H ; Timer 1 overflowed.

;------------------------------------------------------------------------------

; TMOD Enums (Timer 0/1 Mode @ 0x89)

;------------------------------------------------------------------------------

TMOD\_T0M\_\_FMASK EQU 003H ; Timer 0 Mode Select

TMOD\_T0M\_\_SHIFT EQU 000H ; Timer 0 Mode Select

TMOD\_T0M\_\_MODE0 EQU 000H ; Mode 0, 13-bit Counter/Timer

TMOD\_T0M\_\_MODE1 EQU 001H ; Mode 1, 16-bit Counter/Timer

TMOD\_T0M\_\_MODE2 EQU 002H ; Mode 2, 8-bit Counter/Timer with Auto-Reload

TMOD\_T0M\_\_MODE3 EQU 003H ; Mode 3, Two 8-bit Counter/Timers

TMOD\_CT0\_\_BMASK EQU 004H ; Counter/Timer 0 Select

TMOD\_CT0\_\_SHIFT EQU 002H ; Counter/Timer 0 Select

TMOD\_CT0\_\_TIMER EQU 000H ; Timer Mode. Timer 0 increments on the clock

; defined by T0M in the CKCON0 register.

TMOD\_CT0\_\_COUNTER EQU 004H ; Counter Mode. Timer 0 increments on high-to-low

; transitions of an external pin (T0).

TMOD\_GATE0\_\_BMASK EQU 008H ; Timer 0 Gate Control

TMOD\_GATE0\_\_SHIFT EQU 003H ; Timer 0 Gate Control

TMOD\_GATE0\_\_DISABLED EQU 000H ; Timer 0 enabled when TR0 = 1 irrespective of INT0

; logic level.

TMOD\_GATE0\_\_ENABLED EQU 008H ; Timer 0 enabled only when TR0 = 1 and INT0 is

; active as defined by bit IN0PL in register IT01CF.

TMOD\_T1M\_\_FMASK EQU 030H ; Timer 1 Mode Select

TMOD\_T1M\_\_SHIFT EQU 004H ; Timer 1 Mode Select

TMOD\_T1M\_\_MODE0 EQU 000H ; Mode 0, 13-bit Counter/Timer

TMOD\_T1M\_\_MODE1 EQU 010H ; Mode 1, 16-bit Counter/Timer

TMOD\_T1M\_\_MODE2 EQU 020H ; Mode 2, 8-bit Counter/Timer with Auto-Reload

TMOD\_T1M\_\_MODE3 EQU 030H ; Mode 3, Timer 1 Inactive

TMOD\_CT1\_\_BMASK EQU 040H ; Counter/Timer 1 Select

TMOD\_CT1\_\_SHIFT EQU 006H ; Counter/Timer 1 Select

TMOD\_CT1\_\_TIMER EQU 000H ; Timer Mode. Timer 1 increments on the clock

; defined by T1M in the CKCON0 register.

TMOD\_CT1\_\_COUNTER EQU 040H ; Counter Mode. Timer 1 increments on high-to-low

; transitions of an external pin (T1).

TMOD\_GATE1\_\_BMASK EQU 080H ; Timer 1 Gate Control

TMOD\_GATE1\_\_SHIFT EQU 007H ; Timer 1 Gate Control

TMOD\_GATE1\_\_DISABLED EQU 000H ; Timer 1 enabled when TR1 = 1 irrespective of INT1

; logic level.

TMOD\_GATE1\_\_ENABLED EQU 080H ; Timer 1 enabled only when TR1 = 1 and INT1 is

; active as defined by bit IN1PL in register IT01CF.

;------------------------------------------------------------------------------

; SBUF0 Enums (UART0 Serial Port Data Buffer @ 0x99)

;------------------------------------------------------------------------------

SBUF0\_SBUF0\_\_FMASK EQU 0FFH ; Serial Data Buffer

SBUF0\_SBUF0\_\_SHIFT EQU 000H ; Serial Data Buffer

;------------------------------------------------------------------------------

; SCON0 Enums (UART0 Serial Port Control @ 0x98)

;------------------------------------------------------------------------------

SCON0\_RI\_\_BMASK EQU 001H ; Receive Interrupt Flag

SCON0\_RI\_\_SHIFT EQU 000H ; Receive Interrupt Flag

SCON0\_RI\_\_NOT\_SET EQU 000H ; A byte of data has not been received by UART0.

SCON0\_RI\_\_SET EQU 001H ; UART0 received a byte of data.

SCON0\_TI\_\_BMASK EQU 002H ; Transmit Interrupt Flag

SCON0\_TI\_\_SHIFT EQU 001H ; Transmit Interrupt Flag

SCON0\_TI\_\_NOT\_SET EQU 000H ; A byte of data has not been transmitted by UART0.

SCON0\_TI\_\_SET EQU 002H ; UART0 transmitted a byte of data.

SCON0\_RB8\_\_BMASK EQU 004H ; Ninth Receive Bit

SCON0\_RB8\_\_SHIFT EQU 002H ; Ninth Receive Bit

SCON0\_RB8\_\_CLEARED\_TO\_0 EQU 000H ; In Mode 0, the STOP bit was 0. In Mode 1, the 9th

; bit was 0.

SCON0\_RB8\_\_SET\_TO\_1 EQU 004H ; In Mode 0, the STOP bit was 1. In Mode 1, the 9th

; bit was 1.

SCON0\_TB8\_\_BMASK EQU 008H ; Ninth Transmission Bit

SCON0\_TB8\_\_SHIFT EQU 003H ; Ninth Transmission Bit

SCON0\_TB8\_\_CLEARED\_TO\_0 EQU 000H ; In Mode 1, set the 9th transmission bit to 0.

SCON0\_TB8\_\_SET\_TO\_1 EQU 008H ; In Mode 1, set the 9th transmission bit to 1.

SCON0\_REN\_\_BMASK EQU 010H ; Receive Enable

SCON0\_REN\_\_SHIFT EQU 004H ; Receive Enable

SCON0\_REN\_\_RECEIVE\_DISABLED EQU 000H ; UART0 reception disabled.

SCON0\_REN\_\_RECEIVE\_ENABLED EQU 010H ; UART0 reception enabled.

SCON0\_MCE\_\_BMASK EQU 020H ; Multiprocessor Communication Enable

SCON0\_MCE\_\_SHIFT EQU 005H ; Multiprocessor Communication Enable

SCON0\_MCE\_\_MULTI\_DISABLED EQU 000H ; Ignore level of 9th bit / Stop bit.

SCON0\_MCE\_\_MULTI\_ENABLED EQU 020H ; RI is set and an interrupt is generated only when

; the stop bit is logic 1 (Mode 0) or when the 9th

; bit is logic 1 (Mode 1).

SCON0\_SMODE\_\_BMASK EQU 080H ; Serial Port 0 Operation Mode

SCON0\_SMODE\_\_SHIFT EQU 007H ; Serial Port 0 Operation Mode

SCON0\_SMODE\_\_8\_BIT EQU 000H ; 8-bit UART with Variable Baud Rate (Mode 0).

SCON0\_SMODE\_\_9\_BIT EQU 080H ; 9-bit UART with Variable Baud Rate (Mode 1).

;------------------------------------------------------------------------------

; VDM0CN Enums (VDD Supply Monitor Control @ 0xFF)

;------------------------------------------------------------------------------

VDM0CN\_VDDOKIE\_\_BMASK EQU 008H ; VDD Early Warning Interrupt Enable

VDM0CN\_VDDOKIE\_\_SHIFT EQU 003H ; VDD Early Warning Interrupt Enable

VDM0CN\_VDDOKIE\_\_DISABLED EQU 000H ; Disable the VDD Early Warning interrupt.

VDM0CN\_VDDOKIE\_\_ENABLED EQU 008H ; Enable the VDD Early Warning interrupt.

VDM0CN\_VDDOK\_\_BMASK EQU 020H ; VDD Supply Status (Early Warning)

VDM0CN\_VDDOK\_\_SHIFT EQU 005H ; VDD Supply Status (Early Warning)

VDM0CN\_VDDOK\_\_VDD\_BELOW\_VDDWARN EQU 000H ; VDD is at or below the VDDWARN threshold.

VDM0CN\_VDDOK\_\_VDD\_ABOVE\_VDDWARN EQU 020H ; VDD is above the VDDWARN threshold.

VDM0CN\_VDDSTAT\_\_BMASK EQU 040H ; VDD Supply Status

VDM0CN\_VDDSTAT\_\_SHIFT EQU 006H ; VDD Supply Status

VDM0CN\_VDDSTAT\_\_VDD\_BELOW\_VRST EQU 000H ; VDD is at or below the VRST threshold.

VDM0CN\_VDDSTAT\_\_VDD\_ABOVE\_VRST EQU 040H ; VDD is above the VRST threshold.

VDM0CN\_VDMEN\_\_BMASK EQU 080H ; VDD Supply Monitor Enable

VDM0CN\_VDMEN\_\_SHIFT EQU 007H ; VDD Supply Monitor Enable

VDM0CN\_VDMEN\_\_DISABLED EQU 000H ; Disable the VDD supply monitor.

VDM0CN\_VDMEN\_\_ENABLED EQU 080H ; Enable the VDD supply monitor.

;------------------------------------------------------------------------------

; REF0CN Enums (Voltage Reference Control @ 0xD1)

;------------------------------------------------------------------------------

REF0CN\_TEMPE\_\_BMASK EQU 004H ; Temperature Sensor Enable

REF0CN\_TEMPE\_\_SHIFT EQU 002H ; Temperature Sensor Enable

REF0CN\_TEMPE\_\_TEMP\_DISABLED EQU 000H ; Disable the Temperature Sensor.

REF0CN\_TEMPE\_\_TEMP\_ENABLED EQU 004H ; Enable the Temperature Sensor.

REF0CN\_REFSL\_\_FMASK EQU 018H ; Voltage Reference Select

REF0CN\_REFSL\_\_SHIFT EQU 003H ; Voltage Reference Select

REF0CN\_REFSL\_\_VREF\_PIN EQU 000H ; The ADC0 voltage reference is the P0.0/VREF pin.

REF0CN\_REFSL\_\_VDD\_PIN EQU 008H ; The ADC0 voltage reference is the VDD pin.

REF0CN\_REFSL\_\_INTERNAL\_LDO EQU 010H ; The ADC0 voltage reference is the internal 1.8 V

; digital supply voltage.

REF0CN\_REFSL\_\_HIGH\_SPEED\_VREF EQU 018H ; The ADC0 voltage reference is the internal 1.65 V

; high speed voltage reference.

REF0CN\_GNDSL\_\_BMASK EQU 020H ; Analog Ground Reference

REF0CN\_GNDSL\_\_SHIFT EQU 005H ; Analog Ground Reference

REF0CN\_GNDSL\_\_GND\_PIN EQU 000H ; The ADC0 ground reference is the GND pin.

REF0CN\_GNDSL\_\_AGND\_PIN EQU 020H ; The ADC0 ground reference is the P0.1/AGND pin.

;------------------------------------------------------------------------------

; REG0CN Enums (Voltage Regulator Control @ 0xC9)

;------------------------------------------------------------------------------

REG0CN\_OSCBIAS\_\_BMASK EQU 010H ; High Frequency Oscillator Bias

REG0CN\_OSCBIAS\_\_SHIFT EQU 004H ; High Frequency Oscillator Bias

REG0CN\_OSCBIAS\_\_DISABLED EQU 000H ; Disable the precision High Frequency Oscillator

; bias.

REG0CN\_OSCBIAS\_\_ENABLED EQU 010H ; Enable the precision High Frequency Oscillator

; bias.