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; Declarations for Silabs C8051F52x and C8051F53x based microcontroller.

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; Devices: C8051F520/1/2/3/4/5/6/7

; C8051F530/1/2/3/4/5/6/7

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$SAVE

$NOLIST

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; Byte Registers

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P0 DATA 080H ; Port 0 Latch

SP DATA 081H ; Stack Pointer

DPL DATA 082H ; Data Pointer - Low byte

DPH DATA 083H ; Data Pointer - High byte

PCON DATA 087H ; Power Control

TCON DATA 088H ; Timer Control

TMOD DATA 089H ; Timer Mode

TL0 DATA 08AH ; Timer 0 - Low byte

TL1 DATA 08BH ; Timer 1 - Low byte

TH0 DATA 08CH ; Timer 0 - High byte

TH1 DATA 08DH ; Timer 1 - High byte

CKCON DATA 08EH ; Clock Control

PSCTL DATA 08FH ; Program Store R/W Control

P1 DATA 090H ; Port 1 Latch

LINADDR DATA 092H ; LIN Indirect Access Address

LINDATA DATA 093H ; LIN Indirect Access Data

LINCF DATA 095H ; LIN Configuration

SCON0 DATA 098H ; UART0 Control

SBUF0 DATA 099H ; UART0 Buffer

CPT0CN DATA 09BH ; Comparator 0 Control

CPT0MD DATA 09DH ; Comparator 0 Mode

CPT0MX DATA 09FH ; Comparator 0 Mux

SPI0CFG DATA 0A1H ; SPI0 Configuration

SPI0CKR DATA 0A2H ; SPI0 Clock Rate

SPI0DAT DATA 0A3H ; SPI0 Data

P0MDOUT DATA 0A4H ; Port 0 Output Mode Configuration

P1MDOUT DATA 0A5H ; Port 1 Output Mode Configuration

IE DATA 0A8H ; Interrupt Enable

CLKSEL DATA 0A9H ; Clock Select

OSCIFIN DATA 0B0H ; Internal Fine Oscillator Calibration

OSCXCN DATA 0B1H ; External Oscillator Control

OSCICN DATA 0B2H ; Internal Oscillator Control

OSCICL DATA 0B3H ; Internal Oscillator Calibration

FLKEY DATA 0B7H ; Flash Lock & Key

IP DATA 0B8H ; Interrupt Priority

ADC0TK DATA 0BAH ; ADC0 Tracking

ADC0MX DATA 0BBH ; ADC0 Mux Channel Selection

ADC0CF DATA 0BCH ; ADC0 CONFIGURATION

ADC0L DATA 0BDH ; ADC0 LSB Result

ADC0H DATA 0BEH ; ADC0 Data

P1MASK DATA 0BFH ; Port 1 Mask

ADC0GTL DATA 0C3H ; ADC0 Greater-Than Compare Low

ADC0GTH DATA 0C4H ; ADC0 Greater-Than Compare High

ADC0LTL DATA 0C5H ; ADC0 Less-Than Compare Word Low

ADC0LTH DATA 0C6H ; ADC0 Less-Than Compare Word High

P0MASK DATA 0C7H ; Port 1 Mask

TMR2CN DATA 0C8H ; Timer 2 Control

REG0CN DATA 0C9H ; Regulator Control

TMR2RLL DATA 0CAH ; Timer 2 Reload Low

TMR2RLH DATA 0CBH ; Timer 2 Reload High

TMR2L DATA 0CCH ; Timer 2 Low Byte

TMR2H DATA 0CDH ; Timer 2 High Byte

P1MAT DATA 0CFH ; Port 1 Match

PSW DATA 0D0H ; Program Status Word

REF0CN DATA 0D1H ; Voltage Reference 0 Control

P0SKIP DATA 0D4H ; Port 0 Skip

P1SKIP DATA 0D5H ; Port 1 Skip

P0MAT DATA 0D7H ; Port 0 Match

PCA0CN DATA 0D8H ; PCA0 Control

PCA0MD DATA 0D9H ; PCA0 Mode

PCA0CPM0 DATA 0DAH ; PCA0 Module 0 Mode

PCA0CPM1 DATA 0DBH ; PCA0 Module 1 Mode

PCA0CPM2 DATA 0DCH ; PCA0 Module 2 Mode

ACC DATA 0E0H ; Accumulator

XBR0 DATA 0E1H ; Digital Crossbar Configuration 0

XBR1 DATA 0E2H ; Digital Crossbar Configuration 1

IT01CF DATA 0E4H ; INT0/INT1 Configuration

EIE1 DATA 0E6H ; Extended Interrupt Enable 1

ADC0CN DATA 0E8H ; ADC 0 Control

PCA0CPL1 DATA 0E9H ; PCA0 Module 1 Capture/Compare Low Byte

PCA0CPH1 DATA 0EAH ; PCA0 Module 1 Capture/Compare High Byte

PCA0CPL2 DATA 0EBH ; PCA0 Module 2 Capture/Compare Low Byte

PCA0CPH2 DATA 0ECH ; PCA0 Module 2 Capture/Compare High Byte

RSTSRC DATA 0EFH ; Reset Source Configuration/Status

B DATA 0F0H ; B Register

P0MDIN DATA 0F1H ; Port 0 Input Mode

P1MDIN DATA 0F2H ; Port 1 Input Mode

EIP1 DATA 0F6H ; Extended Interrupt Priority 1

SPI0CN DATA 0F8H ; SPI0 Control

PCA0L DATA 0F9H ; PCA0 Counter Low Byte

PCA0H DATA 0FAH ; PCA0 Counter High Byte

PCA0CPL0 DATA 0FBH ; PCA Module 0 Capture/Compare Low Byte

PCA0CPH0 DATA 0FCH ; PCA Module 0 Capture/Compare High Byte

VDDMON DATA 0FFH ; VDD Monitor

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; Bit Definitions

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; TCON 0x88

TF1 BIT TCON.7 ; Timer 1 Overflow Flag

TR1 BIT TCON.6 ; Timer 1 On/Off Control

TF0 BIT TCON.5 ; Timer 0 Overflow Flag

TR0 BIT TCON.4 ; Timer 0 On/Off Control

IE1 BIT TCON.3 ; External Interrupt 1 Edge Flag

IT1 BIT TCON.2 ; External Interrupt 1 Type

IE0 BIT TCON.1 ; External Interrupt 0 Edge Flag

IT0 BIT TCON.0 ; External Interrupt 0 Type

; SCON0 0x98

S0MODE BIT SCON0.7 ; Serial Mode Control Bit 0

; Bit6 UNUSED

MCE0 BIT SCON0.5 ; Multiprocessor Communication Enable

REN0 BIT SCON0.4 ; Receive Enable

TB80 BIT SCON0.3 ; Transmit Bit 8

RB80 BIT SCON0.2 ; Receive Bit 8

TI0 BIT SCON0.1 ; Transmit Interrupt Flag

RI0 BIT SCON0.0 ; Receive Interrupt Flag

; IE 0xA8

EA BIT IE.7 ; Global Interrupt Enable

ESPI0 BIT IE.6 ; SPI0 Interrupt Enable

ET2 BIT IE.5 ; Timer 2 Interrupt Enable

ES0 BIT IE.4 ; UART0 Interrupt Enable

ET1 BIT IE.3 ; Timer 1 Interrupt Enable

EX1 BIT IE.2 ; External Interrupt 1 Enable

ET0 BIT IE.1 ; Timer 0 Interrupt Enable

EX0 BIT IE.0 ; External Interrupt 0 Enable

; IP 0xB8

; Bit7 UNUSED

PSPI0 BIT IP.6 ; SPI0 Interrupt Priority

PT2 BIT IP.5 ; Timer 2 Priority

PS0 BIT IP.4 ; UART0 Priority

PT1 BIT IP.3 ; Timer 1 Priority

PX1 BIT IP.2 ; External Interrupt 1 Priority

PT0 BIT IP.1 ; Timer 0 Priority

PX0 BIT IP.0 ; External Interrupt 0 Priority

; TMR2CN 0xC8

TF2H BIT TMR2CN.7 ; Timer 2 High-Byte Overflow Flag

TF2L BIT TMR2CN.6 ; Timer 2 Low-Byte Overflow Flag

TF2LEN BIT TMR2CN.5 ; Timer 2 Low-Byte Flag Enable

TF2CEN BIT TMR2CN.4 ; Timer 2 Capture Enable

T2SPLIT BIT TMR2CN.3 ; Timer 2 Split-Mode Enable

TR2 BIT TMR2CN.2 ; Timer 2 On/Off Control

T2RCLK BIT TMR2CN.1 ; Timer 2 Xclk/Rclk Select

T2XCLK BIT TMR2CN.0 ; Timer 2 Clk/8 Clock Source

; PSW 0xD0

CY BIT PSW.7 ; Carry Flag

AC BIT PSW.6 ; Auxiliary Carry Flag

F0 BIT PSW.5 ; User Flag 0

RS1 BIT PSW.4 ; Register Bank Select 1

RS0 BIT PSW.3 ; Register Bank Select 0

OV BIT PSW.2 ; Overflow Flag

F1 BIT PSW.1 ; User Flag 1

P BIT PSW.0 ; Accumulator Parity Flag

; PCA0CN 0xD8

CF BIT PCA0CN.7 ; PCA0 Counter Overflow Flag

CR BIT PCA0CN.6 ; PCA0 Counter Run Control Bit

; Bit5 UNUSED

; Bit4 UNUSED

; Bit3 UNUSED

CCF2 BIT PCA0CN.2 ; PCA0 Module 2 Interrupt Flag

CCF1 BIT PCA0CN.1 ; PCA0 Module 1 Interrupt Flag

CCF0 BIT PCA0CN.0 ; PCA0 Module 0 Interrupt Flag

; ADC0CN 0xE8

AD0EN BIT ADC0CN.7 ; ADC0 Enable

BURSTEN BIT ADC0CN.6 ; ADC0 Burst Enable

AD0INT BIT ADC0CN.5 ; ADC0 Conversion Complete Interrupt Flag

AD0BUSY BIT ADC0CN.4 ; ADC0 Busy Flag

AD0WINT BIT ADC0CN.3 ; ADC0 Window Compare Interrupt Flag

AD0LJST BIT ADC0CN.2 ; ADC0 Left Justified

AD0CM1 BIT ADC0CN.1 ; ADC0 Start Of Conversion Mode Bit 1

AD0CM0 BIT ADC0CN.0 ; ADC0 Start Of Conversion Mode Bit 0

; SPI0CN 0xF8

SPIF BIT SPI0CN.7 ; SPI0 Interrupt Flag

WCOL BIT SPI0CN.6 ; SPI0 Write Collision Flag

MODF BIT SPI0CN.5 ; SPI0 Mode Fault Flag

RXOVRN BIT SPI0CN.4 ; SPI0 Rx Overrun Flag

NSSMD1 BIT SPI0CN.3 ; SPI0 NSS Mode Bit 1

NSSMD0 BIT SPI0CN.2 ; SPI0 NSS Mode Bit 0

TXBMT BIT SPI0CN.1 ; SPI0 Transmit Buffer Empty Flag

SPIEN BIT SPI0CN.0 ; SPI0 Enable

$RESTORE