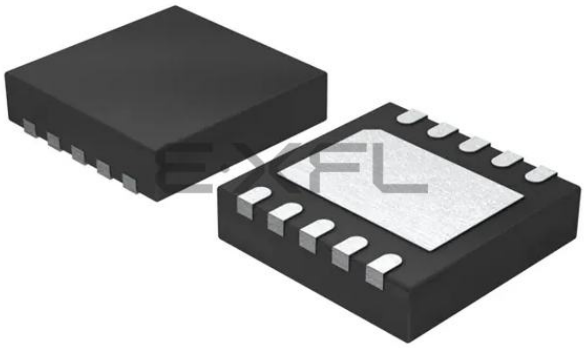

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What is "Embedded - Microcontrollers"?

"Embedded - Microcontrollers" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

Applications of "Embedded - Microcontrollers"

Details	
Product Status	Obsolete
Core Processor	8051
Core Size	8-Bit
Speed	25MHz
Connectivity	LINbus, SPI, UART/USART
Peripherals	Brown-out Detect/Reset, POR, PWM, Temp Sensor, WDT
Number of I/O	6
Program Memory Size	8KB (8K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	256 x 8
Voltage - Supply (Vcc/Vdd)	2V ~ 5.25V
Data Converters	A/D 6x12b
Oscillator Type	Internal
Operating Temperature	-40°C ~ 125°C (TA)
Mounting Type	Surface Mount
Package / Case	10-VFDFN Exposed Pad
Supplier Device Package	10-DFN (3x3)
Purchase URL	https://www.e-xfl.com/product-detail/silicon-labs/c8051f520-im

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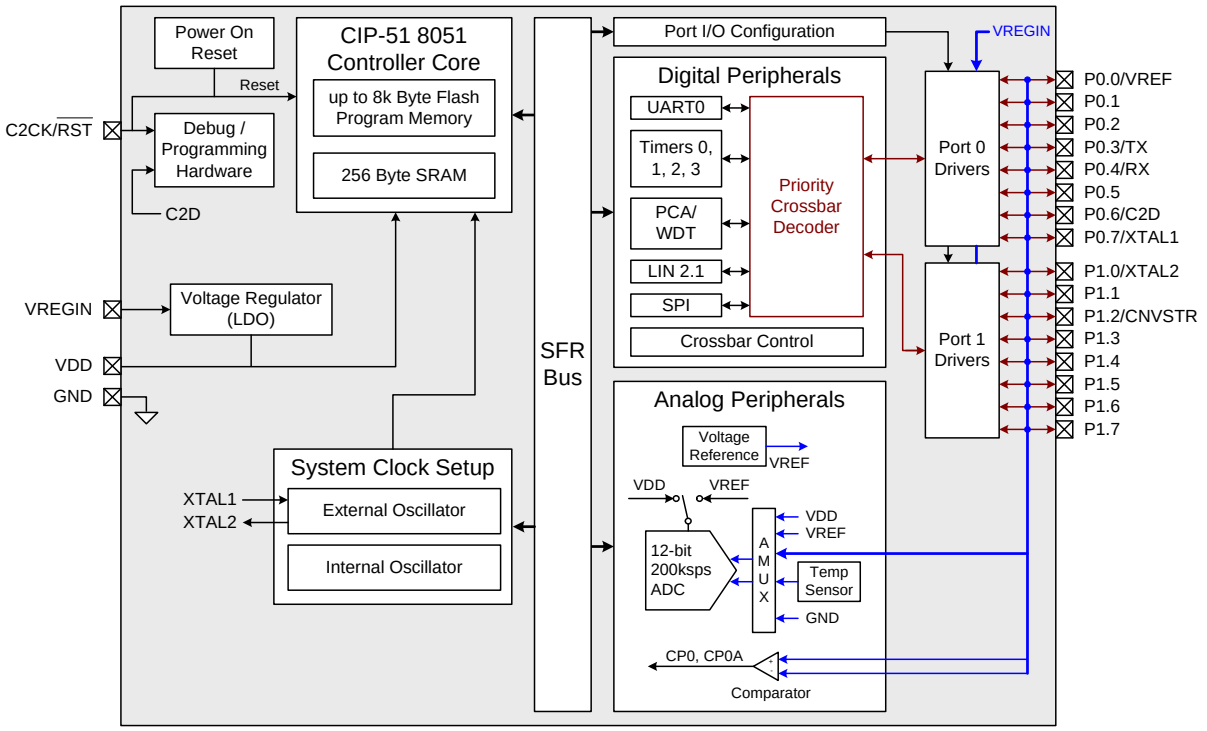

Figure 1.3. C8051F53x Block Diagram (Silicon Revision A)

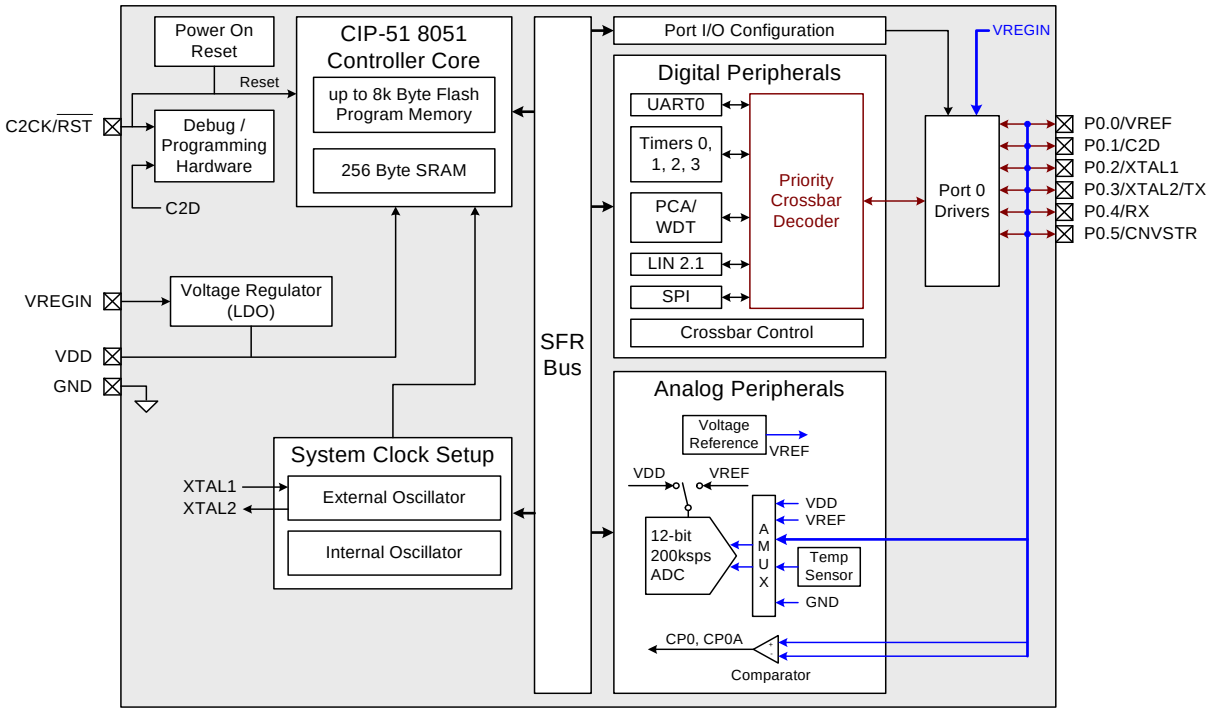

Figure 1.4. C8051F52x Block Diagram (Silicon Revision A)

Table 3.4. Pin Definitions for the C8051F53x and C805153xA (TSSOP 20) (Continued)

Name	Pin Numbers		Type	Description
	'F53xA 'F53x-C	'F53x		
V_{REGIN}	7	7		On-Chip Voltage Regulator Input.
P1.7	8	8	D I/O or A In	Port 1.7. See Port I/O Section for a complete description.
P1.6	9	9	D I/O or A In	Port 1.6. See Port I/O Section for a complete description.
P1.5	10	10	D I/O or A In	Port 1.5. See Port I/O Section for a complete description.
P1.4	11	11	D I/O or A In	Port 1.4. See Port I/O Section for a complete description.
P1.3	12	12	D I/O or A In	Port 1.3. See Port I/O Section for a complete description.
P1.2/ CNVSTR	13	13	D I/O or A In D In	Port 1.2. See Port I/O Section for a complete description. External Converter start input for the ADC0, see Section "4. 12-Bit ADC (ADC0)" on page 52 for a complete description.
P1.1	14	14	D I/O or A In	Port 1.1. See Port I/O Section for a complete description.
P1.0/ XTAL2	15	15	D I/O or A In D I/O	Port 1.0. See Port I/O Section for a complete description. External Clock Output. For an external crystal or resonator, this pin is the excitation driver. This pin is the external clock input for CMOS, capacitor, or RC oscillator configurations. See Section "14. Oscillators" on page 135.
P0.7/ XTAL1	16	16	D I/O or A In A In	Port 0.7. See Port I/O Section for a complete description. External Clock Input. This pin is the external oscillator return for a crystal or resonator. Section "14. Oscillators" on page 135.
P0.6/ C2D	17	17	D I/O or A In D I/O	Port 0.6. See Port I/O Section for a complete description. Bi-directional data signal for the C2 Debug Interface.
P0.5/RX*	18	—	D I/O or A In	Port 0.5. See Port I/O Section for a complete description.
P0.5	—	18	D I/O or A In	Port 0.5. See Port I/O Section for a complete description.
***Note:** Please refer to Section "20. Device Specific Behavior" on page 210.				