Welcome to E-XFL.COM

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	SMBus (2-Wire/I²C), UART/USART
Peripherals	POR, PWM, Temp Sensor, WDT
Number of I/O	8
Program Memory Size	8KB (8K x 8)
Program Memory Type	OTP
EEPROM Size	-
RAM Size	256 x 8
Voltage - Supply (Vcc/Vdd)	1.8V ~ 3.6V
Data Converters	A/D 8x10b
Oscillator Type	Internal
Operating Temperature	-40°C ~ 85°C (TA)
Mounting Type	Surface Mount
Package / Case	10-VFDFN Exposed Pad
Supplier Device Package	11-QFN (3x3)
Purchase URL	https://www.e-xfl.com/product-detail/silicon-labs/c8051t600-gmr

17.2. Interrupt Register Descriptions 82
17.3. INT0 and INT1 External Interrupt Sources 87
18. Power Management Modes 89
18.1. Idle Mode 89
18.2. Stop Mode 90
19. Reset Sources 92
19.1. Power-On Reset 93
19.2. Power-Fail Reset/VDD Monitor 94
19.3. External Reset 94
19.4. Missing Clock Detector Reset 94
19.5. Comparator0 Reset 94
19.6. PCA Watchdog Timer Reset 94
19.7. EPROM Error Reset 95
19.8. Software Reset 95
20. EPROM Memory 97
20.1. Programming and Reading the EPROM Memory 97
20.1.1. EPROM Write Procedure 97
20.1.2. EPROM Read Procedure 98
20.2. Security Options 98
20.3. Program Memory CRC 99
20.3.1. Performing 32-bit CRCs on Full EPROM Content 99
20.3.2. Performing 16-bit CRCs on 256-Byte EPROM Blocks 99
21. Oscillators and Clock Selection 100
21.1. System Clock Selection 100
21.2. Programmable Internal High-Frequency (H-F) Oscillator 101
21.3. External Oscillator Drive Circuit 103
21.3.1. External RC Example 105
21.3.2. External Capacitor Example 105
22. Port Input/Output 106
22.1. Port I/O Modes of Operation 107
22.1.1. Port Pins Configured for Analog I/O 107
22.1.2. Port Pins Configured For Digital I/O 107
22.1.3. Interfacing Port I/O to 5V Logic 108
22.2. Assigning Port I/O Pins to Analog and Digital Functions 109
22.2.1. Assigning Port I/O Pins to Analog Functions 109
22.2.2. Assigning Port I/O Pins to Digital Functions 109
22.2.3. Assigning Port I/O Pins to External Digital Event Capture Functions 110
22.3. Priority Crossbar Decoder 111
22.4. Port I/O Initialization 114
22.5. Special Function Registers for Accessing and Configuring Port I/O 118
23. SMBus 120
23.1. Supporting Documents 121
23.2. SMBus Configuration 121
23.3. SMBus Operation 121
23.3.1. Transmitter Vs. Receiver 122