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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	900/L1
Core Size	16-Bit
Speed	27MHz
Connectivity	EBI/EMI, IrDA, UART/USART
Peripherals	DMA
Number of I/O	81
Program Memory Size	256KB (256K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	16K x 8
Voltage - Supply (Vcc/Vdd)	-
Data Converters	A/D 8x10b
Oscillator Type	Internal
Operating Temperature	-20°C ~ 70°C (TA)
Mounting Type	Surface Mount
Package / Case	100-BQFP
Supplier Device Package	100-QFP (20x14)
Purchase URL	https://www.e-xfl.com/product-detail/toshiba-semiconductor-and-storage/tmp91fy22fg

CMOS 16-Bit Microcontrollers

TMP91FY22F

1. Outline and Features

TMP91FY22F is a high-speed 16-bit microcontroller designed for the control of various mid- to large-scale equipment.

TMP91FY22F comes in a 100-pin flat package.

Listed below are the features.

- (1) High-speed 16-bit CPU (900/L1 CPU)
 - Instruction mnemonics are upward-compatible with TLCS-90/900
 - 16 Mbytes of linear address space
 - General-purpose registers and register banks
 - 16-bit multiplication and division instructions; bit transfer and arithmetic instructions
 - Micro DMA: 4-channels (1.0 μ s/2 bytes at 16 MHz)
- (2) Minimum instruction execution time: 148 ns (at 27 MHz)
- (3) Built-in RAM: 16 Kbytes
Built-in ROM: 256 Kbytes Flash memory
2 Kbytes mask ROM (used for booting)
- (4) External memory expansion
 - Expandable up to 16 Mbytes (shared program/data area)
 - Can simultaneously support 8-/16-bit width external data bus
... Dynamic data bus sizing
- (5) 8-bit timers: 8 channels
- (6) 16-bit timer/event counter: 2 channels
- (7) General-purpose serial interface: 2 channels
UART/ Synchronous mode: 2 channels
IrDA ver1.0 (115.2 kbps) supported