PRODUCT PREVIEW

T-49-19-65

# 80C198-16/83C198-16
# COMMERCIAL/EXPRESS CHMOS MICROCONTROLLER

## 8 Kbytes of OTPROM

- 8 Kbytes of On-Chip ROM Available
- 232 Byte Register File
- Register-to-Register Architecture
- 28 Interrupt Sources/16 Vectors
- 1.75 μs 16 x 16 Multiply (16 MHz)
- 3.0 μs 32/16 Divide (16 MHz)
- Powerdown and Idle Modes
- 16-Bit Watchdog Timer
- 8-Bit External Bus
- Full Duplex Serial Port
- High Speed I/O Subsystem
- 16-Bit Timer
- 16-Bit Counter
- Pulse-Width-Modulated Output
- Four 16-Bit Software Timers
- 10-Bit A/D Converter with Sample/Hold
- Extended Temperature Available

The 80C198 family offers low-cost entry into Intel's powerful MCS®-96 16-bit microcontroller architecture. Intel's CHMOS process provides a high performance processor along with low power consumption. To further reduce power requirements, the processor can be placed into Idle or Powerdown Mode.

The 83C198 has 8 Kbytes of on-chip ROM available.

Bit, byte, word and some 32-bit operations are available on the 80C198 family. With a 16 MHz oscillator a 16-bit addition takes 0.50 μs, and the instruction times average 0.37 μs to 1.1 μs in typical applications.

Four high-speed capture inputs are provided to record times when events occur. Six high-speed outputs are available for pulse or waveform generation. The high-speed output can also generate four software timers or start an A/D conversion. Events can be based on the timer or counter. Also provided on-chip are an A/D converter, serial port, watchdog timer and a pulse-width-modulated output signal.

With the commercial (standard) temperature option, operational characteristics are guaranteed over the temperature range of 0°C to +70°C. With the extended temperature range option, operational characteristics are guaranteed over the temperature range of −40°C to +85°C. Unless otherwise noted when the Preliminary Data Sheet for the 83C198-16/80C198-16 Express is published, the specifications for these options are the same as the commercial EPROM data sheet (see the 87C198/87C198-16 Commercial Preliminary Data Sheet 272034).

Package Designators: N = 52-pin PLCC, S = 80-pin QFP (commercial only). Prefix Designators: T = Extended Temperature.

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