FEATURES

- Pin-for-Pin compatible with AMD® Am186EM/188EM devices
- All features are retained, including:
  - PLL allowing same crystal/system clock frequency
  - 8086/8088 instruction set with additional 186 instruction set extensions
  - Programmable interrupt controller
  - Two DMA channels
  - Three 16-bit timers
  - Programmable chip select logic and wait-state generator
  - Synchronous serial port
  - Asynchronous serial port (UART)
  - Up to 32 programmable I/O pins (PIO)
- Pseudo-static/dynamic RAM controller
- Fully static CMOS design
- 40 MHz operation at industrial operating conditions
- +5 VDC power supply
- Available packages:
  - 100-pin Thin Quad Flat Pack (TQFP)
  - 100-pin Plastic Quad Flat Pack (PQFP)

The IA186EM/188EM is a form, fit, and function replacement for the original Advanced Micro Devices® Am186EM/188EM family of microcontrollers. innovASIC produces replacement ICs using its MILES™, or Managed IC Lifetime Extension System, cloning technology. This technology produces replacement ICs far more complex than "emulation" while ensuring they are compatible with the original IC. MILES™ captures the design of a clone so it can be produced even as silicon technology advances. MILES™ also verifies the clone against the original IC so that even the "undocumented features" are duplicated.

This Advance Information Sheet contains preliminary information for the IA186EM/188EM. The complete data sheet which documents all necessary engineering information about the IA186EM/188EM including functional and I/O descriptions, electrical characteristics, and applicable timing will be available when the device nears completion.

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1-888-824-4184

Description

The IA186EM/188EM family of microcontrollers replaces obsolete AMD® Am186EM/188EM devices, allowing customers to retain existing board designs, software compilers/assemblers, and emulation tools, thereby avoiding expensive redesign efforts.

The IA186EM/188EM microcontrollers are an upgrade for the 80C186/188 microcontroller designs, with integrated peripherals to provide increased functionality and reduce system costs. The InnovASIC devices are designed to satisfy requirements of embedded products designed for telecommunications, office automation and storage, and industrial controls.

Ordering Information

The IA186EM/188EM prototypes will be available in Q4 2002 timeframe. Specific versions include:

- IA186EM-TQF100I – 16-bit bus version in 100-pin TQFP package
- IA186EM-PQF100I – 16-bit bus version in 100-pin PQFP package
- IA188EM-TQF100I – 8-bit bus version in 100-pin TQFP package
- IA188EM-PQF100I – 8-bit bus version in 100-pin PQFP package

For additional information, contact Mike Berg, V.P. Sales and Marketing, at 1-888-824-4184, extension 128.

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