innov**ASIC**

FEATURES

- Pin-for-Pin compatible with AMD® 80C186/188 devices
- Fully static CMOS design
- 40 MHz operation at industrial operating conditions
- All features are retained, including:
    - Enhanced mode with DRAM refresh control and power save features
    - 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
- Available packages:
    - 80-pin Thin Quad Flat Pack (TQFP)
    - 80-pin Plastic Quad Flat Pack (PQFP)

The IA80C186/188 is a form, fit, and function replacement for the original Advanced Micro Devices® AM80C186/188 family of microcontrollers. innov**ASIC** 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 IA80C186/188. The complete data sheet which documents all necessary engineering information about the IA80C186/188 including functional and I/O descriptions, electrical characteristics, and applicable timing will be available when the device nears completion.

DESCRIPTION

The IA80C186/188 family of microcontrollers are CMOS high-integration microcontrollers that replace obsolete AMD® 80C186/188 devices, allowing customers to retain existing board designs, software compilers/assemblers, and emulation tools, thereby avoiding expensive redesign efforts.

The InnovASIC device provides an enhanced 40 MHz operation at industrial operating conditions, and retains the Enhanced Mode with DRAM refresh control and power save features. The Enhanced Mode of operation allows the full feature set of the 80C186/188 to be utilized. The IA80C186/188 is upward compatible with 8086 and 8088 software and fully compatible with 80186 and 80188 software.

• Ordering Information

The IA80C186/188 prototypes will be available in Q4 2002 timeframe. Specific versions include:
   o IA80C186-TQF80I – 16-bit bus version in 80-pin TQFP package
   o IA80C186-PQF80I – 16-bit bus version in 80-pin PQFP package
   o IA80C188-TQF80I – 8-bit bus version in 80-pin TQFP package
   o IA80C188-PQF80I – 8-bit bus version in 80-pin PQFP package

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