DS-186 In-Circuit Emulator

In-Circuit Emulator for 80C186/8 Microprocessors

FEATURES

Support for 80C186/8/XL/EA/EB/EC, 8086/8, V20/25/30/40/50 and other Microprocessors

Full-speed Emulation up to 25MHz

1MB of Zero-Wait-State Mapped Memory

8K x 32-bit Frames Dynamic Trace Buffer

1MB Hardware Breakpoints

USB Communication Link

Numeric Coprocessor Support

Paradigm Debugger

Support for Borland, Microsoft and Intel Compilers

Full Support for C, C++, Pascal and Assembler

DESCRIPTION

DS-186 is a real-time in-circuit emulator dedicated to the 80C186/80C188 family of microprocessors manufactured by Intel, AMD and NEC. The emulator provides a versatile and efficient tool for debugging, developing and manufacturing of systems designed with these microprocessors. The system can be adapted to the different derivatives of the 80C186 by replacing adapters with standard microprocessors. DS-186 operates with a PC or compatible computer through a USB interface.
The software includes Paradigm state-of-the art debugger designed for x86s.

EMULATION MEMORY
DS-186 provides 1 MByte of zero-wait state mapped memory.

MEMORY MAPPING
Memory can be mapped in boundaries of 1 KByte with a programmable number of wait-states.

EMULATION SPEED
The system operates up to 25MHz. Emulation speed is limited by the maximum frequency of the microprocessor placed on the adapter.

TRACE AND LOGIC ANALYZER
The Real-Time Trace Buffer has the capability of recording 8K x 32-bit frames. The Trace display shows the source, assembler and bus cycles.

HARDWARE BREAKPOINTS
DS-186 has the ability to set 1M hardware breakpoints. The program is executed until a specified breakpoint condition is reached. Breakpoints are qualified by instruction fetch, instruction execution, data contents, read/write from/to memory and I/O.

LANGUAGES AND FILE FORMATS
DS-186 accepts Intel OMF-86 and .EXE files. These files are converted by DS-186 utilities to absolute executable format. Assembler and High-Level-Language files are supported by DS-186.

SUPPORTED COMPILERS AND ASSEMBLERS
Most of the popular compilers are supported by DS-186; Borland C++, Turbo C++, Turbo C, Microsoft C, Microsoft C++, Intel C-86, Intel PLM-86 and more. DS-186 also accepts files generated by Turbo Assembler, Microsoft Assembler and ASM86.

PERSONALITY ADAPTERS

DS-186 uses standard microprocessors for hardware and software emulation. The selection of a different microprocessor is made by replacing the microprocessor in the adapter if it is pin-to-pin compatible or changing the adapter. The system runs at the frequency of the crystal on the adapter or from the clock source supplied by the user hardware.

Adapter	*Supported Devices*
AD-86	V20, V30, 8086, 8088, 80C86, 80C88
AD-186	80186, 80188, 80C186, 80C188, 80C186XL, 80C188XL, 80C186EA, 80C188EA
AD-186EB	80C186EB, 80C188EB
AD-186EC	80C186EC, 80C188EC
AD-V25	V25
AD-V50	V40, V50

HOST CHARACTERISTICS

PC or compatible with one USB port.

MICROPROCESSOR VIEWS

Assembler and disassembler windows support the entire instruction set. The peripheral device views allow display and modification of any on-chip peripheral register.

DATA VIEWS

Data views allow to examine source modules in native or disassembled formats, breakpoints, CPU registers, memory contents, complex data structures like pointers, arrays, structures, unions, bit fields and linked lists, watches, inspectors and many more.

EXECUTION CONTROL

DS-186 can execute a step, halt the program execution, run to a function call, and execute functions or procedures with parameters to test individual routines.

ON-LINE HELP

A custom context-sensitive help is always available.

INPUT POWER
5VDC/1.5A.

MECHANICAL DIMENSIONS
26mm x 151mm x 195mm

ITEMS SUPPLIED AS STANDARD
In-circuit emulator with 1M breakpoints, 1 MByte of emulation memory,

OPTIONS
Trace module and personality adapters for the different supported microprocessors.

WARRANTY
Two years limited warranty, parts and labor.

DS-186 - ORDERING INFORMATION

Item	*Description*
DS-186	Emulator, Software, Power Supply, Cables, 1 MByte Memory
TR-186	Trace Memory
A-86	Adapter for 8086, 8088, NEC V20 and NEC V30 - 40-pin DIP and Emulation Header
A-186	Adapter for 80C186/8/EA/XL - 68-pin PLCC and Emulation Header
A-186EB	Adapter for 80C186/8-EB - 84-pin PLCC and Emulation Header
A-186EC	Adapter for 80C186/8-EC - 100-pin QFP and Emulation Header
A-V25	Adapter for NEC V25 - 84-pin PLCC and Emulation Header
A-V50	Adapter for NEC V50 and V40 - 68-pin PLCC and Emulation Header
ADP-100Q-SMC	Adapter for 80C186EC-PQFP
ADP-100Q-AMP	Adapter for 80C186EC-PQFP
ADP-100Q-TEX	Adapter for 80C186EC-PQFP
ADP-100Q-SOL	Adapter for 80C186EC-PQFP

ADP-100J-SMC   Adapter for 80C186EC-EIAJ

ADP-100J-SOL   Adapter for 80C186EC-EIAJ

ADP-80Q-EB   Adapter for 80C186EB-PQFP

ADP-V25-QFP   Adapter for NEC V25 PLCC to QFP