

## KSE5

- Full-Featured Support for all Intel486™ and Intel386™ Processors
- Provides Fully Transparent, Non-Intrusive Debugging
- View all Registers, Including all Internal Peripherals
- Supports Real, Protected, Virtual86 and System Management Modes
- Source Level Debug for all Popular Compilers
- Levels of Complex Breakpoint Sequences
- 32K Trace Depth with 112 Channels
- Performance Analysis Included

Kontron Elektronik's KSE5 in-circuit emulators offer total debugging capability for all Intel486 and Intel386 processors. The KSE5 In-Circuit Emulator also supports the SL Enhanced versions of the Intel486 processor and can debug 3.3 and 5 Volt target systems at clock rates of 1x or 2x. A single personality module supports SX and DX derivatives with clock speeds to 33 MHz and a second module supports the IntelDX2™ processors to 66 MHz and the IntelDX4™ processors.

A sophisticated, Microsoft Windows\* 3.1-compatible interface allows the engineer to edit, compile and debug simultaneously. User-configured icons can be made for frequently used commands or macros which will reduce debug time. This software package combined with special technology permits transparent emulation even in Protected mode, and allows display and modification of Main, MMU and Peripheral registers, plus the segment descriptor tables. The KSE5 employs the latest FPGA technology and sub-nanosecond delay buffers which allow the engineer to practically replicate the timing of the original CPU chip.

Complex trigger sequences of up to 16 levels can be constructed from Real, Protected, Virtual 8086, and System Management mode (SMM) combined with 8 bus events, addresses, address

ranges, data values, and processor status. The trace memory of the 32K x 112 bit real time trace analyzer provides recordings that can be displayed in the actual raw trace, or as the execution trace. The KSE5 also features cache reconstruction which allows a program that is executed in the On-Chip-Cache to be captured and displayed by the trace memory. Performance analysis is also available.

The overlay memory (up to 8 Mbytes) can be mapped for any bus configuration located throughout the entire memory address range, even during System Management mode operation.

The KSE5 provides source level debug in high level languages and supports most popular compilers including C++ and Ada.

All Kontron Elektronik emulators meet the demanding European EMI requirements, specified by the CE mark. This provides a very reliable and accurate system for testing critical targets, even in highly sensitive environments.

Kontron Elektronik is a wholly owned subsidiary of BMW. All development tools have a one year limited warranty. Sales, applications support and service are available worldwide.

PROCESSORS SUPPORTED:  
IntelDX4, IntelDX2, i486SX, i486SL Enhanced and Ultra Low Power Processors; i386EX and C-Step, i386CX, i386DX, i386SX processors

DEVELOPMENT PLATFORMS:  
PC/Windows 3.x, Windows 95, Windows NT, Sun, Unix, HP Workstation, RS6000

AVAILABILITY:  
Now

CONTACT:  
Kontron Elektronik Corp.  
4440 Von Karman Ave., #200  
Newport Beach, CA 92660  
Phone: (800) 566-8766  
FAX: (714) 851-3180  
e-mail: [dtsales@kontron.com](mailto:dtsales@kontron.com)  
WWW: <http://www.kontron.com>

