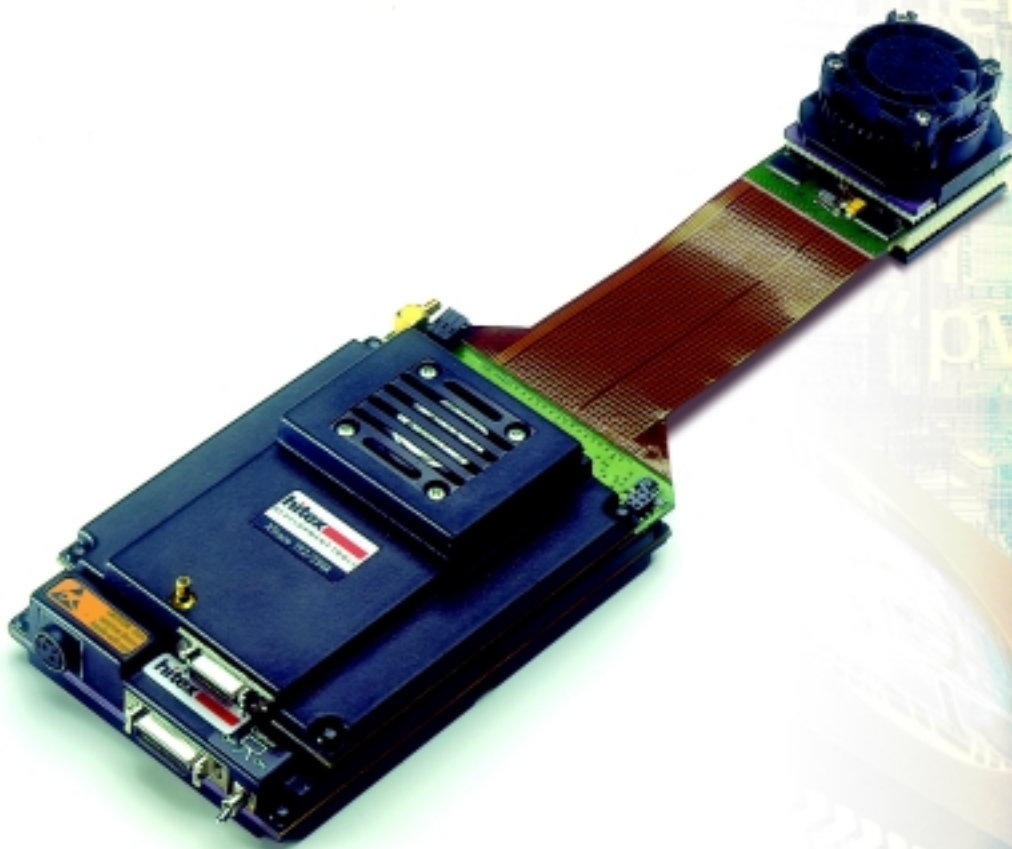


DProbeP5

hitex 
DEVELOPMENT TOOLS



In-Circuit
DProbeP5
Emulator

DProbeP5



Modular Emulation System for Intel Pentium® Processors

Hitex's DProbeP5 is a modular, extensible, robust emulation system for Pentium® processors. It emulates Pentium® processor derivatives regardless of clock frequency, system voltage, or the presence of an MMX unit. The DProbeP5 base unit, which can be used as a stand-alone debugging tool, is the foundation of this modular emulator. Adding either of 2 optional trace modules – DTrace or XTrace – functionally extends the base unit. These extension modules simply plug into the back of the very compact base unit. Although both trace modules provide for user-managed recording and examination of program flow, they possess somewhat different features. The major difference between the 2 trace modules is the number of complex Bus Events and the depth of the trace-memory – the DTrace module possesses a 64K deep trace memory, while the XTrace operates to a depth of 256K. See the table at the end of this brochure for technical details.

Highlights

- Smallest emulator available: the Probe Head is slightly larger than the target CPU;
- Real-time debugging with no target system resources used;
- Support of Pentium® processors up to the maximum frequency at all operating voltages;
- Support of popular compilers and linkers;
- Powerful trace and breakpoint system;
- Support of Real-Time Operating Systems (RTOS);
- Choice of XDB or HiTOP debugger software;
- Extensive macro capabilities.

The modular DProbeP5 is an excellent investment with affordable, flexible and comprehensive features that will support professional Pentium® processor designs for many years.



Mobility With The PC Card

The DProbeP5 can be operated via a PCMCIA interface. If you require mobility for your project, you can take the complete development environment with you, including DProbe and laptop computer.

Hot Plug-In Via Debug Connection

In order to permit debugging instruments to be plugged into running target systems, Intel specified a standard debug port. Any user who provides the appropriate connector on the target system may take advantage of this feature to monitor status and to intervene in program flow. The Hitex DProbeP5 emulator supports this specification.





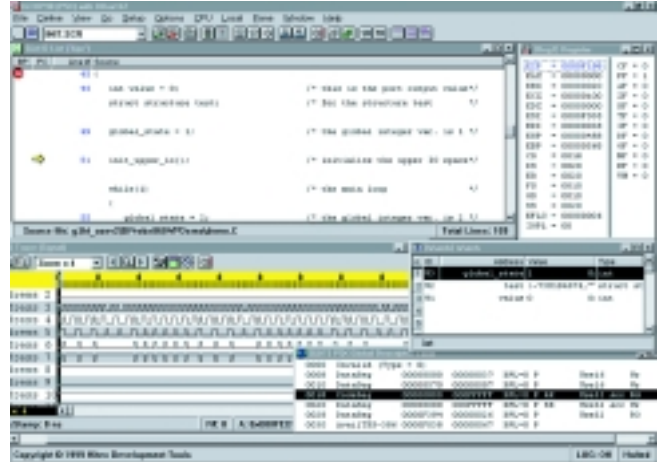
The Operating Environment: HiTOP

HiTOP, our high-performance software debugger used for all Hitex products, is an easy-to-use graphical user-interface that provides the user with a complete, modern compiler and assembler language debugging-environment that also controls all emulator resources.

It offers the following key commands: set breakpoints, examine and modify variables, display and modify structures according to their type, follow any branch-list or data-trees by a simple mouse click, analyze C-expressions dynamically, and display detailed information on all program objects.

Since HiTOP has been tailored to work with other software tools, one can optionally work at a higher level of software abstraction, such as with CASE-Tools. HiTOP is also compatible with third-party cross-compilers.

HiTOP includes the powerful macro-language, HiSCRIPT, which allows the user to repeatedly execute user-determined command sequences. In addition to the usual purposes of macro-languages, HiSCRIPT may also be used for test automation and regression testing. This is an up-to-date, full-featured user-interface that will accelerate the designer's project to a successful conclusion.



Remote Emulator Operation

The DProbeP5 can be operated via a TCP/IP-based network such as the Internet or a WAN. This means that remote testing and diagnosis can be conducted on the target system at a different location from that of the engineer's workplace. Remote debugging may be beneficial when working on difficult-to-access systems or under unfavorable conditions.



One-Stop Development Environments

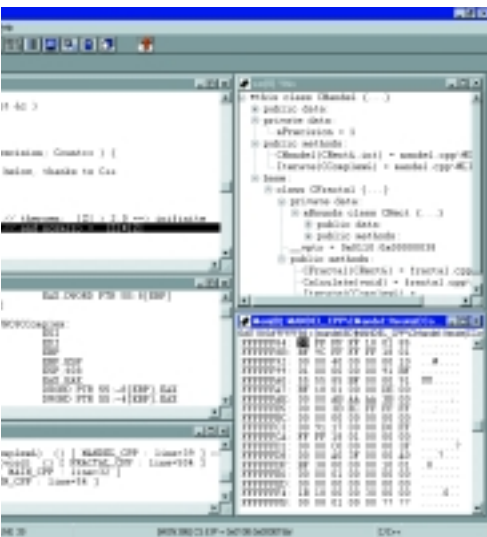
Hitex provides complete solutions for design engineers. In order to accomplish this, we work together with leading software manufacturers to assure interoperability among the various software packages. Hitex markets many third-party products together with its own.



XDB Debugger from CAD-UL

An excellent user-interface for debugging Pentium® processor code is the well-known and proven XDB debugger by CAD-UL. CAD-UL provides a complete solution for software development, from its Intel-compatible C compiler to its XDB debugger. Using the CAD-UL tool set, the design engineer can develop applications for all Intel memory models, including full protected-mode. Hitex and CAD-UL collaborated to create this comprehensive hardware-software debugging environment.

XDB's user-friendly graphical user interface has the same look and feel whether the user works under Windows or UNIX hosts. The easy to comprehend dynamic call hierarchy display allows the user to view and modify the value of local variables and call-parameters. XDB has provision for debugging with real-time operating systems (pSOS+, RMOS3, RMX). In addition to CAD-UL's own C++ and C compilers, XDB also supports compilers from Microsoft and Borland. XDB supports C, C++, Pascal, PLM and assembler. While XDB is ideal for software development, it also provides full control over DProbeP5 hardware features including complex triggers and trace-control.



Technical Data

		DProbeP5 base unit	plus DTrace144 module	plus XTrace192 module
Supported Processors	All Pentium Processors supported up to the max. processor frequency, including MMX and Low-Power.			
Real-time-debugging	Uses the CPU of the target system. Clock frequencies of up to 66 MHz. Memory access without additional wait states. Performance monitoring of internal CPU processes.			
Serial Debug Acceleration Unit (SDA)	Rapid communication between host and processor's debug interface by means of hardware acceleration. Fast transfer times; short reaction times.			
Trace System	Real-time trace: size/channels;	-/-	64 k/144	64 k or 256 k/192
	Time measurement; resolution;	-	50 ns up to 81 days	10 ns up to 16 days
	Clock-cycle trace	-	-	
	Bus-cycle trace	-		
	Trace with active cache up to maximum processor frequency;	-		
	Execution trace display, even if program executes from cache memory	-		
	HLL trace display	-		
	Break at "Trace Full"	-		
	Trace of external transfers i.e. DMA transfers	-	-	
Breakpoint Logic	Hardware breakpoints/passpoints in real, protected and virtual mode	4/-	4/4	4/4
	Hardware breakpoints/passpoints in system management mode (SMM)	4/-	4/4	4/4
	Software breakpoints	256	256	256
	Trigger output individually programmable	-	-	
	Accesses even in the case of burst transfers	-		
Sequencer	Individual sequencer for trace and breakpoint system	-	-	
	Complex bus events	-	2	8
	Address and data ranges	-	-	
	Sequencer levels	-	2	8
	Optional data probe with 8 additional input lines	-		
	Target system reset and interrupts from keyboard			
HLL Support	Support C and C++ source debugging for all popular compilers			
Network support	Control the DProbe remotely			
Host operating systems	Supported host operating systems (ask for UNIX, SunOS support)	Wingx, NT	Wingx, NT	Wingx, NT
Connection to host	choice of three high speed parallel interfaces: HIF ISA card (16 bit) or HIF PC card (PCMCIA) for plug & play, Parallel port (LPT)			
Power Supply	universal input voltage for world wide operation			

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