HP E3490A Software Probe

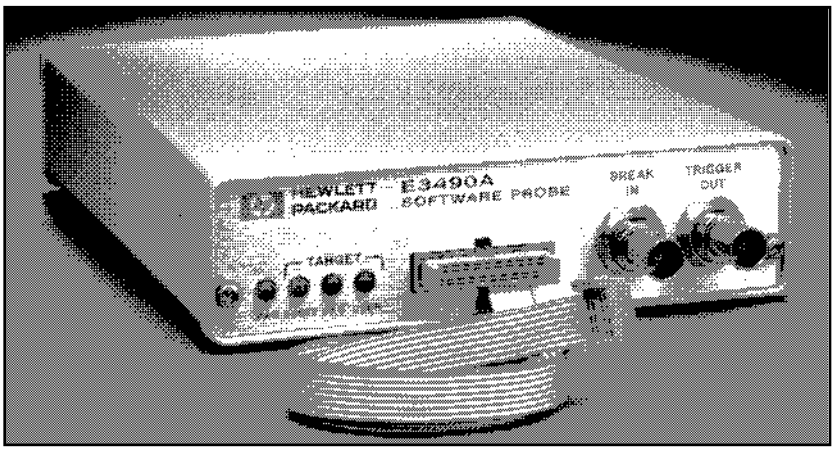
Product Overview

Interfaces to the software probe are available on PC's and workstations.

The HP E3490A software probe provides much of the capability a software engineer needs to perform in-target debugging – all at a much lower cost than a traditional emulator.

Debugging Capabilities
The software probe helps you debug your code by providing run control, high-speed code downloading, programming of target system flash (useful for product manufacturing as well as development), memory/register display and modification. Memory can be symbolically modified through available source-level debuggers. When using the HP E3490A over the LAN and running your target system at full speed, the code download rate is up to four megabytes per minute. You control program execution by setting software breakpoints or an externally generated hardware breakpoint.

Easy Connection to Your Target System
The software probe easily connects to your target system as it does not require that you directly probe the microcontroller. Access to the target system is gained through the Motorola standard, 8- or 10-pin, background debug mode (BDM) connector. If your target system does not incorporate the connector, you can access the BDM pins directly on the microcontroller using flying lead probes that are provided.



Interfaces on Unix and Windows Platforms
The HP interfaces to the software probe are identical to the interfaces that control the HP 64700 series of high-end emulators. This means you can use a consistent debugging environment, no matter what HP tool apply to your debugging task. Interfaces may also be supplied by other vendors.

Using the HP debugger, you can control the software probe from the familiar context of your source code. For example, you can set a breakpoint simply by pointing to a source line and clicking a mouse button. You can also modify variables using "C" expressions.

Flash Programming
The HP software probe can program your target system flash during product development or manufacturing. Popular flash programming algorithms are included with the product, so you do not have to spend time writing them yourself. There is no size limitation on the flash image because the software probe copies the image directly from the host computer to your target system.

Integrated with Hewlett-Packard Analysis Tools
The HP software probe can trigger or be triggered by other HP development tools.
For example, the HP B3470A software analyzer can capture a real-time trace using the HP 16500B logic analysis system and display it as high-level source code. Simultaneously, the software analyzer can trigger the software probe to generate a break in program execution.

One Year Warranty

The HP software probe has been designed to the same high standards as our HP 64700 high-end emulators. Therefore we offer a one-year warranty.

Specifications

Microcontrollers Supported	3.3 V and 5 V Motorola 683XX controllers that incorporate Background Debug Mode (BDM)
Family	**Part Number**
AMD 12 V Bulk Erase	Am28F256 Am28F512 Am28F010 Am28F020 Am28F256A Am28F512A Am28F010A Am28F020A
AMD 12 V only Secor Erase	Am28F010 Am28F100 Am28F200 Am28F040 Am28F400 Am28F016
Intel Flashfile	28F032SA 28F016SA 28F008SA
Intel Boot Block	28F400BX 28F200B 28F001B
Intel Bulk Erase	28F020 28F010 28F512 28F526A
Mitsubishi	M5M28F101 M5M28F10 M5M28F400 M5M28F016
TI	TMS28F010A TMS28F010 TMS28F512A TMS28F210 TMS28F400
Hatachi	28F1600 28W1600 28F4001 28F010
SGS-Thomson	28F410 28F420
Not Supported **Atmel** **Hitachi** **Toshiba**	 HN28F101

Electrical Loading on Target System	
Pin 1,2,4,6,7,8,10	40 pF 7.5K Ω to Vdd
Pin 9	Idd < 10mA at 5 V < mA at 3 V
Download Rate	Two megabytes per minute when target system is running at full speed.
Physical Connections	
Ethernet	10base2 or 10baseT Ethernet connections TCP/IP protocol
RS-232	1200 through 115200 Kbaud rates supported
Flash PROMS Programmable	Contact the factory for Specific Part Numbers
Number of SW breakpoints	Virtually unlimited (limited only by the disk capacity of host computer).
OMF Formats Supported by HP Interfaces	HP/MRI IEEE695 Intel OMF86, OMF286, OMF386 (including Borland and Microsoft extensions)
Physical	155 mm Width x 161 mm Depth x 65 mm Height

For more information, call your local HP sales office listed in your telephone directory, or an HP regional office listed below:

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