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Custom Software, Hardware
& Turnkey Solutions

▶ Full emulation of the original screen, text, colors & Function keys

▶ Run under Windows OS as a stand alone application

▶ 100% Backplane compatibility with 10 to 18 slots

Form, Fit & Function Replacement of HP1000 or PDP-11

REPLACEMENT OF LEGACY HP 1000 OR PDP-11 WITH NEW
PC BASE COMPUTER **WITHOUT** SOFTWARE CHANGES

COBRA 1000/11 - Replacement of HP1000 and PDP11 With a Commercial PC

The COBRA-1000/11 emulates a complete HP1000/PDP-11 computer system on a PC platform.

The solution requires **no conversion or software changes!**

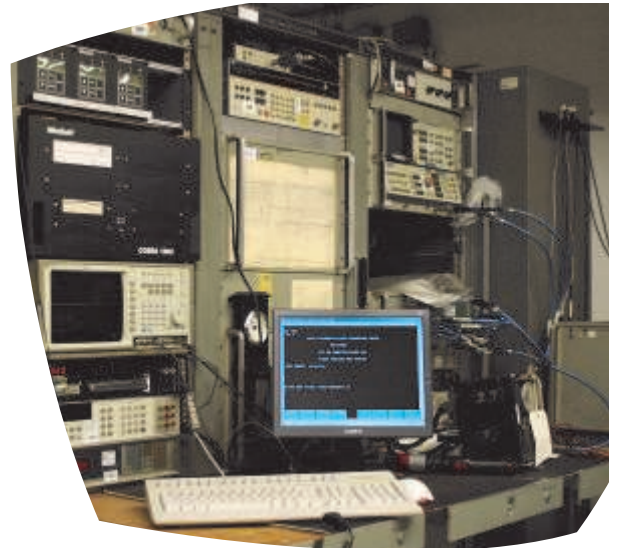
Together with the WISE™ Technology (optional) you can replace any instrument in your test system and still **preserve 100% of your code.**

COBRA-1000/11, complete Hardware/Software emulation on PC add-in cards, can make legacy systems run faster, with more throughput than the original system together with Ethernet networking and integration with Windows functionality.

The HP1000 CPU, memory, disks, tapes, serial lines, and Ethernet controller are emulated by mapping their functionality into the COBRA-1000/11 PCI Co-Processor board.

Based on the fact that the COBRA-1000/11 recognizes native HP1000/PDP-11 binary instructions, it is able to execute existing HP1000/PDP-11 software.

The HP1000 Bus support logic for non-emulated devices is provided via an on-board wide bandwidth Fibrechannel adapter.



FOOT-PRINT, SCHEDULE and BUDGET

COBRA-1000/11 enables same size chassis-unit to replace the old unit. In most cases you will no longer need the old Hard Drive/Tapes. Setup and configuration are done via external configuration file. Fast implementation - typical migration in 2-4 days. Hundreds of binary images of the legacy hard-drives and tapes can be copied on to one CD. Most of the components are available from common PC manufacturers. Unbeatable cost savings.

HP1000 or PDP11 in a Regular PC

TECHNOLOGY HIGHLIGHTS

- Replaces legacy HP1000/PDP11 systems transparently with modern, PC-based technology.
- COBRA-1000/11 is a standard Windows solution that can co-exist with other Windows applications.
- Improves system reliability and performance.
- The HP1000 system and application software are stored as disk image files, allowing for easy version control and backups.

Note: Application source code is typically not required for the conversion.

TECHNICAL SPECIFICATIONS

COBRA 1000/SX

The COBRA1000/SX provide same speed or better than the HP1000 (A400, A600+, A700). It is running under Windows/NT/2000 and occupies one PCI slot. It has a writable control store, FPGA implementation of the HP1000 architecture with 4 MBytes of tightly coupled and zero wait-state memory. The COBRA1000/SX includes compatible hardware floating point. On-card x86 microprocessor rapidly processes "virtual" I/O instructions. PCI bus speeds increase disk throughput by at least a factor of ten. HP1000 Bus support logic for non-emulated devices is provided on-board with connector to wide bandwidth **fibrechannel** adapter.

COBRA 1000/DX

The COBRA 1000/DX (Windows NT and 2000) executes the HP1000 A900 instruction set including code and data separation with performance equal or better than the HP1000 A900. The Co-Processor occupies one PCI slot. It has a writable control store, FPGA implementation of the HP1000 architecture with 4 MBytes of tightly coupled and zero wait-state memory. It includes compatible hardware floating point. On-card x86 microprocessor rapidly processes "virtual" I/O instructions. The PCI bus speeds increase disk throughput by at least a factor of ten. HP1000 Bus support logic for non-emulated devices is provided on-board with connector to wide bandwidth **fibrechannel** adapter. (approximately twice of the CPU performance of the COBRA1000/SX).

COBRA 1000 /QX

Quad+ speed COBRA 1000 Co-Processor for four times the speed of the COBRA 1000/SX. It occupies one PCI slot.

COBRA 1000 /MEF

The COBRA 1000/MEF (Windows NT and 2000) executes the HP1000 21MX instruction set (including the 2100 Series). The Co-Processor occupies one PCI slot. It has a writable control store, FPGA implementation of the HP1000 architecture with 4 MBytes of tightly coupled and zero wait-state memory. It includes compatible hardware floating point. On-card x86 microprocessor rapidly processes "virtual" I/O instructions. HP1000 Bus support logic for non-emulated devices is provided on-board with connector to wide bandwidth **fibrechannel** adapter.

Rack Mount Chassis

Dimensions: 10.5" high by 19" wide by 20" deep (267 x 483 x 508 mm)

Power: A 100-120/200-240 VAC, 47-63Hz system power supply delivers +5V@45A, +12V@13A, +15V@5A, -5V@0.5A, -12V@1A, and -15V@A. A secondary power supply delivers +5V@40A, +12V@8A and -12V@6A.

Capacity: A-Series - 10 slot HP1000 A-Series slots

PC - ATXstyle Motherboard, 3 x 5-1/4" Bays, 2 x 3-1/2"

Weight: 55 pounds configured w/o A-Series boards.

Material: .100 thick aluminum.

Notes: this chassis is FCC/CE certifiable.

A 10-Slot HP 1000 backplane, cooling fans, and slides are provided plus space for a standard ATX PC motherboard, diskette and hard drives (3 x 5-1/4" and 2 x 3-1/2").

Serial Communication Hardware

The RS232/422 Mux III Card and Panel is 16/32 serial ports ISA card connected by 4.8 ft (1.5m) cable and terminated as male DB25 connector on external panel. User-configuration for RS-323 or RS-422 modes is available. The hardware supports eight communication rates from 110 through 38,400 Baud and it emulates the 12040x multiplexer cards..

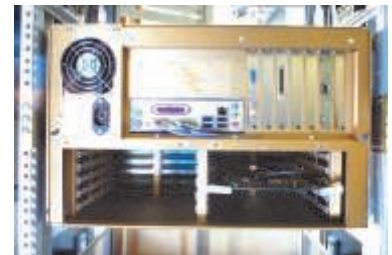
Fibrechannel Adapter - Legacy Interface Card

The Dual-height LIC card plugs into HP 1000 backplane. The fibrechannel cable plugs into HP1000 bus logic connector on COBRA 1000. The I/O Adapter logic provides Programmed I/O and DMA access to "real" HP1000 compatible controllers (those not otherwise emulated). 32 MB/sec transmission meets most wide bandwidth application requirements. FCC/CE certifiable.

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extension



Transparent TPS migrations
regardless of the programming
language - Binary image of
legacy Hard Drives and Tapes



WinSoft®

1932 E. Deere Ave. Suite 110
Santa Ana, CA 92705
Voice 949-428-4844 x 202
Fax 949-428-4842
Email: marketing@winsoft.com
www.winsoft.com