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Data Sheet

August 13, 2026

KEYSIGHT / AGILENT / HP

Keysight / Agilent / HP 16500C Logic Analyzer Mainframe

HP 16500C Logic Analysis System Mainframe The HP 16500C is the five-slot modular logic-analysis mainframe (flagship of the 16500A/B/C family). It adds a 540/545 MB DOS hard disk, IEEE 802.3 LAN (10BaseT RJ-45 or 10Base2 BNC), HP 16505 interface, and PS/2 keyboard/mouse to the color touchscreen architecture. Intermodule triggering provides 2 ns time correlation. Optional 16501A expansion frame adds five slots (ten modules total). Motorola 68EC030 CPU with 8 MB RAM standard (16 MB Option 001). Battery-backed real-time clock. Port In TTL/ECL/user, 4 kohm, -6 to +6 V. Port Out 3 V TTL into 50 ohm. Target control 8 signals on a 2×5 0.1 inch connector. The HP 16500C is the five-slot modular logic-analysis mainframe (flagship of the 16500A/B/C family). It adds a 540/545 MB DOS hard disk, IEEE 802.3 LAN (10BaseT RJ-45 or 10Base2 BNC), HP 16505 interface, and PS/2 keyboard/mouse to the color touchscreen architecture. Intermodule triggering provides 2 ns time correlation. Optional 16501A expansion frame adds five slots (ten modules total). Motorola 68EC030 CPU with 8 MB RAM standard (16 MB Option 001). Battery-backed real-time clock. Port In TTL/ECL/user, 4 kohm, -6 to +6 V. Port Out 3 V TTL into 50 ohm. Target control 8 signals on a 2×5 0.1 inch connector. Modular state, timing, oscilloscope, and pattern-generator benches; multiframe 16500C plus 16501A ten-slot systems; LAN/GPIB automa

**MODEL****Keysight / Agilent /
HP 16500C****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****16500C****LISTING**[https://aumictechlabs.c
om/products/16500c-2/](https://aumictechlabs.com/products/16500c-2/)

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NAICS 423690 · 811210 · 541380

This unit

The Keysight/Agilent/HP 16500C Logic Analyzer Mainframe is a modular digital measurement platform designed for complex debugging, validation, and timing verification across microprocessor and embedded systems applications. The mainframe accepts five internal measurement modules with expansion capability up to 10 modules via an optional HP 16501A expansion frame, build integrated solutions for state/timing analysis, oscilloscopy, and pattern generation. A 9-inch color CRT touchscreen display combined with front-panel knob, PS/2 mouse, and optional keyboard provides intuitive control, while X-Window system support enables remote operation across networks. Technical Specifications Display: 9-inch color CRT with touchscreen interface Module slots: 5 internal; expandable to 10 with HP 16501A expansion frame Intermodule correlation resolution: 2 nanoseconds Storage: 3.5-inch floppy disk drive (DOS, LIF formats); 540 Mbyte hard disk drive (DOS format); optional external removable hard disk drive (Option 060) Network interface: 10Base-T Ethernet (UTP connector) Control options: Touchscreen, front-panel knob, PS/2 mouse (standard), optional keyboard Key Features Modular architecture supporting state/timing analyzers, oscilloscopes, and pattern generators Menu-driven user interface consistent across all installed modules Multi-nanosecond timing resolution for precise intermodule synchronization X-Window system interface for remote viewing and network-based operation Dual mass storage: internal floppy and hard disk with network transfer capability NFS and FTP protocol support for data export and label-by-label ASCII format output Typical Applications Microprocessor and digital IC debugging Timing verification and synchronization analysis Software performance characterization Multi-module measurement correlation Compatibility & Integration The mainframe integrates with HP/Keysight measurement modules and accepts expansion via the HP 16501A frame. Network connectivity via 10Base-T Ethernet enables data transfer using standard protocols (NFS, FTP) to workstations and PCs. Optional keyboard and external storage drive expand operational flexibility.

Features & description

From manufacturer datasheet

Features

- Five measurement slots; 16501A expands to ten modules
- 9 inch color touchscreen with on/off control
- Built-in 3.5 inch floppy (DOS and LIF) plus IDE hard disk
- Ethernet, HP-IB, RS232, Centronics, and HP 16505 interfaces
- Intermodule bus group-run arming with 2 ns correlation
- Target control port with eight programmable vectors
- X Windows version 11 release 5 client; TIFF/PCX screen images

16500C Characteristics / Specifications

PARAMETER	VALUE
Model	16500C
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Logic analysis system mainframe
Series	16500
Alias	16500C; HP 16500C
Module Slots	5
Expansion Frame	16501A five additional slots
Max Modules With 16501A	10
Display	9 inch color CRT touchscreen
Floppy Capacity	1.44 MB formatted, 3.5 inch
Floppy Formats	MS-DOS or LIF
Hard Disk Unformatted	545 MB (service guide)
Hard Disk Formatted	DOS file system, IDE interface (user literature 540 MB)
Standard RAM	8 MB
Expanded RAM	16 MB (Option 001)
CPU	Motorola 68EC030
Video RAM	256 KB
Time Correlation	2 ns intermodule
GPIO Functions	SH1 AH1 T5 TE0 L3 LE0 SR1 RL1 PP1 DC1 DT1 C0 E2
RS232 Connector	9 pin
RS232 Protocols	XON/XOFF or hardware (datasheet also lists None)
RS232 Data Bits	8
RS232 Stop Bits	1, 1.5, or 2
RS232 Parity	none, odd, or even
RS232 Baud	110, 300, 600, 1200, 2400, 4800, 9600, 19200

PARAMETER	VALUE
LAN Standard	IEEE 802.3 (ISO 8802-3) CSMA/CD
LAN Media	10BaseT Ethertwist RJ-45 or 10Base2 Thinlan BNC
LAN Protocols	TCP/IP, NFS, FTP, SNMPXWindows: version 11 release 5 client
Printer Port	Centronics parallel LPT
Printer Path	Centronics, RS232, or HP-IB
PS2 Ports	keyboard and mouse
Port In Levels	TTL, ECL, or user defined
Port In Resistance	4 kohm
Port In Voltage	-6 V at -1.5 mA to +6 V at 1.6 mA
Port Out Levels	3 V TTL compatible into 50 ohm
Port Out Pulse Width	40 to 80 ns (pulsed mode)
Target Control Bits	8
Target Connector	2 × 5, 0.1 inch centers
Target Levels	3 V TTL compatible
Target Vectors	up to 8 programmable, sequenced manually
AC Power	115/230 V, -22 percent to +10 percent
Power Frequency	48 to 66 Hz
Power Max	475 W
Expansion Power Max	420 W (16501A)
Operating Temperature	0 C to 50 C (instrument)
Disk Media Temperature	10 C to 40 C
Humidity	8 percent to 80 percent RH at 40 C
Operating Altitude	3000 m (10,000 ft) datasheet; service also lists 4600 m with HDD to 3000 m
Vibration Operating	random 5 to 500 Hz, 10 min/axis, 0.3 g RMS
Dimensions	222.2 mmHx 425.7 mmWx 548.6 mm D (including rear feet)
Net Weight	18.1 kg plus 0.7 kg per module
Shipping Weight	25.9 kg plus 3.6 kg per module

PARAMETER	VALUE
Expansion Net Weight	13.6 kg plus 0.7 kg per module (16501A datasheet)
Related 16500A	five slots, dual floppy, no LAN, no HDD
Related 16500B	faster CPU than A, no standard Ethernet
Form	benchtop modular mainframe
Status	HP 16500C

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
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Form	benchtop modular mainframe
Status	HP 16500C Notes Specs from HP 16500C/16501A technical data 5965-3184E and the HP 16500C/16501A service/user characteristics (5 slots, 9 in color, 540/545 MB HDD, LAN, 8/16 MB RAM, 475 W, 2 ns correlation). Confirm 16501A cable, Option 001 RAM, and installed modules.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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RS232 Protocols	XON/XOFF or hardware (datasheet also lists None)
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LAN Protocols	TCP/IP, NFS, FTP, SNMPXWindows: version 11 release 5 client
Printer Port	Centronics parallel LPT
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Notes

Specs from HP 16500C/16501A technical data 5965-3184E and the HP 16500C/16501A service/user characteristics (5 slots, 9 in color, 540/545 MB HDD, LAN, 8/16 MB RAM, 475 W, 2 ns correlation). Confirm 16501A cable, Option 001 RAM, and installed modules.

Ordering Information

OPTION	DESCRIPTION
Option 001	RAM, and installed modules.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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