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**Data Sheet**

August 13, 2026

KEYSIGHT / AGILENT / HP

# Keysight / Agilent / HP 16500A Logic Analyzer Mainframe

HP 16500A Logic Analysis System Mainframe The HP 16500A is the five-slot modular logic-analysis mainframe (first generation of 16500A/B/C). 9-inch color CRT with touchscreen, dual 3.5-inch floppy drives (front and rear; rear typically holds the system disk), HP-IB and RS-232-C. Intermodule triggering and time correlation of acquired data. Optional 16501A expansion frame adds five more slots for nine modules total (one slot in the mainframe holds the mainframe-interface card). No standard Ethernet (LAN appears on 16500C). Power 115/230 V, 48-66 Hz, 475 W max. Net about 18.1 kg plus 0.7 kg per module. The HP 16500A is the five-slot modular logic-analysis mainframe (first generation of 16500A/B/C). 9-inch color CRT with touchscreen, dual 3.5-inch floppy drives (front and rear; rear typically holds the system disk), HP-IB and RS-232-C. Intermodule triggering and time correlation of acquired data. Optional 16501A expansion frame adds five more slots for nine modules total (one slot in the mainframe holds the mainframe-interface card). No standard Ethernet (LAN appears on 16500C). Power 115/230 V, 48-66 Hz, 475 W max. Net about 18.1 kg plus 0.7 kg per module. Modular state/timing/scope/pattern-generator benches; 16500A plus 16501A nine-slot systems; HP-IB/RS-232 automated logic analysis; mixed-module correlation without a LAN-era 16500C.



## MODEL

**Keysight / Agilent /  
HP 16500A**

## CALIBRATION

**Available on  
request**

## CONDITION

**Used**

## STATUS

**In stock**

## RFQ / SKU

**16500A**

## LISTING

[https://aumictechlabs.c  
om/products/16500a-2/](https://aumictechlabs.com/products/16500a-2/)

NIST-traceable cal

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NAICS 423690 • 811210 • 541380

## This unit

The Keysight/Agilent/HP 16500A Logic Analyzer Mainframe is a modular platform that integrates logic state analysis, timing analysis, digitizing oscilloscope, and digital pattern generation into a single instrument. The mainframe provides five measurement module slots, each accommodating state/timing cards, timing cards, pattern generator cards, or digitizing oscilloscope modules to customize the system for specific debug, characterization, integration, or pass/fail testing requirements. An optional expansion frame increases total slots to nine for complex applications.

**Technical Specifications**

**Mainframe Architecture**

- Five measurement module slots (nine total with optional expansion frame)
- Time-correlated measurements across modules via intermodule bus
- Support for simulation vectors enabling comparison of design simulation data with actual hardware measurements

**User Interface**

- 9-inch color touchscreen display
- Front panel knob and pop-up menu control
- Optional mouse input; later models (16500C) include DIN connectors for PS-2 keyboard and mouse

**Fully programmable Data Management**

- Two built-in 3-inch floppy disk drives for setup storage and test data archival
- File load, format, store, and rename capabilities
- Instant hardcopy output to graphics printers

**Key Features**

- Modular design accommodating diverse measurement card types
- Expandable architecture supporting up to nine total measurement slots
- Single-instrument integration of four analyzer types eliminates need for separate instruments
- Intermodule bus enables synchronized, time-correlated analysis across different measurement domains

**Typical Applications**

- Digital system debug and fault isolation
- Design characterization and hardware verification
- Systems integration testing
- Pass/fail production testing with simulation vector comparison

**Compatibility & Integration**

The 16500A accepts a wide range of Keysight/Agilent/HP measurement modules. Module compatibility varies; users should consult manufacturer documentation for specific module selection. The system interfaces via HP-IB (GPIB) for remote programmability and integration into automated test environments.

## Features & description

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From manufacturer datasheet

### Features

- Five measurement slots; 16501A expands to nine total
- 9 inch color CRT touchscreen
- Dual 3.5 inch floppy drives
- HP-IB and RS-232-C
- Intermodule arm/trigger
- Optional HIL mouse and keyboard

## 16500A Characteristics / Specifications

| PARAMETER             | VALUE                                                         |
|-----------------------|---------------------------------------------------------------|
| Model                 | 16500A                                                        |
| Manufacturer          | Hewlett Packard / Agilent / Keysight                          |
| Instrument Type       | Logic analysis system mainframe                               |
| Series                | 16500                                                         |
| Alias                 | 16500A; HP 16500A                                             |
| Module Slots          | 5                                                             |
| Expansion Frame       | 16501A five additional slots                                  |
| Max Slots With 16501A | 9 (one mainframe slot used by interface card)                 |
| Display               | 9 inch color CRT touchscreen                                  |
| Floppy                | dual 3.5 inch (front and rear)                                |
| Hard Disk             | none on 16500A (system software on rear floppy)               |
| Interfaces            | HP-IB and RS-232-C                                            |
| LAN                   | not standard (use 16500C for Ethernet)                        |
| Printer path          | HP-IB or RS-232 hardcopy                                      |
| HIL                   | touchscreen plus optional mouse/keyboard                      |
| 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 55 C hardware class (noncondensing)                    |
| Net Weight            | 18.1 kg plus 0.7 kg per module                                |
| Shipping Weight       | 25.9 kg plus 3.6 kg per module                                |
| Related 16500B        | faster CPU than A, still no standard Ethernet                 |
| Related 16500C        | 540 MB HDD, LAN 10Base-T/10Base2, 2 ns correlation literature |
| Form                  | benchtop modular mainframe                                    |

| PARAMETER       | VALUE                                                                                                 |
|-----------------|-------------------------------------------------------------------------------------------------------|
| Line select     | rear 115/230 V selector                                                                               |
| Example modules | 16510A state/timing; 16515A/16516A 1 GHz timing; 16520A/16521A pattern generator; 16530A/16531A scope |

## General Specifications & Supplementary Characteristics

| PARAMETER             | VALUE                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating temperature | 0 C to 55 C hardware class (noncondensing)                                                                                                                                                                                                                                                                                                               |
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| Related 16500B        | faster CPU than A, still no standard Ethernet                                                                                                                                                                                                                                                                                                            |
| Related 16500C        | 540 MB HDD, LAN 10Base-T/10Base2, 2 ns correlation literature                                                                                                                                                                                                                                                                                            |
| Form                  | benchtop modular mainframe                                                                                                                                                                                                                                                                                                                               |
| Line select           | rear 115/230 V selector                                                                                                                                                                                                                                                                                                                                  |
| Example modules       | 16510A state/timing; 16515A/16516A 1 GHz timing; 16520A/16521A pattern generator; 16530A/16531A scope Notes Specs from HP 16500A/16501A service and setup manuals (5 slots, 9 in color, dual floppy, HP-IB/RS-232, 475 W). Confirm 16501A cable, line-select switch, and installed modules. Do not copy 16500C LAN/HDD figures onto this 16500A listing. |

# 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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| PARAMETER             | VALUE                                                         |
| Model                 | 16500A                                                        |
| Manufacturer          | Hewlett Packard / Agilent / Keysight                          |
| Instrument Type       | Logic analysis system mainframe                               |
| Series                | 16500                                                         |
| Alias                 | 16500A; HP 16500A                                             |
| Module Slots          | 5                                                             |
| Expansion Frame       | 16501A five additional slots                                  |
| Max Slots With 16501A | 9 (one mainframe slot used by interface card)                 |
| Display               | 9 inch color CRT touchscreen                                  |
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| Hard Disk             | none on 16500A (system software on rear floppy)               |
| Interfaces            | HP-IB and RS-232-C                                            |
| LAN                   | not standard (use 16500C for Ethernet)                        |
| Printer path          | HP-IB or RS-232 hardcopy                                      |
| HIL                   | touchscreen plus optional mouse/keyboard                      |
| AC Power              | 115/230 V -22 percent to +10 percent                          |
| Power Frequency       | 48 to 66 Hz                                                   |
| Power Max             | 475 W                                                         |
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| Related 16500B        | faster CPU than A, still no standard Ethernet                 |
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| Form                  | benchtop modular mainframe                                    |
| Line select           | rear 115/230 V selector                                       |

## PARAMETER

## VALUE

## Example modules

16510A state/timing; 16515A/16516A 1 GHz timing; 16520A/16521A  
pattern generator; 16530A/16531A scope

## Notes

Specs from HP 16500A/16501A service and setup manuals (5 slots, 9 in color, dual floppy, HP-IB/RS-232, 475 W). Confirm 16501A cable, line-select switch, and installed modules. Do not copy 16500C LAN/HDD figures onto this 16500A listing.

### Available from Aumictech

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

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

#### Aumictech

788 S 500 E, Pleasant Grove, UT 84062  
[sales@aumictech.com](mailto:sales@aumictech.com) · +1 (484) 841-9341  
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.