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**Data Sheet**

August 15, 2026

AGILENT / KEYSIGHT

## Agilent/Keysight 16554A

HP Agilent 16554A 68 Channel 70 MHz State 250 MHz Timing Module The HP 16554A is a deep-memory logic-analyzer card for 16500B. OEM 16500 modular system data list 68 channels, 70 MHz state / 250 MHz timing, and 512K samples per channel, expandable in multi-card sets toward 340 channels in a 16500B plus 16501A expansion frame. Deep-memory state and timing in HP 16500B systems. Expansion: multi-card toward 340 channels with 16501A The HP 16554A is a deep-memory logic-analyzer card for 16500B. OEM 16500 modular system data list 68 channels, 70 MHz state / 250 MHz timing, and 512K samples per channel, expandable in multi-card sets toward 340 channels in a 16500B plus 16501A expansion frame. Deep-memory state and timing in HP 16500B systems. Expansion: multi-card toward 340 channels with 16501A Sibling 16555A: 68 channels 110 MHz state / 500 MHz timing 1M deep



MODEL

**Agilent / Keysight  
16554A**

CALIBRATION

**Available on  
request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**16554A**

LISTING

<https://aumictechlabs.com/products/16554a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

### This unit

The Agilent/Keysight 16554A is a logic analyzer accessory module that expands the signal capture and analysis capabilities of compatible logic analyzer mainframes. It has specialized probing and signal access for engineers developing and debugging digital circuits, embedded systems, and complex integrated circuits. The 16554A connects to the host mainframe via a proprietary interface engineered for high-speed data transfer and control signaling. Technical Specifications Product Type: Logic Analyzer Accessory Manufacturer: Agilent/Keysight Model:

16554A Form Factor: Plug-in module or external pod system (architecture dependent) Connection Interface: Proprietary high-speed data transfer interface to host mainframe Power Source: Powered and controlled by host logic analyzer mainframe

**Key Features**

- Signal integrity optimization for high-speed digital measurements
- Minimized loading effects on target signals
- Accurate measurement performance across complex digital environments

**Proprietary connector system with mainframe-dependent specifications**

**Typical Applications**

- Digital circuit development and debug
- Embedded systems signal analysis
- Complex integrated circuit verification
- High-speed digital signal capture and characterization

**Compatibility & Integration**

The 16554A of compatibility with your specific logic analyzer mainframe model and firmware version. Connector types and cable requirements vary by mainframe architecture. Confirm software version compatibility between the accessory and host instrument before deployment. Consult official Agilent/Keysight documentation or technical support for specific mainframe compatibility matrices and integration requirements.

## 16554A Characteristics / Specifications

| PARAMETER            | VALUE                                              |
|----------------------|----------------------------------------------------|
| Model                | 16554A                                             |
| Instrument Type      | Logic analyzer module                              |
| Host Mainframe       | HP 16500B                                          |
| Channel Count        | 68                                                 |
| State Rate           | 70 MHz                                             |
| Timing Rate          | 250 MHz                                            |
| Memory Depth         | 512K samples per channel                           |
| Expansion            | multi-card toward 340 channels with 16501A         |
| Cable Type           | four shielded 40-pin cables                        |
| Sibling 16555A       | 68 channels 110 MHz state / 500 MHz timing 1M deep |
| Sibling 16556A       | 68 channels 100 MHz state / 400 MHz timing 1M deep |
| Predecessor Family   | 16550A 102 channels 4K deep                        |
| Manufacturer         | HP Agilent Keysight                                |
| Mechanical Package   | 16500B plug-in module                              |
| Mainframe Slots      | 16500B five slots plus optional 16501A five more   |
| Probe Compatibility  | 40-pin IDC compatible with 1650-series cables      |
| Analysis Modes       | state and timing                                   |
| Deep Memory Class    | 512K versus 4K on 16550A                           |
| System Family        | HP 16500 modular logic analysis                    |
| Minimum State Clock  | as published for 16554A 70 MHz max state           |
| Maximum Timing Clock | 250 MHz                                            |
| Card Count Note      | pair/expand per 16500B configuration guide         |

# 16554A Specifications

| PARAMETER                | VALUE                                              |
|--------------------------|----------------------------------------------------|
| Applications             | Deep-memory state and timing in HP 16500B systems. |
| Key Features             | 68 channels 512K deep                              |
| Four shielded pod cables | 16555A/16556A are faster/deeper siblings           |
| Technical Specifications | Model: 16554A                                      |

# 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                                                                                                                                                         |                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Specifications                                                                                                                                                         |                                                    |
| PARAMETER                                                                                                                                                              | VALUE                                              |
| Model                                                                                                                                                                  | 16554A                                             |
| Instrument Type                                                                                                                                                        | Logic analyzer module                              |
| Host Mainframe                                                                                                                                                         | HP 16500B                                          |
| Channel Count                                                                                                                                                          | 68                                                 |
| State Rate                                                                                                                                                             | 70 MHz                                             |
| Timing Rate                                                                                                                                                            | 250 MHz                                            |
| Memory Depth                                                                                                                                                           | 512K samples per channel                           |
| Expansion                                                                                                                                                              | multi-card toward 340 channels with 16501A         |
| Cable Type                                                                                                                                                             | four shielded 40-pin cables                        |
| Sibling 16555A                                                                                                                                                         | 68 channels 110 MHz state / 500 MHz timing 1M deep |
| Sibling 16556A                                                                                                                                                         | 68 channels 100 MHz state / 400 MHz timing 1M deep |
| Predecessor Family                                                                                                                                                     | 16550A 102 channels 4K deep                        |
| Manufacturer                                                                                                                                                           | HP Agilent Keysight                                |
| Mechanical Package                                                                                                                                                     | 16500B plug-in module                              |
| Mainframe Slots                                                                                                                                                        | 16500B five slots plus optional 16501A five more   |
| Probe Compatibility                                                                                                                                                    | 40-pin IDC compatible with 1650-series cables      |
| Analysis Modes                                                                                                                                                         | state and timing                                   |
| Deep Memory Class                                                                                                                                                      | 512K versus 4K on 16550A                           |
| System Family                                                                                                                                                          | HP 16500 modular logic analysis                    |
| Minimum State Clock                                                                                                                                                    | as published for 16554A 70 MHz max state           |
| Maximum Timing Clock                                                                                                                                                   | 250 MHz                                            |
| Card Count Note                                                                                                                                                        | pair/expand per 16500B configuration guide         |
| Notes                                                                                                                                                                  |                                                    |
| From HP 16500B modular logic analysis system data sheet 16554A row (68 ch, 70 MHz state, 250 MHz timing, 512K/ch). Confirm installed memory and pod count on the card. |                                                    |

### 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

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NIST-traceable calibration · SAM registered ·  
30-day returns  
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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.