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August 15, 2026

AGILENT / KEYSIGHT

## Agilent/Keysight M8050A

Keysight M8050A High Performance BERT 120 GBaud The Keysight M8050A is the M8000-series high-performance BERT platform for characterizing receivers at symbol rates up to 120 GBaud class, configured with pattern generator, error analyzer, clock, and optional interference modules in AXIe chassis bundles. 112G/224G class SERDES receiver tolerance, CEI next-generation compliance, and multi-module AXIe BERT systems needing beyond-64-Gbaud stressed serial test. Pairs with M8054A or M8053A interference sources The Keysight M8050A is the M8000-series high-performance BERT platform for characterizing receivers at symbol rates up to 120 GBaud class, configured with pattern generator, error analyzer, clock, and optional interference modules in AXIe chassis bundles. 112G/224G class SERDES receiver tolerance, CEI next-generation compliance, and multi-module AXIe BERT systems needing beyond-64-Gbaud stressed serial test. Pairs with M8054A or M8053A interference sources

Instrument Type: high performance BERT system 120 GBaud class



MODEL

**Agilent / Keysight  
M8050A**

CALIBRATION

**Available on  
request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**M8050A**

LISTING

<https://aumictechlabs.com/products/m8050a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

### This unit

The Keysight M8050A is a Bit Error Rate Tester (BERT) for characterization of high-speed digital interfaces in data center and server applications. Operating at data rates up to 120 GBaud, it supports multiple line coding formats NRZ, PAM3, PAM4, PAM6, and PAM8 - enabling pathfinding

and compliance testing across emerging 400/800/1600 GbE, PCIe 7.0/6.0/5.0, USB4, and OIF-CEI standards. The system delivers exceptional signal integrity with intrinsic random jitter below 100 fs and transition times under 5 ps.

**Technical Specifications**

**Data Rate:** Up to 120 GBaud

**Output Amplitude:** 1.4 Vpp at 120 GBd

**Line Coding:** NRZ, PAM3, PAM4, PAM6, PAM8

**Jitter Performance:** Transition time <5 ps; intrinsic random jitter (RMS) <100 fs

**Jitter Injection:** Calibrated injection for RJ, PJ1, PJ2, BUJ, sRJ, and Clk/2 tolerance testing

**De-emphasis:** Seven-tap built-in for channel loss compensation

**Equalization:** Forward Feedback Equalizer (FFE)

**Clock Data Recovery:** Integrated CDR with adjustable loop bandwidth to 16 MHz

**Error Analysis:** Real-time up to 64 GBaud

**PAM4 with integrated clock recovery and equalization;** UXR-B models extend analysis above 64 GBd

**Key Features**

**Pattern generation modules available for** 32 GBd (M8042A-G32), 64 GBd (M8042A-G64), and 120 GBd (M8042A-G12)

**Single-channel (M8042A-0G1) or dual-channel (M8042A-0G2) configurations**

**Remote heads:** M8059A (120 GBd, 1.0 mm connectors) and M8058A (64 GBd, 1.85 mm connectors)

**Supports 800G and 1.6T link training**

**Modular AXIe form factor integrating with M9505A chassis and M8070B control software**

**Keysight Trigger Bus synchronization across modules**

**Typical Applications**

datacenter serial link validation

High-speed digital interface characterization

Receiver tolerance testing with precise jitter injection

Channel loss compensation and equalization assessment

**Compatibility & Integration**

Part of the Keysight M8000 Series BERT platform. Operates in AXIe chassis with M9537A Embedded PC Controller support. Pattern Generator (M8042A) occupies 2 slots (one-channel) or 3 slots (two-channel); Error Analyzer (M8043A) requires 2 slots.

# M8050A Characteristics / Specifications

| PARAMETER                                  | VALUE                                        |
|--------------------------------------------|----------------------------------------------|
| Model                                      | M8050A                                       |
| Instrument Type                            | high performance BERT system 120 GBaud class |
| Platform Series                            | M8000                                        |
| Maximum Symbol Rate Class                  | 120 GBaud                                    |
| Form Factor                                | AXIe modular system                          |
| Chassis Bundle Example BU                  | M9505A 5 slot AXIe chassis                   |
| Pattern Generator Role                     | stressed serial NRZ PAM generation           |
| Error Analyzer Example Module Class        | M8043A 32/64 GBd NRZ PAM4 with CDR           |
| Clock Module Example                       | M8009A to 60 GHz with jitter modulation      |
| Interference Source Companion 32 GHz       | M8054A                                       |
| Interference Source Companion Above 64 GBd | M8053A                                       |
| Control Software                           | M8070 class                                  |
| Channel Count Class                        | scalable by installed modules                |
| Line Coding Class                          | NRZ and PAM4                                 |
| Primary Use                                | next gen SERDES RX characterization          |
| Remote Heads Class                         | supported in M8000 architecture              |
| Jitter Injection Class                     | clock module and generator options           |
| ISI Boards Class                           | M8049A M8067A family accessories             |
| Bundle Goal BU                             | compact 1 channel complete BERT setup        |
| Host Interface                             | AXIe system controller or external PC        |
| Calibration Class                          | module based factory calibration             |
| Interference Injection Class               | M8053A or M8054A modules                     |

# M8050A Specifications

| PARAMETER                                       | VALUE                                                                                                                  |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Keysight M8050A High Performance BERT 120 GBaud | Overview                                                                                                               |
| Key Features                                    | High performance BERT to 120 GBaud class                                                                               |
| AXIe modular M8000 architecture                 | Pairs with M8054A or M8053A interference sources                                                                       |
| Clock generator modules to 60 GHz class         | M8070 software control                                                                                                 |
| Technical Specifications                        | Model: M8050A                                                                                                          |
| Notes                                           | Capability rows from Keysight M8050A High-Performance BERT 120 GBaud configuration guide and related M8000 literature. |

# 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.

Performance BERT 120 GBaud

Overview

The Keysight M8050A is the M8000-series high-performance BERT platform for characterizing receivers at symbol rates up to 120 GBaud class, configured with pattern generator, error analyzer, clock, and optional interference modules in AXIe chassis bundles.

Applications

112G/224G class SERDES receiver tolerance, CEI next-generation compliance, and multi-module AXIe BERT systems needing beyond-64-Gbaud stressed serial test.

Key Features

High performance BERT to 120 GBaud class  
AXIe modular M8000 architecture  
Pairs with M8054A or M8053A interference sources  
Clock generator modules to 60 GHz class  
M8070 software control

Technical Specifications

Technical Specifications

| PARAMETER                                  | VALUE                                        |
|--------------------------------------------|----------------------------------------------|
| Model                                      | M8050A                                       |
| Instrument Type                            | high performance BERT system 120 GBaud class |
| Platform Series                            | M8000                                        |
| Maximum Symbol Rate Class                  | 120 GBaud                                    |
| Form Factor                                | AXIe modular system                          |
| Chassis Bundle Example BU2                 | M9505A 5 slot AXIe chassis                   |
| Pattern Generator Role                     | stressed serial NRZ PAM generation           |
| Error Analyzer Example Module Class        | M8043A 32/64 GBd NRZ PAM4 with CDR           |
| Clock Module Example                       | M8009A to 60 GHz with jitter modulation      |
| Interference Source Companion 32 GHz       | M8054A                                       |
| Interference Source Companion Above 64 GBd | M8053A                                       |
| Control Software                           | M8070 class                                  |
| Channel Count Class                        | scalable by installed modules                |
| Line Coding Class                          | NRZ and PAM4                                 |
| Primary Use                                | next gen SERDES RX characterization          |
| Remote Heads Class                         | supported in M8000 architecture              |
| Jitter Injection Class                     | clock module and generator options           |

| PARAMETER                    | VALUE                                 |
|------------------------------|---------------------------------------|
| ISI Boards Class             | M8049A M8067A family accessories      |
| Bundle Goal BU2              | compact 1 channel complete BERT setup |
| Host Interface               | AXIe system controller or external PC |
| Calibration Class            | module based factory calibration      |
| Interference Injection Class | M8053A or M8054A modules              |

Notes  
Capability rows from Keysight M8050A High-Performance BERT 120 GBaud configuration guide and related M8000 literature.

### 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

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NIST-traceable calibration · SAM registered ·  
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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.