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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight U4301A

Agilent Keysight U4301A PCIe Protocol Analyzer Module The Agilent/Keysight U4301A isaPCIe protocol analyzer module for Keysight modular logic/protocol platforms supporting PCIe Gen1 through Gen3 link rates of 2.5, 5.0, and 8.0 GT/s with link widths from x1 to x16. OEM product literature targets capture and decode of PCIe traffic for silicon bring-up and validation. PCIe Gen3 endpoint and root-complex validation, link training debug, and protocol compliance analysis in modular analyzer chassis. Instrument Type: PCIe protocol analyzer module The Agilent/Keysight U4301A isaPCIe protocol analyzer module for Keysight modular logic/protocol platforms supporting PCIe Gen1 through Gen3 link rates of 2.5, 5.0, and 8.0 GT/s with link widths from x1 to x16. OEM product literature targets capture and decode of PCIe traffic for silicon bring-up and validation. PCIe Gen3 endpoint and root-complex validation, link training debug, and protocol compliance analysis in modular analyzer chassis. Instrument Type: PCIe protocol analyzer module Supported Generations: PCIe Gen1 Gen2 Gen3



MODEL

**Agilent / Keysight
U4301A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

U4301A

LISTING

<https://aumictechlabs.com/products/u4301a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight U4301A is a modular PCIe protocol analyzer blade designed for high-speed capture and analysis of PCI Express traffic. It integrates into AXIe chassis systems and delivers packet-level decoding, transactional insights, and performance metrics across PCIe Gen 1, 2, and 3 links. The module supports lane widths from x1 to x16 and combines hardware probing with advanced

analysis software to isolate protocol issues, training failures, and throughput bottlenecks in PCIe-based systems.

Technical Specifications

Protocol Support: PCIe Generation 1, 2, and 3

Lane Speeds: 2.5 GT/s (Gen 1), 5.0 GT/s (Gen 2), 8.0 GT/s (Gen 3)

Lane Widths: x1, x2, x4, x8, and x16 configurations

Capture Buffer: 4 GB per module (up to 8 GB for x16 links in specific configurations)

Probing Technology: Equalization Snoop Probe (ESP) for high-speed accuracy

Probe Options: Mid-bus probes, solid slot interposer probes (U4321A), flying lead solder-down probes (U4324A)

Key Features

Transactional Decoding: NVMe and PCIe transactional analysis with directional and queue-based flow organization

Performance Analysis: Real data throughput calculations and response-time measurements

LTSSM Overview: Link Training & Status State Machine visibility for physical layer diagnostics and training sequence troubleshooting

Lane View: Per-lane packet display with highlight capability

Packet Viewer: Flexible color coding by packet type or direction; navigation viewer for rapid message access

State-Based Triggering: Four-state sequence triggering with error detection on illegal sync characters, loss of framing, and illegal blocks

Trigger I/O: External synchronization with complementary test instruments

Compatibility & Integration

The U4301A installs as a modular blade in AXIe chassis systems, including the Keysight M9502A (2-slot) and M9505A (5-slot) platforms. Optional compatibility with Agilent AMP chassis is available. The flexible architecture supports configuration scaling for smaller test deployments.

U4301A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	PCIe protocol analyzer module
Supported Generations	PCIe Gen1 Gen2 Gen3
Link Rates	2.5 GT/s 5.0 GT/s 8.0 GT/s
Link Widths	x1 to x16
Host Platform Class	Keysight modular protocol analyzer chassis
Form Factor	Plug in analyzer module
Protocol Family	PCI Express
Primary Function	Protocol capture and decode
Trigger Capability Class	Protocol aware trigger class
Analysis Software Class	Keysight PCIe analysis software class
Lane Aggregation	Multi lane link support
Export Classification Class	Commercial test equipment class
Operating Environment Class	Laboratory chassis environment
Power	Supplied by host chassis
Warmup Class	Per host chassis recommendation
Series Family	U4301A PCIe analyzer
Connector Interface Class	PCIe interposer or probing class per kit
Capture Memory Class	Module and chassis dependent class
Decode Layers Class	Transaction and data link layers class
Link Training Visibility	Supported class
Compliance Assist Class	Protocol compliance debug class
Calibration	Module level functional verification class

U4301A Specifications

PARAMETER	VALUE
Agilent Keysight U4301A PCIe Protocol Analyzer Module	Overview
Applications	PCIe Gen3 endpoint and root-complex validation, link training debug, and protocol compliance analysis in modular analyzer chassis.
Key Features	PCIe Gen1 Gen2 Gen3 support
Technical Specifications	Instrument Type: PCIe protocol analyzer module

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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Notes	
From Keysight/Agilent U4301A PCIe analyzer product documentation summarizing Gen1 to Gen3 rates and x1 to x16 widths. Confirm interposer kit and memory depth on the chassis configuration sheet.	

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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.