

VIAVI

Xgig 5P16 Analyzer/Exerciser/Jammer Platform

for PCI Express® 5.0

Provides 16-lane full-speed data capture and error injection, enabling detailed functional and performance analysis of PCIe protocol



The Xgig® 5P16 is a system platform that allows for protocol analysis for PCIe 5th generation protocol traffic at all layers of the stack. This product supports link and transaction testing, analysis and advanced debug, link speeds to 32 GTps and widths up-to 16-lanes.

The Xgig 5P16 analysis system is the latest addition of PCI Express 5.0 Analyzer test tools to the family of VIAVI protocol test products. Offering multi-link PCIe support, VIAVI further reduces customer TCO by allowing up to four users to access one of four links simultaneously. Today's complex, multiprotocol environments need integrated analysis with other interfaces such as Ethernet, SAS, and FC. The Xgig 5P16 connects with other VIAVI protocol analyzers designed for those protocols to provide time correlated multi-protocol views.

The Xgig 5P16 chassis has 256GB of memory; 128GB for upstream and 128GB for downstream traffic capture. The chassis provides advanced PCIe, NVMe and CXL level trigger and search capabilities designed to reduce debug and problem resolution time. Additional features include interposer auto-tuning, configuration space viewer, PCIe link performance measurements, trace view packet compression, and sideband signal triggers.

Key Features

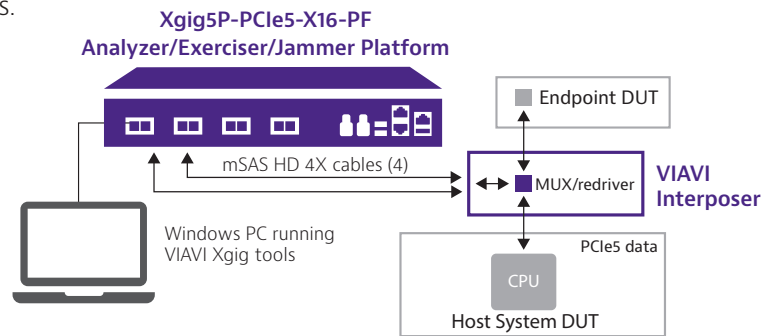
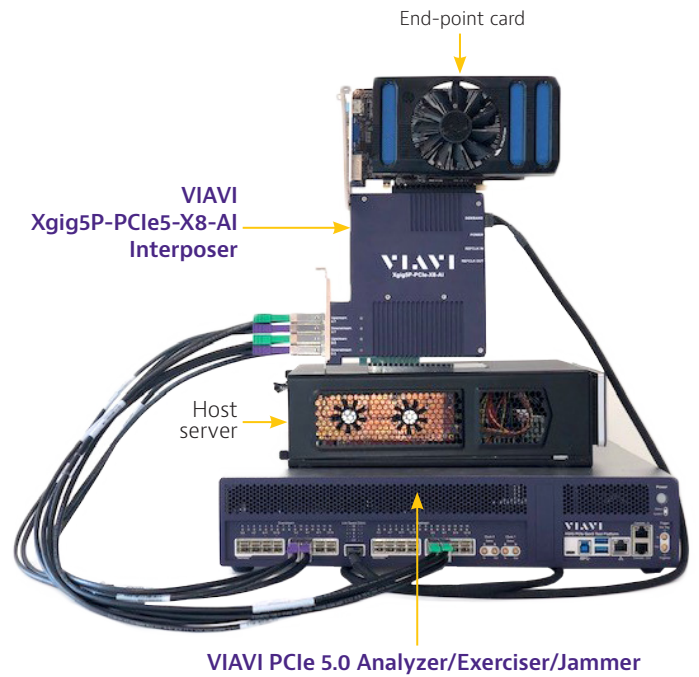
- 32GTps, PCIe 5.0 data rate operation. Fully compatible with other PCIe data rates of 2.5, 5.0, 8.0 and 16 GTps
- Link widths to 16-lanes, including 1-, 2-, 4-, 8-lanes
- 256GB memory (128GB upstream and 128GB downstream)
- Memory segmentation for capture of multiple traces
- Host-Client connection for remote debugging using Ethernet, or local debugging using USB
- SMB capture and trigger for NVMe Management Interface (NVMe-MI) observability
- Supports full Analyzer functionality together with either Exerciser or Jammer operation
- Simultaneous capture of multiple links is allowed with multiple simultaneous users
- Decodes all PCIe, NVMe and CXL traffic at all layers of the stack including the TLP, DLLP, and PHY layer packets
- Flexible trigger events include training sequences, ordered sets, queue pairs, PRPs, SGL, SMB, etc.
- Cascade captures from up to four Xgig chassis into a single trace view
- Full support of PCI Express LTSSM analysis
- Field replaceable power supply
- LEDs give quick indicators of power and link status
- Size (W x D x H): 17.2 x 16.8 x 3.2 inches; 43.7 x 42.7 x 8.1 cm
- Weight: 25.4 lbs; 11.5 kg
- Power: 100 – 240 VAC, 900W maximum
- Includes one-year hardware and three-year software warranties
- Works with the VIAVI Xgig software tool suite: Trace Control, Trace View, Expert™, Serialytics™
- Supported by a wide variety of Interposers (CEM, U.3, etc.)

Application

The 5P16 hardware chassis, together with firmware and Xgig software tools support the latest PCIe, NVMe and CXL specifications. Analysis will alert the user to all protocol errors at every layer of the PCIe stack, including state and sub-state level errors within the LTSSM viewer. This platform also supports Analyzer bifurcation, enabling simultaneous capture of multiple links by up to four simultaneous users.

A full complement of Interposers and probes is available enabling the Xgig 5P16 to attach to all popular PCIe and NVMe connector interfaces. Interposers include CEM, U.2/U.3, M.2, EDSFF and more. Using time-synchronized packet trace view, the Xgig 5P16 supports the SMBus status to be shown alongside PCIe, NVMe or CXL packets. The following photo and diagram show an example test configuration of the 5P16 system.

When purchasing the 5P16 platform you must select appropriate Analyzer and/or Exerciser and Jammer licenses, and Interposers to fit your specific application requirements.



Kit Contents

| Item | Description | Qty |
|------|---|-----|
| 1 | Xgig5P-PCIe5-X16-PF, 16-lane chassis for PCIe 5.0 | 1 |
| 2 | Mechanical accessory kit (includes: Cat5e and USB cables, USB recovery drive, power cord) | 1 |
| 3 | Rack mounting tray | 1 |
| 4 | Hard-shell, wheeled travel case with padding | 1 |

Ordering Information

| Part Number | Description |
|------------------------|--|
| Xgig5P-PCIe5-X16-PF | 16-lane, 32GTps PCIe 5.0 Analyzer/Exerciser/Jammer Platform Chassis with 1-yr HW and 3-yr SW maintenance |
| Xgig5P-PCIe5-X16-PF-H1 | Optional 1-year extended hardware warranty |
| Xgig5P-PCIe5-X16-PF-M1 | Optional 1-year extended software maintenance |



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