VIAVI

Xgig® 4K16 Analyzer/Jammer Platform

for PCI Express ® 4.0

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

The Xgig 4K16 is a single platform that allows for simultaneous protocol analysis (A) and jamming (J) for PCIe 4th generation protocol traffic at all layers of the stack. It supports link widths up-to 16-lanes, and link speeds to 16 GT/s.

The Xgig 4K16 Protocol Analyzer is the latest addition of PCI Express 4.0 Analyzer and Jammer test tools to the family of Viavi protocol products. Multicolored LEDs on the front panel specify Link Speed, Lane Width, and Signal Quality. In today's complex, multiprotocol environments where integrated analysis with other interfaces such as Ethernet, SAS, and FC are required, the Xgig 4K16 connects with other Viavi protocol analyzers designed for these protocols to provide time correlated multi-protocol views.

The Xgig 4K16 chassis has 128 GB of memory; 64GB for upstream and 64GB for downstream traffic capture. The chassis provides advanced PCIe and NVMe level trigger and search capabilities designed to reduce debug and problem resolution down time. Additional features include interposer auto-tuning,

KEY FEATURES

- 16GTps, PCIe 4.0 data rate operation. Fully compatible with other PCIe data rates of 2.5, 5.0 and 8.0GTps

- Link widths to 16-lanes, including 1-, 2-, 4-, 8-lanes

- 128GB memory (64GB Up Stream and 64GB Down Stream)

- 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

- Simultaneously Analyze and Jam on a single chassis

- The Tap ports allow AJ-A configuration Jamming

- Decodes all PCIe and NVMe traffic at all layers of the stack including the TLP, DLLP, and PHY layer logic sub-blocks

- Trigger and Search events include training sequences, ordered sets, queue pairs, PRPs, Scatter/Gather Lists (SGL), SMB, etc.

- Cascade up to 4 Xgig captures into a single trace view

- Full support of LTSSM for PCI Express

- Field replaceable modular fan and power supply assemblies

- LED's give quick indicators of power and status

- Size (W x D x H): 17.0 x 14.5 x 2.3 in; 43.2 x 36.8 x 5.8 cm

- Weight: 15 lbs; 6.8 kg

- Power: 100 – 240 VAC, 450W maximum

- Includes one-year hardware and three-year software warranties

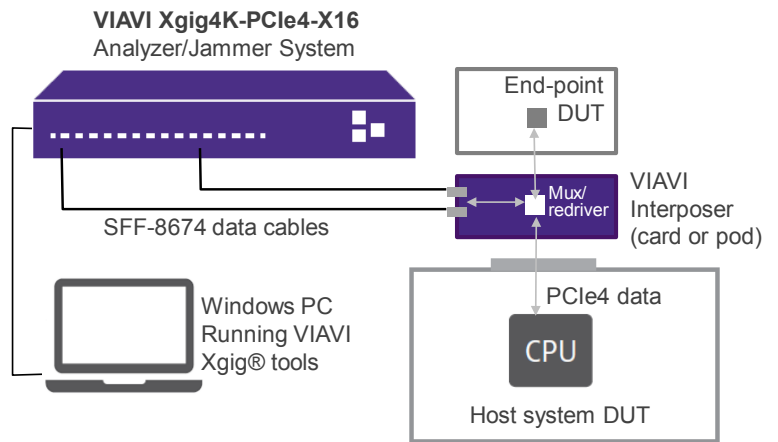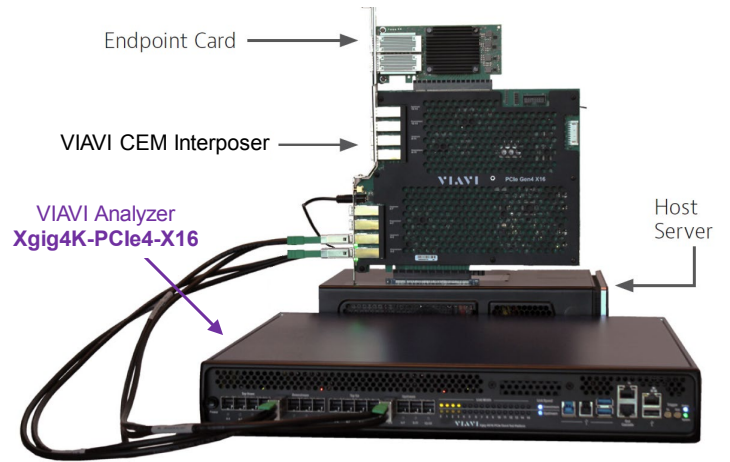- Works with interposers for CEM slot, Flying Lead, U.2 (SFF-8639), M.2, SFF-8674/8644, Oculink, etc.

configuration space viewer, PCIe link performance measurements, trace view packet compression, and sideband signal triggers for PERST#, PEDET#, PEWAKE#, and CLKREQ#.

APPLICATIONS

The 4K16 hardware chassis, together with firmware and Xgig software tools support the latest PCIe and NVMe 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.

A full complement of Interposers and probes is available enabling the Xgig 4K16 to attach to all popular PCIe and NVMe connector interfaces. Interposers include CEM Adapters, U.2, M.2, Oculink, solder-down Flying Lead probes and more. Using a time-synchronized packet trace view, the Xgig 4K16 supports the SMBus status to be shown alongside PCIe or NVMe packets. The following photo and diagram show an example test configuration of the 4K16 system.

When purchasing the 4K16 platform, also select suitable analyzer and/or jammer licenses, and interposers to fit your specific application requirements.

KIT CONTENTS

Item	Description	Qty
1	Xgig4K-PCIe4-X16, 16-lane chassis for PCIe 4.0	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
Xgig4K-PCIe4-X16	16-lane, 16GTps PCIe 4.0 Analyzer/Jammer Platform Chassis with 1-yr HW and 3-yr SW maintenance
Xgig4K-PCIe4-X16-H1	Optional 1-year extended hardware warranty
Xgig4K-PCIe4-X16-M1	Optional 1-year extended software warranty

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