

# VIAVI

## Xgig 4-lane CEM-slot Interposer

for PCI Express® 4.0

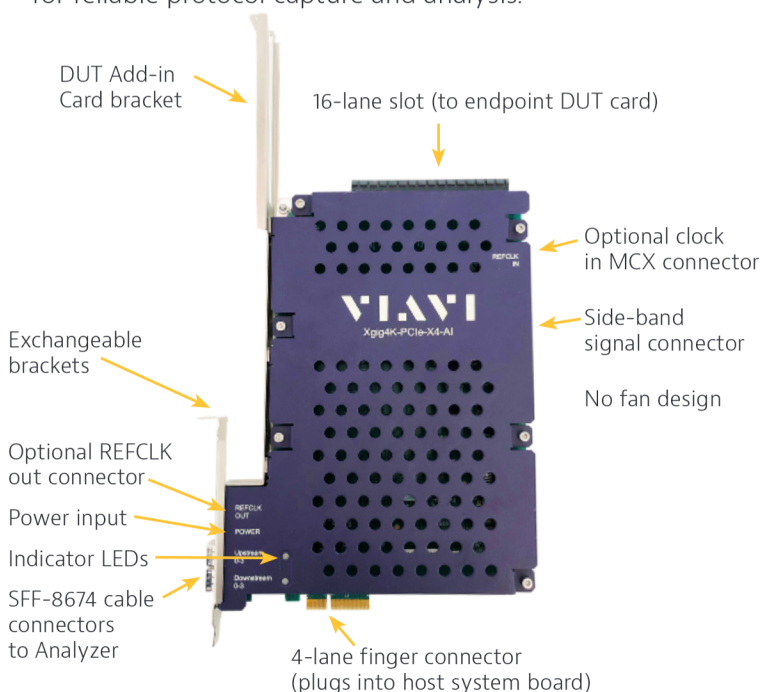
Provides a tap of data signals between a host system and adapter card for input to the VIAVI Analyzer

VIAVI Solutions Xgig® 4-lane, CEM-slot Interposer, the 4K-PCIe4-X4-AI, provides connection between the VIAVI PCIe 4.0 Analyzer/Jammer chassis and a system under test. The Interposer installs into a 4-lane PCIe CEM slot that is common on many servers, workstations, and desktop PCs. The Interposer provides a data signal tap for the Analyzer of communication between host and endpoint devices. It operates up to and including 16GTps, PCIe 4.0 rate, across 4-lanes (bi-directional).

This Interposer uses high-speed linear signal redrivers to buffer the system data signals across the Interposer between PCIe slot and PCB fingers. This design ensures a clean signal is delivered to the Analyzer and DUT devices for reliable protocol capture and analysis.

### Features

- Supports link widths up to and including 4-lanes
- Operates up to 16GTps, PCIe 4.0 data rates
- Downward compatible with PCIe gen-1, gen-2 and gen-3 data rates of 2.5, 5.0 and 8.0GTps
- A top edge 16-lane CEM slot connector accepts all endpoint DUT adapter cards
- Bottom edge 4-lane PCB finger connector installs into host test system's 4-, 8- or 16-lane PCIe slot
- Supplied with two high-quality SFF-8674 equivalent custom cables for Analyzer attachment
- Data path uses high-speed linear redrivers to ensure good signal capture with minimal tuning
- Supports Analyzer side-band signal triggering and capture via custom cable
- Supports clock and trigger I/O
- Interposer power is independent of host system. A 120/220 AC in, 12V/3A DC out converter is included
- Custom, exchangeable brackets enable secure chassis and endpoint card installations
- LEDs give quick indication of power and operation
- Format: Design is based on the PCIe Card Electro-Mechanical (CEM) specification
- Size: 170mm deep x 242mm tall x 15mm thick
- Works together with the VIAVI Xgig4K-PCIe4-X4 Analyzer/Jammer platform chassis
- Provides consistent, repeatable capture of link training, equalization negotiation and other data
- Supports error injection for deep system analysis
- Supported by Xgig tool suite including Trace Control, Expert and Serialytics



Applications

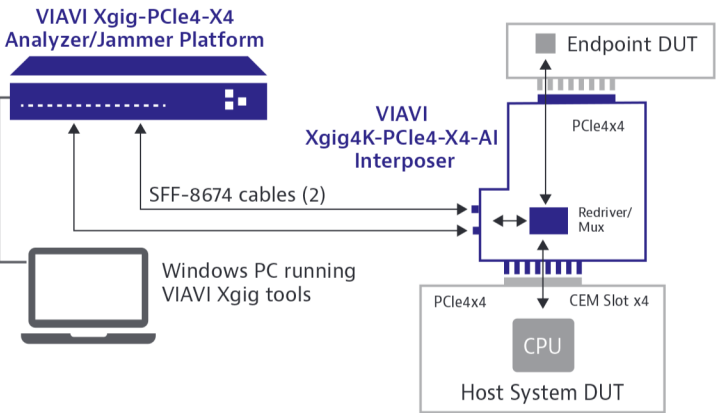
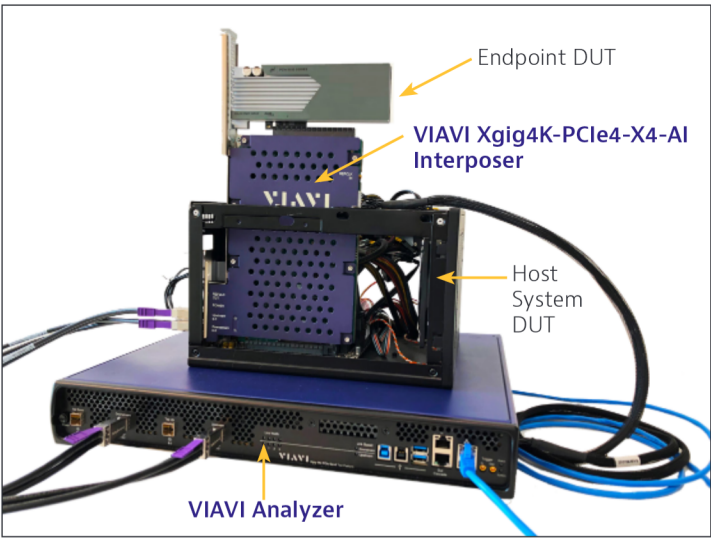
Working together with the VIAVI PCIe 4.0 Analyzer/Jammer chassis, the Interposer enables debug and verification of new ICs, new system hardware implementations, FPGA firmware, validation of system BIOS and software, and supports manufacturing test.

The Xgig4K-PCIe4-X4-AI Interposer is inserted into a 4-, 8- or 16-lane PCIe slot in the host system, and an endpoint card is inserted into the top 16-lane slot connector creating the test data path. Cables connect the Interposer to the VIAVI protocol Analyzer/Jammer platform chassis.

The photo to the right shows a typical application, while the corresponding block diagram below it indicates the signal data paths. Note that this Interposer requires an open chassis while in use.

When operating in Analyzer mode, the DUT data is captured (tapped) from both the upstream and downstream data paths as inputs to the Analyzer. When operating in Jammer mode, or Analyzer/Jammer mode, the Interposer data path is switched to route data into and out of the Analyzer.

In addition to this 4-lane CEM-Slot Interposer, VIAVI offers a variety of other Interposer types for connecting into many popular PCIe system applications, including other CEM, U.2, M.2, OCulink, Slimline, Flying-Lead and others.



Kit Contents

Item	Description	Qty
1	Xgig4K-PCIe4-X4-AI, 4-lane 16Gtps CEM-Slot Interposer card for PCIe 4.0	1
2	SFF-8674 custom high-performance cables	2
3	Sideband cable	1
4	MCX coax cables (for optional clock)	2
5	Power brick, 120/220 input, 12V/3A output	1
6	Replaceable bracket kit	1

Ordering Information

Part Number	Description
Xgig4K-PCIe4-X4-AI	Xgig 4-lane, 16GTps CEM*-Slot Active Interposer Kit for PCIe 4.0
Xgig4K-PCIe4-X4-AI-H1	1-year extended hardware warranty

\* CEM: Card Electro-Mechanical Specification (a PCIe spec)



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