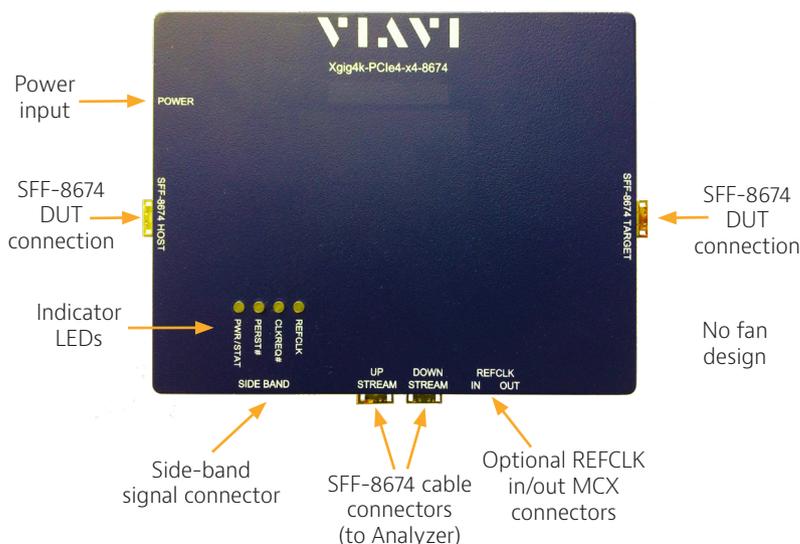Data Sheet

VIAVI
Xgig SFF-8674 Interposer
for PCI Express® 4.0

Provides a tap of PCIe data signals at an SFF-8674 connector for input to the VIAVI PCIe 4.0 Analyzer

VIAVI Solutions Xgig® PCIe 4.0 SFF-8674 Active Interposer, the Xgig-4K-PCIe4-X4-8674, supports analysis of PCIe communication across an SFF-8674 4-lane cable connection. This Interposer enables protocol analysis of communication between SFF-8674 attached host chassis port and an endpoint chassis or device. Bidirectional PCIe 4.0 protocol data on each of 4 lanes is captured at up to 16GTps rate for analysis. High-quality, low-loss, custom SFF-8674 cables are supplied for connection into the VIAVI Analyzer. Multiple units can be placed in parallel to achieve wider links up to 16-lanes.

This Interposer uses high-speed linear signal redrivers to buffer the system data signals ensuring a clean signal is delivered to both the Analyzer and the devices-under-test (DUT) for accurate protocol capture and analysis.

Power input

SFF-8674 DUT connection

Indicator LEDs

Side-band signal connector

SFF-8674 cable connectors (to Analyzer)

Optional REFCLK in/out MCX connectors

SFF-8674 DUT connection

No fan design

Key Features

- Operates up to 16GTps, PCIe gen-4 data rates
- Downward compatible with PCIe gen-1, gen-2 and gen-3 data rates of 2.5, 5.0 and 8.0GTps
- SFF-8674 host and target connections support PCIe links of up to 4-lanes
- Multiple Interposers can be used with links to 16-lanes
- Supplied with two high-quality SFF-8674 equivalent custom cables for Analyzer plus two cables for DUT attachment
- Data path uses high-speed linear redrivers to ensure good signal capture with minimal tuning
- Supports Analyzer side-band signal capture and triggering in multiple formats
- Two coax cables supplied for optional clocking sources
- Interposer power is independent of host system
- A 120/220 AC in, 12V/3A DC output converter is included
- LEDs give quick indication of power and status
- Size: (L x W x H): 112 x 150 x 30 mm (incl. rubber stands)
- Works together with VIAVI Xgig 4K Analyzer platforms
- Provides consistent, repeatable capture of link training, equalization negotiation and other data traffic
- Supports error injection for deep system analysis
- Supported by VIAVI Xgig tool suite including Trace Control, Expert™ and Serialytics™
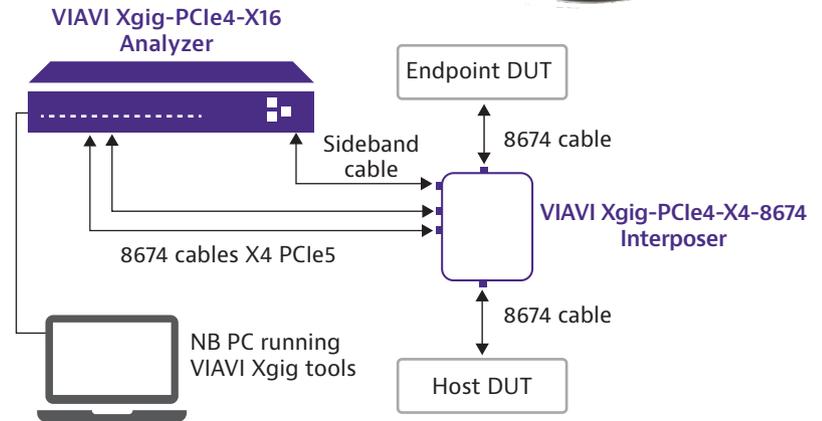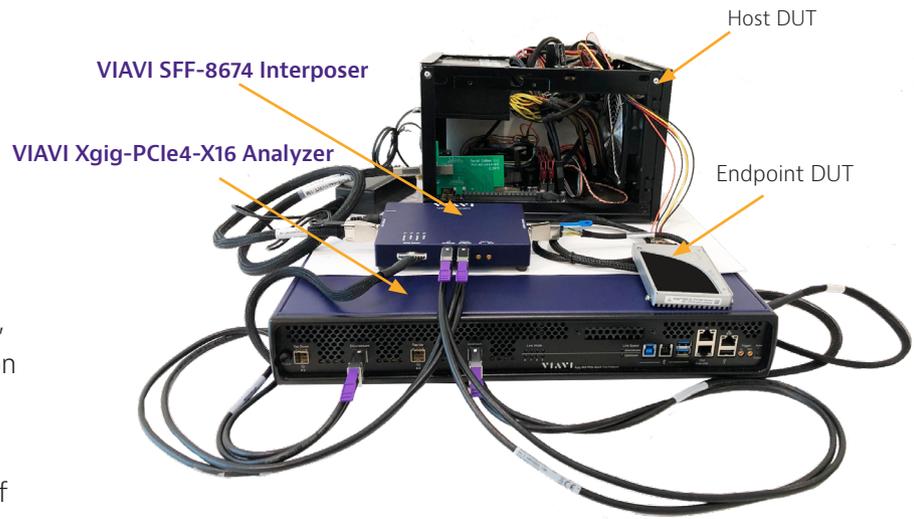
Applications

Working together with the VIAVI PCIe 4.0 Analyzer/Jammer platform, this Interposer enables debug and validation of systems and PCIe connections having a mini-SAS HD / SFF-8674 interface. It supports test and debugging of peripheral devices, host systems, firmware and drivers. It also supports validation of system BIOS and software, PCIe chassis-to-chassis (server-to-JBOD) communications and manufacturing test. Full decode and analysis of data traffic and link states is provided.

The photo to the right shows a typical application, while the corresponding block diagram below it indicates the signal data path. Data flows between the host system SFF-8674 interface to the Interposer and then to the SFF-8674 target DUT. The signal is "tapped" on the Interposer for use by the Analyzer.

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, data gets redirected through the Analyzer chassis.

The contents of an 8674 Interposer kit is listed here. Note that there are multiple versions of this Interposer available, as determined by the side-band signal definitions at the interface. Verify with VIAVI team that you are purchasing the correct Interposer version to match your application.

Kit Contents

Item	Description	Qty
1	SFF-8674, 4-lane Interposer pod for PCIe 4.0	1
2	SFF-8674 custom high-performance cables to Analyzer chassis (purple tab)	2
3	SFF-8674 DUT pass-through cables	2
4	Sideband signal cable (to Analyzer)	1
5	MCX 50-Ohm coax cables for optional clock	2
6	Power brick, 120/220 input, 12V/3A output	1
7	Quick Start Guide	1

Ordering Information

Part Number	Description
	SFF–8674 Active Interposer, 16GTps, 4-lane, for PCIe 4.0
• Xgig4K-PCIe4-X4–8674N • Xgig4K-PCIe4-X4–8674B	• N: PCIe standard pinout • B: Custom pinout
Xgig4K-PCIe4-X4-8674-H1	1-year extended hardware warranty

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