

# VIAVI Xgig E1 EDSFF Interposer

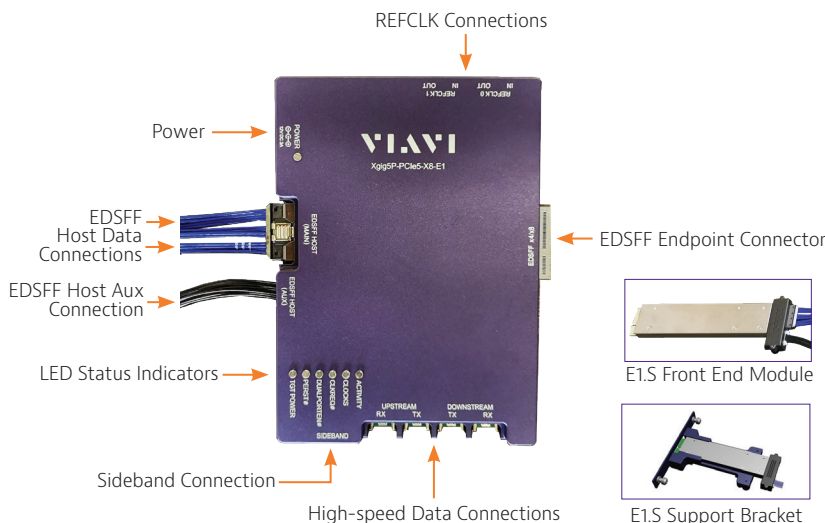
for PCI Express® 5.0

Provides a tap of host-system to EDSFF NVMe SSD data signals for input to the VIAVI Analysis System

VIAVI Solutions Xgig® 8-lane, E1 EDSFF Interposer, the Xgig5P-PCIe5-X8-E1, is optimized for developing, debugging and performance-tuning NVMe SSD operation in high-density storage servers. Bidirectional PCIe 5.0 protocol data on 8-lanes can be captured at 32GT/s for analysis.

The Interposer is supplied with an E1.S (short) front-end module for proper system fit. The E1.S is implemented to fit the 9.5 mm Short Form Factor with Optional Symmetric Enclosure variation. The Interposer is designed to support either 1 link of 4 or 8 lanes.

This Interposer uses high-speed linear signal redrivers to buffer the system data signals across the Interposer between host system and SSD devices-under-test. This design ensures a clean signal is delivered to the Analyzer for reliable protocol capture and analysis.



## Key Features

- Operates at 32GT/s PCIe 5.0 data rates, and is compatible with PCIe rates of 2.5, 5.0, 8.0 and 16GT/s
- Supports 1 link of 4 or 8 lanes
- EDSFF E1.S NVMe SSD DUT (not supplied) plugs directly into the Interposer
- Data path uses high-speed linear redrivers to ensure good signal capture with little or no tuning
- Includes high-quality cables for Analyzer connection
- Supports Analyzer side-band signal capture and triggering with display in multiple formats
- The supplied power brick makes Interposer power independent of host system
- LEDs give quick indicators of power and status
- Size: Base Pod: 120 x 160 x 35 mm  
E1.S: 158 x 9.5 x 33.7 mm (LxTxH)
- Works together with the VIAVI Xgig 5P16 or 5P8 analysis platforms
- Provides consistent, repeatable capture of link training, equalization negotiation and other data
- Supports error injection (jamming) for deep system analysis
- Supported by Xgig tool suite including Trace Control, Expert™ and Serialytics™

## Application

Working together with the VIAVI Xgig 5P16 or 5P8 PCIe 5.0 analysis platform, this Interposer enables debug and verification of new E1 EDSFF PCIe or CXL controller ICs, new server designs, firmware tuning, validation of system BIOS and software, and for verification of manufacturing test.

To setup the Interposer for operation, an E1 EDSFF SSD is inserted into the Interposer base pod. The Interposer front-end module is then inserted into the EDSFF bay of a high-density storage server. To complete the test data path the cables are attached connecting the Interposer to the VIAVI PCIe 5.0 protocol analysis platform. Xgig analysis tools are loaded and run on a local or remote Windows PC.

The photo to the right shows a typical application while the block diagram indicates the signal data path.

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 Analyzer/Jammer mode, data flows through the analysis chassis where it is modified between DUT devices. When operating in Analyzer/ Exerciser mode, data flows through the Interposer to the DUT. In Analyzer/Exerciser mode, data is sourced from the Analyzer chassis and connected to the server device under test via the Interposer.

VIAVI offers a variety of Interposer types for different PCIe system applications, including 4-, 8- and 16-lane CEM, U.2, M.2, Slimline and others.

## Kit Contents

Item	Description	Qty
1	Xgig5P-PCIe5-X8-E1, 8-lane EDSFF Interposer Base Pod	1
3	E1.S Front-end module	1
4	Custom high-performance cables	4
5	Sideband cable (to Analyzer)	1
6	Coax cable for optional clock	2
7	Power brick, 120/220 input, 12V/3A output	1
8	Bracket kit	1
9	Quick Start Guide	1

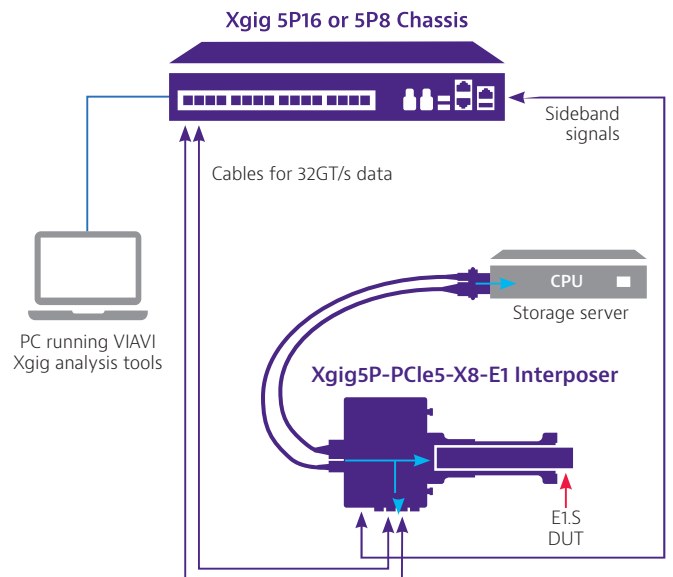
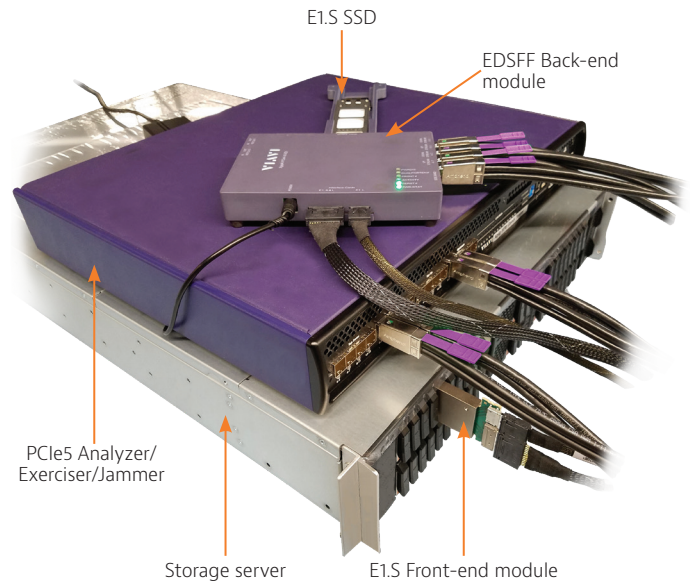
## Ordering Information

Part Number	Description
Xgig5P-PCIe5-X8-E1	Xgig 8-lane E1 EDSFF Interposer for PCIe 5.0
Xgig-Intpsr-C-Hx (x=1, 2, 3, 4)	x-year extended hardware warranty



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