

# PCIe® External Cable 3.0 to PCIe Slot Adapter for PCI Express® 3.0



## Key Features

- Allows devices using PCIe External Cables 3.0 class cable to connect directly to standard PCI Express slots
- Allows direct testing of PCIe device functions
- Allows testing of device drivers for new devices using PCIe External Cables 3.0 class cables with a standard computer system
- Supports I<sup>2</sup>C and PCIe side band signal connectivity
- Supports data rates of 2.5 GT/s, 5 GT/s and 8 GT/s (PCIe 3.0 compliant)
- Supports link widths up to x16
- Combine with interposer and analyzer for data traffic capture, decoding and troubleshooting
- Find errors fast!
- See and understand the traffic

Teledyne LeCroy's PCIe External Cable 3.0 to x16 PCIe Slot Adapter provides developers with multiple test capabilities to speed development of new PCIe External Cable 3.0 designs. Features include test points, I<sup>2</sup>C and side band signal connectors to make it easier to test voltages and control signals. The adapter converts PCIe traffic from a PCIe External Cable 3.0 class cable (or set of cables) to the PCIe CEM form factor connector (standard x16 slot).

## Ease of Use

Cables based on the Mini-SAS HD design are becoming the leading external cables for storage and enterprise systems. The PCI-SIG® has adopted a similar design in the PCIe External Cable 3.0. The PCIe External Cable 3.0 Adapter is a PCIe half-width CEM form factor plug in card that allows connecting a PCIe External Cable 3.0 device to a standard PCIe slot. To use the adapter simply plug the PCIe external cable(s) into the adapter and install the adapter into a standard PCIe slot. One PCIe cable can support x1 to x4, two cables support x8 and four cables support x16.

If traffic capture and protocol decoding is needed, the adapter can be used with a PCIe slot interposer and Summit™ protocol analyzer, providing

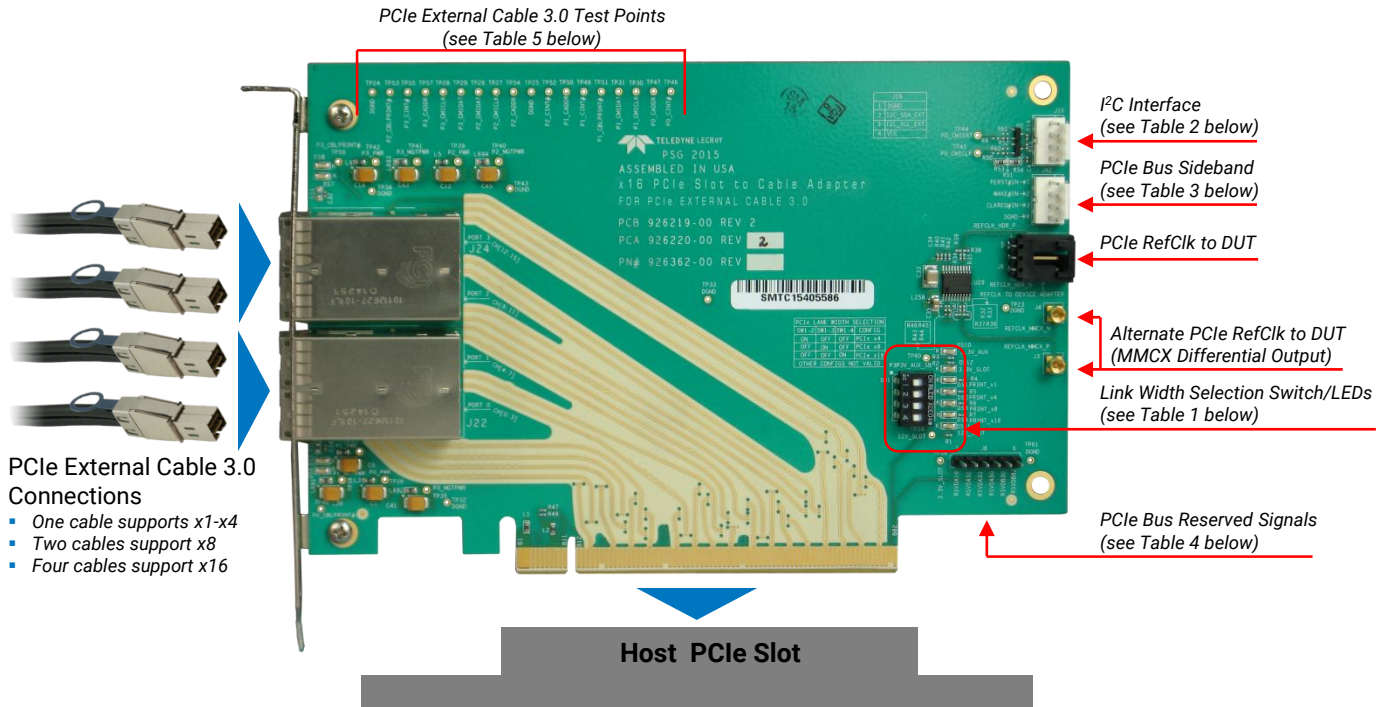
engineers visibility to virtually all types of protocol problems that may affect device performance or reliability. Rapid identification of problems leads to rapid solutions, allowing faster time-to-market for new devices and quicker solutions to issues showing up on existing devices.

## PCIe External Cable Interposer

In addition to the adapter, if a PCIe External Cable 3.0 port is available, Teledyne LeCroy offers a PCIe External Cable 3.0 interposer that can be used as a direct traffic probe and analysis tool with any of our Summit product family of analyzers. In combination, these products provide flexible and powerful tools for developers working on devices to streamline testing and reduce time-to-market for new products.



# PCIe External Cable 3.0 Adapter Connections & Test Points



## PCIe External Cable 3.0 Connections

- One cable supports x1-x4
- Two cables support x8
- Four cables support x16

Table 1: Link Width Selection Switch (SW1)				
PCIe Link Width	1	2	3	4
x1	ON	OFF	OFF	OFF
x4 (default)	OFF	ON	OFF	OFF
x8	OFF	OFF	ON	OFF
x16	OFF	OFF	OFF	ON

Table 2: I <sup>2</sup> C Connections (J16)	
Pin	Description
1	DGND
2	I2C_SDA_EXT
3	I2C_SCL_EXT
4	VCC (+3.3V to 5V)

Table 5: Available Test Points	
Test Point	Name
TP24	DGND
TP53	P2_CBLPRSNT#
TP55	P3_CINT#
TP57	P3_CADDR
TP28	P3_CMICLK
TP29	P3_CMIDAT
TP26	P2_CMIDAT
TP27	P2_CMICLK
TP54	P2_CADDR
TP25	DGND
TP52	P2_CINT#
TP50	P1_CADDR
TP49	P1_CINT#
TP51	P1_CBLPRSNT#
TP31	P1_CMIDAT
TP30	P1_CMICLK
TP47	P0_CADDR
TP46	P0_CINT#

## Specifications

**Dimensions** 167 x 111 mm  
(6.6" x 4.4")

**Link Width** x1, x4, x8 and x16

**Data Rates** 2.5 GT/s, 5 GT/s and 8 GT/s

**Connectors** PCIe External Cable 3.0 (up to 4)  
PCIe CEM x16 Slot  
3-pin RefClk to DUT  
Alternate MMCX RefClk  
I2C 4-pin Header  
PCIe Bus Sideband 4-pin Header  
PCI Bus Reserved 6-pin Header

Table 3: PCIe Bus Sideband (J42)	
Pin	Description
1	PERST# IN
2	WAKE# IN
3	CLKREQ# IN
4	DGND

Table 4: PCIe Bus Reserved Signals(J8)	
Pin	Description
1	RSVDA19
2	RSVDA32
3	RSVDA33
4	RSVDA50
5	RSVDB30
6	RSVDB82

## Ordering Information

### Product Description

PCIe External Cable 3.0 Adapter..... PE-ExtCable3.0-2-X16SLOT-X

### Product Code



1-800-909-7211  
teledynelecroy.com



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