

# PCI® Gen4 OCuLink to PCIe Host Adapter User Manual and Quick Start Guide

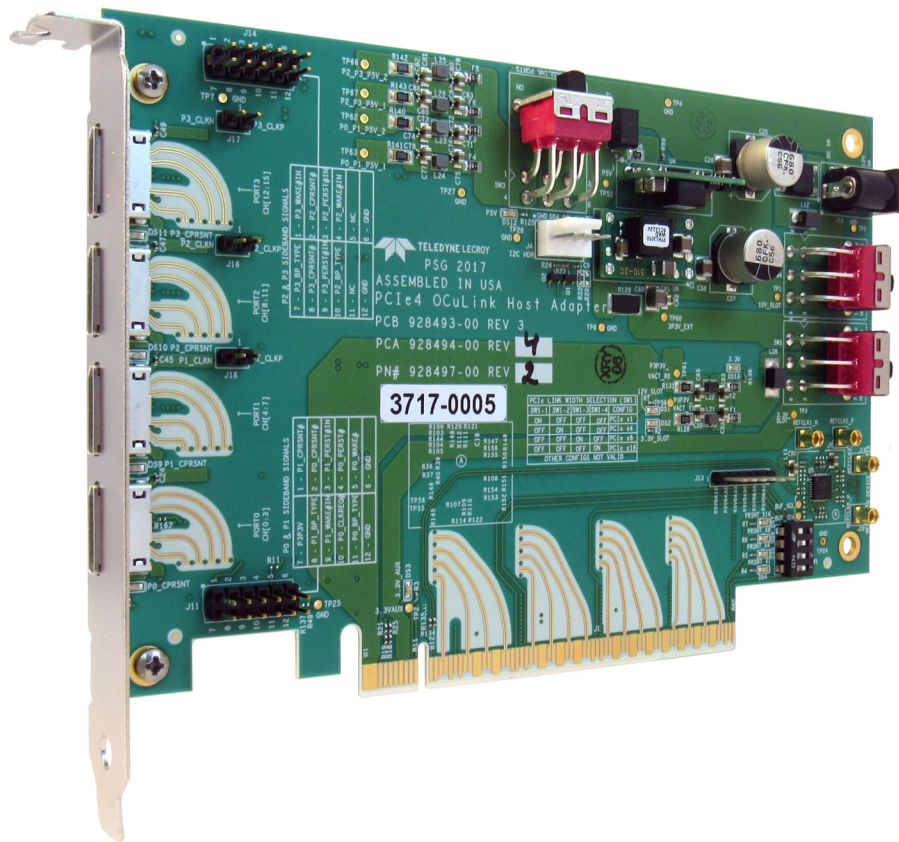
## Before Starting

Use this document for quick installation and setup. If you experience problems or need more information, see the product manuals available at the Teledyne LeCroy web site <https://teledynelecroy.com/sw/pciexpress>

## 1 Introduction

Teledyne LeCroy's PCIe Gen4 OCuLink Host Adapter provides developers with multiple test capabilities to speed development of new PCIe OCuLink Cable designs by allowing connection of an OCuLink device to be connected directly to a standard PCIe x16 CEM Slot. It supports data rates of 2.5 GT/s, 5.0 GT/s, 8.0 GT/s and 16.0 GT/s. Several test points and headers provide easy access to check status of bus signals.

The PCIe Gen4 OCuLink Host Adapter card works with the PCIe Gen4 OCuLink Cable (or set of cables) up to 0.6 meter in length as defined in the PCI Express® OCuLink Cable Specification.



PCIe Gen4 OCuLink Host Adapter

## 2 Components

The adapter package includes the following components:

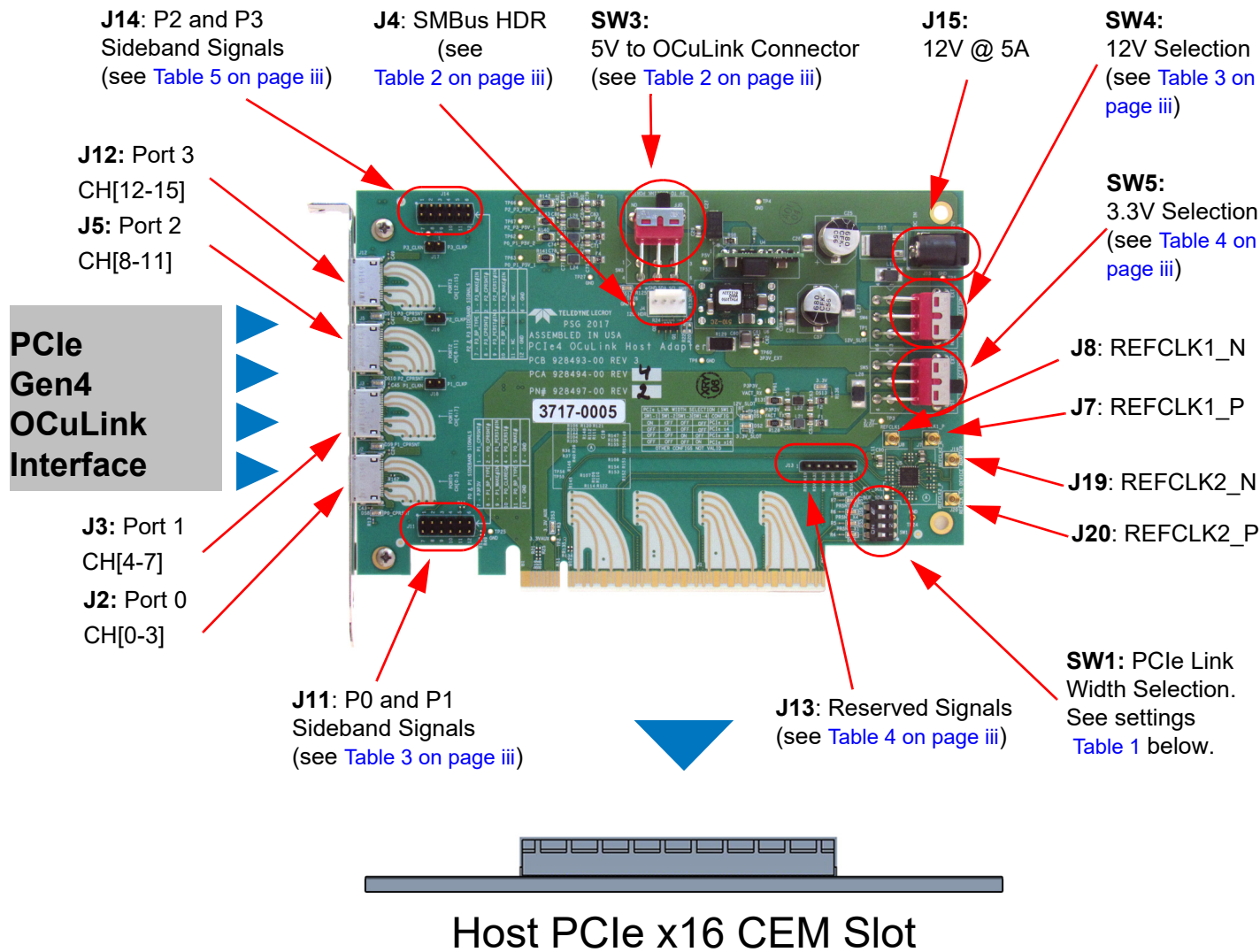
- PCIe Gen4 OCuLink to PCIe Host Adapter
- DC Power Adapter (12V @ 5A)
- User Manual and Quick Start Guide (this document)

Inspect the received shipping container for any damage. Unpack the container and account for each of the system components listed on the accompanying packing list. Visually inspect each component for absence of damage.

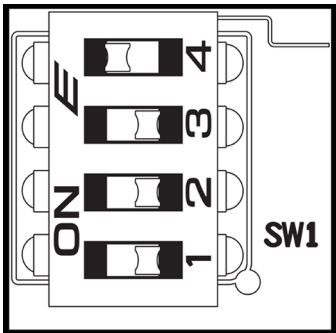
In the event of damage, notify the shipper and Teledyne LeCroy. Retain all shipping materials for shipper's inspection.

### 3 Connections

#### PCIe Gen4 OCuLink Host Adapter: Interconnection Overview



### 4 Switch Configuration: SW1, SW3, SW4, SW5



**Table 2: Switch Settings for 5V\_EXT: SW3**

SW3	5V_EXT Selector Switch to OCuLink Connector
OFF	No 5V_EXT to OCuLink Connector
ON	5V_EXT to OCuLink Connector

**Notes:** Factory settings for the switch is OFF.  
5V is optional on OCuLink External cables. If 5V needs to be provided use the external power supply and set SW3 to ON.

**Table 3: Switch Settings for 12V: SW4**

SW4	12V to EXT or Host
12V Host	12V from PCIe Slot Connector
12V EXT	12V from DC Jack input

**Note:** Factory settings for the switch is 12V Host.

**Table 4: Switch Settings for 3.3V: SW5**

SW5	3.3V to EXT or Host
3.3V Host	3.3V from PCIe Slot Connector
3.3V EXT	3.3V derived from 12V DC Jack input supply

**Notes:** Factory settings for the switch is 3.3V Host.  
External power supply needs to be connected only when using OCuLink External cables.

## 5 Connector Signals

**Table 2: J4 SMBus Connections**

PIN	DESCRIPTION
1	DGND
2	I2C_SDA_EXT
3	I2C_SCL_EXT
4	VCC (+3.3V to +5.0V)

**Table 4: J13 PCIe CEM Slot Signals**

PIN	DESCRIPTION
1	RSVDA19
2	RSVDA32
3	RSVDA33
4	RSVDA50
5	RSVDA30
6	RSVDA82

**Table 3: J11 P0 and P1 Sideband Signals**

PIN	DESCRIPTION	PIN	DESCRIPTION
1	P1_CPRSNT#	7	P3P3V
2	P0_CPRSNT#	8	P1_BP_TYPE
3	P1_PERST#IN	9	P1_WAKE#IN
4	P0_PERST#	10	P0_CLKREQ#
5	P0_WAKE#	11	P0_BP_TYPE
6	GND	12	GND

**Table 5: J14 P2 and P3 Sideband Signals**

PIN	DESCRIPTION	PIN	DESCRIPTION
1	P3_WAKE#IN	7	P3_BP_TYPE
2	P2_CPRSNT#	8	P3_CPRSNT#
3	P2_PERST#IN	9	P3_PERST#IN
4	P2_WAKE#IN	10	P2_BP_TYPE
5	NC	11	NC
6	GND	12	GND

## 6 Test Points

**Table 9: PCIe Gen4 OCuLink Host Adapter Test Points and Functions**

Test Point Number	Function
TP1	12V_SLOT
TP2	3.3VAUX
TP3	3.3V_SLOT
TP4	GND
TP5	GND
TP6	GND
TP7	GND
TP24	GND
TP25	GND
TP26	GND
TP27	GND
TP52	5V
TP55	SMBus_DATA
TP56	SMBus_CLK
TP59	P3P3V_VACT_TX
TP60	P3P3V_EXT
TP61	P3P3V_VACT_RX
TP62	5V Port 0, Port 1
TP63	5V Port 0, Port 1
TP66	5V Port 2, Port 3
TP67	5V Port 2, Port 3

## 7 Environmental Conditions

- Temperature: Operating 32° F to 122° F (0° C to 50° C)
- Temperature: Non-Operating 14° F to 176° F (-10° C to 80° C)
- Humidity: Operating 10% to 90% RH (non-condensing)

### Teledyne LeCroy Customer Support

#### Online Download

Periodically check the Teledyne LeCroy Protocol Solutions Group web site for software updates and other support related to this product. Software updates are available to users with a current Maintenance Agreement.

Web: [teledynelecroy.com/sw/pciexpress](http://teledynelecroy.com/sw/pciexpress)  
E-mail: [psgsupport@teledyne.com](mailto:psgsupport@teledyne.com)  
Support: [teledynelecroy.com/support/contact](http://teledynelecroy.com/support/contact)



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