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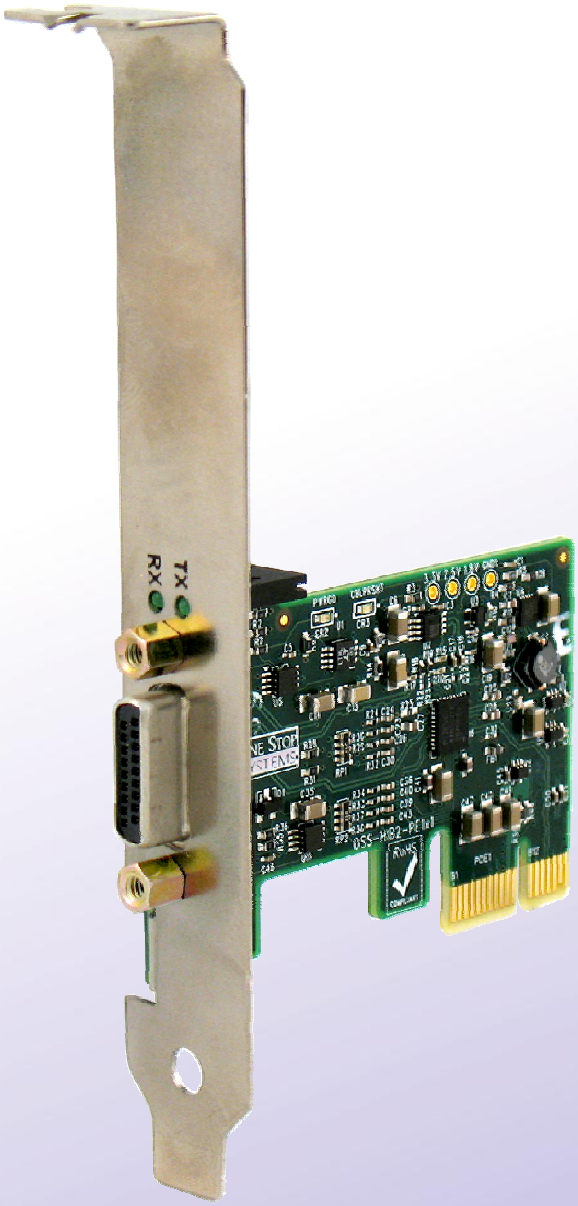


# User Manual, PCIe x1 Gen 2 Host Cable Adapter (HIB2x1-H)

OSS-PCIe-HIB2-x1-H

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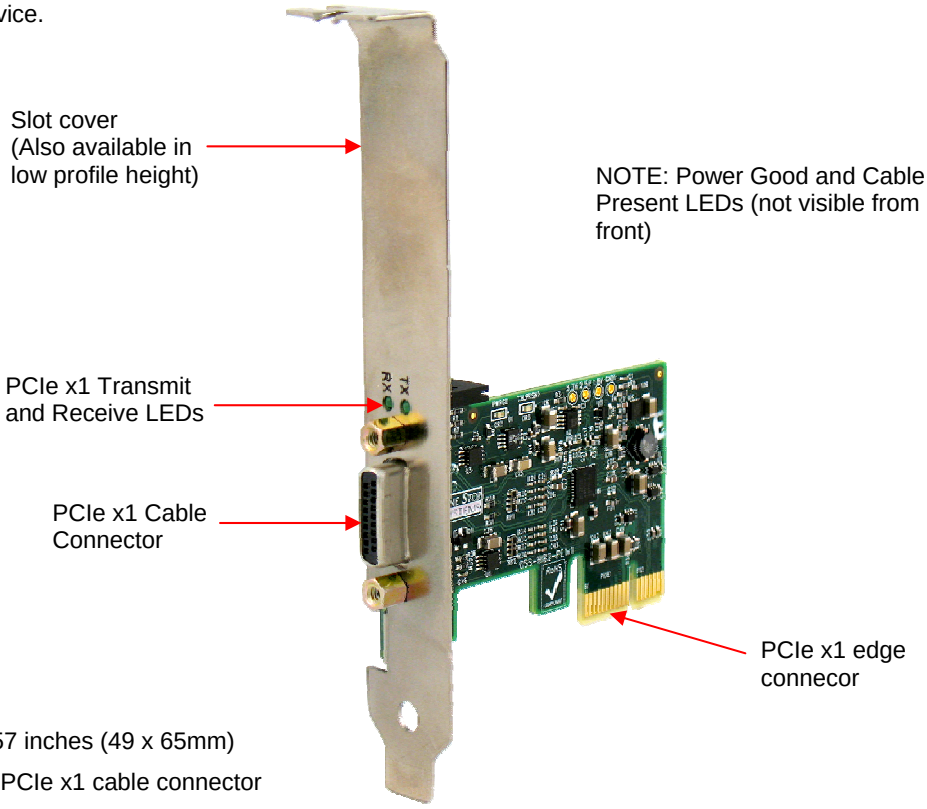
# 1. Overview

## 1.a. Unpacking Instructions

1) If the carton is damaged when you receive it, request that the carrier's agent be present when you unpack and inspect the equipment.
2) After unpacking, verify that all items listed in the packing list are present.
3) Inspect the equipment for shipping damage.

## 1.b. Product Description

PCIe x1 host cable adapter can be inserted into a x1, x4, x8 or x16 slot of a host enclosure to extend the host bus to an expansion system or PCIe device.




## 1.c. Specifications

Dimensions (H x L): 1.94 x 2.57 inches (49 x 65mm)

Front Panel Connectors: One PCIe x1 cable connector

Front Panel Indicators: PCI Express x1 Tx (Transmit) and Rx (Receive)

Power Consumption (designed to meet the following conditions): 3.75W typical, 3.3@1.3A

Operating Environment (designed to meet the following conditions)

Temperature Range: 0° to 70°C (32° to 122°F)

Relative Humidity: 10 to 90% non-condensing

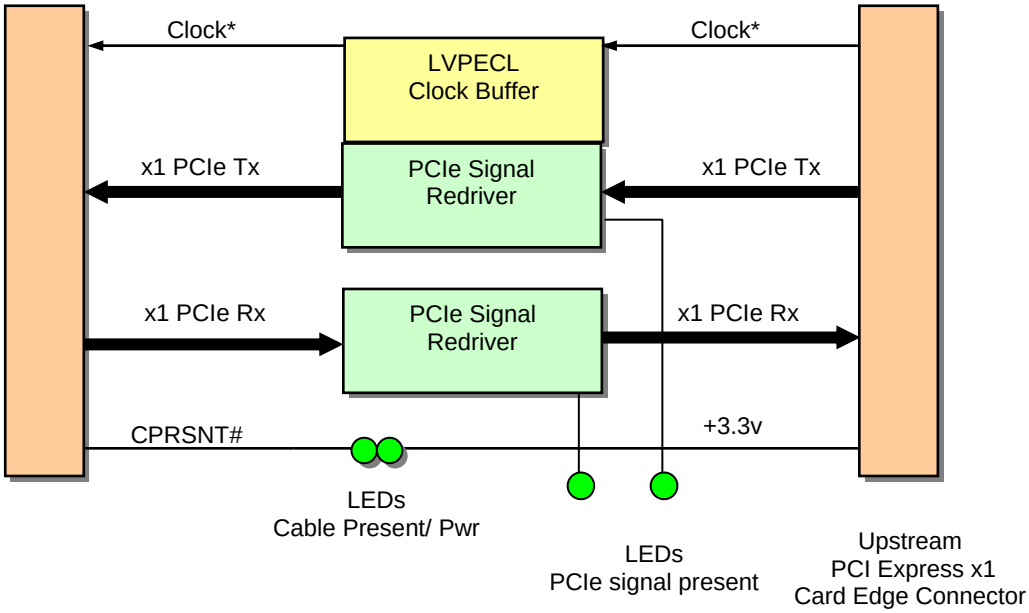
Shock: 30g acceleration peak (11ms pulse)

Vibration: 5-17 Hz 0.5" double amplitude displacement; 7-2000Hz, 1.5g acceleration.

Redriver: Pericom PI2EQX4401

Agency Compliance Designed to meet , but not tested UL60950, FCC Class B, CE safety and emissions

## 1.d. Block Diagram




*Clock direction shown in Host configuration

# 2. Initial Set-Up

## 2.a. Installation and Removal

1. Power down the host system.
2. Open the chassis according to your system documentation.
3. Let the power supply cool down, if necessary.
4. Remove the Host Cable Adapter from the protective bag, observing proper ESD safety procedures.

## 2.b. Installing the Host Cable Adapter:

1. Insert the Host Cable Adapter into a PCIe x1, x4, x8 or x16[1] add-in card slot. Make sure that the card is well seated and tighten the screw.
2. Attach the cable and tighten the two jackscrews.


3. Attach the other end of the cable to the upstream port connector of the ELB in the expansion enclosure. To link to a second expansion enclosure, connect a second cable from the downstream port connector on the ELB of the first expansion enclosure to the upstream port connector on the ELB of the second enclosure.

## 2.c. Removing the Host Cable Adapter:

1. Loosen the jackscrews and remove the cable.
2. Loosen and remove the screw before removing the Host Cable Adapter from the card slot.

## 2.d. When using with any third party I/O device:

1) Install the downstream board into the appropriate PCIe slot.
2) Connect the external power source (separate from the host system power supply) to the downstream device if necessary.
3) Connect the PCIe cable to both the upstream host adapter and the downstream device.

# 3. Signal adjustment

## PCIe x1 Card Edge Connector

The pins are numbered as shown with side A on the top of the centerline on the solder side of the board and side B on the bottom of the centerline on the component side of the board.

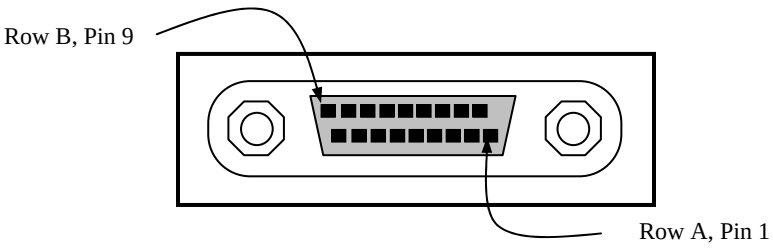
The PCIe interface pins PETpx, PETnx, PERpx, and PERnx are named with the following convention: “PE” stands for PCIe high speed Express, “T” for Transmitter, “R” for Receiver, “p” for positive (+), and “n” for negative (-).

Note that adjacent differential pairs are separated by two ground pins to manage the connector crosstalk.

| Pin # | Side B | | Side A | |
|---|---|---|---|---|
| | Name | Description | Name | Description |
| 1 | N/C | N/C | PRSNT1# | Hot-Plug presence detect |
| 2 | N/C | N/C | N/C | N/C |
| 3 | N/C | N/C | N/C | N/C |
| 4 | GND | Ground | GND | Ground |
| 5 | NC | N/C | N/C | Not connected |
| 6 | N/C | N/C | JTAG3 | TDI (Test Data Input) |
| 7 | GND | Ground | JTAG4 | TDO (Test Data Output) |
| 8 | +3.3V | 3.3 V power | N/C | Not connected |
| 9 | N/C | Not connected | N/C | Not connected |
| 10 | 3.3Vaux | 3.3 V auxiliary power | +3.3V | 3.3 V power |
| 11 | N/C | N/C | PERST# | Fundamental reset |
| Mechanical key | | | | |
| 12 | RSVD | Reserved | GND | Ground |
| 13 | GND | Ground | REFCLK+ | Reference clock (differential pair) |
| 14 | PETp0 | Transmitter differential pair, Lane 0 | REFCLK | |
| 15 | PETn0 | | GND | Ground |
| 16 | GND | Ground | PERp0 | Receiver differential pair, Lane 0 |
| 17 | PRSNT2# | Hot-Plug presence detect | PERn0 | |
| 18 | GND | Ground | GND | Ground |

## PCE Express x1 Connector

The PCI Express x1 connector is an 18 position pin and socket D connector with metallic shell as defined in the PCI Express External Cabling Rev 1.0 Molex part number 74150-0001, or equivalent.




| Pin # | Row A Signal Name | | Row B Signal Name | Pin # |
|---|---|---|---|---|
| 1 | PER0+ | | GND | 1 |
| 2 | PER0- | | N/C | 2 |
| 3 | N/C | | CWAKE# | 3 |
| 4 | GND | | CPRSNT# | 4 |
| 5 | CREFCLK- | | GND | 5 |
| 6 | CREFCLK+ | | 3.3V | 6 |
| 7 | GND | | CPWRON | 7 |
| 8 | CPRSET# | | PET0- | 8 |
| 9 | GND | | PET0+ | 9 |

# 4. Ordering Information

OSS-PCIe-HIB25-x4-H - One Stop Systems HIB25 x4 host cable adapter.

OSS-PCIe-HIB25-x4-T - One Stop Systems HIB 25 x4 target cable adapter.

**Other products you may need;**

**OSS-PCIe-HIB25-x4-H** – PCIe x4 Gen 2 host cable adapter installs in a x4, x8, x16 expansion slot of a host system to extend the host PCIe bus to an expansion system or PCIe device.

**OSS-PCIe-HIB25-x4-T** – PCIe x4 Gen 2 target cable is only used with the OSS 2-slot PCIe backplane to add a single PCIe card to a host.

**OSS-PCIe-HIB25-x8-H** – PCIe x8 Gen 2 host cable adapter installs in a x8 or x16 expansion slot of a host system to extend the host PCIe bus to an expansion system or PCIe device.

**OSS-PCIe-HIB25-x8-T** – PCIe x8 Gen 2 target cable adapter is only used with the OSS 2-slot PCIe backplane to add a single PCIe card to a host.

**OSS-PCIe-HIB25-x16-H** – PCIe x16 Gen 2 host cable adapter installs in a x16 expansion slot of a host system to extend the host PCIe bus to an expansion system or PCIe device.

**OSS-PCIe-HIB25-x16-T** – PCIe x16 Gen 2 target cable adapter is only used with the OSS 2-slot PCIe backplane (OSS-PCIeBP-2010, P.34) to add an additional PCIe slot to any device.

**OSS-XMC-HIB25-x8** – XMC PCIe x8 Gen 2 host cable adapter installs in an XMC connector on a host carrier board and cables to a PCIe downstream device or expansion chassis.

**OSS-PCIe-HIB35-x4** – PCIe x4 Gen 2 cable adapter with PCIe switch (including NT port and DMA controller) operates in upstream or downstream mode with DIP switch setting change.

**OSS-SHB-ELB-x4/x8-2.0** – PCIe x8 or x4 Gen 2 expansion link board installs in SHBe slot of a PCIe Gen 2 backplane, allowing either x8 or x4 cable inputs from upstream host system.

**OSS-PCIe-CA-x1/x4** – PCIe cable adapter fits into slot or stand-alone, converts PCIex1 cable to PCIex4 cable.

**OSS-PCIe-CA-x4/x8** – PCIe cable adapter fits into slot or stand alone, converts PCIex4 cable to PCIe x8 cable.

**OSS-PCIe-CBL-x4-1M** – 1 meter PCIe x4 cable with PCIe x4 connectors.

**OSS-PCIe-CBL-x4-2M** – 2 meter PCIe x4 cable with PCIe x4 connectors.

**OSS-PCIe-CBL-x4-3M** – 3 meter PCIe x4 cable with PCIe x4 connectors.

**OSS-PCIe-CBL-x4-5M** – 5 meter PCIe x4 cable with PCIe x4 connectors.

**OSS-PCIe-CBL-x4-7M** – 7 meter PCIe x4 cable with PCIe x4 connectors.

**OSS-PCIe-CBL-ACT-x4-10M** – 10 meter active optical cable with PCIe x4 connectors.

**OSS-PCIe-CBL-ACT-x4-100M** – 100 meter active optical cable with PCIe x4 connectors.