



One PCIe x 16 3.0 slot Backplane(412)



OSS-412-BP User Manual

SKU: OSS-BP-412



OSS
ONE STOP SYSTEMS

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1 Overview

1.1 Description

The OSS target backplane supports a PCIe Gen3 target cable adapter installed in the OSS target slot and one PCIe x16 expansion card installed in the expansion / downstream slot. The slots are backward compatible and support Gen 1 and Gen 2 target adapters and expansion cards. Only target adapters with the OSS target slot configuration are supported. Expansion cards designed to the PCIe PCI-SIG specification are supported. While the backplane is used in the CUBE products, it can also be used in test applications as a stand-alone backplane with 12VDC power applied.

1.2 Features

1.2.1 Backplane

- The backplane has two slots
 - 1slot is Target slot (a.k.a "Upstream slot / port"). This is a designated slot for the target adapter card
 - 2nd slot is the expansion slot (a.k.a "Downstream" slot / port). Use this slot to plug in a specific PCIe card. The downstream slot accommodates a single x2, x4, x8 and x16 PCIe card.
 - The slot is backward compatible and support Gen 1 and Gen2
- Target slot is x16 Gen 3
- Expansion slot is x16 Gen 3
- 12 VDC input

1.2.2 Adapter Cards

- There are different types of cable adapter cards to use with the backplane. It is recommended to use a compatible OSS cable adapter card.
- The Host adapter card inserts into any x16 slot on the host motherboard.
- The Target adapter card operates ONLY in the OSS backplane target slot.
- Support half-height bracket.
- The Host and Target cable adapter cards require no software / drivers.

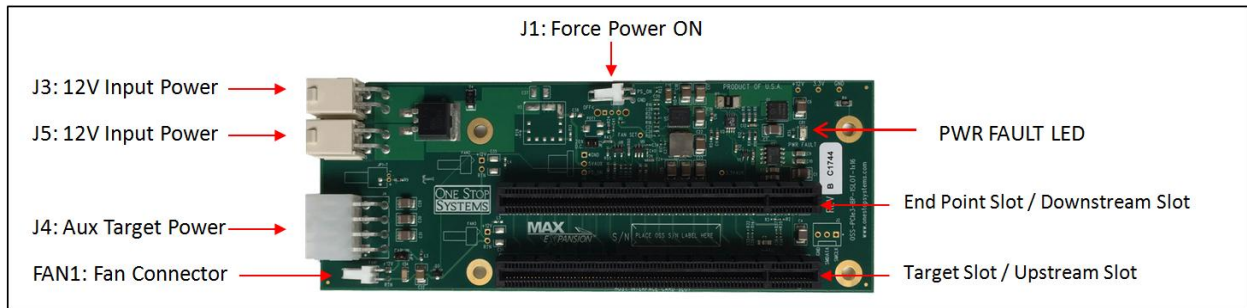
1.3 Specifications

1 PCIe x16 Gen 3 Target Slot backplane 412 (SKU : OSS-BP-412)	
Dimension (H x L)	2.385" x 6.3"
Power	12 VDC. Max:84 Watts, plus 84 watts with power extension
Slots	1 OSS target slot (Upstream Port) for target cable adapter only. 1 downstream slot: x16 Gen3 electrical; x16 mechanical slots
Temperature Range	0° to 50°C (32° to 122°F)
Relative Humidity	10 to 90% non-condensing
Agency Compliance	FCC Class B, CE, ROHS

2 Component Identification

2.1 2slot Backplane

The 2-Slot backplane can be installed in a separate enclosure to support the target adapter and I/O card



Connector Pin-Outs

J3 & J5	PIN	Definition
	1	GND1
	2	GND1
	3	+12V1
	4	+12V2

J1	PIN	Definition
	1	CE_POWER_ON
	2	GND

J4	PIN	Definition
	1	GND
	2	GND
	3	GND
	4	GND
	5	+12V
	6	+12V
	7	+12V
	8	+12V

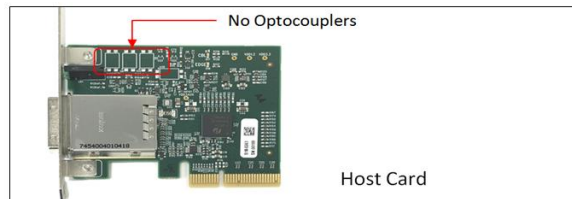
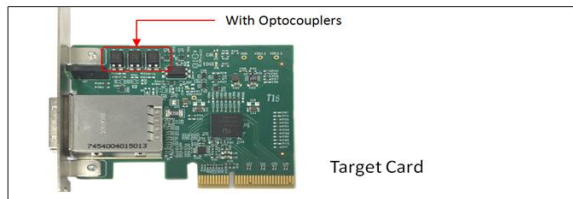
FAN1	PIN	Definition
	1	+12V
	2	FAN_RTN

2.2 Cable Adapter Cards

Use any compatible OSS cable adapter cards. Always use a pair of cable adapter cards, one as host and the other as target, when connecting the backplane to host computer. Below photos are few example cable adapter cards you can use.

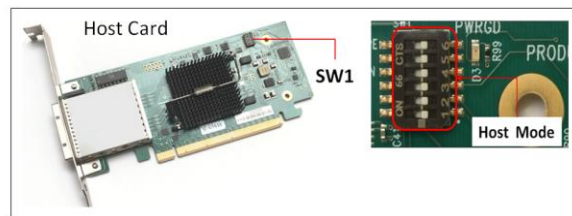
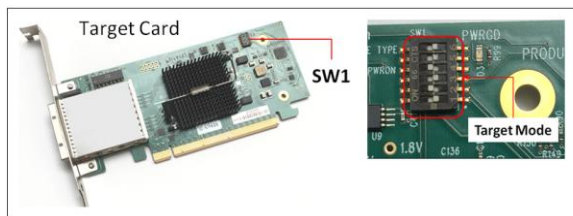
2.2.1 x4 Gen 2 iPass Cable Adapter Card

SKU# OSS-PCIe-HIB25-x4



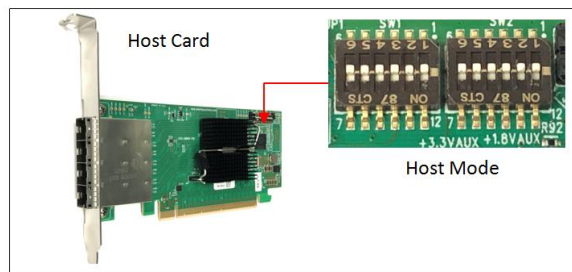
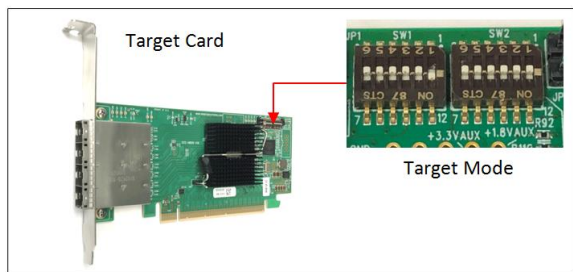
2.2.2 x16 Gen3 iPass Cable Adapter

SKU# OSS-PCIe-HIB38-x16. For more details on the card, please read the OSS-PCIe-HIB36-x16 User's Manual.



2.2.3 x16 Gen3 Cable Adapter with SFF-8644 cable connectors

SKU# OSS-PCIe-HIB68-x16. For more details on dipswitch settings, please read the OSS-PCIe-HIB6x-16 User's manual.



2.2.4 Host Adapter Card

The Host card can only be installed in the computer motherboard of a host computer.

2.2.5 Target cable adapter card

The target adapter card inserts into the designated target slot (Upstream slot) on the OSS expansion backplane. Do not plug in the target card in the “Downstream slot” on the expansion backplane.

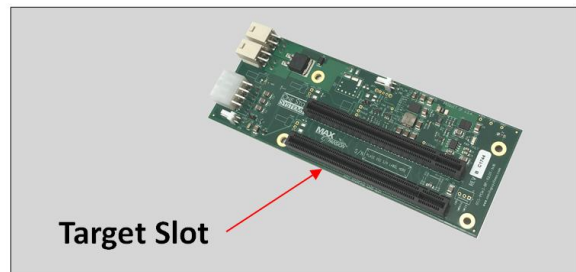
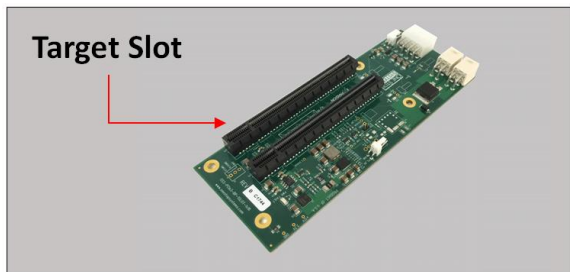
3 Installation Instructions

3.1 Install Host Card

Insert the host cable adapter into an appropriate PCIe slot of the host computer. For example, a PCIe x4 host board can be inserted into a PCIe x16, x8, or x4 slot. It will still operate at x4 speeds. If you are using a x16 Gen3 cable adapter, use a x16 PCIe slot on the computer's motherboard. Secure the cable adapter card

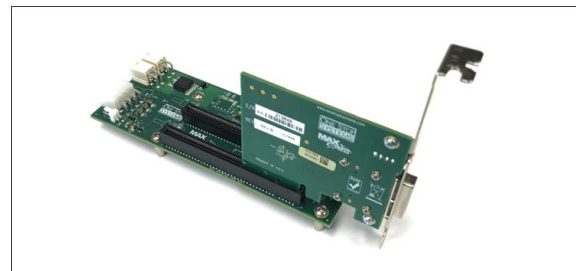
3.2 Install Target Card

Insert the target cable adapter card into the PCIe slot (this is the designated slot). The target slot is also known as "Upstream slot", see photos below. The Target card will only operate in the Target slot / Upstream slot.



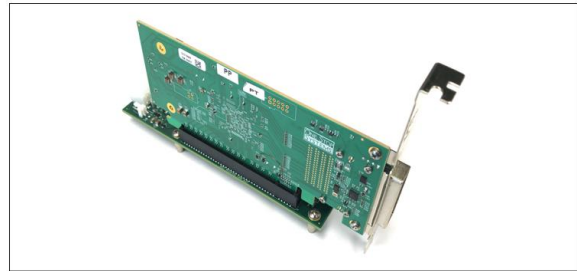
Photos below are few examples of x4 and x16 target cards being installed in the Target slot (also known as Upstream slot).

x4 Card installed in the target slot



x16 card installed in the target slot

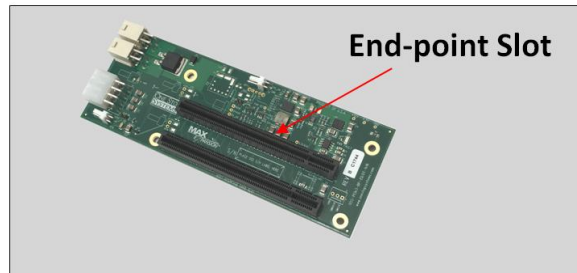
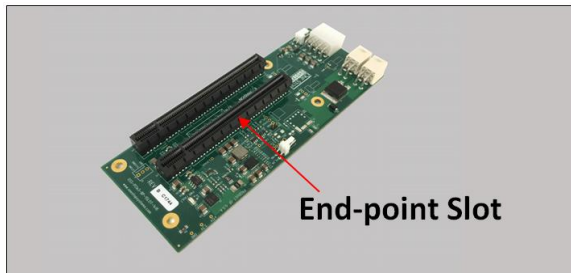




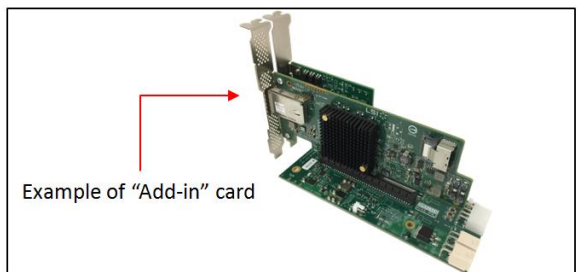
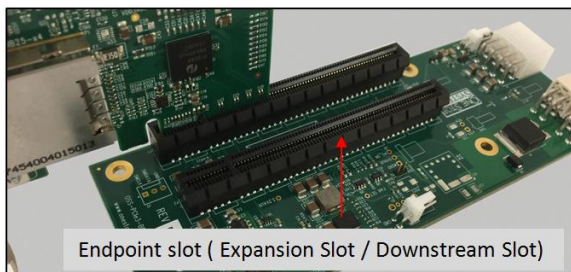
NOTE: Do not use the Endpoint slot (Expansion slot / Downstream slot) for the "Target Cable Adapter card".

3.3 Plug in Add-in Card / 3rd Party PCIe card

Plug in the add-in card or PCIe card in the available IO slot (Endpoint slot: also known as expansion slot and / or downstream slot), see photos below.

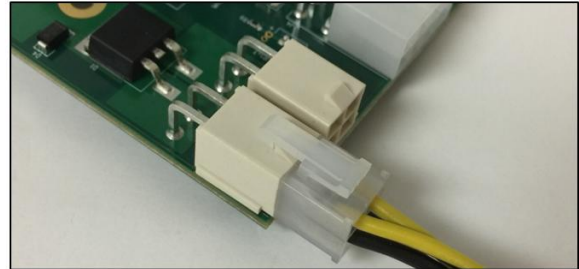


Carefully plug in the add-in card or your 3rd party PCIe card (i.e. Ethernet card, Storage card, Video card, Sound Card and etc) in the downstream slot.



3.4 Connect Power

Connect +12v 4-PIN Aux power cable from your ATX power supply to either J3, J5 or both J3 and J5, see photos below.



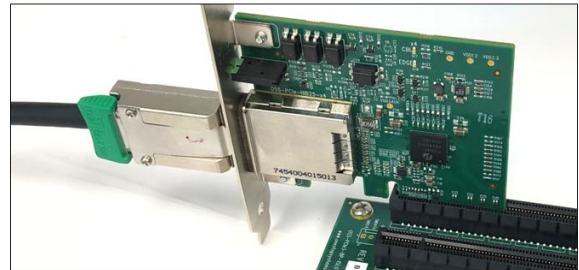
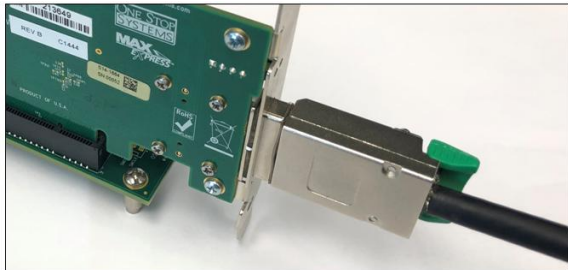
If your ATX power supply does not have a separate +12V 4-pin connector, you can buy a P4-to-ATX Power Supply adapter, see photo below. This cable is not sold by OSS. You can buy this from any online electronics stores. Use the description "P4-to-ATX Power Supply adapter" when searching for the adapter cable on the web.



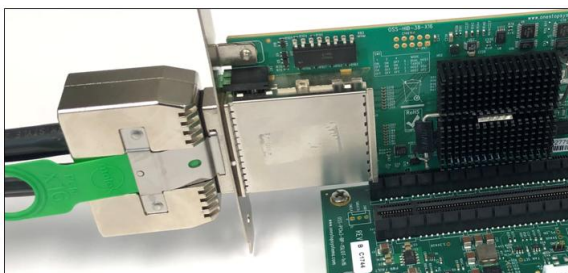
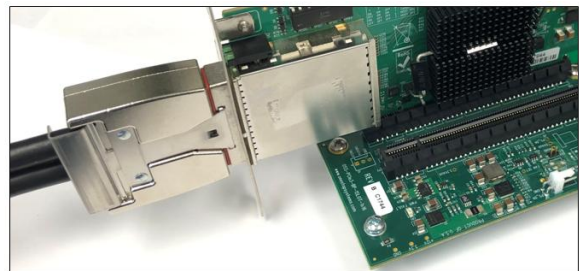
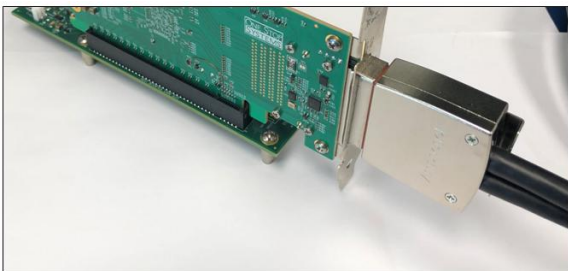
3.5 Connect Link Cable

Connect the link cable between Target and Host cards. You can also use a x8 or x16 iPass or PCIe 3.0 cable, depending on the cable adapter cards you are using.

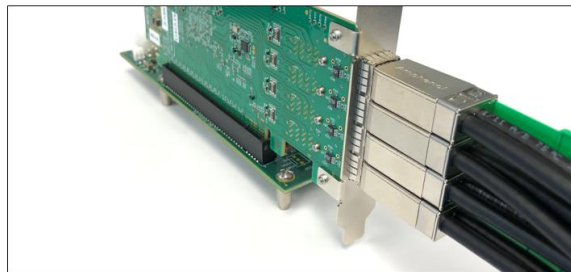
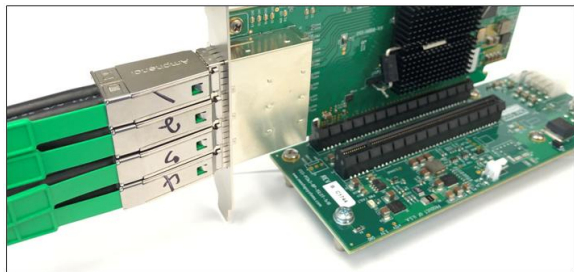
3.5.1 Connecting x4 Ipass Cable



3.5.2 Connecting x16 iPass Cable



3.5.3 Connecting PCIe 3.0 Cables



For more detail on how to properly connect the PCIe 3.0 cables, please read the manual for the HIB68x16 card.

3.6 Power Up the System

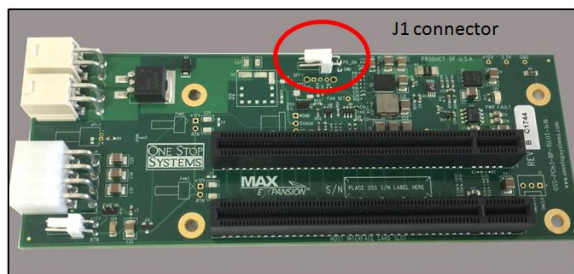
- Connect external power brick to the 2-slot backplane. The board LED will turn ON (as solid red). The board is at standby-mode.
- Power up the Host computer. It will instantly power up the Target card and the backplane (the red LED will turn OFF).
- Link between the host and target will be established after the host computer is powered UP. For details and information on the LINK led for each cable adapter cards, please read the assigned manual for the cable adapter card.

3.7 Using any Third-party I/O device

- The add-in card or third-party I/O device must be installed in the endpoint slot (expansion slot / downstream port).
- Connect the external power source (separate from the host system power supply) to the add-in card or PCIe card device if necessary.

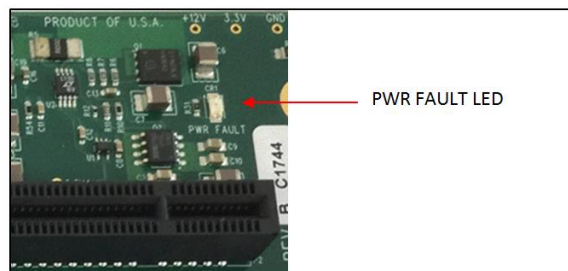
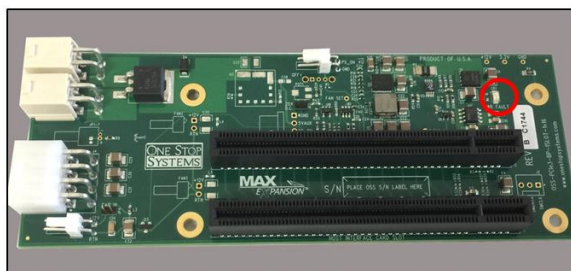
3.8 Force Power ON

- Install shunt or jumper on J1 connector to force power on the backplane. This is not required for normal operation.



3.9 Backplane - PWR / FAULT LED

MODE	LED Indicator / Description
Standby	Controller is in the OFF condition, but it is not clear what the LED signal state is in the OFF condition. Since the LED is powered by 12V input power (not controlled by PS_ON), the LED may shine in this state.
Operational	Controller is in ON condition and power supplies are within specified limits. The LED will be OFF.
Malfunction	If output power is not within specified limits, then LED will shine RED. Or the target board is not initialized



NOTE: The LED is a single color RED device.

4 Contacting Technical Support

Our support department can be by phone at [1 \(760\) 745-9883](tel:17607459883). Support is available Monday through Friday, 8:00 AM to 5:00 PM PT. When contacting One Stop Systems Technical Support, please be sure to include the following information:

- | | |
|------------------|--|
| 1) Name | 7) Serial Number |
| 2) Company Name | 8) Computer Make |
| 3) Phone Number | 9) Computer Model |
| 4) Fax Number | 10) Operating System and Version |
| 5) Email Address | 11) Make/Model of PCI cards in expansion chassis |
| 6) Model Number | 12) Detailed description of the problem |

You can also visit our web site at: www.onestopsystems/support/

For a quick response, use the Technical Support and RMA Request Form available in the Support Section of the website. Simply complete the form with all required information. Please make sure that your problem description is sufficiently detailed to help us understand your problem.

For example: Don't say "Won't boot up." Do say "Tried all the steps in the Troubleshooting Section and it still won't boot up."

For faster diagnosis of your problem, please run the two utility programs described in the following sections and include the diagnostic files they generate with your email.

5 Returning Merchandise to One Stop Systems

If factory service is required, you must contact OSS Service Representative to obtain a Return Merchandise Authorization (RMA) number. Put this number and your return address on the shipping label when you return the item(s) for service. **One Stop Systems will return any product that is not accompanied by an RMA number.** Please note that One Stop Systems **WILL NOT** accept COD packages, so be sure to return the product freight and duties-paid.

Ship the well-packaged product to the address below:

RMA # _____

One Stop Systems

2235 Enterprise Street, Suite#110 92029

USA

It is not required, though highly recommended, that you keep the packaging from the original shipment of your One Stop Systems product. However, if you return a product to One Stop Systems for warranty repair/ replacement or take advantage of the 30-day money back guarantee, you will need to package the product in a manner similar to the manner in which it was received from our plant. One Stop Systems cannot be responsible for any physical damage to the product or component pieces of the product (such as the host or expansion interfaces for the PCIe expansion chassis) that are damaged due to inadequate packing. Physical damage sustained in such a situation will be repaired at the owner's expense in accordance with Out of Warranty Procedures. Please, protect your investment, a bit more padding in a good box will go a long way to insuring the device is returned to use in the same condition you shipped it in. Please call for an RMA number first.



2235 Enterprise Street, Suite#110, Escondido CA 92029

Toll-Free : +1(800)285-8900 US • Main: +1 (760) 745-9883 • Fax: +1 (760) 745-9824

www.onestopsystems.com