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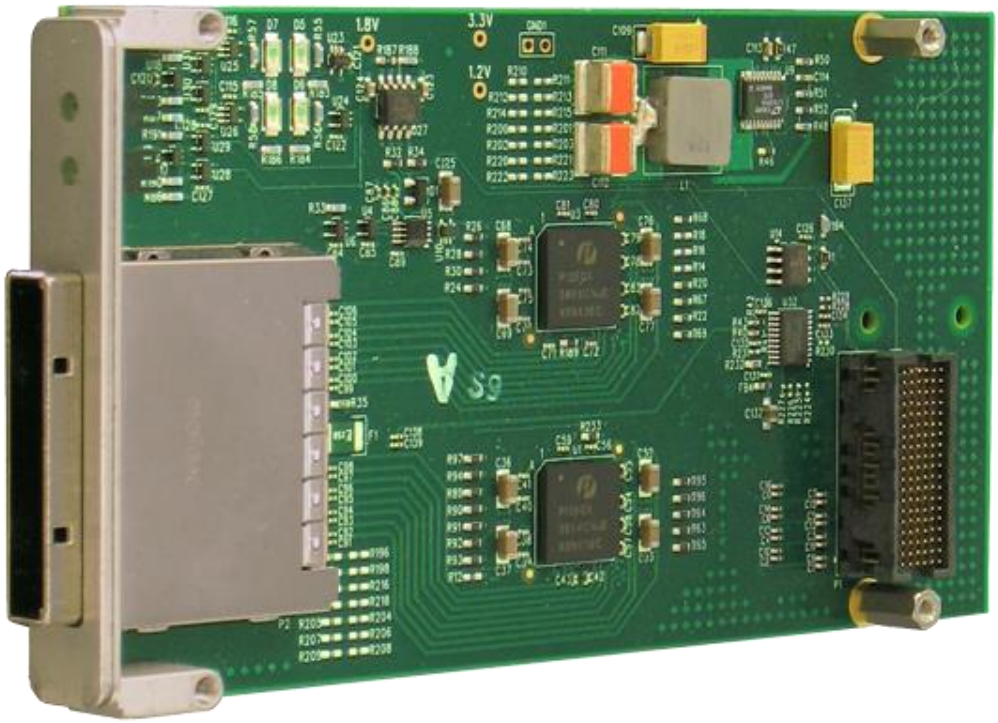
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User Manual,
XMC X8 Gen 2 Host Cable Adapter

OSS-XMC-HIB25-X8

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Table of Contents

1. Components

1.a. Host Interface board 3

1.b. Block diagram 3

1.c. Conceptual Architecture 4

1.d. Host interface board specifications 4

2. Installation Instructions

2.a. Connecting PCIe cable 5

2.b. Removing PCIe cable 5

3. Technical Information

3.a. Connector pin-outs 6

3.b. Lane width indicators 7

3.c. Compatibility identification block 7

3.d. Signal descriptions 7

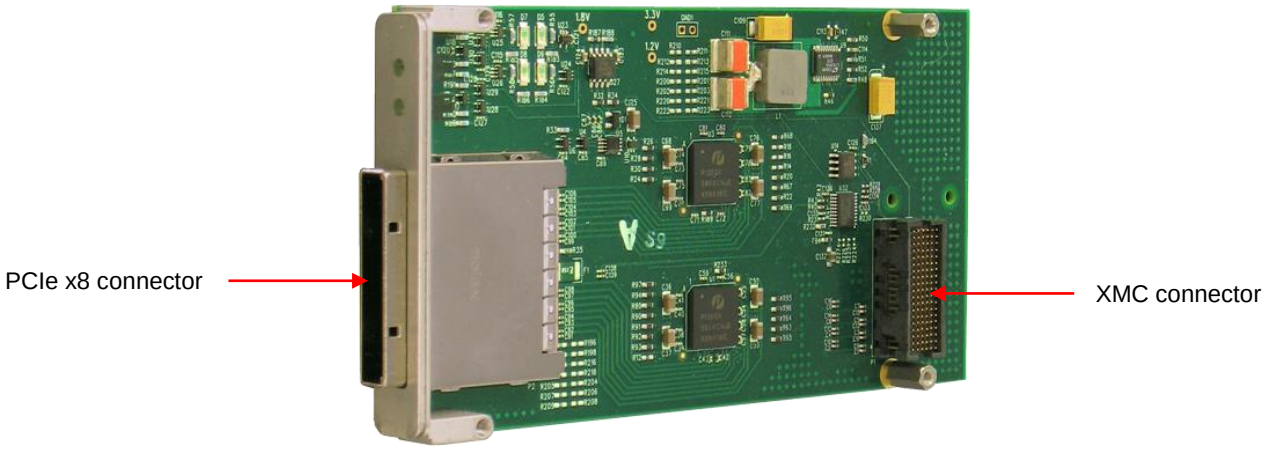
4. Ordering Information

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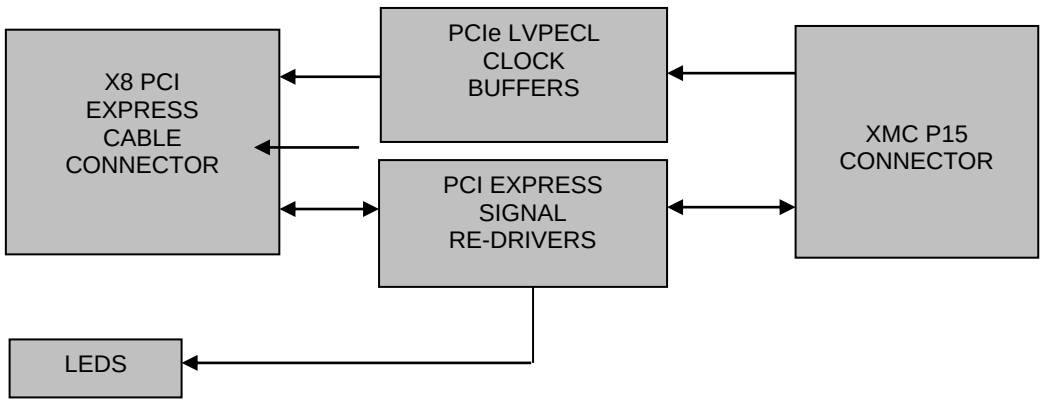
1. Components

1.a. Host Interface Board

PCIe x8 Gen 2 host cable adapter is an XMC form factor that enables high-speed expansion over a PCIe x8 cable from a host system at 40Gb/s to a PCIe downstream device or expansion chassis.

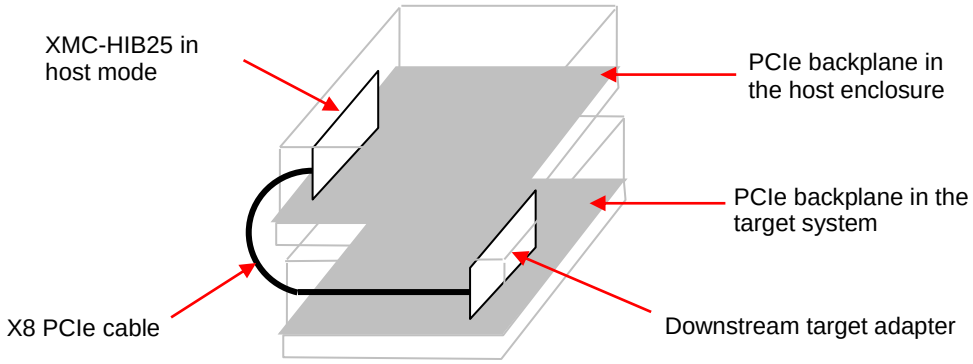


1.b. Block diagram



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1.c. Conceptual architecture



1.d. Host interface board specifications

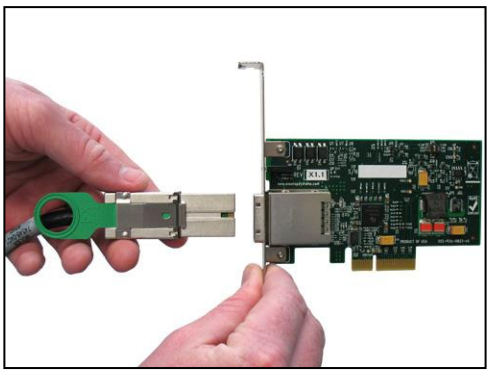
Form Factor	XMC card; does not include PMC connectors
Operating Temperature	0˚C to +70˚C environment
Storage Temperature	-40˚C to 85˚C
Operating Humidity	10% to 90% relative humidity non-condensing
Storage Humidity	5% to 95% relative humidity non-condensing
Power	3.3V
Connectors	• PCIe x8 cable connector • XMC P15 connector
Industry Specifications	• PCIe External Cabling Specification, Rev. 1.0 • PCI Express™ Card Electromechanical Specification, Rev. 2.0 • PCI Express ® Base Specification, Rev. 2.0 • VITA 42.0-2005 • ANSI/VITA 42.3-2006
Re-drivers	• 5.0 Gbps 4-Lane PCI Express Gen 2 Re-Driver with Equalization & de-emphasis • Pericom Part number PI2EQX5804
Bracket	• XMC bezel • LEDs on bracket
Agency Compliance	Designed to Meet: • FCC Class B • CE
PCB	• Form Factor: Short XMC.3 • PCIe x8 cable connector to front panel • PCB thickness .063 +/- 0.008 inch (1.6 +/-0.2 mm) • PCIe signals routed with 85 ohm differential impedance • Two stand-off mounting holes

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2. Installation Instructions

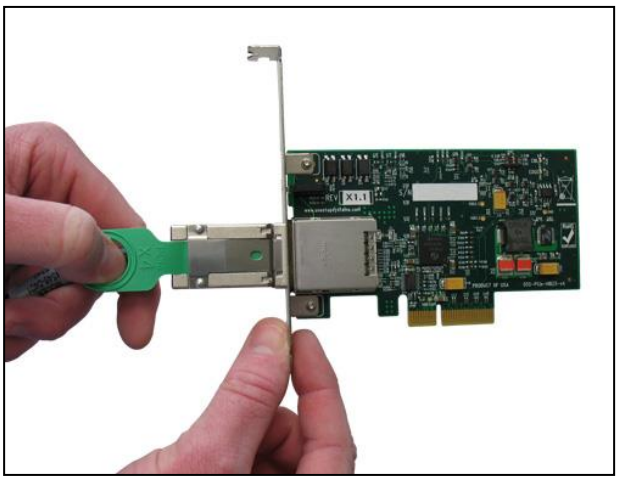
2.a. Connecting PCIe cable

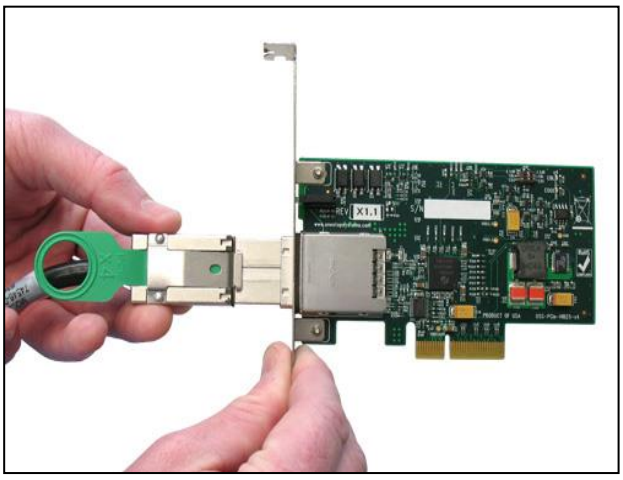
1) To install the PCIe cable, Insert into the expansion link board firmly or until you feel it lock into place.



2.b. Removing PCIe cable:

2) To remove PCIe cable pull back on green thumb tab to release metal pins and gently separate.





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3. Technical Information

3.a. Connector Pin-outs

PCI Express x8 Cable Connector

	Row A	Row B		Row A	Row B		Row A	Row B
Pin #	**Signal Name**	**Signal Name**	**Pin #**	**Signal Name**	**Signal Name**	**Pin #**	**Signal Name**	**Signal Name**
1	GND	GND	**13**	GND	GND	**24**	PETn4	PERp4
2	PETp0	PERp0	**14**	CREFCLK+	PWR (3.3V)	**25**	GND	GND
3	PETn0	PERn0	**15**	CREFCLK-	PWR (3.3V)	**26**	PETp5	PERp5
4	GND	GND	**16**	GND	PWR (3.3V)	**27**	PETn5	PERn5
5	PETp1	PERp1	**17**	RSVD	PWR RTN	**28**	GND	GND
6	PETn1	PERn1	**18**	RSVD	PWR RTN	**29**	PETp6	PERn6
7	GND	GND	**19**	SB_RTN	PWR RTN	**30**	PETn6	PERn6
8	PETp2	PERp2	**20**	CPSRNT$#	CWAKE#	**31**	GND	GND
9	PETn2	PERn2	**21**	CPWRON	CPERST#	**32**	PETp7	PERp7
10	GND	GND	**22**	GND	GND	**33**	PETn7	PERn7
11	PETp3	PERp3	**23**	PETp4	PEPp4	**34**	GND	GND
12	PETn3	PERn3	**24**	PETn4	PERp4			

XMC 42.3 P15 Connector Pin Definition

Row/ Column	A	B	C	D	E	F
1	PET0p0	PET0n0	3.3V	PET0p1	PET0n1	VPWR
2	GND	GND	TRST#	GND	GND	MRSTI#
3	PET0p2	PET0n2	3.3V	PET0p3	PET0n3	VPWR
4	GND	GND	TCK	GND	GND	MRSTO#
5	PET0p4	PET0n4	3.3V	PET0p5	PET0n5	VPWR
6	GND	GND	TMS	GND	GND	+12V
7	PET0p6	PET0n6	3.3V	PET0p7	PET0n7	VPWR
8	GND	GND	TDI	GND	GND	-12V
9	RFU	RFU	RFU	RFU	RFU	VPWR
10	GND	GND	TDO	GND	GND	GA0
11	PER0p0	PER0n0	MBIST#	PER0p1	PER0n1	VPWR
12	GND	GND	GA1	GND	GND	MPRESENT#
13	PER0p2	PER0n2	3.3V AUX	PER0p3	PER0n3	VPWR
14	GND	GND	GA2	GND	GND	MSDA
15	PER0p4	PER0n4	RFU	PER0p5	PER0n5	VPWR
16	GND	GND	MVMRO	GND	GND	MSCL
17	PER0p6	PER0n6	RFU	PER0p7	PER0n7	RFU
18	GND	GND	RFU	GND	GND	RFU
19	REFCLK+0	REFCLK-0	RFU	WAKE#	ROOT0#	RFU

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3.b. Lane Width Indicators

LED \ Lane Width	x1/x4 Link	x8 Link
x1/x4 LED	ON	OFF
x8 LED	OFF	ON

3.c. Compatibility Identification Block

Short XMC.3		
P15		
PCIe		
Standard		
8 Lane	Link 0	5Gb/s*

3.d. Signal Descriptions

PETp(x)	PCI Express Transmit Positive signal of (x) pair.
PETn(x)	PCI Express Transmit Negative signal of (x) pair.
PERp(x)	PCI Express Receive Positive signal of (x) pair.
PERn(x)	PCI Express Receive Negative signal of (x) pair.
CREFCLK+/-	Cable REFerence CLocK: Provides a reference clock from the host system to the remote system.
SB_RTN	Side Band ReTurN: return path for single ended signals from remote systems.
CPRSNT#	Cable PReSeNT: Indicates the presence of a device beyond the cable.
PWR	PoWeR: Provides local power for in-cable redriver circuits. Only needed on long cables. Power does not go across the cable.)
PWR_RTN	PoWeR ReTurN: Provides local power return path for PWR pins.
CWAKE#	Cable WAKE
CPERST#	Cable PCI Express Reset

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4. Ordering Information

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