



PE325G2I71 Server Adapter

Dual Port 25 Gigabit Ethernet PCI Express Server Adapter Intel® XXV710 Based

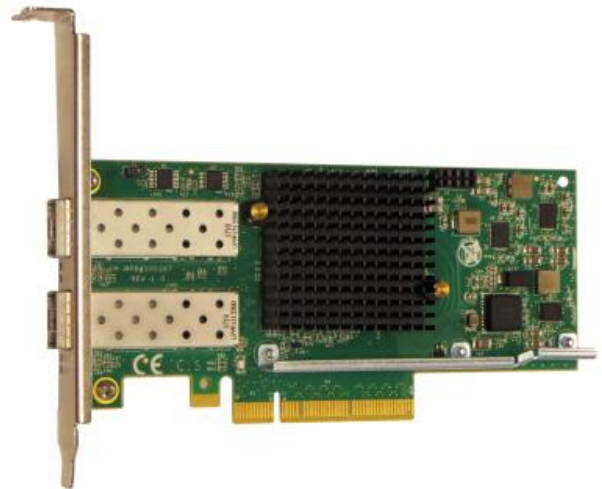
Product Description

Silicom's 25 Gigabit Ethernet PCI Express server adapters are designed for Servers and high-end appliances. The Silicom 25 Gigabit Ethernet PCI Express Server adapters offer simple integration into any PCI Express X8 to 25Gigabit Networks. The performance is optimized so that system I/O is not the bottleneck in high-performance networking applications.



The Silicom 25 Gigabit Ethernet PCI Express server adapters are based on Intel XXV710 Ethernet controller with fully integrated Gigabit Ethernet Media Access Control (MAC), and SFI Interface. In addition to managing MAC and PHY Ethernet layer functions, the controller manages PCI Express packet traffic across its transaction, link, and physical/logical layers. Using hardware acceleration, the controller offloads tasks from the host, such as TCP/UDP/IP checksum calculations and TCP segmentation.

Silicom's 25 Gigabit Ethernet PCI-Express Server adapters are the ideal solution for implementing multiple network segments, mission-critical high-powered networking applications and environments within high performance servers.



Key Features

SFP28 25Gigabit Ethernet:

25Gigabit Ethernet Adapter with SFP cage support :

- -ZS: Fiber 25 Gigabit Ethernet 25GBASE-SR:
 - 25GBase-SR with 25G 850nm Small Form Factor Pluggable (SFP28)
- -ZL: Fiber 25 Gigabit Ethernet 25GBASE-LR:
 - 25GBase-LR with 25G 1310nm Small Form Factor Pluggable (SFP28)
- -SR: Fiber 10 Gigabit Ethernet 10GBASE-SR:
 - 10GBASE-SR with 10Gigabit 850nm Small form Factor Pluggable (SFP+)
- -LR: Fiber 10 Gigabit Ethernet 10GBASE-LR:
 - 10GBASE-LR with 10Gigabit 1310nm Small form Factor Pluggable (SFP+)

-ZS: Fiber 25 Gigabit Ethernet 25GBASE-SR:

- 25 Gigabit Fiber Ethernet port supports 25GBASE-SR (850nM LAN PHY)
- 25Gigabit 850nM Small form Factor Pluggable (SFP28)

-ZL: Fiber 25 Gigabit Ethernet 25GBASE-LR:

- 25 Gigabit Fiber Ethernet port supports 25GBASE-LR (1310nM LAN PHY)
- 25Gigabit 1310nM Small form Factor Pluggable (SFP28)

-SR: Fiber 10 Gigabit Ethernet 10GBASE-SR:

- 10 Gigabit Fiber Ethernet port supports 10GBASE-SR (850nM LAN PHY)
- 10Gigabit 850nM Small form Factor Pluggable (SFP+)

-LR: Fiber 10 Gigabit Ethernet 10GBASE-LR:

- 10 Gigabit Fiber Ethernet port supports 10GBASE-LR (1310nM LAN PHY)
- 10Gigabit 1310nM Small form Factor Pluggable (SFP+)

LAN and Virtualization Features:

- Unified Networking Providing a single wire for LAN and storage: NAS (SMB, NFS) and SAN (iSCSI, FCoE)
- Remote SAN boot with data path intelligent offload
- VEB (Virtual Ethernet Bridge) & Edge Virtual Bridging / 802.1Qbg
- VMDq for VMware Netqueue* and Microsoft DVMQ*
- SR-IOV (Single Root I/O Virtualization): up to 128 Virtual Functions
- iSCSI and PXE boot (legacy and UEFI)
- Support for standard and custom network headers
- Partially Programmable Pipeline and Advanced Traffic Steering
- Intel® Ethernet Flow Director – 8000 On-Die perfect match filters
- 1536 queues/Physical Function (PF), >64 RSS/PF and 256 VMDq/PF
- Data Center Bridging (DCB) up to 8 traffic classes

Host Interface:

- PCI Express GEN3 X8 lanes
- Support PCI Express Base Specification 3.0 (8GT/sec)

Technical Specifications

SFP28 25Gigabit Ethernet Technical Specifications Adapters:	
SFP28 (Small Form Factor Pluggable) supports:	SFI interfaces supports 25GBase-R PCS and 25 Gigabit PMA in order to connect with SFP28 to 25GBase-SR
25GBase-SR SFP28: IEEE Standard / Network topology:	Fiber 25Gigabit Ethernet, 25GBASE-SR (850nM LAN PHY).

25GBase-SR SFP28: Data Transfer Rate :	25.78125Gbps
25GBase-LR SFP28: IEEE Standard / Network topology:	Fiber 25Gigabit Ethernet, 25GBASE-LR (1310nm LAN PHY)
25GBase-LR SFP28: Data Transfer Rate:	25.78125Gbps
25GBase-LR SFP28: Cables and Operating distance Up to:	Single-Mode: 10000m at 9um
-ZS: Fiber 25GBASE-SR Technical Specifications:	
Output Transmit Power (25G):	Minimum: -1.42 dBm
Optical Receive Sensitivity (25G):	Maximum: -5.98 dBm
Operating Systems Support	
Operating system support:	Windows Linux FreeBSD VMware
General Technical Specifications	
Interface Standard:	PCI-Express Base Specification Revision 3.0 (8 GTs)
Board Size:	Low profile short add-in card: 145.542mm X 64.389mm (5.730"X 2.535")
PCI Express Card Type:	X8 Lane
On Board Connector Voltage	+12V +/-8%
PCI Connector:	X8 Lane
Controllers:	Intel XXV710-AM2
Holder:	Metal Bracket
Weight:	340gr (12 oz)
Power Consumption (25G-SR)	9.84W, 0.82A at 12V: Typical all ports operate at 25Gb/s, 6.84W, 0.57A at 12V: Typical No link at all ports
Power Consumption (25G-LR)	10.32W, 0.86A at 12V: Typical all ports operate at 25Gb/s, 5.76W, 0.48A at 12V: Typical No link at all ports
Power Consumption (10G-SR)	6.84W, 0.57A at 12V: Typical all ports operate at 10Gb/s, 5.76W, 0.48A at 12V: Typical No link at all ports

Power Consumption (10G-LR)	6.96W, 0.58A at 12V: Typical all ports operate at 10Gb/s, 6.00W, 0.50A at 12V: Typical No link at all ports
Power Consumption (25G-DA)	8.16W, 0.68A at 12V: Typical all ports operate at 25Gb/s, 4.32W, 0.36A at 12V: Typical No link at all ports
Power Consumption (10G-DA)	5.52W, 0.46A at 12V: Typical all ports operate at 10Gb/s, 4.32W, 0.36A at 12V: Typical No link at all ports
Operating Temperature:	0°C – 45°C (32°F – 113°F)
Air Flow Requirements:	200 ft./min
Storage:	-40°C–65°C (-40°F–149°F)
Regulation:	<p>FCC 47CFR Part 15:2016, Subpart B Class B</p> <p>Conducted emissions</p> <p>Radiated emissions</p> <p>VCCI-CISPR 32: 2016, Class B</p> <p>Conducted emissions</p> <p>Radiated emissions</p> <p>EN 55032: 2012+ AC(13), Class B</p> <p>Conducted emissions</p> <p>Radiated emissions</p> <p>EN 61000-3-2: 2014</p> <p>Harmonic current emissions</p> <p>EN 61000-3-3: 2013</p> <p>Voltage fluctuations and flicker</p> <p>EN 55024: 2010</p> <p>Immunity to electrostatic discharge (ESD)</p> <p>Radiated immunity to radio frequency electromagnetic field</p> <p>Conducted immunity to electrical fast transients / bursts (EFT/ B)</p> <p>Conducted immunity to voltage surges</p> <p>Conducted immunity to disturbances induced by radio frequency field</p> <p>Conducted immunity to voltage dips and short interruptions</p>
MTBF*:	272 years * According to Telcordia SR-332 Issue 3. Environmental condition – GB (Ground, Fixed, and Controlled). Ambient temperature 40°C
LEDs	
LEDs:	Each Port has 2 LEDs to indicate link status and speed. Link: Physical link Speed: Green stay on – physical link on with 25G Speed

	<p>Yellow stay on – physical link on with 10G Speed Off – physical link off. Link /ACT: Logic Link/Activity, Green Green stay on – logic link up, no activity Green blinking – logic link up, activity Off – logic link off</p>
LEDs location:	LEDs are located on the PCB, visible via holes in the metal bracket
Connectors:	(2) SFP28 / zSFP+ Cages

Order Information

P/N	Description	Notes
PE325G2I71-XR	Dual Port SFP28 25 Gigabit Ethernet PCI Express Server Adapter	X8 Gen3 , Low Profile, Based on Intel XXV710-AM2, Support Direct Attached Copper cable, Support Silicom SFP28 approved transceiver. RoHS compliant
PE325G2I71-ZS	Dual Port Fiber (SR) 25 Gigabit Ethernet PCI Express Server Adapter	X8 Gen3, Based on Intel XXV710-AM2, Low-profile, on board support for Fiber SR, RoHS compliant
PE325G2I71-ZL	Dual Port Fiber (LR) 25 Gigabit Ethernet PCI Express Server Adapter	X8 Gen3, Based on Intel XXV710-AM2, Low-profile, on board support for Fiber LR, RoHS compliant
PE325G2I71-SR	Dual Port Fiber (SR) 10 Gigabit Ethernet PCI Express Server Adapter	X8 Gen3, Based on Intel XXV710-AM2, Low-profile, on board support for Fiber SR, RoHS compliant
PE325G2I71-LR	Dual Port Fiber (LR) 10 Gigabit Ethernet PCI Express Server Adapter	X8 Gen3, Based on Intel XXV710-AM2, Low-profile, on board support for Fiber LR, RoHS compliant

Order information: Model P/N -LP /

-LP: Assemble Low Profile Metal Bracket

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