



### PE425G2I81

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

#### Product Description

Silicom's PE425G2i81 25 Gigabit Ethernet PCI Express server adapter is designed for Servers and high-end appliances. The PE425G2i81 25 Gigabit Ethernet PCI Express Server adapters offer simple integration into PCI Express x16 to 25Gigabit Networks. The performance is optimized so that system I/O is not the bottleneck in high-performance networking applications.

The PE425G2i81 25 Gigabit Ethernet PCI Express server adapter is based on Intel E810-XXVAM2 Ethernet controller with fully integrated 25 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 supports :

- -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 256 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:

- PCIe x8 lanes from/to host via gold fingers of edge card
- Support PCI Express Base Specification Revision 4.0, 16GT/s, 8GT/s, 5GT/s or 2.5GT/s

**Technical Specifications**

<b>SFP28 25Gigabit Ethernet Technical Specifications Adapters:</b>	
<b>SFP28 (Small Form Factor Pluggable) supports:</b>	SFI interfaces supports 25GBase-R PCS and 25 Gigabit PMA in order to connect with SFP28 to 25GBase-SR
<b>25GBase-SR SFP28: IEEE Standard / Network topology:</b>	Fiber 25Gigabit Ethernet, 25GBASE-SR (850nM LAN PHY).
<b>25GBase-SR SFP28: Data Transfer Rate :</b>	25.78125Gbps
<b>25GBase-LR SFP28: IEEE Standard / Network topology:</b>	Fiber 25Gigabit Ethernet, 25GBASE-LR (1310nM LAN PHY)
<b>25GBase-LR SFP28: Data Transfer Rate:</b>	25.78125Gbps

<b>25GBase-LR SFP28: Cables and Operating distance Up to:</b>	Single-Mode: 10000m at 9um
<b>-ZS: Fiber 25GBASE-SR Technical Specifications:</b>	
<b>Output Transmit Power (25G):</b>	Minimum: -1.42 dBm
<b>Optical Receive Sensitivity (25G):</b>	Maximum: -5.98 dBm
<b>Operating Systems Support</b>	
<b>Operating system support:</b>	Windows Linux FreeBSD VMware
<b>General Technical Specifications</b>	
<b>Interface Standard:</b>	PCI-Express Base Specification Revision 4.0 ( 16 GTs)
<b>Board Size:</b>	Low profile short add-in card: 145.542mm X 64.389mm (5.730"X 2.535")
<b>PCI Express Card Type:</b>	X8 Lane
<b>On Board Connector Voltage:</b>	+12V +/-8%
<b>PCI Connector:</b>	Gold Finger: X16 Lane
<b>Controllers:</b>	Intel E810-XXVAM2
<b>Holder:</b>	Metal Bracket
<b>Operating Temperature:</b>	0°C – 45°C (32°F – 113°F)
<b>Air Flow Requirements:</b>	200 ft./min
<b>Storage:</b>	-40°C–65°C (-40°F–149°F)
<b>Regulation:</b>	Card shall meet CE, FCC Class B, ROHS requirements.
<b>LEDs</b>	
<b>LEDs:</b>	Each Port has 2 LEDs to indicate link status and speed.  Link: Physical link Speed: Green stay on – physical link on with 25G Speed Yellow stay on – physical link on with 10G Speed Off – physical link off.

	<p>Link /ACT: Logic Link/Activity, Green</p> <p>Green stay on – logic link up, no activity</p> <p>Green blinking – logic link up, activity</p> <p>Off – logic link off</p>
<b>LEDs location:</b>	LEDs are located on the PCB, visible by light guide in the metal bracket
<b>Connectors:</b>	Quad Port SFP28 / zSFP+ Cage

## Order Information

P/N	Description	Notes
<b>PE425G2i81-XR</b>	Dual Port SFP28 25 Gigabit Ethernet PCI Express Server Adapter	X8 Gen4, Low Profile, Based on Intel E810-CAM1, Support Direct Attached Copper cable, Support Silicom SFP28 approved transceiver. RoHS compliant
<b>PE425G2i81-ZS</b>	Dual Port Fiber (SR) 25 Gigabit Ethernet PCI Express Server Adapter	X8 Gen4, Based on Intel E810-CAM1, Low-profile, on board support for Fiber SR, RoHS compliant
<b>PE425G2i81-ZL</b>	Dual Port Fiber (LR) 25 Gigabit Ethernet PCI Express Server Adapter	X8 Gen4, Based on Intel E810-CAM1, Low-profile, on board support for Fiber LR, RoHS compliant
<b>PE425G2i81-SR</b>	Dual Port Fiber (SR) 10 Gigabit Ethernet PCI Express Server Adapter	X8 Gen4, Based on Intel E810-CAM1, Low-profile, on board support for Fiber SR, RoHS compliant
<b>PE425G2i81-LR</b>	Dual Port Fiber (LR) 10 Gigabit Ethernet PCI Express Server Adapter	X8 Gen4, Based on Intel E810-CAM1, 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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