P488CG4I81 4x100G/16x10G Ethernet PCIe Card Intel® E810-CAM2 Based
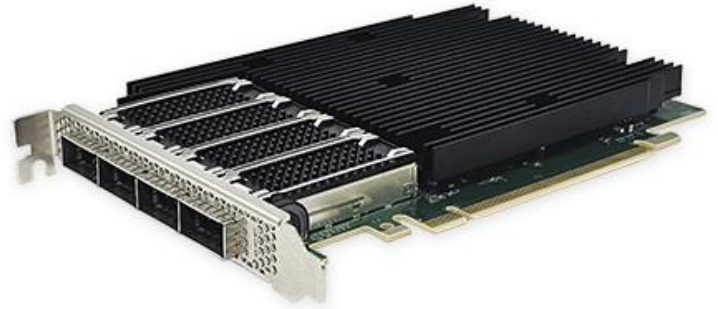
4x100/16x10 Gigabit Ethernet PCI Express Gen 4.0 Card Intel® E810-CAM2 Based

Product Description

Silicom's P488CG4I81 4×100/16×10 Gigabit Ethernet PCI Express Gen 4.0 server adapter is designed for servers and high-end appliances. The Silicom P488CG4I81 4x100/16×10 Gigabit Ethernet PCI Express Gen 4.0 server adapter offers simple integration into any PCI Express x16 (bifurcated x8x8) to 4×100/ 16×10 Gigabit Networks. The performance is optimized so that system I/O is not the bottleneck in high-performance networking applications.
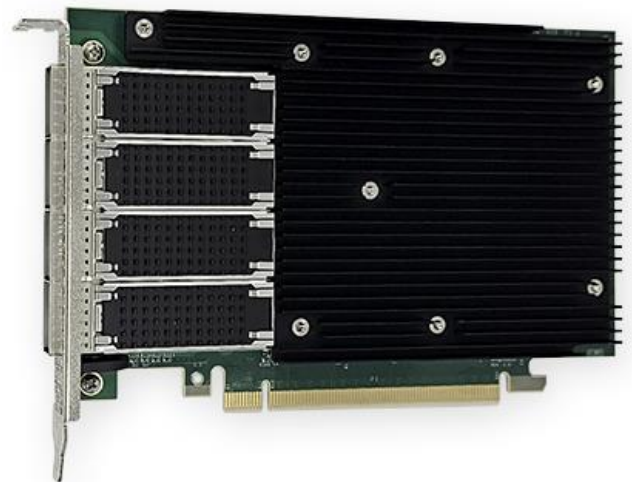
The Silicom P488CG4I81 4x100G/ 16x10G Ethernet PCI Express Gen 4.0 server adapter is based on the Intel® E810-CAM2 Ethernet controller with fully integrated four 100G Ethernet ports, is the ideal solution for implementing multiple network segments, mission-critical high-powered networking applications and environments within high performance servers.

Key Features

LAN and Virtualization Features:

- Supports 4x100G, default 16x10G (SR) (with breakout)
- 200Gbps throughput (each of Tx and Rx)
- Programmable forwarding rules
- Virtualization
  - Host virtualization via VMQ and SR-IOV
  - 256 SR-IOV Virtual Functions
  - Stateless offloads for tunneled packets (network virtualization support)
  - Malicious VF protection
- RDMA
  - iWARP and RoCE v2
  - 256K Queue Pairs (QPs)
  - Send Queue Push Mode
- QoS
  - WFQ Transmit scheduler with 9 programmable layers
  - Pipeline sharing and starvation avoidance
  - Up to 32 Congestion Domains in the Tx and Rx paths
  - QoS via 802.1p PCP or Differentiated services DSCP value
  - Rx Packet buffer supports at least 3 no-drop flow control events, shared among ports

Host Interface:

- PCIe x16, 2×8 bifurcation via gold fingers of edge card
- Support PCI Express Base Specification Revision 4.0, 16GT/s, 8GT/s, 5GT/s or 2.5GT/s Compliance with PCIe spec 4.0

Technical Specifications

General Technical Specifications	
Interface Standard:	PCI-Express Base Specification Revision 4.0 (16 GTs)
Board Size:	Standard height add-in card, FHHL: 167.64mm X 111.15 mm (6.6"X 4.376")
PCI Express Card Type:	Electrical 2×8 G4 Bifurcation, Mechanical x16
PCI Express Voltage:	PCIe +12V ± 8%
PCI Connector:	Gold Finger: X16 Lane
Controller:	(2x) Intel E810-CAM2
Holder:	Metal Bracket
Power Consumption:	Maximum: 53W TDP: 45W
Weight:	273 gr
Operating Humidity:	0%–90%, non-condensing
Operating Temperature:	0°C – 45°C (32°F – 113°F) , Air flow requirement LFM per HVDT thermal profile
Storage:	-40°C–65°C (-40°F–149°F)
Regulation:	Card shall meet CE, FCC Class B, ROHS requirements.

LEDs/ Connectors Specifications:	
LEDs:	One LED per port Link/Act 100/25/10Gbps LED (Green): Turns on – link, Blink – ACT
LEDs location:	LEDs are located on the PCB, visible by light guide in the metal bracket.
Connector:	(4) MPO/LC

Operating Systems Support:	
Operating system support:	Microsoft Windows Server Linux Kernel Red Hat Enterprise Linux SUSE Linux Enterprise Server openEuler for AArch64 (only on Intel® Ethernet E810 Series) UEFI VMware ESXi FreeBSD

-QX4: QSFP28 100Gigabit Ethernet Technical Specifications Adapters:	
QSFP28 (Quad Small Form-factor Pluggable) supports:	100GBASE: CAUI-4 interfaces according to IEEE 802.3bm and IEEE 802.3bj standards, to support 100GBase-SR4, 100GBase-LR4 and 100GBase-CR4 interfaces.

-ZS4: Fiber 100G BASE-SR4 Ethernet Technical Specifications:	
IEEE Standard / Network topology:	Fiber Gigabit Ethernet, 100GBase-SR4 (850nM)
Data Transfer Rate:	103.125GBd
Cables and Operating distance: Up to:	Multimode fiber: 62.5um, (OM4) 100m
Optical Output Power:	Typical: -1.55 dBm Minimum: -8.4 dB * Being defined by IEEE 802.3bm
Optical Receive Sensitivity:	Typical: -8.94 dBm Maximum: -5.2 dBm * Being defined by IEEE 802.3bm

-ZL4: Fiber 100G BASE-LR4 Ethernet Technical Specifications:	
IEEE Standard / Network topology:	Fiber 100Gigabit Ethernet, 100GBASE-LR4 (1310nM)
Data Transfer Rate:	103.1GBd
Cables and Operating distance: Up to:	Single-Mode: 10km

Order Information

P/N	Description	Notes
P488CG4I81-QX4	Quad ports (QSFP28) 4×100/16×10 Gigabit Ethernet PCI Express Gen 4.0 Server Adapter	RoHS Compliant, Gen4 x16 (bifurcated x8 x8), based on Intel E810-CAM2
P488CG4I81-ZS4	Quad ports Fiber (SR4) 4×100/16×10 Gigabit Ethernet PCI Express Gen 4.0 Server Adapter	RoHS Compliant, Gen4 x 16 (bifurcated x8 x8), based on Intel E810-CAM2 16x10G supported with breakout
P488CG4I81-ZL4	Quad ports Fiber (LR4) 4×100 Gigabit Ethernet PCI Express Gen 4.0 Server Adapter	RoHS Compliant, Gen4 x 16 (bifurcated x8 x8), based on Intel E810-CAM2