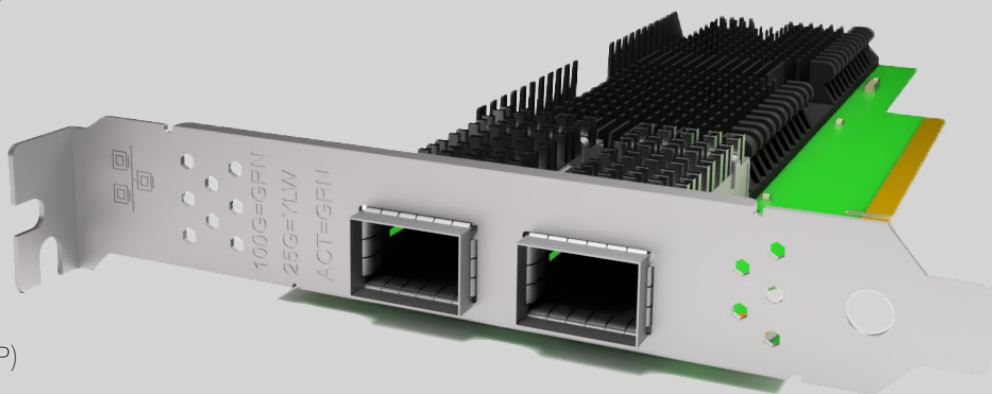


Key Highlights:

- **NIC Category:** Dual Port 100G NIC Card
Controller: Intel® E810-CAM2
- **System Interface Type:** PCIe v4.0 x16
(16GT/s), compatible with PCIe v3.0
- **Ports:** 2x100G QSFP28
- **Data rate per port:** 100GbE
- **Network Operating Systems (NOS):**
Windows, Linux, CentOS, Ubuntu,
VMware
- Application Device Queues (ADQ)
- Dynamic Device Personalization (DDP)
- Supports iWARP, RoCEv2, TCP
(NVMeoF)
- Ethernet Port Configuration Tool (ECPT)
- IEEE 1588 v1, v2
- **Bracket Height:** Low Profile & Full
Height



Network Interface Card: 100G-NIC-E810-20

Product Description:

EDGE Optic 100G-NIC-E810-20 is a dual QSFP28 (quad small form-factor pluggable 28) port PCI Express 100G NIC Card which is based on Intel E810-CAM2 controller. Card has PCI Express (PCIe) x16 slot for operation and supports PCIe version 4.0 with bus transfer rate 16 GT/s. As 100G NIC Cards are close to PCIe Gen4 x16 slots bandwidth limits, the card supports advanced offload functionalities to free up CPU. Advanced Traffic Steering via Application Device Queues ([ADQ](#)) improves application response time predictability, latency and throughput to accelerate network performance and meet service level agreements. Dynamic Device Personalization ([DDP](#)) enhances packet classification, reduces CPU utilization, improves throughput and reduces latency. This Intel E810-CAM2 chip based card as well supports [NVMe-oF](#) (Non Volatile Memory Express over Fabrics) network storage protocol which can use any of the Remote Direct Memory Access (RDMA) technologies iWARP, RoCEv2 and TCP ethernet based storage protocols for high-speed, low-latency connectivity to storage targets.

100G NIC Card has Ethernet Port Configuration Tool ([EPCT](#)) which helps to change physical port configu-



rations and port speeds easily and as often as needed. Intel E810-CAM2 Chipset additionally supports IEEE 1588 PTP v1 and v2 time synchronization which can be useful when used in 5G RAN, industrial automation and energy monitoring applications.

100G-NIC-E810-20 can run on most network operating systems, for a complete list of supported network operating systems for Intel® Ethernet 800 Series Network Adapters visit [Supported Operating Systems for Retail Intel® Ethernet Adapters](#). Card can be used as a compatible alternative for Intel, HPE, Dell, Lenovo, IBM, Cisco, Chelsio, Supermicro, Silicom, Xilinx and many other brand Network Interface Cards which are Intel E810-CAM2 chipset based. When combined with a wide selection of EDGE Optic – [Optical Transceiver Modules](#) and [Direct-Attach Cables \(DAC\)](#) can provide superior flexibility in connectivity and network design.

For a better overview, You are welcome to use our [PCIe Network Interface Card Guide](#). We will be glad to know your requirements – [Contact Us](#).

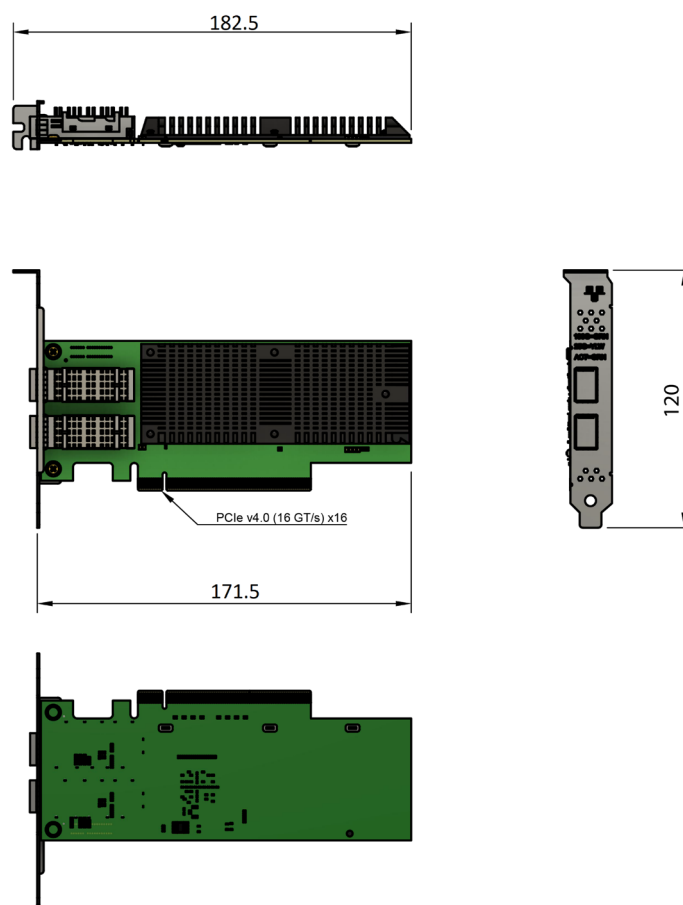
Product Specification:

Parameter	Value
Product type:	Network Interface Cards
NIC Category:	Dual Port 100G QSFP28 PCIe
Controller Silicon:	Intel® E810-CAM2
Controller type:	Ethernet
Connector type:	QSFP28
Number of ports:	2
Data rate per port:	100GbE
Bus interface:	PCI Express v4.0 x16, Compatible with PCI Express v3.0
Bus transfer rate:	16GT/s
Clock:	Time Sync (IEEE 1588v1, v2)
Network Operating Systems (NOS):	<ul style="list-style-type: none"> Windows 7/8/8.1/10 Windows Server 2008 R2/2012 R2/2016 R2/2019 R2; Linux Stable Kernel version 2.6.32.x/3.x/4.x/5.x or later; CentOS/RHEL 6.x / 7.x or later; Ubuntu 14.x/15.x/16.x or later; VMware ESX/ESXi 4.x/5.x/6.x or later
Protocol Support:	<ul style="list-style-type: none"> IEEE 802.3bj 100GBASE Ethernet IEEE 802.3x Full Duplex and flow control IEEE 802.3az Energy Efficient Ethernet (EEE) IEEE 802.3AS IEEE 802.1Q VLAN IEEE 802.1Qaz IEEE 802.1Qbb IEEE 802.1x IEEE 802.1bd IEEE1588 v1&v2
LED Status Indicators:	100Gbps, Yellow Link + Green Blink
Power Consumption (Typical):	<ul style="list-style-type: none"> Idle: 15.4W DACs: 16.9W Optics (3.5W) 20.8W
Environmental Specifications:	<ul style="list-style-type: none"> Operating temperature: 0 °C to 55 °C Storage temperature: -55 °C to 105 °C Relative Humidity: 5% to 90% (non-condensing relative humidity at 35 °C)



Parameter	Value
Physical Characteristics:	<ul style="list-style-type: none"> Dimensions (W x H): 171.5mm x 120mm x 21mm Ships with low-profile bracket attached to interface card. Standard bracket included in packaging.
I/O, Virtualization, Manageability and Advanced Software Features:	As per NIC controller
Compliance:	CE, ROHS
iSCSI:	Supported
WoL:	Not Supported
Jumbo Frames:	Supported
DPDK:	Supported
PXE:	Supported
FCoE:	Not Supported
RDMA (iWARP, RoCEv2):	Supported
Network virtualization:	SR-IOV, VXLAN, GENEVE, GRE

Mechanical Dimensions:



Supported Optical Modules And Cables:

100G-NIC-E810-20 network interface card supports wide variety of 100G optical modules and cables. Below are listed some of the most popular ones:

Part Number	Description
100G-QSFP28-100	100GBASE-SR4 QSFP28 Module (Tx/Rx 850/850nm, 103.125 Gbps, Max. 100m (OM4) over MMF, 1.9 dB, Temp. 0-70C, MTP/MPO Connector)
100G-QSFP28-2.1	Double Fiber 100G CWDM4 and CLR4 QSFP28 Module (Tx/Rx 4 CWDM lines:1271, 1291, 1311, 1331, up to 103.125 Gbps, Max. 2km over SMF, 3.5 dB, Temp. 0-70C, LC Connector)
100G-QSFP28-10	Double Fiber 100GBASE-LR4 QSFP28 Module (Tx/Rx 4 LAN WDM lines:1295.56, 1300.05, 1304.58, 1309.14, 103.125 Gbps, Max. 10km over SMF, 6.6 dB, Temp. 0-70C, LC Connector)
100G-PDAC-QSFP-XX	100G QSFP28 to QSFP28 Twinax Passive Copper Cable (96.97-112.2 Gbps, Temp. 0-70C) * -XX represents possible lengths from 0.5m (AWG30) to 5m (AWG26)
100G-PDAC-QSFP-SFP-XX	100G QSFP28 to 4xSFP28 Twinax Passive Copper Breakout Cable (96.97-112.2 Gbps, Temp. 0-70C) * -XX represents possible lengths from 1m (AWG30) to 5m (AWG26)
100G-AOC-QSFP-XX	100G QSFP28 to QSFP28 Active Optical Cable (96.97-112.2 Gbps, MMF, OM3, DDM/DOM supported, Temp. 0-70C) * -XX represents possible lengths from 1 to 100m (OM4 type for 100m)
BIDI-100G-QSFP28-150	Single Fiber 100G/40G QSFP+ Module (Tx/Rx 850/900nm, up to 103.125 Gbps, Max. 150m over MMF (OM5), 1.9 dB, Temp. 0-70C, LC Connector)

For any assistance in selecting optical modules, DAC/AOC cables for your network interface card or if you didn't find an exact match for your project in above table please contact: sales@edgeoptic.com



Compatibility:

EDGE Optic 100G-NIC-E810-20 can be used as a compatible alternative for many Network Interface Cards which are manufactured by Intel, HPE, Dell, Lenovo, IBM, Cisco, Broadcom, Marvel, Qlogic, Emulex, Mellanox, Supermicro, Allied Telesis, Chelsio, Dlink, Silicom, Solarflare, Startech and others brands. If Network Interface Card from these brands use same Intel® E810 Controller, EDGE Optic 100G-NIC-E810-20 Card is 100% compatible alternative. Additionally if other manufacturer Network Interface Card has similar main technical characteristics, 100G-NIC-E810-20 can be used as a compatible alternative.

For any questions will 100G-NIC-E810-20 be compatible with your server or will it work as 100% alternative for your current Network Interface Card please write us to: sales@edgeoptic.com

Drivers:

100G-NIC-E810-20 card use Intel® E810 Controller. Before using please acquire latest Intel® Ethernet Adapter Complete Driver Pack. Please follow this link to do so: <https://downloadcenter.intel.com/download/22283/-?product=83967>

Warranty:

EDGE Optic's provides a limited warranty for **sixty (60)** months from Purchaser's receipt of the Equipment represented in this data sheet against defective design or workmanship.

