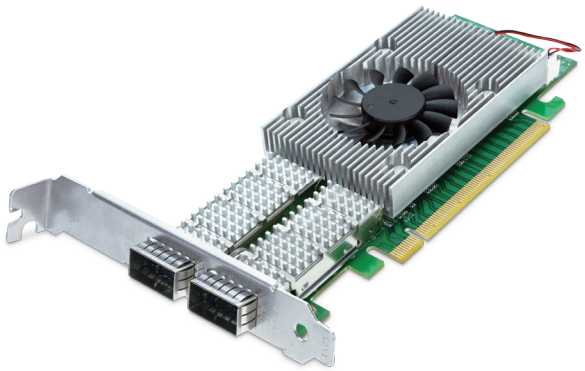
Dual-Port 100Gbps QSFP28 PCI Express Ethernet Adapter (Intel)



PLANET ENW-2QSFP28 100GbE QSFP28 PCI Express server adapter adopts the Intel® Ethernet Controller solution. It provides a PCI Express Gen4 x16 interface and advanced features as follows:

- **Smaller and compact in design**
- **Flexible 100G QSFP28 module installation**
- **Supports PXE boot**
- **Long/Low profile bracket**

The Server Level Adapter to Expand Networking Environments

The ENW-2QSFP28 is a PCI Express 100Gbps Ethernet Adapter designed to meet high-performance system application requirements. Leveraging the PCI Express Gen4 x16 bus architecture, the ENW-2QSFP28 delivers superior bandwidth and efficiency for modern data centers and enterprise servers. Providing up to ten times the speed of legacy 10GbE solutions, it is ideal for connecting servers and workstations with extremely high throughput and excellent signal quality.

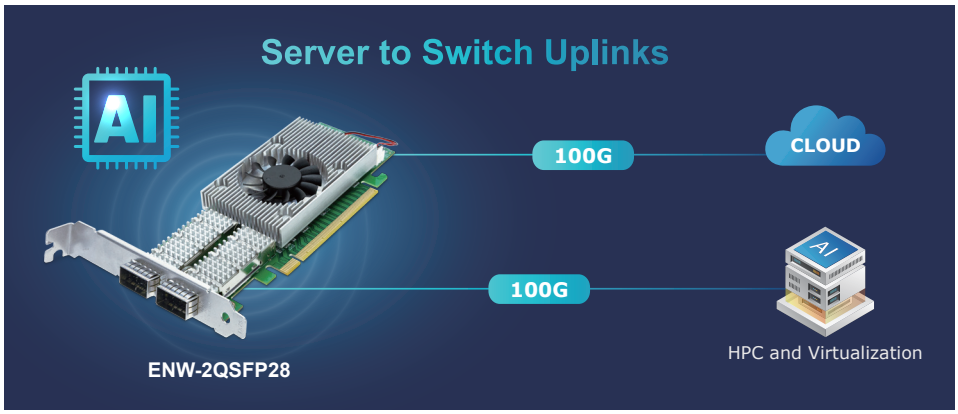
Moreover, the ENW-2QSFP28 supports IEEE 802.1Q VLAN for flexible and secure network segmentation. With jumbo frames up to 9.5K bytes and IEEE 802.3 flow control, it optimizes throughput and ensures wire-speed packet transfer without packet loss. These features make it an excellent solution for 100 Gigabit Ethernet environments.

High-Performance 100GbE QSFP28 Adapter for Data Center and IPC

The PLANET ENW-2QSFP28 is a dual-port 100GbE QSFP28 PCI Express server adapter designed for high-speed networking in modern data centers and industrial applications. Powered by the Intel® Ethernet Controller E810-CAM2, it supports PCI Express Gen4 x16 (backward compatible with PCIe 3.0 x16) for seamless integration into server or IPC motherboards.

Featuring dual QSFP28 ports, the ENW-2QSFP28 delivers up to 2 × 100GbE connectivity with low power consumption and a standard low-profile form factor. The onboard Intel controller integrates advanced networking technologies and a 100GbE MAC into a single chip, achieving up to 100Gbps throughput per port. By offloading key networking and virtualization tasks from the server CPU, it ensures near line-rate performance while maintaining the simplicity of a conventional Network Interface Card (NIC).

- Intel® Ethernet Controller E810-CAM2 for server-grade performance
- Dual-port 100GbE QSFP28 interfaces
- Supports 25/50/100GbE via modules
- PCI Express Gen4 x16 interface (backward compatible with PCIe Gen3 x16)
- Supports PXE Boot for remote deployment and management
- IEEE 802.1Q VLAN tagging for secure and flexible network segmentation
- Jumbo Frame support up to 9.5K bytes for optimized throughput
- IEEE 802.3 Flow Control for reliable wire-speed packet delivery
- SR-IOV, VMDq, RSS, DPDK support for virtualization and high-performance networking
- Supports IEEE 1588 PTP with per-packet hardware timestamping.
- Low-profile and full-height brackets included for flexible installation
- Compatible with Microsoft Windows® 10/11 (64-bit), Windows Server® 2016/2019/2022/2025, Linux Kernel 5.x / 6.x (RHEL / SLES with ice driver), and FreeBSD



High-Speed 100GbE Connectivity and Flexible Extension

The ENW-2QSFP28 is a dual-port 100GbE QSFP28 PCI Express adapter powered by the Intel® Ethernet Controller E810-CAM2. It supports flexible QSFP28 transceivers for connections up to 100 meters over multi-mode fiber or 10 kilometers over single-mode fiber, making it ideal for data center and enterprise deployments. With PCIe Gen4 x16 bandwidth, low power consumption, and a standard low-profile form factor, it delivers up to 100Gbps throughput per port while offloading key networking and virtualization tasks from the server CPU, ensuring near line-rate performance and reliable operation.

High-Performance 802.1Q VLAN and Jumbo Frame Support

The ENW-2QSFP28, powered by the Intel® Ethernet Controller E810-CAM2, supports IEEE 802.1Q VLAN tagging and jumbo frames up to 9.5K bytes, enabling flexible and secure network segmentation. With IEEE 802.3 flow control, it ensures optimized throughput and wire-speed packet transfer without packet loss. Designed for 100GbE high-speed Ethernet environments, the device delivers exceptional performance for demanding server and data center applications.

Multiple OS Support

The ENW-2QSFP28 is fully compatible with a wide range of modern operating systems, including Microsoft Windows® 10/11 (64-bit) and Windows Server® 2016/2019/2022/2025. It also supports leading Linux platforms with kernel versions 5.x and 6.x (RHEL / SLES with driver support), as well as FreeBSD. With this broad OS compatibility, the ENW-2QSFP28 can be seamlessly integrated into diverse server and industrial networking environments.

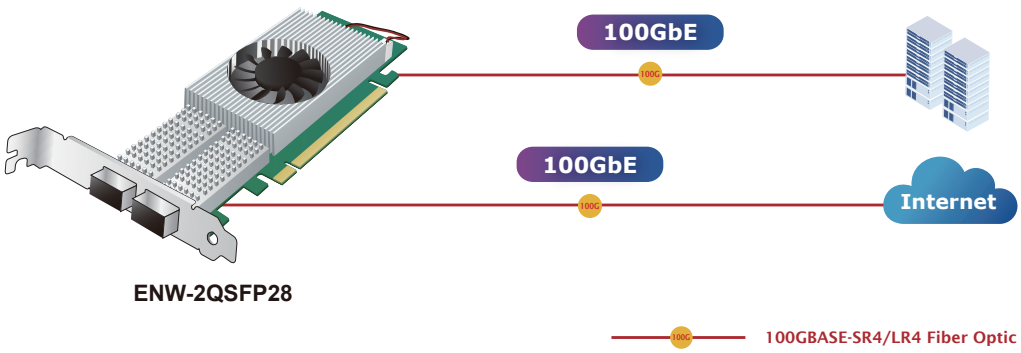
Low-Profile Design

The ENW-2QSFP28 supports both full-height and low-profile PCI Express slots. It comes with an optional low-profile bracket, making it suitable for IPC systems or servers with limited space. This flexible form factor design allows the ENW-2QSFP28 to be deployed in a wide range of industrial and data center applications.

Dual-port 100GbE QSFP28 for Enhanced Deployment

Equipped with two 100GbE QSFP28 fiber interfaces, the ENW-2QSFP28 provides high-speed connectivity and deployment flexibility. The dual-port design allows administrators to build redundant connections for high availability or aggregate both ports to double bandwidth up to 200Gbps, ensuring efficient data transmission in enterprise data centers, cloud computing, and HPC environments. This versatile configuration makes it ideal for scenarios requiring both performance and reliability.

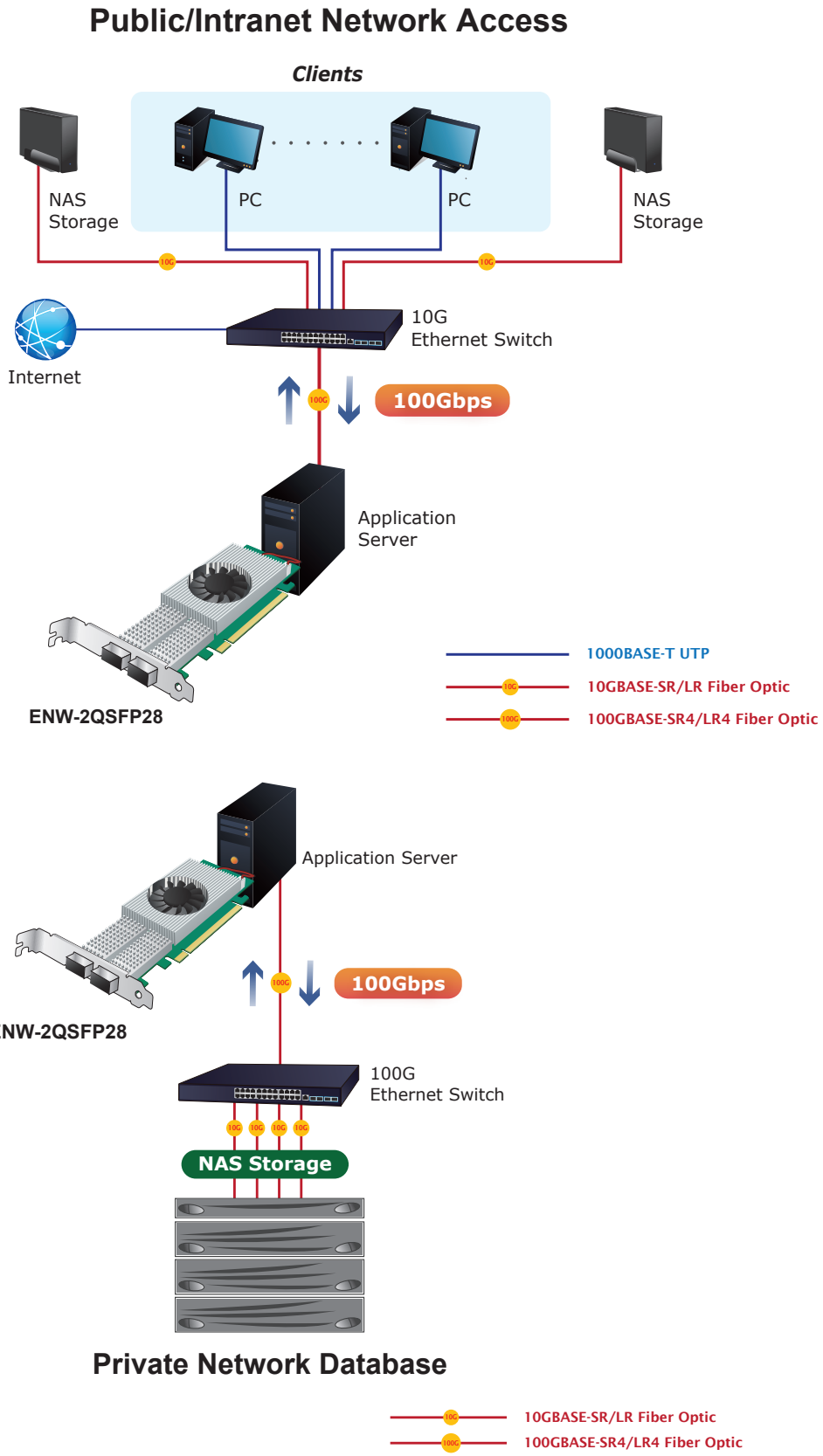
Dual-port 100GbE QSFB28 for Enhanced Deployment



Applications

Empower AI and Next-Gen Data Centers with Dual 100GbE

The ENW-2QSFP28 delivers dual 100GbE QSFP28 ports for the AI era, enabling massive bandwidth for AI training, high-speed storage, and large-scale data migration. Powered by the Intel® E810-CAM2, it offers 200Gbps aggregate throughput, ultra-low latency, and advanced offloads to accelerate machine learning and reduce CPU load. Its flexible dual-port design supports server-to-switch uplinks, redundant links, and can easily act as a server NIC, making it ideal for AI-driven workloads, cloud, HPC, and virtualization—unlocking next-generation performance in intelligent networks.



Product Specifications

Product	ENW-2QSFP28
Hardware Specifications	
Controller	E810-CAM2
Interface	2 x QSFP28
LED Indicator	Link Speed: Green Link/ ACT: Green
Data Rate	100Gbps per port
Optical Module Options	SR4, LR4, DAC * Supports 25/50/100 GbE via compatible modules
Dimensions (W x D x H)	175 x 18 x 150 mm
Weight	170g
PCIe Bus Type	PCI Express Gen4 x16, backward compatible with PCIe Gen3 x16
Typical Power Consumption	Max.12 watts/ 40.92BTU (No Loading) Max.16 watts/ 54.56BTU (Full loading)
Jumbo Frame	9.5K bytes
Advanced Functions	
Layer 2 Features	IEEE 802.3x Flow Control support IEEE 802.1Q VLAN support
Pre-boot Execution Environment (PXE)	Yes
Operating System Support	Windows® 10/11 (64-bit) Windows Server® 2016/2019/2022/2025 Linux Kernel 5.x / 6.x (RHEL / SLES with ice driver) FreeBSD
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class B, CE
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3cd 100GbE IEEE 802.3bd Priority-based Flow Control Enhancements IEEE 802.3x Flow Control and Back Pressure IEEE 802.1Q VLAN Tagging IEEE 802.1p Priority Tagging IEEE 802.1D MAC Bridges IEEE 802.1AX Link Aggregation IEEE 802.1Qbb Priority-based Flow Control IEEE 802.1Qbg Edge Virtual Bridging IEEE 802.1BR Bridge Port Extension IEEE 802.1AB LLDP IEEE 1588 Precision Time Protocol (PTP)
Environment	
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -10 ~ 85 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Standard Accessories	
Package Contents	ENW-2QSFP28 Server Adapter Low Profile Bracket QR Code Sheet

Ordering Information

ENW-2QSFP28	Dual-Port 100Gbps QSFP28 PCI Express Ethernet Adapter (Intel)

Related Products

ENW-9803	10GBASE-T PCI Express Server Adapter
ENW-9801	10Gbps SFP+ PCI Express Server Adapter
ENW-9701	1000Base-SX / LX SFP PCI Express Fiber Adapter
ENW-9720P	2-Port 10/100/1000T 802.3at PoE+ PCI Express Server Adapter
ENW-9740P	4-Port 10/100/1000T 802.3at PoE+ PCI Express Server Adapter
DCS-7342-32C2X	Layer 3 32-Port 100G/40G QSFP28 + 2-Port 10G SFP+ Managed Data Center Switch
DCS-7342-48Y8C	Layer 3 48-Port 25G SFP28 + 8-Port 100G/40G QSFP28 Managed Data Center Switch

Available 100Gbps Modules

QSFP-100G-SR4	100GBASE-SR4 QSFP28 Fiber Transceiver (Multimode, MPO, 850nm, DDM) – 100m
QSFP-100G-LR4	100GBASE-LR4 QSFP28 Fiber Transceiver (Single mode, LC, 1310nm, DDM) – 10km
CB-QSFP100G-1M	100G QSFP28 Direct Attached Copper Cable - 1M
CB-QSFP100G-3M	100G QSFP28 Direct Attached Copper Cable - 3M
CB-QSFP100G-5M	100G QSFP28 Direct Attached Copper Cable - 5M

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