

10GBASE-T PCI Express Server Adapter



Enhanced from the current highly-praised version, PLANET ENW-9803 **version 4** 10GBASE-T PCI Express Server Adapter adopts **Realtek LAN controller solution**. It comes with **PCI Express rev. 4.0 specification x1 lane interface** and other advanced features as follows:

- **Smaller and compact in design**
- **10M/100M/1G/2.5G/5G/10GBASE-T RJ45 Multi-gigabit network solution**
- **Supports PXE boot/Wake-on-LAN**
- **Long/Low profile bracket**

10 Gigabit Performance yet Low Cost and Low Power

The ENW-9803 comes with one **10GBASE-T RJ45 interface** and **low-profile PCI Express form factor**. As the new version of ENW-9803 uses **Realtek LAN controller solution**, it is a low-powered, high performance model that supports IEEE 802.az Energy Efficient Ethernet (EEE). The new version ENW-9803 NIC adapter reference design supports auto-negotiation for allowing the NBASE-T solution to optimally select the best and flexible speed like 10 Gigabit Ethernet (10GbE), 5 Gigabit Ethernet (5GbE), 2.5 Gigabit Ethernet (2.5GbE), 1 Gigabit Ethernet (GbE) or 100 Megabit Ethernet (100MbE) over Cat 5e/Cat 6/Cat 6A or better cabling. It is designed to address system application requirements by offering **the best cost, 10Gbps high performance, low power consumption** and **better-quality** solution in the 10Gbps network market today.



- PCI Express rev. 4.0 specification with 1-lane interface
- Compatible with PCI Express Rev 4.0 specification, PCIe x1 or higher slot
- 10Gbps throughput with 100-meter UTP cable
- Complies with IEEE 802.3an 10GBASE-T, IEEE 802.3ab 1000BASE-T, IEEE 802.3u 100BASE-TX
- Complies with IEEE 802.3bz (NBASE-T) 5GBASE-T and 2.5GBASE-T
- IP, TCP, UDP checksum offloading
- IEEE 802.1Q VLAN ID tagged/IEEE 802.1ad Q-in-Q VLAN
- IEEE 802.3x full-duplex flow control
- IEEE 802.3az Energy Efficient Ethernet (EEE)
- 16K jumbo frame size
- PXE boot support
- Wake-on-LAN (WOL) support
- Complies with Microsoft and Linux platforms

Efficient and Ideal 10G Copper NIC Adapter

Compared with 10G adapter with CX4 and SFP+ interface, PLANET 10GBASE-T PCI-E adapter is the best choice in that the ENW-9803 10GBASE-T can reach up to 100 meters over Cat.6a or Cat.7 RJ45 cable, whereas the CX4 and SFP+ interface only can work with fixed speed rate. However, the ENW-9803 10G copper NIC adapter can adjust and work with the speed rate of 10M/100M/1G/2.5G/5G. The CX4 interface can only extend up to 15 meters in distance. The cost is too high for having an extra SFP+ interface for the SFP+ transceiver. However, with the ENW-9803, customers only spend on Cat.6a or Cat.7 cable as the ENW-9803 is bundled with RJ45 connector, thus costing less than the SFP+ transceiver.

10G Spec.	Interface	Media	Maximum Distance	Total Ownership Cost	Smart LCD
10GBASE-T	RJ45	Cat.6a/Cat.7 UTP cable	100 meters (328 ft)	Low	--
10GBASE-CX4	CX4	Copper	15 meters (49 ft)	Medium	--
10GBASE-SR	SFP+	Multi-mode fiber cord	300 meters (984 ft)	High	■
10GBASE-LR	SFP+	Single mode fiber cord	10 km (32808 ft)	High	--

10GbE Device Designed for Low-power, Low-cost and Single-port Applications

The ENW-9803 is an optimized 10GbE device designed for low-power, low-cost and single-port applications required in application servers, high-end workstations and personal computers. This makes it ideal for enabling 1GbE to migrate to 10GbE for bandwidth-intensive workstation applications and low-end to mid-range network appliances. With the innovative PCI Express Bus Architecture, it offers increased bandwidth, reliability and additional functionality compared with standard GbE network cards. The performance of throughput at rates up to 20Gbps is unbelievable, thus eliminating the bottleneck that exists with the current Gigabit network. PLANET ENW-9803 is designed to connect your servers and workstations, guaranteeing extremely high throughput and excellent signal quality.

The ENW-9803 enhances performance further with its 16K jumbo frame support and IEEE 802.3 flow control, ensuring optimized throughput and reliable wire-speed packet transfer. These features minimize the risk of packet loss, even under high traffic conditions, making the device an ideal solution for demanding 10 Gigabit Ethernet environments.

Standard 802.1Q VLAN and 802.1ad Q-in-Q VLAN Support

The ENW-9803 supports IEEE 802.1Q VLAN and IEEE 802.1ad Q-in-Q VLAN, making it highly versatile for managing network traffic in both enterprise and service provider environments. IEEE 802.1Q VLAN allows the device to operate in a flexible and secure network environment by segmenting traffic into different logical networks. This ensures improved security, better traffic management, and reduced congestion, especially in large-scale network setups. Additionally, the IEEE 802.1ad Q-in-Q VLAN support enables Double VLAN Tagging, which allows customer-specific VLAN tags to be nested within service provider VLAN tags, his dual tagging ensures that service providers can securely transport traffic for multiple customers over the same physical network infrastructure while maintaining traffic isolation. Whether used for Q-in-Q VLAN in large-scale service provider networks or managing traffic in enterprise backbones, the ENW-9803 delivers high performance, scalability, and robust security.

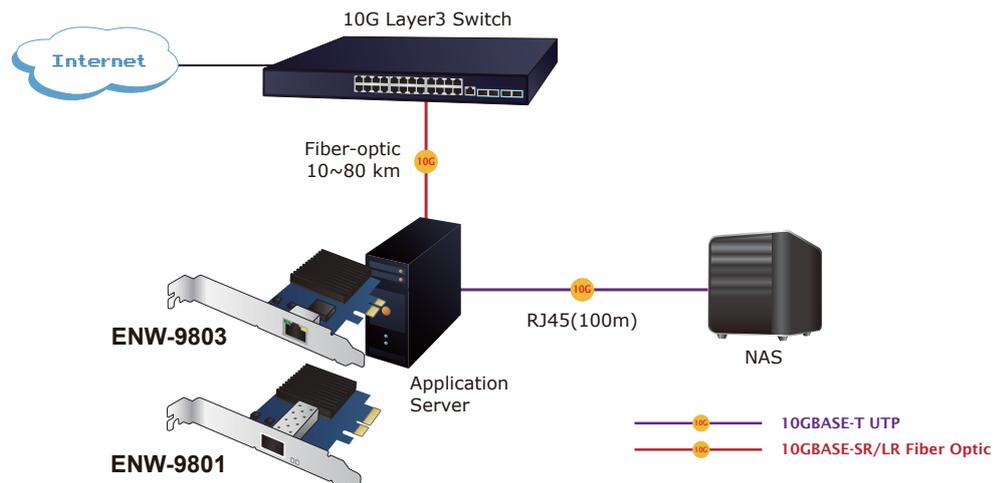
Multiple OS Support

The ENW-9803 operates completely well with most of the popular and latest operating systems including **Microsoft Windows** workstation or server, Linux, enabling simple integration into network designs. There is no need of any modification to the server's operating system or any special software required for the ENW-9803 to be integrated into the system.

Applications

Server NICs

PLANET ENW-9803 is equipped with one 10 Gigabit RJ45 interface, giving 10 times more performance than the existing Gigabit transmission. Thus, the ENW-9803 can easily act as a server NIC of your networks by wiring to the backbone switches. With one PCI Express rev. 4.0 specification x1 lane Interface, the ENW-9803 is an ideal solution for the mainboard with PCI Express interface now and in the future.



Product Specifications

Product	ENW-9803
Hardware Specifications	
Hardware Version	4
Attachment Interface	PCI Express rev. 4.0 specification x1 lane interface
Media Interface	RJ45 connector
Data Rate	10M/100M/1G/2.5G/5G/10Gbps
Jumbo Frame	4K/9K/16K Bytes
LED Indicators	LNK Speed (Amber) LNK/ACT(Green)
Dimensions (W x D x H)	120 x 99 x 22 mm
Weight	67g (W/ Long Profile Bracket)
Typical Power Consumption	1.7 watts/ 5.8BTU (3.3V/520mA)
Network Cable	Twisted-pair cable up to 100 meters (328ft) 10BASE-T: 4-pair UTP Cat. 3, 4, 5, 5e, 6, 6A 100BASE-TX: 4-pair UTP Cat. 5, 5e, 6, 6A 1G/2.5GBASE-T: 4-pair UTP Cat 5e/Cat 6/Cat 6A/ Cat 7 5GBASE-T: 4-pair UTP Cat 6/Cat 6A/Cat 7 10GBASE-T:4-pair UTP Cat 6A/Cat 7
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 Server 2022 64 bits Windows 10 32/64 bits Windows 11 64 bits 10G Ethernet LINUX driver r8127 for kernel 6.15
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class B, CE
Standards Compliance	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Ethernet IEEE 802.3ab 1GBASE-T Ethernet IEEE 802.3bz 2.5/5GBASE-T Ethernet IEEE 802.3an 10GBASE-T Ethernet IEEE 802.3x Flow Control and Back Pressure IEEE 802.1Q VLAN Tagging IEEE 802.1ad Q-in-Q VLAN IEEE 802.3az Energy Efficient Ethernet (EEE)
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)
Package	
Package Contents	ENW-9803 Server Adapter QR Code Sheet Low Profile Bracket

Ordering Information

ENW-9803	10GBASE-T PCI Express Server Adapter
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Related Products

ENW-9801	10Gbps SFP+ PCI Express Server Adapter
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