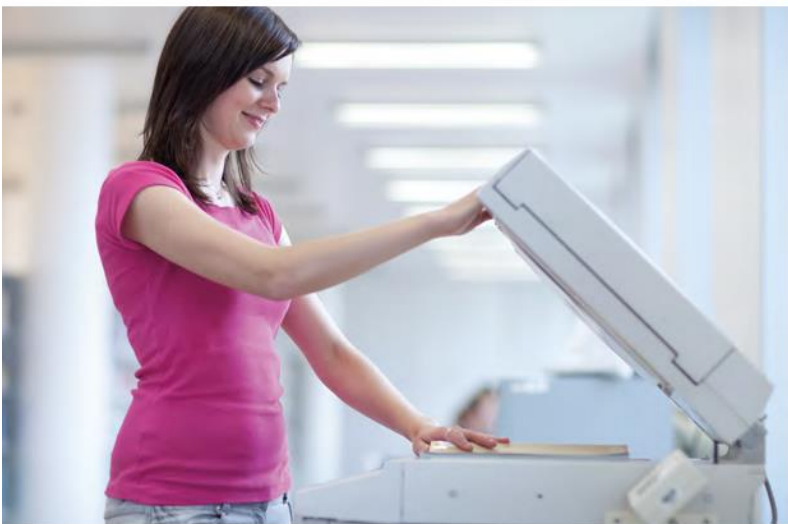




User's Manual

PCI Express 10G Ethernet Adapter



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FCC Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at whose own expense.

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WEEE Warning



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Revision

User's Manual of PLANET 10Gbps SFP+ PCI Express Server Adapter

FOR MODELS: ENW-9801/ENW-9803

REVISION: 4.0 (September 2025)

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Chapter 1: Introduction

Enhanced from the current highly-praised version, PLANET ENW-9801 10Gbps SFP+ / ENW-9803 10GBASE-T PCI Express Server Adapter adopts Realtek LAN controller solution. It comes with PCI Express interfaces and other advanced features as shown below:

Model Name	ENW-9801	ENW-9803
Description	10Gbps SFP+ PCI Express Server Adapter	10GBASE-T PCI Express Server Adapter
Attachment Interface	PCI Express rev. 3.0 specification x 2 lane Interfaces	PCI Express rev. 4.0 specification x1 lane interface

- **Smaller and compact in design**
- **Flexible 10G SFP+ module installation(ENW-9801)**
- **10M/100M/1G/2.5G/5G/10GBASE-T RJ45 Multi-gigabit network solution(ENW-9803)**
- **Supports PXE boot/Wake-on-LAN**
- **Long/Low profile bracket**

The Server Level Adapter to Expand Networking Environments

The ENW-9801 is a PCI Express 10Gbps Ethernet Adapter designed to meet high-performance system application requirements. With the innovative PCI Express Bus Architecture, the ENW-9801 provides superior performance than the network cards based on 32/64bit PCI architecture. It provides the best solution to one of the major issues of Server Farm Networks -- communication speed. Ten times faster than the existing 1000BASE-SX/LX fiber solutions, PLANET ENW-9801 is designed to connect your servers and workstations, guaranteeing extremely high throughput and excellent signal quality.

Moreover, the ENW-9801 supports IEEE 802.1Q VLAN which allows it to operate in a flexible and secure network environment. With 16K Jumbo Frame ability and IEEE 802.3 Flow Control support, it further optimizes throughput and wire-speed packet transfer performance without risk of packet loss. The high data throughput of the device makes it ideal for most 10 Gigabit Ethernet environments.

10 Gigabit Performance Boosts Network Traffic

The ENW-9801 is an optimal solution to Ethernet applications by providing low-power budgets and small form factor. It offers simple integration into any PCI Express x4 or higher server slot via one SFP+ slot. The onboard controller featured on the ENW-9801 integrates embedded technology and a 10GbE MAC into a single chip that offers up to 10Gbps of network throughput. PLANET Network solution greatly reduces the TCP/IP packet processing tasks of the server's CPU by performing enhanced data-handling algorithms, thereby providing nearly 10Gb line speed performance with the simplicity of a conventional Network Interface Card (NIC).

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
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

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, it is a low-powered, high performance model that supports IEEE 802.3 Energy Efficient Ethernet (EEE). The ENW-9803 NIC adapter reference design supports auto-negotiation for allowing the 10GBASE-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.

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.

Multiple OS Support

The ENW-9801/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-9801/ENW-9803 to be integrated into the system.

1.1 Package Overview

Thank you for purchasing PLANET ENW-9801/ENW-9803 PCI Express 10 Gigabit Ethernet adapter, it supports PCI Express interfaces. The ENW-9801/ENW-9803 10 Gigabit Ethernet adapter provides a highly cost-effective solution that can upgrade your existing Ethernet infrastructure to the 10 Gigabit network.

Package Contents

- 1 x ENW-9801 or ENW-9803 10Gigabit Ethernet Adapter (with long profile bracket)
- 1 x QR Code Sheet
- 1 x Low Profile Bracket

ENW-9801	ENW-9803
	
QR Code Sheet	Low Profile Bracket
Let's get started with your PLANET product ENW-9801 EN Please scan the QR code to browse our online User's Manual or Quick Installation Guide and follow the instructions to complete the setup. DE Bitte scannen Sie den QR Code wie werden per Browser zur Bedienungsanleitung oder Schnellanleitung weiter geleitet. Folgen Sie den Anweisungen um die Installation abzuschließen. FR Veuillez scanner le code QR pour obtenir notre Notice d'Utilisation en ligne ou notre Guide d'Installation Rapide et suivez les instructions pour compléter la configuration. ES Escanee el código QR para encontrar el Manual del Usuario en línea o la Guía de Instalación Rápida y siga las instrucciones para completar la configuración. IT Scansiona il codice QR per consultare online il Manuale utente o la Guida di installazione rapida e segui le istruzioni per completare la configurazione. PT Por favor, escaneie o QR code para navegar no Manual do Usuário ou Guia de Instalação Rápida. Siga as instruções para completar a configuração. RU Залезав код QR, абы отыскать наша інфармацыя інструкцыі дапамогі і інструкцыі пастаноўкі. Прачытайце асноўныя і інструкцыі, абы завершыць наладжванне. UK One word modify. Очистите QR код, чтобы просмотреть наше онлайн руководство пользователя или наше руководство по быстрой установке, и читайте инструкции по завершению установки. RO Te rugăm să scanezi codul QR, pentru a descărca User's Manual sau Quick Installation Guide și a urma instrucțiunile necesare în finalizarea instalării. AR يرجى مسح رمز الاستجابة السريعة لتصفح دليل المستخدم أو دليل التثبيت السريع واتبع التعليمات لإكمال الإعداد. Need more help? PLANET online FAQs: http://www.planet.com.tw/en/support/faq Technical Support: support@planet.com.tw Copyright © PLANET Technology Corp. 2025. Contents are subject to revision without prior notice. PLANET is a registered trademark of PLANET Technology Corp. All other trademarks belong to their respective owners. Part No. 2341-A34100-001	

1.2 Features

ENW-9801:

- PCI Express rev. 3.0 specification with 2-lane interfaces
- Compatible with PCI Express Rev 3.0 specification, PCIe x4 or higher slot
- IP, TCP, UDP checksum offloading
- IEEE 802.1Q VLAN ID Tagged
- 16K jumbo frame size
- IEEE 802.3x full-duplex flow control
- PXE boot support
- Wake-on-LAN (WOL) support
- Complies with Microsoft and Linux Platforms

ENW-9803:

- 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

1.3 Gathering Tools and Documentations

To install the ENW-9801/ENW-9803 PCI Express 10 Gigabit Ethernet adapter, you need the following items:

- A suitable screw driver
- Your operating system documentation
- Your system unit documentation, including any service documentation

Chapter 2: Hardware Installation

2.1 LED Definition

Below are the pictures of the faceplates of the ENW-9801, consisting of two LEDs: Link Speed and Link/ACT. Table 1 explains the function and state of the LEDs.



Figure 1: Long Profile Bracket of ENW-9801



Figure 2: Low Profile Bracket of ENW-9801

LED	Color	Description
Link Speed	Green	Lights indicates the link is established at 10Gbps full duplex mode. Off indicates the link is established at 1Gbps full duplex mode.
LNK/ACT	Green	When it lights, it indicates a functional network link through the port. When it blinks fast, it indicates data is transmitting and receiving through the port.

Table 1: Descriptions of the ENW-9801 LED

Below are the pictures of the faceplates of the ENW-9803, consisting of two LEDs: Link Speed and Link/ACT. Table 2 explains the function and state of the LEDs.



Figure 1: Long Profile Bracket of ENW-9803



Figure 2: Low Profile Bracket of ENW-9803

LED	Color	Description
Link Speed	Amber	Indicates the link is established at 10Gbps full duplex mode.
LNK/ACT	Green	When it lights, it indicates a functional network link through the port. When it blinks fast, it indicates data transmit and receive through the port.

Table 2: Descriptions of the ENW-9803 LEDs

2.2 Hardware Installation

System Requirement

■ PCI-Express support

ENW-9801: The Server/Workstation supports **PCI Express v3.0** (8GT/s) and PCI Express (PCIe) x4 interfaces.

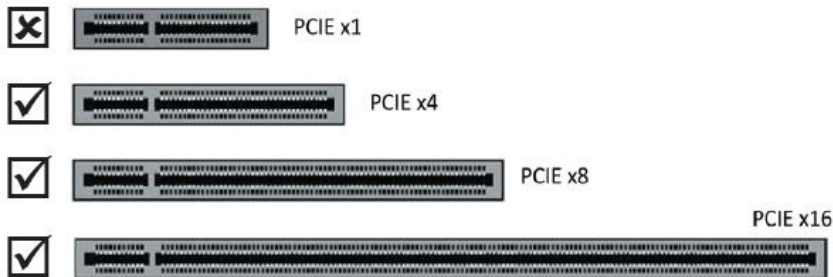
ENW-9803: The Server/Workstation supports **PCI Express v4.0** (16GT/s) and PCI Express (PCIe) x1 interface.



Below are the different PCI Express Slots.

The ENW-9801 is compatible with PCIe 3.0 x4 slots or higher.

The ENW-9803 is compatible with PCIe 4.0 x1 slot or higher.



Operating System Support:

Windows Server 2022 64 bits

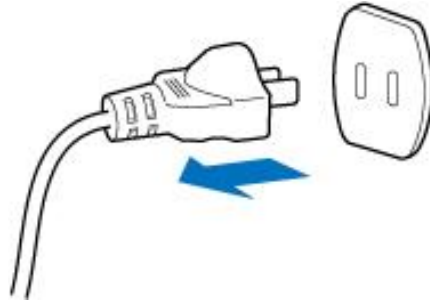
Windows 10 32/64 bits

Windows 11 64 bits

10G Ethernet LINUX driver r8127 for kernel 6.15

Hardware Installation

Step 1: Please turn off your PC.

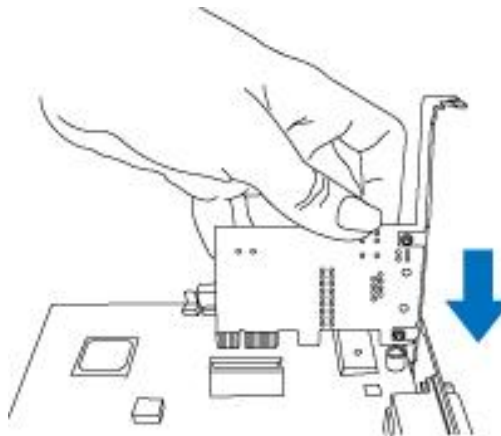


Step 2: Remove any metal decorations from your hands and wrists.

Step 3: Remove the cover from your PC.

Step 4: Locate an empty PCI Express slot and remove the corresponding back plate. Save the screw for use in Step 6.

Step 5: Carefully insert the 10 Gigabit Ethernet Adapter into the chosen slot and press firmly with proper push to ensure it is fully seated in the slot.



Step 6: Secure the 10 Gigabit Ethernet Adapter with the screw you saved in Step 4.

Step 7: Replace the PC cover.

Step 8: Power on your PC and refer to the next section to install driver.

Chapter 3: Driver Installation

A device driver must be installed before your ENW-9801/ENW-9803 can be used with your computer. This chapter describes how to install the driver for various operating systems. Before you begin the driver installation process, make sure you have the installation disks for your computer's operating system.

Installation on Windows 10

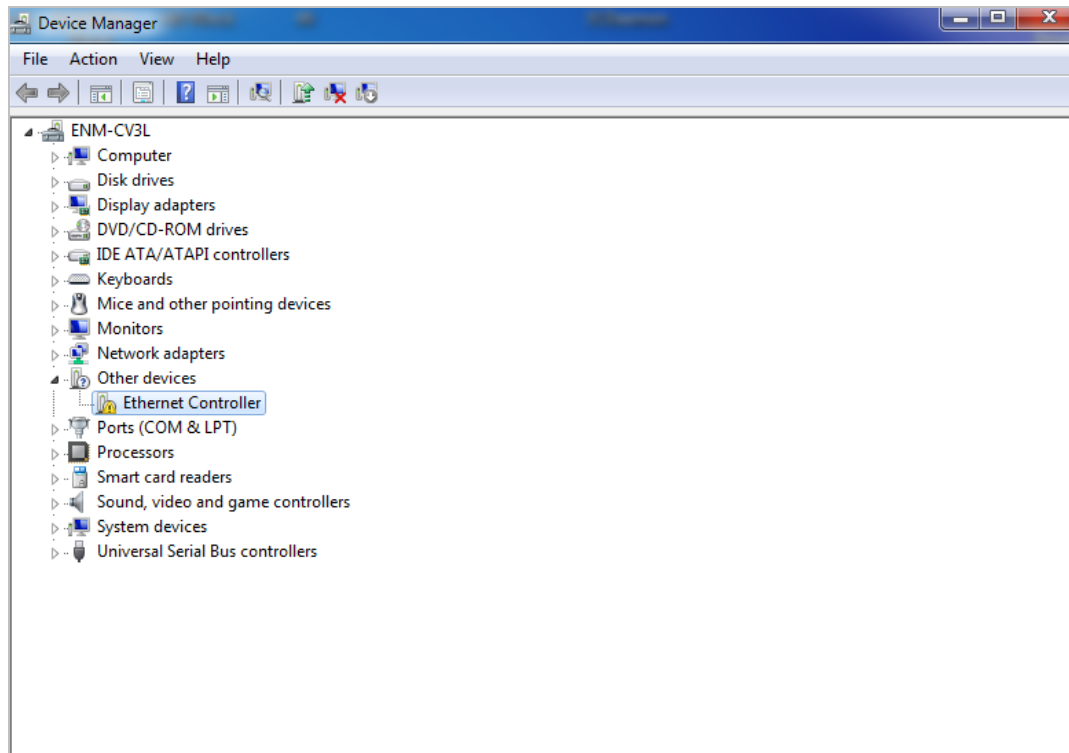
Before installing drivers of ENW-9801/ENW-9803 server adapter, please visit PLANET ENW-9801/ENW-9803 web pages to download the drivers for your operation system.

<https://www.planet.com.tw/en/support/downloads?&method=keyword&keyword=ENW-980&view=4#list>

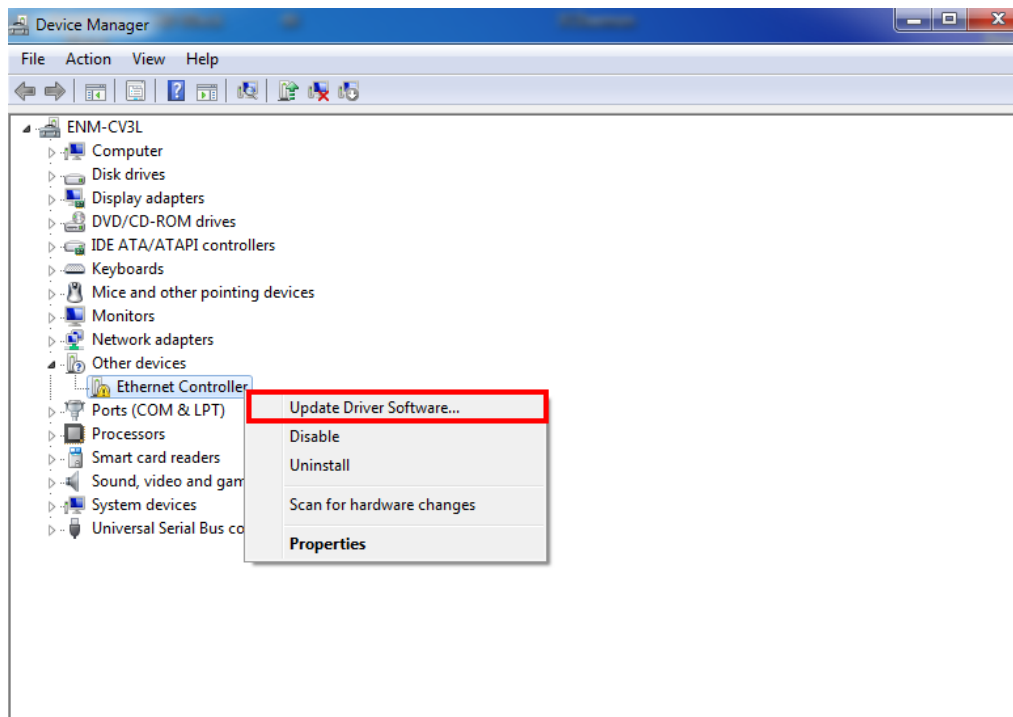


-
- 1: For window 10 and other windows-based operation system, the operation system will detect server adapter and install driver automatically. However, if driver is not installed successfully, you have to install driver manually.
 - 2: This operation is under Windows 10 which it is similar to Windows 11/Windows Server 2022.
-

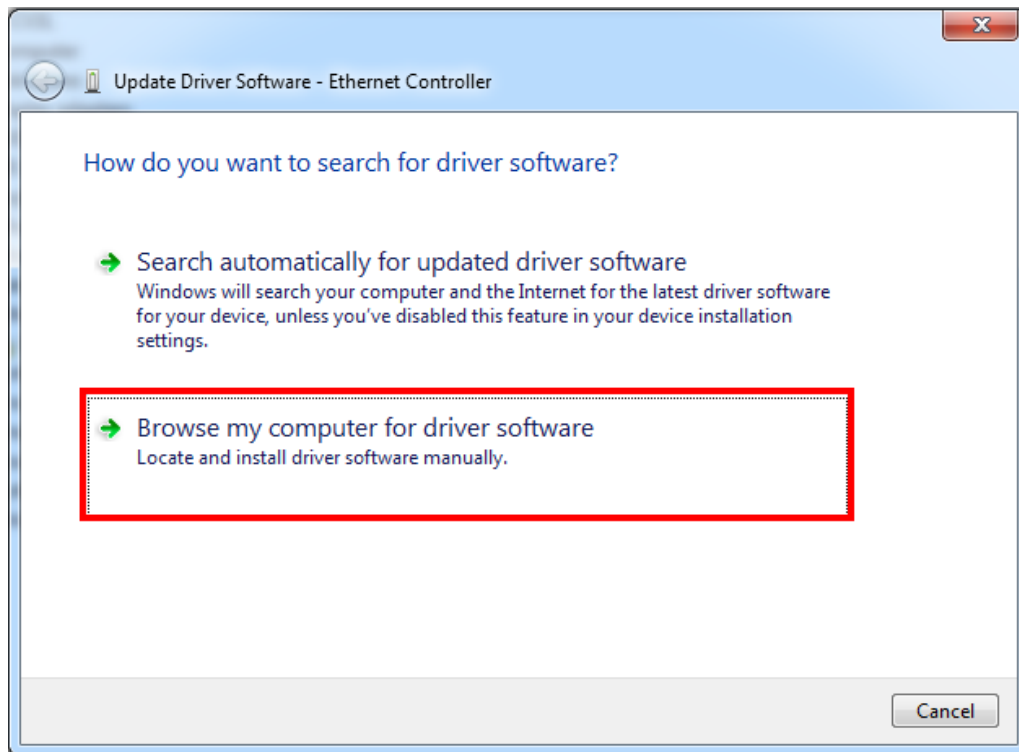
1. After installing the ENW-9801/ENW-9803 to your PC and booting it up, Windows 10 will detect it and you have to install driver.



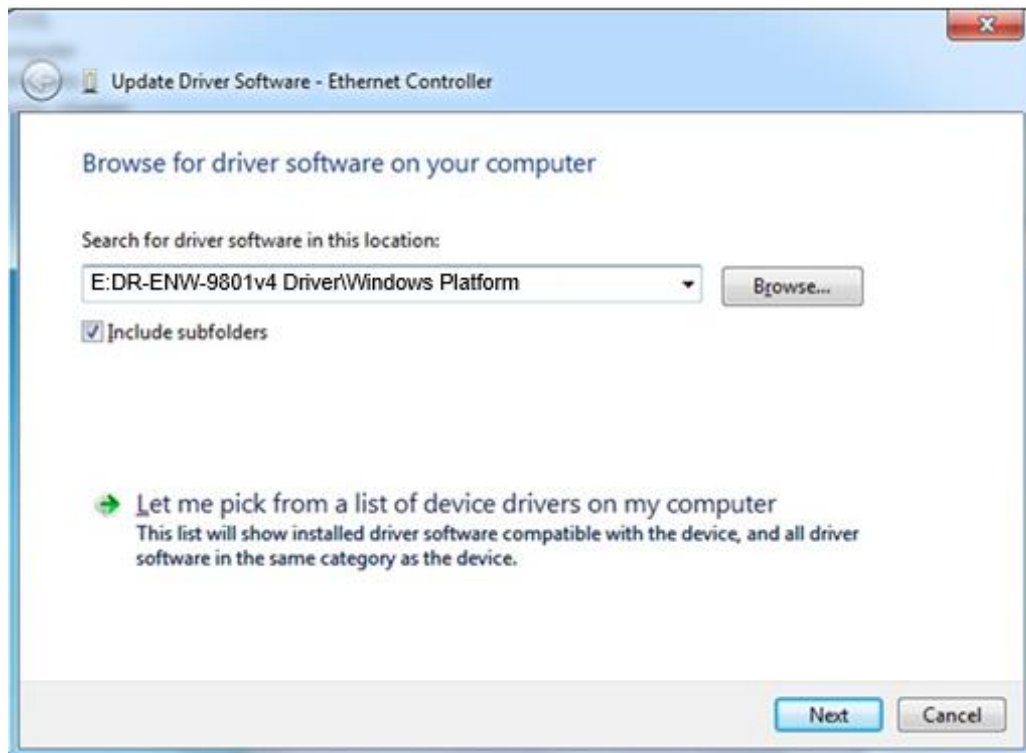
2. Please move and right-click the mouse button for Ethernet Controller item and select “**Update Driver Software**”.



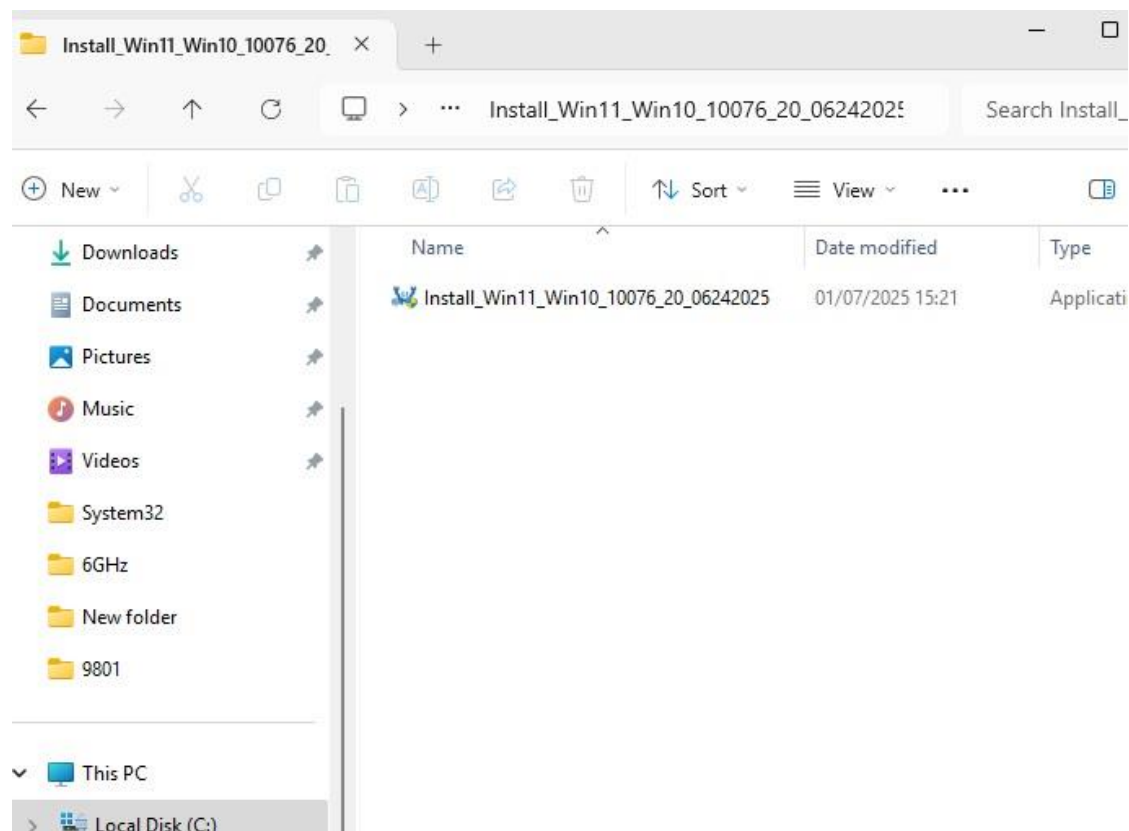
3. Please select “**Browse my computer for driver software**” for the next step.

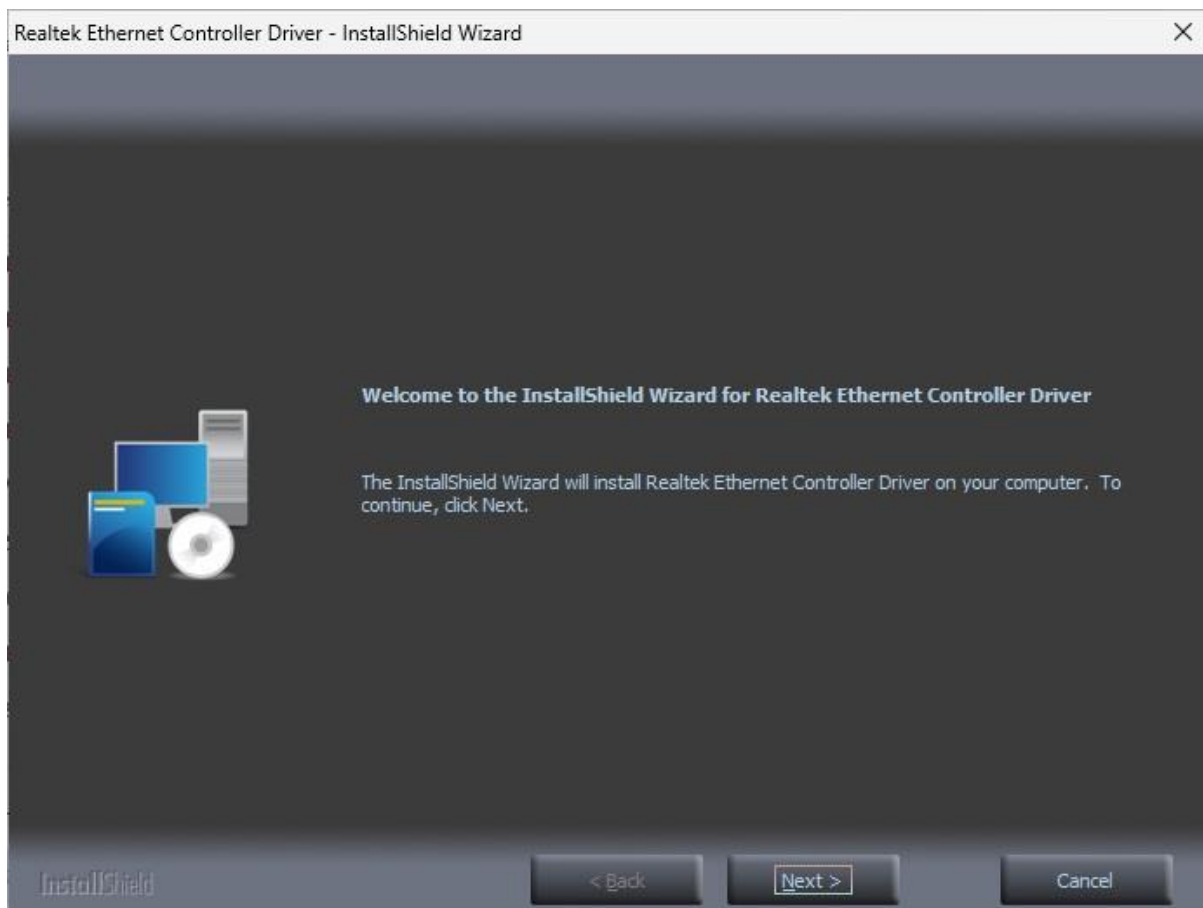
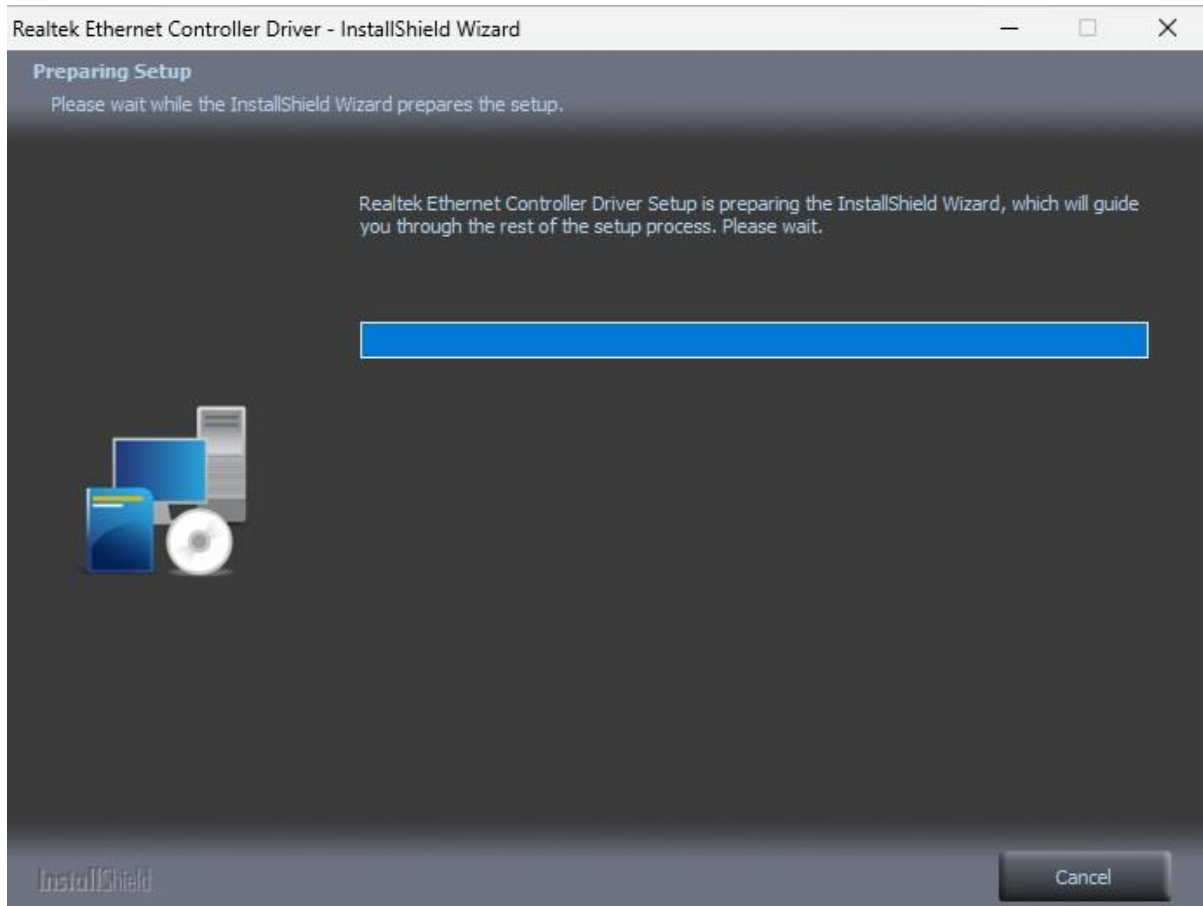


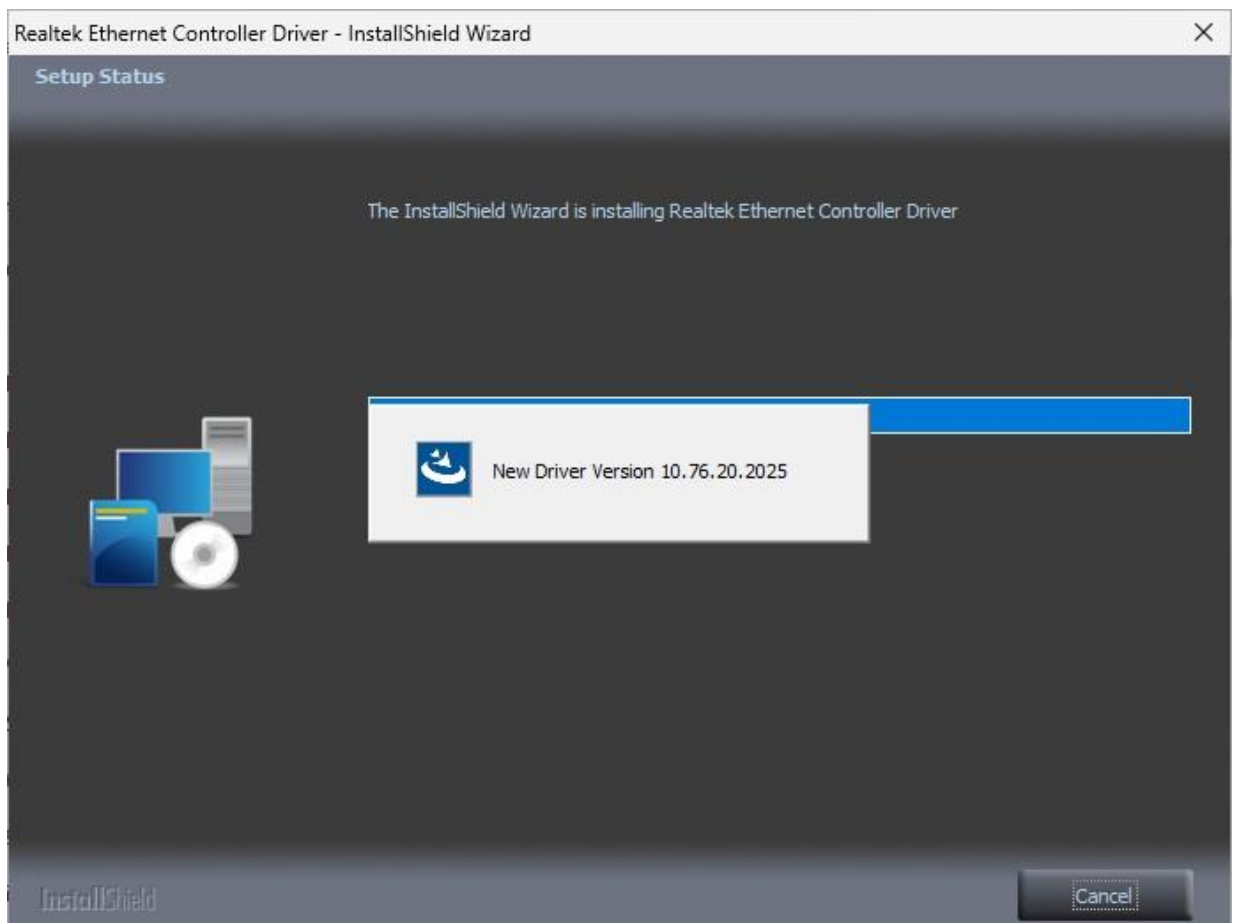
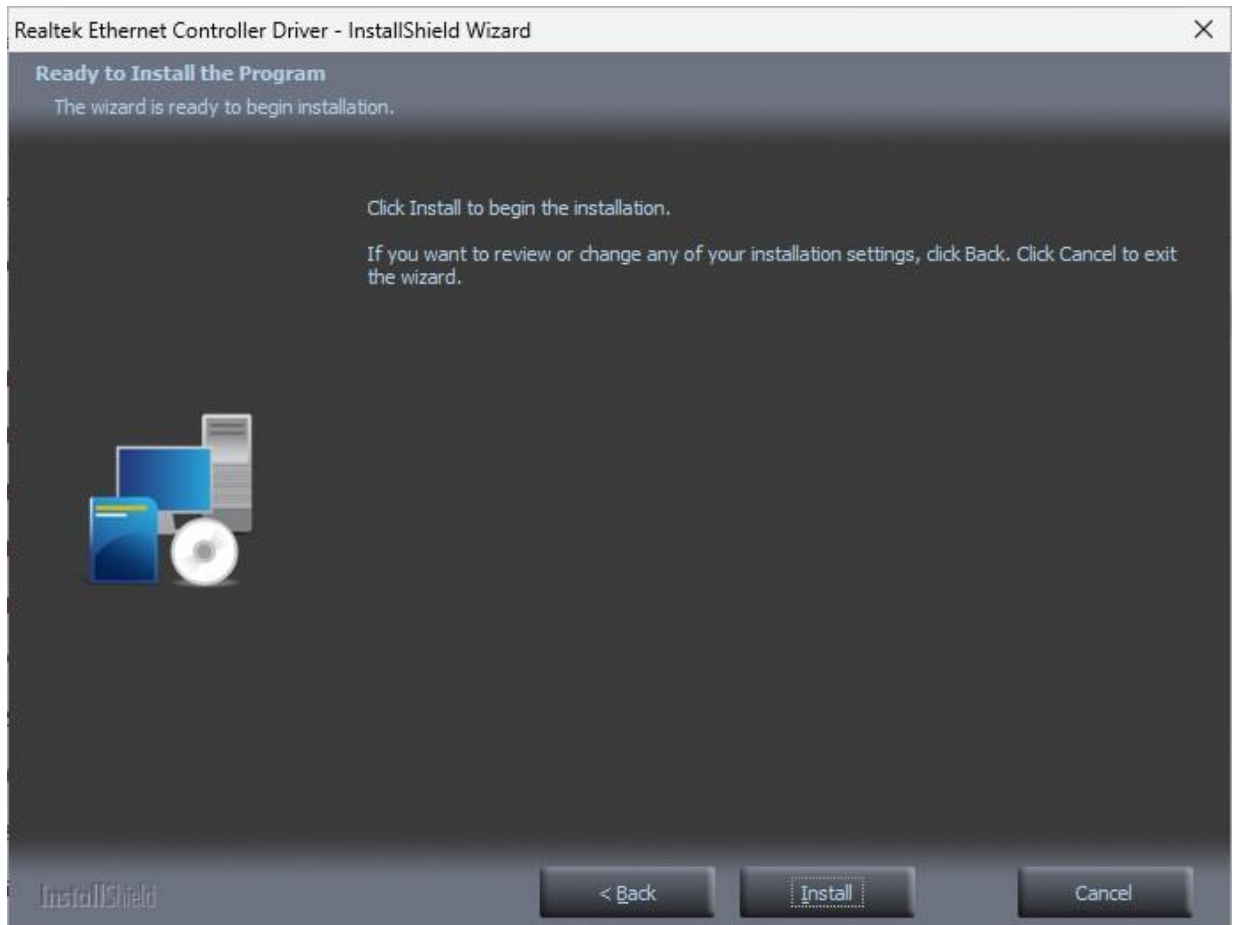
4. Please click “**Browse**” to specify the driver location to install or Let me pick (if needed). Click “**Next**” to continue.

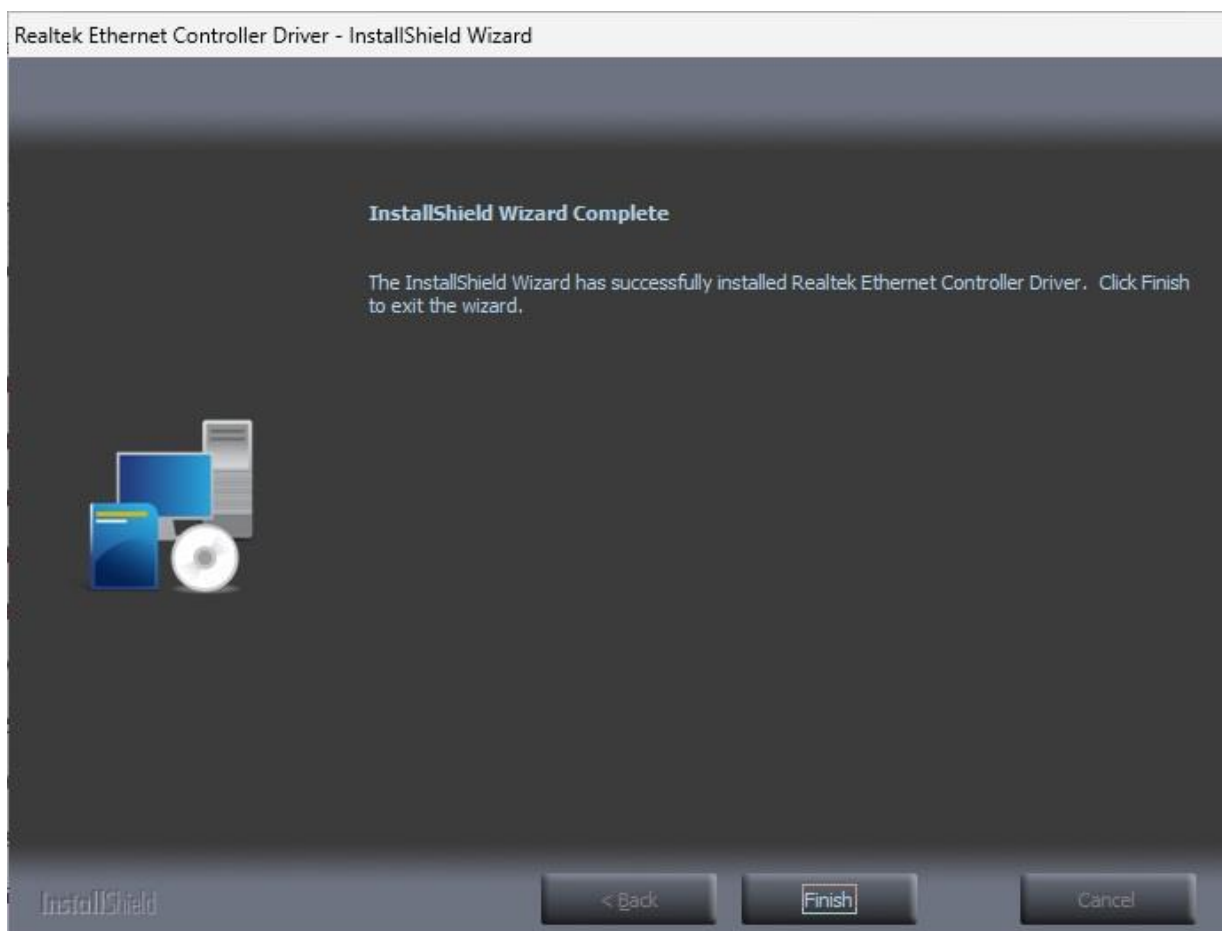


- Please select **“Browse my computer for driver software”** and browse to the extracted driver folder and click Next to install.









6. Verify the device shows as an Realtek PCIe 10GbE Family Controller under Network adapters.



Chapter 4: Specifications

Product	ENW-9801		ENW-9803
Hardware Specifications			
Hardware Version	4		
Attachment Interface	PCI Express rev. 3.0 specification x 2 lane Interfaces		PCI Express rev. 4.0 specification x1 lane interface
Media Interface	SFP+ Connector		RJ45 connector
Optical Module Options	LRM, LR, SR		NA
Data Rate	10Gbps		10M/100M/1G/2.5G/5G/10Gbps
Jumbo Frame	4K/9K/16K Bytes		4K/9K/16K Bytes
LED Indicators	LNK Speed (Green) LNK/ACT(Green)		LNK Speed (Amber) LNK/ACT(Green)
Dimensions (W x D x H)	120 x 107 x 22 mm		120 x 99 x 22 mm
Weight	67.3g (W/ Long Profile Bracket)		67g (W/ Long Profile Bracket)
Typical Power Consumption	2 watts/ 6.8BTU (3.3V/600mA)		1.7 watts/ 5.8BTU (3.3V/520mA)
Network Cables	10GBASE-LR/SR/BX : 50/125µm or 62.5/125µm multi-mode fiber optic cable, up to 300m 9/125µm single-mode fiber optic cable, up to 80km		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 802.3ae 10Gbps Ethernet IEEE 802.3x Flow control and back pressure IEEE 802.1Q VLAN tagging	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-9801 or ENW-9803 Server Adapter ● QR Code Sheet ● Low Profile Bracket

Chapter 5: Available 10Gbps Modules

MTB-RJ	1-Port 10GBASE-T SFP+ Copper Fiber Optic Module - 30m
MTB-SR	1-Port 10GBASE-SR SFP+ Fiber Optic Module - 300m
MTB-SR2	1-Port 10GBASE-SR SFP+ Fiber Optic Module - 2km
MTB-LR	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 10km
MTB-LR20	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 20km
MTB-LR40	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 40km
MTB-LR60	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 60km
MTB-LR80	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 80km
MTB-LA10	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 10km (TX:1270nm RX:1330nm)
MTB-LB10	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 10km (TX:1330nm RX:1270nm)
MTB-LA20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1270nm RX:1330nm)
MTB-LB20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1330nm RX:1270nm)
MTB-LA40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1270nm RX:1330nm)
MTB-LB40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1330nm RX:1270nm)
MTB-LA60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1270nm RX:1330nm)
MTB-LB60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1330nm RX:1270nm)
MTB-LA70	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 70km (TX:1270nm RX:1330nm)
MTB-LB70	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 70km (TX:1330nm RX:1270nm)