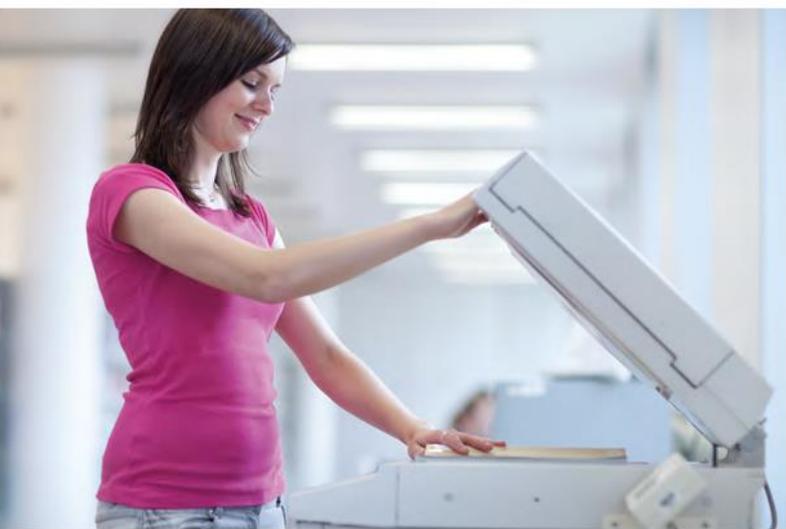




User's Manual

1000BASE-X SFP PCI Express Gigabit Ethernet Adapter

➤ ENW-9701



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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 1000BASE-X SFP PCI Express Gigabit Ethernet Adapter

FOR MODEL: ENW-9701

REVISION: 2.0 (May 2023)

Part No.: EM-ENW-9701_v2.0

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Chapter 1 Introduction

Thank you for purchasing PLANET ENW-9701 1000BASE-X SFP PCI Express Gigabit Ethernet Adapter. PLANET ENW-9701 can provide the best solution for one of the major issues of Local Area Networks -- communication speed. Ten times as fast as the existing 100BASE-TX solutions, using the PLANET ENW-9701 to connect your servers and workstations guarantees extremely high throughput and excellent signal quality.

High Performance Boosts Network Traffic Speed and Flexible Distance Extension

PLANET ENW-9701 is ideal for high-end servers to extend long distance network reliably and flexibly with up to 2000Mbps full-duplex bandwidth capacity. It is an optimal solution for Ethernet applications by providing strictly low-power budgets and small form factor.

Flexible Distance Option

With the 1000BASE-X SFP (small-form factor pluggable) interface, the ENW-9701 can extend fiber network deployment distance from 550 meters (via multi-mode fiber) to 10/20/30/40/50/70/120 kilometers (via single-mode fiber). Users can choose the most suitable SFP transceiver module for their needs. The ENW-9701 connects your servers and workstations, guaranteeing extremely high throughput and excellent signal quality.

More Bandwidth and Advanced Functions

The ENW-9701 is designed to address high-performance system requirements. With the innovative PCI Express Bus Architecture, the ENW-9701 provides better bandwidth and performance than the network cards which are based on 32/64bit PCI architecture. Moreover, the ENW-9701 supports IEEE 802.1Q VLAN which allows it to operate in a flexible and secure network environment. With 9K Jumbo Frame ability and IEEE 802.3 Flow Control support, it offers further optimal throughput and wire-speed packet transfer performance without risk of packet loss. The high data throughput of the device makes it ideal for most Gigabit Ethernet environments.

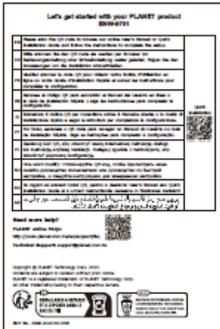
Seamless Integration

The ENW-9701 is completely harmonious with most of the servers' operating systems, 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-9701 to be integrated into the system. The ENW-9701 can take the place of the Ethernet MAC of any conventional TCP connection and have the existing TCP/IP stack of server's CPU still kept intact. It requires only a simple, standard PCIe driver to connect the ENW-9701 to the software.

1.1 Package Contents

Make sure your package contains the following items:

- 1 x ENW-9701 1000BASE-X SFP PCI Express Gigabit Ethernet Adapter.
- 1 x Quick Installation Guide

ENW-9701 Adapter	Quick Installation Guide
 <p>A photograph of the ENW-9701 1000BASE-X SFP PCI Express Gigabit Ethernet Adapter. It is a green printed circuit board with a white metal bracket on the left side. The bracket features a BNC connector and a standard PCI Express slot. Various electronic components, including a large integrated circuit, are visible on the board.</p>	 <p>A photograph of the Quick Installation Guide. It is a white document with black text and a QR code. The title at the top reads 'Let's get started with your PLANET product' followed by 'ENW-9701'. The document contains several sections of text, likely providing step-by-step instructions for installation and configuration.</p>

If any of these are missing or damaged, please contact your dealer immediately. If possible, retain the carton including the original packing material, and use them again to repack the product in case there is a need to return it to us for repair.

1.2 Features

- One 1000BASE-X SFP slot
- One PCI Express Host Bus interface
- 9K Jumbo Frame
- IP, TCP checksum offloading
- IEEE 802.1Q Tagged VLAN
- Low Power Consumption
- Windows Server, Win7/8/10/11, Linux, and MAC OS X Ready

1.3 Gathering Tools and Documentations

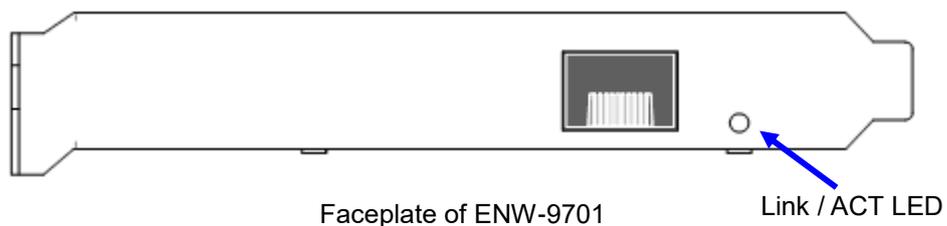
To install the ENW-9701 1000BASE-X SFP PCI Express Gigabit Ethernet Adapter, you will need the following items:

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

Chapter 2 Hardware Installation

2.1 LED Definition

The faceplate of the ENW-9701 shown below has a Link / ACT LED. Table 2-1 explains the function and state of the LED.

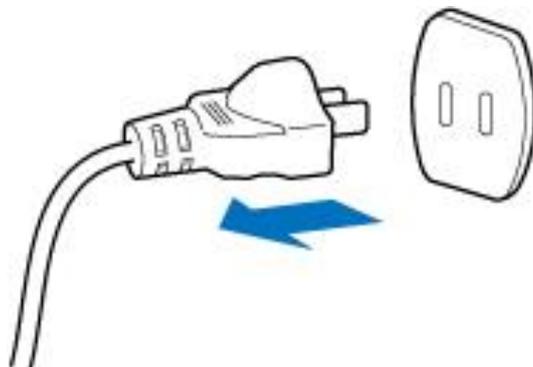


LED	Color	Description
LNK / ACT	Green	Light: Indicates ENW-9701 is running at 1000Mbps. Blink: Indicates ENW-9701 is transmitting and receiving data.

Table 2-1 Descriptions of ENW-9701 LED

2.2 Hardware Installation

Step 1: Please turn off your PC.

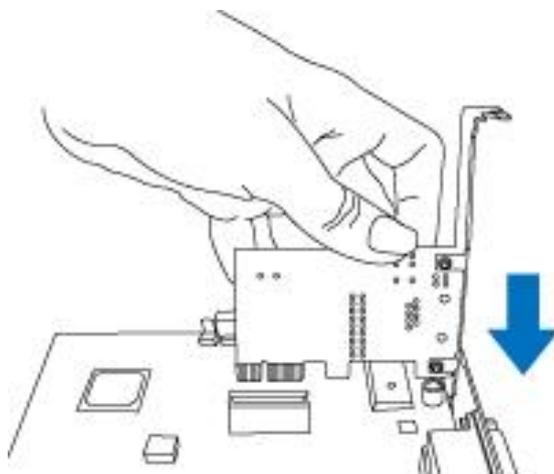


Step 2: Remove any metal decorations from your hands and wrists.

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 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 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-9701 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, please visit PLANET ENW-9701 web pages to download the drivers for your operating system.

Driver for the ENW-9701

<https://www.planet.com.tw/en/support/downloads?&method=keyword&keyword=ENW-97&view=4#list>

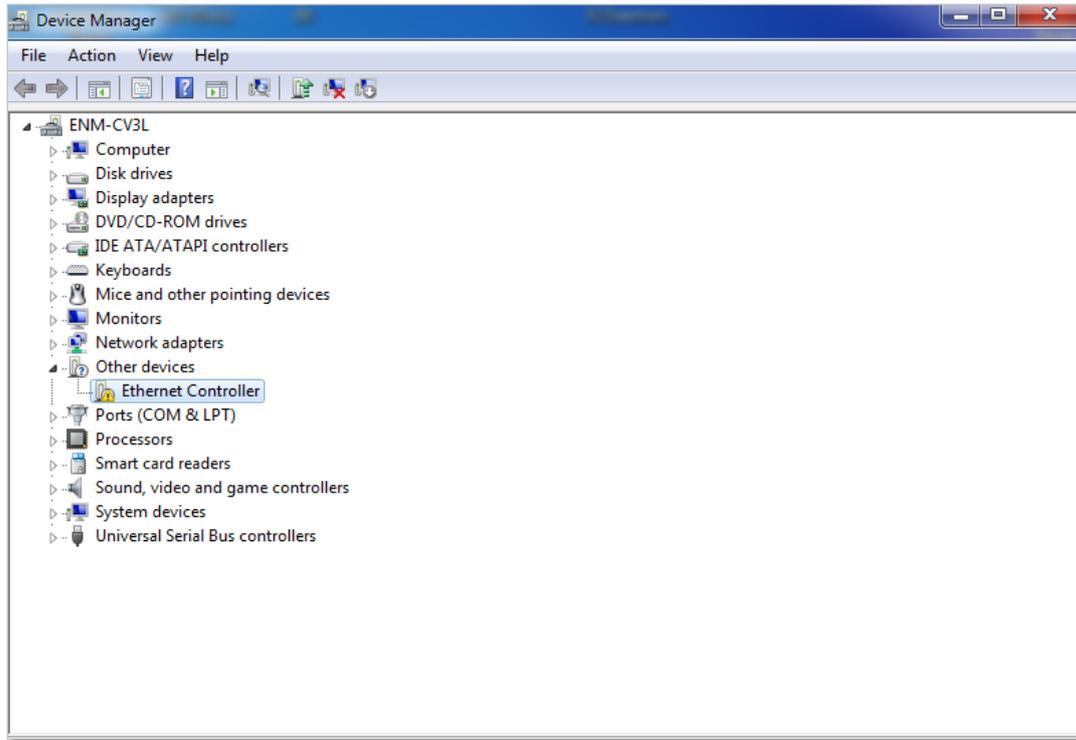


For Windows 7 or later, the operating system will detect adapter and install driver automatically. However, if the driver is not installed successfully, you'll have to install driver manually.

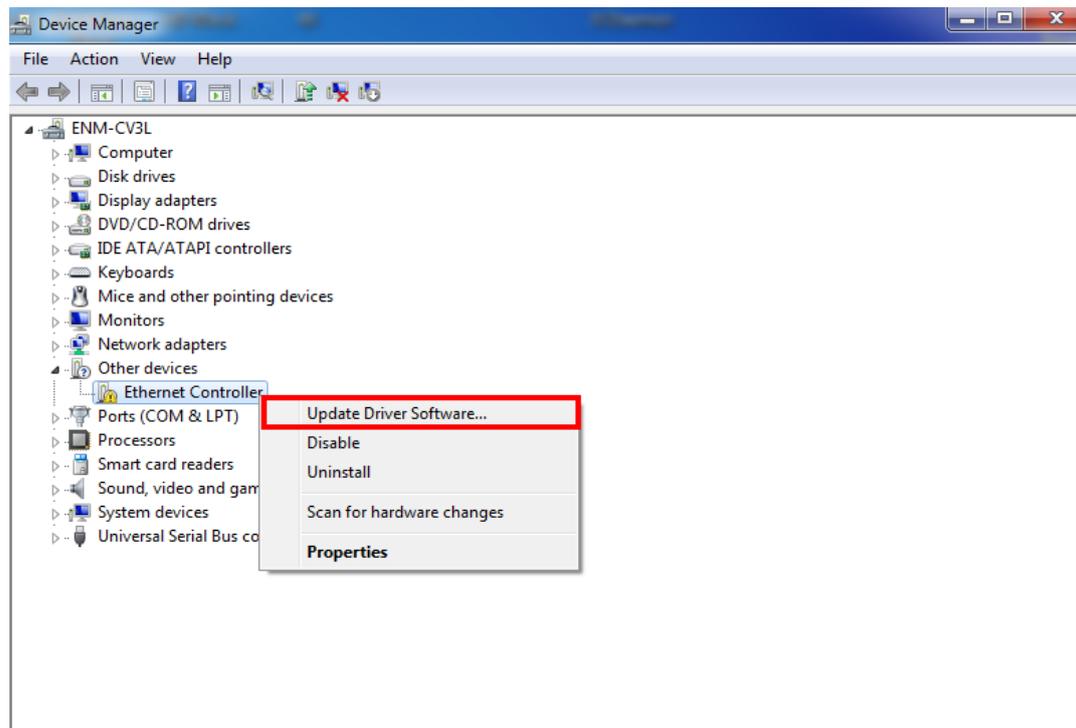
3.1 Installing Driver on Windows

The installation of the following ENW-9701 operates under Windows 7; the Installation procedures are similar to those of the Windows 8/10/11, Windows Server 2008/Windows Server 2012/Windows Server 2016/Windows Server 2019/Windows Server 2022.

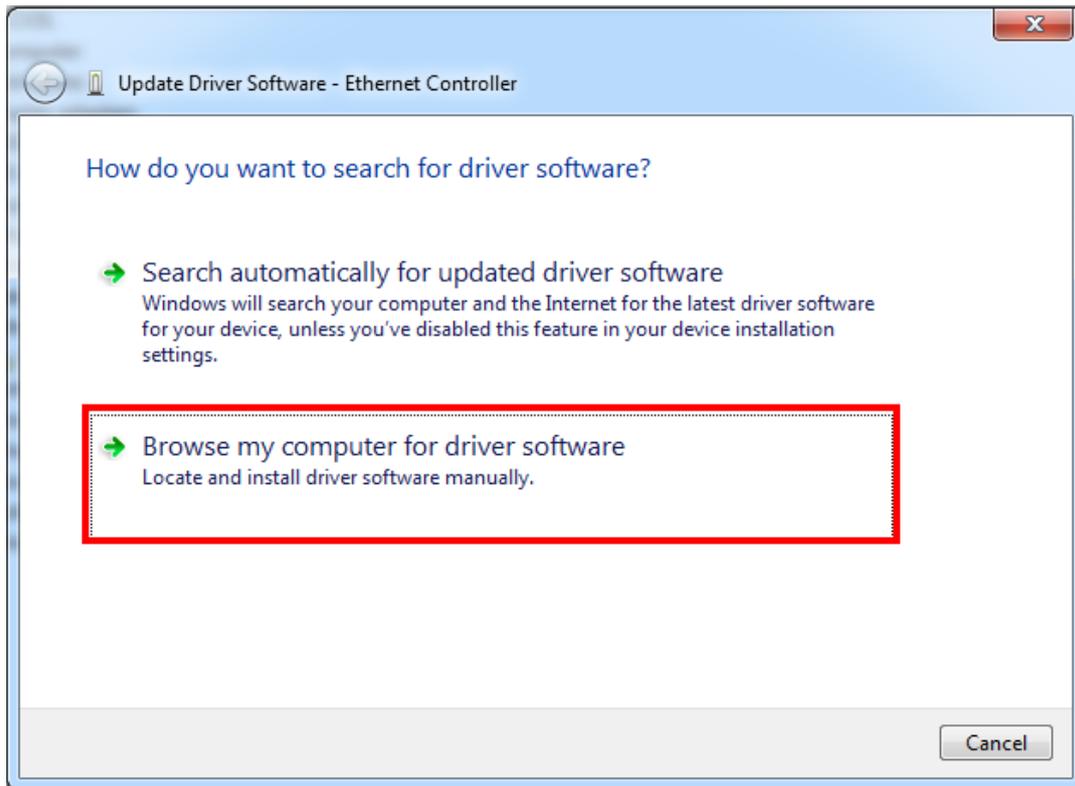
1. After installing the ENW-9701 on your PC and booting it up, Windows 7 will detect it and you have to install the driver.



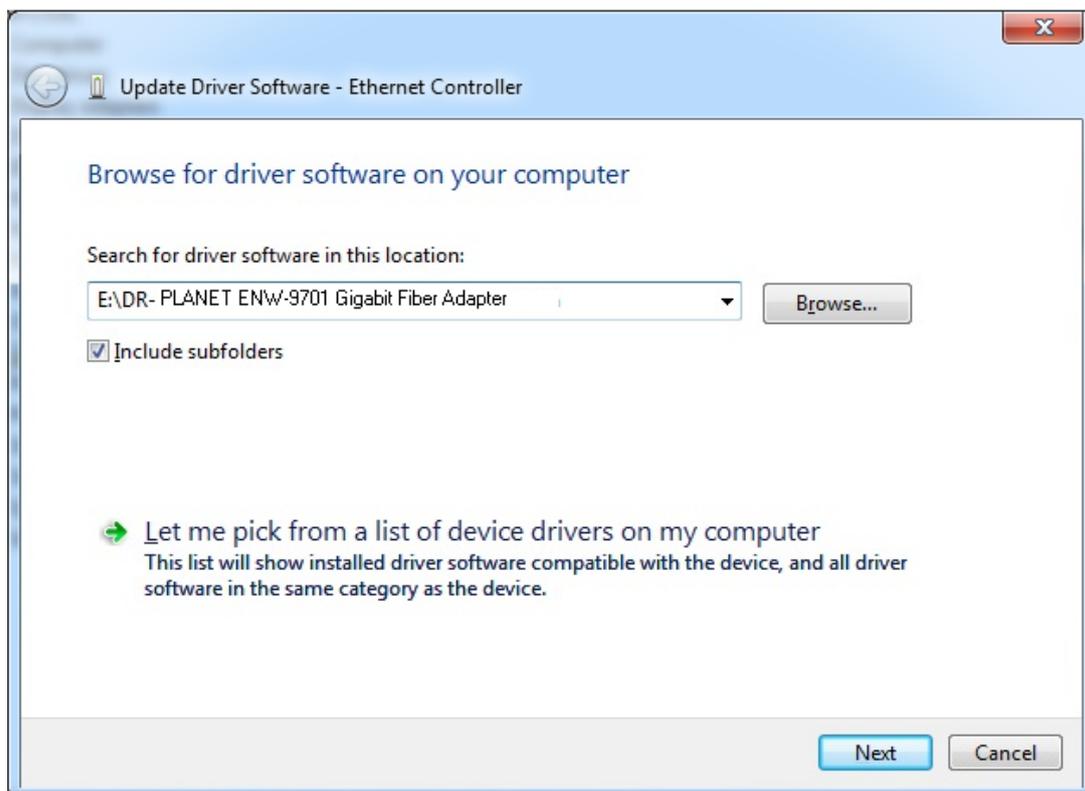
2. Please move and right-click the mouse button for Ethernet Controller item and select **“Update Driver Software”**



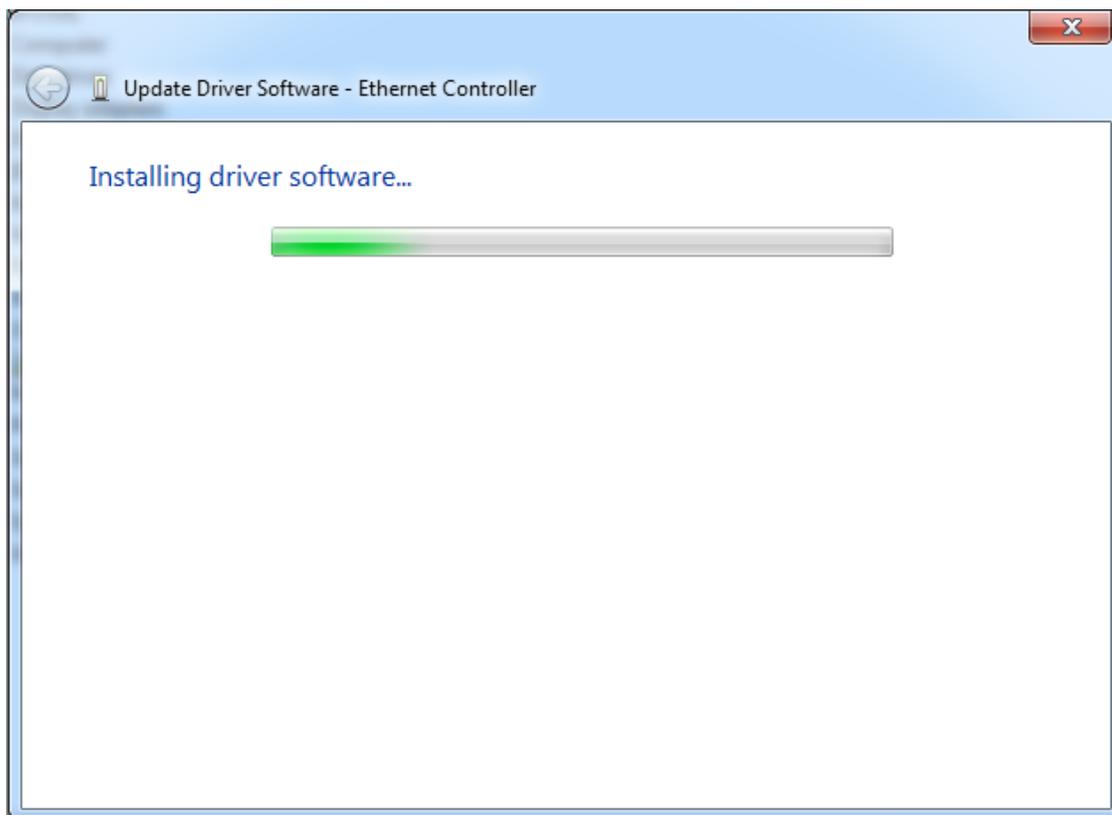
3. Please select “**Browse my computer for driver software**” for the next step.



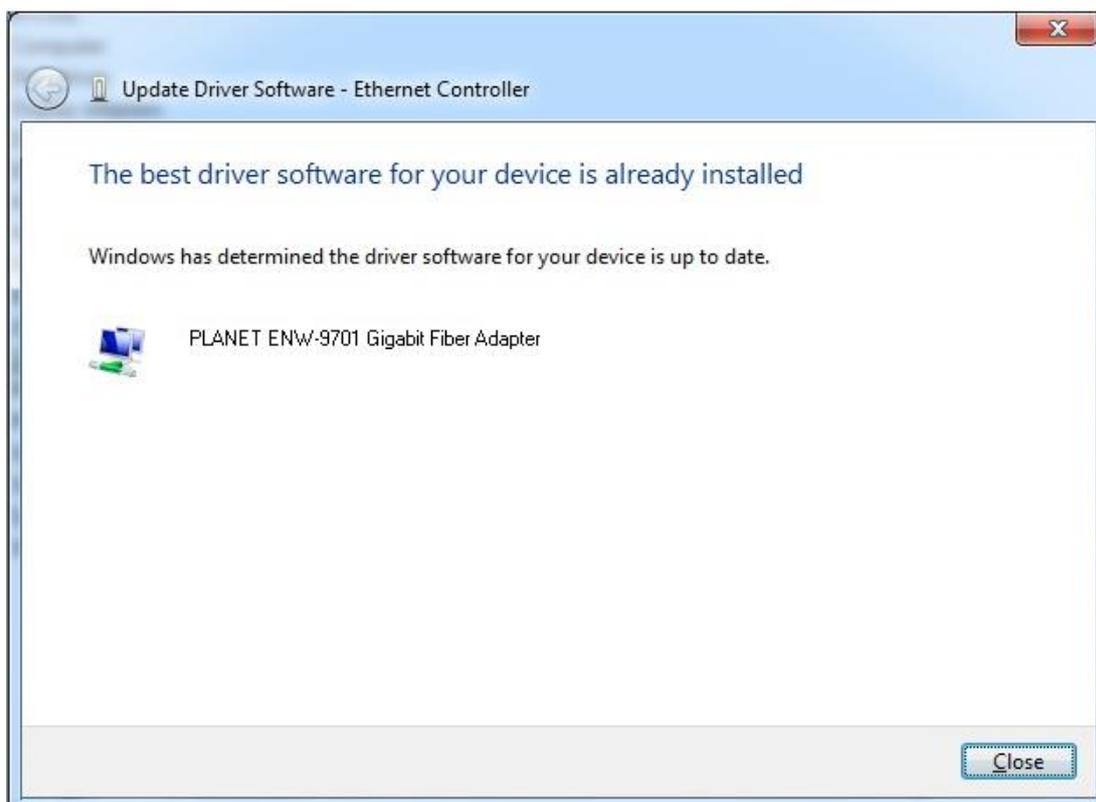
4. Please click “**Browse**” to specify the driver location to install. (Assume “E:\DR-ENW-9701 Gigabit Fiber Adapter” is the directory where driver files are located.) Click “**Next**” to continue.



The driver is installing...



5. Click the “**C**lose” button to complete the driver installation.



Chapter 4 Specifications

Product	ENW-9701 1000BASE-X SFP PCI Express Gigabit Ethernet Adapter						
Hardware Specifications							
Attachment Interface	PCI Express Host Bus Interface, 1 lane PCI Express Rev 1.1						
Media Interface	SFP slot (LC Interface)						
Cabling Options	SFP LC connector : 50/125µm & 62.5/125µm Multi-Mode fiber cable 9/125µm Single-Mode cable						
Jumbo Frame	9Kbytes						
LED Indicators	Link / Active per port						
Dimensions (W x D)	121.4 x 119.5mm						
Advanced Functions							
Layer 2 Features	<ul style="list-style-type: none"> • IEEE 802.3x Flow Control support • IEEE 802.1Q VLAN support 						
Performance Enhancements	<ul style="list-style-type: none"> • Receive-side scaling (RSS): Optimization for multiple CPUs under Windows OS control • Reduced host bus traffic • IP, TCP and UDP Checksum Offloading • Transmit / Receive On-Chip Buffer Support • IPv4, IPv6 						
OS Support	<ul style="list-style-type: none"> • Windows Server 2008R2/2012R2/2016R2/2019R2/2022R2 64bits • Windows 7/8/8.1/10 32/64bits • Windows 11 64bits • Linux (Kernel version 2.6.x/3.x/4.x or later) • VMware® ESX/ESXi 2.6.x/3.x/4.x/5.x/6.x or later • MacOS 10.7 						
Standards Conformance							
Regulatory Compliance	FCC Part 15 Class B, CE						
Standards Compliance	<table> <tr> <td>IEEE 802.3z</td> <td>1000BASE-X Gigabit Ethernet</td> </tr> <tr> <td>IEEE 802.3x</td> <td>Flow Control and Back pressure</td> </tr> <tr> <td>IEEE 802.1Q</td> <td>VLAN Tagging</td> </tr> </table>	IEEE 802.3z	1000BASE-X Gigabit Ethernet	IEEE 802.3x	Flow Control and Back pressure	IEEE 802.1Q	VLAN Tagging
IEEE 802.3z	1000BASE-X Gigabit Ethernet						
IEEE 802.3x	Flow Control and Back pressure						
IEEE 802.1Q	VLAN Tagging						
Environment							
Operating	Temperature: 0 ~ 65 degrees C Relative Humidity: 5 ~ 95% (non-condensing)						
Storage	Temperature: -10 ~ 85 degrees C Relative Humidity: 5 ~ 95% (non-condensing)						