

Neousys Technology Inc.

PCIe-PoE550X

User Manual

Rev. 1.0

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Declaration of Conformity

FCC

This equipment has been tested and found to comply with the limits for a Class A 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 own expense.

CE

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

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Safety Precautions

- Read these instructions carefully before you install, operate, or transport the system.
- Install the system or DIN rail associated with, at a sturdy location
- Install the power socket outlet near the system where it is easily accessible
- Secure each system module(s) using its retaining screws
- Place power cords and other connection cables away from foot traffic. Do not place items over power cords and make sure they do not rest against data cables
- Shutdown, disconnect all cables from the system and ground yourself before touching internal modules
- Ensure that the correct power range is being used before powering the device
- Should a module fail, arrange for a replacement as soon as possible to minimize down-time
- If the system is not going to be used for a long time, disconnect it from mains (power socket) to avoid transient over-voltage

Service and Maintenance

- ONLY qualified personnel should service the system
- Shutdown the system, disconnect the power cord and all other connections before servicing the system
- When replacing/ installing additional components (expansion card, memory module, etc.), insert them as gently as possible while assuring connectors are properly engaged

ESD Precautions

- Handle add-on module, motherboard by their retention screws or the module's frame/ heat sink. Avoid touching the PCB circuit board or add-on module connector pins
- Use a grounded wrist strap and an anti-static work pad to discharge static electricity when installing or maintaining the system
- Avoid dust, debris, carpets, plastic, vinyl and styrofoam in your work area.
- Do not remove any module or component from its anti-static bag before installation

About This Manual

This manual introduces and describes how to setup/ install Neousys Technology PCIe-PoE550X. As one of the first industrial grade dual port 10Gbit Ethernet PCIe add-on card to incorporate IEEE 802.3at PoE+ capability, it features Intel's X550-AT2 10GBASE-T controller chip.

Revision History

| Version | Date | Description |
|---------|-----------|-----------------|
| 1.0 | Sep. 2020 | Initial release |



1 Introduction

PCIe-PoE550X is one of the world's first 10Gbit Ethernet NIC incorporating IEEE 802.3at PoE+ capability, featuring Intel's X550-AT2 silicon, Neousys Technology's PCIe-PoE550X offers cost-effective 10GBAST-T solution for growing 10GbE applications.

1.1 PCIe-PoE550X Overview

PCIe-PoE550X features 10GbE NIC incorporating Power over Ethernet (PoE+) capability. It features Neousys' proven 802.3at PoE+ technology and refined power design to ensure optimal signal integrity over 10G PHY and maximal bandwidth. The

combination of 10GbE and PoE opens the door to new applications such as high-performance WiFi access points and high-speed/ high-definition industrial cameras over single Ethernet cable.

10GBAST-T leverages twisted-pair copper cable and RJ-45 connector that dramatically reduces the deployment cost of 10G network. PCIe-PoE550X provides 10Gbit/s connections over a distance of up to 100 meters with CAT 6a cable or 55 meters with CAT 6 cable. It also supports upcoming NBASE-T standard as well as backward compatibility with existing



1000BASE-T GbE network so you can easily implement it into your current network infrastructure.



1.2 PCIe-PoE550X Specifications

| Bus Interface | Gen3 PCI Express x4 | |
|---|--|--|
| # of 40 ChE Dort | 2x 10 GbE ports by Intel® X550-AT2 controller, | |
| # OF TO GDE POR | supporting 15.5 KB jumbo frame, teaming and IEEE 1588 | |
| Network Protocol | IEEE 802.3 Ethernet interface for 10GBASE-T (IEEE 802.3an), | |
| Support | NBASE-T (IEEE 802.3bz) and 1000BASE-T (IEEE 802.3ab) | |
| PoE Capability | Compliant with IEEE 802.3at-2009 (PoE+), each port delivers up | |
| | to 25.5 W of power | |
| Cable Requirement For 10GBASE-T: CAT 6a (100 meters) or CAT 6 (55 meters) | | |
| | For 5Gbps NBASE-T: CAT 6 (100 meters) | |
| | For 2.5Gbps NBAST-T: CAT 5e (100 meters) | |
| Power Requirement | Maximum 11.5W for 2x 10 GbE operation | |
| | Maximum 51W for powering PoE+ devices | |
| EMC | CE Class A, according to EN 55024/55032 | |
| | FCC Class A, according to FCC Part 15, Subpart B | |
| EMS | IEC 61000-4-x Class/ Level 3 | |
| Operating Temperature | 0° C ~ 60° C with air flow | |
| Dimension | 167.7 mm (W) x 111.2 mm (H) | |

1.3 PCIe-10G550X Specifications

| Bus Interface | Gen3 PCI Express x4 | |
|-----------------------|---|--|
| # of 10 ChE Bort | 2x 10 GbE ports by Intel® X550-AT2 controller, | |
| # OF TO GDE POR | supporting 15.5 KB jumbo frame, teaming and IEEE 1588 | |
| Network Protocol | IEEE 802.3 Ethernet interface for 10GBASE-T (IEEE 802.3an), | |
| Support | NBASE-T (IEEE 802.3bz) and 1000BASE-T (IEEE 802.3ab) | |
| Cable Requirement | For 10GBASE-T: CAT 6a (100 meters) or CAT 6 (55 meters) | |
| | For 5Gbps NBASE-T: CAT 6 (100 meters) | |
| | For 2.5Gbps NBAST-T: CAT 5e (100 meters) | |
| Power Requirement | Maximum 11.5W for 2x 10 GbE operation | |
| EMC | CE Class A, according to EN 55024/55032 | |
| | FCC Class A, according to FCC Part 15, Subpart B | |
| EMS | IEC 61000-4-x Class/ Level 3 | |
| Operating Temperature | 0° C ~ 60° C with air flow | |
| Dimension | 167.7 mm (W) x 111.2 mm (H) | |



1.4 Dimension







2 System Overview

Upon receiving and unpacking your system, please check immediately if the package contains all the items listed in the following table. If any item(s) are missing or damaged, please contact your local dealer or Neousys Technology.

2.1 PCIe-PoE550X Packing List

| System Pack | PCIe-PoE550X | Qty |
|----------------|---------------------------------|-----|
| 1 | PCIe-PoE550X | 1 |
| 2 | Neousys Drivers & Utilities DVD | 1 |

2.2 PCIe-PoE550X





2.3 PCIe-PoE550X Status LEDs



| ltem | Description |
|---------------|--|
| 10Chit DoE | The two 10Gbit Ethernet ports are implemented via Intel® |
| Ethernet port | X550-AT2 controller that supports 15.5K jumbo frame, |
| | teaming and IEEE 1588 |

Active/Link LED (1)

| LED Color | Status | Description |
|--------------|----------|---|
| Green | Off | Ethernet port is disconnected |
| | On | Ethernet port is connected and no data transmission |
| | Flashing | Ethernet port is connected and data is transmitting/receiving |
| Speed LED (2 | 2) | |

Speed LED (2)

| LED Color | Status | Description |
|-----------|--------|-------------|
| | Off | 100 Mbps |
| Green or | Orange | 1000 Mbps |
| Orange | Green | 10 Gbps |

2.4 DIP Switches

PCIe-PoE550X features individual per-port power on/off control via Neousys' API so you may manually cut off or resume the power delivery to the connected PoE device. This feature is designed for failure recovery in the field to reset connected devices. In case you have installed multiple cards, there is a set of DIP switches (shown below) for users to configure board ID. The board ID can be used as a parameter in API to specify the card.



2.4.1 Switching Between PoE (af) and PoE+ (at) Mode

The PCIe-PoE550X offers two modes, users can choose between af mode (IEEE 802.3af) or high at mode (IEEE 802.3at) by configuring DIP switch 4.

| Mode | DIP Switch 4 Position | tion Power Supplied | |
|--------------------------|------------------------------|----------------------|--|
| IEEE 802.3af 15.4W | 4 | Up to 350mA per port | |
| IEEE 802.3at 25.5W | 4 | Up to 720mA per port | |

2.4.2 Board ID Settings

The following illustrations describe DIP switch board ID settings. When installing multiple cards, please remember to set a different ID for each card.

| Board ID | DIP Switch Position (P1 ~ P3) |
|----------|-------------------------------|
| 0 | |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |



3 PCIe-PoE550X Card Installation

Before disassembling the system enclosure and installing the PCIe-PoE550X card, please read the following instructions:

- **DO NOT** remove the card out of the anti-static until you are ready to install it into the system.
- It is recommended that only qualified service personnel should install and service this product to avoid injury or damage to the system.
- Please observe all ESD procedures at all times to avoid damaging the equipment.
- Before disassembling your system, please make sure the system has powered off, all cables and antennae (power, video, data, etc.) are disconnected.
- Place the system on a flat and sturdy surface (remove from mounts or out of server cabinets) before proceeding with the installation/ replacement procedure.



3.1 PCIe-PoE550X Installation

DO NOT remove PCIe-PoE550X out of the anti-static bag until you are ready to install it into the system.

- 1. Save and close all work in progress.
- 2. Power off and unplug the power cable from the system you wish to install to.
- 3. Open the chassis (side panel) of the computer you wish to install the PCIe-PoE550X into.
- 4. Locate the x4 PCIe slot or a spare and compatible x8/ x16 PCIe slot.
- 5. Align and insert PCIe-PoE550X's gold finger into PCIe slot while making sure the panel is inserted into the hinge.





6. Secure PCIe-PoE550X to the chassis with a screw.



7. Reinstall the system's chassis (panel) to complete the hardware installation process.



3.2 Software Installation

Some operating systems may have built-in drivers included and automatically complete the installation upon entering the system. However, it is still recommended to run and install drivers provided by Neousys to take advantage of all the functions offered. To install the software component, please refer to the following procedure.

3.2.1 Installing Drivers Using Automatic Driver Installation

- 1. Plug in the power cable and power up the system.
- 2. Once you are in the system, insert the Neousys driver DVD included in the package into the DVD-ROM.



3. A setup utility launches and the following dialog appears, Click on the "Automatic Driver Installation". The setup utility will automatically detect your operating system and install corresponding driver for PCIe-PoE550X. The installation process takes about 2 ~ 3 minutes and once all drivers have been installed, the setup utility will automatically reboot your Windows to complete the installation process.

3.2.2 Installing Drivers Manually

You may also manually install the driver for PCIe-PoE550X. Please refer to the following information about installing the driver for different operating system. **Windows 10 64-bit**

x:\Driver_Pool\GbE_I210_I350\Win_10_64_CFL\APPS\PROSETDX\Winx64\DxSetu p.exe



4 Driver and Network Settings

PCIe-PoE550X offers 10-Gigabit Ethernet connectivity via Intel® X550-AT2 controller. When connecting to a high-speed PoE device, such as a GigE camera, you can configure driver settings for optimum transmission throughput and connection stability.

4.1 Jumbo Frame

Jumbo frames are Ethernet frames with more than 1500 bytes of payload. By increasing the payload size, large data packets can be transferred with less interruption, which reduces CPU utilization and increases overall data throughput. Intel® X550-AT2 10GbE controller supports jumbo frame size of up to 15.5 Kbytes. Once the Intel® X550-AT2 controller driver is installed, you may configure jumbo frame settings by executing the following steps:

 On your keyboard, press Windows key + E, right click on Network and select Properties.

| _ | Expand |
|---|--------------------------|
| | Open in new window |
| | Pin to Quick access |
| | Pin to Start |
| | Map network drive |
| | Disconnect network drive |
| | Delete |
| | Properties |



 Right click on the corresponding Ethernet connection (Intel® Ethernet Controller X550) and select Properties.

| Intel(i | Disable Status Diagnose | Con Network Con Intel(R) Ethernet Controller X550 |
|-------------|-------------------------|---|
| | Bridge Connections | Ethernet 2 Properties |
| | Create Shortcut | Networking Sharing |
| | Delete | Connect using: |
| | | Intel(R) Ethernet Controller X550 |
| | | Configure |
| | | This connection uses the following items: |
| | | File and Printer Sharing for Microsoft Networks QoS Packet Scheduler QoS Packet Scheduler Internet Protocol Version 4 (TCP/IPv4) Microsoft Network Adapter Multiplexor Protocol Microsoft LLDP Protocol Driver Internet Protocol Version 6 (TCP/IPv6) Install Uninstall Properties Description Allows your computer to access resources on a Microsoft network. |
| | | OK Cancel |
| Right click | on Ethernet | Ethernet properties |



 Click on the Configure ... button, the following dialog appears and click on the Advanced tab.

| Intel(R) I350 Gigab | it Network Cor | nection Pro | perties | (| × | |
|--|--|---|--|---|---|--|
| Teaming General | VLANs Link Speed | D Advanced | river Pow | Details er Managemen | t | |
| (intel) | Advanced Adapi | er Settings | | | | |
| Settings: | | Ŋ | <u>/alue:</u> | | | |
| Gigabit Master S Interrupt Modera Jumbo Packet Large Send Offlo Large Send Offlo Locally Administ | ilave Mode ition pad V2 (IPv4) pad V2 (IPv6) ered Address | | Auto Dete | ct 🔻 | | |
| Log Link State E Performance Op | tions | - | Use | <u>D</u> efault | | |
| Gigabit Master S Determines with the master. The Changing the s partners. CAUTIC Master I device a device r link This | Nave Mode hether the adapt e other device is setting may impro- DN: Some multi-pi Mode. If the adapt and is configured may either discord s may also occur | er or link partn designated a ve link quality ort devices m oter is connec I to "Force Ma nnect or down in a "Forced | er is design s the slave with certa ay be force ted to such ster Mode" ishift to a 1 Slave" to "F | nated as in link d to a , the 00Mbps Forced | | |
| | | | ОК | Cance | ! | |



 Highlight Jumbo Packet and select a jumbo frame size from the <u>Value</u> drop-down list (9014 Bytes is recommended for connecting devices with high data rate).

 \times Intel(R) Ethernet Controller X550 Properties VLANs Boot Options Driver Details Events Advanced Teaming General Link Speed inte Advanced Adapter Settings Value: Settings: Encapsulation Overhead Disabled \wedge Interrupt Moderation Disabled umbo Pac 4088 Bytes 9014 Bytes Large Send Offload V2 (IPv4) Large Send Offload V2 (IPv6) Locally Administered Address on Link State Even < Use Default > Jumbo Packet Enables Jumbo Packet capability for TCP/IP packets. In situations ^ where large packets make up the majority of traffic and additional latency can be tolerated, Jumbo Packets can reduce CPU utilization and improve wire efficiency. Jumbo Packets are larger than standard Ethernet frames, which are approximately 1.5k in size. NOTE: Changing this setting may cause a momentary loss of connectivity. OK Cancel



4.2 Receive Buffers

Receive Buffers is another option which can affect data throughput. It determines the size of memory buffer allocated for receiving data. Increasing the size of Receive Buffers can improve the performance of receiving data. The default setting of Receive Buffers is 256 bytes. When connecting to an Ethernet device that generates large amount of data, you can set this option to a larger value (maximum 2048 bytes) for better performance.

To configure Receive Buffers settings, please refer to the following:

 On your keyboard, press Windows key + E, right click on Network and select Properties.

| Netw- | | |
|---------|--------------------------|--|
| - Ivetw | Expand | |
| - | Open in new window | |
| | Pin to Quick access | |
| | Pin to Start | |
| | Map network drive | |
| | Disconnect network drive | |
| - | Delete | |
| | Properties | |
| - | | |



 Right click on the corresponding Ethernet connection (Intel® Ethernet Controller X550) and select "Properties".

| Intel(i | Disable Status Diagnose | Con Network Intel(R) Ethernet Controller X550 |
|---------|-------------------------|---|
| | Bridge Connections | Ethernet 2 Properties X |
| | Create Shortcut | Networking Sharing |
| | 😌 Delete | Connect using: |
| | Rename | Intel(R) Ethemet Controller X550 |
| | | Configure |
| | | This connection uses the following items: |
| | | Generation Microsoft Networks Generation Content of Microsoft Networks Generation Generati |
| | | Internet Protocol Version 4 (TCP/IPv4) Microsoft Network Adapter Multiplexor Protocol Microsoft LLDP Protocol Driver Internet Protocol Version 6 (TCP/IPv6) < > |
| | | ✓ _ Internet Protocol Version 4 (TCP/IPv4) ✓ _ Microsoft Network Adapter Multiplexor Protocol ✓ _ Microsoft LLDP Protocol Driver ✓ _ Internet Protocol Version 6 (TCP/IPv6) < Install Uninstall |
| | | Internet Protocol Version 4 (TCP/IPv4) Microsoft Network Adapter Multiplexor Protocol Microsoft LLDP Protocol Driver Internet Protocol Version 6 (TCP/IPv6) Install Uninstall Properties Description |
| | | Install Uninstall Properties Description Allows your computer to access resources on a Microsoft network. |
| | | Internet Protocol Version 4 (TCP/IPv4) Microsoft Network Adapter Multiplexor Protocol Microsoft LLDP Protocol Driver Internet Protocol Version 6 (TCP/IPv6) Install Uninstall Properties Description Allows your computer to access resources on a Microsoft network. OK |



3. Click on the **Configure ...**button, the following dialog appears and click on the **Advanced** tab and highlight **Performance Options** and click on **Properties**..

| el(R) Etherne | et Controller X550 P | roperties | | × | |
|-------------------------------|-------------------------------|-----------|---------|---------|--|
| VLANs | Boot Options | Driver | Details | Events | |
| General | Link Speed | Advar | nced | Teaming | |
| intel | Advanced Adapter | Settings | | | |
| ettings: | | | | | |
| .og Link State Maximum Nur | e Event mber of BSS Queues | ^ | Proper | ties | |
| Offloading Op | tions | | | | |
| Performance | y & VLAN Options | | | | |
| Receive Side | Scaling | ~ | | | |
| < | | > | | | |
| Performance | Options | | | | |
| performanc | e. | | | | |
| | | | ок | Cancel | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

4. Highlight **Receive Buffers** and enter a setting into the **Value** column (2048 Bytes is recommended for connecting devices with high data rate).

| Performance Ontions | | × | |
|---|---|---|------|
| enormance options | | ~ | |
| Settings: | Value: | | |
| DMA Coalescing Flow Control Interrupt Moderation Rate Receive Buffers Transmit Buffers | 2,048 | • | |
| | Use | e Default | |
| Despive Ruffern | | | |
| receive performance, but also consu You might choose to increase the nui you notice a significant decrease in the traffic. If receive performance is not setting. | mes system memo mber of Receive E he performance o an issue, use the | ory. Buffers if f received default | |
| TT & HOTT CLASS IN THE | ОК | Cancel | (宋X) |
| | | AN AN | |
| | ОК | Cancel | |
| | 1/5 | | |
| | | | |



4.3 Transmit Buffers

Like Receive Buffers, Transmit Buffers can affect the transmission performance. The default setting of Transmit Buffers is 512 bytes. If you encounter a performance issue while transmitting data, you can adjust the size of Transmit Buffers to a larger value (maximum 2048 bytes) for better performance.

To configure Transmit Buffers settings, please refer to the following:

 On your keyboard, press Windows key + E, right click on Network and select Properties..

| 🥑 Netw 🕇 | Expand | |
|----------|--------------------------|--|
| _ | Open in new window | |
| | Pin to Quick access | |
| | Pin to Start | |
| | Map network drive | |
| | Disconnect network drive | |
| - | Delete | |
| | Properties | |
| | | |



 Right click on the corresponding Ethernet connection (Intel® Ethernet Controller X550) and select Properties.

| Intel(i | Disable Status Diagnose | Con Network Con Intel(R) Ethernet Controller X550 |
|-------------|-------------------------|---|
| | Bridge Connections | thernet 2 Properties |
| | Create Shortcut | Networking Sharing |
| | Delete | Connect using: |
| | | Intel(R) Ethernet Controller X550 |
| | | Configure |
| | | This connection uses the following items: |
| | | File and Printer Sharing for Microsoft Networks QoS Packet Scheduler QoS Packet Scheduler Internet Protocol Version 4 (TCP/IPv4) Microsoft Network Adapter Multiplexor Protocol Microsoft LLDP Protocol Driver Internet Protocol Version 6 (TCP/IPv6) Install Uninstall Properties Description Allows your computer to access resources on a Microsoft network. |
| | | OK Cancel |
| Right click | on Ethernet | Ethernet properties |

3. Click **Configure** ...button, the following dialog appears and click on the

Advanced tab and highlight Performance Options and click on Properties..

| anti cureria | et controller x550 P | ropentes | | ~ | |
|-------------------------------|-----------------------------|-----------------|---------------|---------|--|
| VLANs | Boot Options | Driver | Details | Events | |
| General | Link Speed | Adva | anced | Teaming | |
| (intel) | Advanced Adapte | r Settings | | | |
| attings: | e Event | | Dere er | ¥ | |
| laximum Nur | mber of RSS Queues | | Proper | ues | |
| ffloading Op acket Priorit | itions v & VLAN | | | | |
| erformance | Options | | | | |
| leceive Side | Scaling | ~ | | | |
| 5 | | > | | | |
| erformance | Options | | | | |
| Configures performanc | the adapter to use se e. | ettings that ca | an improve ad | apter | |
| | | | | | |
| | | | | | |

4. Highlight **Transmit Buffers** and enter a setting into the **Value** column (2048 Bytes is recommended for connecting devices with high data rate).

| ettings: | Value: | | |
|---|---|--|--|
| MA Coalescing | 2,048 | ▲ ▼ | |
| interrupt Moderation Rate | | | |
| ransmit Buffers | | | |
| | Use | Default | |
| Transmit Buffers | | | |
| Sets the number of Transmit Buffers u copying data to memory. Increasing thi transmission performance, but also co You might choose to increase the num you notice a significant decrease in the | used by the adapte is value can en ha on sumes system n nber of Transmit B e performance of | er when nce nemory. uffers if transmitted | |
| Sets the number of Transmit Buffers u copying data to memory. Increasing the transmission performance, but also co You might choose to increase the num you notice a significant decrease in the traffic. If transmission performance is setting. | used by the adapte is value can enha onsumes system n nber of Transmit B e performance of not an issue, use | er when nce nemory. uffers if transmitted the default | |
| Sets the number of Transmit Buffers u copying data to memory. Increasing the transmission performance, but also co You might choose to increase the num you notice a significant decrease in the traffic. If transmission performance is setting. | used by the adapt is value can enha onsumes system n ober of Transmit B e performance of not an issue, use OK | er when nce nemory. uffers if transmitted the default | |
| Sets the number of Transmit Buffers u copying data to memory. Increasing the transmission performance, but also co You might choose to increase the num you notice a significant decrease in the traffic. If transmission performance is setting. | used by the adapt is value can enha onsumes system n ober of Transmit B e performance of not an issue, use OK | er when nce nemory. uffers if transmitted the default Cancel | |



Appendix A Using Per-Port PoE On/ Off Control

PCIe-PoE550X supports power on/off control for each of its PoE ports. With provided function APIs, users can turn on or turn off the power of each PoE port manually for fault-recovery or device power reset purpose. To use the function, you need to install the WDT_DIO_Setup.exe driver package.



Please install WDT_DIO_Setup_v2.2.9 or later versions.

Driver Installation

The per-port PoE on/off control function library is delivered as a part of Neousys driver setup package (WDT_DIO_Setup). Please use **WDT_DIO_Setup_64_ v2.2.9.exe** or later versions.

1. Execute WDT_DIO_Setup_v2.2.9.exe. The following dialog appears.





2. Click "Next >" and you may specify a directory you would like to install the files to or you can install to the default directory "*C*:*Neousys\WDT_DIO*".

| Where should Neousys Nu | vo/Nuvis/POC Serie | s WDT & DIO 64-bit I | ibrary be |
|----------------------------|------------------------------|------------------------|--------------------|
| installed? | | | |
| Setup will install f | Neousys Nuvo/Nuvis Folder | /POC Series WDT & I | DIO 64-bit Library |
| To continue, dick Next, If | vou would like to se | lect a different folde | . dick Browse. |
| C:WeausvsWDT_DIQ(x6 | (4) | | Browse |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



3. Once the installation is finished, a dialog appears to prompt you to reboot the system. The WDT & DIO library will take effect after the system rebooted.



4. When you programming your program, the related files are located in

| □Header File: | linclude |
|----------------------|---|
| Library File: | \Lib |
| □Function Reference: | Manual |
| □Sample Code: | \Sample\CAN_Demo (CAN Bus Demo) * |
| | \Sample\COS_Demo (Change-of-State Interrupt Demo) |
| | \Sample\DIO_Demo (Polling I/O Demo) * |
| | \Sample\DTFO_Demo (Trigger Fan-out Demo) * |
| | \Sample\DTIO_Demo (DTIO Demo) * |
| | \Sample\IGN_Demo (Ignition Control Demo) * |
| | \Sample\IVIS_DTIO_Demo (iVIS-200 DTIO Demo) * |
| | \Sample\POE_Demo (PoE per-port Control Demo) |
| | \Sample\PWM_Demo (PWM Control Demo)* |
| | \Sample\WDT_Demo(Watchdog Demo) * |
| | |

* Does not work with PCIe-PoE550X



Per-Port On/ Off Control Function Reference

PCIe-PoE550X offers two 802.3at PoE+ ports with a unique feature to allow users manually turn on or off the power supply of each PoE port. This can be function can be useful in power device (PD) fault-recovery or power reset.

The function APIs are encapsulated in Neousys WDT_DIO driver package. Please install the driver package prior to programming PoE on/off control function.

Syntax BYTE PCI_GetStatusPoEPort(DWORD boardId, DWORD port); Description Acquire current power on/off status of designated PoE port. boardId DWORD value (0 ~ 7) to indicate board ID set for your card. Please refer to **DIP switch** settings for your PCIe-PoE card. Parameter port DOWRD value (1 ~ 2) to specify the PoE port. Return Value Returns 1 if PoE power is on, 0 if PoE power is off. DWORD boardID; DWORD port; BYTE PoEStatus; Usage //Get PoE power status from board #0, port #1. boardID = 0; port = 1; PoEStatus = PCI_GetStatusPoEPort (boardID, port); תתתחחו INNNNN

PCI-GetStatusPoEPort



PCI_EnablePoEPort

| Syntax | BOOL PCI_EnablePoEPort(DWORD boardId, DWORD port); | | |
|--------------|--|--|--|
| Description | Enable (turn on) PoE power for designated PoE port. | | |
| | boardld | | |
| Parameter | DWORD value (0 \sim 7) to indicate board ID set for your card. | | |
| | Please refer to <u>DIP switch</u> settings for your PCIe-PoE card. | | |
| | port | | |
| | DOWRD value (1 \sim 2) to specify the PoE port. | | |
| Return Value | Returns TRUE if successful, FALSE if failed. | | |
| Usage | DWORD boardID; | | |
| | DWORD port; | | |
| | BOOL RetVal; | | |
| | | | |
| | //Enable PoE power status from board #0, port #1. | | |
| | boardID = 0; | | |
| | port = 1; | | |
| | RetVal= PCI_EnablePoEPort (boardID, port); | | |





PCI_DisablePoEPort

| Syntax | BOOL PCI_DisablePoEPort(DWORD boardId, DWORD port); | | |
|--------------|--|--|--|
| Description | Disable (turn off) PoE power for designated PoE port. | | |
| | boardld | | |
| Parameter | DWORD value (0 \sim 7) to indicate board ID set for your card. | | |
| | Please refer to <u>DIP switch</u> settings for your PCIe-PoE card. | | |
| | port | | |
| | DOWRD value (1 \sim 2) to specify the PoE port. | | |
| Return Value | Returns TRUE if successful, FALSE if failed. | | |
| Usage | DWORD boardID; | | |
| | DWORD port; | | |
| | BOOL RetVal; | | |
| | | | |
| | //Disable PoE power status from board #0, port #1. | | |
| | boardID = 0; | | |
| | port = 1; | | |
| | RetVal= PCI_DisablePoEPort (boardID, port); | | |

