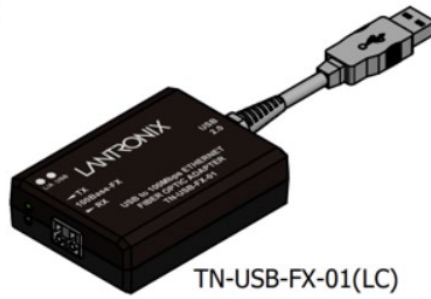
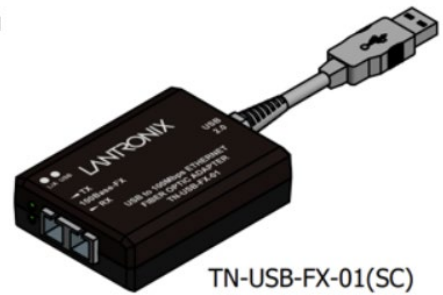


TN-USB-FX-01(SFP)



TN-USB-FX-01(LC)



TN-USB-FX-01(SC)

# TN-USB-FX-01

## USB 2.0-to-100Mbps Ethernet Fiber Adapter

### User Guide

**Part Number 33589**  
**Revision F July 2023**

## Intellectual Property

© 2022, 2023 Lantronix, Inc. All rights reserved. No part of the contents of this publication may be transmitted or reproduced in any form or by any means without the written permission of Lantronix.

*Lantronix* is a registered trademark of Lantronix, Inc. in the United States and other countries. All other trademarks and trade names are the property of their respective holders.

Patented: <https://www.lantronix.com/legal/patents/>; additional patents pending.

## Warranty

For details on the Lantronix warranty policy, please go to our web site at <http://www.lantronix.com/support/warranty>.

## Contacts

### Lantronix Corporate Headquarters

48 Discovery, Suite 250  
Irvine, CA 92618, USA  
Toll Free: 800-526-8766  
Phone: 949-453-3990  
Fax: 949-453-3995

### Technical Support

Online: <https://www.lantronix.com/technical-support/>

### Sales Offices

For a current list of our domestic and international sales offices, go to the Lantronix web site at [www.lantronix.com/about/contact](http://www.lantronix.com/about/contact).

## Disclaimer

All information contained herein is provided "AS IS." Lantronix undertakes no obligation to update the information in this publication. Lantronix does not make, and specifically disclaims, all warranties of any kind (express, implied or otherwise) regarding title, non-infringement, fitness, quality, accuracy, completeness, usefulness, suitability or performance of the information provided herein. Lantronix shall have no liability whatsoever to any user for any damages, losses and causes of action (whether in contract or in tort or otherwise) in connection with the user's access or usage of any of the information or content contained herein. The information and specifications contained in this document are subject to change without notice.

## Revision History

Date	Rev	Notes
05/12/14	A	Initial release for v 1.2.
08/11/14	B	Add DoC information.
04/17/17	C	Add dimensions for SFP version. Update contact info and add MTBF.
2/23/21	D	Update web links.
2/9/22	E	Initial Lantronix rebrand.
7/24/23	F	Update contact information and graphics.

## Table of Contents

Product Description .....	4
Ordering Information .....	4
Features .....	4
Related Manuals .....	4
Application Example.....	5
Specifications .....	5
Pre-Installation .....	6
Safety .....	6
Unpacking .....	6
Package Contents .....	6
Connectors and LEDs.....	7
Connecting the TN-USB-FX-01 .....	9
Installing the Driver .....	10
Typical Plug and Play Install.....	10
Standard Windows Driver Update .....	12
Uninstall the Driver Package .....	18
Driver Configurable Parameters .....	19
Change “Speed and Duplex” to “100 Mbps Full Duplex”.....	21
Troubleshooting .....	22
Windows Driver Setup Program .....	23
Manual Windows Driver Update .....	24
Compliance Information .....	25
Declaration of Conformity .....	25
FCC Regulations .....	25
Canadian Regulations .....	25
European Regulations .....	26
Electrical Safety Warnings .....	27

## Product Description

The Lantronix TN-USB-FX-01 is a USB 2.0-to-Ethernet Fiber Converter designed to allow a PC, Laptop, Tablet or other computer equipment to connect to an Ethernet network through a USB 2.0 interface. The TN-USB-FX-01 provides protocol conversion from USB to 100Base-FX for use with laptops, tablets, and convertibles with USB ports in secure networking environments, where wireless is not permitted and connectivity to a fiber network is required.

## Ordering Information

Model	Description
TN-USB-FX-01(SC)	USB 2.0 to Ethernet 100Base-FX multimode (SC) [2 km/ 1.2 mi.] Link Budget: 11.0 dB
TN-USB-FX-01(LC)	USB 2.0 to Ethernet 100Base-FX multimode (LC) [2 km/ 1.2 mi.] Link Budget: 11.0 dB
TN-USB-FX-01(SFP)	USB 2.0 to Ethernet 100Base-FX Open SFP Slot

## Features

The TN-USB-FX-01 was designed with these features:

- USB 2.0 (480Mbps) peripheral device
- 100Base-FX Ethernet
- Multimode SC, LC, or industry standard SFP fiber port (SFP sold separately)
- Windows 7, 8, 8.1, and 10 and many other drivers
- Bus-powered device (no external power supply required)
- Plastic ABS enclosure with 6" pigtail to USB type-A connector
- LEDs to indicate USB Speed/Activity and fiber Link/Activity
- Advanced power saving modes to preserve battery life

## Related Manuals

A printed documentation card is shipped with each TN-USB-FX-01 device. For the latest information, see the [online manual](#). Note that this manual provides links to third party web sites for which Lantronix is not responsible. Related manuals include:

1. Product Documentation Postcard, 33504
2. TN-USB-FX-01 User Guide, 33589 (this manual)
3. Manual Update - TN-USB-FX-01 Driver Install Note (33597)
4. Release Notes (firmware version specific)

**Note:** Information in this document is subject to change without notice. All information was deemed accurate and complete at the time of publication. This manual documents the latest software/firmware version. While all screen examples may not display the latest version number, all of the descriptions and procedures reflect the latest software/firmware version, noted in the [Revision History](#) on page 2.

**Note:** Some documentation may have Transition Networks named or pictured. Transition Networks was acquired by Lantronix in August 2021.



TN-USB-FX-01 (SC)

## Application Example

The TN-USB-FX-01 can provide a high-speed (FE) USB-to-LAN connection as shown below. A variety of other applications exist.

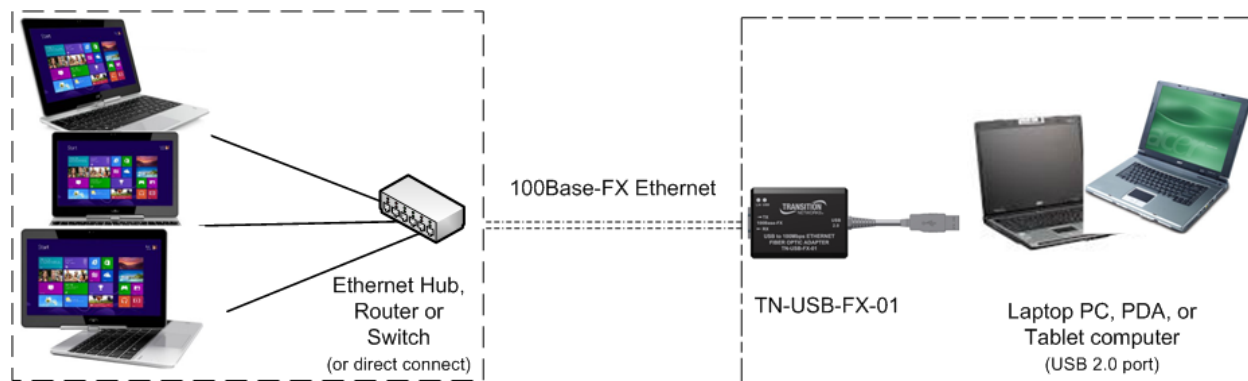


Figure 1: Application Example

## Specifications

<b>IEEE / Network Standards</b>	IEEE 802.3™-2008 USB 2.0
<b>Regulatory Compliance - Emission</b>	EN55022 Class B FCC Class B
<b>Regulatory Compliance - Immunity</b>	EN55024
<b>Safety Compliance</b>	CE Mark
<b>Power Consumption</b>	SC: Typical 1.12W LC: Typical 0.9W SFP: MSA compliant supporting up to a 1W module
<b>Power Source</b>	USB bus
<b>Dimensions (LxWxH)</b>	TN-USB-FX-01(SC) and (LC) = 9.2 x 2.2 x 0.8 inches TN-USB-FX-01(SFP) = 10.0 x 1.2 x 1.0 inches
<b>Weight</b>	TN-USB-FX-01(SC) and (LC) = 0.15 lbs. (2.40 oz. 68.03 g.) TN-USB-FX-01(SFP) = 0.10 lbs. (1.60 oz. = 45.35 g.)
<b>Operating Temperature</b>	0 to 50 deg. C
<b>Storage Temperature</b>	-20 to 80 deg. C
<b>Altitude</b>	0-10,000 feet (with de-rating)
<b>Operating Humidity</b>	5% to 95% (non-condensing)
<b>Data Rate</b>	USB 2.0: 480Mbps Fiber: 100Mbps
<b>Max. Frame Size</b>	1518 bytes (untagged)
<b>Fiber Connectors</b>	TN#13222 1x9, 1310nm, SC, MM, 3.3V TN#13300 2x5, 1310nm, LC, MM, 3.3V
<b>Fiber Specs (SC and LC)</b>	Min TX Pwr -19.0dBm / Max TX Pwr -14.0 dBm Rx Sensitivity -30.0 dBm / Rx Max In Pwr -14.0 dBm Link Budget 11.0 dB
<b>MTBF</b>	Greater than 200,000 MIL-HDBK-217F Hours

## Pre-Installation

### Safety

See "[Electrical Safety Warnings](#)" on page 27 for Electrical Safety Warnings in multiple languages.

- Do not use this product near water, for example, in a wet basement or near a swimming pool.
- Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

**Warning:** This product contains lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling.

### Unpacking

1. Carefully unpack all TN-USB-FX-01 contents.
2. Verify receipt of all TN-USB-FX-01 components; see "[Package Contents](#)" below.
3. Place the TN-USB-FX-01 and related materials in the desired install location.
4. Save the TN-USB-FX-01 shipping carton and packing materials for future use.

### Package Contents

The TN-USB-FX-01 is shipped with some standard and some optional components. Make sure you have received one TN-USB-FX-01 device and one printed Product Documentation postcard.

## Connectors and LEDs

**Data speed:**        *USB 2.0:* 480Mbps (USB type-A connector)  
                          *Fiber:*    100Mbps

**Fiber Port:**        *Connector:* 1x9 or 2x5  
                          *Modes:*    100Base-FX

### LEDs:

**USB TPLink/Activity:** **Yellow** - ON high speed, OFF low speed,  
                                  BLINK activity

**Fiber TPLink/Activity:** **Green** - ON link, BLINK activity

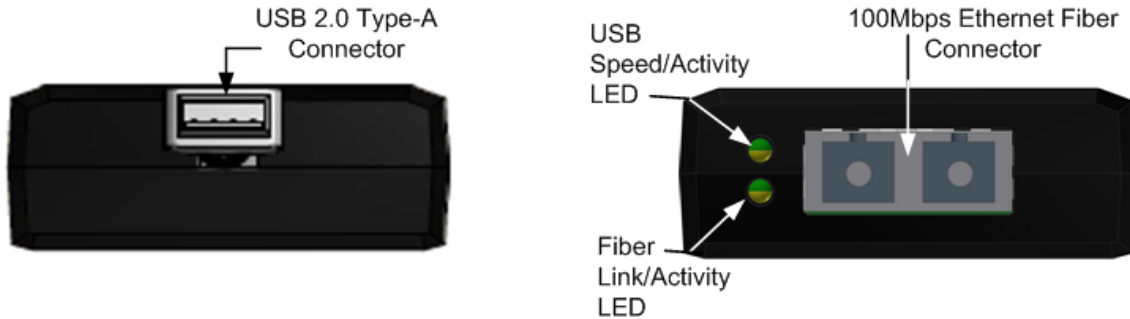


Figure 2: Connectors and LEDs (TN-USB-FX-01 SC)

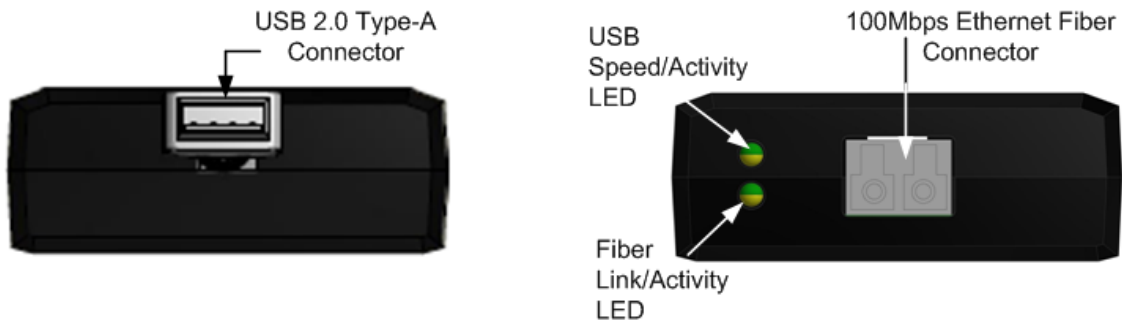


Figure 3: Connectors and LEDs (TN-USB-FX-01 LC)



SC Connector



LC Connector

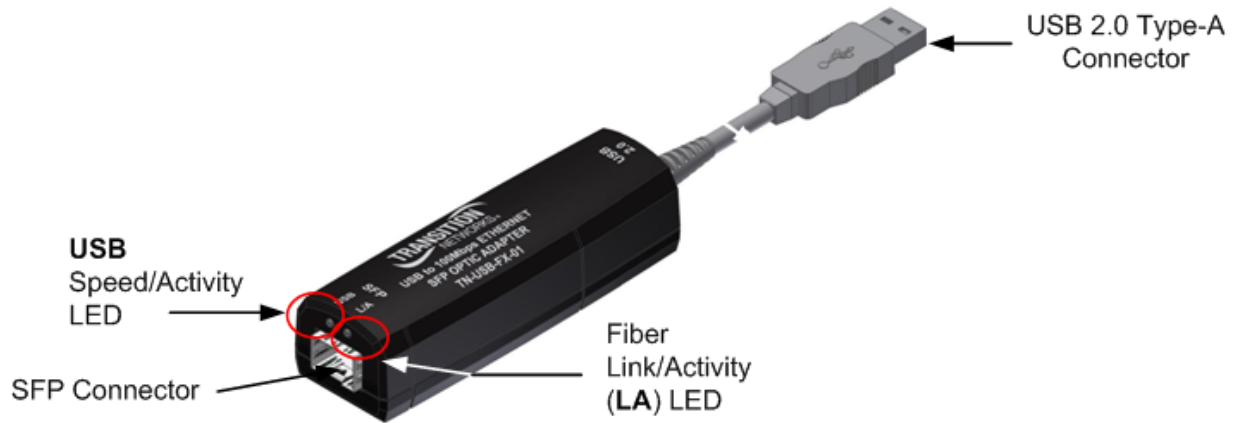
Figure 4: SC and LC Connectors

The SFP fiber interface is MSA compliant supporting up to a 1W module. For more information see the Lantronix [SFP webpage](#).

**LEDs:**

**USB TPLink/Activity:** **Yellow** - ON high speed, OFF low speed,  
BLINK activity

**SFP TPLink/Activity:** **Green** - ON link, BLINK activity



**Figure 5: Connectors and LEDs (TN-USB-FX-01 SFP)**



## Connecting the TN-USB-FX-01

This section describes how to connect the TN-USB-FX-01 to a PC/Notebook/PDA. The TN-USB-FX-01 can be used to connect any device with a USB port to an Ethernet network.



**Figure 6: TN-USB-FX-01 Connections**

The figure above shows cabling a TN-USB-FX-01 to a laptop PC. The procedure is provided below.

1. Insert the TN-USB-FX-01 USB connector into an available USB port on your computer or device.

**Note:** For maximum performance, connect the TN-USB-FX-01 directly to a USB 2.0 port on your computer. If you are connecting to a USB hub, make sure it operates at USB 2.0 speed and can provide the required power for this device.

2. Insert one end of an Ethernet network cable into the **fiber** port of the TN-USB-FX-01.
3. Insert the other end of the Ethernet network cable into an Ethernet port on the other end
4. Install the driver; see “[Installing the Driver](#)” section below.

**Driver installation note:** After you successfully install the driver, the TN-USB-FX-01 will work properly for a short while and then stop. Change the “Speed and Duplex Property Value as described in the “[Driver Configurable Parameters](#)” section on page 19.

## Installing the Driver

Various Management features exist, depending on the OS and driver support. Standard OS support includes Windows 7, 8 and 8.1 (32-bit and 64-bit). Other drivers are available from the ASIX Drivers site; go to [https://www.asix.com.tw/en/product/USBEthernet/High-Speed\\_USB\\_Ethernet/AX88772A](https://www.asix.com.tw/en/product/USBEthernet/High-Speed_USB_Ethernet/AX88772A) then choose Download then Software & Tools to locate the driver for your OS. If the Windows OS is up to date, the driver is automatically recognized and ready to go without additional effort. If the driver is not automatically recognized, use one of the procedures in this section:

- [Typical Plug and Play Install](#) below
- [Standard Windows Driver Update](#) on page 12
- [Uninstall the Driver Package](#) on page 18
- [Driver Configurable Parameters](#) on page 19

### Typical Plug and Play Install

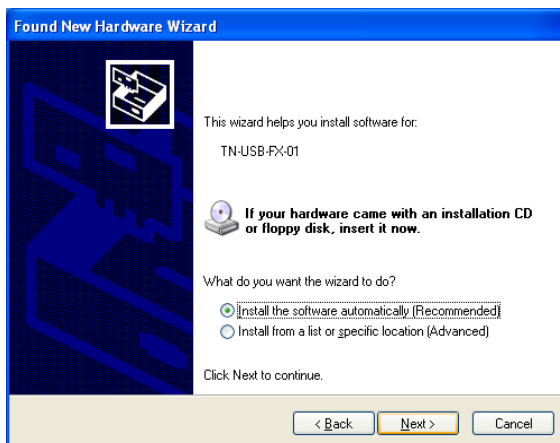
This is the recommended default install procedure.

1. Plug the TN-USB-FX-01 into the computer's USB port. The Found New Hardware Wizard displays.



2. Check the **Yes**, this time only radio button.

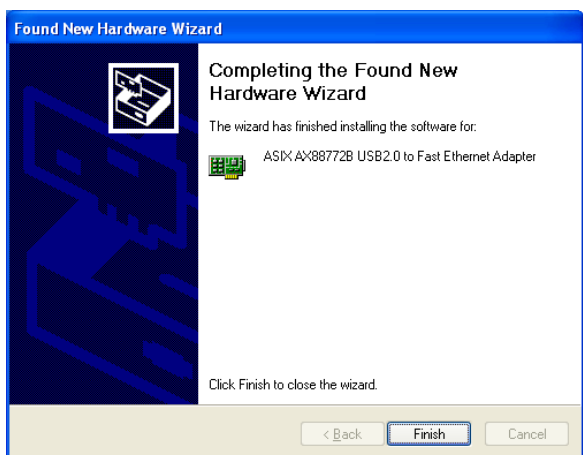
3. Click the **Next** button. This screen displays:



4. With the “*Install the software automatically (Recommended)*” radio button checked, click the **Next** button. The *Please wait while the wizard searches...* message displays:



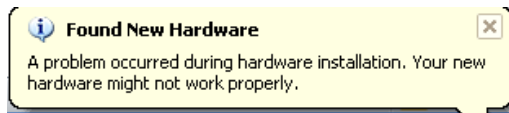
5. When the “Completing the Found New Hardware Wizard” screen displays, click the **Finish** button.



The wizard closes. If no error messages display, continue operation.

## Error Messages

**Message:** *A problem occurred during hardware installation. Your new hardware might not work properly.*



**Meaning:** Tray message indicating a problem with your computer recognizing the device / driver. Configuring flow control advertised capabilities does not apply; Auto-negotiation option not supported. You cannot set the Ethernet link speed; you must force the device to 100 Mbps full duplex.

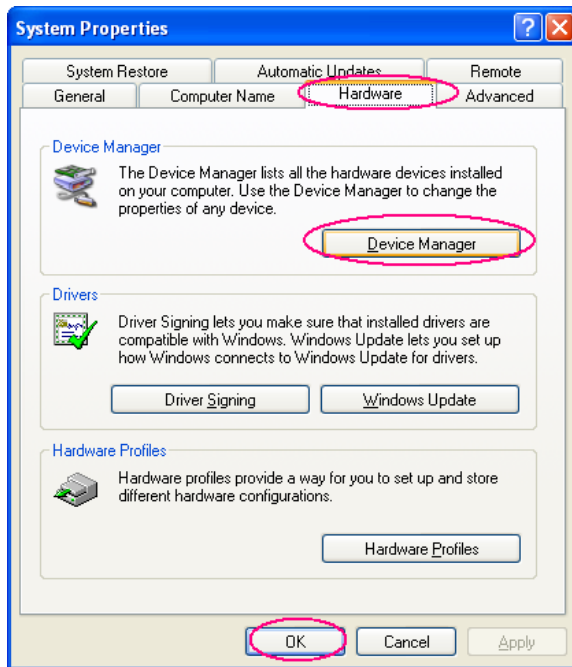
**Recovery:**

1. Remove the device from your computer.
2. Uninstall the driver. See “[Uninstall the Driver Package](#)” on page 18.
3. Change the “Speed & Duplex” and “FlowControl” driver parameters. See “[Driver Configurable Parameters](#)” on page 19.

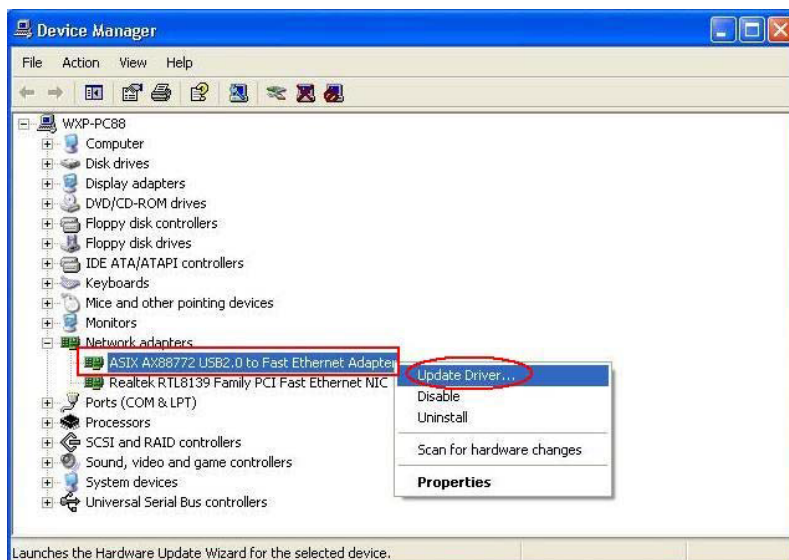
## Standard Windows Driver Update

The following is an example to update AX88772 Windows driver on Windows XP platform for use if the Typical Plug and Play Install (above) does not work on your computer. These are standard Windows driver update procedures. Refer to your computer's Microsoft Windows documentation to update the driver if necessary.

1. Select the Start > Control Panel > System menu path.
2. At System Properties select the **Hardware** tab.



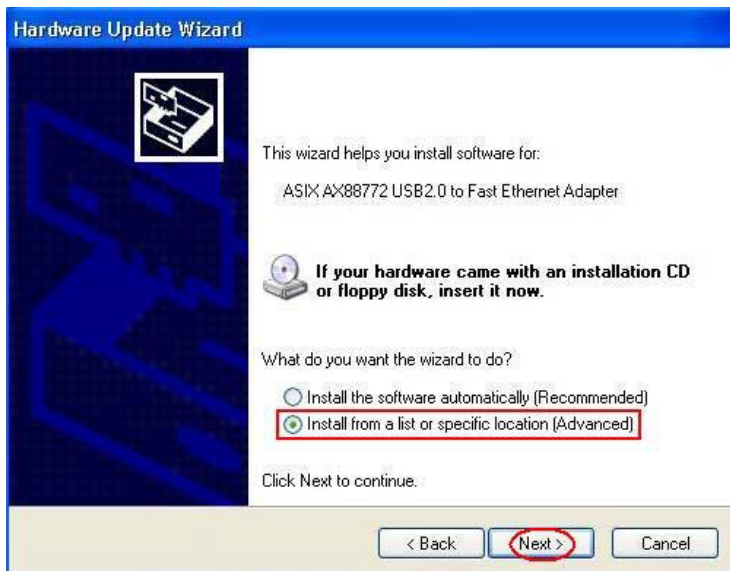
3. Click the **Device Manager** button.
4. At Network Adapters, select and right click on **ASIX AX88772 USB2.0 to Fast Ethernet Adapter**.
5. Select "Update Driver..." to update the new AX88772 driver.



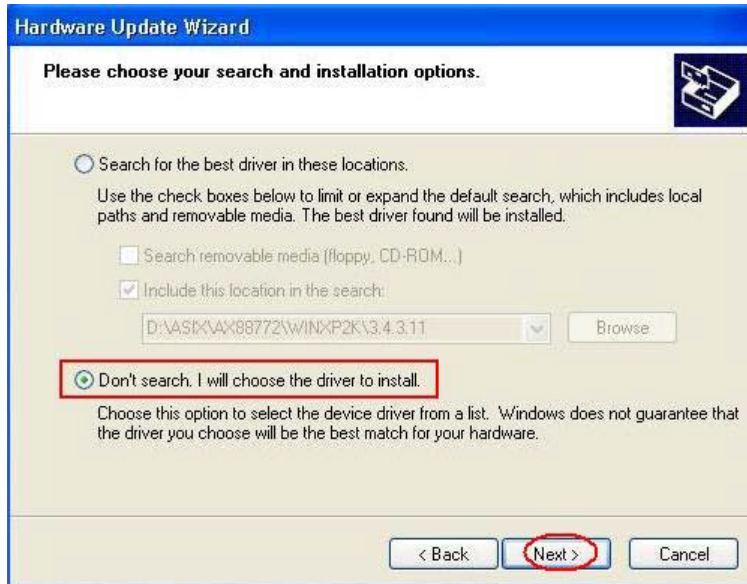
6. At the Welcome to the Hardware Update Wizard screen, select the *No, not this time* radio button, and click the **Next** button.



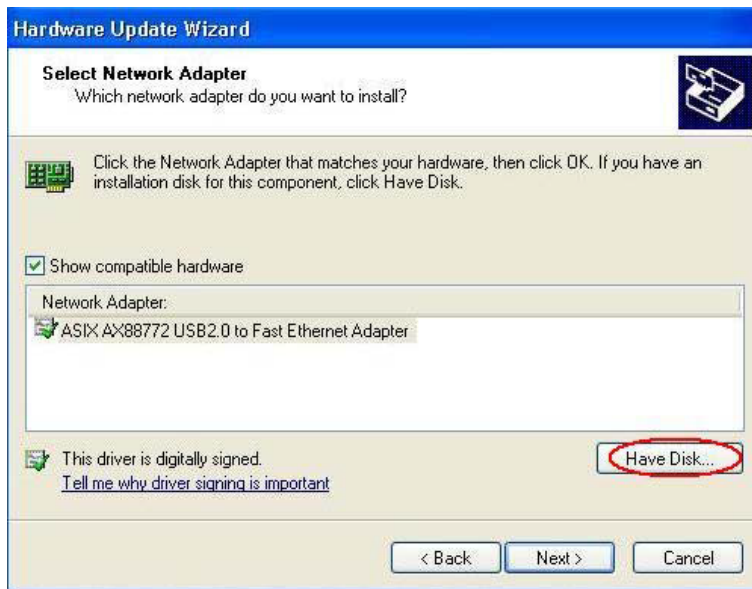
7. At the *What do you want the wizard to do?* prompt, click the *Install from a list or specific location (Advanced)* radio button and click the **Next** button.



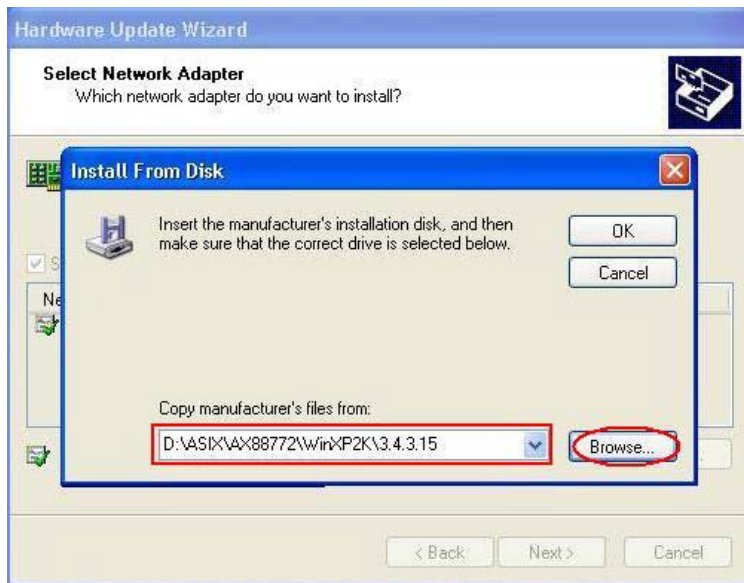
8. At the *Please choose your search and installation options* prompt, select the *Don't search, I will choose the driver to install* radio button, and click the **Next** button.



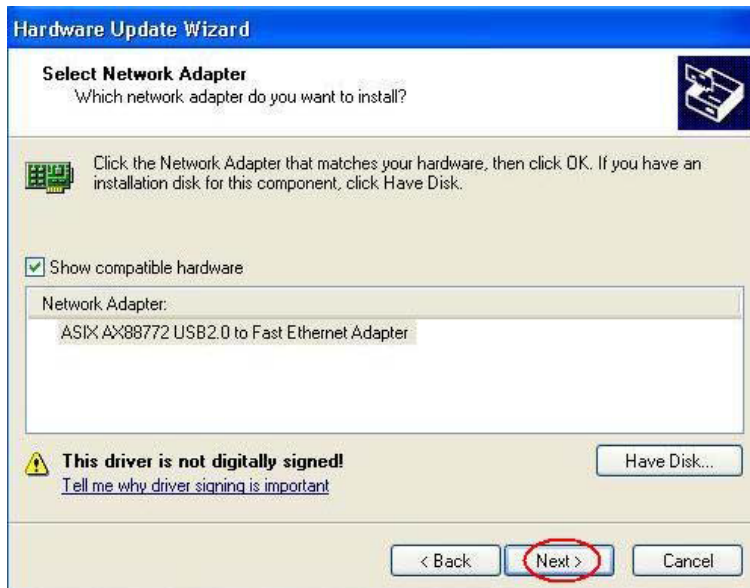
9. At the *Select Network Adapter* screen, click the *ASIX AX88772 USB2.0 to Fast Ethernet Adapter*, and click the **Have Disk...** button.



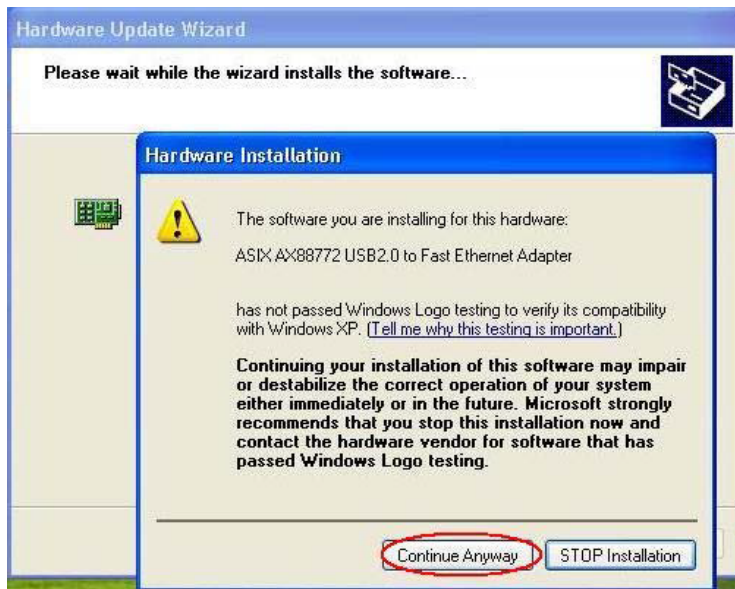
10. At the *Install From Disk* dialog, select the correct subdirectory where the revised AX88772 driver is to be located. Use the **Browse** button if the location displayed is not correct.



11. At the *Select Network Adapter* screen click the **Next** button.



12. The following warning message displays only if the updated driver is non-WHQL signed driver (i.e., no valid driver .cat file).



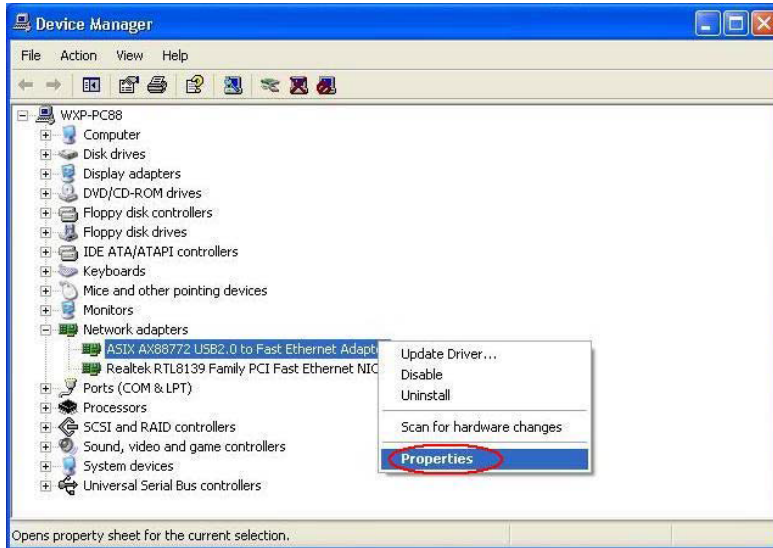
13. Click the **Continue Anyway** button. The AX88772 driver is updated successfully.



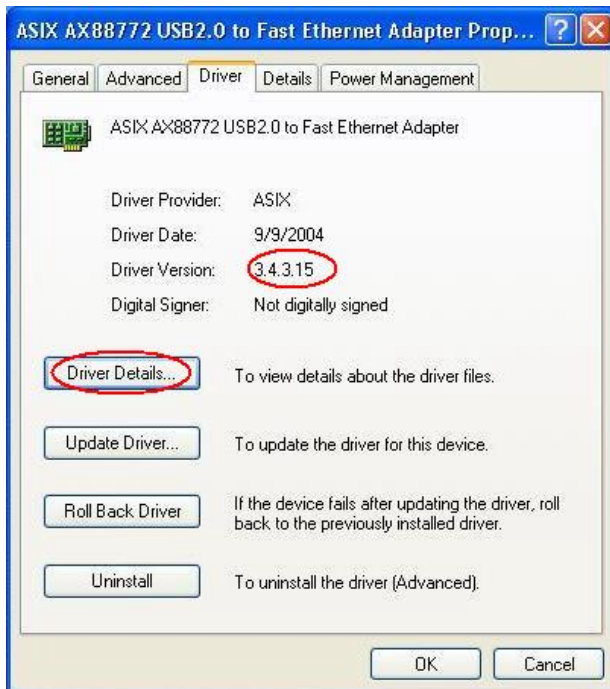
14. At the *Completing the Hardware Update Wizard* screen, click the **Finish** button.



15. From the Windows Start > Control Panel > Admin Tools > Computer Management > Device Manager Network Adapter menu path, select and right click the AX88772 entry and select Properties from the dropdown list. Verify that the AX88772 driver is updated successfully.



16. Verify the updated Driver Version here.



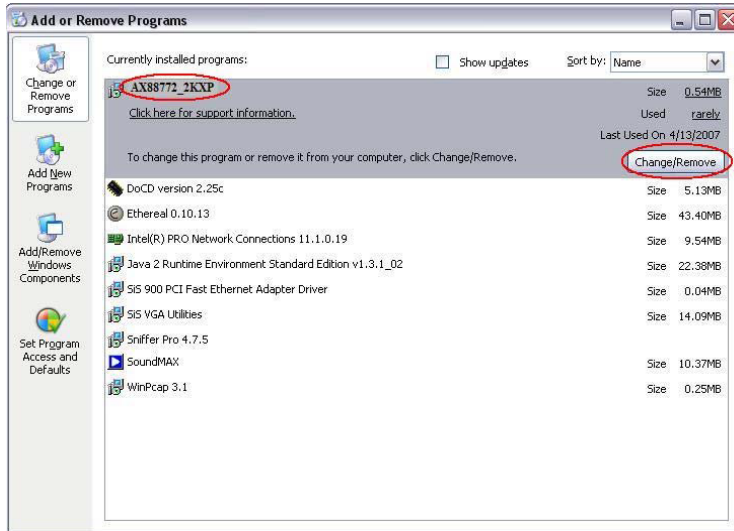
17. If the driver install is successful, continue with normal operation. The USB LED lights after the driver is installed and functional.

If the driver install is unsuccessful, click the **Driver Details...** button, view the details to determine the problem. If the problem is unresolved, continue with the “[Troubleshooting](#)” section on page 22.

## Uninstall the Driver Package

You can uninstall the installed driver package using the following procedure.

1. Navigate to the Windows Start > Control Panel > Add or Remove Programs menu path.
2. Select the AX88772\_2KXP program.
3. Click the **Change/Remove** button.



4. At the Confirm prompt, click the **Yes** button and follow the on-screen instructions.

## Driver Configurable Parameters

This section describes the driver's configurable parameters. See the [Download Driver](#) site for more information on other drivers.

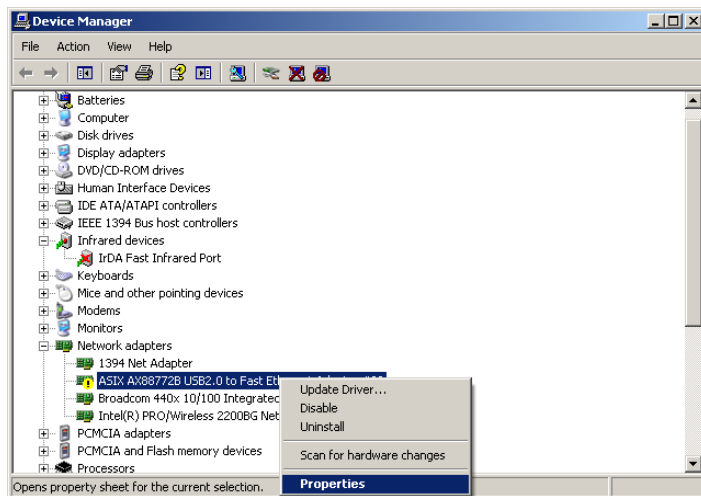
- 1. Speed & Duplex:** Sets the Ethernet link speed /duplex mode. You must force the device to 100 Mbps Full Duplex. See below for details.
- 2. NetworkAddress:** lets you set a MAC address of the device or use the device default address.
- 3. FlowControl:** Configure flow control advertised capabilities (does not apply; Auto-negotiation option not supported).
- 4. WakeOnLinkChange:** Wake up the computer when device detects Ethernet link Changed
  - Disabled     Disable WakeOnLinkChange function
  - Enabled     Enable WakeOnLinkChange function
- 5. Packet Priority & VLAN:** Enable or disable the ability to insert the 802.1Q priority and VLAN tags into the transmit packets.
  - Packet Priority & VLAN Disabled     Disable to insert the 802.1Q priority and VLAN tag
  - Packet Priority Enabled     Only enable to insert the 802.1Q priority tag
  - VLAN Enabled     Only enable to insert the 802.1Q VLAN tag
  - Packet Priority & VLAN Enabled     Enable to insert the 802.1Q priority and VLAN tag
- 6. VLAN ID:** If user set a valid VLAN ID, the driver inserts the VLAN tag with this VLAN ID into the transmit packets and device will filter the received packets.
- 7. WakeOnMagicPacket:** Wake up the computer when device receives a Magic Packet (option not supported).
- 8. WakeOnPattern:** Wake up the computer when device receives a packet that matches a specified pattern (option not supported).
- 9. SelectiveSuspend:** Allows NDIS to suspend an idle AX88772B network adapter by transitioning the adapter to a low-power state
  - Disabled     Disable SelectiveSuspend function
  - Enabled     Enable SelectiveSuspend function
- 10. SSIdleTimeout:** Selective suspend idle time-out in units of seconds
- 11. TCPChecksumOffloadV4:** Enable or disable the device to calculate the TCP checksum of the transmit IPv4 packets and check the TCP checksum of the received IPv4 packets.
  - Disabled     Disable the TCP Checksum Offload
  - TxEnabled     Enable the TCP Checksum Offload for transmit packets
  - RxEnabled     Enable the TCP Checksum Offload for received packets
  - RxDxEnabled     Enable the TCP Checksum Offload for transmit and received packets
- 12. UDPChecksumOffloadV4:** Enable or disable the device to calculate the UDP checksum of the transmit IPv4 packets and check the UDP checksum of the received IPv4 packets.
  - Disabled     Disable the UDP Checksum Offload
  - TxEnabled     Enable the UDP Checksum Offload for transmit packets
  - RxEnabled     Enable the UDP Checksum Offload for received packets
  - RxDxEnabled     Enable the UDP Checksum Offload for transmit and received packets

- 13. TCPChecksumOffloadV6:** Enable or disable the device to calculate the TCP checksum of the transmit IPv6 packets and check the TCP checksum of the received IPv6 packets.
- Disabled    Disable the TCP Checksum Offload
  - TxEnabled    Enable the TCP Checksum Offload for transmit packets
  - RxEnabled    Enable the TCP Checksum Offload for received packets
  - RxBxEnabled    Enable the TCP Checksum Offload for transmit and received packets
- 14. UDPChecksumOffloadV6:** Enable or disable the device to calculate the checksum of the transmit IPv6 packets and check the UDP checksum of the received IPv6 packets.
- Disabled    Disable the UDP Checksum Offload
  - TxEnabled    Enable the UDP Checksum Offload for transmit packets
  - RxEnabled    Enable the UDP Checksum Offload for received packets
  - RxBxEnabled    Enable the UDP Checksum Offload for transmit and received packets
- 15. IPChecksumOffloadV4:** Enable or disable the device to calculate the IP checksum of the transmit IPv4 packets and check the IP checksum of the received IPv4 packets.
- Disabled    Disable the IP Checksum Offload
  - TxEnabled    Enable the IP Checksum Offload for transmit packets
  - RxEnabled    Enable the IP Checksum Offload for received packets
  - RxBxEnabled    Enable the IP Checksum Offload for transmit and received packets
- 16. ArpOffload:** When enable this ability, the device will reply the ARP request packet when computer is suspending. This ability is activated only if WOL is enabled.
- Disabled    Disable ARP Offload
  - Enabled    Enable ARP Offload
- 17. NSOffload:** When enable this ability, the device will reply the neighbor solicitation packet when computer is suspending.
- This ability is activated only if WOL is enabled.
- Disabled    Disable NS Offload
  - Enabled    Enable NS Offload
- 18. AutoDetach:** Enable or disable AutoDetach ability. if AutoDetach is enabled, 3 seconds later after Ethernet cable was unplugged, the device will be detached from USB.
- Disabled    Disable AutoDetach
  - Enabled    Enable AutoDetach
  - Use EEPROM Setting    Disable or enable AutoDetach according to the EEPROM setting
- 19. MaskTimer:** If wake up ability is enabled, the wake up function will delay this time to active.
- 0,4,8,12,16,20,24,28 seconds
- 20. WoLinkSpeed:** Set the Ethernet link speed when device sleeps if wake up ability is enabled.
- 10 Mbps First    The Ethernet link speed works on 10 Mbps first if available
  - Use EEPROM Setting    Use EEPROM setting to set Ethernet link speed

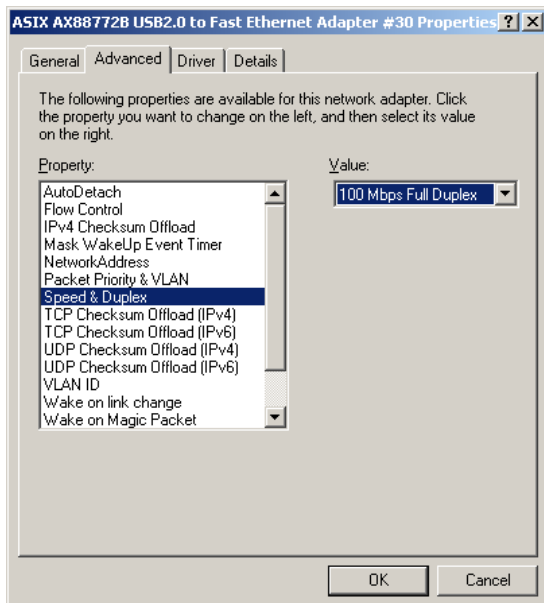
## Change “Speed and Duplex” to “100 Mbps Full Duplex”

As stated in the Driver installation note above, after you successfully install the driver, the TN-USB-FX-01 will work properly for a short while and then stop. To resolve this, you must perform the procedure below.

1. In Windows, navigate to the Start > Settings > Control Panel > System > Device Manager > Network Adapters menu path.



2. Select and right click the “ASIX AX88772B USB to Fast Ethernet Adapter”. The General tab displays the message “*Windows has stopped this device because it has reported problems.(Code 43)*”.
3. Select “Properties” and then select the “Advanced” tab.

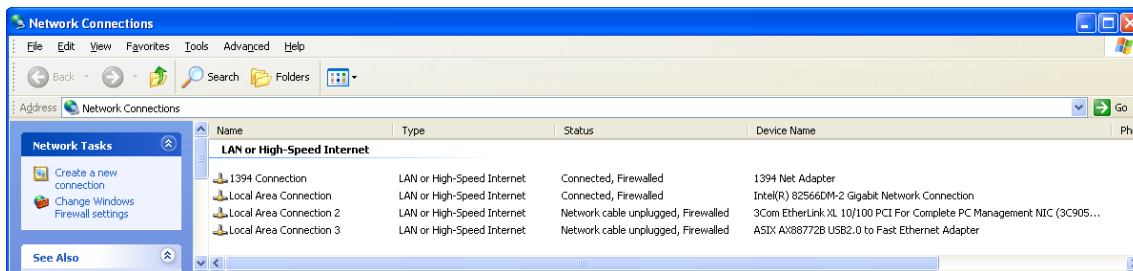


4. At the “Speed and Duplex Property Value” dropdown, change the Ethernet link speed from “Auto Negotiation” to “100 Mbps Full Duplex”.
5. Click the **OK** button.
6. Unplug and replug the TN-USB-FX-01. The device will now run properly.

## Troubleshooting

If a problem or exception occurs, perform these steps.

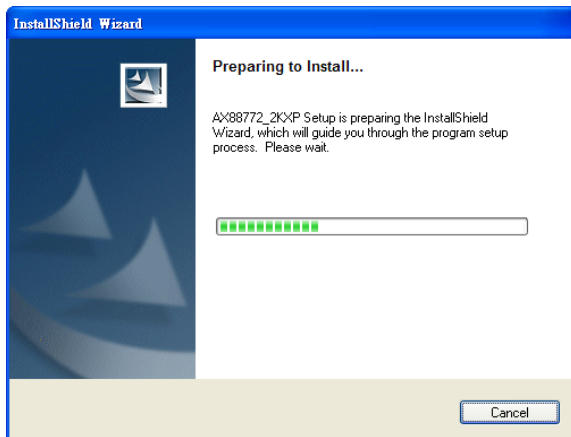
1. If you are connecting to a USB hub, make sure it operates at USB 2.0 speed.
2. If your computer does not recognize the TN-USB-FX-01, make sure that the TN-USB-FX-01 is properly inserted into the USB slot.
3. For maximum performance, connect the TN-USB-FX-01 directly to a USB 2.0 port on your computer. If you are connecting to a USB hub, make sure it operates at USB 2.0 speed and can provide the required power for this device.
4. If the TN-USB-FX-01 does not work properly, remove the TN-USB-FX-01, and then reinsert it into the computer's USB slot.
5. Verify the [Connectors and LEDs](#) on page 7.
6. Verify the [Connecting the TN-USB-FX-01](#) on page 9.
7. Verify the [Installing the Driver](#) on page 10.
8. Try the [Windows Driver Setup Program](#) (see below).
9. Try the [Manual Windows Driver Update](#) (see below).
10. In Windows Network Connections, check for the presence of the TN-USB-FX-01 device. In the example below, the Device Name is "LAN 3 - ASIX AX88772B USB2.0 Fast Ethernet Adapter".



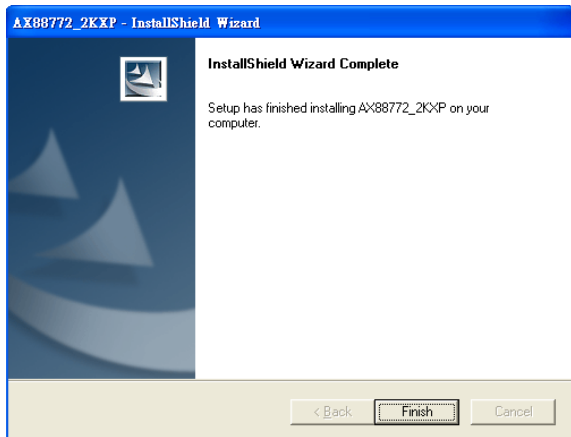
11. See the [Download Driver](#) site for driver Readme files or the [FAQs page](#) to answer questions.
12. Contact Technical Support.

## Windows Driver Setup Program

1. Run the WinXP/2K driver setup program (i.e., *setup.exe*) to start AX88772 driver installation.



2. The setup program will auto-install WinXP/2K driver on your platform and the driver should work fine now after seeing the driver installation completion message (below).



3. Click the **Finish** button.

## **Manual Windows Driver Update**

Use the procedure below to update the revised Windows driver on your platform.

1. Remove the TN-USB-FX-01 from the USB port of your PC.
2. Boot up your PC/Notebook/PDA to Windows system.
3. Copy the new AX88772 Windows driver (AX88772.SYS) to the Windows system driver default folder. (e.g., C:\WINDOWS\system32\drivers for WinXP platform) to overwrite the previous AX88772 driver. If you still can't find the correct folder, search the "AX88772.SYS" file in your computer to find a correct folder.
4. Insert the AX88772 dongle to the USB port of your PC.
5. Enable the USB function from the BIOS setting of your PC. (Refer to the PC User Manual for the detailed BIOS setting.)
6. Verify that the TN-USB-FX-01 works properly.



## Compliance Information

### Declaration of Conformity

Manufacturer's Name: Lantronics, Inc.

Manufacturer's Address: 48 Discovery, Suite 250, Irvine, California 92618 USA

Declares that the product(s)

Media Converters TN-USB-FX-01

Model #: TN-USB-FX-01(SC), TN-USB-FX-01(LC), TN-USB-FX-01(SFP)

Conform to the following Product Regulations:

FCC 47 CFR Part 15 :2012 Class B

ANSI C63.4:2009

EMC-Directive 2004/108/EC

EN 55022:2010 Class B

EN 61000-3-2:2006/A1:2009/A2:2009

EN61000-3-3:2008

EN55024:2010

IEC61000-4-2:2008

With the technical construction on file at the above address, this product carries the CE Mark.

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Place: Irvine, California

Date: July 24, 2023

Signature: *Eric Bass*

Full Name: Eric Bass

Position: Vice President of Engineering

### FCC Regulations

#### RADIO AND TELEVISION INTERFERENCE

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or *more of the following measures*:

- Reorient or *relocate the receiving antenna*.
- Increase the separation between the equipment *and the receiver*.
- Connect the equipment into an outlet on a circuit different from that to *which the receiver is connected*.
- Consult the dealer or an experienced radio/TV technician for help.

Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under *Federal Communications Commissions rules*.

\* In order to maintain compliance with FCC regulations shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio & television reception.

\* NOTE: Shielded cables were used when testing this product.

### Canadian Regulations

This digital apparatus does not exceed the Class B limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

## European Regulations

### Warning

This is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### Achtung !

Dieses ist ein Gerät der Funkstörgrenzwertklasse B. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten. In diesem Fall ist der Benutzer für Gegenmaßnahmen verantwortlich.

### Attention !

Ceci est un produit de Classe B. Dans un environnement domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilisateur de prendre les mesures spécifiques appropriées.



In accordance with European Union Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003, Lantronix will accept post usage returns of this product for proper disposal. The contact information for this activity can be found in the 'Contact Us' portion of this document.



**CAUTION:** RJ connectors are NOT INTENDED FOR CONNECTION TO THE PUBLIC TELEPHONE NETWORK. Failure to observe this caution could result in damage to the public telephone network.

Der Anschluss dieses Gerätes an ein öffentliches Telekommunikationsnetz in den EGMitgliedstaaten verstößt gegen die jeweiligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendeinrichtungen einschliesslich der gegenseitigen Anerkennung ihrer

## Electrical Safety Warnings

### Electrical Safety

**IMPORTANT:** This equipment must be installed in accordance with safety precautions.

### Elektrische Sicherheit

**WICHTIG:** Für die Installation dieses Gerätes ist die Einhaltung von Sicherheitsvorkehrungen erforderlich.

### Elektrisk sikkerhed

**VIGTIGT:** Dette udstyr skal 27nstillers I overensstemmelse med sikkerhedsadvarslerne.

### Elektrische veiligheid

**BELANGRIJK:** Dit apparaat moet in overeenstemming met de veiligheidsvoorschriften worden geïnstalleerd.

### Sécurité électrique

**IMPORTANT :** Cet équipement doit être utilisé conformément aux instructions de sécurité.

### Sähköturvallisuus

**TÄRKEÄÄ :** Tämä laite on asennettava turvaohjeiden mukaisesti.

### Sicurezza elettrica

**IMPORTANTE:** questa apparecchiatura deve essere installata rispettando le norme di sicurezza.

### Elektrisk sikkerhet

**VIKTIG:** Dette utstyret skal installers I samsvar med sikkerhetsregler.

### Segurança eléctrica

**IMPORTANTE:** Este equipamento tem que ser instalado segundo as medidas de precaução de segurança.

### Seguridad eléctrica

**IMPORTANTE:** La instalación de este equipo deberá llevarse a cabo cumpliendo con las precauciones de seguridad.

### Elsäkerhet

**OBS!** Alla nödvändiga försiktighetsåtgärder måste vidtas när denna utrustning används

**Lantronix Corporate Headquarters**

48 Discovery  
Suite 250  
Irvine, CA 92618, USA  
Toll Free: 800-526-8766  
Phone: 949-453-3990  
Fax: 949-453-3995

**Technical Support**

Online: <https://www.lantronix.com/technical-support/>

**Sales Offices**

For a current list of our domestic and international sales offices, go to the Lantronix web site at [www.lantronix.com/about/contact](http://www.lantronix.com/about/contact).