Gigabit USB 2.0 Ethernet Adapter

User's Manual

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Safety Instructions

Always read the safety instructions carefully

- Keep this User's Manual for future reference
- Keep this equipment away from humidity
- If any of the following situation arises, get the equipment checked by a service technician:
 - The equipment has been exposed to moisture.
 - The equipment has been dropped and damaged.
 - The equipment has obvious sign of breakage.
 - The equipment has not been working well or you cannot get it work according to User's Manual.

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1. Introduction

This Gigabit USB 2.0 Ethernet adapter is a cost effective solution that converts a USB port into a 10/100/1000Base-T Ethernet port. It enables low cost and affordable Gigabit Ethernet network connection to desktop, notebook PC, and embedded system using popular USB ports. No need to purchase an expensive Gigabit network interface card and to spare a PCI or Cardbus slot, just using your existing USB ports and you can upgrade your network connection speed.

Features

- Supports 10/100/1000 Mbps auto-sensing capability
- Supports Auto MDIX (straight and cross network cable auto-detection)
- USB specification 1.0, 1.1 and 2.0 compliant
- Supports USB full and high speed modes with bus power capability
- IEEE 802.3, 802.3u, and 802.3ab (10Base-T, 100Base-TX, and 1000Base-T) compatible
- Supports both full-duplex and half-duplex operation in Fast Ethernet
- Supports Jumbo packet of up to 9KB
- Supports suspend mode and remote wakeup via link-up and magic packet
- Plug and Play Installation

Package Contents

Before installation, please check the items of the package.

- Gigabit USB 2.0 Ethernet Adapter x1
 Driver CD x1
- Quick Installation Guide x1

System Requirements

- Pentium III 800MHz or faster PC with USB port
- 256 MB RAM or more
- Windows[®] 98SE/ME/2000/XP

LED Status

LED	Color	Status	Description
Link	Green	Off	Link is not established.
		On	Link is established.
1000Mbps	Green	Off	Link is not established Link to 10/100Mbps network.
		On	Link to 1000Mbps network.
		Blinking	There is 1000Mbps traffic flow over the network.

2. Driver Installation

Windows XP

- 1. Connect the Ethernet adapter's USB end to a free USB port of your computer.
- Upon your USB device connection, Windows will detect the new device and pop up the following screen. Insert the provided CD into your CD-ROM drive. Then select Install from a list or specific location (Advanced) and click Next.

Found New Hardware Wizard	
	Welcome to the Found New Hardware Wizard
	This wizard helps you install software for:
	AX178
	What do you want the wizard to do?
	 Install the software automatically (Recommended) Install from a list or specific location (Advanced)
	Click Next to continue.
	< Back Next > Cancel

 Select Search for the best driver in these locations and check only the Include this location in the search option. Click Browse to navigate to x:\Driver\W2K_XP where x: is your CD-ROM drive letter. Then click Next.

Found New Hardware Wizard
Please choose your search and installation options.
• Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
Include this location in the search:
F:\Driver\W2K_XP Browse
O Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back Next > Cancel

4. If compatibility message appears, just click Continue Anyway.



5. Click Finish to complete the installation.



Windows 2000

- 1. Connect the Ethernet adapter's USB end to a free USB port of your computer.
- 2. Upon your USB device connection, Windows will detect the new device and pop up the following screen. Insert the provided CD into your CD-ROM drive. Then click **Next**.

Found New Hardware Wizard	
	Welcome to the Found New Hardware Wizard This wizard helps you install a device driver for a hardware device.
	< Back, Next > Cancel

3. Select Search for a suitable driver for my device (recommended) and click Next.

Found New Hardware Wizard
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
A device driver is a software program that makes a haddware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
Search for a suitable driver for my device (recommended)
C Display a list of the known drivers for this device so that I can choose a specific driver
< Back Next > Cancel

4. Select the CD-ROM drives option and click Next.

Found New Hardware Wizard
Locate Driver Files Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify. To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations:
Floppy disk drives
CD-ROM drives
🔲 Specify a location
Microsoft Windows Update
< Back Next > Cancel

5. When Windows found the driver, click Next.



6. If Digital Signature Not Found window appears, just click Yes.

Digital Signature Not Found	
•	The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.
	The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.
	ASIX AX88178 USB2.0 to Gigabit Ethernet Adapter
	If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.
	Do you want to continue the installation?
	Yes No More Info

7. Click Finish to complete the installation.



Windows ME

- 1. Connect the Ethernet adapter's USB end to a free USB port of your computer.
- 2. Upon your USB device connection, Windows will detect the new device and pop up the following screen. Insert the provided CD into your CD-ROM drive. Select **Automatic search for a better driver** and then click **Next**.

Add New Hardware Wizard	
	Windows has found the following new hardware: AX178 Windows can automatically search for and install software that supports your hardware. If your hardware came with installation media, insert it now and click Next. What would you like to do? Automatic search for a better driver (Recommended) Specify the location of the driver (Advanced)
	< <u>B</u> ack. Next > Cancel

3. Click Finish.

Add New Hardware Wizard	
	ASIX AX89178 USB2.0 to Gigabit Ethernet Adapter
	Windows has finished installing the new hardware device.
8 ≈	
< Back Finish Cancel	

4. When prompted, click **Yes** to restart your computer.

System Settings Change 🛛 🛛 🕅		
?	To finish setting up your new hardware, you must restart your computer.	

Windows 98SE

- 1. Connect the Ethernet adapter's USB end to a free USB port of your computer.
- 2. Upon your USB device connection, Windows will detect the new device and pop up the following screen. Insert the provided CD into your CD-ROM drive. Then click **Next**.

Add New Hardware Wizard		
	This wizard searches for new drivers for: AX178 A device driver is a software program that makes a hardware device work.	
	Kancel	

3. Select Search for the best driver for your device (Recommended) and click Next.

Add New Hardware Wiz	ard
	What do you want Windows to do? Search for the best driver for your device. Recommended). Display a list of all the drivers in a specific location, so you can select the driver you want.
	< <u>B</u> ack Next> Cancel

 Select Specify a location and click Browse to navigate to x:\Driver\Win98_ME where x: is your CD-ROM drive letter. Then click Next.

Add New Hardware Wizard	
	Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.
	Eloppy disk. drives
	CD-ROM drive
😪 👗	□ <u>M</u> icrosoft Windows Update
	Specify a location:
	F:\Driver\Win98_ME
	Browse)
	< <u>B</u> ack Next > Cancel

5. Click Next.

Add New Hardware Wi	izard
	Windows driver file search for the device:
	ASIX AX88178 USB2.0 to Gigabit Ethernet Adapter
	Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.
😵 🏤 🛛	Location of driver:
	F:\Driver\Win98_ME\AX88178.INF
	< <u>B</u> ack Next> Cancel

6. If the screen below appears, click **OK**.



In the drop-down list, select *x*:\Driver\Win98_ME and click OK.



7. If the system prompts you for the Windows 98SE CD-ROM, click **OK**. Remove the provided CD and insert the Windows 98SE CD-ROM. Then click **OK** again.

Insert Di	sk		X
8	Please insert the disk labeled Windows 98 Seco	nd Edition CD-ROM', a	nd then click OK.
	[0K]		
Copying	Files	×	
	The file 'choosusr.dll' on Windows 98 Second Edition CD-ROM cannot be found.	OK	
_	Insert Windows 98 Second Edition CD-ROM in the selected drive, and click OK.	Cancel	
		<u>S</u> kip File	
	Copy files from:	<u>D</u> etails	
	E:WIN98SE		

8. Click Finish.

Add New Hardware Wi	zard
	ASIX AX88178 USB2.0 to Gigabit Ethernet Adapter
	Windows has finished installing the software that your new hardware device requires.
8	
	< Back Finish Cancel

9. When prompted, click Yes to restart your computer.

System Settings Change 🛛 🔀		
?	To finish setting up your new hardware, you must restart your computer. Do you want to restart your computer now?	
	Yes No	

Verifying the Driver Installation in Windows

To verify your Ethernet adapter installation, select **Control Panel > System >** (Hardware) > Device Manager. In the Network adapters group, a string similar to USB2.0 to Gigabit Ethernet Adapter should be displayed.

If there is a question or exclamation mark next to that item, then the driver is not properly installed. Please delete the item and repeat the installation steps.



*The example screenshot is taken from Windows XP.

Connecting to a Network

Now you can connect your network to the device's LAN port. The LAN port supports Auto-MDIX feature. It eliminates the need to use crossover cables.

Upon your connection, a message pops up in the notification area indicating your connection speed.



The adapter's AutoSense feature can automatically detect the network's maximum line speed. To have a 1000Mbps connection, your network device (e.g., switch, router or DSL modem) must also support 1000Mbps.

Configuring Network Settings

You should configure your Ethernet adapter as required according to your network environment. If you are unsure about the settings, consult your network administrator for assistance. The following describes how to launch the network settings window for your Ethernet adapter.

Windows XP/2000

After the installation, a local area connection icon is automatically created for your Ethernet adapter in the **Network Connections** folder. You can access **Network Connections** folder by selecting **Start > Settings > Control Panel > Network and Internet Connections**.

In the **Network Connections** folder, double-click the connection icon for your adapter. Then the **Local Area Connection Properties** window appears.



🕹 Local Area Connection 3 Properties 🛛 🔹 💽
General Authentication Advanced
Connect using:
B ASIX AX88178 USB2.0 to Gigabit Ethernet Adapter
Configure
This connection uses the following items:
Client for Microsoft Networks File and Printer Sharing for Microsoft Networks QoS Packet Scheduler Internet Protocol (TCP/IP) Install Uninstall Properties
Description Allows your computer to access resources on a Microsoft network.
Show icon in notification area when connected
OK Cancel

Windows ME/98SE

Right-click the **Network Neighborhood** icon on the desktop and select **Properties**. Then the **Network** window appears.

		Network ? 🗙
Network Neighborhoo	* Open Explore Find Computer Map Network Drive Disconnect Network Drive Create Shortcut Rename	Network ? × Configuration Identification Access Control The following network components are installed: The following network components are installed: Dial-Up Adapter Image: Control of the control of th
	Hena <u>m</u> e P <u>r</u> operties	Description TCP/IP is the protocol you use to connect to the Internet and wide-area networks.
		OK Cancel

3. Specifications

Network Standards	IEEE 802.3, 802.3u, and 802.3ab
Data Bus	USB
LED Indicators	Link, 1000Mbps
Power	Integrates on-chip 3.3V to 2.5V voltage regulator and requires only single power supply: 3.3V
Network Interface	Female RJ45 jack supporting Auto MDIX
Full Duplex	10BaseT, 100BaseTx, 1000BaseT
Half Duplex	10BaseT, 100BaseTx
RAM	Embedded 20KB SRAM for RX packet buffering and 20KB SRAM for TX packet buffering
Operating Temperature	0℃ to 70℃
Operating System Support	Windows 98SE, ME, 2000, XP
Certification	FCC, CE

* Specification is subject to change without further notice.

4. Regulatory Compliance

FCC Conditions

This equipment has been tested and found to comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference

(2) This device must accept any interference received. Including interference that may cause undesired operation.

CE

This equipment is in compliance with the requirements of the following regulations: EN 55 022: CLASS B

