

How to identify authentic ASIX USB to LAN Products

Revision 1.00 July 16th, 2013



Revision History

Revision	Date	Description
1.00	2013/07/16	Initial release.



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1. Introduction

This document indicates how to identify authentic ASIX USB to LAN products and only adapts to AX88772C/AX88772B/AX88772A/AX88760/AX88772 products.

Recently some USB to LAN devices with Non-authentic ASIX USB to LAN solution inside illegally use ASIX default VID/PID. The illegal USB to LAN devices might cause some abnormal network functionalities failure issues on your target platforms. Please refer to below sections to identify if your tested USB to LAN device is the authentic ASIX USB to LAN products or not.

NOTE: ASIX DOES NOT GUARANTEE AND PROVIDE ANY SUPPORT FOR THOSE ILLEGAL NON-AUTHENTIC ASIX USB TO LAN PRODUCTS. PLEASE PURCHASE AUTHENTIC ASIX USB TO LAN PRODUCTS INSTEAD IF YOU ARE USING THE ILLEGAL NON-AUTHENTIC ASIX USB TO LAN PRODUCTS NOW.

ASIX authentic products should have the following ASIX mark on the top side of IC.



Of course, you might not be able to open the case of your tested USB to LAN device to check ASIX mark on the top side of IC. You can still refer to below sections to identify if your USB to LAN device is ASIX solution inside or not.



2. How to check the VID/PID of your USB to LAN device

Before installing ASIX's standard USB to LAN drivers, please refer to this section to check if the VID/PID of your tested USB to LAN device is supported in the following ASIX's default VID/PID table or not? If no, please contact the manufacturer of your USB to LAN device to get proper drivers.

ASIX Product	ASIX Vendor I	D Product ID
AX88772C	0B95h	772Bh
AX88772B	0B95h	772Bh/7E2Bh
AX88760	0B95h	772Ah
AX88772A	0B95h	772Ah
AX88772	0B95h	7720h
Figure 1	ASIX USB to LAN Pro	ducts Default VID/PID

Note:

- 1. ASIX USB to LAN standard drivers might support some known customer's VID/PID. Please check ASIX USB to LAN standard drivers for details.
- Some ASIX customers' USB to LAN products have their own VID/PID. In this case, you should 2. contact the manufacturer of your USB to LAN device to get proper customized drivers.

ASIX AX88772B USB2.0 to Fast Ethernet Adapter #3 Properties				
General Advanced Driver Details				
ASIX AX88772B USB2.0 to Fast Ethemet Adapter #3				
Property				
Hardware Ids				
Value				
USB\VID_0B95&PID_772B&REV_0001 USB\VID_0B95&PID_772B				
OK Cancel				

How to check VID/PID on Windows system Figure 2.



● ⊖ ⊖	MacBook Air				
 Hardware 	USB Device Tree				
ATA	▼ USB High-Speed Bus				
Audio	FaceTime Camera (Built-in)				
Bluetooth	▼ Hub				
Card Reader	AX88772B				
Diagnostics	Apple Internal K	eyboard / Trackpad			
Disc Burning	WBRCM20702 Hub)			
Ethernet Cards	Bluetooth USE	B Host Controller			
Fibre Channel	▼ USB High-Speed Bus				
FireWire	Hub				
Graphics/Displays					
Hardware RAID					
Memory					
PCI Cards	0				
Parallel SCSI	AX887728:				
Power	Product ID:	0x772b			
Printers	Vendor ID:	0x0b95 (ASIX Electronics Corporation)			
SAS	Version:	0.01			
Serial-ATA	Serial Number:	002A36			
Thunderbolt	Manufacturer:	ASIX Elec. Corp.			
USB	Location ID:	0xfa130000 / 7			
Network	Current Available (mA):	500			
Firewall	Current Required (mA):	Unknown (Device has not been configured)			

Figure 3. How to check VID/PID on Mac OSX system

lsusb
Bus 002 Device 005: ID 0b27:0165 Ritek Corp.
Bus 002 Device 008: ID 0b95:772b ASIX Electronics Corp.
Bus 003 Device 002: ID 0461:4d16 Primax Electronics, Ltd
Bus 004 Device 002: ID 0461:0010 Primax Electronics, Ltd HP Keyboard
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 002 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 003 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 004 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 005 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 006 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 007 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub

Figure 4. How to check VID/PID on Linux system



3. Download the latest ASIX USB to LAN Drivers

In order to identify the illegal Non-authentic ASIX USB to LAN products, please download the latest ASIX USB to LAN drivers from ASIX web site (http://www.asix.com.tw/products.php?op=ProductList&PLine=71).

You can refer to <u>Section 2</u> to get the VID/PID of your USB to LAN device and then refer to <u>Figure 1</u> to identify which ASIX product drivers should be downloaded.

4. How to identify authentic ASIX USB to LAN Product on Windows

- 1. Refer to <u>Section 3</u> to download the latest ASIX USB to LAN Windows driver.
- 2. Install the ASIX USB to LAN Windows driver on your Windows platform and make sure if the driver can be installed successfully or not?

If your USB to LAN device is Non-authentic ASIX product inside, you should see below Yellow Exclamation mark on AX88772B Windows driver with Error Code 10 error message on the Device Manager console as below figure.

🚔 Device Manager	
File Action View Help	ASIX AX88772B USB2.0 to Fast Ethernet Adapter #3 Properties
(+ +) 🖬 🖬 🖬 🖉 🕼 🚱	General Advanced Driver Details
 asix-PC Computer Disk drives Display adapters DVD/CD-ROM drives Human Interface Devices IDE ATA/ATAPI controllers Keyboards Mice and other pointing devices Monitors Network adapters ASIX AX88772B USB2.0 to Fast Ethernet Adapter #3 Realtek R1L8168D/8111D Family PCI-E Gigabit Ethernet Sound, video and game controllers System devices Universal Serial Bus controllers 	ASIX AX88772B USB2.0 to Fast Ethemet Adapter #3 Device type: Network adapters Manufacturer: ASIX Location: Port_#0005.Hub_#0006 Device status This device cannot start. (Code 10)
	OK Cancel



3. You can refer to below figure to double check if your USB to LAN device is ASIX product inside or not? If your USB to LAN device is Non-authentic ASIX product inside, you should see below Error Message "Non-authentic ASIX product. ASIX does not support it." on the Windows Event Viewer console.

ä		Event Viewer						×
File Action View Help								
🗢 🧼 🖄 📅 📓 📷								
Event Viewer (Local)	System Number of events: 41,933					Actions		
Custom Views Administrative Events	Level	Date and Time	Source Ev	vent ID	Task C	^	System	٠
a 🙀 Windows Logs	(1) Information	7/10/2013 4:22:19 PM	UserPnp	20001	(7005)		🍯 Open	10
Application	Error	7/10/2013 4:22:19 PM	AX88772	0	None		Y Creat	
Security	(1) Information	7/10/2013 4:22:19 PM	UserPnp	20003	(7005)		Impor	
E Setup	Information	7/10/2013 4:18:51 PM	UserPnp	20001	(7005)		anpora	
System	Information	7/10/2013 4:18:50 PM	UserPnp	20003	(7005)		Clear	11
Forwarded Events	Information	7/10/2013 4:18:18 PM	UserPnp	20001	(7005)		Filter	
Applications and Services Logs	Information	7/10/2013 4:18:17 PM	UserPnp	20003	(7005)		Prope	a
Subscriptions	(1) Information	7/10/2013 4:18:17 PM	UserPnp	20001	(7005)		00 Find	· ·
	Information	7/10/2013 4:18:15 PM	UserPnp	20003	(7005)	۷		
	Event 0, AX88772					x	bell Save	
				Attac				
	General Details						View	•
						a Refresh	8	
	The following information was included with the event:						14. ₁₇	
	Non-authentic ASIX product.					Help	1	
	ASIX does not support it.					Event 0,		
	The specified resource type cannot be found in the image file					Event		
	I an Nama	Curtan					💿 Attac	
	Log Name.	aystem	10000400				Copy	•
	source:	AX88772	Logged:	"	10/2013 4	24	Save S.	
	Event ID:	0	Task Categ	gory: N	one		B D.C.	-
	Level:	Error	Keywords:	C	lassic		Ca Kerresn	2
	Jser:	N/A	Computer:	: w	8_x86		I Help	
	OpCode:							
	More Information:	Event Log Online Help						
						/		
	,						and a second	
						_		



5. How to identify authentic ASIX USB to LAN Product on Mac OSX

- 1. Refer to <u>Section 3</u> to download the latest ASIX USB to LAN Mac OSX driver.
- 2. Refer to the MAC OSX Driver Installation Guide to install the ASIX USB to LAN Mac OSX driver on your Mac OSX platform and make sure if the driver can be installed successfully or not?

If your USB to LAN device is ASIX product inside, you should install ASIX USB to LAN Mac OSX driver successfully as below figure.

 O Show All 	Network	٩
Locat	tion: Automatic	\$
OSB Ethernet Connected Connected IrDA Not Configured	Status:	Connected USB Ethernet is currently active and has the IP address 10.1.4.203.
• Wi-Fi 📀	Configure IPv4:	Using DHCP +
● iPhone USB Not Connected	IP Address:	10.1.4.203
Bluetooth PAN No IP Address	Subnet Mask: Router:	255.255.255.0
	DNS Server:	168.95.1.1, 10.1.4.100
	Search Domains:	wi2000.asix-local
+ - **		Advanced ?
Click the lock to prevent fu	irther changes.	Assist me Revert Apply



3. If you can't install ASIX USB to LAN driver successfully, you can refer to below figure to double check if your USB to LAN device is ASIX's product inside or not? If your USB to LAN device is Non-authentic ASIX product inside, you should see below "Non-authentic ASIX product, ASIX does not support it." error message by running the "sudo dmesg" command on the Mac OSX Terminal console.

allan\$ sudo dmesg Password:

..... DSMOS has arrived

macx swapon SUCCESS

AppleUSBMultitouchDriver::handleReport - not in path binary mode, received 0x74 data packet of length 58 virtual bool IOHIDEventSystemUserClient::initWithTask(task_t, void *, UInt32): Client task not privileged to open IOHIDSystem for mapping memory (e00002c1)

Authentic ASIX product normal messages

AppleUSBEthernet: start - Version number 3.9.0 AppleUSBEthernet: Input buffers 64, Output buffers 64 AppleUSBEthernet: Ethernet address 00:0e:c6:00:2a:36 AppleUSBEthernet::monitorLinkStatus - Link up at 100 Mbps - Full Duplex (PHY regs 5,6:0xc1e1,0x000b)

Sandbox: sandboxd(344) deny mach-lookup com.apple.coresymbolicationd AppleUSBEthernet::disable - Link down.

Non-authentic ASIX product error messages

AppleUSBEthernet: start - Version number 3.9.0 AppleUSBEthernet: Non-authentic ASIX product, ASIX does not support it.

.....



6. How to identify authentic ASIX USB to LAN Product on Linux

- 1. Refer to <u>Section 3</u> to download the latest ASIX USB to LAN Linux driver.
- 2. Change to the ASIX USB to LAN Linux driver source folder and then refer to below commands to build and install the compiled ASIX USB to LAN Linux driver on your Android/Linux platform. Run "**ifconfig -a**" and "**dmesg**" commands to make sure if the ASIX USB to LAN Linux driver was installed successfully or not?

make
make -C /lib/modules/3.5.7/build
SUBDIRS=/home/allan/AX88772C_772B_772A_760_772_178_LINUX_Driver_v4.9.0_Source modules
make[1]: Entering directory `/usr/src/linux-3.5.0'
CC [M] /home/allan/AX88772C_772B_772A_760_772_178_LINUX_Driver_v4.9.0_Source/asix.o
/home/allan/AX88772C_772B_772A_760_772_178_LINUX_Driver_v4.9.0_Source/asix.c: In function
'ax88772b_suspend':
/home/allan/AX88772C_772B_772A_760_772_178_LINUX_Driver_v4.9.0_Source/asix.c:812:6:
warning: unused variable 'tmp32'
Building modules, stage 2.
MODPOST 1 modules
CC /home/allan/AX88772C_772B_772A_760_772_178_LINUX_Driver_v4.9.0_Source/asix.mod.o
LD [M] /home/allan/AX88772C_772B_772A_760_772_178_LINUX_Driver_v4.9.0_Source/asix.ko
make[1]: Leaving directory `/usr/src/linux-3.5.0'
make install
su -c "cp -v asix.ko /lib/modules/3.5.7/kernel/drivers/net/usb && /sbin/depmod -a"
`asix.ko' -> `/lib/modules/3.5.7/kernel/drivers/net/usb/asix.ko'
insmod asix.ko
ifconfig -a
eth0 Link encap:Ethernet HWaddr 90:e6:ba:d8:94:84
UP BROADCAST MULTICAST MTU:1500 Metric:1
RX packets:0 errors:0 dropped:0 overruns:0 frame:0
TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)
eth28 Link encap:Ethernet HWaddr 00:0e:c6:00:2a:36
inet addr:192.168.20.144 Bcast:192.168.20.255 Mask:255.255.255.0
inet6 addr: fe80::20e:c6ff:fe00:2a36/64 Scope:Link
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:59 errors:0 dropped:0 overruns:0 frame:0
TX packets:67 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:16945 (16.9 KB) TX bytes:9426 (9.4 KB)
lo Link encan:Local Loonback
inet addr: 127.0.0.1 Mask: 255.0.0.0
inet addr: :1/128 Scope:Host
LIP I OOPBACK RUNNING MTU: 16436 Metric: 1
RX packets: 1558 errors: 0 dropped: 0 overruns: 0 frame: 0
TX nackets:1558 errors:0 dropped:0 overruns:0 carrier:0
RX packets:1558 errors:0 dropped:0 overruns:0 frame:0 TX packets:1558 errors:0 dropped:0 overruns:0 carrier:0



collisions:0 txqueuelen:0 RX bytes:126300 (126.3 KB) TX bytes:126300 (126.3 KB) # dmesg [620.345602] usb 2-6: new high-speed USB device number 15 using ehci hcd [620.490014] usb 2-6: New USB device found, idVendor=0b95, idProduct=772b [620.490025] usb 2-6: New USB device strings: Mfr=1, Product=2, SerialNumber=3 [620.490033] usb 2-6: Product: AX88772B [620.490038] usb 2-6: Manufacturer: ASIX Elec. Corp. [620.490043] usb 2-6: SerialNumber: 002A36 [620.518127] ASIX USB Ethernet Adapter:v4.9.0 23:06:44 Jul 11 2013 [620.518127] http://www.asix.com.tw [621.151696] eth%d: status ep1in, 8 bytes period 11 [621.152152] eth1: register 'asix' at usb-0000:00:13.2-6, ASIX AX88772B USB 2.0 Ethernet, 00:0e:c6:00:2a:36 [621.152209] usbcore: registered new interface driver asix [621.189489] eth28: rxqlen 0 --> 5 [621.189489] [621.190067] eth28: ax88772b - Link status is: 0 [621.208486] IPv6: ADDRCONF(NETDEV_UP): eth28: link is not ready [621.208606] IPv6: ADDRCONF(NETDEV_UP): eth28: link is not ready [622.978626] eth28: ax88772b - Link status is: 1 622.979022] IPv6: ADDRCONF(NETDEV_CHANGE): eth28: link becomes ready

3. You can refer to below figure to double check if your USB to LAN device is ASIX's product inside or not? If your USB to LAN device is Non-authentic ASIX product inside, you should see below "Non-authentic ASIX product, ASIX does not support it" error message by running the "dmesg" command on the Linux Terminal console.

root@fae-CM1525:/home/allan/AX88772C_772B_772A_760_772_178_LINUX_Driver_	_v4.9.0_Source# dmesg
[1055.808206] usb 2-6: new high-speed USB device number 17 using ehci_h	ncd
<pre>[1055.952627] usb 2-6: New USB device found, idVendor=0b95, idProduct=7</pre>	772b
[1055.952638] usb 2-6: New USB device strings: Mfr=1, Product=2, Serial	LNumber=3
[1055.952645] usb 2-6: Product: AX88772B	
[1055.952651] usb 2-6: Manufacturer: ASIX Elec. Corp.	
[1055.952656] usb 2-6: SerialNumber: 002A36	
[1055.954958] ASIX USB Ethernet Adapter:v4.9.0 23:06:44 Jul 11 2013	
[1055.954958] http://www.asix.com.tw	
[1056.586364] eth%d: status ep1in, 8 bytes period 11	
<pre>[1056.586820] eth1: register 'asix' at usb-0000:00:13.2-6, ASIX AX88772</pre>	2B USB 2.0 Ethernet, 00:0e:c6:00:2a:36
[1056.641899] eth28: rxqlen 0> 5	
[1056.641899] Authentic	ASIX product normal message
[1056.729412] eth28: ax88772b - Link status is: 0	
[1058.390136] eth28: ax88772b - Link status is: 1	
[1067.704738] usb 2-6: USB disconnect, device number 17	
[1067.705079] eth28: unregister 'asix' usD-0000:00:13.2-6, ASIX AX88772	2B USB 2.0 Ethernet
[10/9.//8/11] usb 2-6: new nigh-speed USB device number 18 using enci_n	
[10/9.912143] USD 2-6: New USB device found, lavendor=0D95, laProduct=/	
[1079.912154] USD 2-6: New USB device strings: MTF=1, Product=2, Serial	LNUMDEr=3
[10/9.912161] USD 2-6: PFODUCT: AX88//2B	
[10/9.91210/] USD 2-0: Manufacturer: ASIX Elec. Corp.	
[10/9.9121/2] USD 2-0; SerialNumber: 0004FC	
[10/9.918555] ASIA USB Ethernet Audpter: V4.9.0 25:00:44 Jul 11 2015	
[10/9.918333] ILLP://WWW.dstx.com.tw	Non outboatin ASIX menduat amon massage
[1080.585034] Non-adchenicc ASIA product	Non-aumentic ASIA product error message
[1080.585105] etb%d: Binding device failed: -19	
[1088 837492] usb 2-6: USB disconnect device number <u>19</u>	





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