

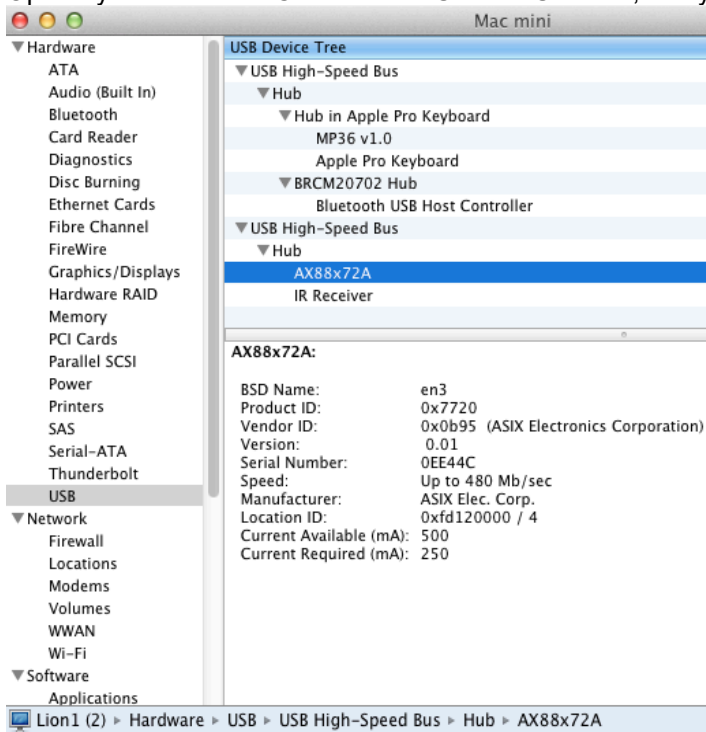
Application Note 280: ETHUSB Not Communicating on Mac OS X 10.9 or above

This application note outlines the steps to verify that the ETHUSB is installed correctly.

- Download and install installer revision **2.7.0** via the link below. This driver is compatible with Mac OS X 10.9-10.13.
 - <http://www.asix.com.tw/download.php?PItemID=105&sub=driverdetail>
 - Asix manufactures the chip inside various brands of this adapter, the AX88772B

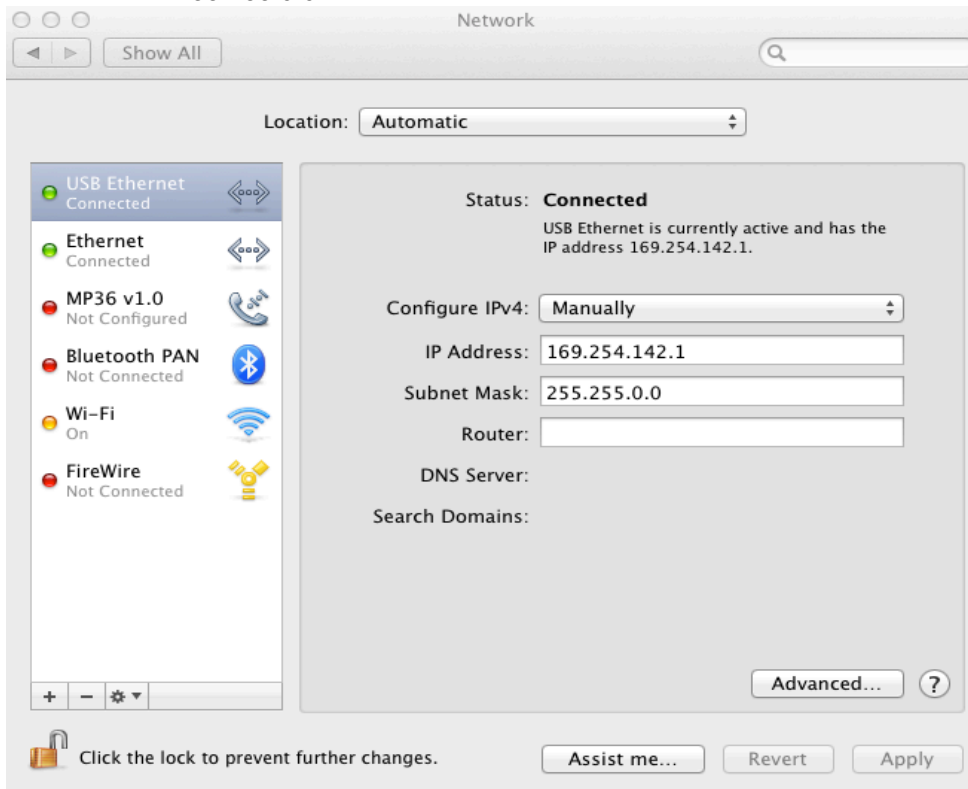
Driver Type	Revision	Release Date	Description	File Size	
Apple Mac OS X 10.9 and above Drivers Installer	V2.7.0	2018-09-27	For Apple x86/Power PC, 32-bit/64-bit platforms	1.2 MB	

- To install, standard Mac practice (mount .dmg, double click the .pkg, follow instructions...will require a computer restart).
- After computer reboots, verify that the adapter is recognized.
 - Open System Profiler. Connect ETHUSB. In USB tab, verify that the adapter appears:

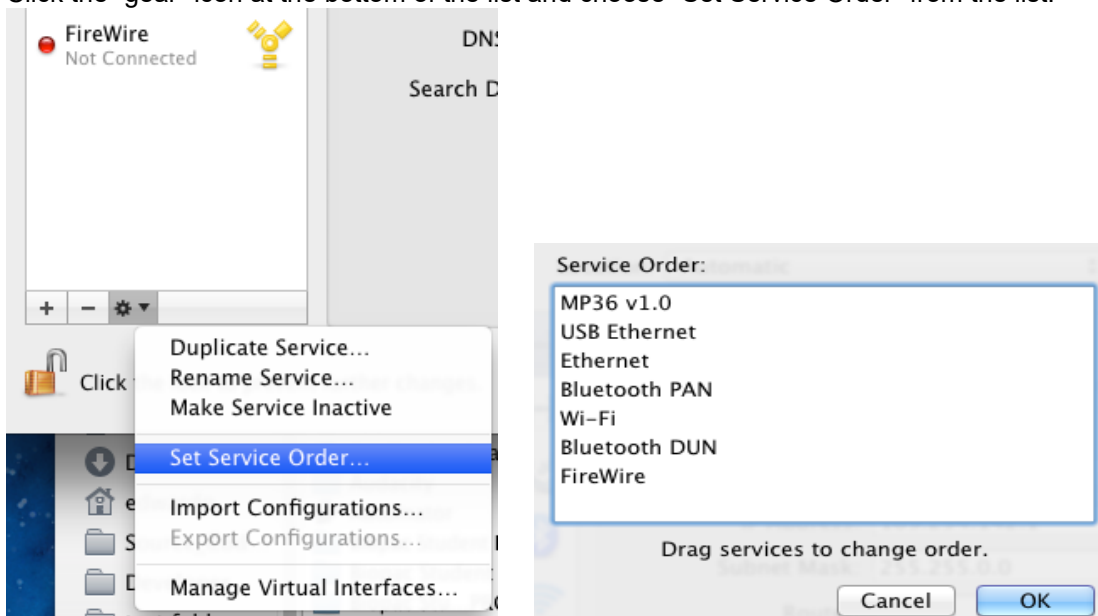


- Scroll down to Software > Extensions and search for AX88772 in the list and verify that version 2.7.0 is installed.
- Configure the network. Open System Preferences > Network. Select "USB Ethernet" to adjust the adapter settings. Set them to the following manual settings:
 - Configure: Manually
 - IP: 169.254.142.1

- Subnet Mask: 255.255.0.0



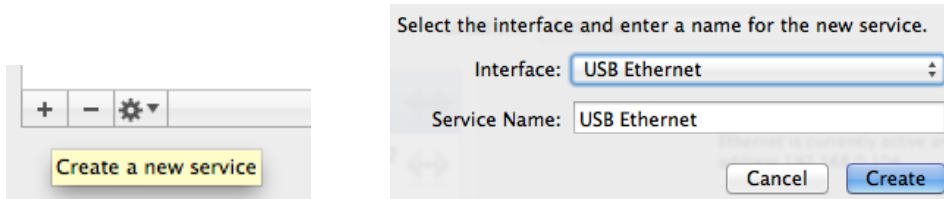
5. **IMPORTANT:** Adjust the network ordering such that USB Ethernet is first on the list.
 - a) Click the “gear” icon at the bottom of the list and choose “Set Service Order” from the list.



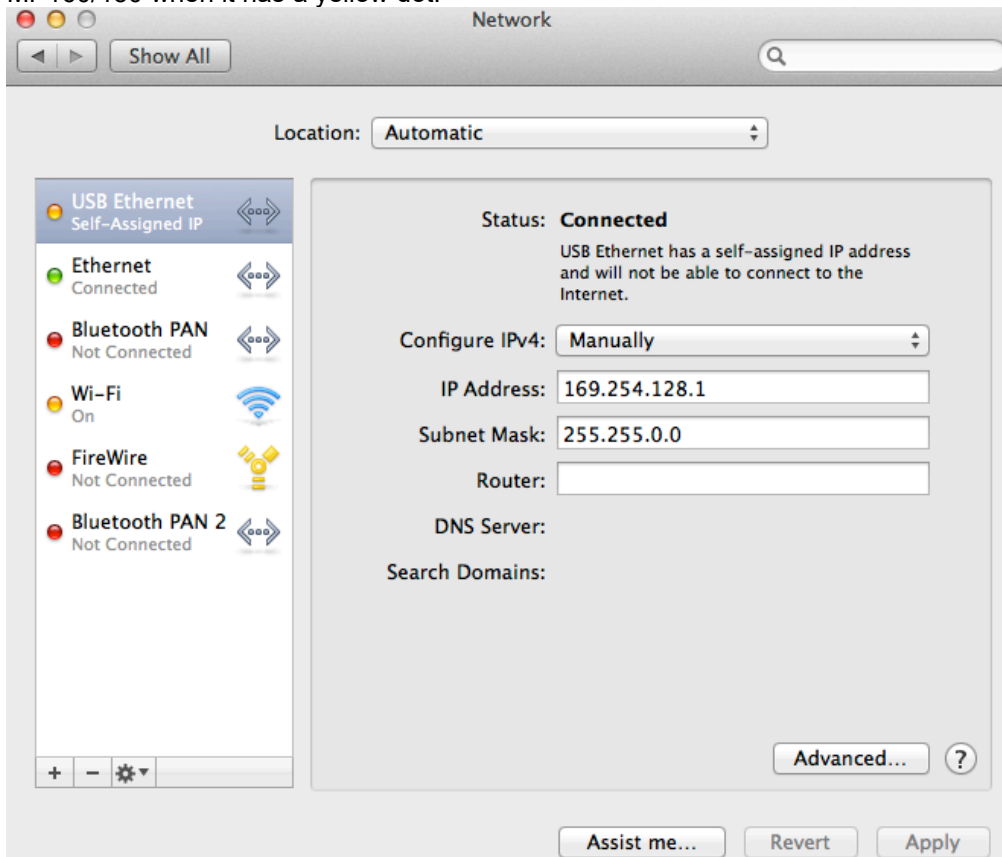
- b) In the dialog, drag “USB Ethernet” above Ethernet in the list.
 - c) Click OK and close System Preferences to apply the network settings.
6. Turn on the MP160/150 (or power cycle it if it was on).
 7. Check the amber light on the ETHUSB.
 - The amber light should turn on when the MP160/150 is on and may blink periodically but should generally be solid amber.
 8. Launch AcqKnowledge.
 - It should now be possible to establish communications with the MP160/150.

For Mac OS X 10.8 or 10.9

- In section (2), the driver version will be listed as 2.7.0 if the 10.9 driver is installed.
- Add the following intermediate steps:
 - a) (2.5) Now the USB network interface must be added (10.9+). Open System Preferences > Network. Click on the “+” in the lower left to “Create a new service.”



- b) In the next dialog that appears, select the "USB Ethernet" interface and give it a default service name. "USB Ethernet" will now be available in the list in the main dialog.
- c) (3.5) Unlike previous operating systems, when the cable is connected it will show up as functional with an MP160/150 when it has a yellow dot.



For Mac OS X 10.10.x – 10.12.x

For OS X 10.10.x – 10.12.x, the following additional steps may be required.

1. Make certain all previous steps were followed and the MP160/150 is connected to the ETHUSB Ethernet adapter.
2. Disable all Ethernet and WiFi access. (Click the “gear” icon and choose “Make Service Inactive.” This allows the computer to locate the MP160/150 connected to the Ethernet adapter independently of other MP160/150s on the network.)
3. **In Mac OS X 10.11.x**, make sure a gateway address is present in the USB Ethernet “**Router:**” field. This is due to a known 10.11.x issue where IP traffic cannot be routed unless the network has a gateway. (Enter 169.258.0.1 into the “Router” field and click “Apply.”)
4. Launch the *AcqKnowledge* software.
5. If desired, re-enable the Ethernet and WiFi access.
6. If the Ethernet is enabled, the above steps may need to be repeated each time *AcqKnowledge* is launched.

Workarounds:

- Use a direct crossover cable connection from the MP160/150 to the computer Ethernet port.
- Establish communication via the local network without using the crossover cable or ETHUSB adapter.

For Mac OS X 10.13 and higher

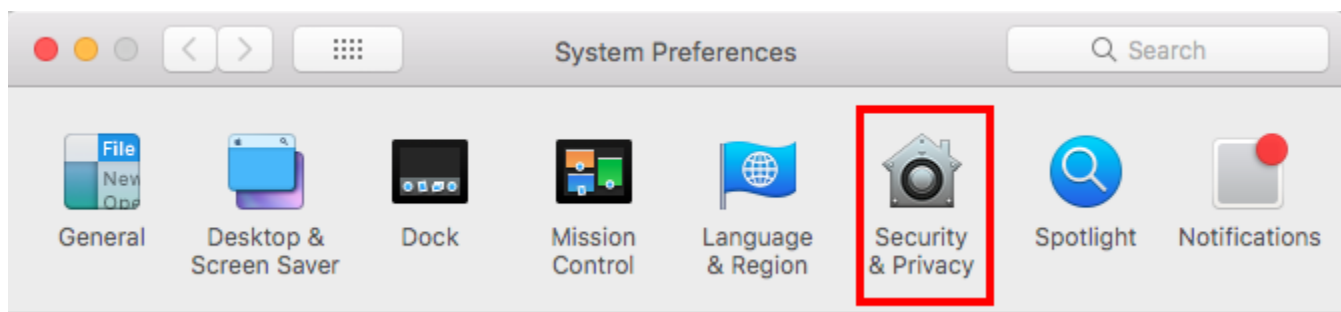
Due to enhanced security protocols in OS 10.13 and higher, first-time driver installations are routinely “blocked” by the operating system as shown in the example dialog below. To complete the ETHUSB Ethernet Adapter driver installation, it’s necessary to access the “**System Preferences > Security & Privacy**” options and manually “allow” any **new** driver installation.



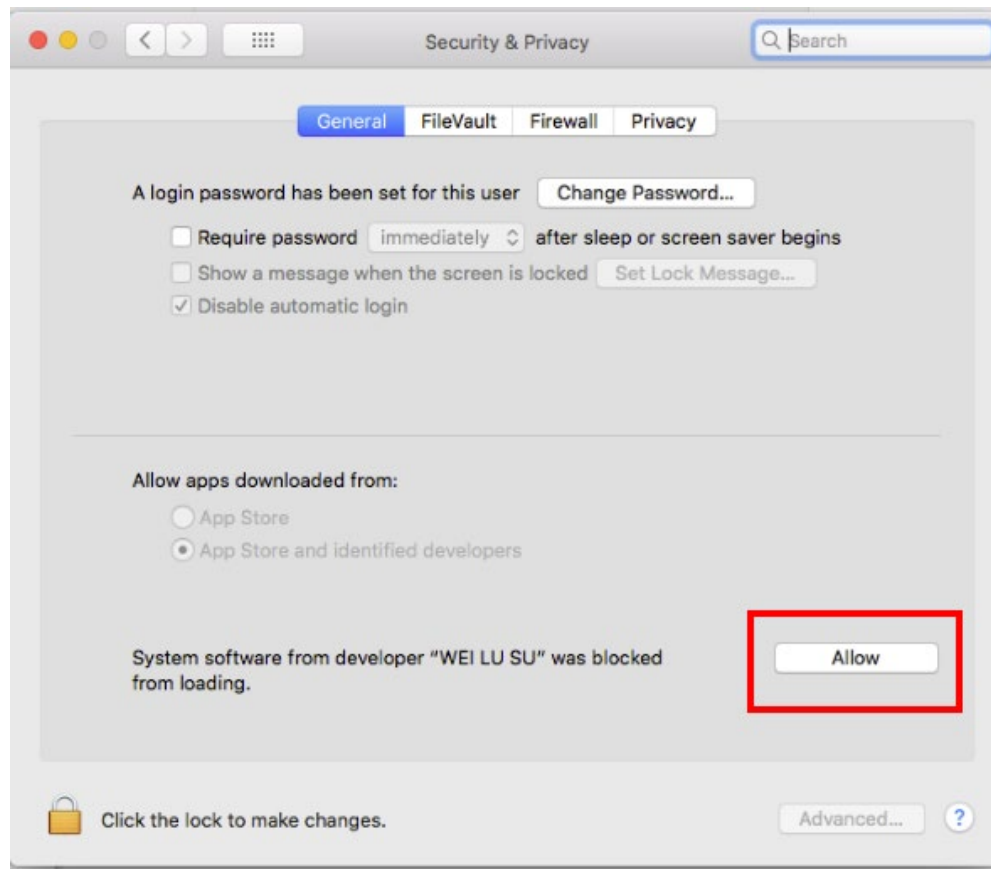
If you see the above dialog, perform the following steps:

NOTE: In certain cases, the “System Extension Blocked” warning dialog shown above may **not** appear and it won’t be apparent that ETHUSB driver installation was blocked until the user launches the newly installed BIOPAC software. In this instance, a “Hardware not found” warning dialog will appear. Should this occur, proceed to Steps 1 and 2 to correct the problem.

1. Go to Finder > **System Preferences > Security & Privacy**.



2. Locate “**System software from developer “WEI LU SU” was blocked from loading**” at bottom of screen and click “**Allow.**” You will need Administrator privileges to make this change.



3. Restart the computer if prompted.

For Mac OS X 11

NOTE: Depending on when ETHUSB was purchased, it may have chip AX8872, AX88772A, or AX88772B. BIOPAC currently ships ETHUSB with AX88772B. Users with chip AX8872 or AX88772A may require different adapter or newer ETHUSB. ASIX provides a page for AX88772A, however that page does not offer a driver that was released since the release of macOS 11.

ASIX Driver

1. Download the ASIX Driver that supports macOS 11 for the AX88772B chip (and may also support the AX88772A chip).
 - a. Follow this link to Version 1.2.0: https://www.asix.com.tw/en/product/USBEthernet/High-Speed_USB_Ethernet/AX88772B
 - b. Click "Download" in the menu bar or scroll down the page to "Download", expand the "Software & Tools" section to see the following:

Software & Tools

Drivers

Apple macOS 11.3 and above Drivers Installer For Intel and Apple silicon platforms	Version	Release Date	File Size	
	1.3.0	2021-08-25	1.3 MB	↓

2. Download the driver for Apple macOS11.3.
3. Driver installation may require the user to override some Apple security features as ASIX hasn't completed all certifications. The following website provides [steps for installing the AX88772B driver](#). Though the site does not reference the AX88772B driver specifically, the steps are applicable for multiple ASIX products, including AX88772B.
4. Turn Wi-Fi **OFF** before launching *AcqKnowledge*.
5. After *AcqKnowledge* has launched and the system has established communication with the MP160, Wi-Fi can be turned back and used during data collection.
6. If turning off Wi-Fi is insufficient, try the additional steps outlined above for Mac OS X 10.8 – 10.11.x.