



# ZONE X 1208 (D)

HYBRID ARCHITECTURE DSP MATRIX - 12 IN / 8 OUT  
LDZONEX1208, LDZONEX1208D

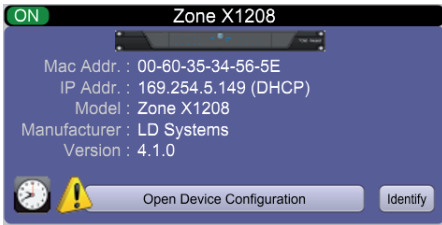
# TABLE OF CONTENTS

<b>FIRMWARE UPGRADE PROCEDURE (ETHERNET)</b>	<b>3</b>
<b>USB FIRMWARE RECOVERY AND FIRMWARE COMPONENTS</b>	<b>5</b>
MAINBOARD USB BIOS UPGRADE	5
CPU/DSP BOARD	8
FRONT PANEL USB BIOS UPGRADE	11
<b>ZONEX 1208 USB LOG FILE</b>	<b>13</b>
<b>NETWORK VIEW ERROR MESSAGES AND TROUBLESHOOTING</b>	<b>16</b>
FIRMWARE UPGRADE VERSIONS	16
🚫 RED CIRCLE WITH BACKSLASH	16
⚠️ YELLOW TRIANGLE WITH AN EXCLAMATION MARK	16
🕒 THE DEVICE CLOCK IS NOT SYNCHRONIZED	16
NO PROJECT FILE IS STORED IN THE DEVICE.	17
NO DATA	17
DSP PROCESSING ERROR (1)	17
DSP PROCESSING ERROR (2)	17
IP ISSUE ERROR	17
FLICKERING ON/OFF STATUS	18
XILICA DESIGNER CRASHING	19
HEARTBEAT MONITOR AND NETWORK CAPTURE	19
<b>IP RESET</b>	<b>20</b>
<b>DEVICE NETWORK CONFIGURATION</b>	<b>20</b>
SETUP A MANUAL STATIC IP ADDRESS	21
SETUP A DYNAMIC IP ADDRESS (DHCP MODE)	23
FINDING YOUR COMPUTER LOCAL IP ADDRESS IN WINDOWS 10	25
FINDING YOUR COMPUTER LOCAL IP ADDRESS ON A MAC	26
ASSIGNING A STATIC IP ADDRESS TO THE HOST COMPUTER IN WINDOWS 10	26
ASSIGNING A STATIC IP ADDRESS ON A MAC	28
CONNECTIVITY TROUBLESHOOTING	29

# FIRMWARE UPDATE PROCEDURE (ETHERNET)

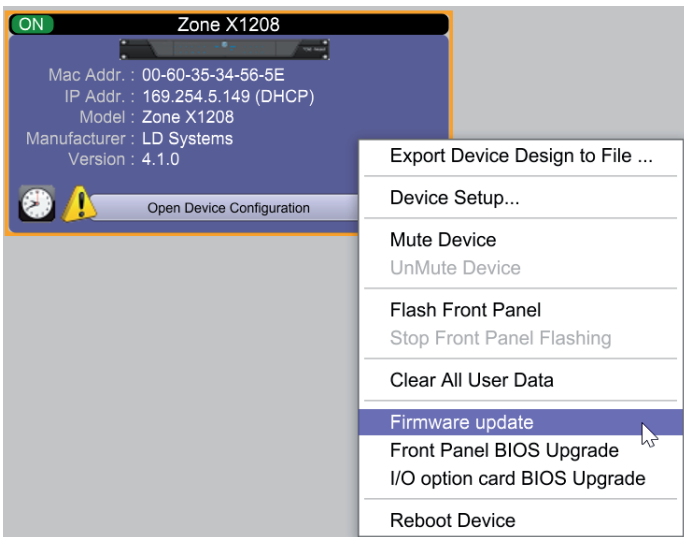
Please save any design files from the device onto your computer as all programmed data on the device will be erased during the upgrade procedure.

To perform a standard firmware upgrade via ethernet the device must be online and operational.

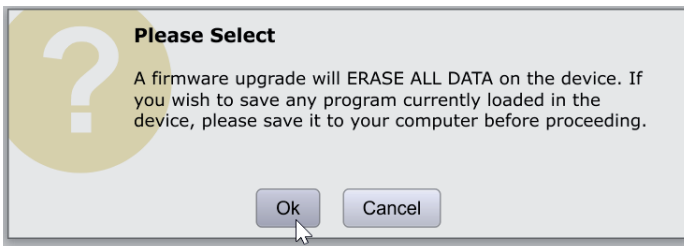


Download the latest firmware version for ZoneX 1208(D) from the product's download section on the LD Systems website.

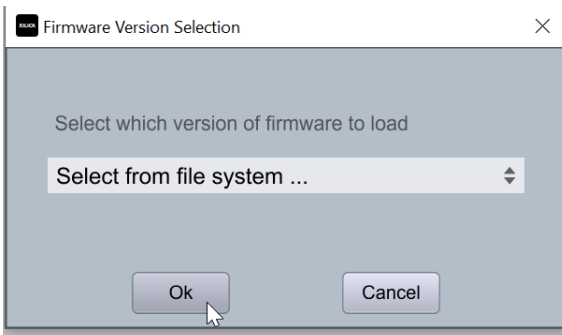
In Network View, right-click the device block and select "Firmware update".



Please note that the firmware upgrade process will erase all data on the device. Make sure you save your changes beforehand. Click "Ok" to proceed.

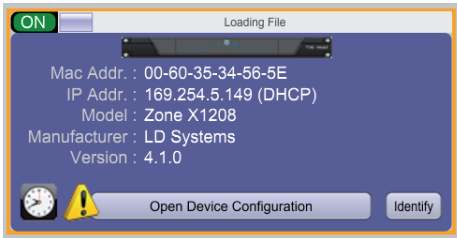


A drop-down menu will appear giving several choices. Please select the option "Select from file system..." and click "Ok".



The computer's file explorer will be displayed. Navigate to the folder in which the new firmware file has been downloaded, select it and click "Open".

A status bar in the device window will monitor the firmware upgrade process.



**DO NOT POWER OFF THE DEVICE.** Powering off the device during a firmware upgrade can result in a complete corruption of the processor. If this however happens, a USB firmware recovery must be completed. For more details regarding USB firmware recovery please check section **“USB Firmware Recovery and Firmware Components”**.



Once the Firmware file has been loaded to the device, it will automatically restart and update its internal data. This may take up to several minutes. During this period the device network indicator will turn red and appear offline. Please wait.



Once the firmware upgrade is completed, the device block will display a green **“ON”** indicator.



**NOTE:** the yellow **“No Data”** message means that no design has yet been loaded to the device.

## USB FIRMWARE RECOVERY AND FIRMWARE COMPONENTS

For ZoneX 1208(D) there are 3 different hardware components that require proper firmware to be loaded so that they function correctly. These components are:

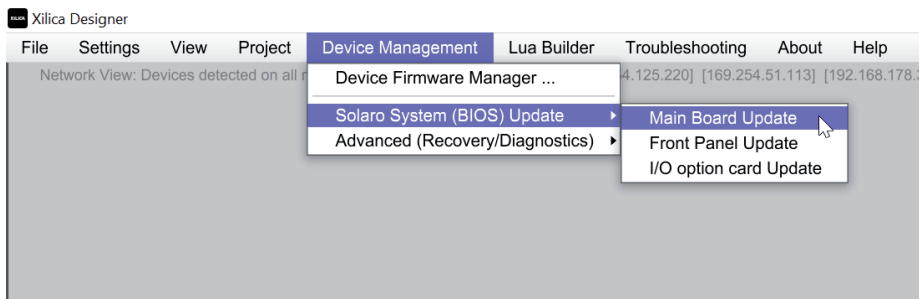
- Mainboard
- CPU/DSP Board
- Front Panel

The firmware version of these components can be upgraded through USB connection. To upgrade each individual component, please follow the procedures described below:

### MAINBOARD USB BIOS UPGRADE

**Please note that the USB BIOS Upgrade will erase the entire device. Make sure you save your changes beforehand.**

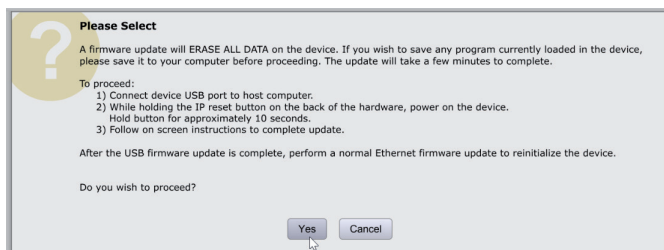
- Download the appropriate USB driver for PC or Mac and the latest ZoneX 1208(D) mainboard BIOS file (in .xw format) from the product download section on the LD Systems website.
- Install the USB driver compatible with your computer's OS.
- Activate Recovery Mode:
  1. Power off the device.
  2. Push and hold the IP reset button, then power on the device and wait until the blue LED in the rear panel's network card starts flashing in a special pattern. It will quickly flash 8 times in two seconds and then off for another second. This LED pattern indicates that the device is in Recovery Mode.
- Connect the device's USB port to a host computer. Please note that it is necessary to use a USB data transfer cable. Once connected, start Xilica Designer and go into Network View.
- Select **"Device Management" → "Solaro System (BIOS) Update" → "Main Board Update"**



- **NOTE:** Be sure to close any open projects before performing USB firmware recovery, otherwise the software will not display the options within the **"Device Management"** menu and instead will indicate a warning message **"Operation NOT available under project editing mode!"**



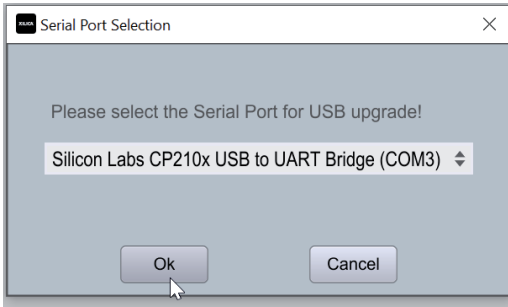
- Please note that the firmware upgrade process will erase all data on the device. Make sure you save your changes beforehand. Click **"Yes"** to proceed.



- Another pop-up window will appear asking to select the firmware file. Click **“Ok”** to open the computer’s file explorer and navigate to the folder in which the new firmware file has been downloaded. Select it and click **“Open”**.



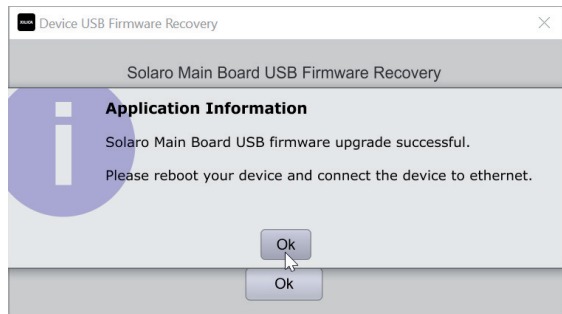
- Select the appropriate Serial Port for the USB connection and click **“Ok”**.



- A status progress bar will display the firmware upgrade process.



- This should take around 2 minutes. Once finished an application information message will be displayed. Click **“Ok”** to confirm.

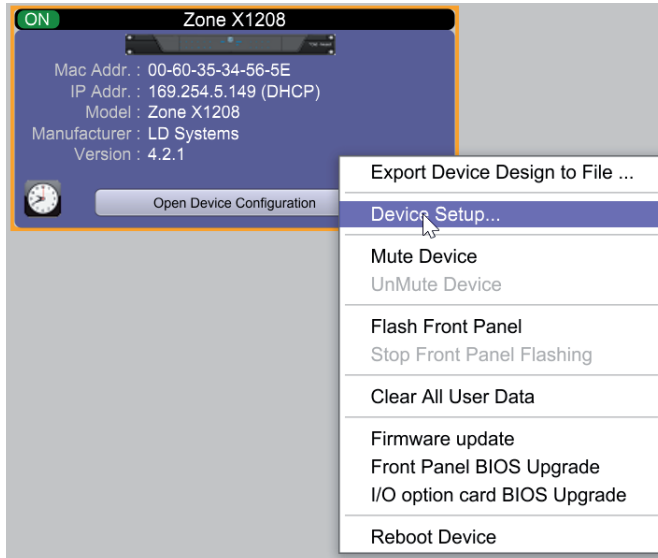


- A status message will display **“USB upgrade successful”**. Click **“Ok”** to proceed.

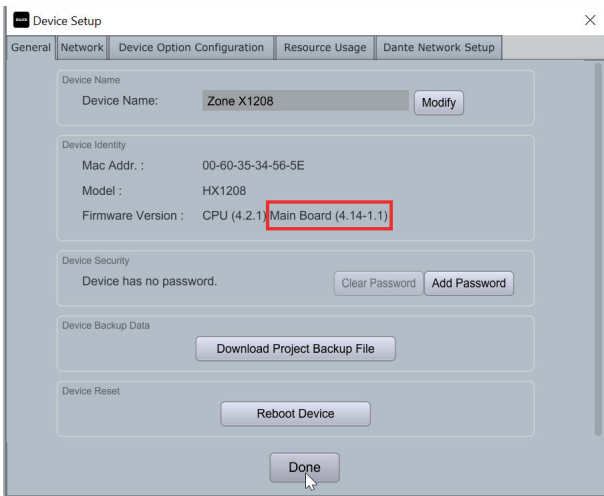


- When done, please power off the device and connect it to the host computer via ethernet. Then, power on the device and wait for it to appear online in Network View.

- To confirm that the device is running the latest mainboard firmware version, in Network view right-click on the device block once it appears online and select **"Device Setup..."**.



- In **General tab**, under **Device Identity** the Main Board firmware version displays the current installed version.



## CPU/DSP BOARD

Under normal situation and when the device is detected by Xilica Designer, the device firmware file can be upgraded through ethernet. This firmware upgrade procedure has been previously described in section **“Firmware Upgrade Procedure (Ethernet)”**.

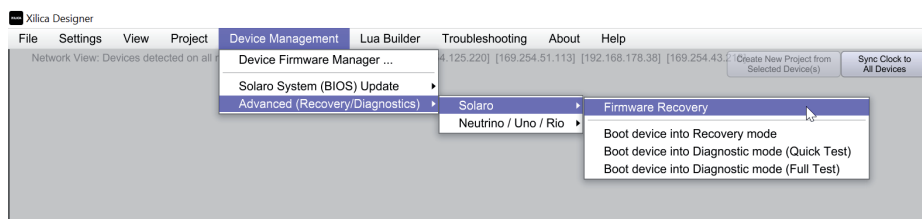
However, if the device's OS is corrupted for any reason during upgrade (e.g. device is accidentally powered off during a firmware upgrade procedure), users must perform a full firmware recovery to the CPU board via USB. For this, the full firmware file (with a size of approximately 100 Mbytes in .xfw format) should be obtained from the product's download section on the LD Systems website.

Once downloaded, the procedure consists of the following steps:

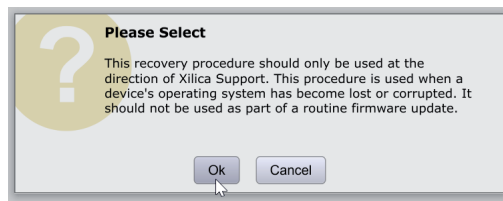
- Download the appropriate USB driver from the product's download section on the LD Systems website.
- Install the USB driver compatible with your computer's OS.
- Since ethernet access will be required during the second stage of the recovery procedure, please connect the ethernet port of ZoneX as well as the ethernet port of the host computer to an enabled DHCP server. Also, make sure that DHCP network settings are enabled on your PC/Mac.
- Activate Recovery Mode:
  1. Power off the device.
  2. Push and hold the IP reset button. Then power on the device and wait until the blue LED in the rear panel's network card starts flashing in a special pattern. It will quickly flash 8 times in two seconds and then off for another second. This LED pattern indicates that the device is in Recovery Mode.
- Connect the device's USB port to a host computer. Please note that it is necessary to use a USB data transfer cable. Once connected, start Xilica Designer and go into Network View.
- **NOTE:** Be sure to close any open projects before performing USB firmware recovery, otherwise the software will not display the options within the **“Device Management”** menu and instead will indicate a warning message: **“Operation NOT available under project editing mode!”**



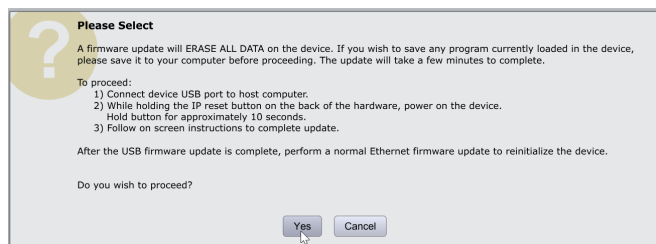
- Select **“Device Management”** → **“Advanced (Recovery/Diagnostics)”** → **“Solaro”** → **“Firmware Recovery”**.



- A pop-up message will appear indicating that this kind of procedure is only to be used in case of OS corruption and not as a standard firmware update routine. Click **“OK”** to continue if you wish to perform a USB firmware recovery.



- Please note that the firmware upgrade process will erase all data on the device. Make sure you save your changes beforehand. Click **“Yes”** to proceed.

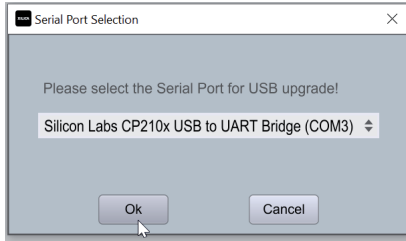




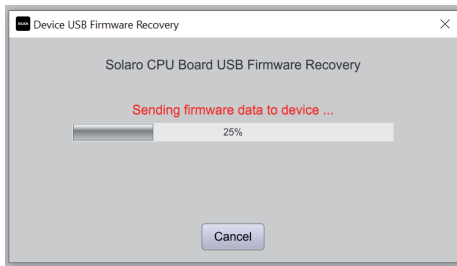
- Another pop-up window will appear asking to select the firmware file. Click **“Ok”** to open the computer’s file explorer and navigate to the folder in which the new firmware file has been downloaded. Select it and click **“Open”**.



- Select the appropriate Serial Port for the USB connection and click **“Ok”**.



- A status progress bar will display the firmware upgrade process.



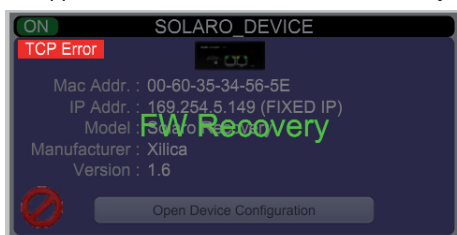
- The recovery involves erasing the entire device. This part of recovery is going to take around 15-20 minutes to finish. Once finished, an application information message will be displayed. Click **“Ok”** to confirm.



- A status message will display **“USB upgrade successful”**. Click **“Ok”** to proceed.



- When this part is done, the device will automatically reboot and appear in Network view. At this stage the device recovery is only half done. It will appear in the Network view as in **“Recovery Mode”**.



- In this mode, the only action available is to perform the second half of the recovery. Right-click the device block and select **"Firmware Recovery"**.



- A pop-up warning will appear stating that the firmware upgrade process will erase all data from the device. Click **"OK"** to proceed.



- When asked to select the firmware file, please choose the same .xwf firmware recovery file (approximately 100 Mbytes) indicated in the first stage of the recovery procedure. The application will perform the second stage of recovery through ethernet. This will take around 5 minutes and the device block will display the following stages:

1. Loading the firmware file



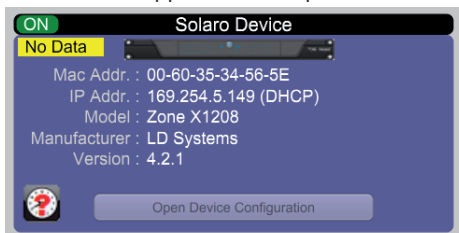
2. Firmware update in progress. This is a critical stage, please do not power off the device during this stage.



3. Once the firmware update is done, the device block will appear offline in Network View. **Please wait and do not power off or reboot the device.**



4. The recovery process is completed once the device appears online.

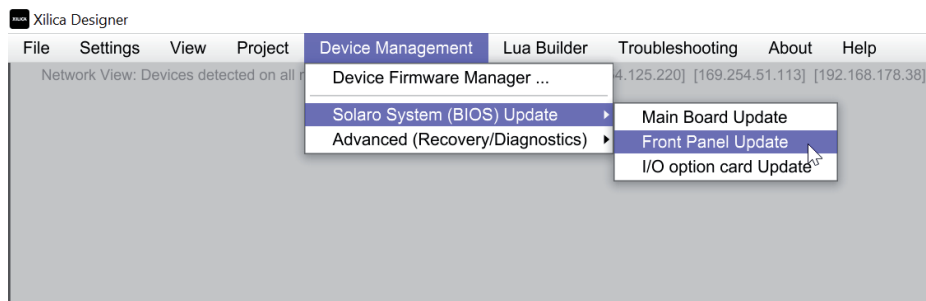


## FRONT PANEL USB BIOS UPGRADE

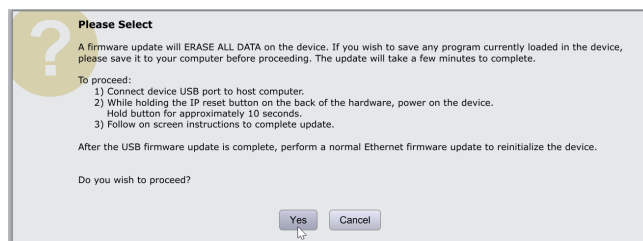
- Download the appropriate USB driver and the latest ZoneX 1208 (D) front panel BIOS from the product's download section on the LD Systems website.
- Install the USB driver compatible with your computer's OS.
- Activate Recovery Mode:
  1. Power off the device.
  2. Push and hold the IP reset button, then power on the device and wait until the blue LED in the rear panel's network card starts flashing in a special pattern. It will quickly flash 8 times in two seconds and then off for another second. This LED pattern indicates that the device is in Recovery Mode.
- Connect the device's USB port to a host computer. Please note that it is necessary to use a USB data transfer cable. Once connected, start Xilica Designer and go into Network View.
- **NOTE:** Be sure to close any open projects before performing USB firmware recovery, otherwise the software will not display the options within the "Device Management" menu and instead will indicate a warning message: "Operation NOT available under project editing mode!"



- Select "Device Management" → "Solaro System (BIOS) Update" → "Front Panel Update"



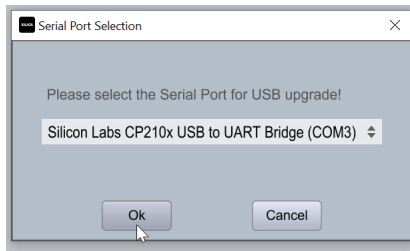
- Please note that the firmware upgrade process will erase all data on the device. Make sure you save your changes beforehand. Click "Yes" to proceed.



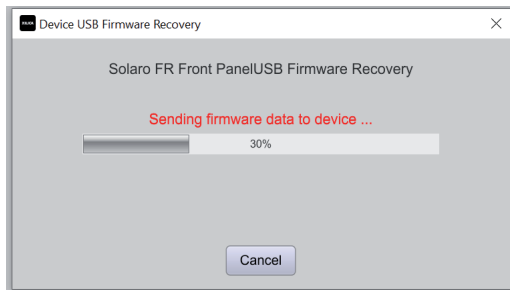
- Another pop-up window will appear asking to select the firmware file. Click "Ok" to open the computer's file explorer and navigate to the folder in which the new firmware file has been downloaded. Select it and click "Open".



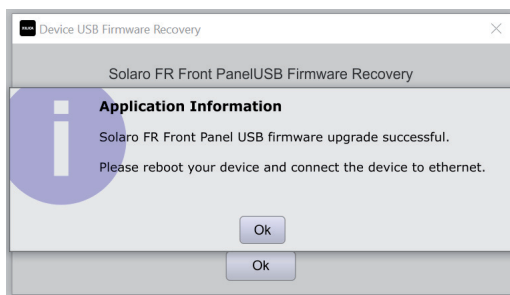
- Select the appropriate Serial Port for the USB connection and click **“Ok”**.



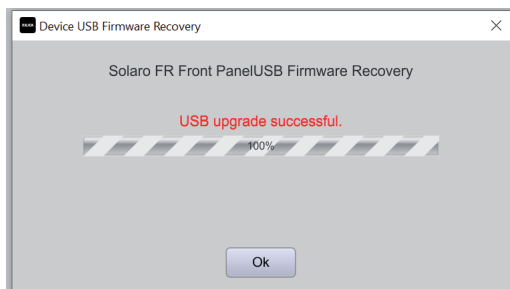
- A status progress bar will display the firmware upgrade process.



- This upgrade process should take around 2 minutes. When finished an application information message will be displayed. Click **“Ok”** to confirm.



- A status message will display **“USB upgrade successful”**. Click **“Ok”** to proceed.



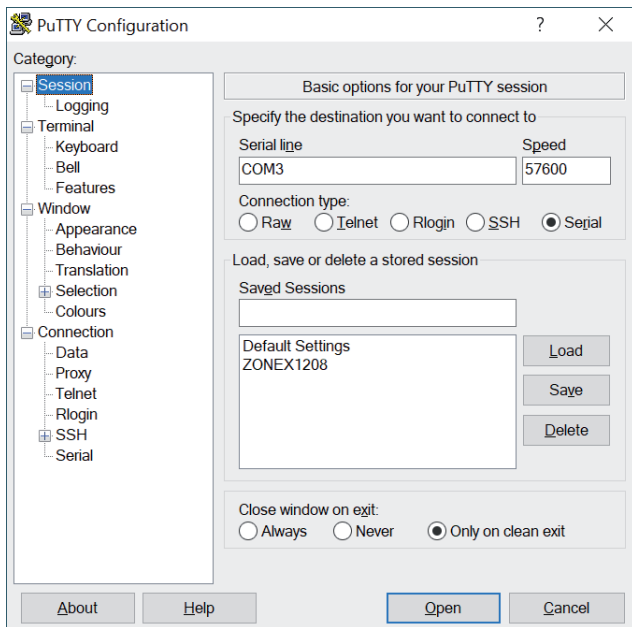
- When done, please power off the device and connect it to the host computer via ethernet. Then, power on the device and wait for it to appear online in the Network View.

## ZONEX 1208 USB LOG FILE

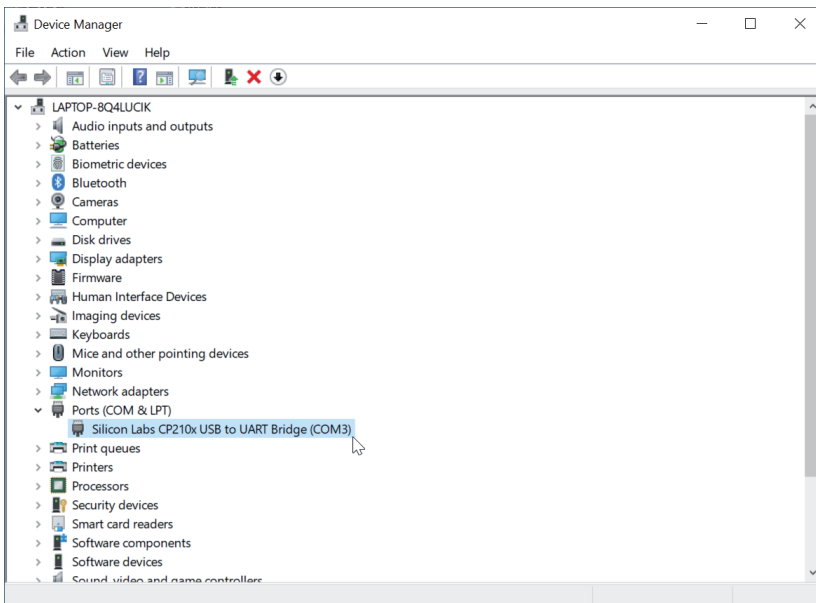
For Troubleshooting purposes and only when requested by LD Systems customer support department or the official LD Systems distributor, users can obtain a USB Log File from a ZoneX1208(D) processor. To achieve this, a serial terminal program such as PuTTY is required. Download the latest version of PuTTY from [www.putty.org](http://www.putty.org)

To obtain a USB Log File using PuTTY please follow the procedure described below:

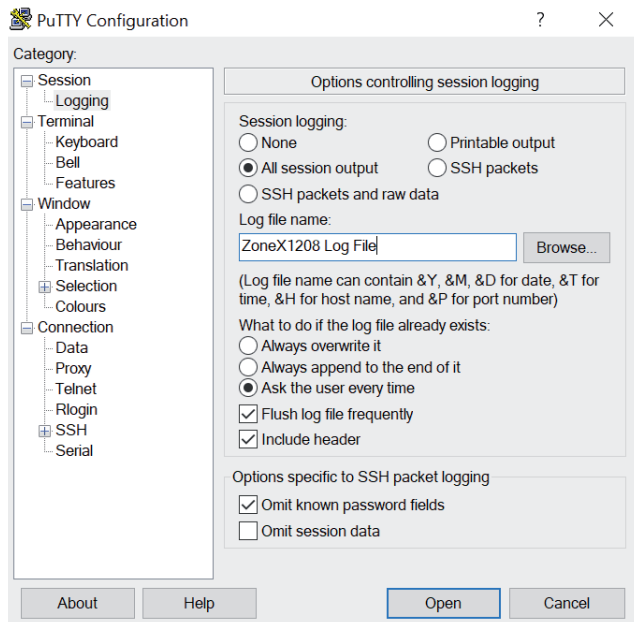
- Power off the device.
- Run PuTTY.
- Select **“Session”** in the Category menu and under **“Connection type”** select **“Serial”**.



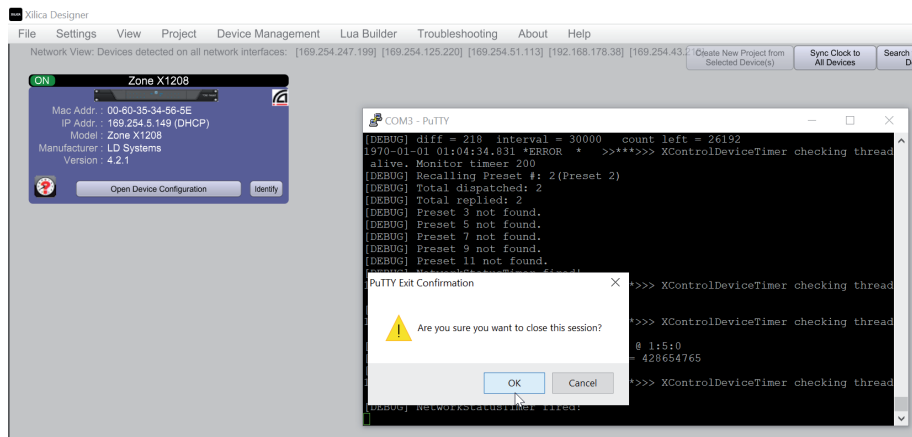
- Under **“Serial line”** type in the appropriate serial port **“COM number”** (the active serial port number can be found in the **“Device Manager”** under **“Ports (COM&LPT)”**).



- Under “**Speed**” type in the following value: **57600**
- In the Category menu, under “**Session**” select “**Logging**”.
- Under “**Session logging**” select “**All session output**”.
- Enter the Log File name (e.g. “**ZoneX1208 Log File**”).



- Click “**Browse**” to specify the location where the USB Log File should be stored.
- Click “**Open**” to open the PuTTY Session.
- Power on the device and open Xilica Designer and go to Network View.
- Wait until the unit appears online.
- While the device is booting up, PuTTY is obtaining all the necessary information for creating the Log file.
- Once the device is online PuTTY can be closed. Click “**OK**” to close the session.



- By closing PuTTY a Log file has been automatically generated.
- Navigate to the folder where the Log File has been saved and open to check if the file was successfully generated.

```

ZoneX1208 Log File - Notepad
File Edit Format View Help
===== PUTTY log 2021.04.23 13:36:42 =====

U-Boot 2015.01 ADI-1.2.0-gb68310e-dirty (May 10 2019 - 10:58:33)

CPU:  ADSP ADSP-SC589-0.1 (Detected Rev: 1.1) (spi flash boot)
VCO:  450 MHz, Cclk0: 450 MHz, Sclk0: 112.500 MHz, Sclk1: 112.500 MHz, DCLK: 450 MHz
OCLK: 150 MHz
I2C:  ready
DRAM:  512 MiB
MMC:   SC5XX SDH: 0
SF: Detected W25Q256 with page size 256 Bytes, erase size 4 KiB, total 32 MiB
*** Warning - bad CRC, using default environment

In:    serial
Out:   serial
Err:   serial
other init
signalling external MCU
Net:   dwmac.3100e000
Boot Skip is 3 total random characters 0, RETURN char 0
Hit 'ENTER' to stop autoboot:  4 3 2 1 0
SF: Detected W25Q256 with page size 256 Bytes, erase size 4 KiB, total 32 MiB
SF: 20480 bytes @ 0xff0000 Read: OK
SF: 11403264 bytes @ 0x510000 Read: OK
## Booting kernel from Legacy Image at 80000000 ...
   Image Name:   Linux-4.0.0-ADI-1.2.0
   Image Type:   ARM Linux Kernel Image (uncompressed)
   Data Size:    5655136 Bytes = 5.4 MiB
   Load Address: 80008000
   Entry Point:  80008000
   Verifying Checksum ... OK
## Flattened Device Tree blob at 8f000000
   Booting using the fdt blob at 0x8f000000
   Loading Kernel Image ... OK
   Loading Device Tree to 8fe59000, end 8fe5f9d4 ... OK
  
```

- Once the file has been checked and the content is similar to the example above, please send it over to LD Systems customer service support (customerservice@adamhall.com), or your respective official LD Systems distributor to get further support.

# NETWORK VIEW ERROR MESSAGES AND TROUBLESHOOTING

## FIRMWARE UPGRADE VERSIONS

LD Systems ZoneX firmware upgrades use a numbering scheme of **X.Y.Z** (e.g. 4.2.1).

- **X** is a major version which means a significant modification on compatibility of different communication protocols. If the software Xilica Designer and ZoneX device(s) have different major versions, they will not work together and this will cause unexpected issues.
- **Y** is a minor version which means there are functionality changes, however the communication protocol will remain compatible. Only specific new features will not function properly but in general older features will still work fine.
- **Z** is the build number. The build number is used when a bug fix version is available.

If the device block displays a symbol or icon, hover over the icon to view the message.

### RED CIRCLE WITH BACKSLASH

The major version expected by Xilica Designer is different from the device's major version. This will cause a communication breakdown and the device's firmware needs to be updated.

### YELLOW TRIANGLE WITH AN EXCLAMATION MARK

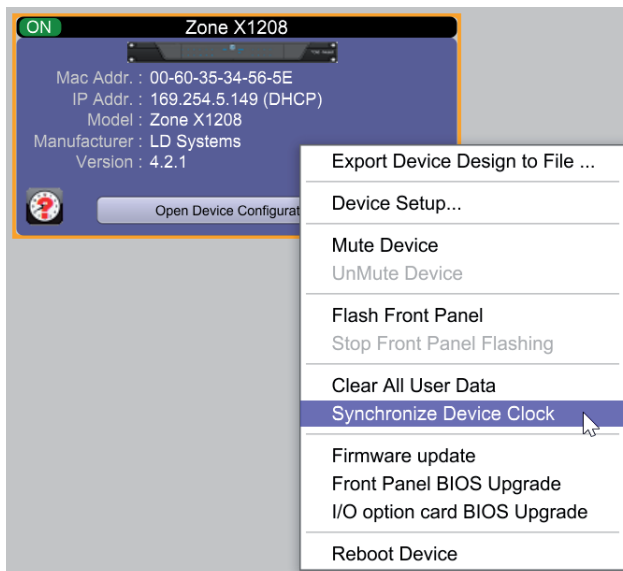
The detected device has a lower minor version as compared to the recommended minor version stored in Xilica Designer. In this situation, some new features provided in Xilica Designer will not work in the device. We recommend upgrading the device's firmware. However, if the user is not using any new features and does not wish to upgrade, it will still work.

### THE DEVICE CLOCK IS NOT SYNCHRONIZED

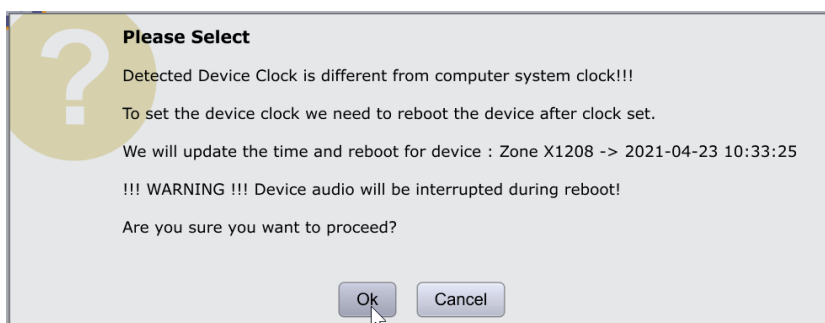
Xilica Designer provides a function which enables synchronization between the host computer's clock and the device's real-time clock. In Network view, a clock icon will be displayed in the lower left corner of the device block. When online, the device will check its internal clock and confirm that it is synchronized with the host computer. If the clock is correct, it will display a clock icon.

If the clock is different than the one from the host computer, the clock will display a question mark on top of the icon. To solve this issue, please follow the next steps:

- To sync only one device:
  - Right click the device block → **"Synchronize Device Clock"**



- A pop-up message appears saying the device clock is different from the computer system clock. Click **"Ok"** to synchronize it.





- This process will reboot the device and once it is online again the clock icon will display a synchronized clock.



- To sync many devices at once:
  - At the top right corner in Network View → Sync clock to all devices

## NO PROJECT FILE IS STORED IN THE DEVICE.

There is no design in the device. Create a new design or import a design.

## NO DATA

The processor needs a design to be loaded into the device. If the same error message persists even after loading a design to the device, please restart the device and reboot Xilica Designer.

## DSP PROCESSING ERROR (1)

A corrupted pre-designed project was loaded into the device. Try reloading the pre-designed DSP file into the device. If there is no change, restart the device, reboot Xilica Designer and reload the file.

## DSP PROCESSING ERROR (2)

The pop-up message shown will print out an error code. Please retry the Firmware Upgrade Procedure.

## IP ISSUE ERROR

### TCP error:

There is a network connection issue with the device. When a device is detected, Xilica Designer tries to establish a TCP connection to the device to obtain device information. If it fails to obtain the device information, a TCP error message will be displayed.

When communication is sent through TCP, Xilica Designer sends a message and then waits for the device to respond with a timeout period of 1 minute. If the network is not set up properly and the message cannot get to the device, Xilica Designer will keep waiting until it times out (after approx. 1 minute), and then it will try sending another message. If a temporary network issue caused the TCP message to drop, it will take up to 1 minute before Xilica Designer tries sending a new message again.

However if the network issue is persistent, the TCP connection attempt will never succeed and the TCP error icon will be displayed.

**If you see the TCP error, please wait for approximately 1 minute to see whether the TCP error goes away.**

If the system can recover itself, that might mean that a temporary issue occurred on the network. If the TCP error icon is persistently displayed, this means that there is something wrong with the network.

Follow these network connection troubleshooting tips to solve network related problems:

1. If the connection is lost, right click the device block → **Remote Reset Device**.
2. Perform Connection Test. In Xilica Designer's Network View, right click the device block → **Device Setup**. In the **Network** tab, under the **Connectivity Test** section, select **TCP Test**. The results will be displayed.
3. Check the firewall on the host computer. Disable the firewall on the host computer and see if this resolves the problem.
4. Check the IP address range of the host computer to see whether it is consistent with the device IP range. Note that all available IP addresses of all network interfaces of the host computer are displayed within Network View.



Notice that in the example above there are multiple IP addresses. This is because the computer has multiple network interfaces such as, Wi-Fi, Bluetooth, etc.

5. Make sure the device IP address is within the same subnet of the host computer (or use a router to route the network traffic to the appropriate subnet).
6. It is recommended to keep the host computer network interfaces to a minimum. If possible, please disable some of the unused network interfaces. This will reduce network traffic.
7. If the problem persists, the issue must be isolated by reducing the network components. By doing so the user can determine whether the device and host computer are working properly.
  - a. Setup the device and host computer to DHCP mode.
  - b. Connect a LAN cable directly between the device and host computer.
  - c. As there is no DHCP server available, the device and host computer will revert to the link-local (APIPA) address. The device IP address will be 169.254.x.x, and the computer's IP address will also be 169.254.x.x. Check if a communication between the two devices can now be established.

#### UDP error:

ZoneX devices rely on UDP broadcast communication protocol to broadcast a device heartbeat message. In order for the system to work, the network must be able to support UDP broadcast. In normal LAN environments, UDP broadcast is supported. However, if you are setting up a more complex network with different subnets, you must enable your routers to support UDP broadcast from one network to the other.

We recommend keeping your network simple and run everything under a single subnet.

To verify whether UDP is working, you can use the **UDP test** function.

In Xilica Designer's Network View, right click the device block → **Device Setup**. In the **Network** tab, under the **Connectivity Test** section, select **UDP Test**. The results will be displayed.

## FLICKERING ON/OFF STATUS

If the device status is flickering from ON to OFF repeatedly, this means that the device is detected on the network. However, Xilica Designer cannot consistently receive the heartbeat message from the device. Once Xilica Designer receives a heartbeat message (UDP broadcast) from a device, it is expected that the device keeps sending its heartbeat broadcast every second. If the detected heartbeat is not received for 3 seconds (missing 3 heartbeats in a row), the device will be considered OFFLINE. Once the next heartbeat message is received, the device will switch to ONLINE again.

The flickering status is likely caused by a bad network setup or a bad Wi-Fi reception (especially when Xilica Designer runs on a Wi-Fi network). It is recommended to always run your equipment on a wired network.

To assist in this situation, a **Network Condition** setting is available in System Preferences. At the top of the software, select **Settings** → **Preferences**.

Set the Network Condition:

#### Excellent - Wired network with no packet lost

The device is considered as OFFLINE when the heartbeat is missed for 3 seconds.

#### Acceptable - Wi-Fi network with no packet lost

The device is considered OFFLINE when the heartbeat is missed for 6 seconds.

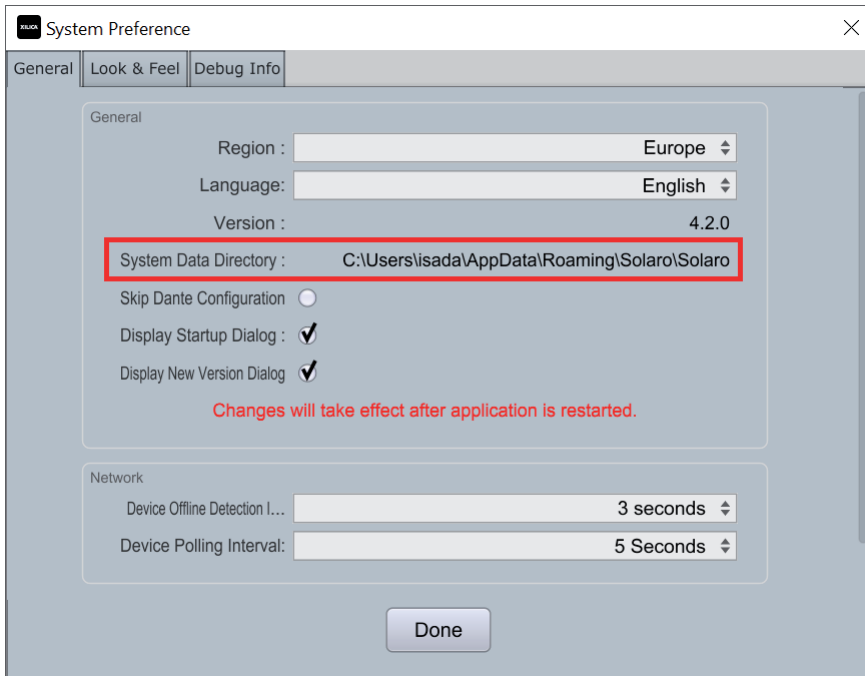
#### Poor - Wi-Fi network with some packet lost

The device is considered OFFLINE when the heartbeat is missed for 12 seconds.

## XILICA DESIGNER CRASHING

If Xilica Designer is crashing before it opens Network View, there is a high chance that one of the system files is corrupted. Complete the following steps to recover the data file:

1. In Xilica Designer open **Settings** → **Preferences**. (If Network View does not open try starting a New Project or open Dante view)



2. In the **General** tab, note the System Data Directory location. Navigate to this location on your computer.
3. Locate a file called "**Devices.xml**" stored in the system directory. This file stores all detected devices on the network so that all previously detected devices on the network are known and display the OFFLINE status for offline devices.

For PC, the path is usually: **C:\Users\<<your user name>\AppData\Roaming\Solaro\Solaro**

For Mac, the path is usually: **/Users/<your user name>/Library/Application Support/Solaro**

**NOTE:** The AppData directory is a hidden directory. You must enable "Show hidden files, folders and drives" to be able to see it.

4. Exit Xilica Designer. Now delete the "Devices.xml" file inside the System Data Directory.
5. After the file is deleted, restart Xilica Designer. The "Devices.xml" file will be regenerated and recovered.

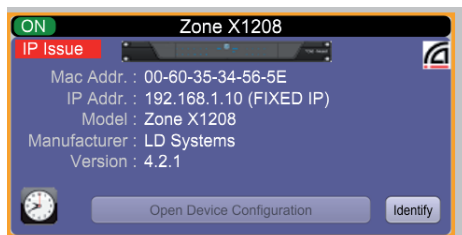
## HEARTBEAT MONITOR AND NETWORK CAPTURE

In Xilica Designer, there are two features listed under the **Troubleshooting** tab.

**These features should only be used under LD Systems Support direction.** Users should avoid using these features by themselves.

## IP RESET

When the device is connected directly to a host computer or indirectly via a switch and DHCP is not enabled, the connection process will not be automatic. Once no DHCP server is detected the device will either try to connect using the IP address last assigned and stored on the device or attempt to revert to its default link-local/APIPA (169.254.x.x) automatic IP address/range. Under some conditions the device may refuse to revert to its default IP address range and on one hand appear offline with an **"IP Issue"** label displayed on the device block in Network View, although it has been powered on. On the other hand, the device may appear online in Network View but still display the **"IP Issue"** label. In both cases please try to use the IP reset method first.



To reset the IP address of a device, push and hold the IP reset button for approximately 15 seconds. The device block will appear offline if it was previously online. If it was already offline, then the **"OFF"** status will remain visible for another 20 seconds.



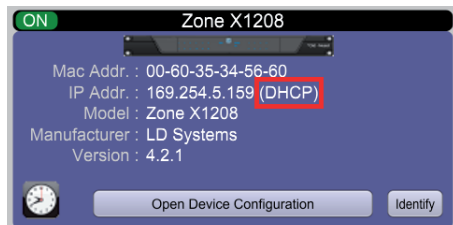
Release the IP reset button and wait around 20 seconds for the device to appear back online.

Notice that the device is now back in the link-local/APIPA (169.254.x.x) automatic IP range with DHCP mode enabled.



## DEVICE NETWORK CONFIGURATION

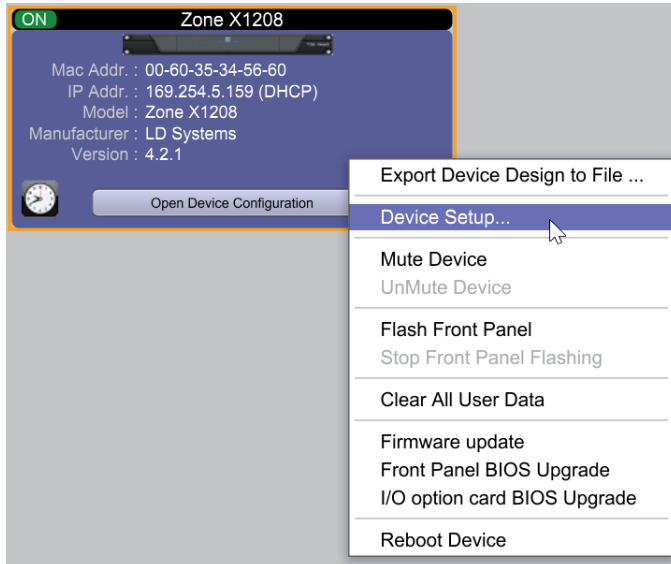
The device is by default set to automatically obtain its IP settings.



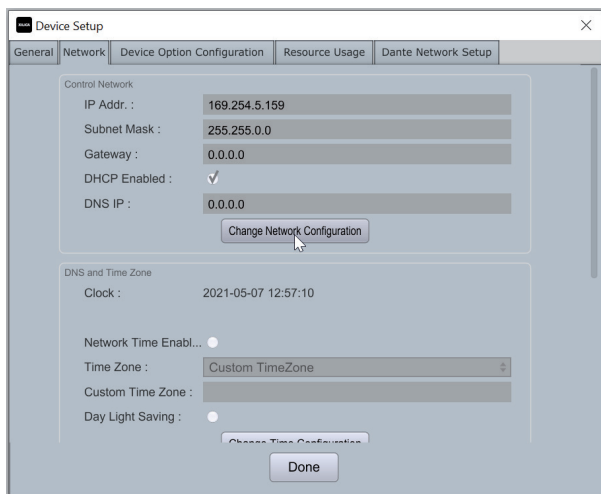
## SETUP A MANUAL STATIC IP ADDRESS

To manually configure network settings please follow the next steps:

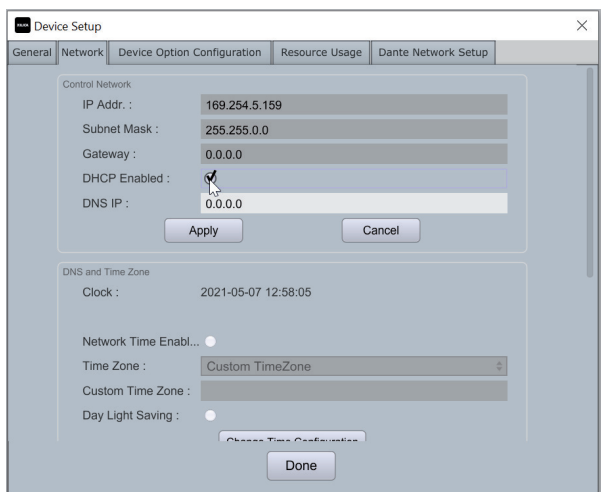
- in Network View right-click the device block and select **“Device Setup...”**



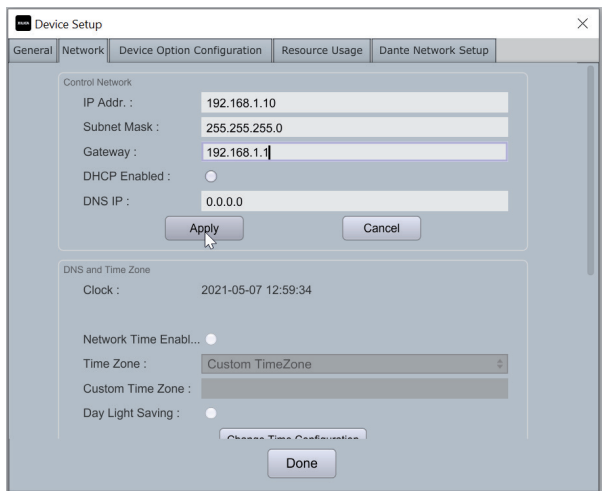
- in Network tab click on the **“Change Network Configuration”** button



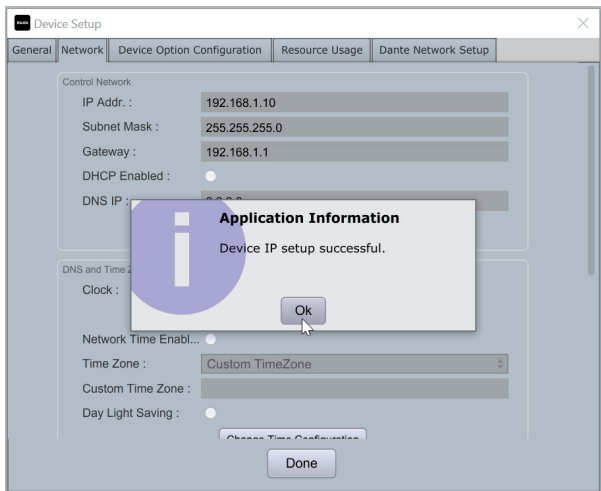
- Deselect **“DHCP Enabled”** tick box to activate manual IP settings



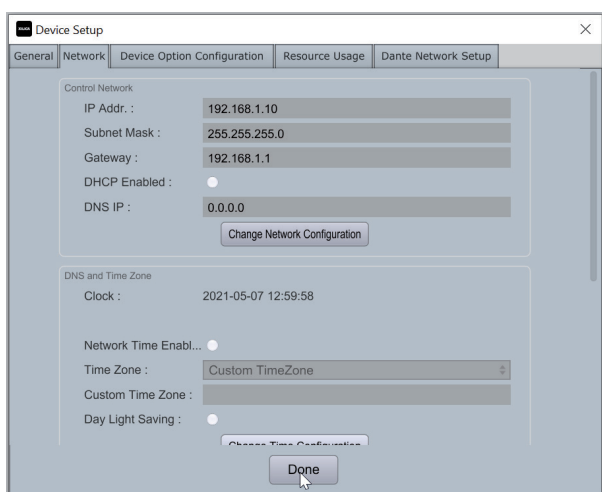
- Set the **IP address** in the way so that the first three groups of digits (a.k.a. octets) are same as the host computer IP address, if you are using a typical class C address range (192.168.1.XXX). Then for the last octet choose any value between 1-254. **Please note that this value should be unique in your network.** Therefore, check the IP addresses already used by other devices in the same network. For example, if your computer IP address is set to 192.168.1.254, then the device's IP address should be 192.168.1.XXX, where **XXX** can be any value between 1 and 253. Please also note that the gateway (router), on most basic local networks in this range, is usually located in the IP address 192.168.1.1. Therefore, this IP address should also be avoided.
- Set the **Subnet Mask** to 255.255.255.0, following the current example with a typical class C address.
- Set the **Gateway** IP address. Please note that it is mandatory to set an IP address for the Gateway which should be in the same IP range as the networked devices. In the current example, it could be located at 192.168.1.1.
- Click **"Apply"**



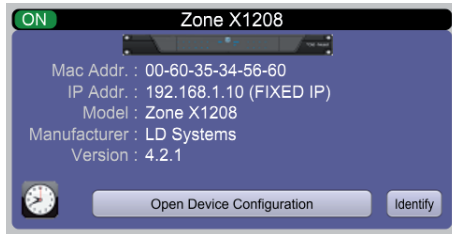
- An application information message will be displayed. Click **"Ok"** to confirm.



- If no other network settings are needed to be adjusted (DNS, Network Time), click **"Done"** to apply the changes.



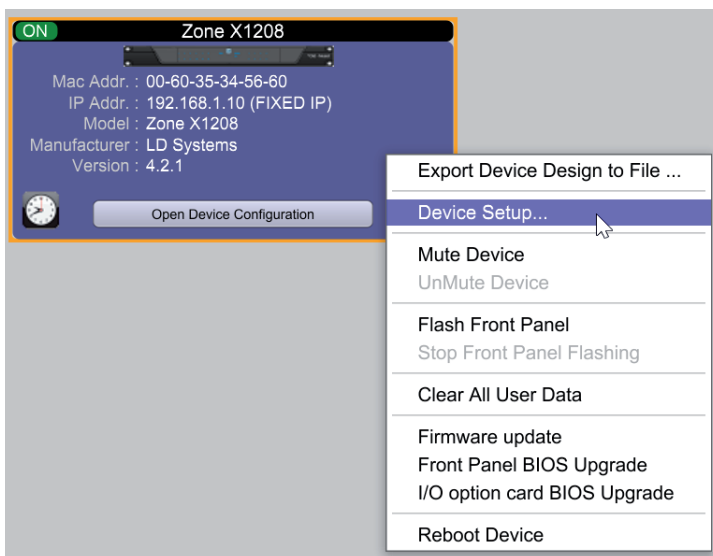
- A few seconds later the device block will display the given IP address followed by a **(FIXED IP)** text which indicates that this IP address is a static one, assigned by the user.



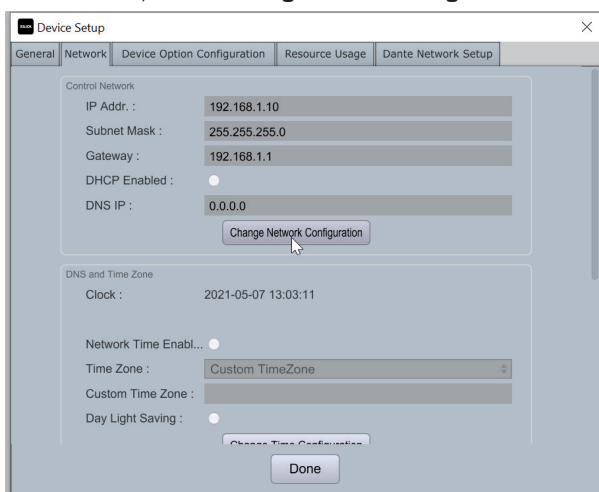
- When managing multiple devices, repeat all the previously described steps for each single device but make sure to change the last octet of the IP address so that this value remains unique per each device on the network (e.g. Device 1: 192.168.1.11; Device 2: 192.168.1.12; Device 3: 192.168.1.13...).

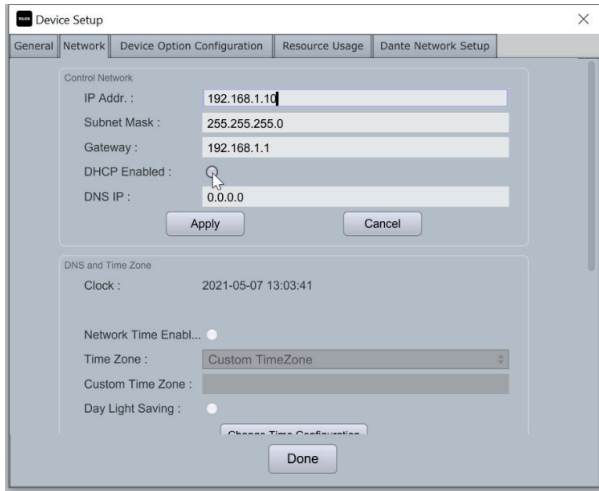
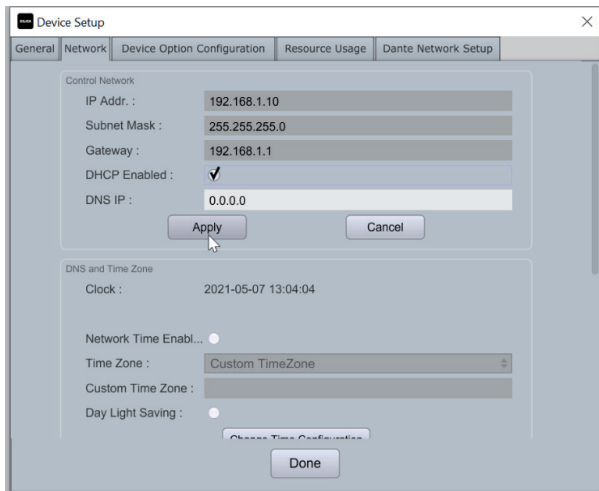
## SETUP A DYNAMIC IP ADDRESS (DHCP MODE)

To setup a dynamic IP address, right-click on the device block in Network View and select **“Device Setup...”**

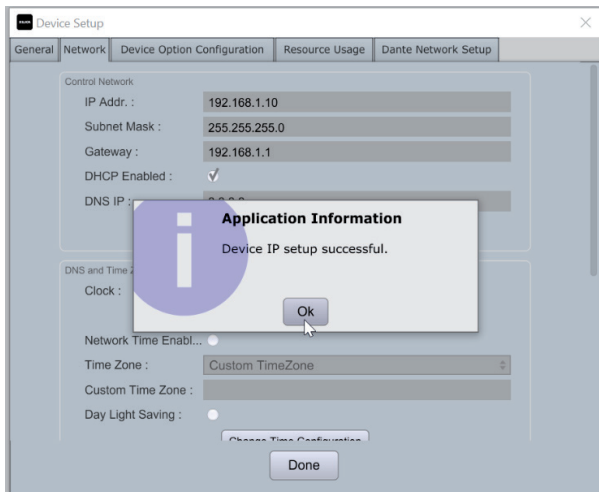


In Network tab, click on **“Change Network Configuration”** button



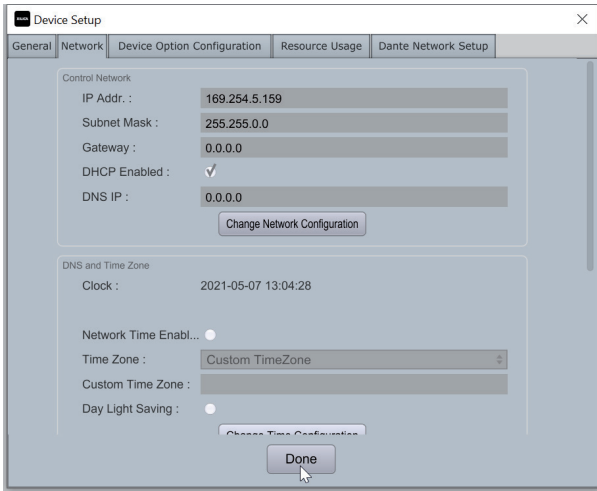
Select **"DHCP Enabled"**Then click **"Apply"**.

An application information message will be displayed. Click **"Ok"** to confirm

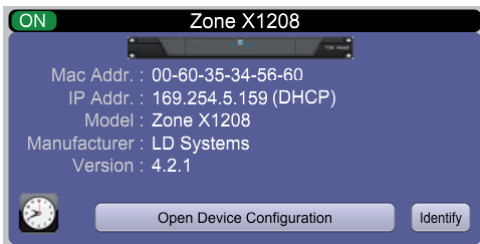




Since no other settings are needed to be adjusted, click **“Done”** to apply network changes.



Once all changes have been applied, the device block will display the dynamic IP address. If no DHCP server is available or not enabled, the device block will display the link-local/APIPA (169.254.x.x) automatic IP range address.



## FINDING YOUR COMPUTER LOCAL IP ADDRESS IN WINDOWS 10

1. Open the command prompt application. Click on the **“Start”** (Windows) menu and type **“cmd”** in the search bar. Press **“Enter”**.
2. In the command prompt application type **“ipconfig”** and press **“Enter”**. A list will appear showing all available network adapters. Locate the **“Ethernet Adapter Local Area Connection”** and the IP address will be displayed in the **“IPv4 Address”** field.

```

Microsoft Windows [Version 10.0.19041.928]
(c) Microsoft Corporation. All rights reserved.

C:\Users\isada>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

   Connection-specific DNS Suffix  . : 
   Link-local IPv6 Address . . . . . : fe80::1995:9751:821e:f7c7%5
   Autoconfiguration IPv4 Address. . : 169.254.247.199
   Subnet Mask . . . . . : 255.255.0.0
   Default Gateway . . . . . : 

Wireless LAN adapter Local Area Connection* 1:

   Media State . . . . . : Media disconnected
   Connection-specific DNS Suffix  . : 

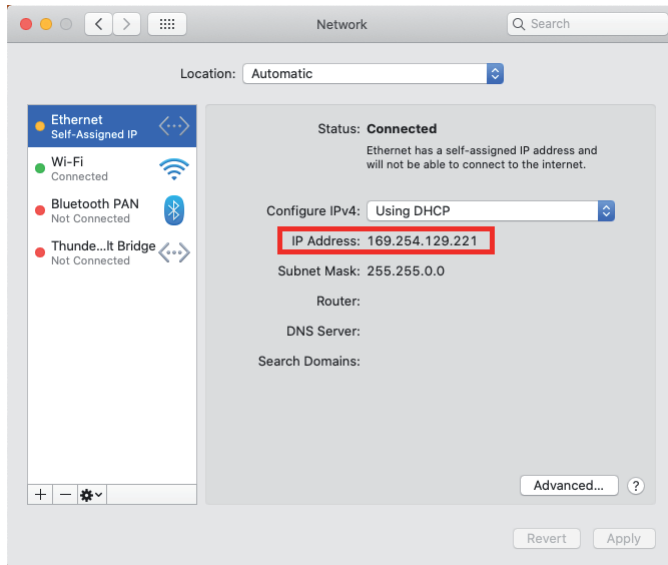
Wireless LAN adapter Local Area Connection* 2:

   Media State . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :

```

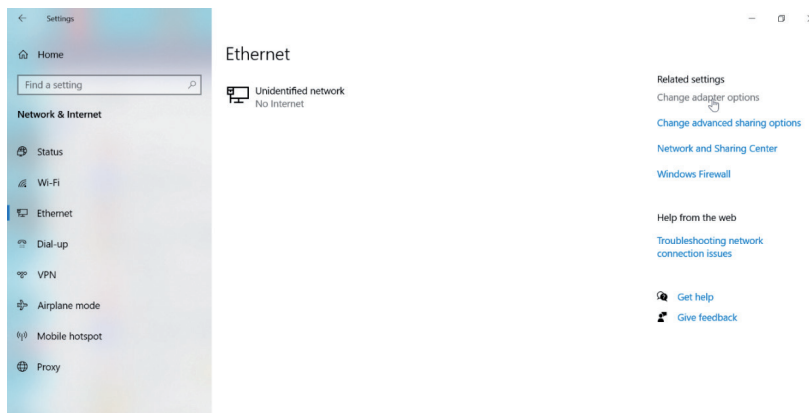
## FINDING YOUR COMPUTER LOCAL IP ADDRESS ON A MAC

1. In Apple menu select **"System Preferences"** and then **"Network"**.
2. In the left column click on **"Ethernet"** and the IP address will be displayed under **"IP Address"**.

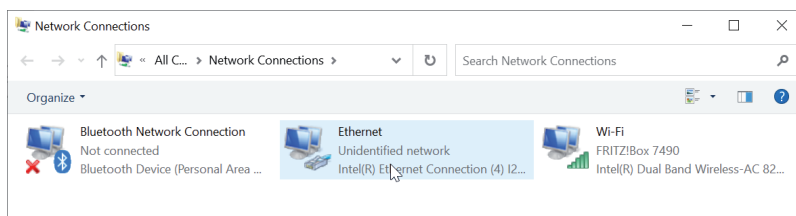


## ASSIGNING A STATIC IP ADDRESS TO THE HOST COMPUTER IN WINDOWS 10

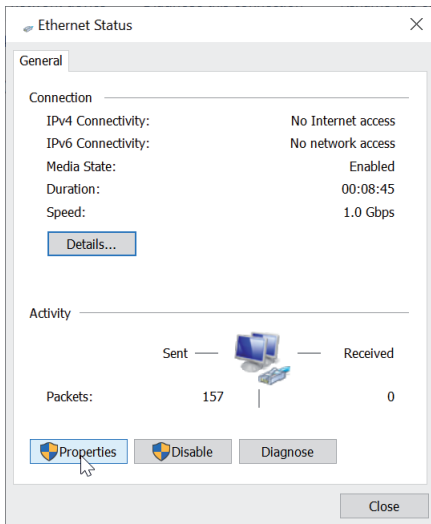
1. Type in the Windows search box **"Ethernet settings"** and press **"Enter"**
2. On the right side, under **"Related settings"**, click **"Change adapter options"**.



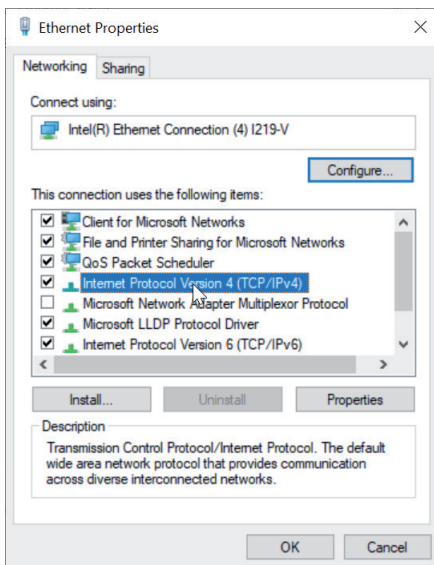
3. Double-click **"Ethernet"**



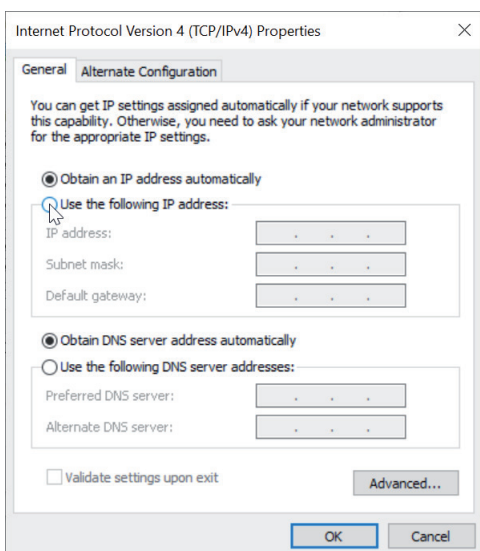
#### 4. Select "Properties".



#### 5. Within "Ethernet Properties", under the section "This connection uses the following items:" double-click on "Internet Protocol Version 4 (TCP/IPv4)".

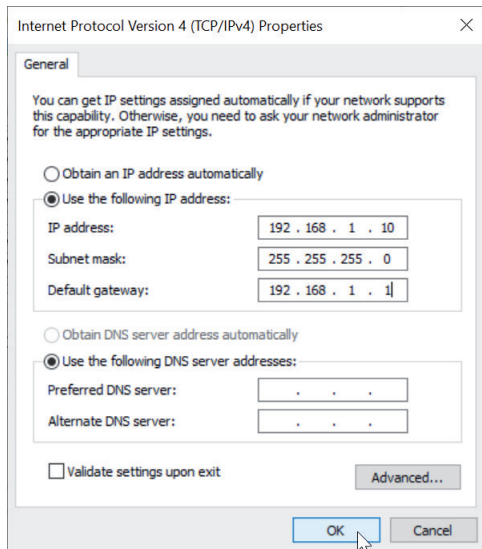


#### 6. In "General" tab select "Use the following IP address:"



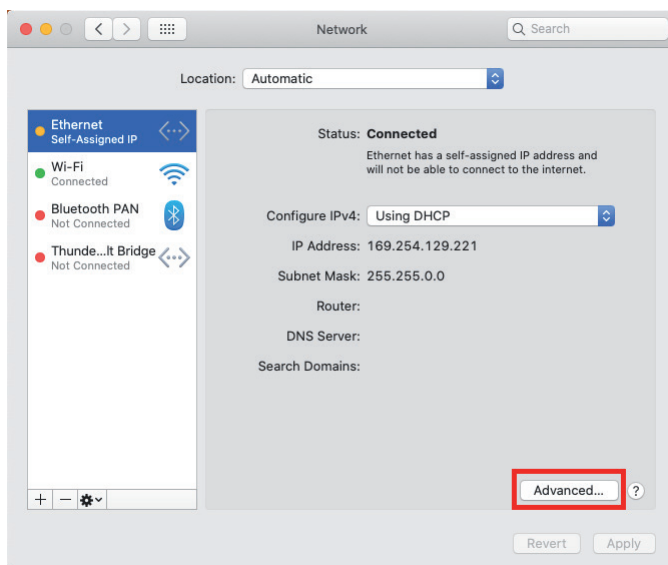
7. Setup the computer's **IP address** to be 192.168.1.X where X can be any value between 1-254. The computer IP address must be unique in the current network.
8. Set the **Subnet Mask** to 255.255.255.0, following the current example with a typical class-C address.
9. Set the **Gateway IP address**. In the current example, the router is located at 192.168.1.1

10. Click **“OK”** to finish the network configuration.



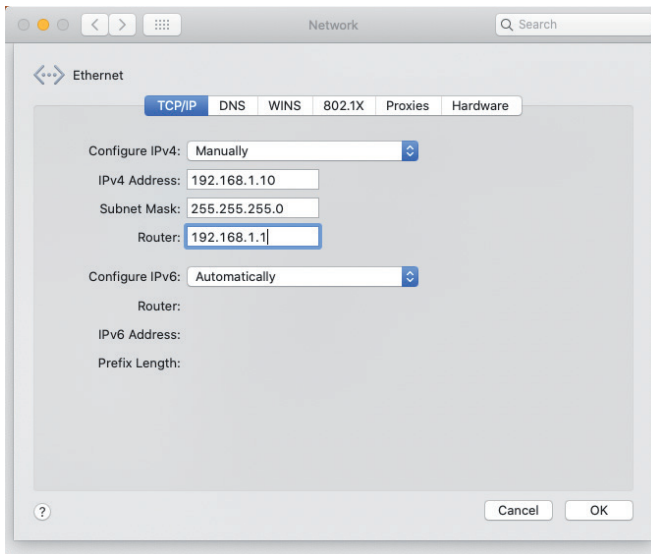
## ASSIGNING A STATIC IP ADDRESS ON A MAC

1. From the Apple menu select **“System Preferences”** and then **“Network”**.
2. From the left menu select **“Ethernet”** and click on **“Advanced”**.



3. In the **“TCP/IP”** tab set **“Configure IPv4”** to **“Manually”** using the drop-down menu.
4. Setup the Mac’s **IP address** to be 192.168.1.X where X can be any value between 1-254. The computer IP address must be unique in the current network.
5. Set the **Subnet Mask** to 255.255.255.0, following the current example with a typical class-C address.

6. Set the **Router** IP address. In the current example, the router is located at 192.168.1.1

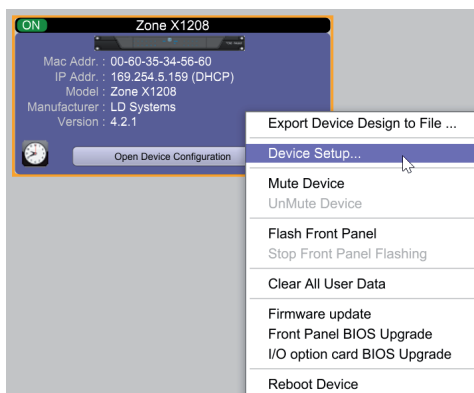


7. Click **“OK”**

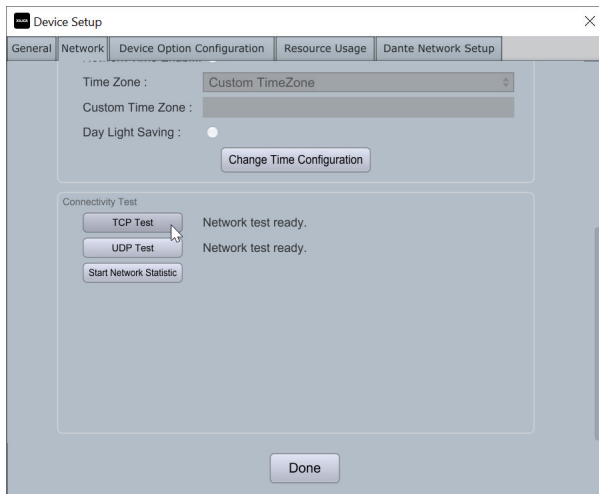
## CONNECTIVITY TROUBLESHOOTING

If the connection status indicator in Network View is yellow, hover the cursor over the indicator and a pop-up message will display the problems detected. A list of possible issues is indicated below.

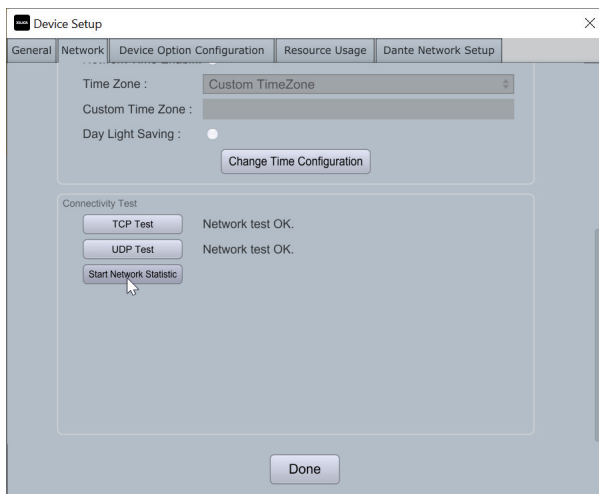
1. **“Device Not Ready”** - The processor needs to have a design loaded to the unit. If the same error message persists after a design is loaded, restart the processor and Xilica Designer software.
2. **“DSP Processing Error”** - Retry reloading the pre-designed DSP app schematic. If the indicator is still yellow, restart the processor and Xilica Designer software.
3. **“Error in Firmware Upgrade”** - The pop-up message shown will print out an error code. Retry the Firmware upgrade procedure.
4. Device can communicate using the UDP protocol but cannot communicate using the TCP protocol:
  - Right-click the device block in Network view and select **“Device Setup...”**.



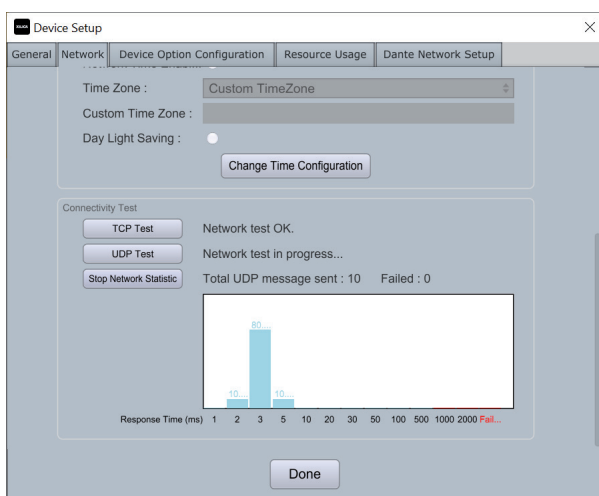
- In Network tab scroll down to **“Connectivity Test”** and click on **“TCP Test”** and **“UDP Test”** buttons to test both connections.



- If failed, please check your computer's firewall and router settings. Also, ensure that Wi-Fi on the host computer is turned off.
- Click **“Start Network Statistics”** to see a graphical representation of the UDP/TCP test status.



- If Xilica Designer detects more than one network interface, it will prompt the user to choose the right one with a drop-down menu. Please select the proper interface.



- Restart Xilica Designer and review your device connection.



