StudioEdge   **AXIA®** Telos Alliance®   **StudioCore**

Product Family

Thank you for purchasing StudioEdge and StudioCore

This Quickstart Guide assumes a few things:

- Basic networking skills and a familiarity with networking terminology
- Familiarity with Audio over IP and Axia Livewire products
- An approved network switch properly configured for use on a Livewire network

ITEMS REQUIRED FOR INSTALLATION:

The following items are necessary to complete the installation of this unit:

- Axia StudioEdge or StudioCore unit
- Gigabit Switch configured for use on an Axia network (optional)
- PC with access to the AXIA network (not supplied)
- CAT5 Ethernet Cable (not supplied)
- Power (mains) cords (not supplied)

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Safety Notices

The following safety rules must be observed during installation:

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

To reduce the risk of electric shock, do not open the top cover. Refer servicing to qualified service personnel only.

This unit is not intended for outdoor use. To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.

The StudioEdge and StudioCore are designed for quiet, fanless operation in rack furniture or table top.

Mounting in a Rack:

- The unit must be rack mounted with four screws.
- The rack must be properly grounded.
- In case the environment is not air conditioned, empty rack spaces are required above and below the unit.
- The side panels must not be obstructed and a free air flow must be guaranteed.
- Maintain a clearance of at least 10 cm behind the unit, for proper cable routing.

Warning - Make sure there is no obstruction to the rear and side panels while it is operating, or serious damage to the unit may occur!
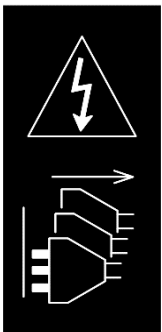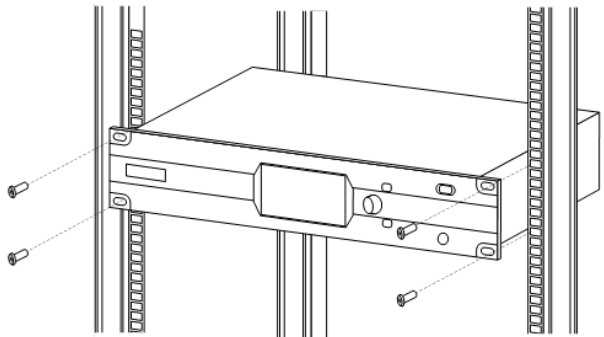
Redundant Power Connections:

In case of service or inspection, both AC mains cables must be disconnected before opening the unit.

Unpacking the Unit

The Axia StudioEdge and StudioCore are 2RU, rack-mountable units that can be ordered in different model versions:

2001-00631-000: StudioEdge 2001-00632-000: StudioEdge Dual PSU	2001-00633-000: StudioCore 2001-00634-000: StudioCore Dual PSU 2001-00635-000: StudioCore +CAN 2001-00636-000: StudioCore +CAN Dual PSU

Warning - Please pay attention to not damage the front panel's touchscreen display while you unpack and pull the unit out of its box.

The StudioEdge can be upgraded to a StudioCore, and both can be fitted with an optional redundant PSU in case they are purchased with a single PSU. Upgrades will have to be performed by an approved Axia Dealer or Service Center. Please ask your preferred Axia Dealer about the upgrade options.

No cables are included with this unit. The user manual can be found on the Telos' website, in the product page.

Product Description

The StudioEdge and StudioCore are two different and unique products based on the same hardware platform:

- StudioEdge is an I/O Endpoint device
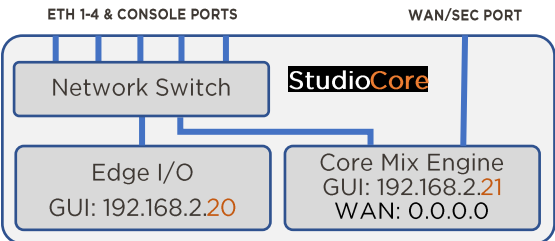- StudioCore is a Console Engine with Integrated I/O

The StudioCore incorporates the StudioEdge: you can look at it as a StudioEdge with an additional AoIP Mix Engine inside.

The **Studio Edge** has a single IP address and Web UI: the default IP is 192.168.2.20/24.

ETH 1-4 & CONSOLE PORTS

Network Switch

Studio**Edge**

Edge I/O
GUI: 192.168.2.20
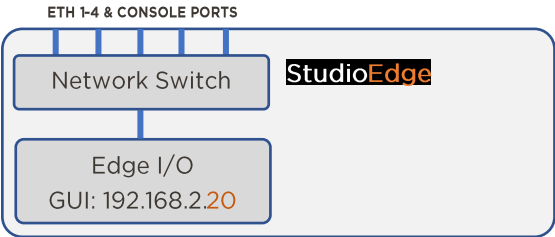
The **StudioCore** has two IP addresses and Web UIs: the default IPs are 192.168.2.20/24 and 192.168.2.21/24

The StudioCore has an additional Ethernet port (WAN/Secondary) which is disabled by default, and can only be activated from the web UI.

ETH 1-4 & CONSOLE PORTS   WAN/SEC PORT

Network Switch

Studio**Core**

Edge I/O
GUI: 192.168.2.20

Core Mix Engine
GUI: 192.168.2.21
WAN: 0.0.0.0

Front Panel

1. **PRODUCT BADGE:** Indicates whether the unit is a StudioEdge or StudioCore. Can be replaced in case of a model upgrade

2. **TOUCHSCREEN:** This is a 5" Touchscreen with P-CAP technology and high resolution IPS display

3. **ENCODER:** Use it to increment/decrement values or scrolling menus, when navigating the front panel GUI. Push the knob to enter values or select items on the touchscreen. A built-in touch sensor can be enabled to display the Main Menu.

4. **TOP KEY:** This button is user-programmable. Default function is **Menu**

5. **BOTTOM KEY:** This button is user-programmable. Default function is **Back**

6. **FRONT PANEL LEDs:** PSU 1 Active, PSU 2 Active, SYNC OK, STATUS (see below)

7. **USB PORT:** This is a DATA only port, intended for connecting a USB drive containing audio files to be played through the internal audio player. The USB drive must be FAT32 formatted and contain no folders, just files.

8. **HEADPONE 1 OUT:** This output is paralleled with the rear panel's HEADPHONES OUT 1, for your convenience.

9. **TELOS METER LOGO:** ....Cool, isn't it?

   Note – The Headphone output is equipped with a high-power amplifier. Make sure the volume is down before plugging your headphones in!

- **PSU 1 :** Active on all StudioEdge and StudioCore units
- **PSU 2:** Only active on Dual PSU units
- **SYNC:** Flashing = synchronizing

  Solid Green = LW or PTP clock slave

  Solid Red = LW master resolved to internal clock

  Solid Yellow = LW master resolved to PTP clock
- **STAT:** User-Programmable Status alarm (future use).

Connections
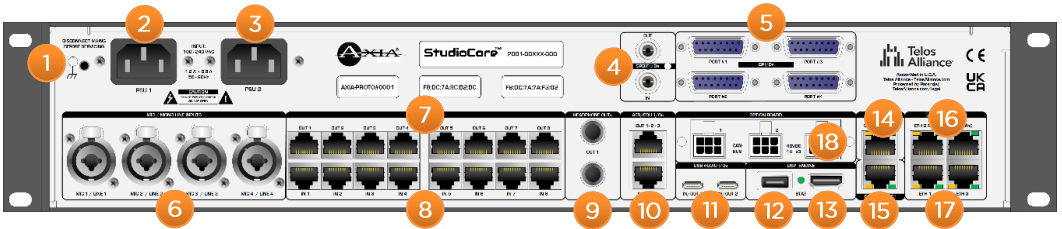
1. **CHASSIS GROUND:** Connect your rack ground wire terminated with a lug using an M3 screw with a tooth washer (optional not required to run the unit)

2. **PSU 1 INPUT:** Connect the IEC Type 13 mains cable here

3. **PSU 2 INPUT:** Connect the IEC Type 13 mains cable here. Single PSU models have a blanking plate installed in this place

4. **S/PDIF IN/OUT:** Top RCA connector: S/PDIF output. Bottom RCA connector: S/PDIF input. Shared with AES I/O #1

5. **GPIO PORTS #1-4:** DB-15 connectors with standard Axia GPIO port pinout

6. **MIC/LINE 1-4 IN:** Combo connectors. XLR connectors: Balanced Microphone inputs. 1/4'' TRS Jack connectors: Balanced mono line inputs.

7. **LINE 1-7 OUT:** Balanced Stereo Line output ports on StudioHub® RJ-45 connectors

8. **LINE 1-7 IN:** Balanced Stereo Line input ports on StudioHub® RJ-45 connectors

9. **HP OUT 1-2:** 2x Stereo Headphone outputs (unbalanced) on 1/4'' TRS Jack connectors

10. **AES IN/OUT 1-3:** Top RJ-45 connector: AES/EBU 1-3 outputs. Bottom RJ-45 connector: AES/EBU 1-3 inputs.

11. **USB AUDIO 1-2:** 2x Standard USB Audio I/O ports with USB Power Delivery (1A charging capacity). Shared with AES I/O #2 and #3. Not a USB 3.0 data port!

12. **USB:** StudioCore USB-A control port. Not active in StudioEdge

13. **HDMI:** StudioCore Standard HDMI port. Not active in StudioEdge

14. **Secondary/WAN:** StudioCore secondary WAN Gigabit Ethernet port. This port is not switched with the other ports, and it is not active in StudioEdge.

15. **CONSOLE:** PoE+ Port for connecting PoE-enabled Axia control surfaces. Switched with ETH 1 – 4 (16 and 17)

16. **Livewire/PoE:** PoE ports for connecting Livewire+/AES67 devices, or PoE-enabled devices. They are switched with ports ETH 1 & 2 (17), and with the CONSOLE port (15)

17. **Livewire:** Ethernet ports for connecting Livewire+/AES67 devices. They are switched with ports ETH 3 & 4 (16) and with the CONSOLE port (15)

18. **CANBUS 1-3:** CANBUS ports for connecting Axia legacy control surfaces (iQ, RAQ, DESQ). Only available on StudioCore +CAN and StudioCore +CAN Dual

PSU units, or in case the optional 1771-00236 CANBUS OPTION BOARD KIT is installed aftermarket.

Note - The maximum length for passive USB2.0 cables is 5mt (15ft). If a greater distance exists between the unit and the control device, we recommend using an active USB cable with PSU (not bus-powered).

Wiring AC Power and Ground to the unit

This is a Class I product. An Earth connection MUST be provided in each AC power cord. The unit is grounded through the AC power cable and therefore relies upon proper grounding of the circuit providing AC power.

In case of Dual PSU models, we suggest connecting them to different power sources for redundancy and we highly recommend the use of a UPS (uninterruptable power supply) for each source. Alternatively, one of the PSU inlets can be connected to standard Mains and the other PSU is connected to uninterrupted (UPS) mains. Always make sure that both circuits are referenced to, and share, the same ground.

The Axia StudioEdge and StudioCore do not require a separate chassis ground to operate. However, for those users who wish to have a separate ground/earth connection using a dedicated earth cable (at least 6mm² or 10 AWG cross section), this could be connected to the rear CHASSIS GROUND terminal using an M3 screw with integrated lock washer. Such a cable is not provided with the unit, as this connection is optional and it is NOT a requirement to comply with safety standards.

Cycling AC Power to the unit (Cold Reboot)

In case a cold-reboot is operated, and AC Power needs to be cycled:
1. Remove the AC Power (from both PSUs)
2. Wait for at least 10 seconds, then reconnect AC Power.

External Network Switch Configuration

A 5-port Gigabit switch is included with every StudioEdge and StudioCore. You don't need an External network switch unless you are connecting this unit to a larger AoIP network.

Audio over IP requires the use of an approved and properly configured switch. Not all switches are capable of handling the traffic generated by AoIP, and an improper configuration can lead to a flood of traffic on the network. Details of switch configuration are beyond the scope of this Quick Start Guide, and it is assumed the person responsible for installation has the necessary configuration skills or the resources of an IT engineer.

A list of Telos Alliance-approved Ethernet switches is available on our website, at the following link: Approved Ethernet Switches or you may submit an online support request at the following url: https://www. telosalliance.com/support-request.

StudioEdge Initial Set-Up

The default IP Address for the StudioEdge I/O component is 192.168.2.20/24. You can edit this address either from the touchscreen or from the web UI, so as to match your network configuration.

> **Note –** The IP address in the front panel belongs to the Edge I/O only. In case of a StudioCore unit, changing the Edge IP from the front panel <u>will not</u> automatically change the Core DSP Engine IP. Please check the next chapter for instructions on how to change the Core IP address.

Setting the IP Address from the Front Panel

1. Connect the unit to AC Mains and wait for the unit to complete the boot process. The front panel touchscreen display will show a splash screen identifying the unit base model (StudioEdge or StudioCore).

2. Press the top button on the Front Panel (above the encoder) : a dynamic menu will appear, sliding in from the left.

3. Rotate the encoder and scroll the menu up until you can select "Network Setup". Push the encoder to enter the Network Setup menu.
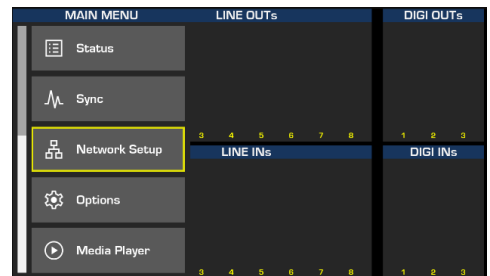
4. Press the **SET IP** button on the screen, enter the desired IP address using the keypad, and push **Enter.** Follow the same steps to set the Subnet (A Gateway is not required).

5. Push **SAVE & Reboot** to apply the new IP and reboot the unit. You can exit at any time by pushing the **Cancel** button.
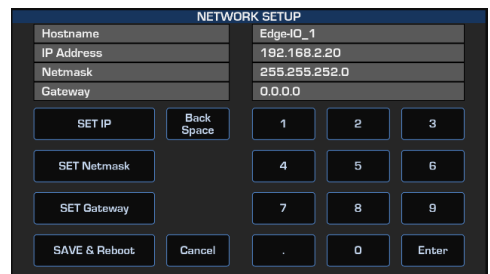
Setting the StudioEdge IP Address from the Web UI

1. Connect an Ethernet cable to one of the Ethernet ports on the rear panel of the StudioEdge (see Connections: 16 or 17), connect the other end to either a configured AoIP Network switch or directly to a PC

2. Launch a web browser and enter the default IP address: 192.168.2.20, then click on the **Network Setup** menu. When prompted for authentication, enter "user" in the Username field and leave the Password field blank.
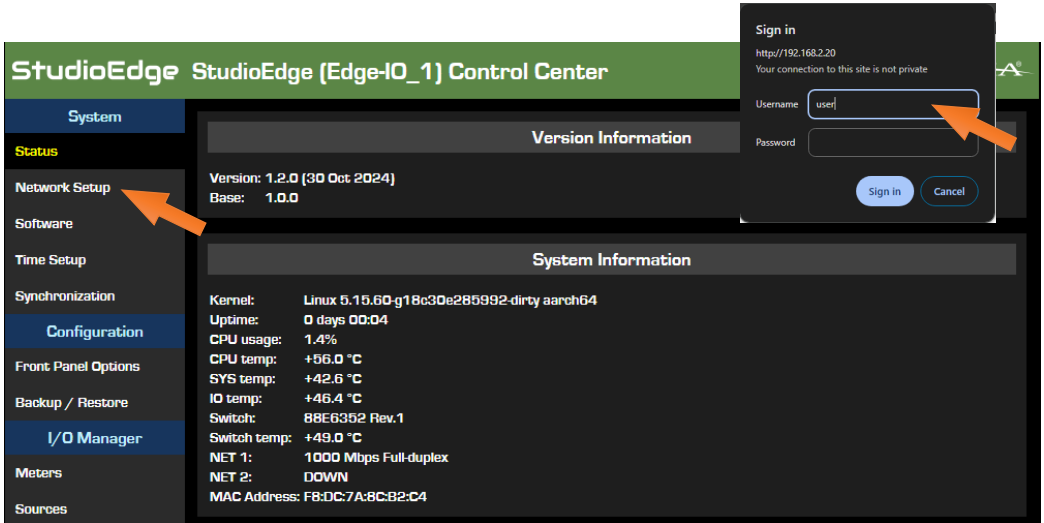
3. In the Network Setup screen, type the new IP in the **IP Address** field and select the desired Subnet from the drop-down. You do not need to enter a Gateway.
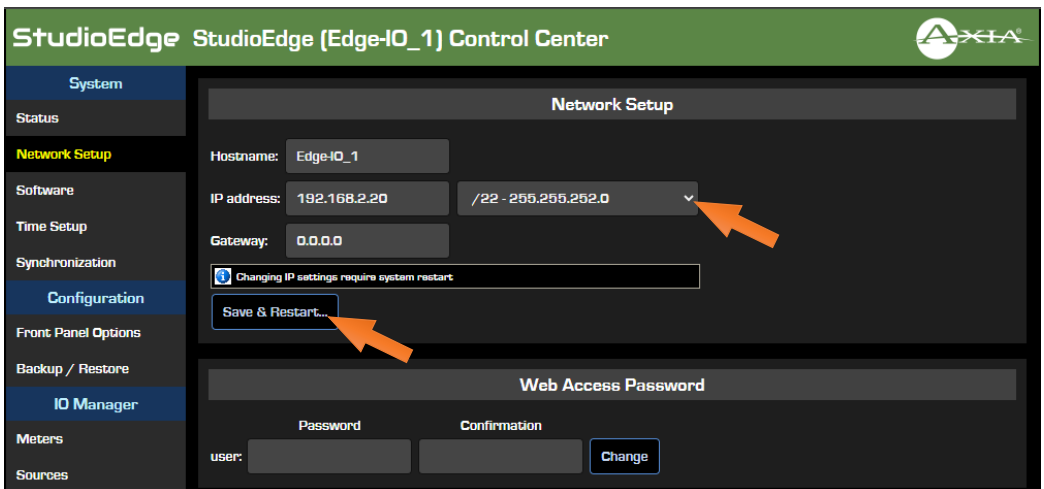
4. Click on **Save & Restart** to apply the new IP and reboot the unit.

Configuring the StudioEdge Sources and Destinations

Open up a browser and navigate to the StudioEdge IP Address. In the I/O Manager section, click onto the **Sources** configuration menu. The following page will appear:
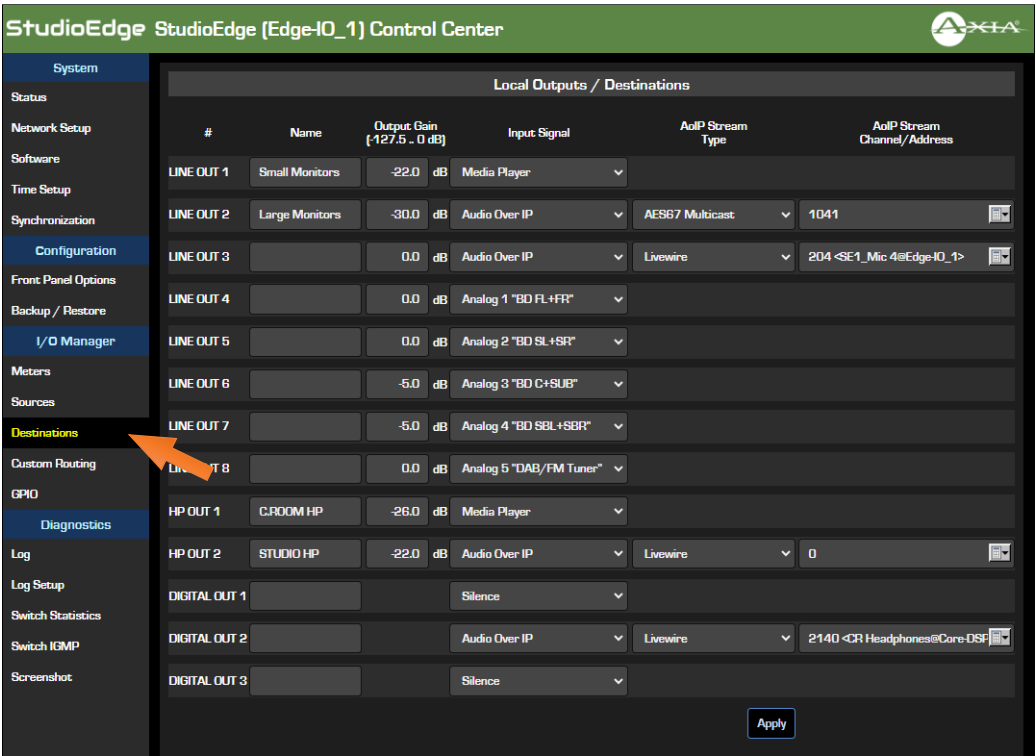

In the **Name** fields, enter useful labeling to describe the devices connected to the xNode. Click the **Apply** button.

In each of the **Channel / IP** fields, assign a unique Livewire channel number, (or multicast IP address in case of AES67) to each of the sources you wish to enable.
You can press the arrow button next to the Channel field, to automatically generate all the following numbers/addresses.

In the **Mode** fields, set the desired AoIP operation mode (packet time).
Click the **Apply** button.

In the I/O Manager section, click onto the **Destinations** configuration menu.
The following page will appear:

In the **Name** fields, enter useful labeling to describe what is connected to the xNode outputs.

In the **Input Signal** fields, you can choose to route one of the local input signals (from the StudioEdge rear panel) to the selected output, or you can select "Audio Over IP" and enter the network Stream Type and Channel number (or AES67 multicast IP).

Only the relevant fields will be displayed and available for configuration, after the Input Signal is slected.
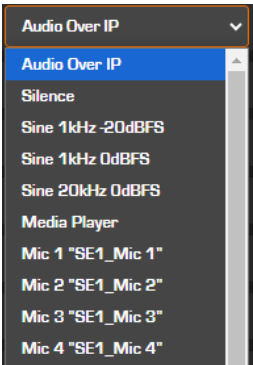
If Audio Over IP is selected for one of the Destinations, clicking on the ⊞▾ button will allow you to select a Livewire or an AES67 stream from the Network. A list of network streams will be displayed for selection.
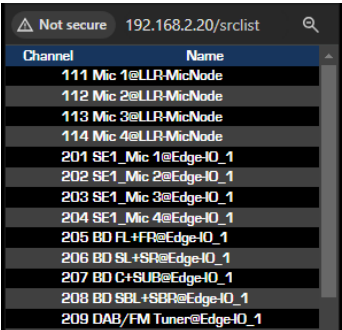
StudioCore Initial Set-Up

The StudioCore adds a DSP Mixing Engine to the StudioEdge: the network settings for these two entities are completely independent from each other, therefore you must setup both the Edge IP address, (as described in the previous chapter) and the Core DSP Engine IP address. The default IP Address for the StudioCore DSP component is 192.168.2.21/24. You can edit this address either from a CAN-connected console, or from the web UI, so as to match your network configuration.

Setting the StudioCore IP Address from the Web UI

1. Launch a web browser and enter the default IP address: 192.168.2.21, then click on the **Network Setup** menu. When prompted for authentication, enter "user" in the Username field and leave the Password field blank.
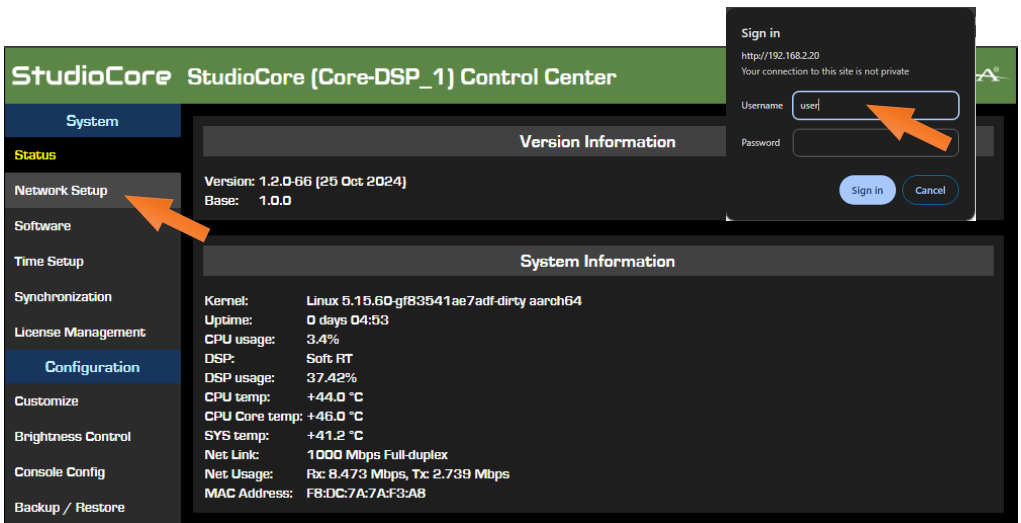

2. In the Network Setup screen, type the new IP in the **IP Address** field and select the desired Subnet from the drop-down. You do not need to enter a Gateway.

3. Leave the **WAN IP Address** set to 0.0.0.0.

4. Push **Save & Restart** to apply the new IP and reboot the unit.
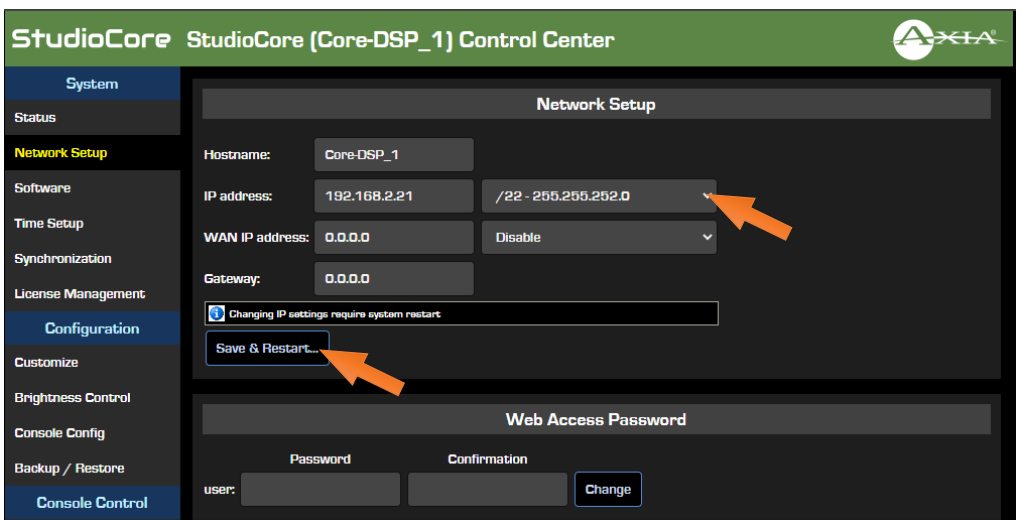
Configuring the StudioCore + CAN models

StudioCore + CAN models are designed to connect to a legacy Axia iQ-family console.

Select **Console Config** in the Configuration section of the left column menu. The StudioCore Control Center will display the Console Configuration page:
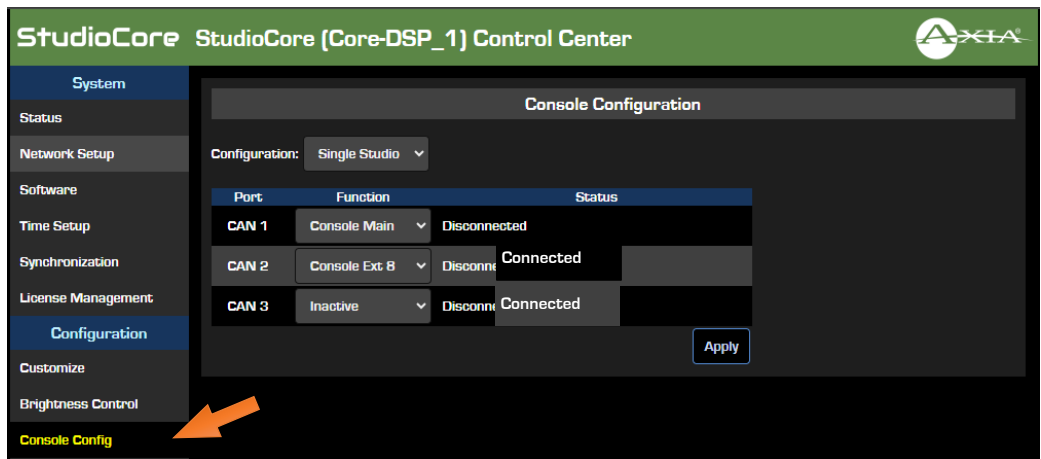
In the **Configuration** drop-down menu, choose your application type:

- **Single Studio** will create one logical console and connect it to the Mix Engine
- **Twin Studios** will create two logical consoles sharing a single Mix Engine, each one with its own monitor section. <u>Only DESQ and RAQ surfaces are supported in this mode.</u>

In the **Function** drop-down menu, select the type of surface module connected to each CAN port.

In the **Status** section, check that the modules you have selected are listed as "Connected" to the appropriate port.

Setting the StudioCore IP Address from an iQ, Radius, Desk or RAQ

To enter the Engine IP address from the console, you must access System Settings:

Press-and-hold the Meter key for three seconds:

The Studio display now shows the options and the Studio Monitor control is used to navigate, select options and change parameter values.

The options available are:
• IP Address
• Subnet Mask
• Gateway
• Save and Reboot

To exit, select EXIT and press the Studio Monitor control.

Note - After making changes to any QOR.32 IP address settings, you must reboot the unit for these changes to take effect.

INFORMATION ABOUT YOUR NEW PRODUCT

IMPORTANT!

Telos Alliance strongly suggests that you use an Uninterruptible Power Supply (UPS) with power line filtering to prevent damage to the unit during electrical storms and power surges. Please note that damage due to lightning is not covered under the product Warranty (refer to your User Manual for warranty information).

For more information on lightning protection please visit our website:
http://blogs.telosalliance.com/tech/surge-suppression-pointers

Obtaining Service

Before contacting our Customer Support, please have the serial number of the unit (located on a small barcode sticker on the rear panel) and a description of the symptoms/problems ready for the technician.

All units being returned for service MUST have a Return Authorization number (RA) assigned to them first.

Units shipped without an RA number will experience delays in service.
Be sure to write the RA prominently on the box on or near the shipping label.

Whenever possible, return the unit in its original shipping carton with original packing materials. This will provide the best protection possible during shipping.
Remember, damaged caused by improper packaging is not covered under warranty.

Shipping Address

Our shipping address is:
Telos Alliance
1241 Superior Avenue East
Cleveland, Ohio 44114 USA
ATTN: (RA Number obtained from Telos Customer Service)

Support via the Web

The Telos website www.TelosAlliance.com has a wide variety of information that may be useful for product support, applications information, software updates, and user manuals.

Factory Support via Phone and E-mail

Customer support personnel in the Cleveland, Ohio, USA office are available by phone or e-mail Monday through Friday 9:00am to 5:00pm Eastern Time by calling +1.216.241.7225 or sending an e-mail to support@TelosAlliance.com

After Hours Support

After hours support is available 24/7 by telephone by calling +1.216.622.0247 or by sending an e-mail to support@TelosAlliance.com
If you are outside the United States and need support in a language other than English, please contact the Axia dealer you purchased your unit from.

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