

THE TELOS ALLIANCE®

# Installation of ETH4CAN board in Element consoles

---

This document covers the dis-assembly, and removal of the CANBus distribution board (p/n 1701-00189-100) originally installed in all Element consoles, and details how to replace it with a, Ethernet-to-CANBus board (referred to as ETH4CAN board, p/n 1701-00385). The ETH4CAN board is sold as a kit (Telos Alliance p/n 2011-00161-000); if you wish to purchase this kit, please contact your Axia distributor.

## Table of Contents

1. [Scope of this Document](#)
2. [Prerequisites for installation](#)
3. [Removal of Existing CANBus board](#)
4. [Installing new ETH4CAN board](#)
5. [Configuring ETH4CAN for use with PowerStation](#)
6. [Configuring ETH4CAN for use with a stand-alone Axia Studio MixEngine \(no Element PS/GPIO\)](#)
7. [Configuring ETH4CAN for use with Legacy Element “separates” \(utilizing Element PS/GPIO and Fanless Axia Studio MixEngine\)](#)

## 1. Scope of this Document

This document applies to the following part numbers

- 2001-00173 - Element 8-Position Mainframe
- 2001-00174 - Element 12-Position Mainframe
- 2001-00280 - Element 14-Position Mainframe
- 2001-00175 - Element 16-Position Mainframe
- 2001-00176 - Element 20-Position Mainframe
- 2001-00229 - Element 22-Position Mainframe
- 2001-00177 - Element 24-Position Mainframe
- 2001-00178 - Element 28-Position Mainframe

**Note: 2001-00172 - Element 4-Position Mainframe is not supported due to insufficient chassis space for mounting of the ETH4CAN board.**



# THE TELOS ALLIANCE®

## 2. Prerequisites for Installation

You must have on-hand one ETH4CAN Kit (p/n 2011-00161-000) for each frame that you are converting. Your KIT contains the following parts.

- Qty 1 1701-00385-000 Console Interface Board (ETH4CAN Board)
- Qty 1 1451-00749-102 Aluminum Mounting Plate
- Qty 2 1308-00066-100 3.2mm X 4.75mm Snap in Nylon standoff
- Qty 3 1301-00077-100 M3 X 6MM Phillips #2 Pan Head Screw
- Qty 2 1301-00080-100 M3 X 8MM Phillips #2 Pan Head Screw
- Qty 2 1302-00011-100 #6 Flat washer
- Qty 4 1771-00041-100 RJ45 CANBUS Terminator Plug (Picture Shown)



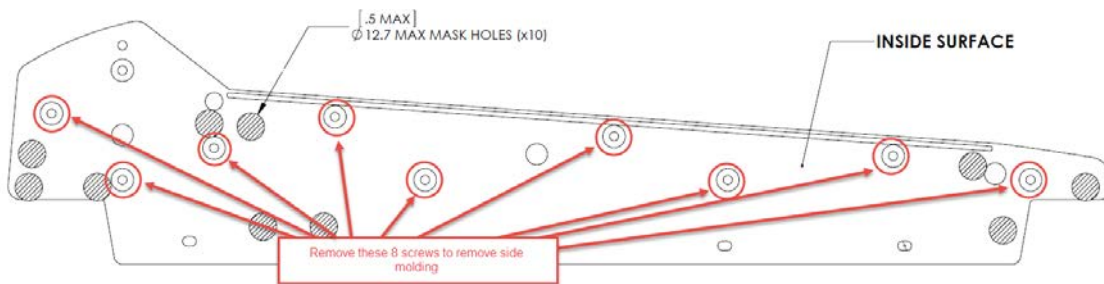
# THE TELOS ALLIANCE®

## 3. Removal of existing CANBus board

This document shows removal of the right hand console end components parts; however, you may choose either end to remove.

The end molding must be removed first. It is attached with 8 or 9 screws as shown in the illustration below. Once the molding is removed, the aluminum side panel is removed, after which the existing board can be removed and new parts installed.

The following illustration shows the location of the attaching screws.



One screw is accessed from under the front palm rest as shown here.

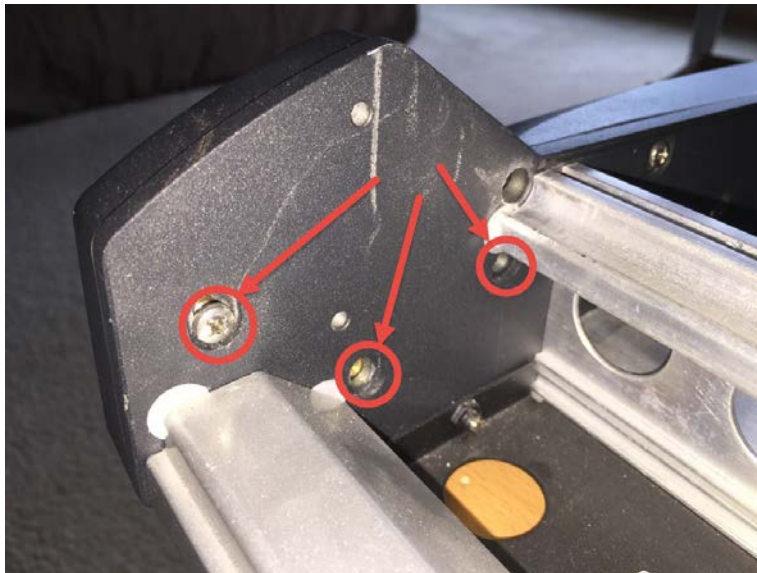


## THE TELOS ALLIANCE®

Five screws are accessed from the inside of the console frame as shown here.



Three screws are accessed from under the overbridge as shown here. Depending upon the age of your console, it is possible that only the two screws shown at the left of this picture are present.

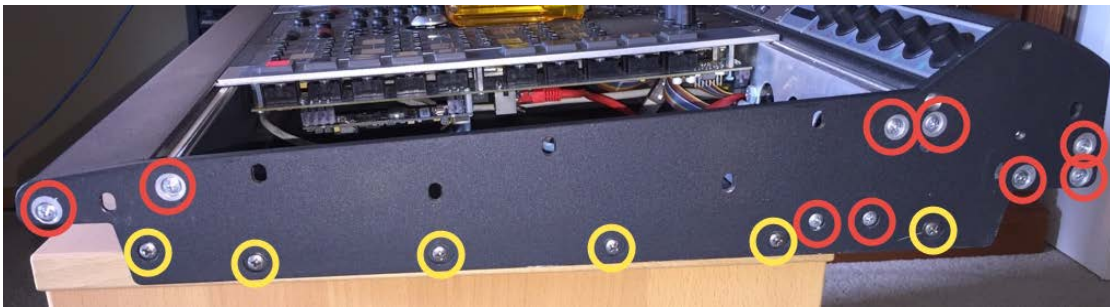


# THE TELOS ALLIANCE®

Once the side molding is removed, the console side plate is accessible.



Next, remove 15 screws holding the side plate to the other parts. Note that there are nine long screws and six short screws to be removed. The location of the long screws are noted in the following photo with red circles; locations of the shorter screws are circled in yellow.



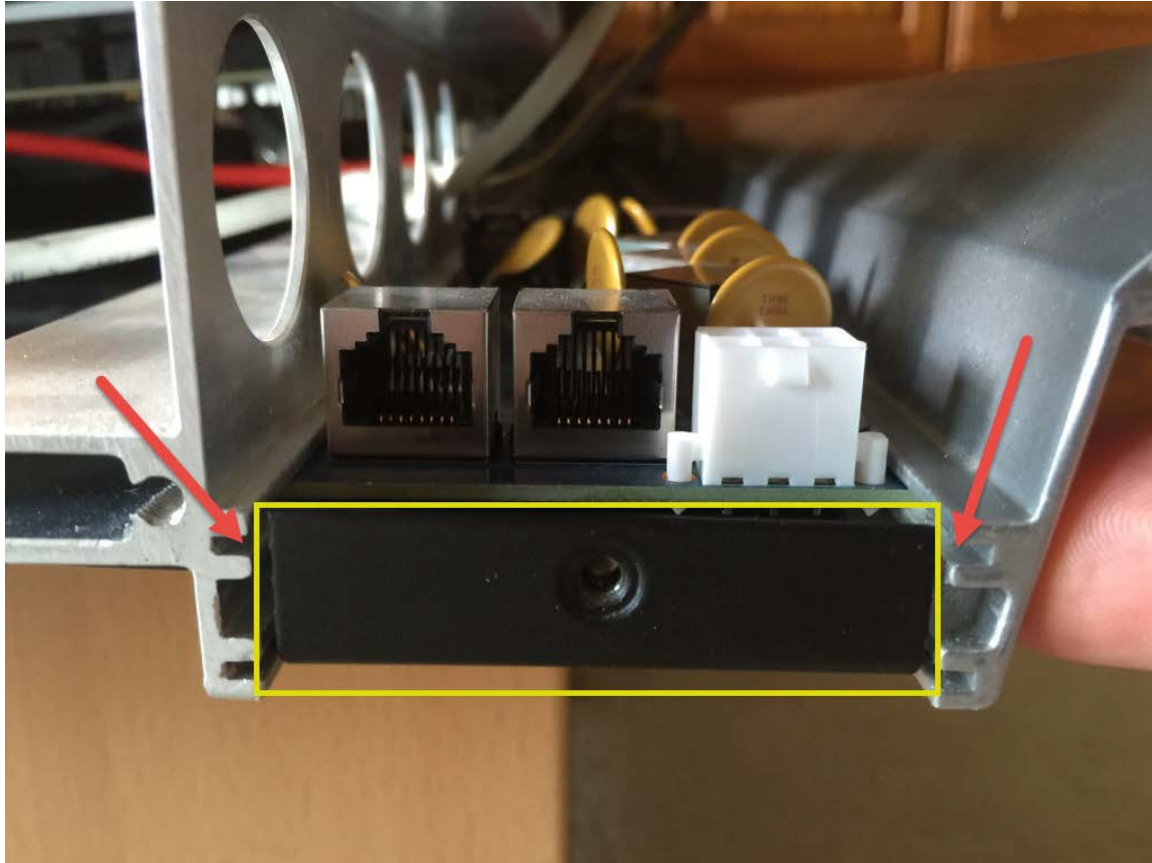
In the photo below, the side panel is removed. The area we will focus on to remove the CANBus board and install the new ETH4CAN board is within the red square.





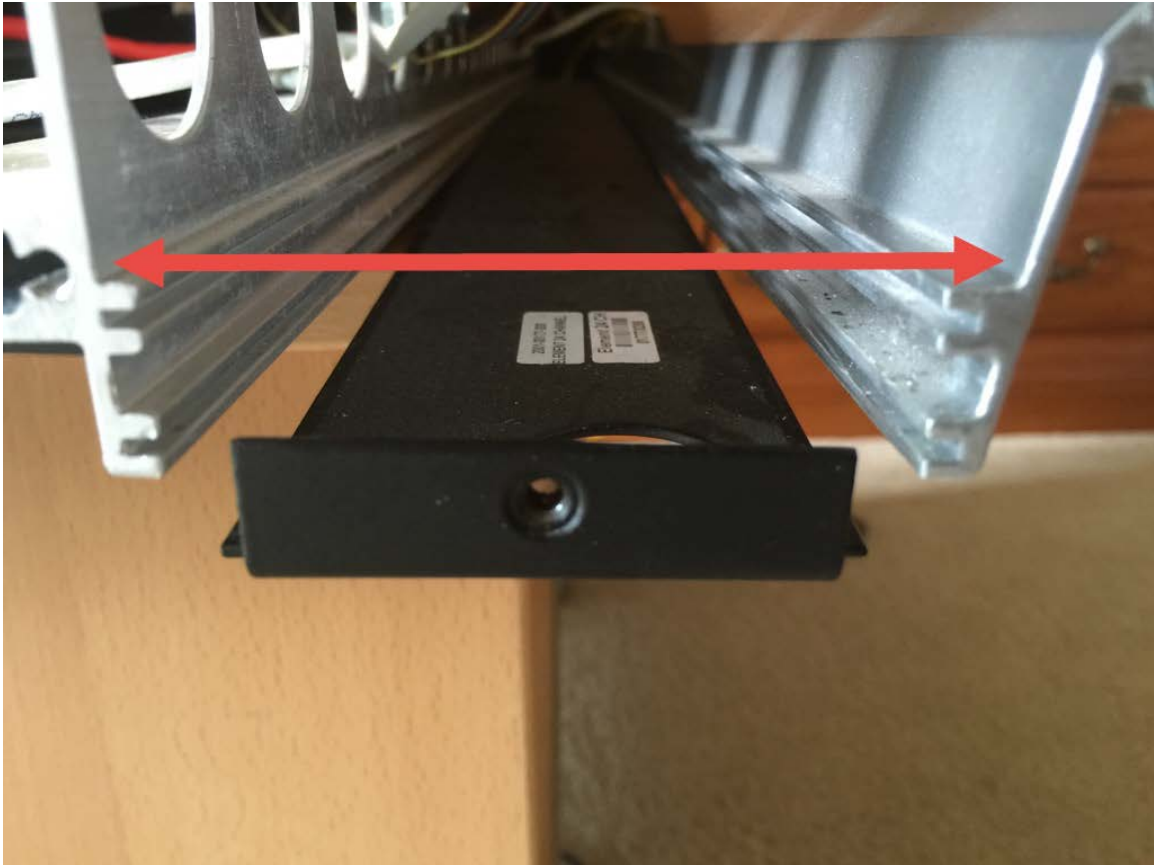
## THE TELOS ALLIANCE®

The photo below shows a close-up of the rear channel where the boards are mounted. The existing board is mounted in two slots (marked with red arrows). The bottom metal, enclosed in the yellow rectangle, prevents the CANBus board from being slid out of that channel.



## THE TELOS ALLIANCE®

In order to remove the existing board, separate the two extruded aluminum pieces slightly, allowing the bottom piece to fall away, as shown in the picture below.

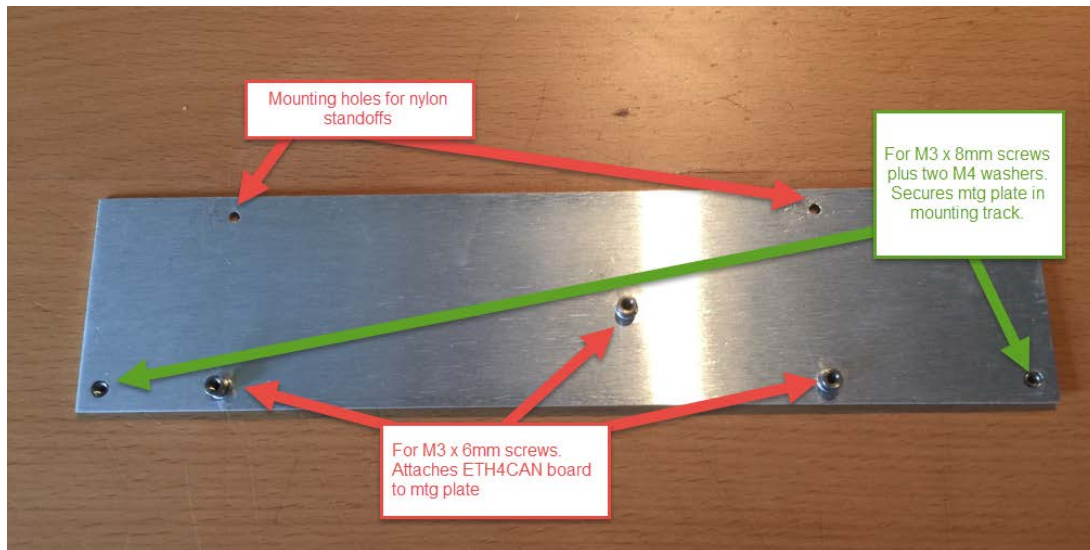


### 4. Installing the new ETH4CAN board

To install the new ETH4CAN board, you will need the parts from one KIT.

You will install the mounting plate first. Note that the mounting plate is installed with the two nylon standoffs toward the front of the console frame, and the 3 mounting points for the M3 x 6mm screws facing the back of the console. The following picture shows the various mounting points on the mounting plate

# THE TELOS ALLIANCE®

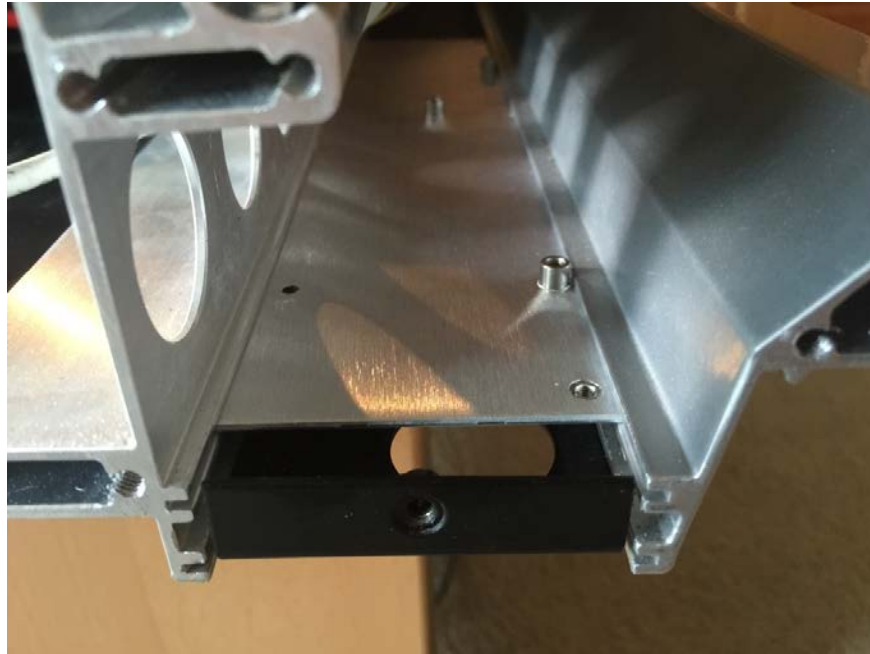


Install the mounting plate in the top channel of the extruded aluminum parts as shown in the picture. The aluminum mounting plate goes in the same channel that the original CANBus board was removed from.

**IMPORTANT NOTE:** This mounting plate must be mounted as shown, with the nylon standoffs toward the front of the console, and the pressed-in nuts for the screws toward the back. For clarification, the picture below was taken looking at the right side of the console. The back of the console is on the right, and the front of the console is to the left.



# THE TELOS ALLIANCE®



Now that the mounting plate is installed, you must reassemble the console frame.

Make certain that the hinge pin for the console overbridge is properly located in the hole provided on the side plate. Reattach the side plate, making certain that the nine long and six short screws are installed in the correct positions. The short screws are noted in the photo below in yellow, the long screw locations are noted in red.

To allow for proper alignment of the side plate, it is suggested that you put all screws in loosely before fully tightening them.



## THE TELOS ALLIANCE®

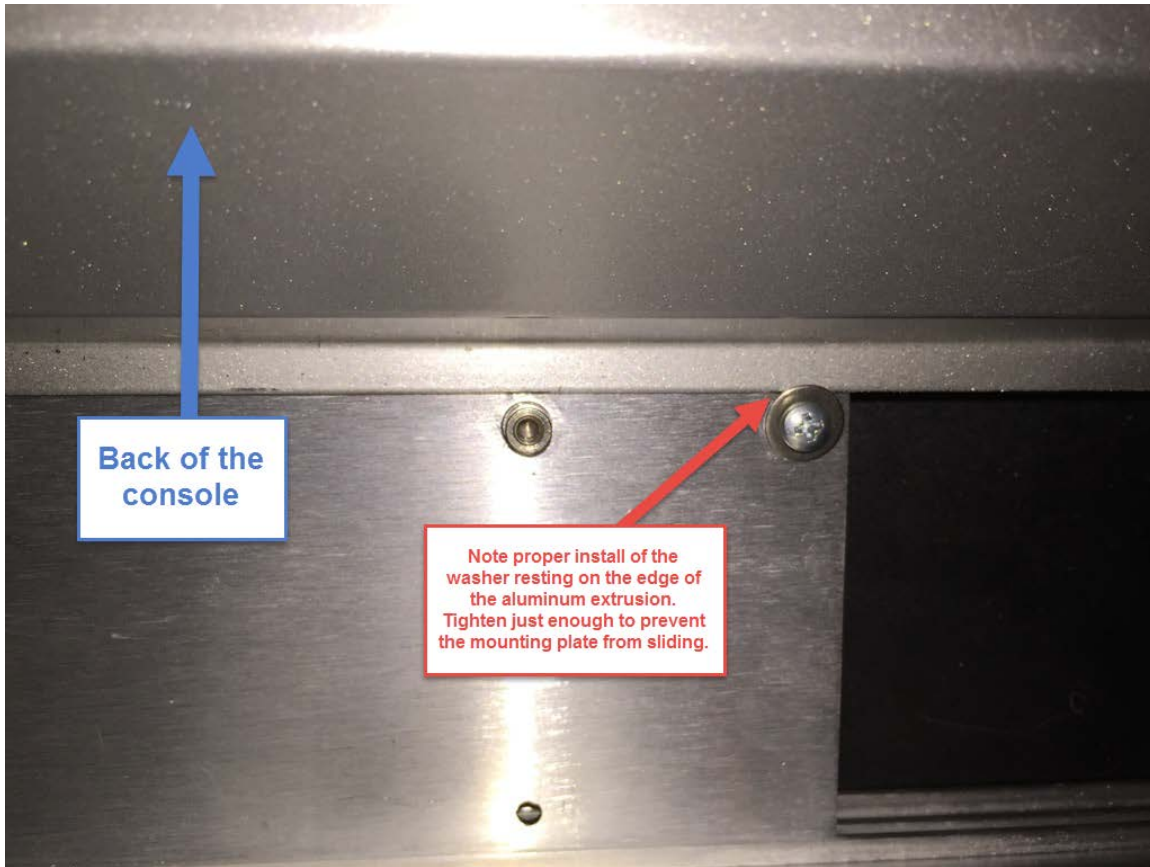
Once the side plate properly secured, reattach the side molding by reinstalling the 8 or 9 screws removed at the beginning of Step 3

Next, center the aluminum mounting plate in the console as shown in the following photo.



Install two M3 x 8mm screws with #6 flat washer in the left and right corners of the mounting plate. Proper placement of these screws and washers prevents the mounting plate from sliding around inside the slot. The following picture shows proper installation of the screws and washers with the edge of the washer up on the edge of the aluminum extrusion.

# THE TELOS ALLIANCE®



## THE TELOS ALLIANCE®

Once the mounting plate is secured, install the ETH4CAN board over the two nylon standoffs, and secure with the three M3 x 6mm screws. The photo below depicts a properly installed ETH4CAN Board.



After the physical installation of the board is complete, the console may be connected to the network. This requires connection of Ethernet, power and console modules.

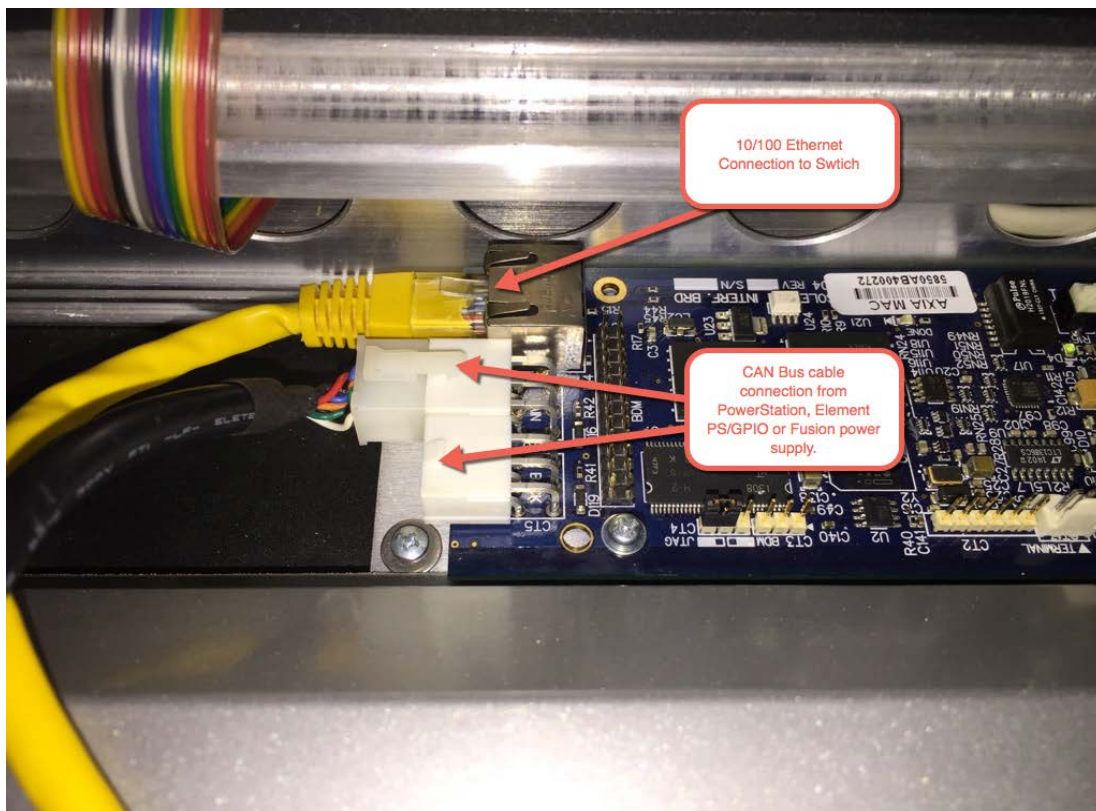
**Ethernet** - The Ethernet connection is the single RJ45 connector on the left in the picture below (the yellow cable), just above the two white Molex connectors. Connect the other end to a properly configured access port on any switch in your Axia network. This connection does NOT require a 1GB connection.



## THE TELOS ALLIANCE®

**Power** - The ETH4CAN board is powered using at least 1 of the Molex connectors located right next to the Ethernet port.

Note that the single Molex connector on the opposite side of the board should not be used. Your configuration may vary slightly, but options for providing power could be an existing PowerStation or Element Power Supply/GPIO or a new, standalone Axia Console Power Supply. The dual Molex connectors are provided to facilitate connection of redundant power supplies to the console.



**Modules** - CANBus connections to the individual modules are made via the four RJ45 connections located on the opposite side of the board from the Ethernet and Power connectors.

A CAT5 cable is used to connect one of these ports to up to 3 Modules. Each connection requires a RJ45 terminator to be installed at the end of the chain of modules. Any unused ports on the ETH4CAN board should be terminated with an RJ45 terminator. If your configuration requires more than 3 modules per connection please contact Telos Alliance 24/7 Support for assistance.



# THE TELOS ALLIANCE®

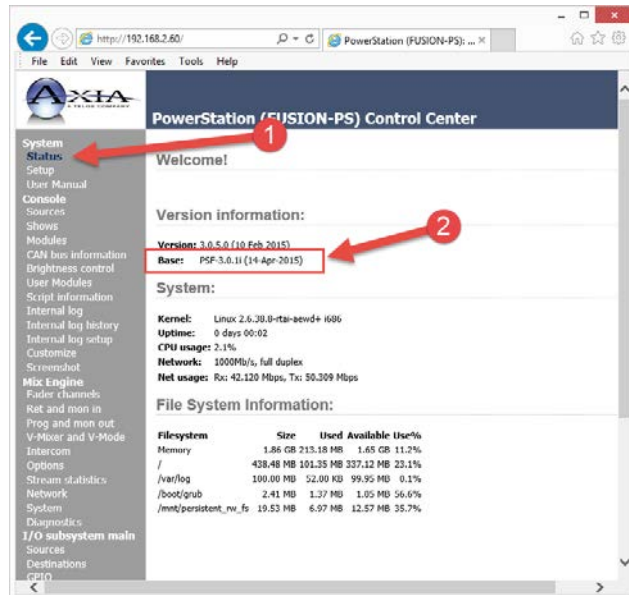
## 5. Configuring ETH4CAN for use with PowerStation

### PREREQUISITES

Before beginning, confirm that your Axia PowerStation is running the correct version of software to support ETH4CAN operation.

Using Axia iProbe, or a computer connected to your Axia network, navigate to the Configuration web page of your PowerStation, then click on the Status link from the left-side menu. Note the BASE version number noted in red as item 2.

**If your BASE version number is NOT 3.0.0 or higher, STOP NOW and contact customer support for information on updating your PowerStation to a version that supports ETH4CAN operation.**



Assuming your PowerStation has been updated with the required software version, there are a couple of things you will need to know prior to proceeding.

First, like every other Axia device (really, every Ethernet device), each ETH4CAN board consumes an IP address. That IP address is managed by the PowerStation software in exactly the same manner as the PowerStation manages the IP address of its internal switch board, I/O Board and PowerStation AUX unit (if present).

The first ETH4CAN board will be assigned an IP address by PowerStation that is the same as the PowerStation, with the final octet incremented by + 4. In this case, the PowerStation is assigned IP address 192.168.2.60, so the first ETH4CAN board will be assigned 192.168.2.64.

# THE TELOS ALLIANCE®

If your Element is configured as a “split frame” console, it is the preferred best practice for each frame to contain its own ETH4CAN board. If your console configuration follows this convention, each ETH4CAN board after the first automatically has its IP address incremented by +1, so:

- The first ETH4CAN board IP address equals the IP address of the PowerStation, + 4.
- The second ETH4CAN board IP address equals the IP address of the PowerStation, + 5.
- The third ETH4CAN board IP address equals the IP address of the Powerstation, + 6
- And so on.

## CONFIGURATION

Pairing the ETH4CAN boards with your PowerStation is easy and will require a few simple mouse clicks.

Begin by logging in to the main page of your PowerStation. Click on the Network link found under the Mix Engine menu heading; on the resulting page beneath the “Aux IO and Fusion Frames” heading, click on the “Install...” button as shown in the graphic below.

The screenshot displays the 'PowerStation (FUSION-PS) Control Center' interface. On the left is a navigation menu with categories: System, Console, Mix Engine, Network, and I/O subsystem main. The 'Network' option is highlighted with a red arrow labeled '1'. The main content area shows the 'Host Name' field set to 'FUSION-PS', followed by 'IP Settings' with fields for Network address (192.168.2.60), Netmask (255.255.255.0), and Gateway (192.162.2.1). Below these fields is an 'Apply' button. A red arrow labeled '2' points from the 'Apply' button to the 'Install...' button under the 'Aux IO and Fusion frames' heading.

## THE TELOS ALLIANCE®

Clicking the “Install...” button begins a discovery process in which the system looks for any un-configured ETH4CAN boards. If you have a system with many un-configured boards, they will all show up in the list. It is important that you take note of the MAC address found on each board, in order to pair the correct board(s)/console with the correct PowerStation.

After clicking the Install button you will be presented with the following screen:

The system assumes there is one frame to start with. If you are converting more than just one console frame to ETH4CAN, enter the total number of console frames to be paired with this PowerStation in the “Number of frames (0..15)” box, and click the “Apply” button. Pay particular attention to the note on the screen as it speaks to the number of Element frames relative to the number of ETH4CAN boards. What the “Number of frames” box is really asking for is the total number of ETH4CAN boards to be associated with the PowerStation.

The “Current MAC” box should display all zeros.

Using the dropdown list, select your ETH4CAN board for Fusion Frame 1 and then click the “Apply IP” button. The system will apply the correct IP to the board and then “pair” that board with this console.



# THE TELOS ALLIANCE®

Once an ETH4CAN board has been paired, it will not show up in the drop down list again.

Repeat this process for each console frame to be paired with your PowerStation. Once properly configured, the “Current MAC” box will show the MAC address of each newly paired ETH4CAN board. The following screen shot shows the Current MAC set to the address of the ETH4CAN board; there are no longer any boards listed in the Select: dropdown list.

**PowerStation (FUSION-PS) Control Center**

**PowerStation Hardware Components**

AUX I/O

Current MAC: 00:00:00:00:00:00

AUX I/O boards found: none

MAC	current IP	hostname
(none)		

Select: (none)

Apply IP

**Fusion Console Frames**

Number of frames (0..15): 1 Apply

Note: This setting determines the number of Ethernet/CAN interfaces, which require individual IP addresses. A split frame having one Ethernet/CAN interface and only CAN wiring between its parts counts as one.

**Fusion frame 1**

Current MAC: 58:50:AB:40:02:72

Console boards found: none

MAC	current IP	hostname
(none)		
(none)		

Select: (none)

Apply IP

Current MAC is no longer all zeros

ETH4CAN is no longer in the selection list

Once the ETH4CAN board is paired, all of your displays will show one of two states.

- Scenario 1 - If this is an upgrade, (in other words, you are converting an existing Element for operation with ETH4CAN) then your displays will show exactly what they had shown before starting the conversion.
- Scenario 2 - If this is a NEW installation, then your displays will likely show 'Inactive'.

In order to activate these channels the console must be “captured”. Capturing is the process of pairing the individual modules with the console software. This is accomplished by holding the \* and 2 keys on the numeric keypad on the console at the same time, for 5 seconds until the console enters capture mode and the overbridge displays display 'Capture'.

# THE TELOS ALLIANCE®

To exit Capture mode, press the Enter key located directly below the keypad on your console. If you console does not have an Enter key, press the # key on the numeric keypad. Once the capture process has been completed, only channel numbers will be shown on your displays.

The Capture process is explained in full detail in the Element and Fusion manuals.

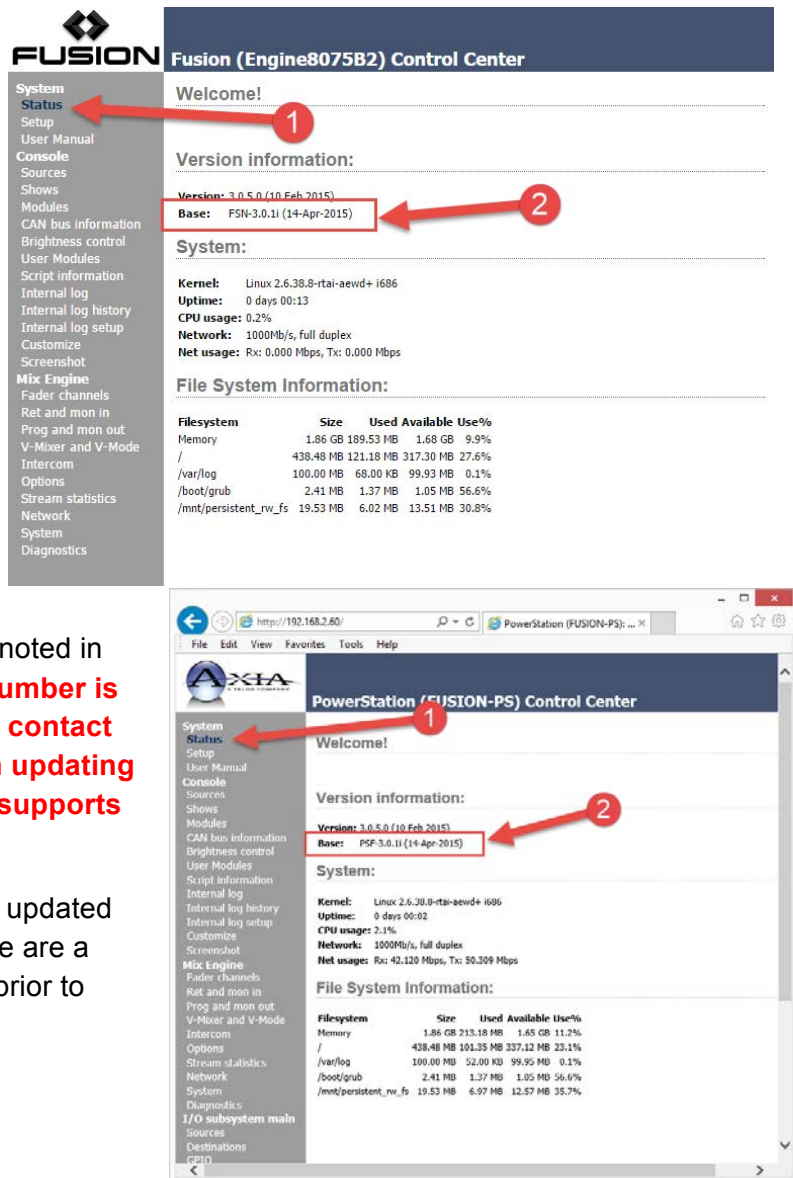
## 6. Configuring ETH4CAN for use with stand-alone StudioEngine and Axia Power Supply

### PREREQUISITES

Before beginning, confirm that your Axia StudioEngine is running the correct version of software to support ETH4CAN operation.

Using Axia iProbe, or a computer connected to your Axia network, navigate to the Configuration web page of your StudioEngine, then click on the Status link from the left-side menu. Note the BASE version number noted in red as item 2. **If your BASE version number is NOT 3.0.0 or higher, STOP NOW and contact customer support for information on updating your StudioEngine to a version that supports ETH4CAN operation.**

Assuming your StudioEngine has been updated with the required software version, there are a couple of things you will need to know prior to proceeding.





# THE TELOS ALLIANCE®

First, the engine must be running in the “Fusion Engine” system mode. Even though you will be converting an Element console for use with ETH4CAN, the StudioEngine must use “Fusion Engine” mode. To confirm (or change) this setting, navigate to the “Options” link under “Mix Engine” and confirm that “Fusion Engine” is selected in the System Mode section, as shown below. If not, select it and click “Apply”. A reboot is then required.

**FUSION** Fusion (Engine8075B2) Control Center

Host name: Engine8075B2

**System Mode**

System Mode:  Element Engine  Fusion Engine

Warning: this setting must not be changed during normal operation. It is an installation option that has major impact on configuration of the entire system.

Apply

**Source Sharing**

Source sharing:  Sources lockable (normal Element operation)  Sources shareable (SmartSurface compatibility mode)

Apply

**Livewire Standard Audio Streams**

Receive buffer size (15-100 ms): 35

Warning: changes take effect after restart.

Apply

**Audio mixing**

Console type:	Element/Fusion
Audio mixing mode:	Stereo

Second, like every other Axia device (really, every Ethernet device), each ETH4CAN board consumes an IP address. That IP address is managed by the StudioEngine software at the time of pairing.

The first ETH4CAN board will be assigned an IP address by StudioEngine that is the same as the StudioEngine, with the final octet incremented by + 1. In this case, the PowerStation is assigned IP address 192.168.2.60, so the first ETH4CAN board will be assigned 192.168.2.61.



# THE TELOS ALLIANCE®

If your Element is configured as a “split frame” console, it is the preferred best practice for each frame to contain its own ETH4CAN board. If your console configuration follows this convention, each ETH4CAN board after the first automatically has its IP address incremented by +1, so:

- The first ETH4CAN board IP address equals the IP address of the StudioEngine, + 1.
- The second ETH4CAN board IP address equals the IP address of the StudioEngine, + 2.
- The third ETH4CAN board IP address equals the IP address of the StudioEngine, + 3
- And so on.

## CONFIGURATION

Pairing the ETH4CAN boards with your StudioEngine is easy and will require a few simple mouse clicks.

Begin by logging in to the main page of your StudioEngine. Click on the Network link found under the Mix Engine menu heading; on the resulting page beneath the “Fusion Frames” heading, click on the “Install...” button as shown in the graphic below.

**FUSION Fusion (Engine8075B2) Control Center**

**System**  
 Status  
 Setup  
 User Manual  
**Console**  
 Sources  
 Shows  
 Modules  
 CAN bus information  
 Brightness control  
 User Modules  
 Script information  
 Internal log  
 Internal log history  
 Internal log setup  
 Customize  
 Screenshot  
**Mix Engine**  
 Fader channels  
 Ret and mon in  
 Prog and mon out  
 V-Mixer and V-Mode  
 Intercom  
 Options  
 Stream statistics  
**Network**  
 System  
 Diagnostics

**Host Name**  
 Host name:   
 Domain name syntax - series of labels concatenated with dots. Labels may contain only letters, digits, and hyphens, and must start with a letter or digit.

**Engine Livewire Port**  
 Network address:   
 Netmask:   
 Gateway:

Warning: all changes except host name take effect after restart.  
 Attempts to set network address and netmask to 0.0.0.0 will not be accepted.

**Fusion frames**

1: Click on the **Network** link in the sidebar menu.  
 2: Click on the **Install...** button under the Fusion frames heading.

## THE TELOS ALLIANCE®

Clicking the “Install...” button begins a discovery process in which the system looks for any un-configured ETH4CAN boards. If you have a system with many un-configured boards, they will all show up in the list. It is important that you take note of the MAC address found on each board, in order to pair the correct board(s)/console with the correct StudioEngine.

After clicking the Install button you will be presented with the following screen:



The system assumes there is one frame to start with. If you are converting more than just one console frame to ETH4CAN, enter the total number of console frames to be paired with this PowerStation in the “Number of frames (0..15)” box, and click the “Apply” button. Pay particular attention to the note on the screen as it speaks to the number of Element frames relative to the number of ETH4CAN boards. What the “Number of frames” box is really asking for is the total number of ETH4CAN boards to be associated with the PowerStation.

The “Current MAC” box should display all zeros.

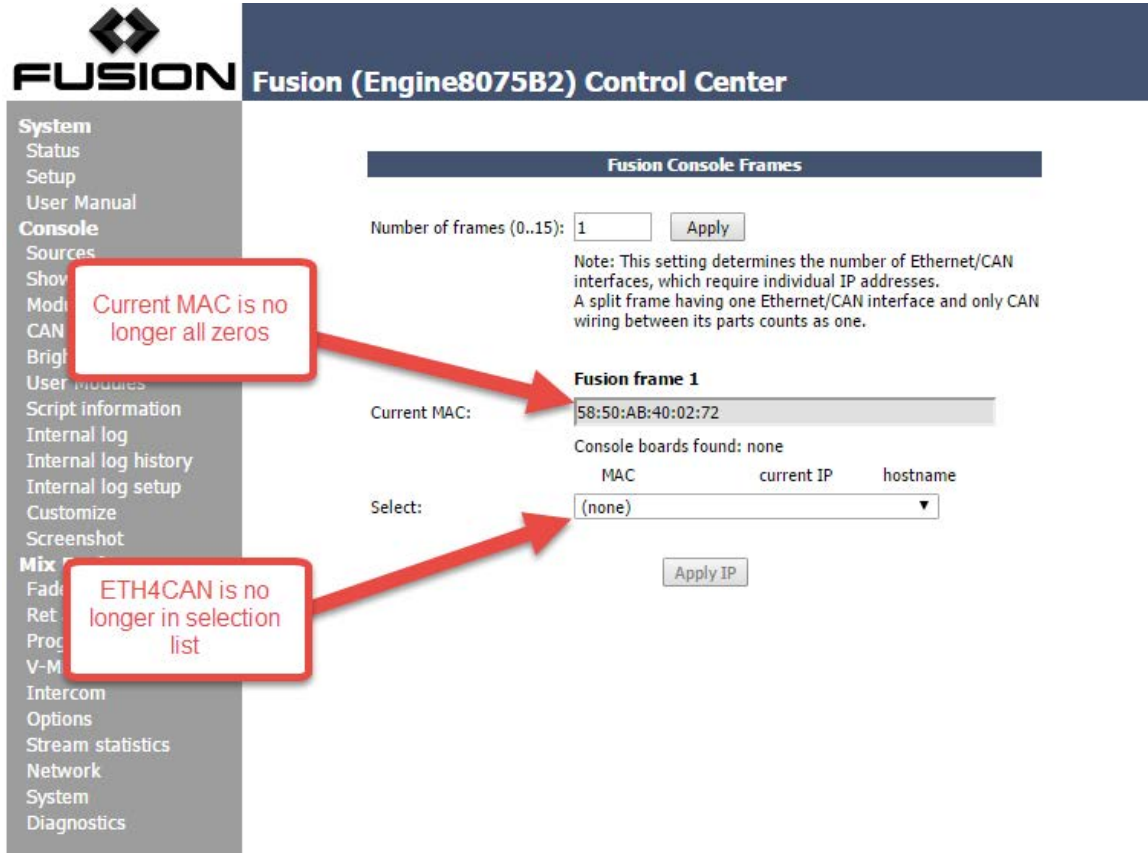
Using the dropdown list, select your ETH4CAN board for Fusion Frame 1 and then click the “Apply IP” button. The system will apply the correct IP to the board and then “pair” that board with this console.



# THE TELOS ALLIANCE®

Once an ETH4CAN board has been paired, it will not show up in the drop down list again.

Repeat this process for each console frame to be paired with your PowerStation. Once properly configured, the “Current MAC” box will show the MAC address of each newly paired ETH4CAN board. The following screen shot shows the Current MAC set to the address of the ETH4CAN board; there are no longer any boards listed in the Select: dropdown list.



Once the ETH4CAN board is paired, all of your Element’s overbridge displays will read “Inactive”.

In order to activate these channels the console must be “captured”. Capturing is the process of pairing the individual modules with the console software. This is accomplished by holding the \* and 2 keys on the numeric keypad on the console at the same time, for 5 seconds until the console enters capture mode and the overbridge displays display ‘Capture’.



# THE TELOS ALLIANCE®

To exit Capture mode, press the Enter key located directly below the keypad on your console. If your console does not have an Enter key, press the # key on the numeric keypad. Once the capture process has been completed, only channel numbers will be shown on your displays.

The Capture process is explained in full detail in the Element and Fusion manuals.

## 7. Configuring ETH4CAN for use with legacy Element “Separates” (Fanless StudioEngine and Element Power Supply/GPIO Node)

**NOTE: Original StudioEngine with fans *not* supported.**

### PREREQUISITES

Before beginning, confirm that both your Axia StudioEngine AND Element PS/GPIO are running the correct versions of software required to support ETH4CAN operation.

First, using Axia iProbe, or a computer connected to your Axia network, navigate to the Configuration web page of your StudioEngine, then click on the Status link from the left-side menu. Note the BASE version number noted in red as item 2. **If your BASE version number is NOT 3.0.0 or higher, STOP NOW and contact customer support for information on updating your StudioEngine to a version that supports ETH4CAN operation.**

**Element (Element) Control Center**

Welcome

**Version information:**

Package: 1601-00499-021-element-3.0.10.15.zip  
Version: 3.0.10.15 (02 Jun 2015)  
Base: 1.2.1

**System:**

Kernel: Linux 2.6.35.10 i686  
Uptime: 0 days 00:03  
CPU usage: 2.5%  
CPU temp: +57.0 °C  
SYS temp: +64.0 °C  
CPU fan: 0 RPM  
SYS fan: 0 RPM  
Network: 1000Mb/s, full duplex  
Net usage: Rx: 0.029 Mbps, Tx: 0.001 Mbps

**File System Information:**

Filesystem	Size	Used	Available	Use%
Memory	882.59 MB	77.78 MB	804.81 MB	8.8%
/	27.33 MB	17.74 MB	9.59 MB	64.9%
/flash	221.98 MB	52.68 MB	169.30 MB	23.7%

**FUSION Fusion (Engine807582) Control Center**

Welcome!

**Version information:**

Version: 3.0.5.0 (10 Feb 2015)  
Base: FSN-3.0.1i (14-Apr-2015)

**System:**

Kernel: Linux 2.6.38.8-rtai-aevid+ i686  
Uptime: 0 days 00:13  
CPU usage: 0.2%  
Network: 1000Mb/s, full duplex  
Net usage: Rx: 0.000 Mbps, Tx: 0.000 Mbps

**File System Information:**

Filesystem	Size	Used	Available	Use%
Memory	1.86 GB	189.53 MB	1.68 GB	9.9%
/	438.48 MB	121.18 MB	317.30 MB	27.6%
/var/log	100.00 MB	68.00 KB	99.93 MB	0.1%
/boot/grub	2.41 MB	1.37 MB	1.05 MB	56.6%
/mnt/persistent_nv_fs	19.53 MB	6.02 MB	13.51 MB	30.8%





# THE TELOS ALLIANCE®

Next, using Axia iProbe, or a computer connected to your Axia network, navigate to the web page of your PS/GPIO, click on the “Status” link under the “System” heading, and note the Version number as shown in the adjacent screen capture. **If your version is NOT 3.0.10.15 or higher, STOP NOW and contact customer support for information on updating your Element to a supported version.**

**Element (Element) Control Center**

System  
**Status**  
 Setup  
 Customize  
 Log  
 Log History  
 Log Setup  
 Screenshot  
**Module Manager**  
 Modules  
 CAN bus information  
 Brightness control  
 User Modules  
 GPIO Configuration  
**Script Manager**  
 Script information  
**Profile Manager**  
 Sources  
 Shows  
**Misc.**  
 Engine

Version information:

**Package:** 1601-00499-021-element-3.0.10.15.zip  
**Version:** 3.0.10.15 (02 Jun 2015)  
**Base:** 1.2.1

System:

**Kernel:** Linux 2.6.35.10 i686  
**Uptime:** 0 days 00:03  
**CPU usage:** 2.5%  
**CPU temp:** +57.0 °C  
**SYS temp:** +64.0 °C  
**CPU fan:** 0 RPM  
**SYS fan:** 0 RPM  
**Network:** 1000Mb/s, full duplex  
**Net usage:** Rx: 0.029 Mbps, Tx: 0.001 Mbps

File System Information:

Filesystem	Size	Used	Available	Use%
Memory	882.59 MB	77.78 MB	804.81 MB	8.8%
/	27.33 MB	17.74 MB	9.59 MB	64.9%
/flash	221.98 MB	52.68 MB	169.30 MB	23.7%

Assuming your Element and Engine are both running compatible and supported versions, there are a couple of things you will need to know prior to proceeding.

First, the engine must be running in the “Fusion Engine” system mode. Even though you will be converting an Element console for use with ETH4CAN, the StudioEngine must use “Fusion Engine” mode. To confirm (or change) this setting, navigate to the “Options” link under “Mix Engine” and confirm that “Fusion Engine” is selected in the System Mode section, as shown below. If not, select it and click “Apply”. A reboot is then required.

## THE TELOS ALLIANCE®

**FUSION** Fusion (Engine8075B2) Control Center

Host name: Engine8075B2

**System Mode**

System Mode:  Element Engine  Fusion Engine

Warning: this setting must not be changed during normal operation.  
It is an installation option that has major impact on configuration of the entire system.

Apply

**Source Sharing**

Source sharing:  Sources lockable (normal Element operation)  Sources shareable (SmartSurface compatibility mode)

Apply

**Livewire Standard Audio Streams**

Receive buffer size (15-100 ms): 35

Warning: changes take effect after restart.

Apply

**Audio mixing**

Console type: Element/Fusion

Audio mixing mode: Stereo

Second, like every other Axia device (really, every Ethernet device), each ETH4CAN board consumes an IP address. That IP address is managed by the StudioEngine software at the time of pairing.

The first ETH4CAN board will be assigned an IP address by StudioEngine that is the same as the StudioEngine, with the final octet incremented by + 1. In this case, the PowerStation is assigned IP address 192.168.2.60, so the first ETH4CAN board will be assigned 192.168.2.61.

If your Element is configured as a “split frame” console, it is the preferred best practice for each frame to contain its own ETH4CAN board. If your console configuration follows this convention, each ETH4CAN board after the first automatically has its IP address incremented by +1, so:

- The first ETH4CAN board IP address equals the IP address of the StudioEngine, + 1.
- The second ETH4CAN board IP address equals the IP address of the StudioEngine, + 2.
- The third ETH4CAN board IP address equals the IP address of the StudioEngine, + 3
- And so on.

# THE TELOS ALLIANCE®

## CONFIGURATION

Pairing the ETH4CAN boards with your StudioEngine is easy and will require a few simple mouse clicks.

Pairing of the ETH4CAN board with the PS/GPIO is accomplished via navigation to a “hidden” link, as there is no menu option for it. Open your web browser and navigate to **http://*nnn.nnn.nnn.nnn*/discovery** (where *nnn* represents the IP address of your PS/GPIO unit). You will be presented with a page (shown below) that will display any discovered ETH4CAN boards.

The screenshot shows a web browser window with the URL `192.168.2.210/discovery`. The page title is "Element (Element) Control Center". The main content area is titled "Remote Console Discovery:" and contains a table with the following data:

#	Hostname	MAC Address	IP Address	Connected to
1	ETH4CAN	58:50:AB:40:02:72	192.168.2.28	0.0.0.0

Below the table, there is a form with the text "Assign ip address" followed by a text input field containing "192.168.2.211", the text "to selected console and connect it.", and a "Do It!" button.

The left sidebar contains a navigation menu with the following items:

- System
  - Status
  - Setup
  - Customize
  - Log
  - Log History
  - Log Setup
  - Screenshot
- Module Manager
  - Modules
  - CAN bus information
  - Brightness control
  - User Modules
  - GPIO Configuration
- Script Manager
  - Script information
- Profile Manager
  - Sources
  - Shows
- Misc.
  - Engine

At the bottom of the page, there is a copyright notice: © 2004-2015 Axia Audio.



## THE TELOS ALLIANCE®

Select the radio button next to the ETH4CAN board that you want to pair with your PS/GPIO. The “Assign ip address” box should be pre-populated with an IP address, according to the convention described previously; if you choose to change it, simply type the IP address that you would like in the box and click the “Do It!” button.

After a few moments, refresh the page. Double-check that the ETH4CAN board you just paired now shows the IP address you assigned, and that it properly shows the “Connected to” IP Address of your PS/GPIO as shown below.

**element**

**Element (Element) Control Center**

**Remote Console Discovery:**

#	Hostname	MAC Address	IP Address	Connected to
1	ETH4CAN	58:50:AB:40:02:72	192.168.2.211	192.168.2.210

Assign ip address  to selected console and connect it.

Correct IP Address shown

Shows connected to the correct PS/GPIO

Once the ETH4CAN board is paired, all of your displays will show one of two states.

- Scenario 1 - If this is an upgrade, (in other words, you are converting an existing Element for operation with ETH4CAN) then your displays will show exactly what they had shown before starting the conversion.
- Scenario 2 - If this is a NEW installation, then your displays will likely show ‘Inactive’.

In order to activate these channels the console must be “captured”. Capturing is the process of pairing the individual modules with the console software. This is accomplished by holding the \* and 2 keys on the numeric keypad on the console at the same time, for 5 seconds until the console enters capture mode and the overbridge displays display ‘Capture’.



## THE TELOS ALLIANCE®

To exit Capture mode, press the Enter key located directly below the keypad on your console. If your console does not have an Enter key, press the # key on the numeric keypad. Once the capture process has been completed, only channel numbers will be shown on your displays.

The Capture process is explained in full detail in the Element and Fusion manuals.

For more information or for assistance, please contact Telos Alliance 24/7 Support at <http://www.telosalliance.com/support> .

© 2015 TLS Corp., All Rights Reserved. S15/16014

