

**IMPORTANT:**  
Go to [www.extron.com](http://www.extron.com) for the complete user guide, installation instructions, and specifications before connecting the product to the power source.

### General Setup

The FOX3 Matrix Switchers are configurable matrix switchers that distribute optical and audio signals. The FOX3 Matrix is primarily designed to support switching of FOX3 endpoints, FOX3 transmitters to FOX3 receivers. The matrix switcher routes any input signal to any combination of outputs. The FOX3 Matrix switcher can also route multiple input and output configurations simultaneously (see figure 1 for a FOX3 Matrix 80x configuration).

**⚠ WARNING:** The FOX3 Matrix switcher fiber optic I/O boards output continuous invisible light, which may be harmful to the eyes; use with caution. Do not look into the fiber optic cable connectors or into the fiber optic cables themselves. Plug the attached dust caps into the optical transceivers when the fiber cable is unplugged.

**AVERTISSEMENT :** Les cartes d'E/S fibre optique FOX3 Matrix switcher émettent une lumière invisible continue, qui peut être dangereuse pour les yeux ; à utiliser avec précaution. Ne pas fixer directement les connecteurs optiques ou les câbles fibre optique. Branchez les protections contre la poussière dans l'ensemble émetteur/récepteur lorsque le câble fibre optique est débranché.

**NOTE:** FOX3 signals are not compatible with FOX and FOX II signals.

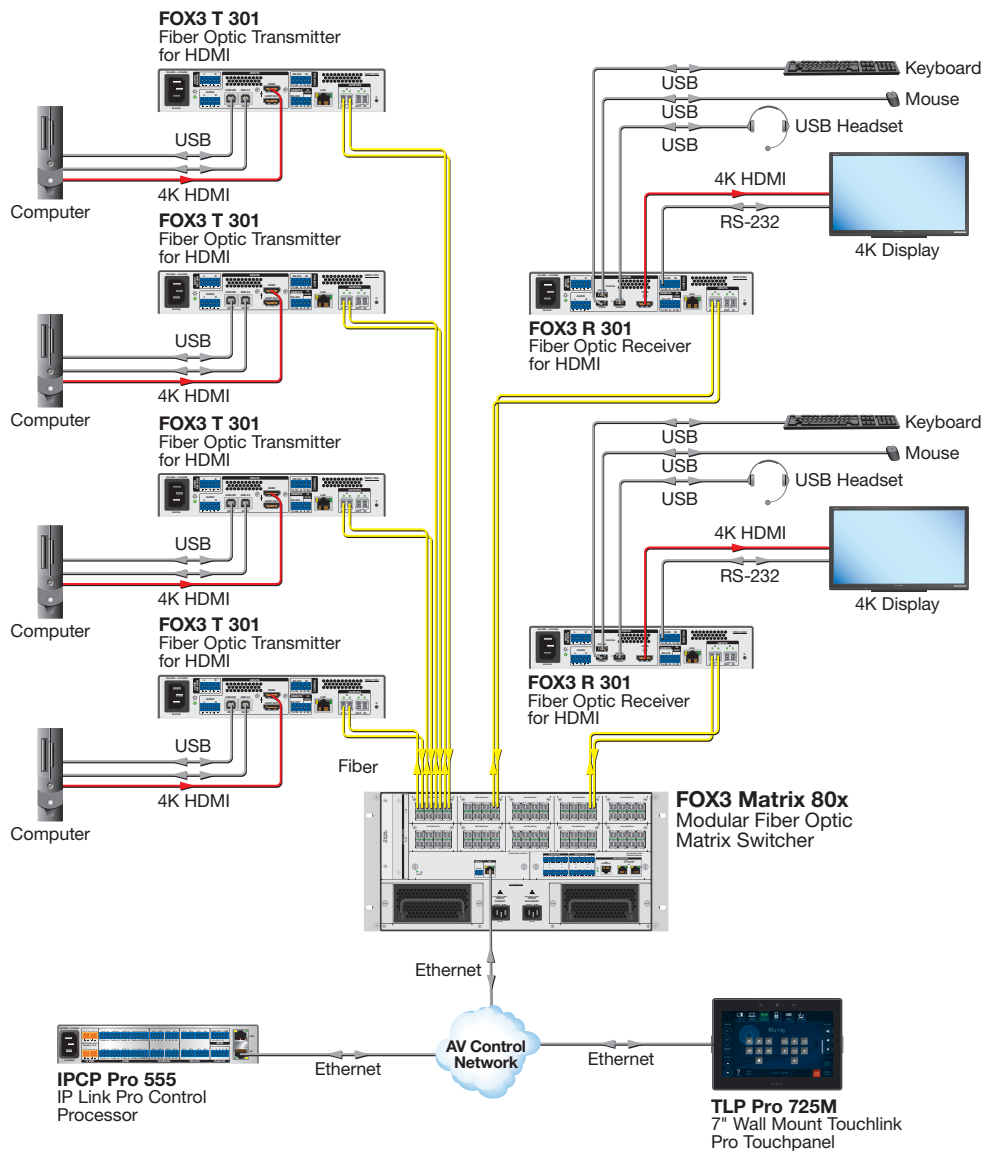


Figure 1. Typical FOX3 Matrix Application

# FOX3 Matrix Series • Setup Guide (Continued)

The Extron proprietary fiber optic signal, generated by Extron fiber optic transmitters, can include video, stereo audio, USB 2.0, USB HID, return audio, IR, and 3D sync.

The matrix switcher can be remotely controlled via the rear panel Ethernet LAN port, rear panel RS-232 port (SIS only), or front panel USB port, using either the Windows®-based Extron Product Configuration Software (PCS) or Simple Instruction Set (SIS) commands.

### NOTES:

- Compatible optical signals are digital signals up to 10 Gbps that are sent and received via fiber optic small form factor pluggable (SFP) modules.
- The FOX3 transmitter-to-receiver communications, including the serial link, occupy one matrix switcher input and output. This matrix switcher supports the insertion, through the LAN port, of serial (pass through) communications from the matrix to the FOX3 transmitter or the FOX3 receiver.

The switcher has two hot-swappable 100 VAC to 240 VAC, 50-60 Hz power supplies that provide worldwide power compatibility and reliability.

## Configurability and Transmission modes

The FOX3 Matrix Switchers are assembled from individual input/output (I/O) boards. The switchers can include multiple I/O boards, each I/O board supports up to 8 inputs and 8 outputs:

- FOX3 Matrix 24x — 24 inputs and outputs
- FOX3 Matrix 40x — 40 inputs and outputs
- FOX3 Matrix 80x — 80 inputs and outputs
- FOX3 Matrix 160x — 160 inputs and outputs
- FOX3 Matrix 320x — 320 inputs and outputs

The two types of I/O boards are:

- Singlemode (SM) fiber optic 8x8 I/O board — Very long distance, up to 20 km (12.43 miles)
- Multimode (MM) fiber optic 8x8 I/O board — Long distance, up to 500 m (1640 feet)

Increase or decrease the size of the FOX3 Matrix Switcher from an 8-input by 8-output matrix (one I/O board) to multiple-inputs by multiple-outputs matrix by adding or removing I/O boards.

**NOTE:** Multimode and singlemode fiber optic I/O boards can be mixed in a FOX3 Matrix switcher, but it is imperative to connect the proper transmission mode fiber cables to the board.

## Rear Panel

As shown in figure 2, each I/O board is identified by the input and output numbers supported by the board position. The board position designators, printed beside the fan, correspond to the input and output numbers served by that position.

**WARNING:** This unit outputs continuous invisible light, which may be harmful to the eyes; use with caution. For additional safety, plug the attached dust caps into the optical transceivers when the fiber cable is unplugged.

**AVERTISSEMENT :** L'appareil émet une lumière invisible en continu, qui peut être dangereuse pour les yeux; à utiliser avec précaution. Pour une sécurité renforcée, associez les bouchons anti-poussière à l'ensemble émetteur/récepteur optique lorsque le câble fibre optique est débranché.

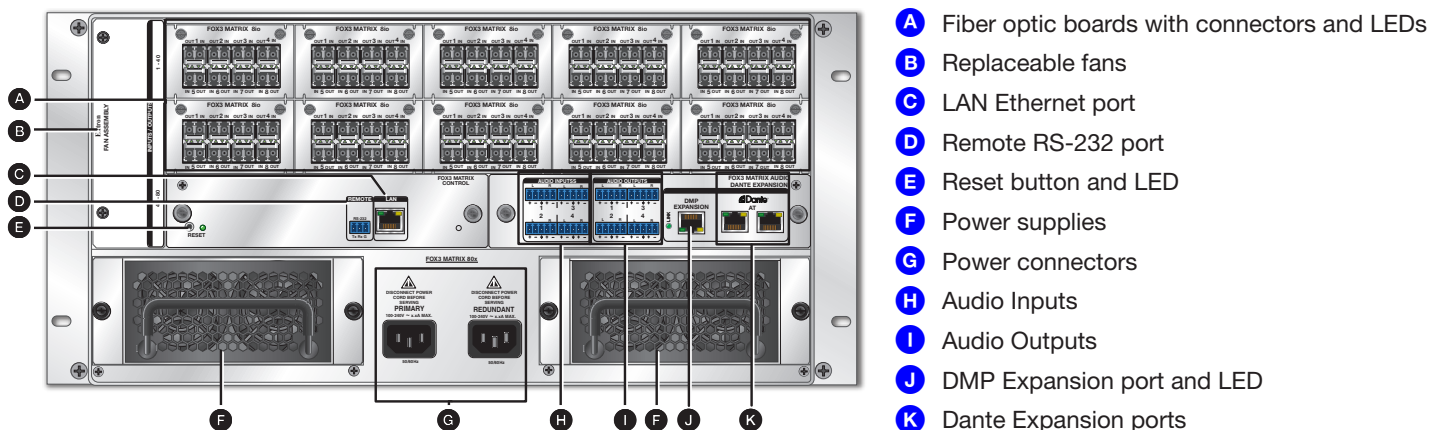


Figure 2. FOX3 Matrix 80x Switcher Rear Panel

## Rear Panel Overview

### A Fiber optic boards with connectors and LEDs — (see [figure 2](#) on page 2)

#### NOTES:

- Ensure the proper fiber cable for the I/O board is used. Typically, singlemode fiber has a yellow jacket and multimode cable has an orange or cyan jacket.
- The FOX3 Matrix switcher uses one connector on the block as an input and the second connector on the same block as a separate output.

- 1 Input connector** — Connect a fiber optic cable between each Input LC connector and a FOX3 transmitter or any other compatible Extron FOX device.

**NOTE:** For USB, return audio, and serial RS-232 (receiver-to-transmitter) function, connect the far end to the Optical Out connector on a FOX receiver.

**Input LED** — See [Fiber optic I/O board LED indication](#) on page 4.

- 2 Output connector** — Connect a fiber optic cable between each output LC connector and a FOX3 receiver or any other compatible Extron FOX device (see [figure 1](#) on page 1).

**NOTE:** For USB, return audio, and Matrix LAN inserted serial RS-232 (receiver-to-transmitter) function, connect the far end to the Optical In connector on a FOX transmitter.

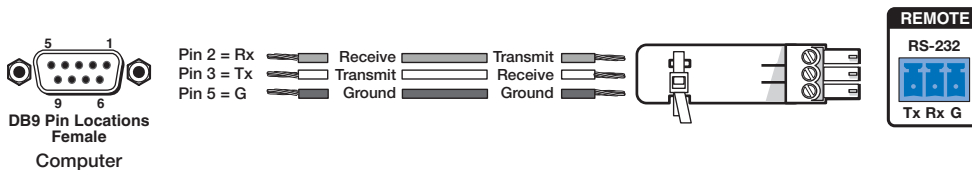
**Output LED** — See [Fiber optic I/O board LED indication](#).

### B Replaceable fans — This fan card has 3 or more removable fans (see [Removing and Installing a Fan Assembly](#) on page 12 to replace a fan).

### C LAN Ethernet port — Optionally, connect a network WAN or LAN hub, a control system, or a computer to the Ethernet RJ-45 port.

- **Network connection** — Wire as a patch (straight) cable.
- **Computer or control system connection** — Wire the interface cable as a crossover cable.

### D Remote RS-232 port — Optionally, connect a control system or computer to the rear panel Remote RS-232 port (see [figure 3](#) for wiring).



**Figure 3. RS-232 Connector Wiring**

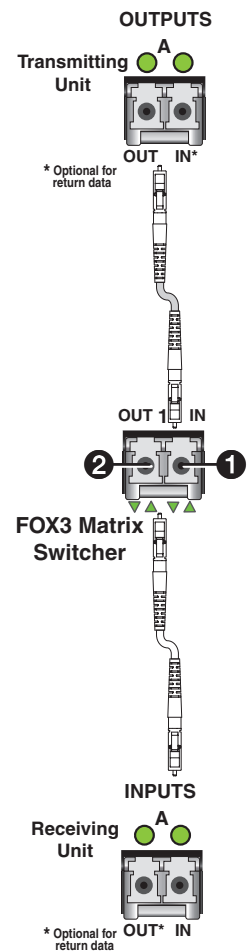
### E Reset button and LED — Initiate four levels of reset of the matrix switcher. For different reset levels, press and hold the recessed button while the switcher is running or while powering up the switcher (see the *FOX3 Matrix Series User Guide*, available at [www.extron.com](http://www.extron.com) for more information on the reset modes).

**NOTE:** The factory configured passwords for all accounts on this device have been set to the device serial number. In the event of a complete system reset, the passwords convert to the default, which is *extron* for the Admin and User.

### F Power supplies — The Primary and Redundant power supplies are hot-swappable. There are two corresponding LEDs on the front panel that indicate the status of each power supply (see [Removing and Installing a Power Supply Module](#) on page 12 to replace power supplies).

### G Power connectors — Plug the switcher into two grounded AC sources.

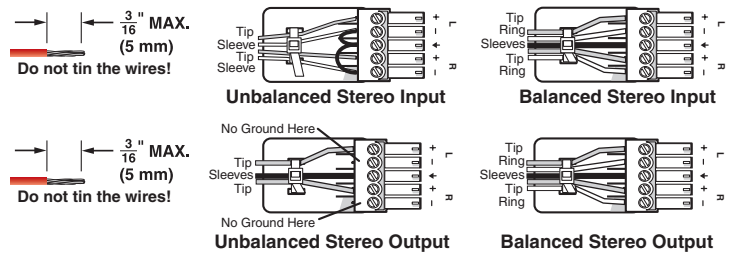
**NOTE:** For reliability, connect the Redundant power cord to either an uninterruptible power source or to a power source that is completely independent from the primary power source.



# FOX3 Matrix Series • Setup Guide (Continued)

**H Audio Inputs** (see [figure 2](#) on page 2) — Connect audio input devices to an audio 5-pole captive screw port (see figure 4 to wire the captive screw connector).

**I Audio Outputs** — Connect audio output devices to an audio 5-pole captive screw port (see figure 4 to wire the captive screw connector).



**Figure 4. Audio Input Wiring Diagram**

**J DMP Expansion port and LED** —

- **Expansion Port** — Connect an STP cable between this port and the Expansion port on an optional Extron DMP Digital Matrix Processor for digital audio connection. Receive and transmit eight 2-channel stereo inputs and eight 2-channel stereo outputs via this RJ-45 connection.
- **Link LED** — Lights to indicate that the port is connected to a compatible device.

**NOTE:** Only connect Extron non-AT audio devices to the DMP Expansion port.

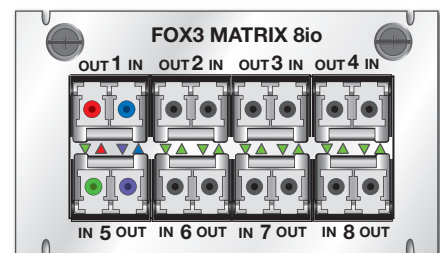
**K Dante Expansion ports** — Connect RJ-45 connectors to external Dante devices for digital audio networking. Receive and transmit 32 2-channel inputs and 32 2-channel outputs via these two RJ-45 connections.

## Fiber optic I/O board LED indication

On the fiber optic I/O boards, the input and output LEDs on the transceivers light green when 10 G light is detected. The arrow LEDs point to the input and output port they represent.

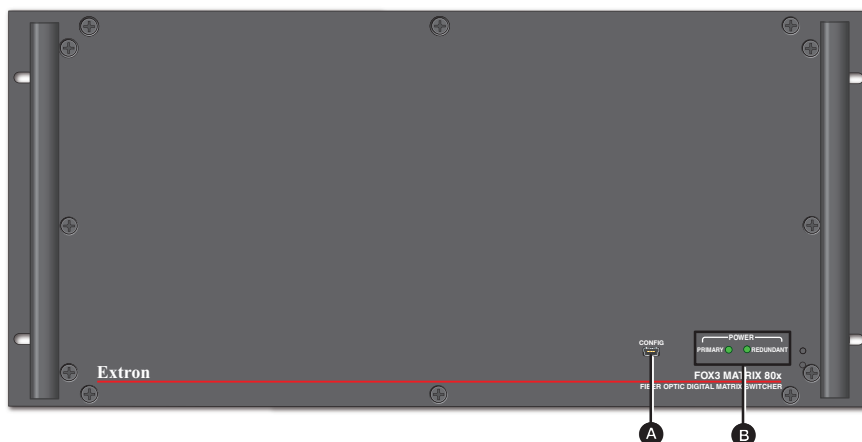
In figure 5, SFP 1 and SFP 5 are examples of the LEDs that indicate the input and output port (different colors are used to indicate the connection only).

- Out 1 is red and the corresponding arrow LED is red.
- In 1 is blue and the corresponding arrow LED is blue.
- Out 5 is purple and the corresponding arrow LED is purple.
- In 5 is green and the corresponding arrow LED is green.



**Figure 5. Fiber Optic I/O Board LEDs**

## Front Panel



**Figure 6. FOX3 Matrix 80x Switcher Front Panel**

**A USB Config port** — If desired, connect computer to the front panel Configuration port.

**B Primary and Redundant Power Supply LEDs** — Light to indicate the power supply status.

- **Green** — Indicates that the associated power supply is operating within normal tolerances.
- **Red** — Indicates that the associated power supply is operating outside the normal tolerances, there is no AC connected to the power supply, or the power supply has failed (see [Removing and Installing a Power Supply Module](#) on page 12 to replace the power supply).
- **Unlit** — Indicates that the power supply is not connected.

## Matrix Operations

The FOX3 Matrix can be operated in one of two modes: Port mode and System Map mode.

**NOTE:** The FOX3 Matrix is initially in Port mode when it is powered for the first time.

- In **Port mode**, each physical SFP on the Matrix represents an individual In 1 and Out 1.
- In **System Map mode**, multiple SFP modules can be combined via PCS to create a configuration map. This mode is used to simplify system switching and USB group switching.

## Remote Control

This section describes using the remote control features of the FOX3 Matrix switchers to control the devices.

Use Simple Instruction Set (SIS) commands for operation and configuration of the matrix. Run these commands from a PC connected to:

- A LAN or WAN using the rear panel RJ-45 LAN connector (see [figure 2, C](#) on page 2) via PuTTY and port 22023.
- The Remote RS-232 port (see [figure 2, D](#)) via DataViewer.
- The front panel USB config port (see [figure 6, A](#) on page 4) via PuTTY and IP address 203.0.113.22 and port 22023.

**NOTE:** The table below is a partial list of SIS commands. For a complete listing of commands and instructions to install PuTTY, see the *FOX3 Matrix Series User Guide*.

## Command and Response Table for SIS Commands

Command	ASCII Command (Host to Unit)	Response (Unit to Host)	Additional Description
<b>NOTE:</b> Commands can be entered back-to-back in a string, with no spaces. For example: 1*1!002*002!003*003!.			
<b>Output switching</b>			
<b>NOTES:</b>			
<ul style="list-style-type: none"> <li>• The quick multiple tie and tie input to all output commands activate all I/O switches simultaneously.</li> <li>• The matrix switcher support 3-digit numeric (001*001) and 5- digit for Audio ties (50001*50001).</li> <li>• The ! <b>tie</b> command connects all available signals for the Tx to the Rx.</li> <li>• When you create a tie where <math>\boxed{x1} = 00</math>, you tie no input to the specified output (<math>\boxed{x3}</math>) (untie <math>\boxed{x3}</math>).</li> <li>• When you create a tie where <math>\boxed{x3} = 00</math>, you untie all outputs from input <math>\boxed{x1}</math>.</li> <li>• If a System Map has been initiated, the Input number (<math>\boxed{x1}</math>) or Output number (<math>\boxed{x3}</math>) can represent a single physical SFP port or a group of SFP ports.</li> </ul>			
Tie input $\boxed{x1}$ to output $\boxed{x3}$	$\boxed{x1}*\boxed{x3}!$	Out $\boxed{x3}$ •In $\boxed{x1}$ •All ←	Tie input $\boxed{x1}$ to output $\boxed{x3}$ , all signals.
Tie input $\boxed{x1}$ to output $\boxed{x3}$	$\boxed{x1}*\boxed{x3}\%$	Out $\boxed{x3}$ •In $\boxed{x1}$ •Vid ←	Tie input $\boxed{x1}$ to output $\boxed{x3}$ , video only.
Tie input $\boxed{x35}$ to output $\boxed{x36}$	$\boxed{x35}*\boxed{x36}\$$	Out $\boxed{x36}$ •In $\boxed{x35}$ •Aud ←	Tie input $\boxed{x1}$ to output $\boxed{x3}$ , audio.
Tie return audio source $\boxed{x37}$ to destination $\boxed{x38}$	$\boxed{x37}*\boxed{x38}\&$	Out $\boxed{x38}$ •In $\boxed{x37}$ •Rta ←	Tie return audio source to destination.
<b>TIP:</b> 0*! clears all ties.			
<b>KEY:</b>			
$\boxed{x1}$ = Input number	00 – Maximum number of inputs for your configuration (0 = untied)		
$\boxed{x3}$ = Output number	00 – Maximum number of outputs for your configuration (0 = untied)		
$\boxed{x35}$ = Audio input number	00 – Maximum number of inputs or DMP Expansion 30001-30008, Dante 40001-40032, Analog 50001-50004		
$\boxed{x36}$ = Audio output number	00 – Maximum number of outputs or DMP Expansion 30001-30008, Dante 40001-40032, Analog 50001-50004		
$\boxed{x37}$ = Return audio source number	00 – Maximum number of outputs (from an Rx unit, DMP Expansion 30001-30008, Dante 40001-40032, or Analog 50001-50004)		
$\boxed{x38}$ = Analog audio destination number (to Tx)	00 – Maximum number of inputs		

# FOX3 Matrix Series • Setup Guide (Continued)

Command	ASCII Command (Host to Unit)	Response (Unit to Host)	Additional Description
<b>Tie an input to all outputs</b>			
Tie input to all outputs	$\boxed{x1}^*!$	In $\boxed{x1}$ •A11←	Tie video and audio input, 3D sync and IR signals to all outputs.
<b>NOTE:</b> USB 2.0, USB HID, and Return Audio are not switched with this command			
Tie input to all outputs	$\boxed{x1}^*%$	In $\boxed{x1}$ •Vid←	Tie video input to all outputs.
Tie input to all outputs	$\boxed{x1}^*\$$	In $\boxed{x1}$ •Aud←	Tie audio input to all outputs.
<b>KEY:</b> $\boxed{x1}$ = Input number 00 – Maximum number of inputs for your configuration (0 = untied)			
<b>Untie</b>			
Untie all outputs	0*!	In00•A11←	Untie all outputs.
Untie an output	0* $\boxed{x3}!$	Out $\boxed{x3}$ •In00•A11←	Untie a particular output.
Untie an input	$\boxed{x1}^*0!$	Out00•In $\boxed{x1}$ •A11←	Untie an input from all tied outputs.
<b>KEY:</b> $\boxed{x1}$ = Input number 00 – Maximum number of inputs for your configuration (0 = untied) $\boxed{x3}$ = Output number 00 – Maximum number of outputs for your configuration (0 = untied)			
<b>Quick tie</b>			
<b>NOTES:</b>			
<ul style="list-style-type: none"> <li>The quick multiple tie and tie input to all outputs commands activate all I/O switches simultaneously.</li> <li>The matrix switcher support 3-digit numeric (001*001) and 5- digit for audio ties (50001*50001)</li> <li>The quick tie applies to fiber I/O, audio expansion, Dante, or analog audio sections.</li> <li>Commands can be made back to back with no spaces.</li> </ul>			
Quick multiple tie	$\boxed{Esc}+Q\boxed{x1}^*\boxed{x3}! \dots \boxed{x1}^*\boxed{x3}! \leftarrow$	Qik← or Qik14←	Make multiple ties with one command. Qik14 responds back when part of the command is invalid or incorrect.
<b>KEY:</b> $\boxed{x1}$ = Input number 00 – Maximum number of inputs for your configuration (0 = untied) $\boxed{x3}$ = Output number 00 – Maximum number of outputs for your configuration (0 = untied)			
<b>Matrix Status</b>			
Request Information	I/i Verbose mode 2/3	$\sqrt{\boxed{x28}X\boxed{x28} \bullet A\boxed{x1}X\boxed{x35} \bullet S\boxed{x6}^1 X\boxed{x6}^2 \dots \boxed{x6}^n \leftarrow$ Inf00* $\sqrt{\boxed{x28}X\boxed{x28} \bullet A\boxed{x1}X\boxed{x35} \bullet S\boxed{x6}^1 X\boxed{x6}^2 \dots \boxed{x6}^n \leftarrow$	
Slot/LC connector information	0* $\boxed{x7}I$ Verbose mode 2/3	$\boxed{x18} \boxed{x18} \boxed{x18} \boxed{x18} \boxed{x18} \boxed{x18} \boxed{x18} \leftarrow$ Inf* $\boxed{x18} \boxed{x18} \boxed{x18} \boxed{x18} \boxed{x18} \boxed{x18} \boxed{x18} \leftarrow$	
Request part number	N/n	60-nnnn-nn←	
View power supply voltages, unit temperature, fan speeds and Power Supply status	S/s Verbose mode 2/3	$\boxed{x24}^P \bullet \boxed{x24}^R \bullet \boxed{x25} \bullet \boxed{x26}^1 \bullet \boxed{x26}^2 \bullet \boxed{x26}^3 \dots \bullet \boxed{x26}^n \bullet \boxed{x27}^P \bullet \boxed{x27}^R \leftarrow$ Sts00* $\boxed{x24}^P \bullet \boxed{x24}^R \bullet \boxed{x25} \bullet \boxed{x26}^1 \bullet \boxed{x26}^2 \bullet \boxed{x26}^3 \dots \bullet \boxed{x26}^n \bullet \boxed{x27}^P \bullet \boxed{x27}^R \leftarrow$	
View temperature of the unit	$\boxed{Esc}20STAT \leftarrow$ Verbose mode 2/3	$\boxed{x25} \leftarrow$ 20Stat• $\boxed{x25} \leftarrow$	
View status of power supplies (Primary, Redundant)	$\boxed{Esc}21STAT \leftarrow$ Verbose mode 2/3	$\boxed{x24}^P \bullet \boxed{x24}^R \leftarrow$ 21Stat• $\boxed{x24}^P \bullet \boxed{x24}^R \leftarrow$	
View fan speeds	$\boxed{Esc}22STAT \leftarrow$ Verbose mode 2/3	$\boxed{x26}^1 \bullet \boxed{x26}^2 \bullet \boxed{x26}^3 \dots \bullet \boxed{x26}^n \leftarrow$ 22Stat• $\boxed{x26}^1 \bullet \boxed{x26}^2 \bullet \boxed{x26}^3 \dots \bullet \boxed{x26}^n \leftarrow$	
<b>KEY:</b> $\boxed{x1}$ = Input number 00 – Maximum number of inputs for your configuration (0 = untied) $\boxed{x6}$ = I/O board type 0 = No board detected, 1 = Active MM board, 2 = Active SM board, 3 = Passive MM board, 4 = Passive SM board, 5 = Unknown $\boxed{x7}$ = I/O board slot number 1 – maximum number of slots (3 for 24x, 5 for 40x, 10 for 80x, 20 for 160x, 40 for 320x) $\boxed{x18}$ = SFP modules installed 0 = No SFP, 1 = MM SFP, 2 = SM SFP, 3 = Unknown SFP $\boxed{x24}$ = Power supply voltage P = Primary, R = Redundant $\boxed{x25}$ = Temperature Degrees in Fahrenheit and Celsius (example: xx.xF • xx.xC) $\boxed{x26}$ = Fan speed Revolutions per Minute (RPM) (example: xxxRPM) $\boxed{x27}$ = Power supply status 0 = Power Supply inactive/Not installed, 1 = Power Supply active/Installed, 2 = Power Supply failed/Installed $\boxed{x28}$ = Maximum virtual video matrix size inputxoutput (example: 80x80) $\boxed{x35}$ = Audio input number 00 – Maximum number of inputs or Expansion 30001-30008, Dante 40001-40032, Analog 50001-50004			

Command	ASCII Command (Host to Unit)	Response (Unit to Host)	Additional Description
View individual video input signal status	<code>Esc</code> <code>[X1]</code> LS← Verbose mode 2/3	<code>[X19]</code> ← In <code>[X1]</code> • <code>[X19]</code> ←	
View all video input signal status	<code>Esc</code> 0LS← Verbose mode 2/3	<code>[X19]</code> <sup>1</sup> <code>[X19]</code> <sup>2</sup> ... <code>[X19]</code> <sup>n</sup> ← In00• <code>[X19]</code> <sup>1</sup> <code>[X19]</code> <sup>2</sup> ... <code>[X19]</code> <sup>n</sup> ←	Each response is the video input status, starting from Input 1 and <i>n</i> = highest numbered installed input.
<b>KEY:</b> <code>[X1]</code> = Input number    00 – Maximum number of inputs for your configuration (0 = untied) <code>[X19]</code> = Video signal status    0 = No video signal at input,    1 = Video Input signal detected			
<b>Verbose Mode</b>			
Set verbose mode	<code>Esc</code> <code>[X20]</code> CV←	Vrb <code>[X20]</code> ←	
View verbose mode	<code>Esc</code> CV←	<code>[X20]</code> ←	
<b>NOTE:</b> Verbose mode will revert back to default in the event of a power cycle, disconnect from dataviewer, or disconnect from the Ethernet.			
<b>KEY:</b> <code>[X20]</code> = Verbose mode    0 = Clear/none,    1 = Verbose mode (default),    2 = Tagged response for queries, 3 = Verbose mode and tagged responses for queries			

## Product Configuration Software (PCS)

Another way to operate the switcher is via Product Configuration Software (PCS), which runs on computers that use the Windows operating system. This program is available on the [Extron website](#). PCS can be run from a PC connected to the rear panel LAN port (see [figure 2, C](#)) or front panel configuration port (see [figure 6, A](#) on page 4) on the switcher.

**NOTE:** For details on operating PCS, see the *FOX3 Matrix Series Help file*.

## Installing the Program

Download and install all programs as follows:

- Go to [www.extron.com](http://www.extron.com) and mouse over the **Download** tab (see [figure 7, 1](#)).
- Click the **PCS Product Configuration Software** link ([2](#)). The PCS Product Configuration Software page opens.
- Click **Download** (see [figure 8, 1](#)).

**TIP:** Jump to the nearest page of downloads by clicking the desired filtering letter.

The download warns about downloads and asks to confirm the download.

- Click **Run** to confirm that you want to run the installation.
- Follow the on-screen instructions. The installation program creates the necessary directories and folders and installs the program.

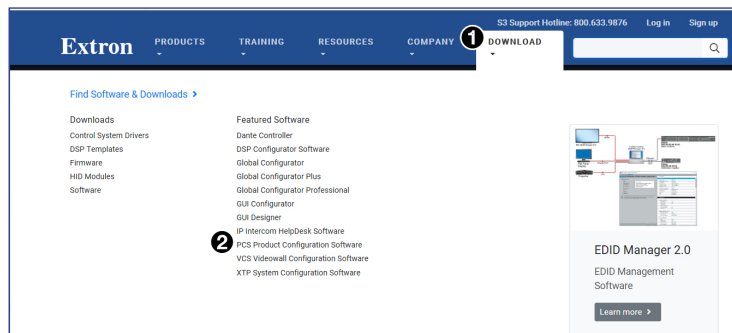


Figure 7. Download Drop-down List

Version	Release Date	New in the Current Release	Size
4.3.0	Jul. 9, 2018	<ul style="list-style-type: none"> <li>Added support for HC 403</li> <li>Added language support for Spanish, Simplified Chinese, Japanese, German, and French</li> <li>Ability to restore configuration to multiple devices across all IN1608 products</li> </ul>	162.5 MB <a href="#">Download</a> Login required

Figure 8. Download Center Dialog Box

# FOX3 Matrix Series • Setup Guide (Continued)

## Connecting to PCS

The Extron Product Configuration Software window opens to the Device Discovery panel. Connect to the FOX3 Matrix using the Device Discovery panel or the TCP/IP panel (see figure 9).

1. Open the Product Configuration Software program from the desktop shortcut.

The Extron PCS window opens to the Device Discovery panel (see figure 9).

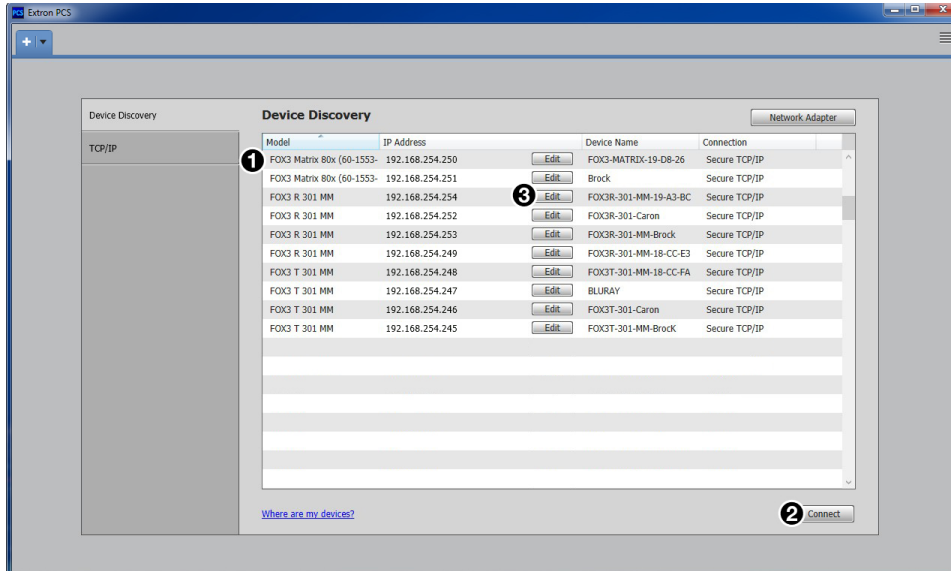


Figure 9. Device Discovery Panel

2. Select the FOX3 Matrix device by clicking on it to highlight it in the list (1).
3. Click **Connect** (2). The FOX3 Matrix PCS main page opens (see figure 10).

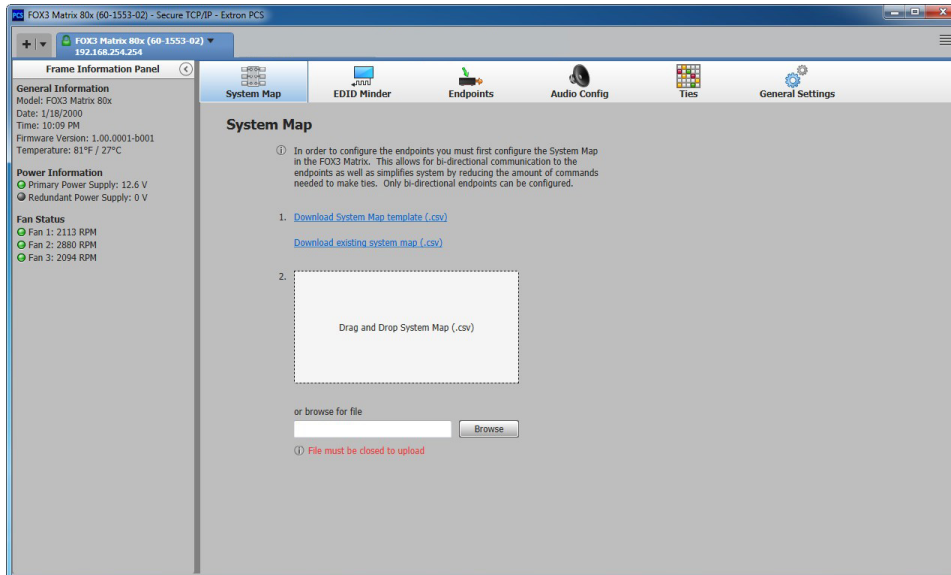


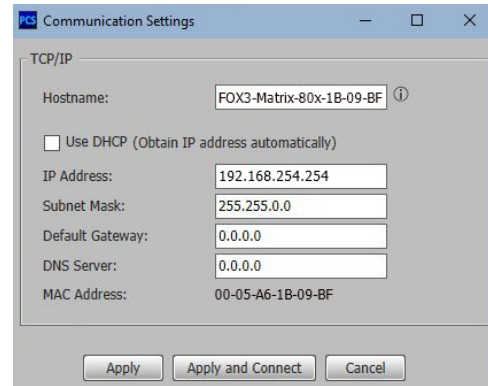
Figure 10. FOX3 Matrix PCS Main Page

To edit the IP address:

1. Click on the **Edit** button (see [figure 9](#), **3** on page 8). The Communication Settings box opens.
2. Click in the field to edit (see [figure 11](#)).
1. Click **Apply** to complete and close.

Alternatively, click **Apply and Connect** to complete and connect to the device.

Click **Cancel** to close the box without changes.



**Figure 11. Communication Settings Box**

## Internal Web Pages

Another way to configure and operate the switcher is via its factory-installed internal web pages. The pre-loaded web pages on the switcher are accessible through the LAN port (see [figure 2](#), **C** on page 2) via a LAN or WAN connection or the front panel USB config port (see [figure 6](#), **A** on page 4) using a web browser such as Microsoft® Internet Explorer®.

### Disabling Compatibility Mode

The internal web page does not support compatibility mode in Microsoft Internet Explorer.

To check compatibility view settings:

1. From the Tools menu of the browser, select **Compatibility View Settings**. The Compatibility View Settings dialog box opens.
2. Be sure the **Display all websites in Compatibility View** checkbox is clear, and the IP address of the matrix is not in the list of websites that have been added to Compatibility View.

### Accessing the Internal Web Page

Access the FOX3 Matrix internal web page as follows:

1. Connect the FOX3 Matrix to a LAN or WAN using the rear panel RJ-45 LAN connector (see [figure 2](#), **C**) or the front panel USB config port (see [figure 6](#), **A**).
2. Open a web browser on a connected PC.
3. Enter the FOX3 Matrix IP address in the browser **Address** field.

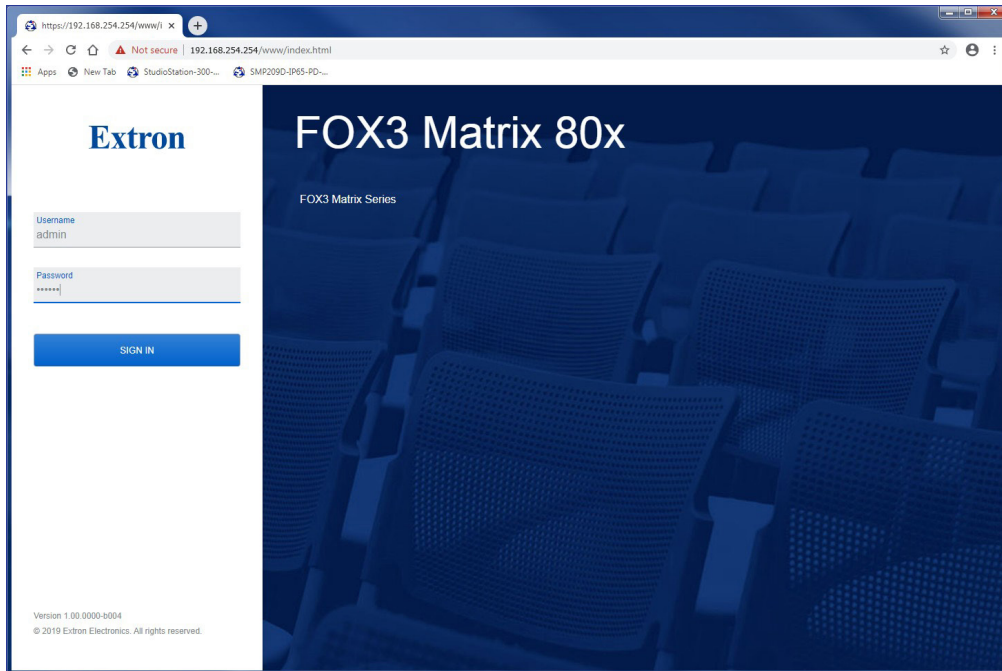
#### NOTES:

- If the local system administrators have not changed the value, the factory specified default for the LAN or WAN connection is 192.168.254.254.
- The default for the USB connection is 203.0.113.22 (this IP address cannot be changed).

4. Press the <Enter> key on the keyboard.
5. The FOX3 Matrix is password protected. Enter a user name (**user** or **admin**) in the **Username** field and the password in the **Password** field when prompted (see [figure 12](#) on page 10).

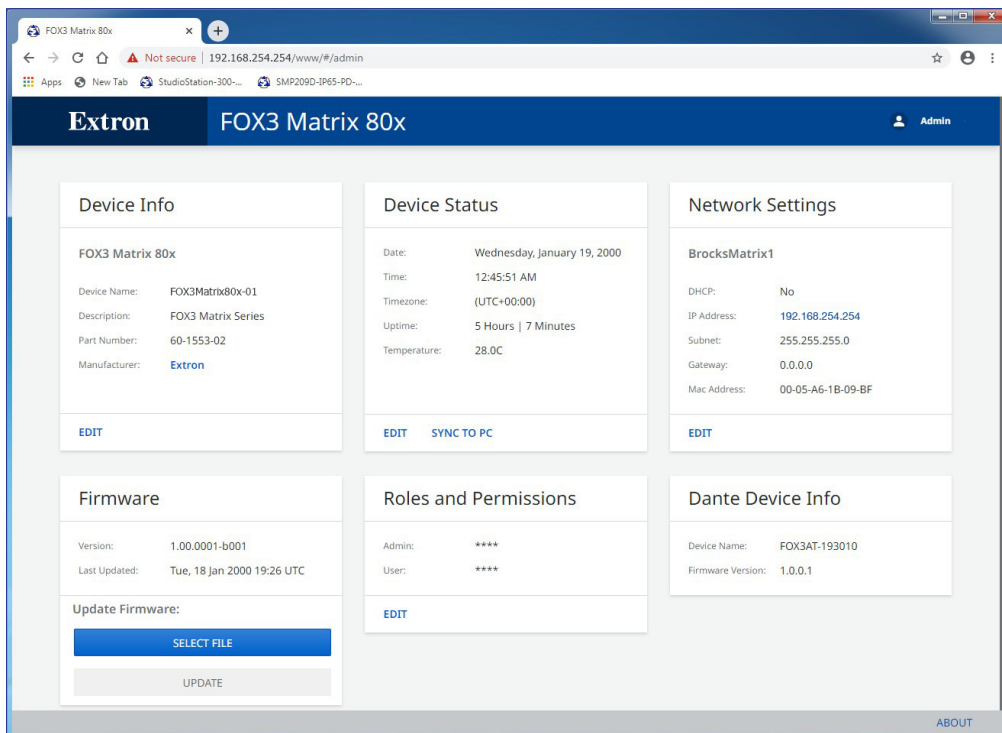
**NOTE:** The factory configured passwords for all accounts on this device have been set to the device serial number. In the event of a complete system reset, the passwords convert to the default. The default password is **extron** for the **admin** and **user**.

# FOX3 Matrix Series • Setup Guide (Continued)



**Figure 12. Network Password Prompt**

6. Click the **Sign in** button. The internal web page opens (see figure 13).



**Figure 13. Internal Web Main Page**

**NOTE:** For detailed information about the internal web page, see the *FOX3 Matrix Series User Guide* available at [www.extron.com](http://www.extron.com).

## Maintenance and Modifications

This section describes repairing and reconfiguring the FOX3 Matrix switchers by replacing components.

**NOTE:** All the diagrams in this section show the 40x frame, which is similar in function to all the other matrix frames.

### Removing and Installing a Module

Input/Output modules can be added or removed to increase or decrease the I/O configuration (size) of the switcher.

**⚠ WARNING:** The fiber optic I/O modules of the FOX3 Matrix switchers output continuous invisible light, which may be harmful to the eyes; use with caution.

**Do not look** into the fiber optic cable connectors or into the fiber optic cables themselves.

Plug the attached dust caps into the optical transceivers when the fiber cable is unplugged.

**AVERTISSEMENT:** L'appareil émet une lumière invisible en continu qui peut être dangereuse pour les yeux ; à utiliser avec précaution.

**Ne regardez pas** dans les connecteurs de câble fibre optique sur le panneau arrière ou dans les câbles fibre optique eux-mêmes.

Branchez les protections contre la poussière dans l'ensemble émetteur/récepteur lorsque le câble fibre optique est débranché.

#### ATTENTION:

- Do not touch the electronic components or the connectors on the backplane or on the circuit boards without being electrically grounded. Handle circuit boards by their edges only. Electrostatic discharge (ESD) can damage circuits, even if you cannot feel, see, or hear it.
- Ne pas toucher les composants électroniques ou les connecteurs sur la carte mère ou sur les circuits imprimés sans être électriquement relié à la terre. Manipuler les circuits imprimés en les tenant seulement par leurs bords. Les décharges électrostatiques (ESD) peuvent endommager l'équipement, même si vous ne pouvez pas le sentir, le voir ou l'entendre.
- Thumbscrews should be tightened with a tool after both initial installation and subsequent access to the panel.
- Les vis doivent être serrées avec un outil adapté après la première installation et l'accès postérieur au panneau.

#### NOTES:

- On a fiber optic I/O module as delivered from Extron, all transceiver modules are configured the same: either all multimode or all singlemode. Multimode and singlemode fiber optic I/O modules can be mixed in a FOX3 Matrix switcher, but ensure the proper transmission mode fiber cables are connected to the board.
- Typically, singlemode fiber has a yellow jacket and multimode cable has an orange or cyan jacket.
- For proper cooling and air flow, boards or blank panels should be installed in all locations during normal switcher operations.
- The FOX3 Matrix Switcher components that are user-replaceable are hot-swappable. The switcher does not need to be powered down to remove or replace a component.

#### Remove and replace an I/O module as follows:

1. Disconnect any connected cables.
2. Rotate the left and right captive panel screws to completely loosen the screws (see figure 14).
3. Gently pull on the captive panel screws to loosen the module from the backplane.
4. Slide the module out of the chassis. Place the removed module on an anti-static surface or in an anti-static container.
5. Align the replacement module with the left and right chassis guides.
6. Gently slide the replacement module into the enclosure. Slide the module toward the front panel until it meets resistance.
7. Gently seat the replacement module in the backplane.
8. Use a screwdriver to tighten the left and right captive panel screws to lock the replacement module in place.

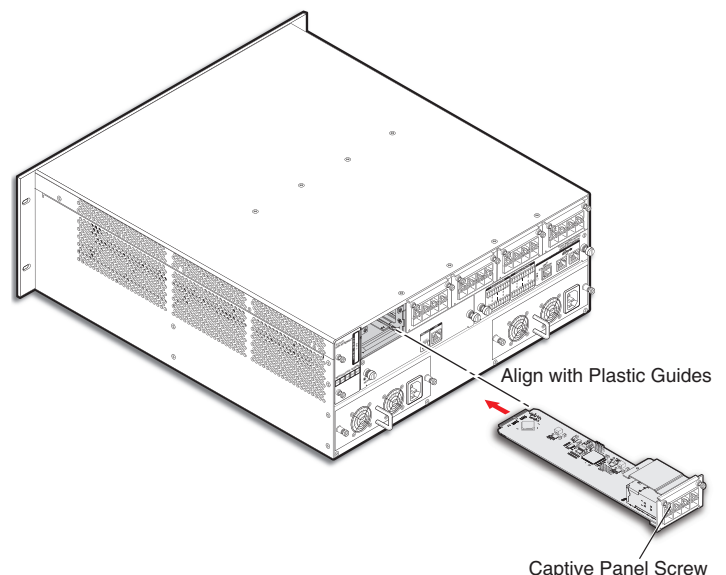


Figure 14. Removing an I/O Board

## Removing and Installing a Power Supply Module

The two power supply modules (primary power supply and redundant power supply) are identical. Each power supply module has a 2-color LED, visible on the front panel, that indicates the status of the power supply outputs. If the LED is lit green, the power supply is operating normally. If the LED is lit red, the supply has failed and should be replaced at the earliest opportunity.

### ATTENTION:

- Disconnect both power supply cords before servicing.
- Débranchez les deux câbles de la source d'alimentation avant l'entretien.

**NOTE:** Power supply modules are not interchangeable between other FOX3 Matrix models.

1. Rotate the left and right captive panel screws to completely loosen the screws (see figure 15).
2. Gently pull on the handle to loosen the power supply from the backplane.
3. Slide the power supply out of the chassis.
4. Orient the replacement power supply module to be installed with the LED to the right.
5. Align the flanges on the replacement power supply module with the left and right power supply guides.
6. Gently slide the replacement power supply module into the enclosure until the power supply meets resistance.
7. Gently seat the replacement power supply in the backplane.
8. Use a screwdriver to tighten the left and right captive panel screws to lock the replacement power supply in place.

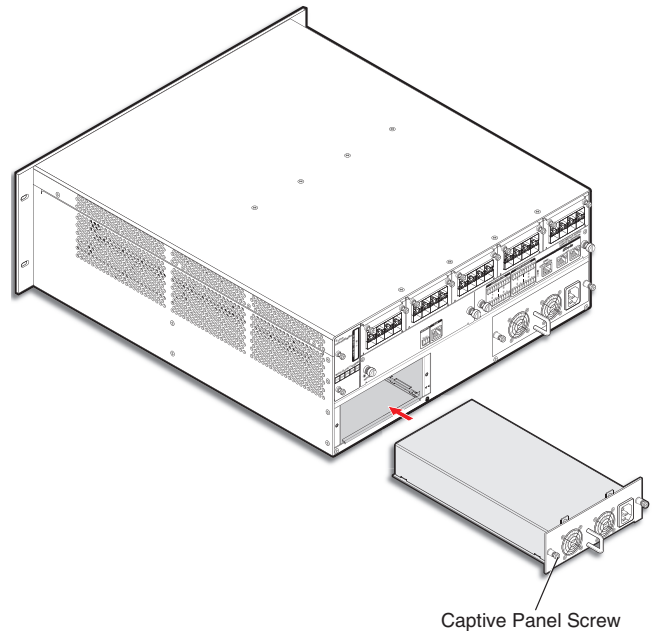


Figure 15. Replacing a Power Supply

## Removing and Installing a Fan Assembly

The FOX3 Matrix has a single fan module with multiple fans. If the fan fails, it should be replaced at the earliest opportunity.

1. Rotate the top and bottom captive panel screws to completely loosen the screws (see figure 16).
2. Gently pull on the captive panel screws to loosen the fan from the backplane.
3. Slide the fan assembly out of the chassis.
4. Align the flanges on the replacement fan assembly with the top and bottom fan guides.
5. Gently slide the replacement fan assembly into the enclosure until the fan meets resistance.
6. Gently seat the replacement fan assembly into the backplane.
7. Use a screwdriver to tighten the top and bottom captive panel screws to lock the replacement fan assembly in place.

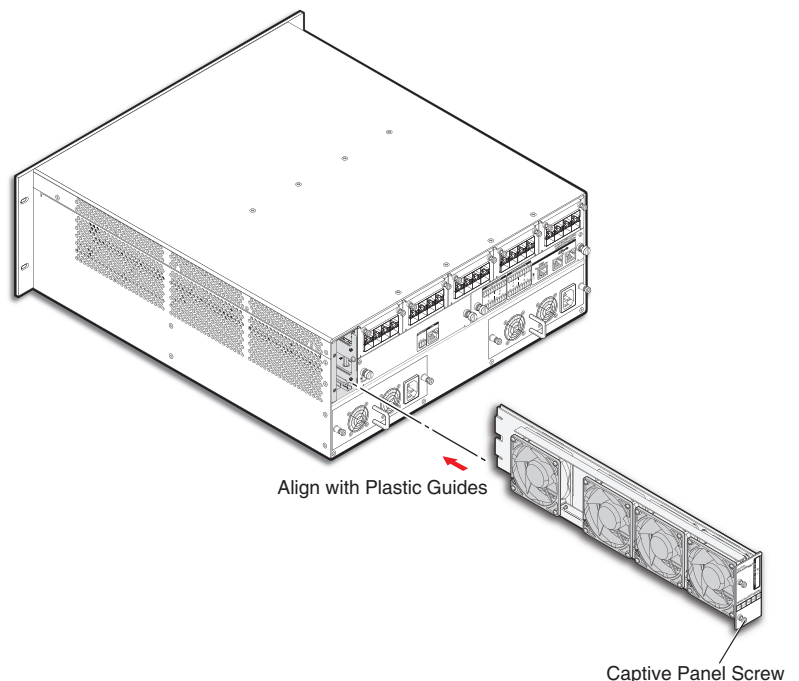


Figure 16. Replacing a Fan Assembly

For information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the [Extron Safety and Regulatory Compliance Guide](#) on the Extron website.