

PowerCage™ FOX 3G HD-SDI • Setup Guide

This guide provides instructions for an experienced installer to set up and operate the Extron® PowerCage FOX 3G HD-SDI fiber optic video extender.

The PowerCage FOX 3G HD-SDI Fiber Optic Extender is a modular transceiver board for the PowerCage 1600 enclosure, enabling long distance transmission of multi-rate SDI, HD-SDI, and 3G-SDI video signals, with embedded audio and metadata, over a fiber cable at rates of up to 2.97 Gbps. The PowerCage FOX 3G HD-SDI is compatible with the FOX 3G HD-SDI fiber optic multi-rate SDI transceiver, the FOX 3G DVC, and the FOX series of distribution amplifiers and switchers. It is available in singlemode and multimode configurations.

IMPORTANT:
Refer to www.extron.com for the complete user guide and installation instructions before connecting the product to the power source.

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

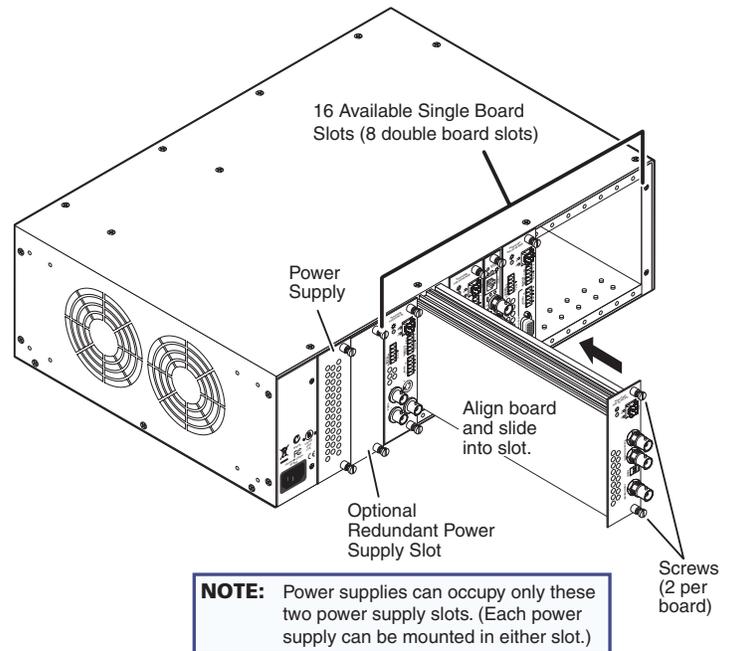
NOTE: The PowerCage FOX 3G HD-SDI is a transceiver that can function as a transmitter, a receiver, or both. At least two boards are required for a transmitter-receiver system, with at least one fiber optic cable linking each two units.

Installation

Step 1 — Install the Board in the Enclosure

Install the transceiver board in a PowerCage 1600 Enclosure slot, as shown at right. Use a screwdriver or other tool to tighten the two screws that hold the board in place.

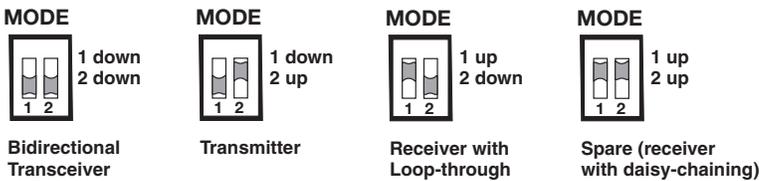
NOTE: Ensure that the board is flush with the rear of the enclosure and that the screws are tightened securely before applying power.



NOTE: Power supplies can occupy only these two power supply slots. (Each power supply can be mounted in either slot.)

Step 2 — Set the Mode DIP Switches

Set the rear panel Mode DIP switches to configure each unit that will be installed in the system as a bidirectional transceiver, a transmitter, or a receiver, as shown below.

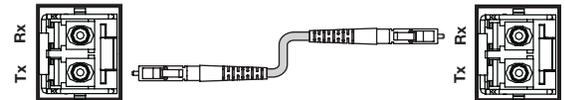


Step 3 — Connect the Input, Output, and Fiber Cables

- **HD-SDI input connector** — If the PowerCage FOX 3G HD-SDI is configured as either a bidirectional transceiver or as a transmitter, connect an HD-SDI, SDI, or 3G-SDI video input to this BNC connector (shown at right).
- **Fiber optic connectors** —



NOTE: Ensure that you use the proper fiber cable for your transceivers. Typically, singlemode fiber cable has a yellow jacket and multimode fiber cable has an orange or aqua jacket.



- **Tx connector** — **In any configuration**, connect a fiber optic cable to the optical Tx connector. Connect the free end of this fiber optic cable to the optical Rx connector on another FOX 3G HD-SDI that is configured as a bidirectional transceiver or as a receiver.
- **Rx connector** — **In either the bidirectional transceiver or receiver configuration**, connect a fiber optic cable to the optical Rx connector to receive the signal from the transmitting unit. Connect the free end to one of the following:
 - **In a two-transceiver system**, connect the free end of this cable to the optical Tx connector on the transmitting unit, which is configured as a transmitter.
 - **In a daisy-chained system**, connect the free end of this cable to the optical Tx connector on the previous unit in the daisy chain (configured as either a bidirectional transceiver or a transmitter).
- **HD/SDI output connectors** — **In any PowerCage FOX 3G HD-SDI configuration**, connect a digital display to these BNC connectors (shown at right).



PowerCage™ FOX 3G HD-SDI • Setup Guide (Continued)

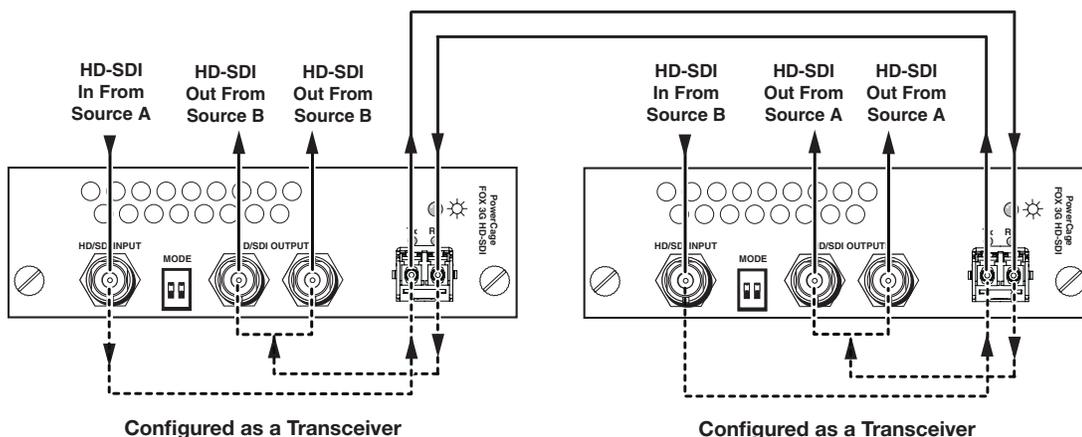
Step 4 — Connect a Host to the RS-232 Port for Status (Optional)

To receive status on the PowerCage FOX 3G HD-SDI via RS-232, connect a host computer to the Config port on the PowerCage 1600 Enclosure front panel, using the 9-pin D to 2.5 mm mini jack TRS RS-232 cable (provided with the PowerCage enclosure). Repeatedly press the Comm Select button until the front panel Comm LED lights for the slot where the transceiver is installed. The protocol for this port is **9600 baud, no parity, 8 data bits, 1 stop bit, and no flow control**.

Transceiver Configurations

Bidirectional Transceiver Configuration

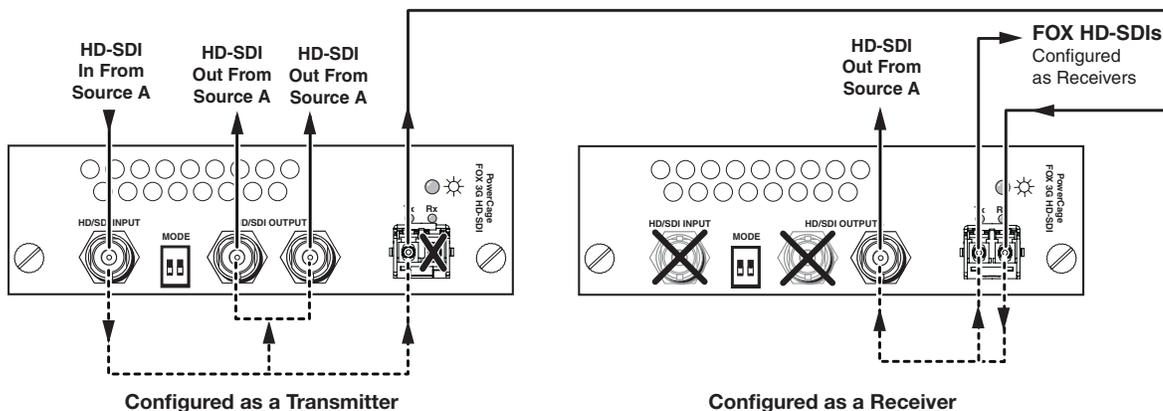
A bidirectional transceiver inputs digital video on its HD-SDI Input BNC connector. The transceiver converts the video input to a proprietary signal and transmits it over a fiber cable to another FOX 3G HD-SDI that is configured as either a bidirectional transceiver or as a receiver. A bidirectional transceiver can also simultaneously receive a proprietary signal from another FOX 3G HD-SDI (in any configuration) on its optical Rx port, convert the proprietary signal back to the original format digital video, and output the video on its own two "HD/SDI Outputs" BNC connectors.



Transmitter and Receiver Configuration

A PowerCage FOX 3G that is configured as a transmitter inputs digital video on its HD/SDI Input BNC connector. The transmitter converts the video input to a proprietary signal and transmits the video over a fiber cable to a FOX 3G HD-SDI that is configured as a receiver or as a bidirectional transceiver. The PowerCage FOX 3G HD-SDI also simultaneously outputs the digital video on its two "HD/SDI Outputs" BNC connectors. A unit configured as a receiver accepts a proprietary signal on its Rx fiber optic port.

The receiver converts the proprietary signal back to the original HD-SDI, SDI, or 3G-SDI video and outputs the video on **only one** of its own HD/SDI output connectors (output 2). The receiver converts the second digital video signal (created from the optical input) back into a proprietary signal. It then outputs the signal from the optical Tx port over a fiber link to another FOX 3G HD-SDI that is configured as a receiver or as a bidirectional transceiver. Up to **10** receivers can be daisy-chained in this manner.



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