

IMPORTANT:
Go to www.extron.com for the complete user guide, installation instructions, and specifications.

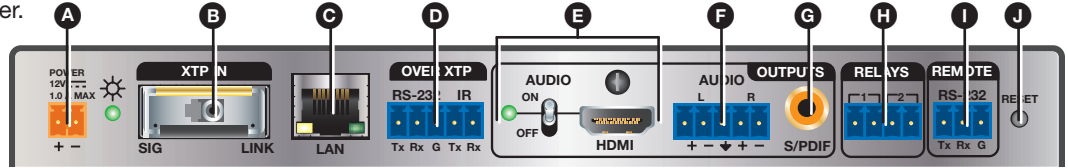
XTP SFR HD 4K • Setup Guide

CLASS 1 LASER PRODUCT, see the *XTP SFR HD 4K User Guide* at www.extron.com

The Extron XTP SFR HD 4K is an XTP fiber receiver that scales HDMI, DVI, RGB, HD component video, and standard definition video to the optimal output resolution. This guide provides instructions for an experienced installer to install and connect the XTP SFR HD 4K scaling receiver.

Installation

Rear Panel Features



| Power and Throughput Connections | Output Connections | Control Connections and Reset |
|---|--|--|
| <ul style="list-style-type: none"> A DC power connector and power LED B XTP input connector C LAN connector and LEDs D RS-232 and IR Over XTP connector | <ul style="list-style-type: none"> E HDMI output connector and corresponding HDMI audio switch F Analog audio output connector G S/PDIF digital audio output connector | <ul style="list-style-type: none"> H Relay connectors I Remote RS-232 connector J Reset button |

Figure 1. Rear Panel Features

Mounting and Cabling

Step 1 – Mount the device

Turn off or disconnect all equipment power sources and mount the XTP SFR HD 4K on a tabletop or in a rack.

Step 2 – Connect throughput devices

- a. Connect an XTP transmitter or XTP matrix switcher to the XTP fiber input connector (**B**).

WARNING: Potential risk of severe injury. The XTP SFR HD 4K outputs continuous invisible light (class 1 laser rated), which may be harmful to the eyes; use with caution.

AVERTISSEMENT : Risque potentiel de blessure grave ou de mort. Le XTP SFR HD 4K émet une lumière invisible en continu (conforme à la classe 1 laser) qui peut être dangereux pour les yeux, à utiliser avec précaution.

- Do not look into the fiber optic cable connector or into the fiber optic cables themselves.
- Ne regardez pas dans le connecteur de câble fibre optique sur le ou dans les câbles fibre optique eux-mêmes.
- Plug the attached dust caps into the connector when the fiber optic cable is unplugged.
- Branchez la protection contre la poussière dans le connecteur lorsque le câble fibre optique est débranché.

Signal LED indicator – Lights green when it receives an active XTP input signal from a transmitter or matrix switcher.

Link LED indicator – Lights yellow when a valid link between an XTP input and output is established.

- b. Connect a host device or control LAN or WAN to the LAN RJ-45 connector (**C**) for pass-through 10/100 Ethernet communication. These are Ethernet pass-through ports with LEDs to indicate link and activity status.
- c. To pass bidirectional serial, infrared, or other control signals, connect a control device or a device to be controlled to the RS-232 and IR Over XTP connector (**D**). See [RS-232 and IR Over XTP Wiring](#) on page 2 for wiring details.

Step 3 – Connect outputs

- a. Connect a digital video display to the HDMI output connector (**E**) on the receiver.
- b. Connect a balanced or unbalanced, stereo or mono audio device to the 3.5 mm, 5-pole captive screw connector (**F**) on the receiver for 2-channel stereo analog audio (see [Audio Wiring](#) on page 2 for wiring details).
- c. Connect an audio device to the female orange RCA connector (**G**) for digital S/PDIF audio output.

Step 4 – Connect control devices

- a. Connect a host device, such as a computer, to the front panel female USB mini-B connector (see [figure 2, B](#) on page 2) to configure the device or update firmware.
- b. Connect equipment controlled via momentary or latching contact, like projector screens or lifts, to these normally open relays (**H**). Do not exceed 24 V at 1 A for each port.
- c. For serial control of the scaler, connect a host device to the Remote RS-232 3.5 mm, 3-pole captive screw connector (**I**).

Step 5 – Connect power

Connect the provided external power supply to the 2-pole captive screw connector (**A**).

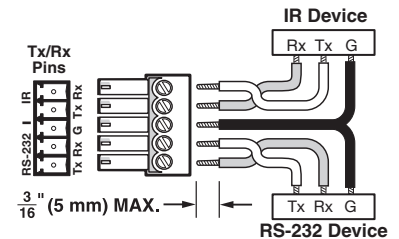
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Connection Details

RS-232 and IR Over XTP Wiring

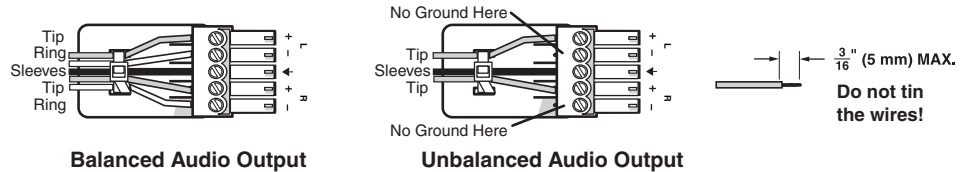
To pass bidirectional serial command signals between XTP-compatible devices, connect a control device to the three leftmost poles (Tx, Rx, and G) of the 5-pole captive screw connector. To transmit and receive IR signals, connect a control device to the three rightmost poles (G, Tx, and Rx).

NOTE: RS-232 and IR data can be transmitted or received simultaneously.



Audio Wiring

Wire the audio output connector as shown to the right. Use the supplied tie-wrap to strap the audio cable to the extended tail of the connector.



ATTENTION: For unbalanced audio, connect the sleeves to the ground contact. DO NOT connect the sleeves to the negative (-) contacts.

ATTENTION : Pour l'audio asymétrique, connectez les manchons au contact au sol. Ne PAS connecter les manchons aux contacts négatifs (-).

NOTE: The length of exposed wires is critical. The ideal length is 3/16 inch (5 mm).

Operation

After all transmitters and connected devices are connected and powered on, the system is fully operational. If any issues arise, verify that the cables are routed and connected properly.

NOTE: Use the Extron XTP System Configuration Software or SIS commands to configure the scaler (see the *XTP SFR HD 4K User Guide* on the Extron website).

Front Panel Overview

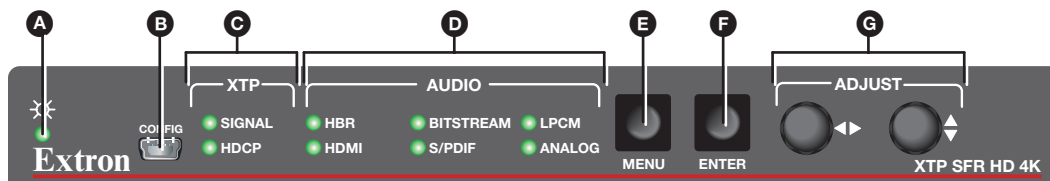


Figure 2. Front Panel Features

- A Power LED indicator** — Lights on the front and rear panels when power is applied to the device.
- B Configuration port** — Connect a host device to the USB mini-B port for device configuration, control, and firmware upgrades.
- C XTP LED indicators**
 - Signal LED** — Lights when an active XTP video signal is received.
 - HDCP LED** — Lights when the XTP input signal is encrypted.
- D Audio LED indicators**
 - HBR LED** — Lights when the embedded audio signal is high bit rate audio.
 - Bitstream LED** — Lights when the embedded audio input signal is Dolby Digital, DTS audio format, and 2-ch Dolby.
 - LPCM LED** — Lights when the embedded audio input signal is 2-channel LPCM.
 - HDMI LED** — Lights when HDMI embedded audio output (HBR, bitstream, or LPCM) is enabled.
 - S/PDIF LED** — Lights when S/PDIF audio output (multi-channel or LPCM) is enabled.
 - Analog LED** — Lights when analog audio output is enabled.
- E Menu button** — Press this button to access and navigate the on-screen display (OSD) menu system.
- F Enter button** — Press this button to select submenus and submenu items.
- G Adjustment knobs** — Rotate the horizontal and vertical knobs to navigate the on-screen display menu and to adjust settings.

Front Panel Lockout Mode (Executive Mode)

The front panel security lock (executive mode) limits operation of the device from the front panel. While in executive mode, the XTP SFR HD 4K can still be configured with SIS commands and the XTP System Configuration Software. To enable or disable executive mode through the front panel, press and hold the Menu and Enter buttons simultaneously for 2 seconds or until the power LED blinks (see the *XTP SFR HD 4K User Guide* to enable or disable executive mode with Simple Instruction Set (SIS) commands or the XTP System Configuration Software).

HDMI Audio

The embedded audio on the HDMI output connector can be enabled or disabled by setting the HDMI audio switch next to the connector (see [figure 1](#), **E** on page 1). Move and hold the HDMI audio switch up (for about 1 second) to enable embedded audio on the display connected to the HDMI output connector or move and hold the HDMI audio switch down (for about 1 second) to disable it. The switch returns to the middle position after it has been released. The associated LED lights when the audio is enabled and remains unlit when audio is disabled.

Firmware Upgrades

The onboard firmware of the XTP SFR HD 4K can be upgraded via the XTP System Configuration Software or the Extron Firmware Loader Program (available on the Extron website, www.extron.com).

Configuration

The XTP SFR HD 4K can be configured through front panel controls and the On-screen Display (OSD) menu, Simple Instruction Set (SIS) commands, or the XTP System Configuration Software. To utilize SIS commands or access the XTP System Configuration Software, connect a host device to the XTP SFR HD 4K through the front panel configuration port (see [figure 2](#), **B** on page 2) or the rear panel Remote RS-232 connector (see [figure 1](#), **I** on page 1). The configuration port supports SIS commands and the XTP System Configuration Software while the Remote RS-232 connector supports only SIS commands.

On-Screen Display (OSD) Menu System

The OSD menu consists of six submenus that can be accessed using the front panel **Menu** button (see [figure 2](#), **E** on page 2). View the menu on a display connected to the HDMI output connector (see [figure 1](#), **E** on page 1). The submenus are:

- **Image Reset** — Use this submenu to perform a one-time Image Reset on the image. The image is centered and sized to fill the output screen.
- **Picture Control** — Use this submenu to adjust the horizontal and vertical position, horizontal and vertical size, brightness, contrast, and detail of the image.
- **User Presets** — Use this submenu to save or recall a user preset.
- **Input Configuration** — Use this submenu to view the total pixels and horizontal and vertical active pixels of the input signal.
- **Output Configuration** — Use this submenu to select an output rate from a list of common resolutions and refresh rates or view color bit depth, and output format settings.
- **Advanced Configuration** — Use this submenu to apply a test pattern, enable or disable a blank screen, freeze the output, set the aspect ratio, or reset the receiver to factory default settings.

To adjust settings in the OSD menu:

1. Press the **Menu** button to access the main menu.
2. Rotate either adjustment knob to navigate to a desired submenu.
3. Press the **Enter** button to access the submenu items of the selected submenu.
4. Rotate either adjustment knob to navigate to a desired submenu item.
5. Press the **Enter** button to select a submenu item for adjustment.
6. As required, rotate the adjustment knobs or press the **Enter** button to adjust submenu items.
7. Press the **Menu** button to return to the list of submenus or exit the OSD menu.

XTP System Configuration Software

The XTP SFR HD 4K can be configured by the XTP System Configuration Software when it is installed on a connected host device, such as a PC, through the front panel USB port (see the *XTP SFR HD 4K User Guide* for more details).

Basic SIS Commands

To use SIS commands, connect the XTP SFR HD 4K to a host device through the RS-232 or USB connector. Use the Extron DataViewer utility or a control system to send SIS commands and receive responses. The following table identifies a selection of SIS commands (for a full list, see the *XTP SFR HD 4K User Guide* on the Extron website, www.extron.com).

| Command | ASCII Command (Host to Device) | Response (Device to Host) | Additional Description |
|-------------------------------|-----------------------------------|------------------------------|---|
| Picture adjustments | | | |
| Execute image reset | A | Img← | Execute a one time image reset. |
| Mute video | 1B | Vmt1← | Mute video and display black video. |
| Mute video and sync | 2B | Vmt2← | Mute video and sync. |
| Unmute video | ØB | VmtØ← | Unmute the video. |
| Output configuration | | | |
| Set scaler output rate | [Esc]X34RATE← | RateX34← | Set the output resolution and refresh rate. |
| View scaler output rate | [Esc]RATE← | RateX34← | View the selected output resolution and refresh rate. |
| Set a test pattern | X11J | TstX11← | Set the test pattern to X11. |
| View the test pattern | J | TstX11← | View the current test pattern status. |
| Audio configuration | | | |
| Mute all audio | 7Z | Amt7← | Mute all audio outputs. |
| Unmute audio | ØZ | AmtØ← | Unmute all audio outputs. |
| Set volume level | X17V | VolX17← | Set the output volume to X17. |
| View volume level | V | VolX17← | View the current volume setting. |
| Advanced configuration | | | |
| Enable executive mode | 1X | Exe1← | Lock the front panel. |
| Disable executive mode | ØX | ExeØ← | Unlock the front panel. |
| Set aspect ratio to Fill | [Esc]1ASPR← | Aspr1← | Fill the entire output screen. |
| Set aspect ratio to Follow | [Esc]2ASPR← | Aspr2← | Match the native value. |
| View aspect ratio setting | [Esc]ASPR← | AsprX23← | View the current aspect ratio setting. |
| Reset | | | |
| Reset to factory default | [Esc]ZXXX← | Zpx← | Resets all user settings back to factory defaults. |

NOTES:

X11 = Test pattern (Ø = off [default], 1 = crop, 2 = alternating pixels, 3 = crosshatch, 4 = color bars, 5 = grayscale)

X17 = Volume (Ø - 64, where 64 = default)

X23 = Input aspect ratio (1 = Fill [default], 2 = Follow)

X34 = Output scaler resolution and refresh rate (see the table below for a selection of resolutions and refresh rates or the *XTP SFR HD 4K User Guide* for a full list)

| SIS Variable X34 for EDID or Output Resolution and Refresh Rate Combination (Where X34 = 10 through 77, 199) | | | | | | | | |
|--|----------|-------|-------|----------|-------|-------|----------|-------|
| Resolution | 23.98 Hz | 24 Hz | 25 Hz | 29.97 Hz | 30 Hz | 50 Hz | 59.94 Hz | 60 Hz |
| 1024x768 | | | | | | | | 12 |
| 1280x800 | | | | | | | | 14 |
| 1280x1024 | | | | | | | | 15 |
| 1680x1050 | | | | | | | | 21 |
| 1920x1200 | | | | | | | | 23 |
| 720p | | | 32 | 33 | 34 | 35 | 36 | 37* |
| 1080p | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 2K (2048x1080) | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 4K (3840x2160) | 73 | 74 | 75 | 76 | 77 | | | |
| Bypass scaling | 199 | | | | | | | |

* = default