MediaPort 200 HDMI and Audio to USB Scaling Bridge • Setup Guide

The MediaPort 200 is an HDMI and audio to USB scaling bridge that interfaces between pro AV equipment and computer-based video conferencing software. Incoming HDMI video is scaled and output via USB to a host computer. Bi-directional audio is supported over the USB bus, including two stereo pairs from the PC for application playback and far-end communication audio, and one stereo pair to the PC for local audio to be sent to the far end. Digital and analog audio inputs and outputs include a full range of DSP optimization features, including filtering, EQ, ducking, compressors, and limiters. Setup and control are available via front panel controls with an LCD menu, a front panel USB Configuration port, a rear panel RS-232 port, and a rear panel Ethernet port. SIS™ (Simple Instruction Set™) commands and Windows®-based software configuration simplify initial configuration and real-time control. The 1U high, half rack wide, 9.5 inches (24.1 cm) deep enclosure can be optionally mounted to a rack shelf, or under or through furniture.

This setup guide provides step-by-step instructions for an experienced user to set up and configure a MediaPort 200.


Installation

Rear Panel Features

Mounting and Cabling the MediaPort 200

1. Disconnect power — Turn off or disconnect all equipment power sources.

2. Mount the unit — (Optional) Mount the MediaPort 200 either in a rack using shelf mounting brackets such as Extron RSU 129 or RSB 129, or under furniture using furniture mounting brackets (MBU 125). A false half-rack plate can fit next to the unit if desired.

3. Connect the HDMI input — Connect an HDMI video source to the HDMI input connector (see figure 1, B). Use the included LockIt® brackets to secure the connector in place.

4. Connect analog audio input —
   - Connect an analog audio input source to the 5-pole captive screw Line audio input connector (D) for balanced or unbalanced stereo audio. Wire as shown at right.
   - Connect a balanced or unbalanced microphone or mono line level input to the 3-pole Mic/Line captive screw connector (E). Wire as shown at right.

Digital I/O connector

Figure 1. MediaPort 200 Rear Panel

Balanced Stereo Input
Unbalanced Stereo Input
Balanced Audio Output
Unbalanced Audio Output

Do not tin the wires!
5. Connect the USB output — Connect a USB type A to B cable from the rear panel bidirectional USB B port (see figure 1, B) to a USB type A port of a PC or Mac computer for video and audio input and output. The USB Host LED lights when this connection is made.

6. Connect to the HDMI loop output — (Optional) Connect a local monitor or a video conferencing hardware device to the HDMI Loop Out connector (C).

7. Connect audio output — Connect an amplifier or other output device to the 5-pole captive screw Line output connector (G) for balanced or unbalanced, stereo or dual mono, analog program output. Wire as shown at right.

8. Connect devices for configuration and control —
   - RS-232 — For serial control, connect a host computer or other control device to the Tx, Rx, and G pins of the 5-pole RS-232 and +12 V captive screw connector (L). Wire as shown at right.
   - +12 V power — (Optional) Connect a device requiring DC power (such as a digital I/O device that illuminates LEDs for a microphone or switch plate) to the + and – pins of the 5-pole control connector (L).
   - USB Config — Connect a host computer to the front panel USB mini B port (see figure 2, C, below) for configuration via SIS commands or the Extron PCS software.

9. Connect the MediaPort to the network — Connect an Ethernet cable between the LAN port (see figure 1, K) and the network to configure and control the MediaPort from a remote location using SIS commands, the PCS software, or the embedded Web page.

10. Connect an AEC reference (optional) — Connect the +, –, and ◯ (ground) REF pins of the 5-pole REF/AUX connector (F) to an external DSP processor to use as the reference for acoustic echo cancellation. The Ref output matches the audio received via the USB communication input (far end audio) to the USB communications input.

11. Connect an auxiliary device — (Optional) Connect the Aux +, –, and ◯ (ground) pins of the REF/AUX connector (F) to an external DSP processor or a video conferencing hardware device, to which mic/line audio will be sent. The Aux output matches the audio applied to the Mic/Line input.

12. Connect devices to the Digital I/O ports — (Optional) Connect a microphone or other contact closure or tally device to the 5-pole Digital I/O captive screw connector (M). The digital input ports are labeled I1 and I2. The output ports are O1 and O2. The middle pin, labeled G, is the shared ground. Wire inputs to pins I1 and I2 and outputs to pins O1 and O2. Connect the ground wires of all devices to the G pin (see the illustration at right).

13. Connect power to the MediaPort 200 AC power connector (A).

14. Apply power to all connected devices.

Front Panel Overview

Figure 2. MediaPort Front Panel

A USB Config port  C USB LEDs  E Menu button  G Next button
B HDMI LEDs  D LCD screen  F Adjust knobs
USB Config port — Connect a computer to this USB mini B port for device configuration.

HDMI LEDs — These four LEDs light to indicate the HDMI input and loop output connection and HDCP status.
- Signal In — An active HDMI input signal is present.
- HDCP In — An HDCP encrypted input signal is being received.
- Loop Out — A sink is detected on the HDMI loop out connector.
- Loop HDCP — The signal out of the HDMI loop out is HDCP encrypted.

USB LEDs — These four LEDs light to indicate the connection and signal status of the rear panel USB port.
- Host — The rear panel USB port is connected to and enumerated with the host computer.
- Video Send — A video signal is being output to the host via USB.
- Audio Send — An audio signal is being output to the host via USB.
- Audio Return — Audio input is being received from the host via USB playback, communication, or both.

LCD screen — This LCD window displays menus, messages, and your selections from menus and submenus.

Menu button — Press this button to access the menu system and step through the menus on the LCD screen (D).

Adjust knobs — Rotate these horizontal (↔) and vertical (↕) Adjust rotary encoders to scroll through submenu item values and make adjustments to your selections.

Next button — Press this button to step through the submenus displayed on the LCD screen when a menu is selected.

Locking the Front Panel (Executive Mode)
To prevent unauthorized access or accidental changes to MediaPort settings, you can lock the front panel controls as follows, making control available only by SIS commands and the PCS software.

- Using the front panel buttons: To lock, press the Menu and Next buttons simultaneously and hold them until the LCD screen displays Executive Mode Enabled (approximately 5 seconds). To unlock, press and hold the same buttons until the LCD screen displays Executive Mode Disabled. The default state is Unlocked.
- SIS commands: To lock (enable executive mode), enter 1X using Extron DataViewer or other communication tool on your host computer. To unlock (disable executive mode), enter 0X.

Configuring the MediaPort 200
The MediaPort 200 can be configured through a host connected to the LAN or the front panel USB Config port using Extron PCS software, or to the RS-232, LAN, or front panel USB Config port using SIS commands. Common settings and statuses can be viewed or changed via the LCD menus.

Using the LCD Menu System
The front panel LCD screen displays eight menus: Quick Setup, Input Presets, Picture Control, Input Configuration, Output Configuration, Audio Configuration, Advanced Configuration, and View Comm Settings (read-only).

1. Press the Menu button to access the menu system, then press it repeatedly to navigate to the desired menu.
2. Press the Next button to navigate to the desired menu item.
3. Rotate the horizontal (↔) or vertical (↕) Adjust knobs to cycle through the values for the selected item until the desired value is displayed. For Picture Control menu items, rotate the left (left) knob to adjust the value displayed at the left side of the LCD screen and the right (right) knob to adjust the value at the right side.
4. To exit the menu system, press the Menu button until Exit Menu? Press NEXT appears, then press Next. The default cycle is displayed. Alternatively, wait for the menu system to time out and return to the default cycle (approximately 30 seconds).

To edit the communication settings, navigate to the View Comm Settings menu, then press and hold Next until Edit Comm Settings is displayed on the LCD screen (approximately 5 seconds). Press Next to navigate through the menu.

Setup Items on the LCD Quick Setup Menu
Select and adjust the following LCD menu items to set up the MediaPort.

- Auto-Image™ — Performs an Auto-Image on the video input to adjust the horizontal and vertical size and positioning to the selected aspect ratio (fill the screen or follow the input device aspect ratio). To perform an Auto-Image, select this item, then press Next again to initiate the process. Follow the instructions on the LCD screen to complete the Auto-Image.
- HDMI Input EDID — Lets you select the Extended Display Identification Data (EDID) for the input. Default is 720P @ 60 Hz.
- Aspect Ratio — Controls how input signal aspect ratios will be compensated Rotate either encoder to select Fill (fills the entire output raster) or Follow (the aspect ratio of the input signal is maintained relative to the output raster).
- Test Pattern — Lets you choose a test pattern to aid in setting up the MediaPort and the connected computer. Rotate either Adjust knob to select a pattern: Off (no test pattern), Crop, Alt Pixels, Crosshatch, Color Bars, and Grayscale.
Configuring Windows for MediaPort 200

The MediaPort can enumerate with the host PC in one of the following modes (the default is no external DSP and AEC):

- **Standalone** — Sets the MediaPort to Speakerphone as described in this section.
- **Using external DSP with AEC** — Sets the device to Echo-cancelling Speakerphone using the Hardware Settings screen of the PCS configuration software. This procedure is applicable when the MediaPort 200 is used in conjunction with an external DSP processor with AEC (see the MediaPort 200 User Guide for detailed information on this advanced configuration).

1. Connect a USB type A to B cable from the MediaPort 200 rear panel USB port to a USB port on a Windows PC. The appropriate drivers install automatically. A message notifies you when driver installation is complete.
2. Right-click on the speaker icon (see figure 3, 1) on the Windows taskbar, and select **Playback Devices** (2) from the pop-up menu. The Sound dialog box opens, displaying the Playback control panel.
3. On the Playback control panel, right-click **Speakers – Extron MediaPort 200** (see figure 4, 1).
4. From the drop-down menu, select **Set as Default Device**.
5. Right-click **Speakerphone – Extron MediaPort 200**, (see figure 4, 2) and select **Set as Default Communication Device** (see figure 4, 3) from the drop-down menu.
6. Click the **Recording** tab in the Sound dialog box.
7. On the Recording control panel, right-click **Speakerphone – Extron MediaPort 200** (see figure 5, 1) and select **Set as Default Communication Device** from the drop-down menu (see figure 5, 2).
8. Configure the software codec application to use the MediaPort as the video input device and select **Speakerphone – MediaPort 200** for audio input and output devices.

Configuring Skype for Business MediaPort 200

1. Open the Skype for Business application and select **Tools/Options** from the menu bar, or click the **Options** icon near the right side of the Lync dialog box.
2. On the Options screen, click **Audio Device** (see figure 6, 1 below).
3. From the Audio Device drop-down menu at the top of the screen, select **Speaker Phone – Extron MediaPort 200**.
4. Drag all three sliders all the way to the right, to their maximum settings (3).
5. In the left panel, click **Video Device**.
6. From the Video Device drop-down menu, select **MediaPort 200 Video**.
7. Click **OK**. The Options dialog box closes.