Integrator's Complete Guide to the

OneLINK Bridge

AV Interface

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Contents

Overview

This guide covers the OneLINK™ Bridge AV Interface, which is available as the receiver only, as part of a camera and receiver system, or with an interface module for use with a RoboSHOT HDMI or third-party camera:

- 999-9595-000/001/009 – receiver only
- 999-9950-200/201/209 – RoboSHOT 20 UHD HDBT OneLINK System (black RoboSHOT 20 UHD camera)
- 999-9950-200W/201W/209W – RoboSHOT 20 UHD HDBT OneLINK System (white RoboSHOT 20 UHD camera)
- 999-9960-200/201/209 – RoboSHOT 12 HDBT OneLINK Bridge System
- 999-9963-200/201/209 – RoboSHOT 30 HDBT OneLINK Bridge System (black RoboSHOT 30 HDBT camera)
- 999-9963-200W/201W/209W – RoboSHOT 30 HDBT OneLINK Bridge System (white RoboSHOT 30 HDBT camera)
- 999-9690-000/001/009 – OneLINK Bridge System for RoboSHOT HDMI Cameras
- 999-9630-000/001/009 – OneLINK Bridge System for Sony/Panasonic Cameras
- 999-9660-000/001/009 – OneLINK Bridge Systems for Cisco Precision Series Cameras
- 999-9620-000/001/009 – OneLINK Bridge System for Polycom EagleEye IV Camera

Part number suffixes indicate power cord set types and (where applicable) color. Those ending in 00 or 00W include cord sets for use in North America; 01 and 01W include cord sets for use in Europe and the UK; 09 and 09W include cord sets for use in Australia and New Zealand.

What's in this Guide

This guide provides information about:

- Unpacking the OneLINK Bridge AV interface
- The OneLINK Bridge AV interface's physical features
- Installing the OneLINK Bridge AV interface
- Configuring the OneLINK Bridge AV interface
- Telnet API
- Specifications
- Troubleshooting and maintenance
- Warranty and compliance/conformity information

Features

- Converts any conference room to a BYOD environment, delivering a USB stream for soft conferencing clients
- Incorporates Vaddio's market-leading AV Bridge functionality, connecting professional AV equipment to PC applications via USB 3.0 media stream
- Simple, clutter-free camera installation – power, control, video, and streaming over one Cat-5e or better cable
- Extends installation distance for HDBaseT cameras up to 100 m (328 ft.)
- Video with audio: Simultaneous uncompressed USB 3.0, HDMI 1.4b, and 3Gb/s HD-SDI; passes IP stream if available from source
- Two balanced audio inputs – line level or mic level; two balanced audio outputs, line level
- Control via web interface or Telnet; passes web-based, Telnet, and RS-232 serial control to connected devices
- Front panel buttons: Display the IP and MAC address for the device on the display outputs; reboot
- Status lights to show activity – USB, Network, Source, and OneLINK

Unpacking the AV Interface

Make sure you received all the items you expected. Here are the packing lists for the OneLINK Bridge AV interface.

OneLINK Bridge AV interface, 999-9595-000/001/009

- OneLINK Bridge AV interface unit, 998-9595-000
- 48 VDC, 1.36A switching power supply
- AC cord set(s):
    - Kit 999-9595-000 includes one AC cord set for North America
    - Kit 999-9595-001 includes two AC cord sets, one for Europe and one for the UK
    - Kit 999-9595-009 includes one AC cord set for Australia and New Zealand
- 3-position, 3.5 mm Phoenix connector plugs (4)
- Quick-Start Guide

RoboSHOT 20 UHD HDBT OneLINK Bridge System, 999-9950-200/201/209 (black/silver camera) or 999-9950-200W/201W/209W (white camera)

- RoboSHOT 20 UHD camera kit (includes Thin Profile Wall Mount; refer to the RoboSHOT 20 UHD manual for the full camera packing list)
- OneLINK BridgeAV interface unit, 998-9595-000
- 48 VDC, 1.36A switching power supply
- AC cord set(s):
    - Kit 999-9960-200 includes one AC cord set for North America
    - Kit 999-9960-201 includes two AC cord sets, one for Europe and one for the UK
    - Kit 999-9960-209 includes one AC cord set for Australia and New Zealand
- 3-position, 3.5 mm Phoenix connector plugs (4)
- Quick-Start Guide

Roboshot 12 HDBT OneLINK Bridge System, 999-9960-200/201/209

- RoboSHOT 12 HDBT camera kit (includes Thin Profile Wall Mount; refer to the RoboSHOT HDBT manual for the full camera packing list)
- OneLINK Bridge AV interface unit, 998-9595-000
- 48 VDC, 1.36A switching power supply
- AC cord set(s):
    - Kit 999-9960-200 includes one AC cord set for North America
    - Kit 999-9960-201 includes two AC cord sets, one for Europe and one for the UK
    - Kit 999-9960-209 includes one AC cord set for Australia and New Zealand
- 3-position, 3.5 mm Phoenix connector plugs (4)
- Quick-Start Guide

Roboshot 30 HDBT OneLINK Bridge System, 999-9963-200/201/209 (black) or 999-9963-200W/201W/209W (white)

- RoboSHOT 30 HDBT camera kit, black or white (includes Thin Profile Wall Mount; refer to the RoboSHOT HDBT manual for the full camera packing list)
- OneLINK Bridge AV interface unit, 998-9595-000
- 48 VDC, 1.35A switching power supply
- AC cord set(s):
    - Kit 999-9963-200/200W includes one AC cord set for North America
    - Kit 999-9963-201/201W includes two AC cord sets, one for Europe and one for the UK
    - Kit 999-9963-209/209W includes one AC cord set for Australia and New Zealand
- 3-position, 3.5 mm Phoenix connector plugs (4)
- Quick-Start Guide

OneLINK Bridge System for RoboSHOT HDMI Cameras, 999-9690-000/001/009

Camera not included.

- OneLINK BridgeAV interface unit, 998-9595-000
- 3-position, 3.5 mm Phoenix connector plugs (4)
- 48 VDC, 1.36A switching power supply
- AC cord set(s):
  - Kit 999-9690-000 includes one AC cord set for North America
  - Kit 999-9690-001 includes two AC cord sets, one for Europe and one for the UK
  - Kit 999-9690-009 includes one AC cord set for Australia and New Zealand
- OneLINK HDMI EZIM transmitter unit
- Cat-5e patch cable, 1 ft. (30 cm)
- HDMI cable, 1 ft. (30 cm)
- Power cable, 1 ft. (30 cm)
- USB 3.0 cable, type A to type B, 6 ft. (1.8 m)
- Screws, 6-32 X .188" (2)
- Quick-Start Guide

OneLINK Bridge System for Sony and Panasonic HDMI Cameras, 999-9630-000/001/009

Camera not included.

- OneLINK BridgeAV interface unit, 998-9595-000
- OneLINK HDMI EZCamera Interface Module (EZIM)
- 48 VDC, 1.36A switching power supply
- AC cord set(s):
  - Kit 999-9963-200/200W includes one AC cord set for North America
  - Kit 999-9963-201/201W includes two AC cord sets, one for Europe and one for the UK
  - Kit 999-9963-209/209W includes one AC cord set for Australia and New Zealand
- Thin Profile Wall Mount for Sony and Panasonic Cameras, with mounting hardware for the OneLINK HDMI EZIM
- Cat-5e patch cable, 1 ft. (30 cm)
- HDMI cable, 1 ft. (30 cm)
- OneLINK cable for Sony and Panasonic cameras, RJ-45 to 8-pin mini-DIN, 1 ft. (30 cm)
- Power cable for Sony camera, 1 ft. (30 cm)
- Power cable for Panasonic camera, 1 ft. (30 cm)
- USB 3.0 cable, type A to type B, 6 ft. (1.8 m)
- 3-position, 3.5 mm Phoenix connector plugs (4)
- Quick-Start Guide

OneLINK Bridge Systems for Cisco Precision Series Cameras, 999-9660-000/001/009

Camera not included.

- OneLINK BridgeAV interface unit, 998-9595-000
- OneLINK HDMI EZCamera Interface Module (EZIM)
- 48 VDC, 1.36A switching power supply
- AC cord set(s):
  - Kit 999-9963-200/200W includes one AC cord set for North America
  - Kit 999-9963-201/201W includes two AC cord sets, one for Europe and one for the UK
  - Kit 999-9963-209/209W includes one AC cord set for Australia and New Zealand
- Thin Profile Wall Mount for Cisco Precision Series Cameras with Codecs, with mounting hardware for the OneLINK HDMI EZIM
- Cat-5e patch cable, 1 ft. (30 cm)
- Cat-5e patch cable, 3 ft. (90 cm)
- HDMI cable, 1 ft. (30 cm)
- HDMI cable, 3 ft. 3 in. (1 m)
- OneLINK cable for Cisco Precision HD Camera, 1 ft. (30 cm)
- OneLINK cable for Cisco Precision 60 Camera, 1 ft. (30 cm)
- USB 3.0 cable, type A to type B, 6 ft. (1.8 m)
- RS-232 adapter, RJ-45 to DE-9
- 3-position, 3.5 mm Phoenix connector plugs (4)
- Quick-Start Guide

OneLINK Bridge System for Polycom EagleEye IV Camera, 999-9620-000/001/009

Camera not included.

- OneLINK BridgeAV interface unit, 998-9595-000
- OneLINK HDMI EZCamera Interface Module (EZIM)
- 48 VDC, 1.36A switching power supply
- AC cord set(s):
  - Kit 999-9963-200/200W includes one AC cord set for North America
  - Kit 999-9963-201/201W includes two AC cord sets, one for Europe and one for the UK
  - Kit 999-9963-209/209W includes one AC cord set for Australia and New Zealand
- Thin Profile Wall Mount for Polycom Cameras with Codecs, with mounting hardware for the OneLINK HDMI EZIM
- USB 3.0 cable, type A to type B, 6 ft. (1.8 m)
- OneLINK cable, EZIM side, 1 ft. (30 cm)
- OneLINK cable, codec side, 2 ft. (60 cm)
- 3-position, 3.5 mm Phoenix connector plugs (4)
- Quick-Start Guide

A Quick Look at the OneLINK Bridge AV Interface

This section covers the physical features of the OneLINK Bridge AV interface.

Note
The OneLINK Bridge is not a camera control device. You cannot access camera control from the OneLINK Bridge AV interface's IP address.

Front Panel

- **USB** indicator – Illuminates when a USB stream is present.
- **Network** indicator – Illuminates when connected to the IP network.
- **Source** indicator – Illuminates when a video input is detected.
- **OneLINK** indicator – Illuminates when the OneLINK Bridge detects a connection to an HDBaseT device or to the OneLINK HDMI EZIM.
- **Display IP and MAC Address** button (illuminated blue) – Outputs the OneLINK Bridge IP and MAC addresses as an overlay on the HDMI, HD-SDI, and USB video outputs.
- **Power System Reset** button (illuminated red) – reboots the OneLINK Bridge without affecting the connected camera.

Connector Panel

- **48 VDC 1.36 AMP** – Connect only the power supply provided with the unit.
- **OneLINK Digital Camera Interface** – All connectivity to the HDBaseT camera or switcher (or to the OneLINK HDMI EZIM): power, network, control, video, and (if available) audio
- **HDMI** – Video from the connected camera or other source
- **USB 3.0** – Uncompressed video output with PCM audio for conferencing applications
- **HD-SDI** – Video output from the camera
- **Network** – IP streaming (if available from source) and control
- **RS-232** – Control pass-through to the camera
- **Audio I/O Line Out 1 and Line Out 2** – Far-end audio from conferencing application or as configured in the audio matrix
- **Audio I/O Mic/Line In 1 and Mic/Line In 2** – Microphone or other audio inputs

Connector Panel – EZIM

The OneLINK HDMI EZIM is not required when using the OneLINK Bridge with a Vaddio HDBaseT camera; however, it is required when using the OneLINK Bridge with a RoboSHOT HDMI or other HDMI camera.
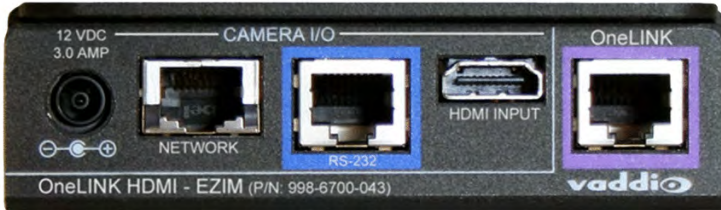
From left to right:

- **Camera power jack** – Power to the camera. In each camera-specific kit, the appropriate cable is provided to connect your camera to this jack.
- **Ethernet port** – Passes IP streaming (if available) and control.
- **RS-232** – Bidirectional RS-232 connection for camera control.
- **HDMI connection** – HDMI video signal from the camera.
- **OneLINK interface port** – Connection from the OneLINK Bridge to the OneLINK HDMI EZIM. Cat-6 or Cat-7 cabling may provide better performance in noisier RF or EMF environments - when in doubt, use shielded Cat-6 cable. Cable distance between the OneLINK EZIM and OneLINK HDMI Interface is a maximum of 328 feet (100 m).

Use the mounting flange to attach the EZIM to the camera's included wall mount.

Installation

Details of the OneLINK Bridge installation vary, depending on the equipment to be used with it.

Don't Void Your Warranty!

Caution
Use only the power supply included with this product. Using a different one will void the warranty, and could create unsafe operating conditions or damage the product.

Do not connect the OneLINK power supply to a camera. It does not provide the correct voltage for Vaddio cameras, and will damage the camera and void the camera's warranty.

This product is for indoor use only. Do not install it outdoors or in a humid environment. Do not allow it to come into contact with any liquid.

Do not install or operate this product if it has been dropped, damaged, or exposed to liquids. If any of these things happen, return it to Vaddio for safety and functional testing.

All information about this product is available for download at www.vaddio.com/support – no cost, no registration required.

Cabling Notes

If a OneLINK EZIM is used, the maximum cable distance between the EZIM and main interface is 328 ft. (100 m).
In noisier RF or EMI environments, shielded Cat-6 cable is recommended.

Note
Use standard RJ-45 connectors and a good crimping tool. Do not use pass-through RJ-45 connectors. Poorly crimped connectors can damage the connectors on the product, cause intermittent connections, and degrade signal quality. Test cable pin-outs and continuity before connecting them.

Intact – Contact fingers will make reliable contact with the cable connector

Damaged – Some contact fingers are bent and will NOT make reliable contact with the cable connector
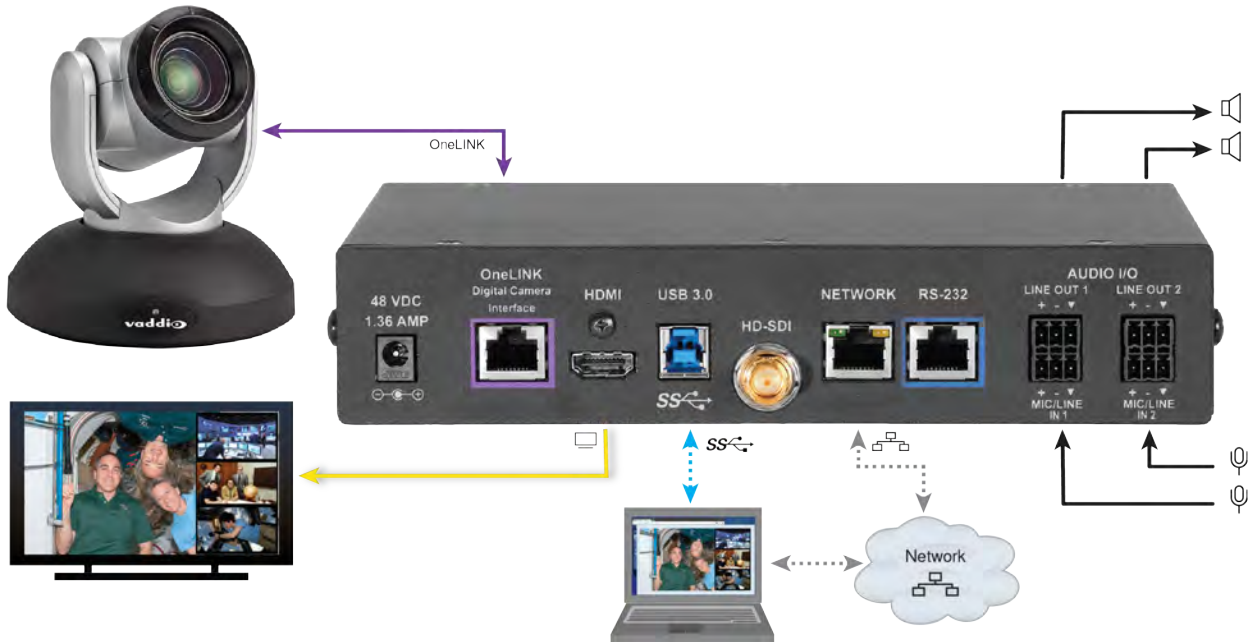
Pro Tip
To prevent tragic mishaps, label both ends of every cable.

Connections

Conferencing installation with HDBaseT camera (RoboSHOT 20 UHD shown)

Note
To discover the IP address for the OneLINK Bridge, press the Display IP and MAC Address button. The information is overlaid on the HDMI, HD-SDI, and USB video outputs.

Mounting the Extension Module

If you are installing the OneLINK device with a OneLINK HDMI EZIM, mount the EZIM with or near the camera.

Most Vaddio Thin Profile Wall Mounts include mounting holes to attach the EZIM. Follow the instructions supplied with the mount. Connect all required cables during camera installation.

Connecting to a Conferencing Codec

Shown with Cisco camera and codec
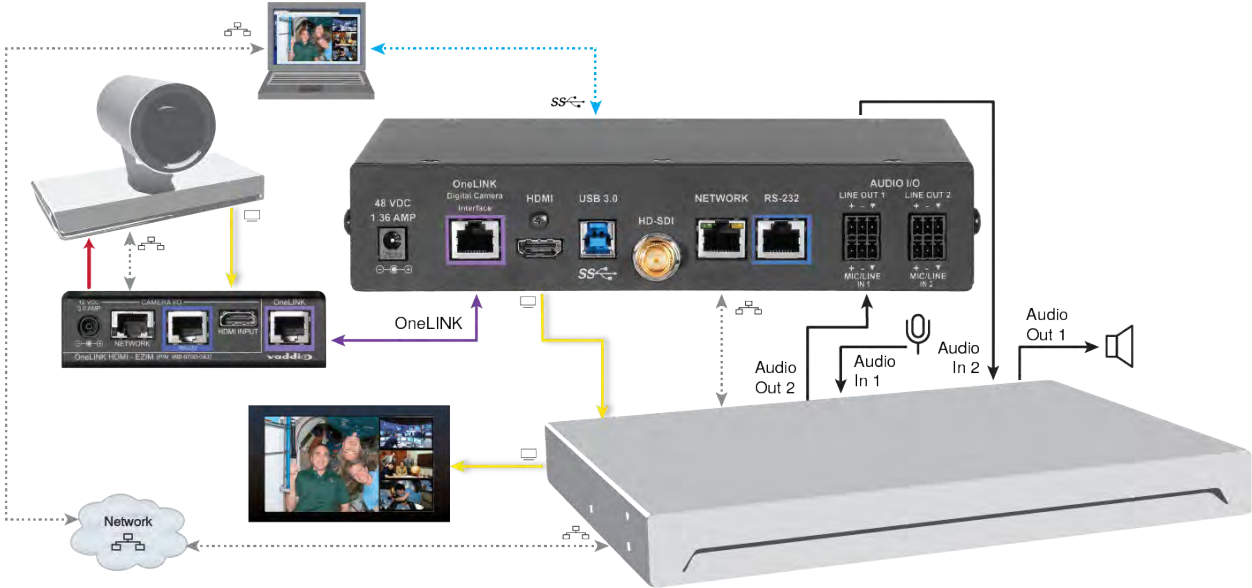
Note

Ensure that echo cancellation is enabled on only one device, whether it is the OneLINK Bridge or the conferencing codec. If echo cancellation is enabled on both the OneLINK Bridge and the codec, unexpected audio effects may result.

Note

When using the OneLINK Bridge AV interface with a Polycom camera and conferencing codec, conference participants will need to point the remote at the codec or use third-party control. IR forwarding for camera control is not available.

Connecting to an HDBaseT Switcher

Shown with Crestron switcher
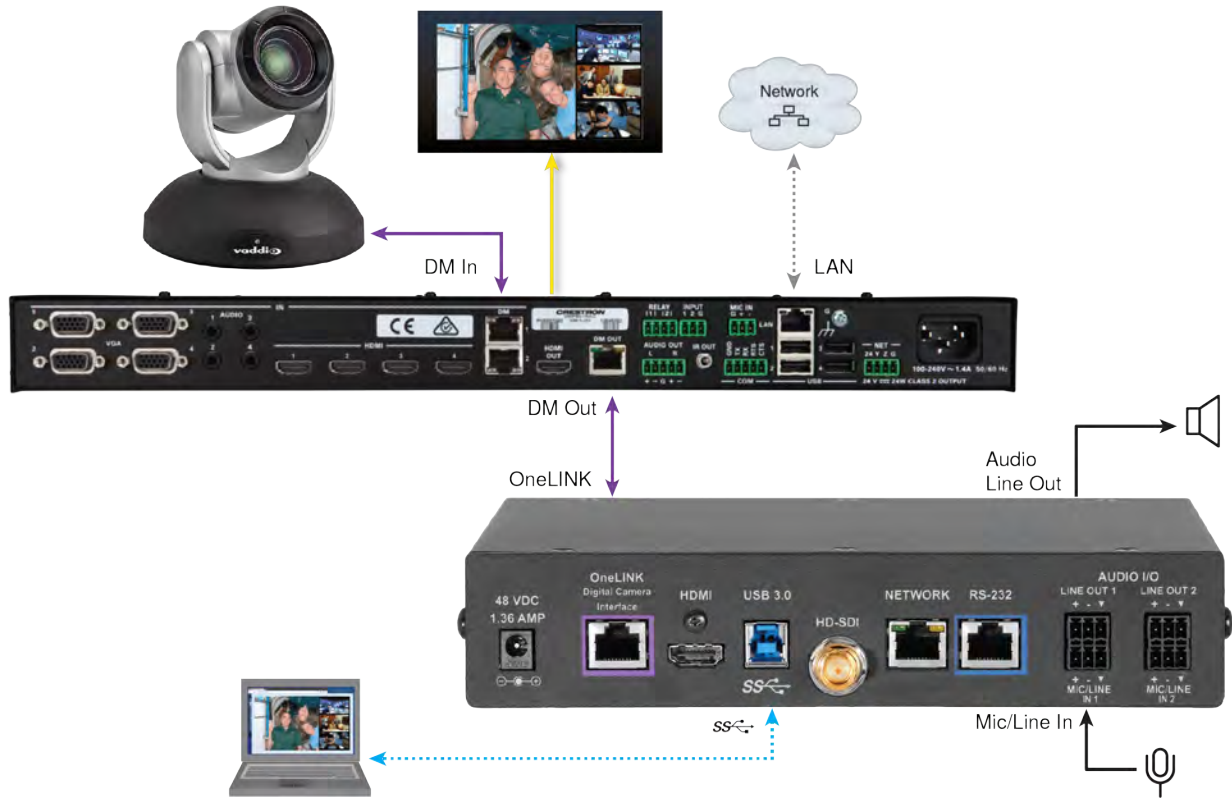
Configuration and Administration Tasks

The OneLINK Bridge AV interface provides a web interface to allow configuration and administration using a browser.

The web interface allows password-protected access to tasks such as setting passwords, changing the IP address, viewing diagnostics, and installing firmware updates.

Note
The OneLINK device is not a camera control device. To configure or operate the camera, use the camera's web interface. Refer to the camera's documentation for details.

Compatible Web Browsers

We have tested this product with these web browsers:
- Chrome®
- Firefox®
- Microsoft® Internet Explorer®
- Safari®

We test using the browser version available from the vendor at that time. Older versions of these browsers are likely to work, and other browsers may also work.

Accessing the Web Interface

To get the IP address:

Press the button labeled Display IP and MAC Address, on the front of the unit. The information is overlaid on the HDMI, HD-SDI, and USB video outputs.

To access the web interface:

1. Enter the IP address in your browser's address bar to open the login page.
2. Log in using the `admin` account. The default password is `password`. The web interface opens to the System page.

Note
For best security, Vaddio strongly recommends changing the default password. Using default passwords leaves the product vulnerable to tampering. See [Managing Access and Passwords](#).

Web Interface Cheat Sheet

You must log in to access the pages for all system administration tasks.

What do you need to do?	Go to this page
Mute the connected microphone(s)	Mute button on all pages
Adjust audio inputs and outputs	Audio
Allow conferencing applications to control the audio	Streaming
Enable or disable USB streaming	Streaming
Find the current firmware version	System
Change the Admin password	Security
Reboot, restore factory defaults, or run firmware updates	System
Add or change information about the room where the equipment is installed, or the phone number for A/V support	Room Labels
Configure time zone or NTP settings	Networking
Specify whether idle sessions close automatically	Security
Configure IP addressing	Networking
View or change the OneLINK device's hostname	Networking
View or change the OneLINK device's USB device name	Streaming
Access contact information for Vaddio technical support	Help
View or download diagnostic logs for technical support	Diagnostics

For your convenience, the navigation panel also provides an elegant Logout button for ending your session gracefully – and leaving the web interface in a password-protected state.
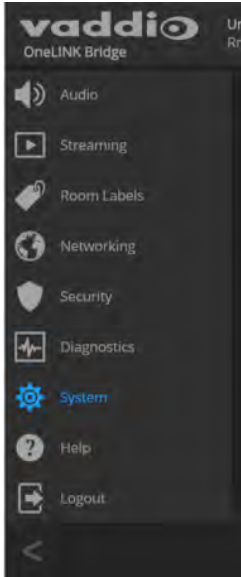
Configuring Network Settings

DHCP addressing is the default setting. The OneLINK device will use the default address of 169.254.10.1 if no DHCP server is available. In this situation, you will need to connect a computer to the OneLINK device's network port and configure network settings. Depending on the computer, you may need a crossover cable.

Caution
Do not change DHCP/Static addressing, IP address, subnet mask, or gateway unless you are very familiar with the characteristics and configuration of the network where you install the equipment. Errors in network configuration can make the OneLINK BridgeAV interface and the connected equipment inaccessible from the network.

To assign a static IP address:

1. Select static IP addressing.
2. Specify the IP address, subnet mask, and gateway address.
3. Save your changes.

Note
Changes on the OneLINK web interface do not affect the configuration of the connected equipment. If you need to change the way the camera is configured, log in to its web interface.
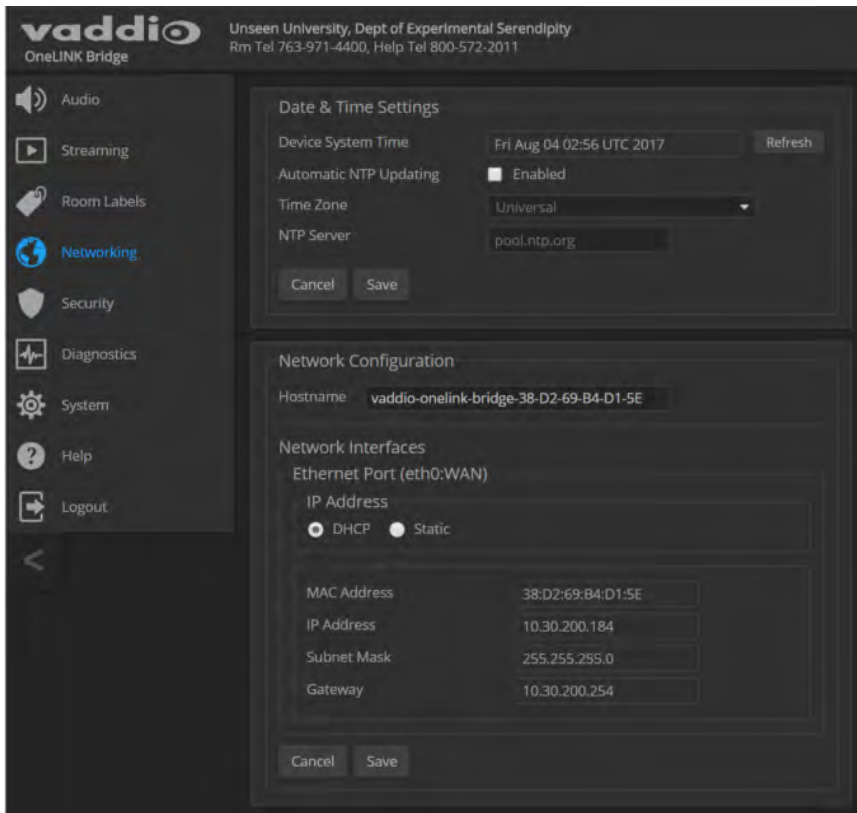
Assigning a Hostname

If your network supports hostname resolution, you can browse to the OneLINK device by hostname even if you cannot readily determine its IP address.

The default hostname for the OneLINK BridgeAV interface is the string `vaddio-onelink-bridge-` followed by the module's MAC address. You can change this in the Hostname field.

To edit the hostname:

Enter the desired hostname in the Hostname text box, and save your changes.

Specifying Time Zone and NTP Server

To ensure that data exports receive accurate time stamps, and to display the correct date and time on the Networking page, NTP updating must be enabled.

1. Enable Automatic NTP Updating.
2. Select the desired time zone from the list.
3. If desired, specify the NTP server to use. Otherwise, use the default.
4. Select Refresh to update the displayed date and time.
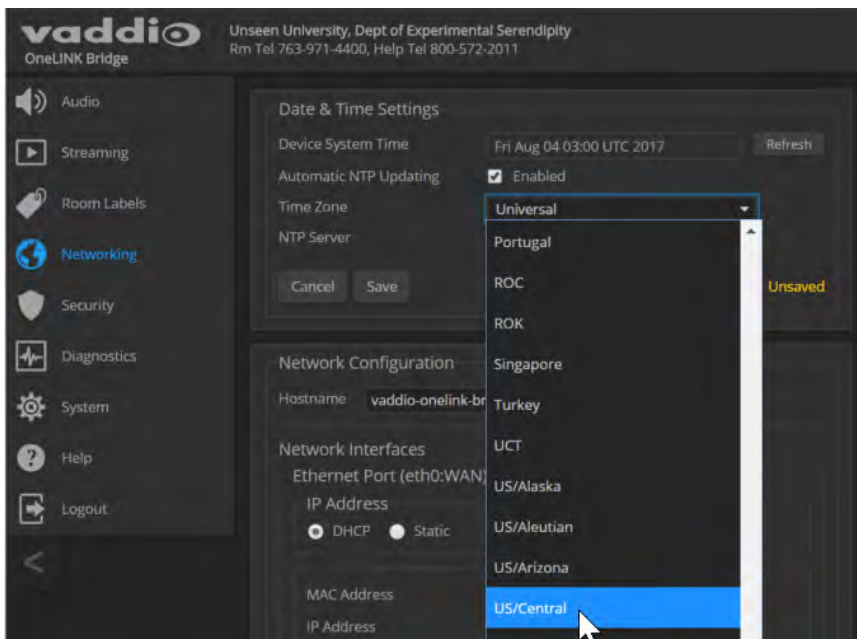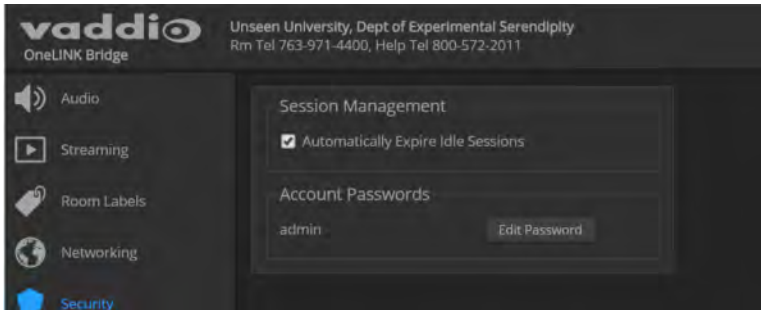
Managing Access and Passwords

Things you can do on this screen:
- Set whether inactive sessions log off automatically or not
- Change the password for the admin account (default is `password`)

Note
For best security, Vaddio strongly recommends changing passwords from the default. Using default passwords leaves the product vulnerable to tampering.

Pro Tip
Make sure you have a way to remember the admin password. There is no hardware factory reset.

## Adding Room Information to the Web Interface

On this page, you can provide information about the OneLINK Bridge AV interface's location:
- Name of the organization
- Name of the room where the equipment is installed
- Phone number of the room where the equipment is installed
- Phone number for the AV or IT support team

This information appears on every page of the OneLINK web interface.

Note
This does not affect the room information (if any) presented on the web interface for the attached camera.
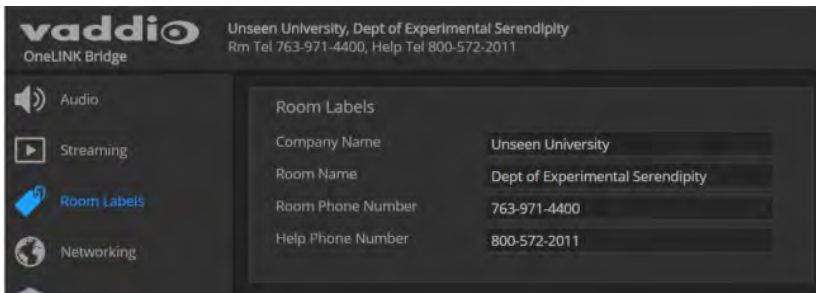
Configuring Streaming Settings

The camera's settings are used for IP streaming; the OneLINK BridgeAV interface passes the IP stream from the camera and does not require additional IP streaming configuration.

For non-USB cameras, the OneLINK Bridge AV interface provides USB streaming capability. On the Streaming page, you can:

- Disable/enable USB streaming
- Allow the conferencing application to control the audio
- Edit the USB device name

After making changes on this page, save them.
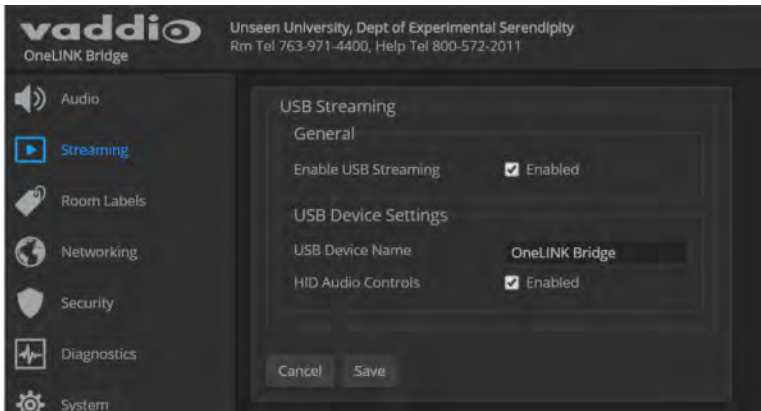
To disable or enable streaming:

USB streaming is enabled by default. Use the Enable USB Streaming checkbox to change this.

To control the audio from a computer:

Check the Enabled box for HID Audio Controls.

Note
When HID Audio Controls are enabled, we recommend controlling volume manually. Allowing the conferencing application to manage the volume automatically can produce undesirable results.
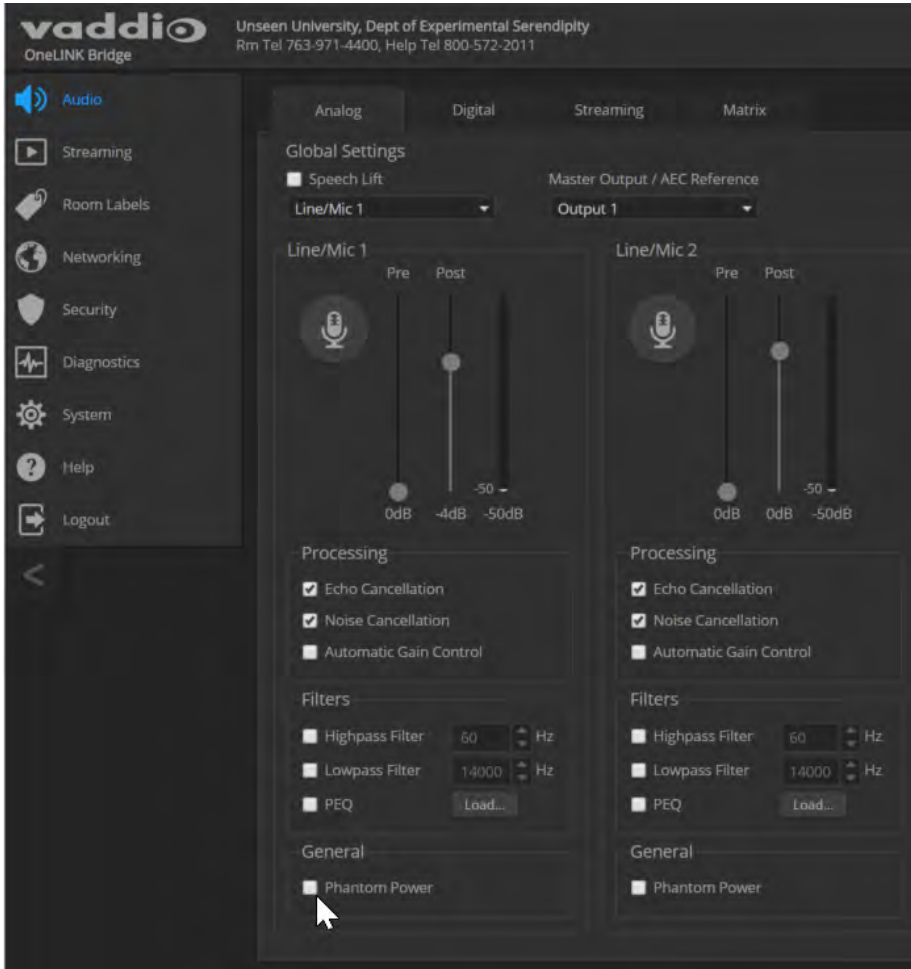
To edit the USB device name:

To change the way the OneLINK device shows up in your soft client's selection list, edit the USB Device Name.

Enabling Phantom Power to Microphones

AUDIO PAGE, ANALOG TAB

To supply 48 VDC phantom power to a connected microphone, check the Phantom Power checkbox below the controls for the Line/Mic input.

Configuring Audio Settings

The web interface provides separate controls for each of the audio inputs and outputs:
- Analog (Mic/Line In 1 and 2, and Line Out 1 and 2)
- Digital (HDBT Input left and right, HDMI Output left and right, SDI Output left and right)
- Streaming (USB Playback left and right, HDBT Output left and right, USB Record left and right)

The Matrix tab of the Audio page defines audio routing.

Muting the Microphones
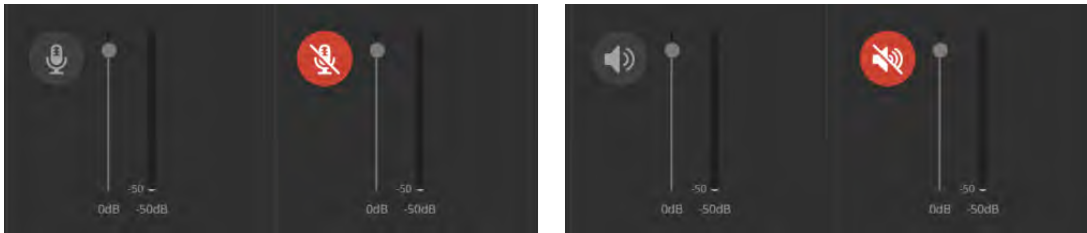
Use the Mute control at the top of any page.
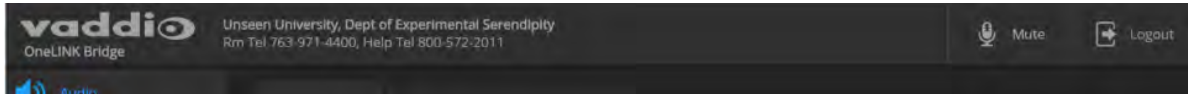
Controlling Volume on Individual Inputs or Outputs

AUDIO PAGE, ANALOG, DIGITAL, AND STREAMING TABS

Use the button to mute the desired audio input or output. Use the slider to set the volume.

Note
For best performance with most computers, we recommend setting the USB Record volume high.

Default Microphone Settings

Acoustic Echo Cancellation – Enabled; prevents audio feedback by cancelling the specified output signal out of the line/mic input.

Note
If using the OneLINK Bridge with a conferencing codec, ensure that echo cancellation is enabled on only one device, whether it is the OneLINK Bridge or the codec. If echo cancellation is enabled on both the OneLINK Bridge and the codec, unexpected audio effects may result. We recommend disabling echo cancellation on the OneLINK Bridge and allowing the conferencing codec to handle it.

Noise Cancellation – Enabled; suppresses ambient noise.

Automatic Gain Control – Disabled; adjusts gain to compensate for differences in volume as different people speak.
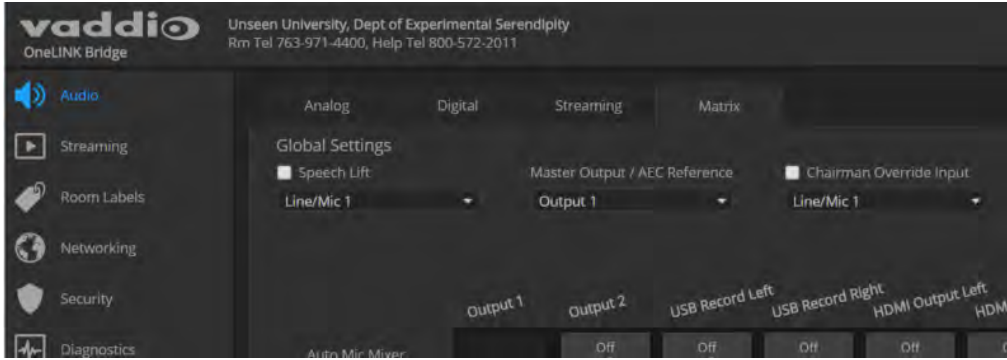
Microphone Settings for Environments with Audiences

Speech Lift: Feeds the signal from the specified microphone to the speakers in the room, so that people in the back of the room can hear the person who is speaking.

Chairman Override: Gives priority to the specified microphone when more than one person is speaking. (Matrix tab only)

Microphone Adjustments

To adjust for more natural speech reproduction:

- **High-pass filter** – Specify the lowest frequency that the microphone should pick up. Use this setting to reduce low-frequency background noise such as heating/air conditioning systems.
- **Low-pass filter** – Specify the highest frequency that the microphone should pick up. Use this setting to reduce hissing sounds and make speech sound natural.
- **PEQ** (parametric equalizer) – Increase or reduce the volume of specific frequency ranges to compensate for the audio challenges unique to the situation.

Note
As a best practice, use the equalizer to attenuate undesirable frequency ranges rather than to boost the desirable frequencies.
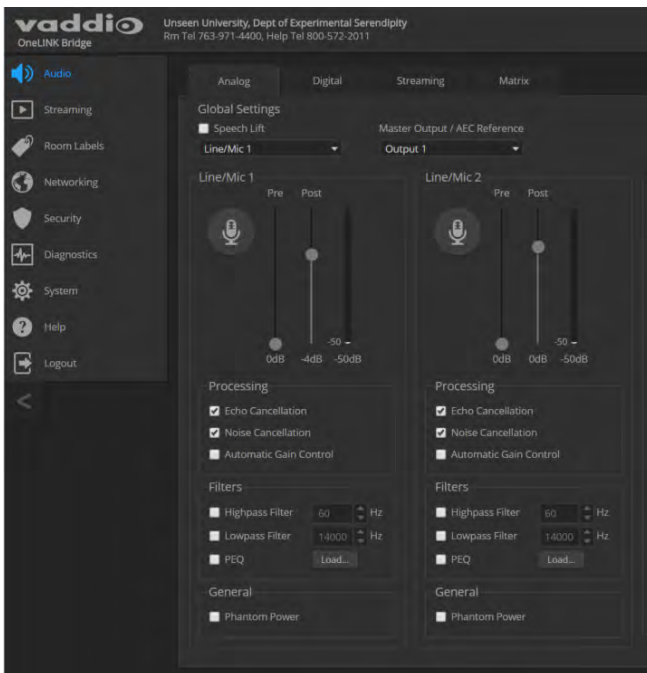
Speaker Adjustments

To sync the sound with the video:

If the video lags noticeably behind the audio, check the Delay box for the appropriate audio outputs (Analog or Streaming tab) and enter a delay value in msec. The delay may differ from one output to another.

To compensate for differing speech volumes:

If some people on the far end are inaudible while others are too loud, check the Compressor box to reduce the dynamic range from the connected speakers. (Analog tab only.)

To compensate for specific audio issues on the far end:

Use the equalizers for the analog outputs to attenuate specific frequency ranges. This can help if the far-end audio includes unwanted elements such as a rumbling HVAC system or a cricket in the room.

Default Audio Matrix

The audio matrix shows where each audio output originates. Each column of the matrix shows one audio output, and each row shows one audio input. Table cells highlighted in blue mean that the input represented in that row is routed to the output represented in that column.

- **USB Playback** left and right (far-end audio from the soft conferencing client) route to **line output 1** (typically the speaker in your conference room).
- **Line/Mic 1** (your room's microphone) routes to **USB Record** left and right (the audio that the participants on the far end hear).
- **HDBT** left and right (far-end audio received as part of the HDMI signal over the HDBT connection) routes to **HDMI Output** left and right, and goes to the HDMI display's speakers.

Routing Audio

To specify how the OneLINK Bridge uses a given audio input, locate its row. Locate the column representing the desired output and select the table cell where the desired row and column intersect.

Example: The USB stream has left and right audio channels, but by default Line/Mic 1 provides the source for both channels of outbound USB audio (USB Record left and right) and both channels of incoming USB audio are routed to Output 1 (Audio Line Out 1). You might choose to change the default matrix to provide separate right and left channels of outbound and inbound USB audio.
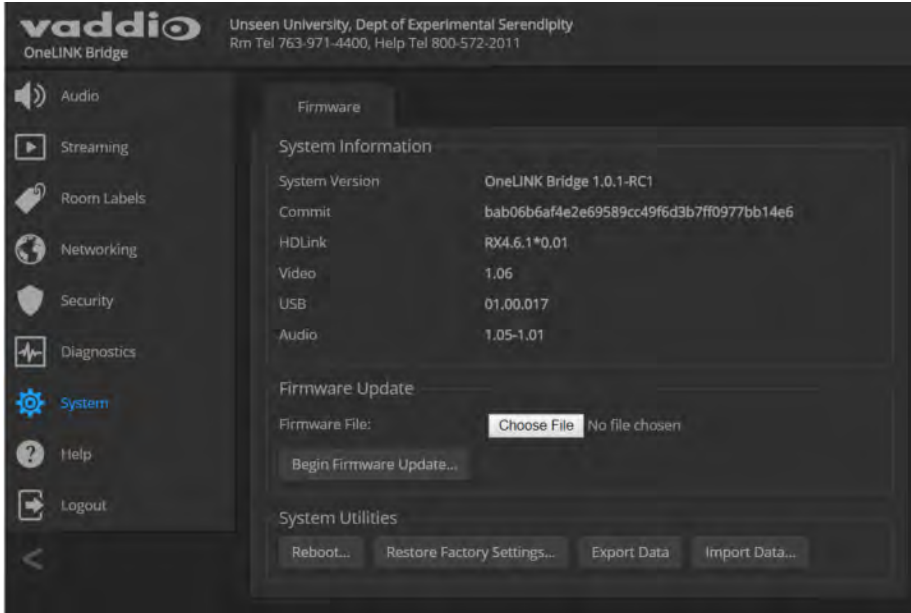
Viewing System Information

The information on the System page includes the version – so you don't need to guess about whether the latest update has already been installed.

The System page also provides controls to:
- Reboot the OneLINK device
- Back up or restore configuration data
- Restore factory presets
- Update the firmware

Saving (Exporting) or Restoring (Importing) a Configuration

SYSTEM PAGE

You can save a known good configuration by exporting it. This allows you to quickly configure several OneLINK devices the same way, by importing the configuration to all of them. It also gives you a quick way to go back to a known good configuration if you are concerned about planned changes on a specific unit.

The configuration file can only be imported to a OneLINK device using the same version of firmware from which the file was exported. You cannot export a configuration, update the firmware, and import the configuration – but you won't need to. Firmware updates do not change the device configuration.

To export the current configuration:

Select Export Data. The configuration file downloads to your computer's default download location as a `.dat` file. The filename is the device's hostname.

Note
The configuration file can only be imported if the device is using the same version of firmware from which the file was exported. The OneLINK device cannot import a configuration file that was exported from a different version of firmware.

To import a configuration file:

1. Select Import Data. The Import Data dialog opens.
2. Select Choose File, and select the configuration file. The filename is the same as the OneLINK device's hostname, with the file extension `.dat`. The OneLINK device loads the configuration and reboots.
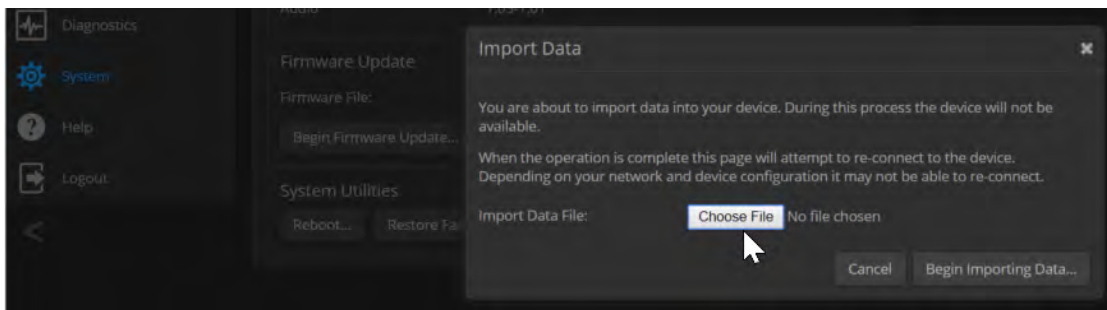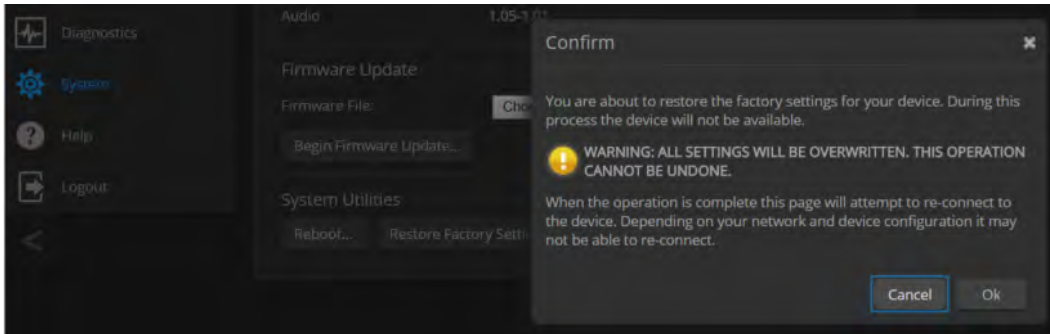

Rebooting the OneLINK Device

SYSTEM PAGE

This may help if the OneLINK device stops responding as you expect.

In the System Utilities section of the System page, select Reboot.

Restoring Factory Settings

Select Restore Factory Settings to return to the default configuration. Read the confirmation message before you select Continue or Cancel.

Starting a Firmware Update

SYSTEM PAGE

1. Be sure you have downloaded the appropriate update file to your computer.
2. Select Choose File, browse to the firmware update file that you downloaded, and select it. The filename ends with `.p7m`. The System page then displays the filename beside the Choose File button.
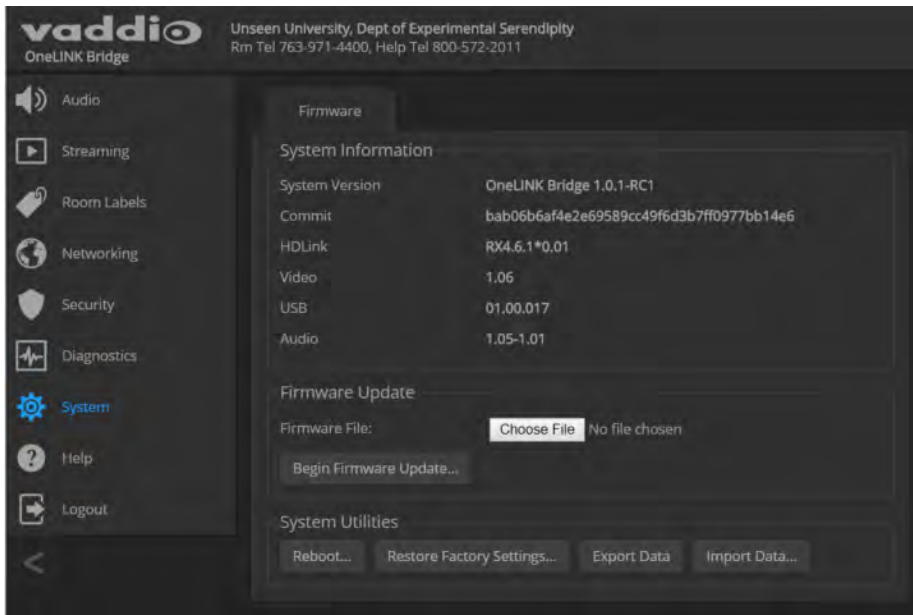
3. Select Begin Firmware Update.
4. READ the information in the Confirm dialog box and be sure you understand it. It's boring, but it could save you a lot of time and aggravation.
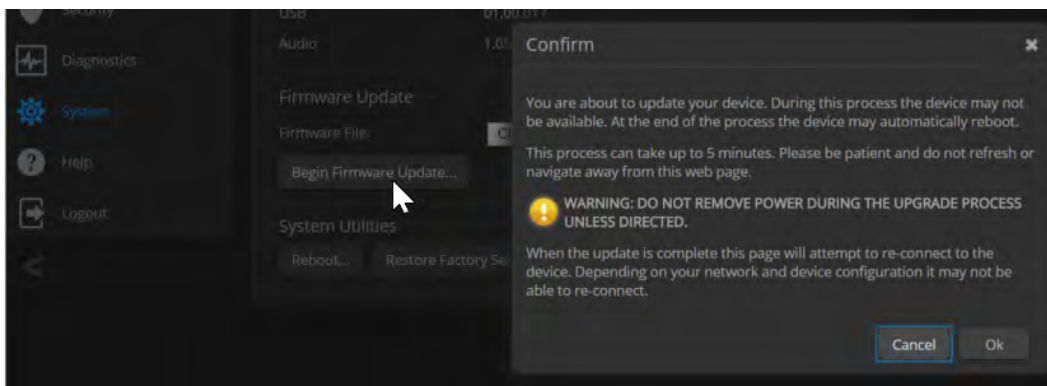

5. When you are ready to start the update, select Continue.
6. If the update process presents warnings or error messages, read them carefully.
7. Contact Vaddio technical support if you encounter any problems with the update.

# Contacting Vaddio Technical Support and Viewing Diagnostics

HELP PAGE, DIAGNOSTICS PAGE

If you encounter an issue that you can't resolve using your superior troubleshooting skills (and perhaps the Troubleshooting section of this guide), go to the Help page. This page provides Vaddio Technical Support contact information.
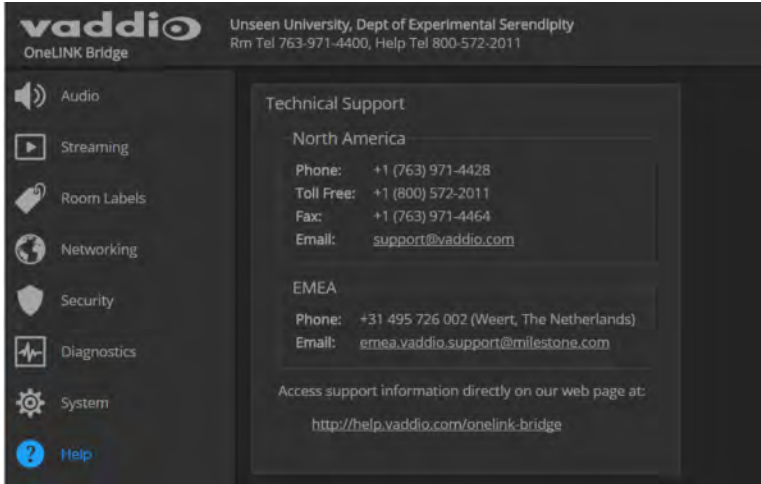
Your Vaddio technical support representative may ask you to download and email the log file available from the Diagnostics page.

The information on this page does not necessarily indicate errors or problems. Most of it is a log of code execution that can be helpful later if technical support or engineering staff need to research an issue.
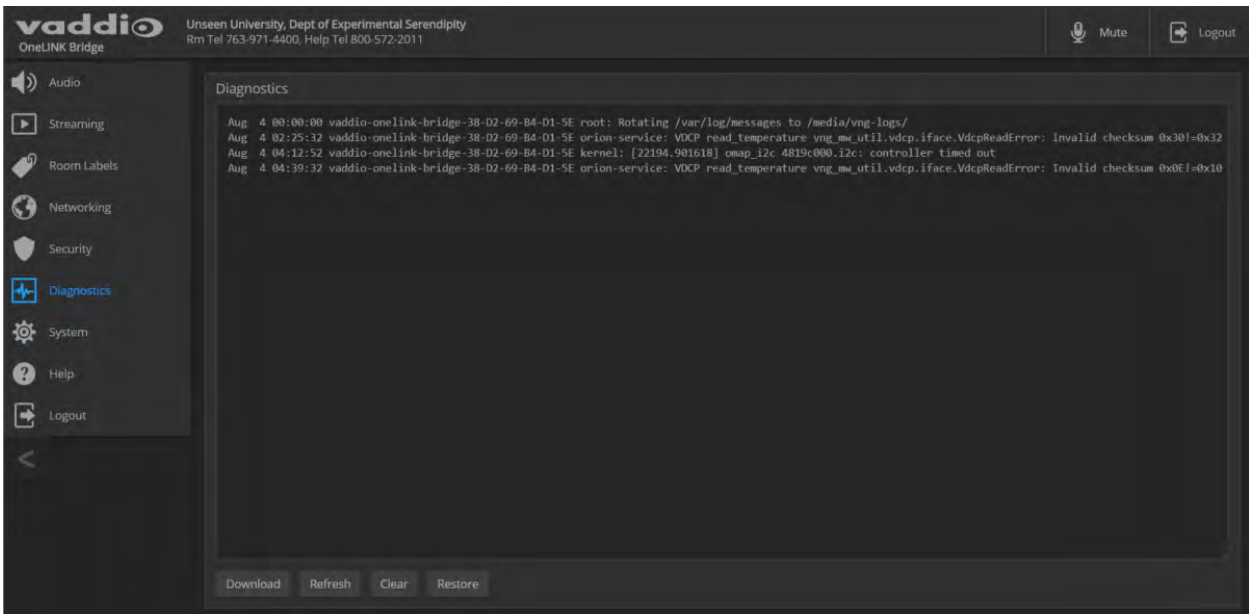
Telnet Serial Command API

The Vaddio Telnet serial command API is a high-level, text-based command line interface to allow an external device such as AMX or Crestron to control the OneLINK device. Use a Telnet client to access the API via the network. The default Telnet port is 23. Telnet sessions require the `admin` account login.

Using a question mark as a command parameter will bring up a list of available commands for the menu you are in.

Things to know about control via Telnet session:

- Command lines are terminated with a carriage return.
- All ASCII characters (including carriage returns) are echoed to the terminal program and appended with the VT100 string ESC[J (hex 1B 5B 4A), which most terminal programs automatically strip.
- CTRL-5 Clears the current serial buffer on the device.
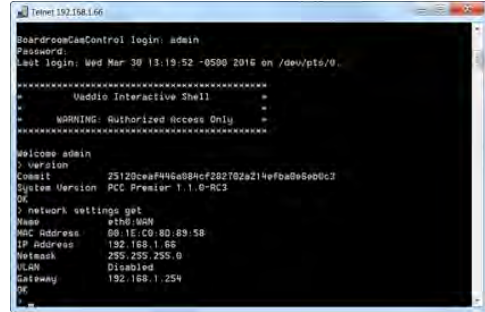
Typographical conventions:

- { x | y | z } – Choose x, y, or z.
- <variable> – Substitute the desired value here.
- < x - y > – Valid range of values is from x through y.
- [parameter] – Parameter is not required.

Note
The commands in this guide refer to the OneLINK device. To control the camera itself, open a Telnet session to the camera's IP address and use the camera's Telnet commands.

link power

Sets the camera connection on or off.

Note
The camera extension module is not a camera control device. To set the camera to standby instead of powering it off, use the camera's remote or other camera control interface to issue a standby command directly to the camera.

Synopsis	link power { on	off }	
Options	`off`	Powers off the camera connection.
	`on`	Powers on the camera connection.

Examples	`>link power off`
	OK
	`>`
	Powers off the camera connection.	

audio volume

Gets or sets the volume of the specified audio channel.

Synopsis	audio [channel] volume {get | on | off | toggle}	
Channels	`master`	Applies the command to all audio channels.
	`line_in_1` `line_in_2`	Line/Mic In ports (typically microphone inputs).
	`usb3_playback_left` `usb3_playback_right`	Audio portion of the incoming (far-end) USB stream, left and right channels.
	`hdbt_in_left` `hdbt_in_right`	Audio portion of the incoming (far-end) HDMI signal, left and right channels.
	`line_out_1` `line_out_2`	Line Out ports (typically speaker outputs).
	`usb3_record_left` `usb3_record_right`	Outbound (near-end) audio portion of the USB stream, left and right channels.
	`hdmi_out_left` `hdmi_out_right`	Audio portion of the HDMI output (far-end audio to the display's speakers), left and right channels.
	`sdi_out_left` `sdi_out_right`	Audio portion of the SDI output (far-end audio to the display's speakers), left and right channels.
	`hdbt_out_left` `hdbt_out_right`	Outbound (far-end) audio portion of the IP stream, left and right channels.
Options	`get`	Returns the current volume of the specified channel.
	`up`	Increases the volume of the specified channel.
	`down`	Reduces the volume of the specified channel.
	`set`	Sets the volume of the specified channel.

Examples	`audio line_in_1 volume set -5`
	`OK`
	`>`
	
	Sets -5 dB as the volume for the device connected to the Line In 1 port.
	
	`audio line_out_1 volume get`
	`volume -10.0 dB`
	`OK`
	`>`
	
	Returns the current volume for the speaker connected to the line out port.	

audio mute

Gets or sets the mute status of the specified audio channel.

Synopsis	audio [channel] mute {get	on	off	toggle}	
Channels	`master`	Applies the command to all audio channels.
	`line_in_1` `line_in_2`	Line/Mic In ports (typically microphone inputs).
	`usb3_playback_left` `usb3_playback_right`	Audio portion of the incoming (far-end) USB stream, left and right channels.
	`hdbt_in_left` `hdbt_in_right`	Audio portion of the incoming (far-end) HDMI signal, left and right channels.
	`line_out_1` `line_out_2`	Line Out ports (typically speaker outputs).
	`usb3_record_left` `usb3_record_right`	Outbound (near-end) audio portion of the USB stream, left and right channels.
	`hdmi_out_left` `hdmi_out_right`	Audio portion of the HDMI output (far-end audio to the display's speakers), left and right channels.
	`sdi_out_left` `sdi_out_right`	Audio portion of the SDI output (far-end audio to the display's speakers), left and right channels.
	`hdbt_out_left` `hdbt_out_right`	Outbound (far-end) audio portion of the IP stream, left and right channels.
Options	`get`	Returns the current mute status of the specified channel.
	`on`	Mutes the audio for the specified channel.
	`off`	Unmutes the audio for the specified channel.
	`toggle`	Changes the mute state for the specified channel – unmutes if it was muted, mutes if it was not.

Examples	`> audio line_out_1 mute get`
	`mute:  off`
	`OK`
	`>`
	
	Returns the current mute state of the device connected to audio line out 1. Mute is off, so the audio is on.
	
	`>audio master mute on`
	`OK`
	`>`
	
	Mutes all audio.	

audio route

Gets or sets the input routed to the specified output.

Synopsis	audio [channel] route {get	set}	
Outputs	`line_out_1` `line_out_2`	Line Out ports (typically speaker outputs).
	`usb3_record_left` `usb3_record_right`	Outbound (near-end) audio portion of the USB stream, left and right channels.
	`hdmi_out_left` `hdmi_out_right`	Audio portion of the HDMI output (far-end audio to the display's speakers), left and right channels.
	`sdi_out_left` `sdi_out_right`	Audio portion of the SDI output (far-end audio to the display's speakers), left and right channels.
	`hdbt_out_left` `hdbt_out_right`	Outbound (far-end) audio portion of the IP stream, left and right channels.
Options	`get`	Returns the routing for the specified output.
	`set`	Sets the routing for the specified input.
Inputs	`line_in_1` `line_in_2`	Line/Mic In ports (typically microphone inputs).
	`usb3_playback_left` `usb3_playback_right`	Audio portion of the incoming (far-end) USB stream, left and right channels.
	`hdbt_in_left` `hdbt_in_right`	Audio portion of the incoming (far-end) HDMI signal, left and right channels.

Examples	`> `**`audio line_out_1 route get`**
	`[usb3_playback_left usb3_playback_right ]`
	`OK`
	`>`
	
	Returns the current source of the audio output on Line Out 1 (typically a speaker). Both channels of far-end audio from the USB stream are currently routed to this output.	

audio crosspoint-gain

Returns or sets the current routing gain, in dB, for the crosspoint between a given output and input.

Synopsis	audio <output> crosspoint-gain <input> {get	set <level>}	
Outputs	`line_out_1` `line_out_2`	Line Out ports (typically speaker outputs).
	`usb3_record_left` `usb3_record_right`	Outbound (near-end) audio portion of the USB stream, left and right channels.
	`hdmi_out_left` `hdmi_out_right`	Audio portion of the HDMI output (far-end audio to the display's speakers), left and right channels.
	`sdi_out_left` `sdi_out_right`	Audio portion of the SDI output (far-end audio to the display's speakers), left and right channels.
	`hdbt_out_left` `hdbt_out_right`	Outbound (far-end) audio portion of the IP stream, left and right channels.
Inputs	`line_in_1` `line_in_2`	Line/Mic In ports (typically microphone inputs).
	`usb3_playback_left` `usb3_playback_right`	Audio portion of the incoming (far-end) USB stream, left and right channels.
	`hdbt_in_left` `hdbt_in_right`	Audio portion of the incoming (far-end) HDMI signal, left and right channels.
Options	`get`	Returns the gain from the specified input to the specified output.
	`set` <-12.0 .. 12.0>	Sets the gain from the specified input to the specified output. Valid range is -12.0 dB to 12.0 dB.
Examples	`> ``**``audio program_out_left crosspoint-gain usb3_in_left get``** `3.9` `OK` `>`  Returns the gain from the left channel of the USB 3 playback to the left channel of the program output.  `> ``**``audio program_out_left crosspoint-gain usb3_in_left set -3``** `OK` `>` Sets the gain from the left channel of the USB 3 playback to the left channel of the program output to -3 dB.	

sleep

Pauses for the specified number of milliseconds before evaluating and executing the next command.

Synopsis	sleep <milliseconds>	
Options	<milliseconds>	The number of milliseconds (1 to 10000) to pause.
Example	>**sleep 7000** OK > Pause for 7 seconds (7000 milliseconds) before returning.	

network settings get

Returns the current network settings for MAC address, IP address, subnet mask, and gateway.

Synopsis	network settings get
| Example | ```
> network settings get
Name          eth0:WAN
MAC Address   00:1E:C0:F6:CA:7B
IP Address    192.168.1.67
Netmask       255.255.255.0
VLAN          Disabled
Gateway       192.168.1.254
OK
>
``` |

network ping

Sends an ICMP ECHO_REQUEST to the specified IP address or hostname.

Synopsis	network ping [count <count>] [size <size>] <destination-ip>	
Options	<count>	The number of ECHO_REQUEST packets to send. Default is five packets.
	<size>	The size of each ECHO_REQUEST packet. Default is 56 bytes.
	<destination-ip>	The IP address where the ECHO_REQUEST packets will be sent.
Examples	>`network ping 192.168.1.66` PING 192.168.1.66 (192.168.1.66): 56 data bytes 64 bytes from 192.168.1.66: seq=0 ttl=64 time=0.476 ms 64 bytes from 192.168.1.66: seq=1 ttl=64 time=0.416 ms 64 bytes from 192.168.1.66: seq=2 ttl=64 time=0.410 ms 64 bytes from 192.168.1.66: seq=3 ttl=64 time=0.410 ms 64 bytes from 192.168.1.66: seq=4 ttl=64 time=3.112 ms --- 192.168.1.66 ping statistics --- 5 packets transmitted, 5 packets received, 0% packet loss round-trip min/avg/max = 0.410/0.964/3.112 ms > Sends five ECHO_REQUEST packets of 56 bytes each to the host at 192.168.1.66.	
	>`network ping count 10 size 100 192.168.1.1` Sends 10 ECHO_REQUEST packets of 100 bytes each to the host at 192.168.1.1. The command returns data in the same form as above.	

system reboot

Reboots the system either immediately or after the specified delay. Note that a reboot is required when resetting the system to factory defaults (system factory-reset).

Synopsis	system reboot [<seconds>]	
Options	<seconds>	The number of seconds to delay the reboot.
Examples	>`system reboot` OK > The system is going down for reboot NOW! onelink-bridge-D8-80-39-62-A7-C5 Reboots the system immediately. >`system reboot 30` Reboots the system in 30 seconds. The response appears at the end of the delay.	

system factory-reset

Gets or sets the factory reset status. When the factory reset status is on, the extension module resets to factory defaults on reboot.

Note
This does not reset the camera.

Synopsis	system factory-reset { get	on	off}	
Options	`get`	Returns the camera's current factory reset status.
	`on`	Enables factory reset on reboot.
	`off`	Disables factory reset on reboot.

Examples	`>`**`system factory-reset get`**
	`factory-reset (software):     off`
	`factory-reset (hardware):     off`
	`OK`
	`>`	

	Returns the factory reset status.	
	This evaluates the most recent `system factory-reset` on or off command, if one has been received, then reads the rear panel DIP switches and returns the status `on` if they are all in the down position.	

	`>`**`system factory-reset on`**
	`factory-reset (software):     on`
	`factory-reset (hardware):     off`
	`OK`
	`>`	

	Enables factory reset upon reboot.	
	Note *This command does not initiate a factory reset. The factory reset takes place on the next reboot.*	

history

Returns the most recently issued commands from the current Telnet session. Since many of the programs read user input a line at a time, the command history is used to keep track of these lines and recall historic information.

Synopsis	history <limit>	
Options	<limit>	Integer value specifying the maximum number of commands to return.
Examples	**history** Displays the current command buffer. **history 5** Sets the history command buffer to remember the last 5 unique entries.	
Additional information	You can navigate the command history using the up and down arrow keys. This command supports the expansion functionality from which previous commands can be recalled from within a single session. History expansion is performed immediately after a complete line is read. Examples of history expansion: * **!!** Substitute the last command line. * **!4** Substitute the 4th command line (absolute as per 'history' command) * **!-3** Substitute the command line entered 3 lines before (relative)	

version

Returns the current firmware version of the OneLINK device.

Synopsis	version

Example	**version**
	Returns current firmware version information in a form something like this:
	
	`Audio          1.05-1.01`
	`Commit         a735fee1ab6270e693e2791b76a9bcbdf5bd36b5`
	`HDLink         RX4.6.1x0.01`
	`System Version OneLINK Bridge 1.0.0`
	`USB            01.00.017`
	`Video          1.06`
	`OK`
	`>`

help

Displays an overview of the CLI syntax.

Synopsis	help
Example	**help**

exit

Ends the command session and closes the socket.

Synopsis	exit
Example	**exit**

Specifications

Video outputs	Simultaneous HDMI, USB 3.0 and HD-SDI	Resolution and frame rate	Up to 1080p/60 (full HD)
Audio inputs	Two mic/line-level channels with noise/echo cancellation; phantom power available	Audio outputs	Two balanced line-level audio outputs
Mixing	10X8 audio mixer; audio is routable through all outputs		
USB 3.0 Streaming	Uncompressed video with PCM audio	IP Streaming	RTSP format with H.264 video compression and AAC audio compression
Control Features	Web interface for configuration via browser Telnet API for third-party external control USB Human Interface Device (HID) for room audio controls		
Operating Environment	32°F to 104°F (0 °C to +40°C), 15% to 80% relative humidity, non-condensing		
Storage Environment	-4°F to 140°F (-20° to +60° C), 15% to 80% relative humidity, non-condensing		
Dimensions	Height 1.72 in. (4.4 cm); Width 8.375 in (21.3 cm); Depth 6.0 in. (15.2 cm)		
Weight	1.7 lb (0.8 kg)	Power	48 VDC, 1.36 A

Specifications are subject to change without notice.

Troubleshooting

When the Vaddio camera connected to the OneLINK device doesn't behave as you expect, check the color of the camera's indicator light before you do anything else.

- Purple – booting or in standby (low power) mode.
- Blue – normal operation.
- Blinking blue – the camera has received a valid IR command.
- Red – Tally function; the camera is on-air.
- Blinking red – fault condition.
- Yellow – firmware update in progress.
- Off – no power to the camera.

Now check the OneLINK device's web interface for error messages. With HDBaseT technologies, the EZIM (if one is used) tends to run warm, which is normal. If the system detects that the temperature is too high, a temperature fault message will appear at the top of the web interface page.

If neither of these reveal the problem, use this table to determine whether it's time to call Vaddio Technical Support.

What is it doing?	Possible causes	Check and correct
The camera is not receiving power.	The camera is not connected to the EZIM (if an EZIM is used).	Plug the EZIM into the camera.
	The OneLINK device's power pack is not plugged in to main power, or the EZIM (if one is used) is not connected to the main OneLINK unit.	Plug the power pack into a wall outlet, or connect the EZIM to its OneLINK base unit.
	At least one of the cables is bad.	Replace the bad cable.
	The wall outlet is not active. (Check by finding out if it powers something else, such as a laptop or phone charger.)	Plug the OneLINK power pack into a different outlet.
	"He's dead, Jim."	Contact your reseller or Vaddio Technical Support.
The camera is on, but its web interface is not available.	At least one Ethernet cable is not connected.	Make sure all cables are connected.
	One of the Ethernet cables is bad.	Replace the bad cable.
	The camera is not using the IP address you browsed to.	Vaddio cameras: Press the Data Screen button on the remote to see the camera's IP address.
Comm errors / cannot discover camera	Ethernet or RS-232 cable connected to the wrong port at one end	Check the cables from the EZIM to the camera.
	The camera is not compatible with the OneLINK device.	Be sure you are using your OneLINK device with a compatible camera.
The camera is on but not transmitting video.	Possible cable length issue	Check the HDMI output from the camera by connecting a display directly to it. If video is good using a relatively short cable directly to the

What is it doing?	Possible causes	Check and correct
		display, then a better grade of cable (Cat-6 or Cat-7) may correct the problem.
Video drops out during PTZ movements.	The camera is not getting adequate power.	Check how the camera behaves when it and the attached EZIM are connected to the main interface with a short (6 to 10 ft/ 2 to 3 m) cable. If the camera performs properly, then the problem is the length of the cable from the main interface to the EZIM. A better grade of cable (Cat-6 or Cat-7) may correct the problem.
Video and audio don't match up – speech is audible before the person on the far end appears to start speaking.	The audio signal is arriving before the video signal, which is normal but not desirable.	For the affected audio outputs (Line Out, HDMI Out, or USB Record), enable Delay and enter a value in milliseconds.
When connected to a conferencing codec: Far-end audio drops out periodically, and the issue may intensify.	Echo cancellation is enabled on both the codec and the OneLINK Bridge.	Disable echo cancellation on the OneLINK Bridge.
Audio feedback or echo that intensifies.	Echo cancellation is disabled.	If using the OneLINK Bridge with a conferencing codec, enable echo cancellation on the codec. Otherwise, enable echo cancellation on the OneLINK Bridge.
Polycom camera does not respond to the remote.	The OneLINK Bridge AV interface has no IR forwarding.	Point the remote at the conferencing codec.

Operation, Storage, and Care

For smears or smudges on the product, wipe with a clean, soft cloth. Use a lens cleaner on the lens. Do not use any abrasive chemicals.

Keep this device away from food and liquids.

Do not operate or store the device under any of the following conditions:
- Temperatures above 40°C (104°F) or below 0°C (32°F)
- High humidity, condensing or wet environments
- Inclement weather
- Severe vibration
- Lateral acceleration of more than 27G
- Dry environments with an excess of static discharge

Do not attempt to take this product apart. There are no user-serviceable components inside.

Compliance Statements and Declarations of Conformity

Statements are given separately for the OneLINK Bridge AV interface and the OneLINK HDMI EZCamera Interface Module (EZIM).

OneLINK Bridge AV Interface

Compliance testing was performed to the following regulations:

FCC Part 15 (15.107, 15.109), Subpart B	Class A
ICES-003, Issue 6, January 2016	Class A
EN 55024, 2010	Class A
EN 55032, 2012	Class A
EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013	Safety
KN24 2008 (CISPR 24: 1997 + A1: 2000 + A2: 2002)	Class A
EMC Directive 2014/30/EU	Class A

FCC Part 15 Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15, Subpart B, of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by Milestone AV Technologies can affect emission compliance and could void the user's authority to operate this equipment.

ICES-003 Compliance

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'emet pas de bruits radioélectriques dépassant les limites applicables aux appareils numeriques de la classe A préscrites dans le Règlement sur le brouillage radioélectrique édicte par le ministère des Communications du Canada.

European Compliance

This product has been evaluated for Electromagnetic Compatibility under the EMC Directive for Emissions and Immunity and meets the requirements for a Class A digital device. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Standard(s) To Which Conformity Is Declared: 　　　　　　　　　　　　　　　C E

EMC Directive 2014/30/EU	
EN 55032: 2012	Multimedia Equipment Emissions Requirements
EN 55024: 2010	IT Immunity Characteristics
EN 61000-4-2 + Amendments A1, A2	Electrostatic Discharge
EN 61000-4-3 + A1	Radiated Immunity
EN 61000-4-4 + Corrigendum	Electrical Fast Transients
EN 61000-4-5	Surge Immunity
EN 61000-4-6	Conducted Immunity
EN 61000-4-8	Power Frequency Magnetic Field
EN 61000-4-11	Voltage Dips, Interrupts and Fluctuations
KN24 2008 (CISPR 24: 1997 + A1: 2000 + A2: 2002)	IT Immunity Characteristics
EN 61000-4-2	Electrostatic Discharge
EN 61000-4-3	Radiated Immunity
EN 61000-4-4	Electrical Fast Transients
EN 61000-4-5	Surge Immunity
EN 61000-4-6	Conducted Immunity
EN 61000-4-8	Power Frequency Magnetic Field
EN 61000-4-11	Voltage Dips, Interrupts and Fluctuations
Low Voltage Directive 2014/35/EU	
IEC 60950-1: 2005 (2nd Edition); Am 1: 2009 + Am 2: 2013	Safety
EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013	Safety
RoHS Directive 2011/65/EU	

OneLINK HDMI EZCamera Interface Module (EZIM)

Compliance testing was performed to the following regulations:
- FCC Part 15 (15.107, 15. 109), Subpart B Class A
- ICES-003, Issue 4: 2004Class A
- EN 55022A: 2006 + A1: 2007 Class A
- KN24 2008 (CISPR 24: 1997 + A1: 2000 + A2: 2002) Class A
- KN22 2008 (CISPR 22: 2006) Class A
- EMC Directive 2004/108/EC Class A
- EN 55024: A2: 2003 Class A
- EN 60950-1:2006+A11: 2009+A1: 2010+A12: 2011 Safety

FCC Part 15 Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15, Subpart B, of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by Vaddio can affect emission compliance and could void the user's authority to operate this equipment.

ICES-003 Compliance

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'emet pas de bruits radioélectriques dépassant les limites applicables aux appareils numeriques de la classe A préscrites dans le Règlement sur le brouillage radioélectrique édicte par le ministère des Communications du Canada.

European Compliance

C E

This product has been evaluated for Electromagnetic Compatibility under the EMC Directive for Emissions and Immunity and meets the requirements for a Class A digital device. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Standard(s) To Which Conformity Is Declared:

EMC Directive 2004/108/EC

EN 55022:2010 Conducted and Radiated Emissions

EN 55024: 1998 + Amendments A1: 2001 + A2: 2003 Immunity
- EN 61000-4-2: 1995 + Amendments A1: 1998 + A2: 2001 Electrostatic Discharge
- EN 61000-4-3: 2006 + A1: 2008 Radiated Immunity
- EN 61000-4-4: 2004 + Corrigendum 2006 Electrical Fast Transients
- EN 61000-4-5: 2006 Surge Immunity
- EN 61000-4-6: 2009 Conducted Immunity
- EN 61000-4-8: 2010 Power Frequency Magnetic Field
- EN 61000-4-11: 2004 Voltage Dips, Interrupts and Fluctuations

KN24 2008 (CISPR 24: 1997 + A1: 2000 + A2: 2002)IT Immunity Characteristics
- EN 61000-4-2 Electrostatic Discharge
- EN 61000-4-3 Radiated Immunity
- EN 61000-4-4 Electrical Fast Transients
- EN 61000-4-5 Surge Immunity
- EN 61000-4-6 Conducted Immunity
- EN 61000-4-8 Power Frequency Magnetic Field
- EN 61000-4-11 Voltage Dips, Interrupts and Fluctuations

IEC 60950-1:2005 (2nd Edition); Am 1:2009 Safety

EN 60950-1: 2006+A11: 2009+A1: 2010+A12: 2011 Safety

Warranty Information

See Vaddio Warranty, Service and Return Policies posted on support.vaddio.com for complete details.

Hardware* warranty: Two (2) year limited warranty on all parts and labor for Vaddio manufactured products. Vaddio warrants its manufactured products against defects in materials and workmanship for a period of two years from the day of purchase, to the original purchaser, if Vaddio receives notice of such defects during the warranty. Vaddio, at its option, will repair or replace products that prove to be defective. Vaddio manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry standard practices.

Exclusions: The above warranty shall not apply to defects resulting from improper or inadequate maintenance by the customer, customers applied software or interfacing, unauthorized modifications or misuse, mishandling, operation outside the normal environmental specifications for the product, use of the incorrect power supply, modified power supply or improper site operation and maintenance. OEM and special order products manufactured by other companies are excluded and are covered by the manufacturer's warranty.

Vaddio Customer Service: Vaddio will test, repair, or replace the product or products without charge if the unit is under warranty. If the product is out of warranty, Vaddio will test then repair the product or products. The cost of parts and labor charge will be estimated by a technician and confirmed by the customer prior to repair. All components must be returned for testing as a complete unit. Vaddio will not accept responsibility for shipment after it has left the premises.

Vaddio Technical Support: Vaddio technicians will determine and discuss with the customer the criteria for repair costs and/or replacement. Vaddio Technical Support can be contacted by email at support@vaddio.com or by phone at one of the phone numbers listed on support.vaddio.com.

Return Material Authorization (RMA) number: Before returning a product for repair or replacement request an RMA from Vaddio's technical support. Provide the technician with a return phone number, e-mail address, shipping address, product serial numbers and original purchase order number. Describe the reason for repairs or returns as well as the date of purchase. See the General RMA Terms and Procedures section for more information. RMAs are valid for 30 days and will be issued to Vaddio dealers only. End users must return products through Vaddio dealers. Include the assigned RMA number in all correspondence with Vaddio. Write the assigned RMA number clearly on the shipping label of the box when returning the product. All products returned for credit are subject to a restocking charge without exception. Special order product are not returnable.

Voided varranty: The warranty does not apply if the original serial number has been removed or if the product has been disassembled or damaged through misuse, accident, modifications, use of incorrect power supply, use of a modified power supply or unauthorized repair.

Shipping and handling: Vaddio will not pay for inbound shipping transportation or insurance charges or accept any responsibility for laws and ordinances from inbound transit. Vaddio will pay for outbound shipping, transportation, and insurance charges for all items under warranty but will not assume responsibility for loss and/or damage by the outbound freight carrier. If the return shipment appears damaged, retain the original boxes and packing material for inspection by the carrier. Contact your carrier immediately.

Products not under warranty: Payment arrangements are required before outbound shipment for all out of warranty products.

Index