



Complete Manual for the



Document 411-0019-30 Rev. D August 2021

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Overview

This guide covers the OneLINK[™] HDMI camera extension, which is available in several kit configurations for use with Vaddio or third-party cameras, with or without third-party codecs. It is also available as a component of several Vaddio camera systems.



If the OneLINK device is sold for use with an HDMI camera, it is shipped with a OneLINK EZCamera Interface Module (EZIM).



Note

OneLINK devices are not compatible with PoE+ powered HDMI cameras such as RoboSHOT[®] 12E HDMI and RoboSHOT 30E HDMI. OneLINK devices are compatible with the discontinued RoboSHOT 12 HDMI and RoboSHOT 30 HDMI cameras.

What's in this Guide

This guide provides information about:

- Physical features
- Installation
- System administration and configuration
- Serial API for third-party control
- Troubleshooting and maintenance

For your convenience, the information you need to install this product is also available in the smaller, stand-alone **Installation Guide for the OneLINK HDMI Camera Extension**, which covers physical features, installation, and initial power-on.

Features

- Simple, fast, clutter-free camera installation power, control, video, and network connectivity over a single cable
- Extends installation distance for HDMI and HDBaseT[™] cameras up to 100 m (328 ft.) using Cat-6 cable; 230 ft (70 m) using Cat-5e
- Administrative control via web interface; passes web, Telnet, and RS-232 serial control to connected devices
- Passes uncompressed HDMI[®] video up to 2160p/29.97
- Compatible with Vaddio HDBaseT cameras no EZCamera Interface Module (EZIM) needed
- Compatible with legacy RoboSHOT HDMI and other HDMI cameras
- Kits available for use with Polycom and Cisco codecs

A Quick Look at the OneLINK Device

This section covers the physical features of the OneLINK HDMI camera extension.

All OneLINK kits include a receiver, which is typically co-located with other equipment, up to 328 ft (100 m) away from the camera. OneLINK kits for use with HDMI cameras also include an EZCamera Interface Module (EZIM) HDBaseT converter, which is mounted adjacent to the camera.

Front Panel of the Receiver



• **Power System Reset** button (illuminated red) – reboots the device. This does not affect the connected camera.

Connector Panel of the Receiver



From the left:

- **Power input jack** Connect the supplied 48 VDC, 1.36 A power supply.
- OneLINK interface port Connection to the HDBaseT camera or to the EZIM. This bidirectional connection carries video, network connectivity including H.264 IP streaming from the camera (if available), RS-232 control, and 12 VDC power.
- HDMI output Connection for a display.
- **RS-232 port** Connection for a camera controller.
- IR forwarding port IR signal from the camera, if available. Modulated and non-modulated outputs provided.
- Network port Web interface access, H.264 IP streaming (if available from the camera), and thirdparty IP control via Telnet API.

Connector Panel of the EZCamera Interface Module (EZIM)

If the OneLINK device is used with an HDMI camera, the EZIM HDBaseT converter is required.



From the left:

- **Power output jack** Supplies power to the camera.
- Network port Provides network connectivity to the camera for H.264 IP streaming (if available from the camera), web interface access, and third-party control via Telnet API.
- **RS-232 port** Provides RS-232 connectivity to the camera, for third-party control.
- HDMI input Receives HDMI video from the camera.
- OneLINK port Single-cable connection to the OneLINK receiver. This bidirectional connection carries all video, power, and control.

Installing the OneLINK Device

This section covers:

- Things to know before you start the installation
- Basic connection examples

For information about using the OneLINK device with third-party cameras or codecs, see the Complete Manual for the OneLINK HDMI Camera Extension.

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 Vaddio 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.

Note

Disassembling this product will void the warranty.

Cabling Notes

- Maximum cable distance between the OneLINK device and the camera or EZIM is 328 ft (100 m) using Cat-6 or Cat-7 cable, or 230 ft (70 m) using Cat-5e cable.
- Cat-6 or Cat-7 cabling allows longer maximum cabling distance, and may provide better performance in noisier RF or EMF environments.
- We recommend shielded cabling if the cables will be coiled, run tightly with other cables, or routed near sources of electromagnetic interference such as power lines or fluorescent light fixtures. When in doubt, use shielded Cat-6 cable.

Caution

When making cables for Vaddio products, do not use pass-through RJ-45 connectors. If they are crimped incorrectly, they can damage the connectors on the product, cause intermittent connections, and degrade signal quality. Physical damage to the connectors will void your warranty.





Intact

Pro Tip

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

We recommend using high-quality connectors and a high-quality crimping tool.



To prevent tragic mishaps, label both ends of every cable.

RS-232 Connector Pin-Outs

The OneLINK device passes signals from a third-party device to the connected camera.



OneLINK Receiver - RS-232 Control Port

- 1. Unused
- 2. Unused
- 3. Unused
- 4. Unused
- 5. Unused
- 6. GND
- 7. RX (from TX of controller)
- 8. TX (to RX of controller)

OneLINK EZIM - RS-232 Control Port

- 1. Unused
- 2. Unused
- 3. Unused
- 4. IR GND
- 5. IR (non-modulated)
- 6. GND
- 7. TX (to RX of camera)
- 8. RX (from TX of camera)

Note

Vaddio recommends following the 568B cabling standard for Cat-5 cabling.

IR Forwarding Connector Pin-Out



- 1. Modulated IR Output
- 2. Common Ground
- 3. Non-modulated IR Output

Mounting the OneLINK Device

If you are installing the OneLINK device with a OneLINK EZIM, mount the EZIM with or near the camera. The Thin Profile Wall Mount for the camera may include mounting holes to attach the EZIM to the underside of the mount using two 6-32 screws. Connect all required cables during camera installation. Rack and under-table mounting kits are available for the receiver. Follow the mounting instructions supplied with the kit.

About Installations Using the Half-Recessed Ceiling Mount

If the connected camera is mounted in Vaddio's Half-Recessed Ceiling Mount, the camera's IR receiver may have trouble receiving signals from the remote. The mount has an IR receiver that can forward commands to the camera; this must be powered separately using Power Extension Module 999-1005-021. Cameras powered by OneLINK devices cannot supply power to the mount's IR receiver.

Connections for HDBaseT Cameras

The OneLINK HDMI extends network connectivity, power, and control to an HDBaseT camera, and sends HDMI video from the camera to a display.

The camera can optionally be controlled by a camera controller via the OneLINK connection. Depending on the equipment, the camera controller may connect directly to the OneLINK device's RS-232 port, or it may control the camera over the network. In either case the OneLINK device passes communication between the controller and the camera.

If an IP stream is available from the camera, the OneLINK device passes it to the network. Ethernet passthrough is limited to 100 Mb/s. HDMI output resolution and streaming parameters (including resolution) are configured on the camera, not the OneLINK device.



Vaddio HDBaseT cameras include RoboSHOT HDBT, RoboSHOT UHD, RoboFLIP, and RoboSHOT In-Wall.

Connecting a Vaddio HDBaseT Camera

This diagram shows a RoboSHOT HDBT camera. Other Vaddio HDBaseT cameras connect in the same way.



Connections for HDMI Cameras

The OneLINK HDMI extends network connectivity, power, and control to an HDMI camera via the EZ Camera Interface Module (EZIM), and sends HDMI video from the camera to a display.

The camera can optionally be controlled by a camera controller via the OneLINK connection. Depending on the equipment, the camera controller may connect directly to the OneLINK device's RS-232 port, or it may control the camera over the network. In either case the OneLINK device passes communication between the controller and the camera.

If an IP stream is available from the camera, the OneLINK device passes it to the network. Ethernet passthrough is limited to 100 Mb/s. HDMI output resolution and streaming parameters (including resolution) are configured on the camera, not the OneLINK device.



Note

OneLINK devices are not compatible with PoE+ powered HDMI cameras such as RoboSHOT 12E HDMI and RoboSHOT 30E HDMI. OneLINK devices are compatible with the discontinued RoboSHOT 12 HDMI and RoboSHOT 30 HDMI cameras.

Connecting a RoboSHOT HDMI Camera

This diagram shows a RoboSHOT HDMI camera.

The RoboSHOT 12 HDMI and RoboSHOT 30 HDMI cameras are discontinued. OneLINK devices are not compatible with RoboSHOT 12E HDMI and RoboSHOT 30E HDMI cameras, as these cameras are PoE+ powered.



Connecting a Polycom EagleEye IV Camera

The Polycom EagleEye IV camera does not use the network connection from the OneLINK device.



Connecting a Cisco Camera

Note

If connecting to a Cisco Precision 40 or Precision HD 1080p2.5x camera, you will need to provide a Cisco split cable, Cisco part number CAB-PHD4XS2-SPLIT.

Cisco Precision 40 or Precision HD Series Camera



Cisco Precision 60 Camera



Hardware Note: RS-232 Connections

For RS-232 connections to Cisco cameras, use the appropriate null-modem cable. Connect it as indicated on the cable labels. This cable is used with the Cisco split cable CAB-PHD4XS2-SPLIT for some cameras.

Connecting a Sony or Panasonic HDMI Camera

Panasonic AW-HE130 Camera



Sony SRG300 Camera

The SRG120 camera's connector panel looks similar, and connects in the same way.



Connections for HDBaseT Cameras Used with Codecs

The OneLINK HDMI extends network connectivity, power, and control to an HDBaseT camera, and sends HDMI video from the camera to a connected codec.

The codec may be connected to the OneLINK device via RS-232 or over the IP network, depending on the codec.

If an IP stream is available from the camera, the OneLINK device passes it to the network. Ethernet passthrough is limited to 100 Mb/s. HDMI output resolution and streaming parameters (including resolution) are configured on the camera, not the OneLINK device.



Vaddio HDBaseT cameras include RoboSHOT HDBT, RoboSHOT UHD, RoboFLIP, and RoboSHOT In-Wall.

Hardware Note: Connection and Configuration Changes

After connecting or configuring the equipment, reboot the OneLINK device, camera, and codec. Note that rebooting the OneLINK device does not affect the camera and codec; they must be rebooted separately.

Connecting a Vaddio HDBaseT Camera and Polycom Codec

These diagrams show a RoboSHOT HDBT camera. Other Vaddio HDBaseT cameras connect in the same way.

The Polycom RealPresence Group 500 codec is similar to the RealPresence Group 310 codec, and connects to the OneLINK device in the same way.

RoboSHOT HDBT Camera and Polycom RealPresence Group 310 Codec





RoboSHOT HDBT Camera and Polycom RealPresence Group 700 Codec

Hardware Note: IR Forwarding

Use the supplied 3-position Euro-style connector to terminate the two unterminated wires of the codecside fan-out cable as follows:

- Black wire: Center position (pin 2)
- Red wire: Right position (pin 3)

Connect this part of the fan-out cable to the IR FORWARD connector on the OneLINK HDMI receiver.



Note

Some fan-out cables have a black/white wire instead of a red one. Wiring is the same – black to pin 2, black/white to pin 3.

Some older fan-out cables have the wires reversed. This will not damage the equipment. If IR forwarding does not work when you terminate the cable per these instructions, remove power from the OneLINK device, disconnect the fan-out cable, and re-terminate the wires with red (or black/white) to pin 2 and black to pin 3. Then reconnect the cable and power up the OneLINK device again.

Connecting a Vaddio HDBaseT Camera and Cisco Codec

These diagrams show a RoboSHOT HDBT camera. Other Vaddio HDBaseT cameras connect in the same way.

RoboSHOT HDBT Camera and Cisco C20 Codec



RoboSHOT HDBT Camera and Cisco C60 Codec

The C40 codec looks similar and connects in the same way.





RoboSHOT HDBT Camera and Cisco SX20 Codec

Note

If connecting to a Cisco SX20 codec, you will need to provide a Cisco split cable, Cisco part number CAB-PHD4XS2-SPLIT.

RoboSHOT HDBT Camera and Cisco SX80 Codec

Other Vaddio HDBaseT cameras connect in the same way.



Hardware Note: RS-232 Connections

For RS-232 connections to Cisco gear using DE-9 connectors, use the 998-1002-232 RJ-45 to DE-9 adapter. Its wiring differs from the 998-1001-232 adapter used with many Vaddio products. For RS-232 connections to Cisco gear using the Cisco split cable, use the appropriate null-modem cable to the RJ-45 side of the split cable. Connect the null-modem cable as indicated on the cable labels.

Connections for HDMI Cameras Used with Codecs

The OneLINK HDMI extends network connectivity, power, and control to an HDMI camera via the EZ Camera Interface Module (EZIM), and sends HDMI video from the camera to a connected codec.

The codec may be connected to the OneLINK device via RS-232 or over the IP network, depending on the codec.

If an IP stream is available from the camera, the OneLINK device passes it to the network. Ethernet passthrough is limited to 100 Mb/s. HDMI output resolution and streaming parameters (including resolution) are configured on the camera, not the OneLINK device.



Note

OneLINK devices are not compatible with PoE+ powered HDMI cameras such as RoboSHOT 12E HDMI and RoboSHOT 30E HDMI. OneLINK devices are compatible with the discontinued RoboSHOT 12 HDMI and RoboSHOT 30 HDMI cameras.

Hardware Note: Connection and Configuration Changes

After connecting or configuring the equipment, reboot the OneLINK device, camera, and codec. Note that rebooting the OneLINK device does not affect the camera and codec; they must be rebooted separately.

Connecting a RoboSHOT HDMI Camera and Polycom Codec

These diagrams show a RoboSHOT HDMI camera.

The RoboSHOT 12 HDMI and RoboSHOT 30 HDMI cameras are discontinued. OneLINK devices are not compatible with RoboSHOT 12E HDMI and RoboSHOT 30E HDMI cameras, as these cameras are PoE+ powered.

RoboSHOT HDMI Camera and Polycom RealPresence Group 310 Codec

The Group 500 codec looks similar and connects in the same way.





RoboSHOT HDMI Camera and Polycom RealPresence Group 700 Codec

Hardware Note: IR Forwarding

Use the supplied 3-position Euro-style connector to terminate the two unterminated wires of the codecside fan-out cable as follows:

- Black wire: Center position (pin 2)
- Red wire: Right position (pin 3)

Connect this part of the fan-out cable to the IR FORWARD connector on the OneLINK HDMI receiver.



Note

Some fan-out cables have a black/white wire instead of a red one. Wiring is the same – black to pin 2, black/white to pin 3.

Some older fan-out cables have the wires reversed. This will not damage the equipment. If IR forwarding does not work when you terminate the cable per these instructions, remove power from the OneLINK device, disconnect the fan-out cable, and re-terminate the wires with red (or black/white) to pin 2 and black to pin 3. Then reconnect the cable and power up the OneLINK device again.

Connecting a Polycom EagleEye IV Camera and Polycom Codec

The Polycom EagleEye IV camera does not use the network connection from the OneLINK device. **Polycom EagleEye IV Camera and Polycom RealPresence Group 310 Codec** The Group 500 codec looks very similar and connects in the same way.



Polycom EagleEye IV Camera and Polycom RealPresence Group 700 Codec



Hardware Note: IR Forwarding

Use the supplied 3-position Euro-style connector to terminate the two unterminated wires of the codecside fan-out cable as follows:

- Black wire: Center position (pin 2)
- Red wire: Right position (pin 3)

Connect this part of the fan-out cable to the IR FORWARD connector on the OneLINK HDMI receiver.



Note

Some fan-out cables have a black/white wire instead of a red one. Wiring is the same – black to pin 2, black/white to pin 3.

Some older fan-out cables have the wires reversed. This will not damage the equipment. If IR forwarding does not work when you terminate the cable per these instructions, remove power from the OneLINK device, disconnect the fan-out cable, and re-terminate the wires with red (or black/white) to pin 2 and black to pin 3. Then reconnect the cable and power up the OneLINK device again.

Connecting a RoboSHOT HDMI Camera and Cisco Codec

These diagrams show a RoboSHOT HDMI camera.

The RoboSHOT 12 HDMI and RoboSHOT 30 HDMI cameras are discontinued. OneLINK devices are not compatible with RoboSHOT 12E HDMI and RoboSHOT 30E HDMI cameras, as these cameras are PoE+ powered.



RoboSHOT HDMI Camera and Cisco C20 Codec

RoboSHOT HDMI Camera and Cisco C60 Codec

The C40 codec looks very similar and connects in the same way.



RoboSHOT HDMI Camera and Cisco SX20 Codec



Note

If connecting to a Cisco SX20 codec, you will need to provide a Cisco split cable, Cisco part number CAB-PHD4XS2-SPLIT.



RoboSHOT HDMI Camera and Cisco SX80 Codec

Hardware Note: RS-232 Connections

For RS-232 connections to Cisco gear using DE-9 connectors, use the 998-1002-232 RJ-45 to DE-9 adapter. Its wiring differs from the 998-1001-232 adapter used with many Vaddio products.

For RS-232 connections to Cisco gear using the Cisco split cable, use the appropriate null-modem cable to the RJ-45 side of the split cable. Connect the null-modem cable as indicated on the cable labels.

Connecting a Cisco Camera and Codec

Note

If connecting to a Cisco SX20 codec, you will need to provide a Cisco split cable, Cisco part number CAB-PHD4XS2-SPLIT. This cable is also required when connecting to a Cisco Precision 40 or Precision HD 1080p2.5x camera; you will need two of them if connecting one of these cameras and an SX20 codec.

Cisco Precision 40 or Precision HD Series Camera and Cisco C20 Codec



Cisco Precision 40 or Precision HD Series Camera and Cisco C60 Codec

The C40 codec looks very similar and connects in the same way.





Cisco Precision 40 or Precision HD Series Camera and Cisco SX20 Codec



Cisco Precision 40 or Precision HD Series Camera and Cisco SX80 Codec

Cisco Precision 60 Camera and Cisco SX80 Codec



Hardware Note: RS-232 Connections

For RS-232 connections to Cisco gear using DE-9 connectors, use the 998-1002-232 RJ-45 to DE-9 adapter. Its wiring differs from the 998-1001-232 adapter used with many Vaddio products.

For RS-232 connections to Cisco gear using the Cisco split cable, use the appropriate null-modem cable to the RJ-45 side of the split cable. Connect the null-modem cable as indicated on the cable labels.

Camera Configuration

To use IR forwarding on Cisco cameras with Cisco C-series codecs, go to the camera's admin settings and set IR to Auto.

To use IR forwarding on Cisco cameras with Cisco SX20 and SX80 codecs, go to the camera's admin settings and set IR to On.

Powering Up the Equipment

Power up the connected equipment that is not powered by the OneLINK device (such as displays and third-party control devices), then connect power to the OneLINK device. The connected camera and the OneLINK device power up together.

Web Interface

The OneLINK device provides a web interface to allow configuration and administration using a browser. The web interface allows you to:

- Set idle session behavior and passwords
- Add identifying information to the web interface
- Back up, reboot, reset, or update the device
- View information about the camera connection
- View network-related information
- View information about the device's firmware and current settings

Many of the screen shots in this manual are from the OneLINK Bridge AV interface, which has some capabilities that are not available in the OneLINK HDMI device.

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.

Note

The connected camera is configured separately from the OneLINK device. Changes to the OneLINK device's configuration do not affect the configuration of the camera or other connected equipment. If you need to change the way the camera is configured, log in to the camera's web interface.

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.

Initial Device Set-Up and System Administration Tasks

When any Vaddio product is shipped from the factory, there is no admin password and the administrative controls are not available. You will need to access the web interface and set the admin password. This gives you access to the system administration tasks to define how the device behaves as an element of your network.

Initial Device Set-Up Using the Vaddio Device Controller

The Vaddio Device Controller is a stand-alone tablet for working with Vaddio products' web interfaces.

To complete the initial device set-up with the Vaddio Device Controller:

- 1. Connect the touch-panel to the network on the same subnet as the products you need to work with for example, connect both to the same PoE+ switch.
- 2. Go to the touch-panel's Configuration page (gear icon) and select Scan.
- 3. Locate the device you need to work with, and select Use.
- 4. Select Exit to leave the Configuration page and open the device's web interface.

Note

The first time you access a device at a specific IP address, the Vaddio Device Controller's screen may remain blank for 20 seconds or more.

5. Set the admin password. This logs you in.

If the Vaddio Device Controller does not find the device, verify that the Vaddio Device Controller and the device are connected to the same subnet. You may need to access the web interface manually.

Initial Device Set-Up Using the Vaddio Deployment Tool

Be sure you have the current version of the Vaddio Deployment Tool. If you have a copy of the tool already, compare its version information to the version shown on the release notes. You can find both at https://www.legrandav.com/en/products/vaddio/accessories/vaddio_deployment_tool under the Resources tab.

To complete the initial device set-up with the Vaddio Deployment Tool:

- 1. Download and install the Vaddio Deployment Tool if you have not done so already, then open it.
- 2. Power up the OneLINK device if you have not done so already.
- 3. On the Find Devices page, click Scan. If the scan does not locate the device, your computer may be on a different subnet. Click Advanced and specify the appropriate portion of the network to scan.
- 4. In the list of equipment that the scan discovers, locate the devices marked Not Set Up.

Name	Location	IP / Hostname 🔺	Firmware	Status	Video
Robo SHOT 12E HD-SDI Camera	Karen	10.30.219.51 🗗	3.3.0	Password Login	
Robo SHOT 12E HDMI Camera	Very Large University Dept of Theoretical Ekphrasis	10.30.219.54 🗗	3.4.1	Password Login	
OneLINK HDMI Camera Extension		10.30.219.56 🗗	1.2.1	Password Login	
Robo SHOT 12E Camera		10.30.219.64 🗗	3.3.0	Password Login	
Robo SHOT 20 UHD Camera		10.30.219.65 🗗	2.4.0	Password Login	
OneLINK Bridge Camera Extension		10.30.219.66 🗗	1.5.1	Not set up	***

5. For each device that you need to work with, click the Not Set Up button and set the admin password on the device detail page that opens. Other people using the Vaddio Deployment Tool then have the option to log in, as shown for the other devices in the screen shot.

You can use the Vaddio Deployment Tool to access the web interface of any device in the device list, if it is set up and you have provided the admin password.

If the Vaddio Deployment Tool cannot discover the OneLINK device, you may need to <u>access the web</u> <u>interface manually</u>.

Accessing the Web Interface Manually

To get the IP address:

Ensure that the OneLINK device is connected to the network, and read the IP address from the display on the front.

The OneLINK device uses 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.

To access the web interface:

Enter the IP address or hostname in your browser's address bar. If you use the hostname, you may need to enter https:// as a prefix to keep the browser from treating it as a search query.

If the Device Is At 169.254.10.1

This is the device's default IP address. This means one of these things:

- The device is not connected to the network check the cable connected to the Network port.
- The network does not automatically assign IP addresses, and you need to configure the device for the network.

To communicate directly with the device, connect a cable from your computer's network port to the device's network port. You do not need to disconnect other devices.

After completing the initial device set-up, you will need to configure the device with a static IP address. Work with your network administrator.

Completing the Initial Device Set-up

Set the admin password and complete any other required tasks, such as accepting agreements. The full administrative interface opens when you finish.



Be sure you have a way to remember the admin password. We cannot reset it for you. If the password is lost, you may need to return the device for factory service.

Note

The web interface provides links to the company's standard privacy policy because the device's IP address is considered "personally identifiable information". This product does not record or save audio or video files, and it does not store any identifying information other than what you may choose to enter on the Room Labels page of the web interface.

You may also need to complete the initial device set-up and administrative configuration on the connected camera.

System Administration

Administrative tasks are on these pages of the web interface:

- Networking Network configuration, time zone and NTP server
- Security Passwords, guest access, other IT security-related settings
- Room Labels Helpful information to display in the web interface

Most of the screen shots in this manual are from the OneLINK Bridge, which includes features and web interface pages that the OneLINK HDMI does not have.

Configuring Access and Other Security Settings

SECURITY PAGE

The Account Passwords and Web Server areas of the Security page provide basic security for the web interface:

- Admin Password Required for access to the admin pages of the web interface and for serial API access (via Telnet session or RS-232 connection) to the device.
- Automatically Expire Idle Sessions Logs you out after 30 minutes of inactivity.
- Allow Telnet Access disabled by default.
- Allow Zeroconf DNS-SD Discovery allowed by default.
- Advanced Settings Enable HTTP Access (disabled by default) and Manage SSL Certificate.

Note

Consult your network security specialist before changing any of these settings. Seek explicit guidance concerning the SSL certificate.

Pro Tip

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

Ì	Pairing	Account Passwords
۱	Audio	admin Edit Password
►	Streaming	
Þ	Room Labels	Web Server Automatically Expire Idle Sessions
0	Networking	Hide Advanced Settings
۲		Advanced Web Server Settings
	Diagnostics	Your are currently accessing this site from a HTTPS connection. <u>Switch to HTTP</u> .
ø	System	HTTP Access Enabled
?	Help	Manage SSL Certificate
€	Logout	
		Telnet Server
		Z Allow Telnet Access
		Device Discovery
		Allow Zeroconf DNS-SD Discovery

Configuring a Static IP Address for a Device Currently at 169.254.10.1

NETWORKING PAGE

These settings are for the OneLINK device only. The camera is configured separately. *If the device is currently at an IP address other than 169.254.10.1, skip this section.*

By default, the device is set to DHCP, and will receive an IP address automatically if your network assigns IP addresses. However, if no DHCP server is available to automatically assign an address, the device uses its default IP address of 169.254.10.1. If you install more than one OneLINK device on a non-DHCP network, you must follow this procedure to prevent IP address conflicts.

Caution

Consult your IT department before editing network settings. Errors in network configuration can make the device inaccessible from the network. 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 device.

To access the device's Networking page after initial device setup:

- 1. Leave the device connected as for initial device setup.
- 2. Log in to the web interface, if you have not done so already.
- On the Networking page, set IP Address to Static; then enter the IP address, subnet mask, and gateway as directed by the network specialist. You will need to log in again after saving your changes.

The device is now ready to be connected to the network.

\bigcirc						
	Security	Network Configuration				
4-	Diagnostics	Hostname vaddio-onelink-bridge-80-30-DC-B1-68-F3				
ø	System	Network Interfaces Ethernet Port (eth0:WAN)				
?	Help	IP Address DHCP O Static				
€	Logout					
1		MAC Address	80:30:DC:B1:68:F3			
		IP Address	10.30.219.66			
		Subnet Mask	255.255.255.0			
		Gateway	10.30.219.1			
		DNS Server	205.171.2.25			
		Cancel Save		Unsaved		

Changing from an Automatically Assigned Address to a Static IP Address

NETWORKING PAGE

In a network that assigns IP addresses automatically, the device's IP address may change from time to time. Setting a static IP address will keep this from happening,

You may wish to change the IP addresses of other connected equipment to static addresses as well. The process is the same for all Vaddio products with web interfaces.

- 1. Consult your network specialist to determine what the IP address should be.
- 2. Set the IP address to Static. If this is the only change you make, you will not be logged out.
- 3. If necessary, enter the IP address, subnet mask, and gateway that your network specialist instructs you to use. You will need to browse to the new IP address and log in again.

Changing the Device's Hostname

NETWORKING PAGE

If your network supports hostname resolution, you may find it convenient to change the device's hostname to something easy to remember. This allows you to access the device by its hostname instead of its IP address – for example, by entering https://fred to open the web interface of the device named fred.

9		
	Security	Network Configuration
4-	Diagnostics	Hostname fred
₿	System	Network Interfaces Ethernet Port (eth0:WAN)
?	Help	IP Address

Work with your IT department to ensure that the hostname conforms to the organization's naming conventions.

Specifying Time Zone and NTP Server

NETWORKING PAGE

Using automatic NTP updating ensures that the timestamps in the device's diagnostic log are accurate. Specifying your time zone may make it easier to match logged events with other actions and external events.

- 1. To make the time zone and NTP server editable, enable Automatic NTP Updating.
- 2. Select the desired time zone from the list.
- 3. Optional: Specify the NTP server to use. If you are not sure about this, use the default.
- 4. Save your changes.
- 5. To update the system time immediately, select Refresh. Otherwise, the time will update the next time the device contacts the NTP server.



Adding Room Information to the Web Interface

ROOM LABELS PAGE

Enter information about the location of the equipment and the local IT or A/V help line. This information will be displayed on all pages of the web interface.

Note

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



Serial Control Settings

Enhanced VISCA mode is enabled by default. It provides enhanced support for some capabilities in HDBaseT cameras.

If the installation includes devices that use RS-232 connections, set the baud rate to match the camera's baud rate.

_					
Ô P	airing	Firmware	Serial Control		
, 🔶 в	oom Labels	Serial Control			
() N	letworking	Enhanced VISCA m Baud Rate	iode	9600	-
🛡 s	ecurity			9600	
- ∎	Diagnostics			19200	
ক 5				38400	
	lelp			57600	
	icip			115200	

Accessing the Connected Camera's Web Interface

The Pairing page shows whether the OneLINK connection goes to an EZCamera Interface Module (EZIM) or directly to an HDBaseT camera.

If the OneLINK device is directly connected to a camera, this page provides a link to the camera's web interface.

Pairing	OneLINK Connection	
Audio	Connection	🚿 Vaddio EZIM
Streaming		
P Room Labels		
A		
2 Pairing	OneLINK Connection	
Audio	Connection	💉 HDBaseT
	Camera	RoboSHOT 30 HDBT
Streaming	Host/IP Address	
P Room Labels	Camera Control Web Page	http://10.30.219.57
A		

You can access the camera's web interface using a Vaddio Device Controller (if the room includes one) regardless of the connection type.

If the OneLINK device connects to the camera through an EZIM and no Vaddio Device Controller is present, use the Vaddio Deployment Tool or refer to the camera's manual for information on discovering its IP address.
System Maintenance

This chapter covers the tasks on the System page:

- Exporting (backing up) and importing configuration data
- Updating firmware
- Rebooting

It also includes information that you may need if you contact Vaddio Technical Support.

Most of the screen shots in this manual are from the OneLINK Bridge, which includes features and web interface pages that the OneLINK HDMI does not have.

Exporting and Importing Configuration Data

SYSTEM PAGE, FIRMWARE TAB

You can export a device's configuration and save it as a backup. This allows you to quickly restore customized information if you need to <u>restore factory defaults</u> or replace the unit, or import a configuration to multiple devices.

The exported data includes settings that may be the same on several devices – the room label, NTP and time zone information.

Security and network settings are not included in the export file.

When importing a configuration to multiple devices:

- All the devices must be of the same model.
- All the devices must have compatible firmware versions installed.

To export a configuration:

To save a copy of the current configuration, select Export Data.

The configuration exports as a . dat file and downloads to your default file download location. The filename is the device's hostname followed by the . dat file extension.



To import a configuration:

- 1. Select Import. The Import Data box opens.
- 2. Select Choose File, and browse to the .dat file to be imported.
- 3. Select Begin Importing Data. When the import is complete, the device reboots.

Starting a Firmware Update

SYSTEM PAGE

Caution

Do not remove power or disconnect the OneLINK device while a firmware update in progress. Interrupting a firmware update can make the OneLINK device unusable.

- 1. Be sure you have downloaded the appropriate update file to your computer.
- 2. OPTIONAL: Select Export Data to save a copy of the OneLINK device's current configuration. You probably won't need it, but it could save time if you need to roll back the update.
- 3. 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.
- 4. Select Begin Firmware Update.

Pairing	Firmware DIP Switches General Serial Control
Audio	System Information
Streaming	System Version OneLINK Bridge 14.0 Commit 6204066e8882zb3eb4d2ebe56117f7d7495edf55
PRoom Labels	HDLink RX4.6.1*0.01-TX4.6.1*0.03
Networking	Video 1.07 USB 01.02.002
Security	Audio 0 1.06 Audio 1 1.01
Diagnostics	Firmware Update
System	Firmware File: Choose File OneLinkBrite-1.5.1.p7m
? Help	Begin Firmware Update
Logout	System Utilities Reboot Restore Factory Settings Export Data Import Data
<	Lapor Data impor Data

- 5. READ the information in the Confirm dialog box and be sure you understand it.
- 6. When you are ready to start the update, select Continue.
- 7. If you have any problems with the update, take screen shots if possible, and contact Vaddio technical support. We can help you better when we have the exact text of any warnings or error messages that you encounter. See <u>Contacting Vaddio Technical Support and Viewing Diagnostics</u>.

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.

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 the <u>Troubleshooting</u> section of this guide), go to the Help page for information on contacting Vaddio Technical Support.



Note

The web interface provides links to the company's standard privacy policy because the device's IP address is considered "personally identifiable information". This product does not record or save audio or video files, and it does not store any identifying information other than what you may choose to enter on the Room Labels page of the web interface.

Your Vaddio technical support representative may ask you to download and email the event log file available from the Diagnostics page. The log may include large numbers of internal events even when no errors have occurred. Rebooting generates over 100 log entries.

~		
Ċ	Pairing	Diagnostics
()	Audio	<pre>3ep 24 04:24:09 YouldhomeLink winge-08-39-0L-61-08-75 File /Vas/link/ptonic//jite-packages/ymg_mw_temperature/tem temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/temperature/tempera</pre>
▶	Streaming	Sep 24 04:24:09 vaddio-onelink-bridge-80-30-DC-B1-68-F3 File "/usr/lib/python2.7/site-packages/vng_mw_util/vdcp/iface.py", line 292, in read_packet Sep 24 04:24:09 vaddio-onelink-bridge-80-30-DC-B1-68-F3 VdcpReadError: Invalid checksum 0x2F1=0x2E
Þ	Room Labels	Sep 24 04:54:09 vaddio-onelink-bridge-80-30-DC-81-68-73 temperature-service: Read fpga temperature vng_mw_util.vdcp.iface.VdcpReadError: Invalid checksum 0x3 Sep 24 04:54:09 vaddio-onelink-bridge-80-30-DC-81-68-73 temperature-service: Traceback (most recent call last): Sep 24 04:54:09 vaddio-onelink-bridge-80-30-DC-81-68-73 File "/usr/lib/python2.7/site-packages/vng_mw_temperature/temperature_util.py", line 116, in read_tem
0	Networking	Sep 24 04:54:09 vaddio-onelink-bridge-80-30-DC-81-68-F3 File "/usr/lib/python2.7/site-packages/vng_mu_ttemperature/temperature_util.py", line 217, in _read_in Sep 24 04:54:09 vaddio-onelink-bridge-80-30-DC-81-68-F3 File "/usr/lib/python2.7/site-packages/vng_mu_util/vdcp/iface.py", line 64, in get_temper Sep 24 04:54:09 vaddio-onelink-bridge-80-30-DC-81-68-F3 File "/usr/lib/python2.7/site-packages/vng_mu_util/vdcp/iface.py", line 430, in send_request Sep 24 04:54:09 vaddio-onelink-bridge-80-30-DC-81-68-F3 File "/usr/lib/python2.7/site-packages/vng_mu_util/vdcp/iface.py", line 240, read-request
	Security	Sep 24 04:54:09 Vadulo-Unezink-bridge-80-30-DC-81-68-F3 VidcpRedBError: Invalid checksum 0x301=0x31 Sep 24 04:54:09 Vaddio-onelink-bridge-80-30-DC-81-68-F3 VidcpRedBError: Invalid checksum 0x301=0x31 Sep 24 06:51:39 Vaddio-onelink-bridge-80-30-DC-81-68-F3 temperature-service: Read fpga temperature vng mw util.vdcp.iface.VdcpRedError: Invalid checksum 0x3
*		Sep 24 06:06:39 vaddio-onelink-bridge-80-30-DC-B1-68-F3 temperature-service: Traceback (most recent call last): Sep 24 06:06:39 vaddio-onelink-bridge-80-30-DC-B1-68-F3 File "/usr/lib/python2.7/site-packages/vng_mw_temperature/temperature_util.py", line 116, in read_tem
ø	System	Sep 24 06:06:39 vaddio-onelink-bridge-80-30-0C-81-68-F3 File "/usr/lib/python2.7/site-packages/vng_mm_temperature/temperature.py", line 217, in _read_in Sep 24 06:06:39 vaddio-onelink-bridge-80-30-0C-81-68-F3 File "/usr/lib/python2.7/site-packages/vng_mm_util/vdcp/mixin_temperature.py", line 46, in get_temper Sep 24 06:06:39 vaddio-onelink-bridge-80-30-0C-81-68-F3 File "/usr/lib/python2.7/site-packages/vng_mm_util/vdcp/fiace.py", line 480, in send_request
?	Help	Sep 24 06:06:39 vaddio-onelink-bridge-80-30-DC-81-68-F3 File "/usr/lib/python2.7/site-packages/vng_mm_util/vdcp/iface.py", line 292, in read_packet Sep 24 06:06:39 vaddio-onelink-bridge-80-30-DC-81-68-F3 VdcpReadError: Invalid checksum 0x31=0x32
₽	Logout	Sep 24 06:19:09 vaddio-onelink-bridge-80-30-DC-81-68-F3 temperature-service: Read fpga temperature vng_mu_util.vdcp.iface.VdcpReadError: Invalid checksum 0x3 Sep 24 06:19:09 vaddio-onelink-bridge-80-30-DC-81-68-F3 temperature-service: Traceback (most recent call last): Sep 24 06:19:09 vaddio-onelink-bridge-80-30-DC-81-68-F3 File "/usr/lib/python2.7/site-packages/vng_mw_temperature/temperature_util.py", line 116, in read_tem Sep 24 06:19:09 vaddio-onelink-bridge-80-30-DC-81-68-F3 File "/usr/lib/python2.7/site-packages/vng_mw_temperature/temperature_util.py", line 116, in read_tem
<		Sep 24 %:19:09 Vadolo-onelink-bridge-88-30-CB-168-73 File "/USr/11D/python2.//Site-packages/vng_mw_ttmPerfature/temperfatu
		Download Refresh Clear Restore

Telnet Serial Command API

The Vaddio 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. The serial command API can be accessed via Telnet. Windows provides a built-in Telnet client; PuTTY can also be used.

Telnet connections use port 23.

Note

At the start of the session, you must log in using the admin account.

Note

By default, Telnet access is disabled in all firmware releases issued after mid-December 2019. Enable it on the Security page of the web interface.

Usage notes:

- The > character is the command prompt.
- Using a question mark as a command or command parameter will bring up a list of available commands, subcommands, or command parameters. For example, ? returns all top-level commands; system ? returns the valid subcommands for the system command; and system reboot ? returns the parameter available for the system reboot command.
- 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 manual refer to the OneLINK device. To control the connected camera, open a Telnet session to the camera's IP address and use the camera's Telnet commands, or connect a camera controller to the OneLINK device's RS-232 port and use the camera's VISCA-compatible RS-232 serial control API.

Password:	strol login: admin		
Last login: Wed	Mar 30 13:19:52 -0500 201	16 on /dev/pts/0.	
		кини	
× Vaddi	o Interactive Shell		
н			
WARNING:	Authorized Access Only		
		ююк	
Welcome admin			
> version			
Commit	25120ceaf446a084cf282702a	a214efba0e6eb0c3	
System Version OK	PCC Premier 1.1.0-RC3		
> network setti	nos oet		
Name	eth0:WAN		
MAC Address	eth0:WAN 00:1E:C0:8D:89:58		
IP Address	192.168.1.66		
Netmask	255.255.255.0		
	Disabled		
Cabauau	192.168.1.254		

Communication and Power Commands

These commands are available for managing power and sequences of actions:

- network settings get
- link power

network settings get

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

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

link power

Sets the camera's power connection on or off.

Note

The OneLINK device does not provide camera control. 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. Camera power remains off until the OneLINK device receives a link power on command or a reboot.	
	on	Powers on the camera connection.	
Examples	>link power off OK > Powers off the camera conne	-	

Maintenance and Troubleshooting Commands

The following commands are available for maintenance and troubleshooting:

- version
- network ping
- system reboot
- system factory-reset

version

Returns the current firmware version of the OneLINK device.

Synopsis	version	
Example	version	
	Returns current firm	ware version information in a form something like this:
	Commit HDLink System Version OK >	9116ca13deff8990088d5ef9fa40903c094da1bb RX4.6.1*0.05 OneLINK HDMI 1.2.1

network ping

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

Synopsis	network ping [count <count>] [size <s< th=""><th colspan="2">network ping [count <count>] [size <size>] <destination-ip></destination-ip></size></count></th></s<></count>	network ping [count <count>] [size <size>] <destination-ip></destination-ip></size></count>	
Options <count> The number of ECHO_REQUE send. Default is five packets.</count>		The number of ECHO_REQUEST packets to send. Default is five packets.	
	<size></size>	The size of each ECHO_REQUEST packet. Default is 56 bytes.	
	<destination-ip></destination-ip>	The IP address where the ECHO_REQUEST packets will be sent.	
Examples	<pre>>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=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 ></pre>		
	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>]</seconds>	
Options	<seconds></seconds>	The number of seconds to delay the reboot.
Examples	> system reboot OK > The system is going down for reboot C5	NOW! onelink-hdmi-D8-80-39-62-A7-
	Reboots the system immediately. >system reboot 30	
	Reboots the system in 30 seconds. The respo	onse 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 OneLINK device resets to factory defaults on the next 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	<pre>>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.</pre>	
	<pre>>system factory-reset on factory-reset (software): factory-reset (hardware): OK ></pre>	on off
	Enables factory reset upon rebood Note This command does not initiate a the next reboot.	factory reset. The factory reset takes place on

Telnet Information and Session Management Commands

The following commands are available for Telnet help and session management:

- help
- history
- exit

You can also use a question mark as a command or command parameter to display a list of available commands, subcommands, or command parameters. For example, ? returns all top-level commands; system ? returns the valid subcommands for the system command; and system reboot ? returns any parameters available for the system reboot command.

history

Returns the most recently issued commands from the current session.

Synopsis	history <limit></limit>			
Options	<limit></limit>	Integer value specifying the maximum number of commands to return.		
Examples	history			
	Displays the current command buf	Displays the current command buffer.		
	history 5			
	Sets the history command buffer to remember the last 5 unique entries.			
Additional	You can navigate the command history using the up and down arrow keys.			
information	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)			

help

Displays an overview of the CLI syntax.

Synopsis	help
Example	help
	<pre>Intert 10.10.24.14</pre>

exit

Ends the command session and closes the socket.

Synopsis	exit
Example	exit

Troubleshooting

When the equipment doesn't behave as you expect, check for error indications and messages first.

Check the camera:

If the problem might be with the Vaddio camera connected to the OneLINK device, check the color of the camera's status light before you do anything else – but keep in mind that the camera's status light can be turned off in the administrative interface.

- Purple booting or in standby (low power) mode.
- Blue normal operation.
- Red Tally function; the camera is on-air.
- Blinking blue video is muted.
- Blinking red video is muted, or fault condition.
- Yellow firmware update in progress.

Check the OneLINK device:

Now check the OneLINK device's web interface for error messages. 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 these tables to determine whether it's time to call Vaddio Technical Support.

Power Issues

What is it doing?	Possible causes	Check and correct
Nothing. The front panel display is off. The camera is not receiving power.	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.
	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 not receiving power but the OneLINK device has	The camera is not connected to the EZIM (if an EZIM is used).	Plug the EZIM into the camera.
power.	At least one of the cables is bad.	Replace the bad cable.
Camera does not finish booting or does not go to the ready state.	Camera firmware may be out of date.	Check the camera's firmware version; update the camera firmware if necessary.
	Possible cable issue.	Test with shorter cables. Try re-terminating the cable.

Communication Issues

What is it doing?	Possible causes	Check and correct
The camera is on, but its web interface is not available.	A cable is not connected.	Make sure all network and OneLINK cables are connected.
	The network or OneLINK cable 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.
No communication with camera	Ethernet or RS-232 cable is connected to the wrong port at one end.	Check the cables from the EZIM or OneLINK device to the camera.
	The wrong cable is connected (standard Cat-5e cable where a custom Cisco cable is needed, or vice- versa) or the custom cable is connected the wrong direction.	Be sure you are using the right cable. If using a custom Cisco cable, be sure it is connected according to the instructions on its labels.
	The camera is not compatible with the OneLINK device.	Be sure you are using your OneLINK device with a compatible camera.

Video Issues

What is it doing?	Possible causes	Check and correct
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 display, then a better grade of cable (Cat-6 or Cat-7) may correct the problem.
Video drops out repeatedly.	If this happens 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.
	Possible cable inductance issue.	Do not store excess cable by coiling it neatly. Best practice: Build cables to the required length.

Restoring Factory Defaults

This operation returns the device to its original state.

- Any settings you have customized will be lost.
- Anyone who is logged in to the web interface is logged out.
- You will need to do the initial device setup again to be able to communicate with the device.

To save and restore your customized settings, export the device configuration before restoring factory defaults. See <u>Exporting and Importing Configuration Data</u>. Then import the configuration after completing the initial device configuration. Time zone and room labels are preserved in the configuration file; security and network settings are not.

You can restore factory defaults from the web interface (System page, Firmware tab) or by sending the Telnet command system factory-reset on followed by system reboot. If you are not able to log in to the device, contact Vaddio Technical Support.

If the password is unknown, contact Vaddio Technical support to return the unit for service.

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
- In a plasma chamber
- Dry environments with an excess of static discharge

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

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