Configuration and Administration Guide for the

DocCAM 20 HDBT
Ceiling-Mounted Document Camera

Document 411-0017-32 Rev A
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Contents

Overview

This guide describes installation and related information for the DocCAM 20 HDBTceiling-mounted document camera:

- Camera only, North America – 999-9968-000
- Camera only, Europe/UK – 999-9968-001
- Camera with OneLINK® HDMI, North America – 999-9968-200
- Camera with OneLINK HDMI, Europe/UK – 999-9968-201
- Camera with OneLINK Bridge, North America – 999-9968-300
- Camera with OneLINK Bridge, Europe/UK – 999-9968-301

What's in this Guide

This guide covers:
- Unpacking the camera
- Tips for a successful installation
- Information on mounting and connecting the camera
- Camera power-on

Complete product information is available in the **Integrator's Complete Guide to the DocCAM 20 HDBT Ceiling-Mounted Document Camera**.

Download manuals, dimensional drawings, and other information from www.vaddio.com/support.

Features

- Exmor® 1/2.8 type, high-speed, low-noise image sensor for 2.38 megapixels total, full HD (native 1080p/60)
- 20x optical zoom with horizontal field of view from 60° (wide end) to 3.3° (tele end)
- Low-power laser pointer for centering
- Superior low-light performance (0.4 Lux)
- Web interface for remote administration and operation, integration-ready Telnet and serial RS-232 control, presenter-friendly IR remote control
- Use with a OneLINK device for power, video, and control:
  - OneLINK HDMI – uncompressed HDMI video, bidirectional RS-232 connectivity for camera control via third-party equipment, passes IP stream from the camera
  - OneLINK Bridge – OneLINK HDMI capabiliities plus uncompressed USB 3.0 streaming, HD-SDI output, and audio routed up to the camera and injected into the IP stream

A Quick Look at the Camera

The DocCAM 20 HDBT ceiling-mounted document camera is designed for recessed mounting. The features of interest during installation are not visible after the installation is complete.

Caution
This product contains a 5 mw, 650 nm red laser pointer which produces visible laser radiation. Avoid direct eye exposure. Do not look at the laser aperture during camera operation.

Caution
Laser controls are available to remote operators using the web interface. Keep your eyes out of the beam path when the camera is connected to power.

Features of Interest During Operation

- **Camera lens** – 20x optical zoom lens for crisp detail.
- **Laser pointer** – Shows where the camera image is centered. Use the remote to turn on the laser pointer.
- **IR window** – Sensors in the camera face receive signals from the remote. Point the remote toward the camera; precision is not necessary.
- **Status light** – The multicolored LED indicates the camera's current state.

In a typical installation, only the items inside the bezel ring are visible.

Status Light

The light in the camera's face indicates its current state.
- **Blue:** Normal operation (blinks off momentarily when the camera receives a command from the remote)
- **Purple:** In standby mode or booting
- **Yellow:** Firmware update in progress

Caution
This product contains a 5 mw, 650 nm red laser pointer which produces visible laser radiation. Avoid direct eye exposure. Do not look at the laser aperture during camera operation.
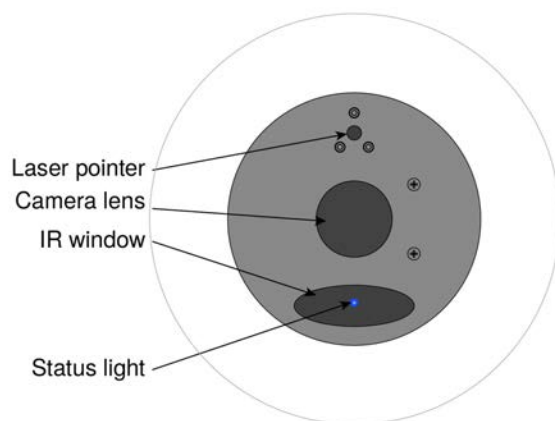
Caution
Laser controls are available to remote operators using the web interface. Keep your eyes out of the beam path when the camera is connected to power.

Using the IR Remote

The IR remote provides basic camera control for end users.

IR Remote Cheat Sheet

What do you need to do?	Button(s)
Power on or standby	**Power** (green button at top right)
Select the camera to control (if this remote controls more than one)	**Camera Select** buttons 1 through 3 (second row of buttons)
Discover the camera's IP address	**Data Screen** button (top left) – press and hold for 3 seconds.
Center the camera's subject	**Laser** buttons – The laser pointer is aligned at the factory to point slightly above the center of the camera's subject.
Move the camera to a zoom preset	**Position Preset** buttons 1 through 6 (bottom two rows)
Focus the camera	**Auto Focus** button (near arrow buttons) **Manual Focus** buttons **Near** and **Far** (below Zoom Speed buttons)
Control zoom speed	**Zoom Speed** buttons - Slow **T** and **W**, Fast **T** and **W** for telephoto and wide-angle modes (light gray)
Adjust for excess light behind the camera's subject	**Back Light** button (top center)

IR Remote Details

The Vaddio remote provides the following functions:

Power – Switch the selected camera on or off.

Power indicator – Lights momentarily when you press a button.

Back Light – Use or turn off Back Light Compensation.

Data Screen – Display the camera's IP address and MAC address. Press this button again to dismiss the display.

Camera Select – In multi-camera installations, selects the camera to be controlled. See Camera Settings for information on configuring the camera as camera 1, 2, or 3.

Home button – Returns the camera to its home zoom level.

Laser On – Toggles the laser pointer on and off.

Laser MOM – Turns on the laser pointer momentarily, and forbids it to go out with its friends if it doesn't turn off again after 5 seconds.

Caution
This product contains a 5 mw, 650 nm red laser pointer which produces visible laser radiation. Avoid direct eye exposure. Do not look at the laser aperture during camera operation.

Caution
Laser controls are available to remote operators using the web interface. Keep your eyes out of the beam path when the camera is connected to power.

Auto Focus – Switch the camera to Auto-Focus mode.

Zoom Speed – Select Slow or Fast movements for telephoto and wide-angle shots.
- **T** (slow and fast) – Telephoto
- **W** (slow and fast) – Wide-angle

Manual Focus – Switch the camera to Manual Focus mode.

Near (-) adjustment – Moves the focus nearer when in manual focus mode.

Far (+) adjustment – Moves the focus farther when in manual focus mode.

Preset – Save the camera's current zoom level as one of the numbered presets.

Reset – Clear a saved preset.

Position Presets 1 through 6 – Move the camera to a predefined zoom level, or specify the preset to save or clear.

Storing a Preset Using the Remote

Position the camera. Then hold down the Preset button and press one of the numbered preset buttons.

Clearing a Preset Using the Remote

Press and hold the Reset button while pressing the preset number you want to clear.

Web Interface

The camera provides a web interface to allow control via a network connection, using a browser. In addition to the user-level camera control that the IR remote offers, the web interface allows password-protected administrative access for network and streaming configuration, password management, color and lighting adjustments, installing firmware updates, and other tasks.

You will need to know the camera's IP address to use the web interface. If the LAN has a DHCP server, the camera will get its IP address, gateway and routing information automatically and you will be able to browse to it. If not, you will need to configure the camera to use a static IP address.

Getting the Camera's IP Address

You will need to be able to view the camera's video output on an HDMI display.

1. Press the Data Screen button on the remote. The room display presents the camera's IP address and MAC address.
2. Press the Data Screen button again to dismiss the information.

If the address is 169.254.1.1, the camera is using its default IP address and you will need to configure it for your network. You can configure the camera's static IP address either through the network or from a computer connected directly to its Ethernet port. You may need a crossover cable.

Note
For static addressing, work with your IT department to determine the correct IP address, subnet mask, and gateway information.

Accessing 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 `http://` as a prefix to keep the browser from treating it as a search query.

Browser Support

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

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.

Administrative Access

If you are on the Camera Control screen and no other screens are available, you're logged in at the user level, or guest access is enabled and you're not logged on at all. Use the Admin button to open the login screen.

When you log in as Admin, all the admin menu buttons appear on the left side of the screen. In addition to Camera Controls, you also have access to:

- Camera Settings – Additional control over camera behavior related to camera movement and color management.
- Streaming – Set up IP (H.264) streaming.
- Room Labels – Add helpful information the web interface screens, such as conference room name and the in-house number for AV assistance.
- Networking – Ethernet configuration.
- Security – Set passwords and manage guest access.
- Diagnostics – Access to logs for troubleshooting.
- System – Reboot, restore defaults, view switch settings, and run updates.
- Help – Tech support contact information.

Compact Menu View

By default, the navigation buttons in the administrative interface display an icon and a text label. You can also select the compact view of the menu buttons along with the standard view. The button at the bottom of the menu toggles between the two views.
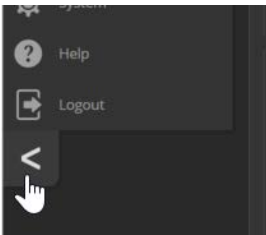
Web Interface Cheat Sheet

Where to find the camera controls you need right now.

What do you need?	Go to this screen
Camera operation ■ Zoom the camera ■ Set the speed for zoom motions ■ Focus the camera (Focus button reveals the focus control) ■ Zoom to a camera preset ■ Put the camera into or bring it out of standby mode	Camera
Camera behavior ■ Set or clear presets ■ Select the appropriate lighting adjustments (CCU Scenes section)	Camera
Camera behavior ■ Define custom lighting adjustments (CCU scenes) ■ Specify whether to use automated adjustments (auto-iris, auto white balance, backlight compensation)	Camera
Camera adjustments ■ Color settings (Iris, iris gain, red gain, blue gain, detail, chroma, gamma) ■ Store and label custom color settings as CCU scenes	Camera
Access management ■ Guest access ■ Account passwords ■ Idle session time-out	Security
IP streaming settings ■ Quality ■ Resolution ■ Frame rate ■ Streaming URL and path	Streaming
IP settings ■ Hostname ■ DHCP or static addressing ■ Static: IP address, subnet mask, gateway	Networking
Access to the camera's soft DIP switch settings	System
Time zone and NTP server (source for system time/date)	Networking
Diagnostic logs	Diagnostics
Information about the camera location	Room Labels
Helpdesk phone number for end users	Room Labels
Vaddio Technical Support contact information	Help

System Administration

Administrative tasks are on these pages of the web interface:
- Networking – Ethernet configuration.
- Streaming – IP (H.264) streaming.
- Security – Set passwords and manage guest access.
- Room Labels – Display helpful information in the web interface.
- System – Controls to reboot, reset to defaults, and run firmware updates, access to soft DIP switches.
- Help – Tech support contact information and a link to more product information.
- Diagnostics – Logs to help Vaddio Technical Support troubleshoot issues.

Configuring Network Settings

NETWORKING PAGE

DHCP is the default setting, but the camera will use the default address of 169.254.1.1 if no DHCP server is available.

You will only be able to enter the IP address, subnet mask, and gateway if you set IP Address to Static.

Caution

Consult your IT department before changing network settings. Errors in network configuration can make the camera and its IP stream 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 camera.
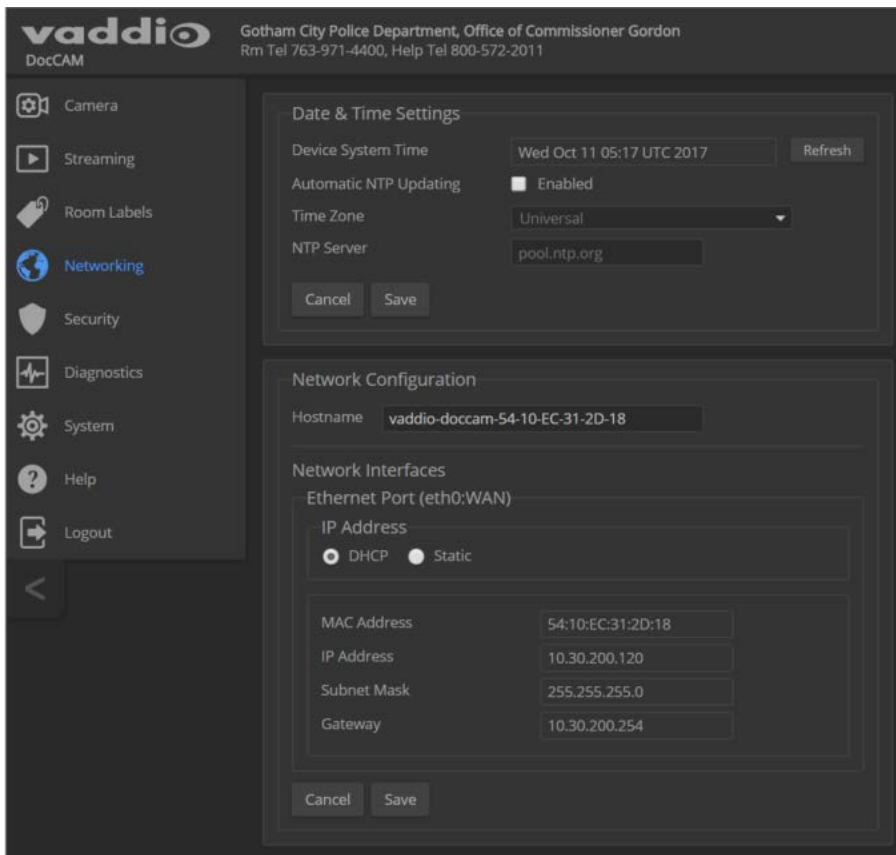
Specifying Time Zone and NTP Server

1. To make the time zone and NTP server editable, 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.

You may need to refresh the system time display.
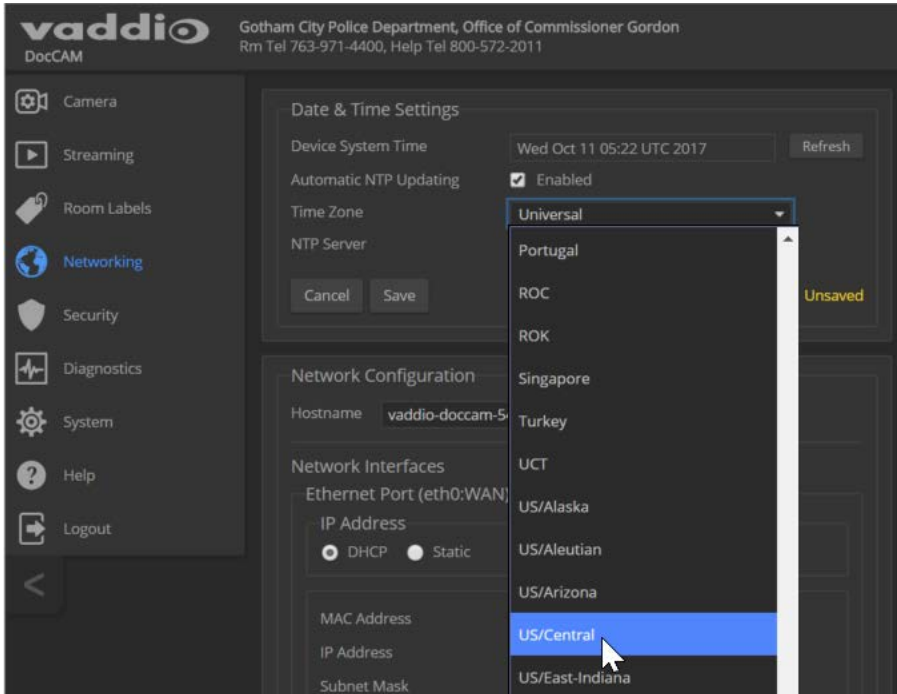
Managing Access and Passwords

SECURITY PAGE

Things you can do on this page:
- Allow people to access the Camera screen without logging on (Allow Guest Access)
- Set whether inactive sessions log off automatically or not (Automatically Expire Idle Sessions)
- Change the password for the admin account
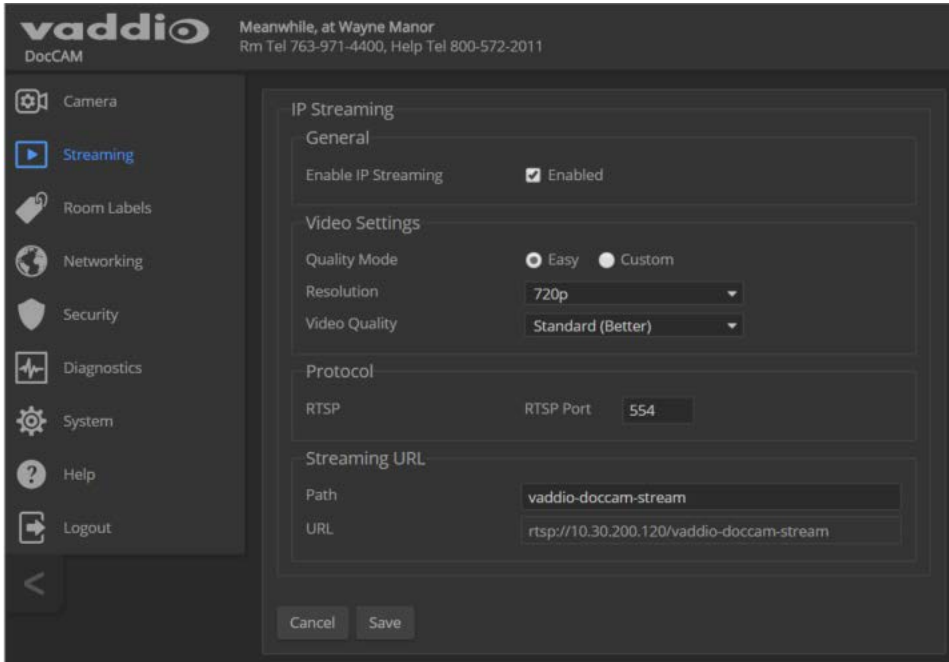- Change the password for the user account

Note
For best security, Vaddio strongly recommends changing the user and admin passwords from the default. *Using the default passwords leaves the product vulnerable to tampering.*
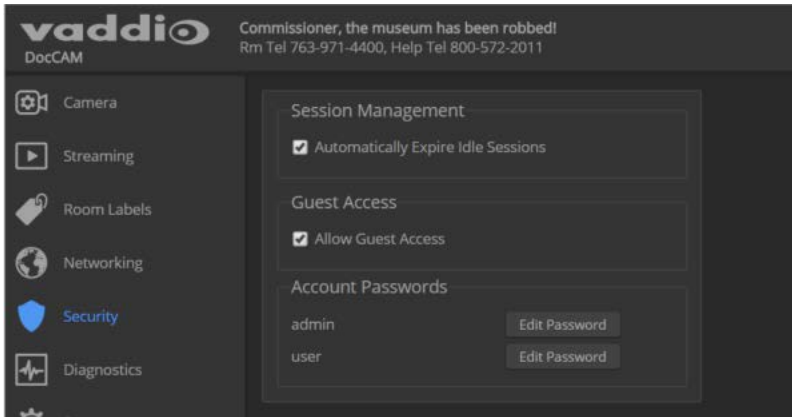
Configuring IP Streaming

STREAMING PAGE

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

Editing IP Streaming Settings

STREAMING PAGE

Note
The web interface presents all the possible streaming resolutions values, but the IP stream cannot be higher than the value set with the video resolution switch on the back of the camera. (See Video Resolution for information on setting the switch.) If the selected value is out of range, the camera will automatically adjust the streaming resolution.

If you are not sure about these settings, start with the defaults.

1. Select the video Quality Mode: Easy or Custom. Easy automatically sets the recommended frame rate; Custom provides additional control.
2. Select the desired IP streaming resolution.
3. Easy quality mode only: Select Video Quality.
4. Custom quality mode only: Select the desired IP streaming frame rate.
5. Custom quality mode only: Select Constant or Variable bit rate.
6. Custom quality mode, Variable bit rate only: Set the Quality (Quantization) slider.
7. Save your changes.
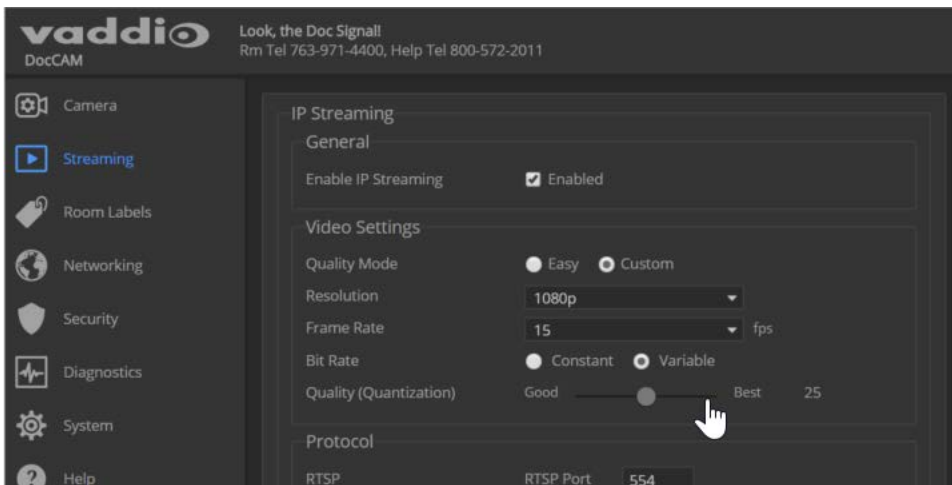
Protocol and Streaming URL

STREAMING PAGE

The camera uses the RTSP protocol for H.264 streaming. Resolutions range from 1080p down to CIF; frame rates are 60/30/25/15.

RTSP port: Vaddio strongly recommends using the default RTSP port number.

Streaming URL: If necessary, edit the path name to change the portion of the streaming URL that appears after the IP address.

## Adding Room Information to the Web Interface

ROOM LABELS PAGE

To display your company name, conference room name and phone number, and the number for meeting hosts to call for in-house A/V support, enter this information on the Room Labels page.
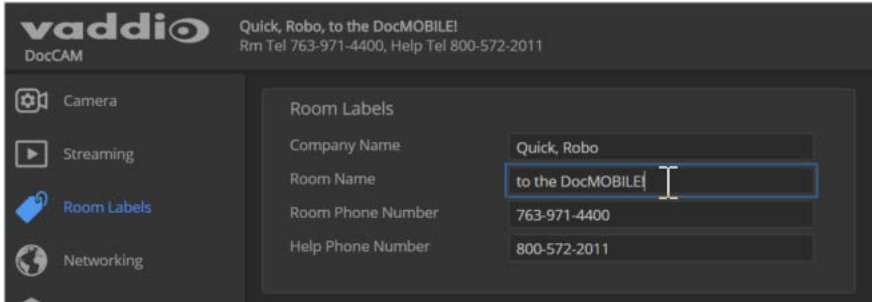
Rebooting the Camera

SYSTEM PAGE, FIRMWARE TAB

This can help if the camera stops responding as you expect. In the System Utilities section, click Reboot.
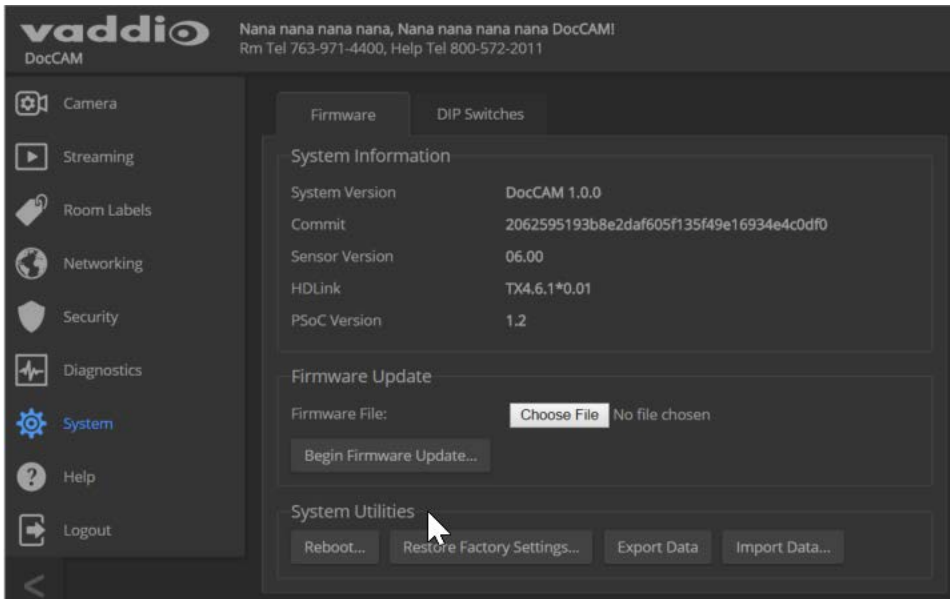
Saving (Exporting) or Restoring (Importing) a Configuration

SYSTEM PAGE, FIRMWARE TAB

If you need to configure several cameras the same way, you can configure the first one, export its configuration (Export Data button), and then import the configuration to the other cameras (Import Data button in each camera's web interface). The export downloads to your computer as a `.dat` file. The filename is the camera's hostname.

Certain information is not included in the configuration, such as hostname and passwords.

Note
The camera cannot import a .dat file that was exported from a camera using a different version of software.

Restoring Factory Settings

SYSTEM PAGE, FIRMWARE TAB

Sometimes it's easiest to just start over. To restore the original factory settings…click Restore Factory Settings. This will overwrite anything you have customized, such as custom CCU scenes and presets.

Installing a Firmware Update

SYSTEM PAGE, FIRMWARE TAB

1. Locate and download the firmware and its release notes.
2. Select Choose File, then browse to the firmware that you downloaded and select it. The filename ends with `.p7m`.
3. Click Begin Firmware Update.
4. READ the information in the Confirm dialog box and be sure you understand it. It may seem boring, but it could save you some time and aggravation.
5. When you are ready to start the update, click Continue. A progress message box opens and the indicator light on the front of the camera turns yellow to show the firmware update is in progress. If the update process presents warnings or error messages, read them carefully.

The process may take a few minutes.

Caution
Ensure that the camera stays powered on and connected to the network during the update. Interrupting the update could make the camera unusable.

The camera reboots when the update is complete.
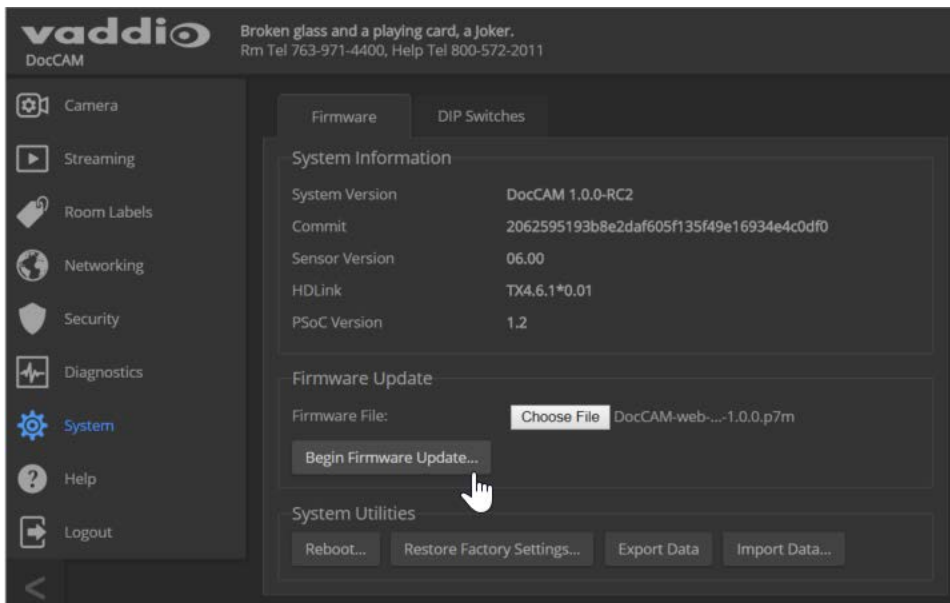
Contacting Vaddio Technical Support

HELP PAGE

If you can't resolve an issue using your troubleshooting skills (or the Troubleshooting table in this manual), we are here to help.
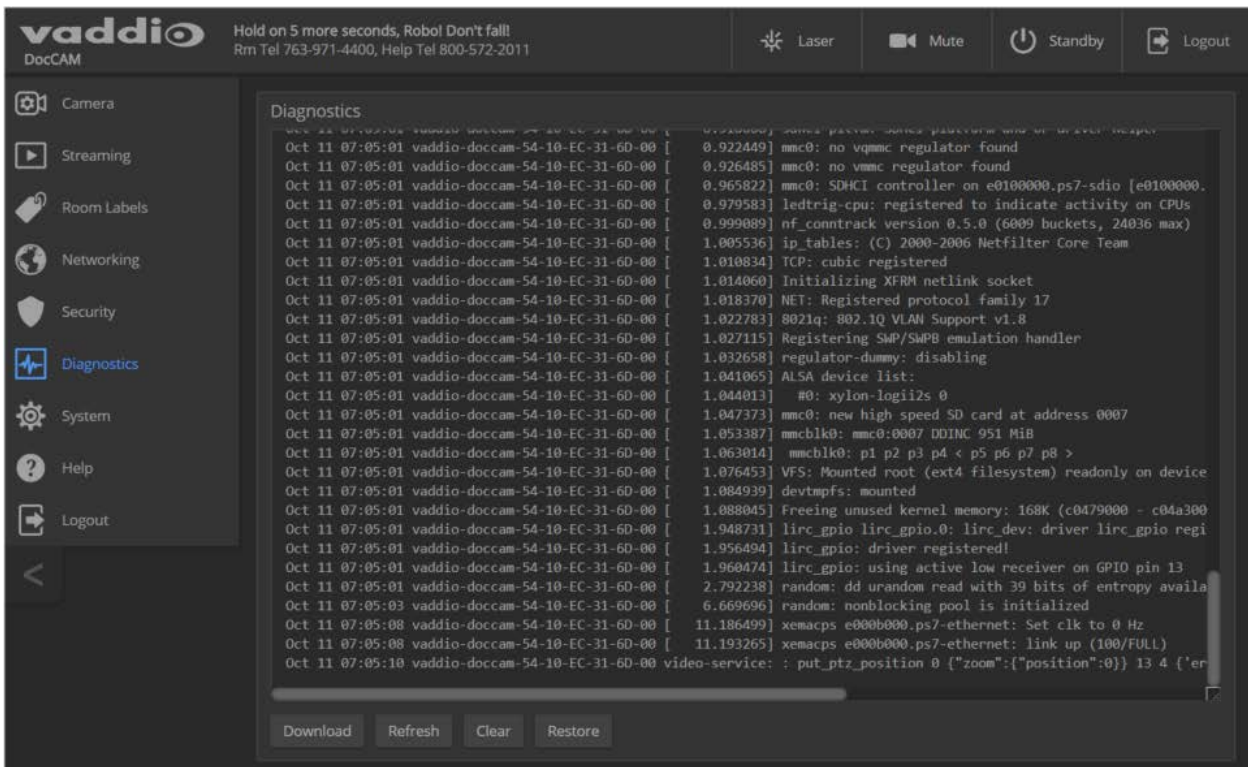
You'll find information for contacting Vaddio Technical Support on the Help page.

Accessing the Diagnostic Logs

DIAGNOSTICS PAGE

If you encounter a problem that you can't solve, your Vaddio technical support representative may ask you to download and email the log file available from the Diagnostics page.

Configuring Camera Behavior

Camera configuration tasks are on the DIP Switches tab of the System page. These tasks include:

- Setting video resolution
- Setting the way the camera responds to the remote
- Setting the baud rate for RS-232 control
- Enabling or disabling the laser pointer
- Enabling or disabling the status light
- Setting the HDMI color space

All these settings are on DIP Switches tab of the System page.

Setting Video Output Resolution

SYSTEM PAGE, DIP SWITCHES TAB

The video output resolution set on the System page determines the resolution available on the video output (s) of the connected OneLINK device or HDBaseT-capable third-party equipment. It also determines the maximum resolution available for the IP stream.

To change the video output resolution:

Select the resolution and frame rate from the table. The arrow on the soft rotary switch points at the character corresponding to your selection.

Other Switch Settings

SYSTEM PAGE, DIP SWITCHES TAB

Set the remaining aspects of camera configuration using the soft DIP switches.

To set how the camera responds to the remote:

By default, the camera responds to the remote as camera 1. To change this, set the two leftmost soft DIP switches (switch 1 and switch 2):

- Switch 1 and switch 2 up: Camera 1
- Switch 1 down, switch 2 up: Camera 2
- Switch 1 and switch 2 down: Camera 3

To enable or disable the laser pointer:

By default, the laser pointer is enabled. To disable it, use the soft DIP switch for Laser Enabled/Laser Disabled.

To change the baud rate for RS-232 communication:

By default, the camera is set to 9600 baud. To change to 38400 baud, use the soft DIP switch for baud rate.

To enable or disable the indicator light:

By default, the indicator light is on. Use the LED On/LED Off soft DIP switch to change the state of the indicator light.

To set the LED color scheme:

The LED color scheme is set to UC by default, to follow the standard for conferencing cameras. The UC/Pro AV soft DIP switch allows you to change it to the pro A/V (broadcast) color scheme; but at this time, they are functionally identical on this camera.

To set the HDMI color space:

By default, the HDMI color space is YCbCr; use the soft DIP switch for HDMI Color Space if you need to change it to sRGB.

## Setting the Home Zoom Level and Other Zoom Presets

CAMERA PAGE

You can define a default zoom level – the Home preset. The camera returns to this level on powering up from standby or following a reboot. You can also define other zoom presets, for views that you will want to use repeatedly.

All zoom presets may include color and lighting information as well as zoom level.

Note
The Store Preset dialog does not show which presets have already been defined. Storing a preset overwrites any information that was previously associated with that preset.
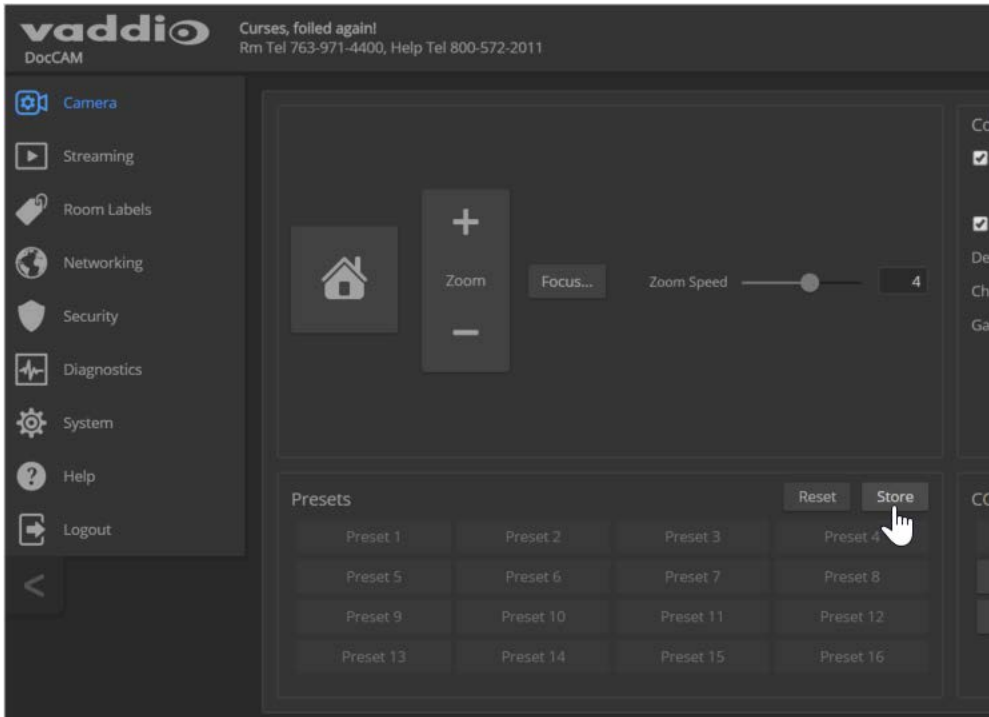
To set a zoom preset:

1. Set up the shot.
2. Optional: Adjust the color settings as needed.
3. Note which presets have not been defined.
4. In the Presets area, select Store.
5. Select the preset number that you want to store.
6. Optional: Check the "Store with current color settings" box. This is super-helpful if you adjusted the color settings in step 2.
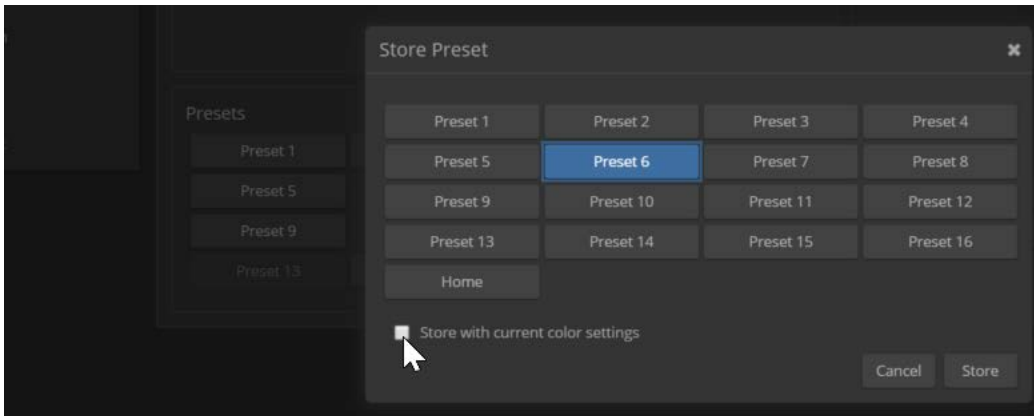
To rename a zoom preset:

Right-click the preset and enter a name in the dialog box that opens.

Clearing a Zoom Preset

CAMERA PAGE

Storing a zoom preset automatically overwrites any information previously associated with that preset. To clear a preset without storing new information, select Reset in the Presets area. Then select the preset to be cleared, and select Reset in the Reset Presets dialog box.

Adjusting for the Lighting in the Room

The camera's default settings include the Auto CCU scene, Auto Iris, and Auto White balance, to allow the camera to do most of the lighting adjustments on its own. Our technical experts (specifically Scott) have pre-loaded some additional adjustments for common lighting scenarios as factory-defined CCU scenes – Incandescent Hi, Incandescent Lo, Fluorescent Hi, Fluorescent Lo, and Outdoor.
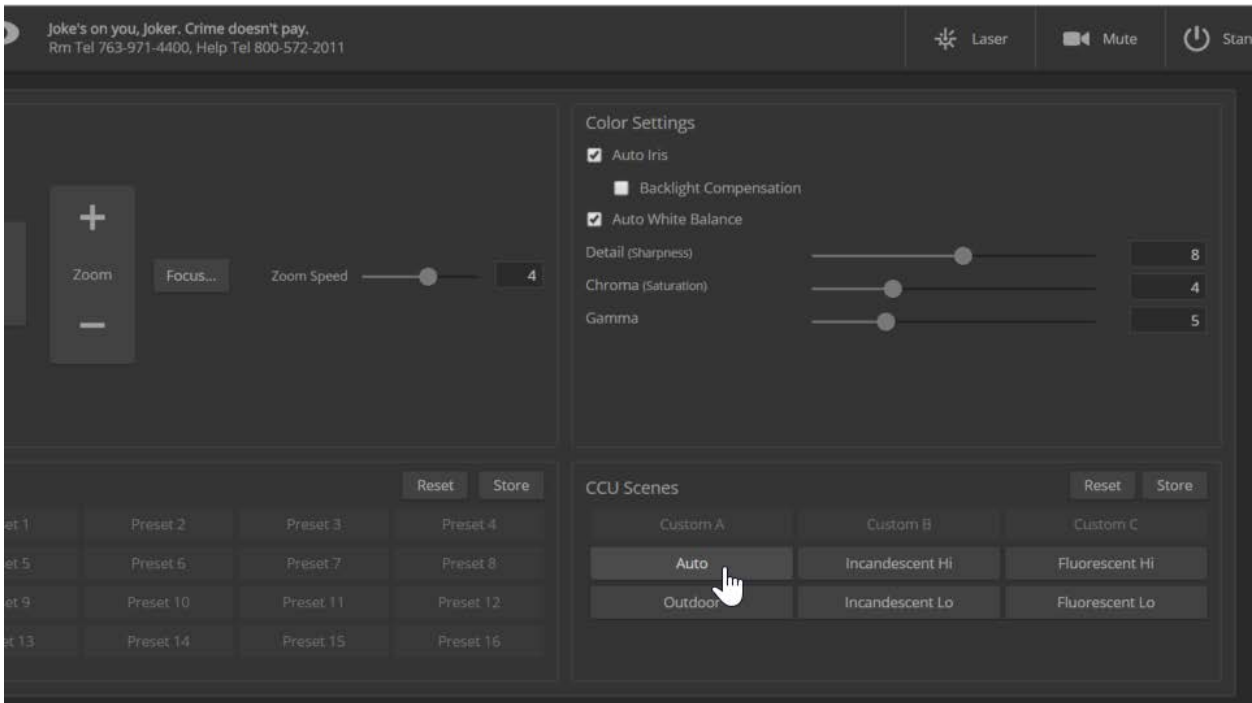
If the Auto settings don't yield the results you want, pick the CCU scene button with the label that best describes the lighting in the room. Then fine-tune the lighting and color adjustments as needed using the Color Settings:

- Auto Iris manages light level adjustments automatically. Clear this checkbox to adjust iris and gain manually.
- Auto White Balance manages color automatically. Clear this checkbox to adjust red gain and blue gain manually.
- If there is bright light behind the main subject of the shot, check the box for Back Light Compensation. This setting is only available if you are using Auto Iris.
- To adjust the intensity of the color, use the Chroma slider.
- To adjust the contrast between light and dark areas, use the Gamma slider.
- To adjust the image sharpness, use the Detail slider.

Note
If the video looks grainy or "noisy," try a lower Detail setting. As in conversation, too much detail is bad.

If you make a change that you don't like, you can clear all your changes by selecting a CCU scene.

If you will want to use your color and lighting adjustments again (for example, after changing to a different zoom preset), save them as a custom CCU scene.

If you do not save your adjustments as a custom CCU scene, they will no longer be available after any action that accesses or affects color and lighting adjustments. These actions include:

- Rebooting the camera
- Putting the camera in standby mode
- Selecting a zoom preset that has color and lighting adjustments associated with it

To save a custom CCU scene:

1. Adjust color and lighting. When the scene looks the way you want it to, click Store CCU Scene.

2. In the Store CCU Scene dialog box, select which custom scene to store (Custom A, B, or C).

3. Save your custom scene.
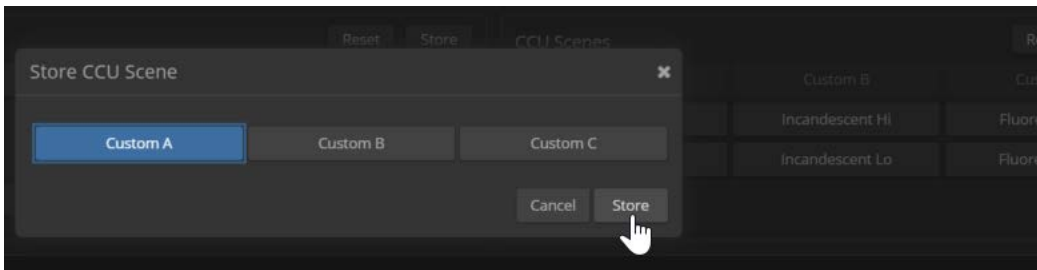
To rename a custom CCU scene:

Right-click a CCU scene label and make the change in the dialog box that opens.

Operating the Camera from the Web Interface

Operator controls include:

- Home and other zoom presets – If defined, Home returns the camera to its default zoom level. Other zoom levels may also be available as presets. All presets, including Home, may include lighting and color adjustments.
- Manual zoom – Zoom in (+) or zoom out (-) using the Zoom buttons.
- Scenes – If defined, color and lighting adjustments are available as scenes.
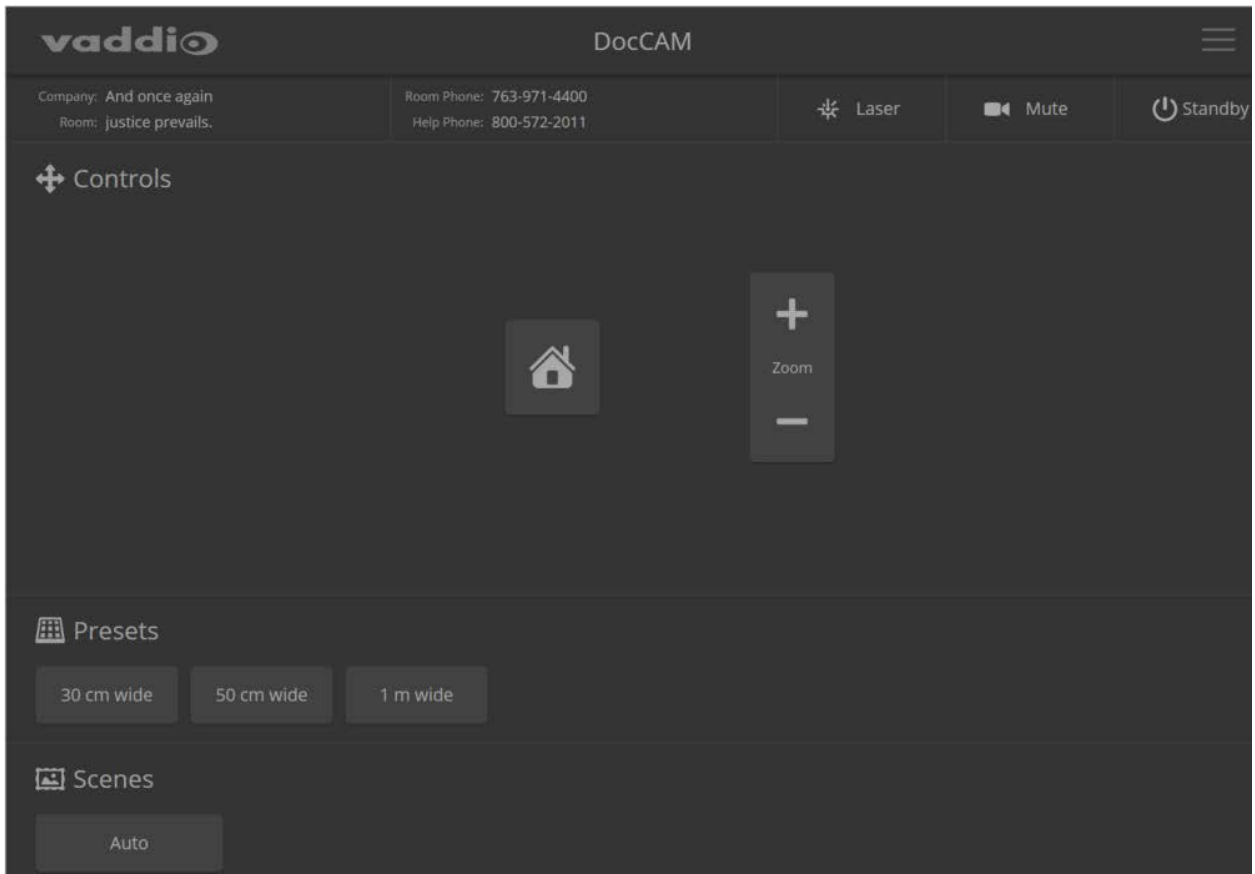
Troubleshooting and Care

Stuff happens – we get it. Use this information to determine whether it's time to call Vaddio Technical Support.

Check the Status Light First

When the camera doesn't behave as you expect, check the indicator light before you do anything else.
- **Blue:** Normal operation (blinks once when the camera receives a command from the remote)
- **Purple:** In standby mode or booting
- **Yellow:** Firmware update in progress
- **Red:** On-air tally

Identify the Issue

What is it doing?	Possible causes	Check and correct
Nothing. The status light is off, there is no video, and the camera does not respond to the laser pointer controls.	The camera is not receiving power.	Is the camera's power source (PoE+ injector or OneLINK device) receiving power? Is the camera's cable connected to the power source? If both are true, the camera cable or the camera is bad.
	The camera's status light is turned off and the camera is in standby mode.	Point the remote toward the camera and press the Power button.
	The camera's status light is turned off and the remote is not using the same IR channel as the camera.	Push the Camera Select 1 button on the remote. Try the other Camera Select buttons if necessary.
	The camera's status light is off and the camera is confused.	Reboot or power-cycle the camera.
The camera never finishes initializing and the light is purple.	The camera is not receiving enough power. Is a PoE power injector connected?	Use PoE**+** instead. PoE does not deliver enough power.
The camera does not respond to the remote and the light is yellow.	A firmware update is in progress.	Wait a few minutes, and try again when the light turns blue.
The camera does not respond to the remote, but the web interface is available	The remote and the camera are not using the same IR channel.	Press the **Camera Select 1** button on the remote. Try the other Camera Select buttons if necessary.
	IR is switched off (Soft DIP switch 3 down)	Turn IR on (System page, DIP Switches tab). See Other Switch Settings for more information.
	The remote's batteries are dead.	Put new batteries in the remote.

What is it doing?	Possible causes	Check and correct
The camera responds to the remote but the web interface is not available.	The camera is not using the IP address you browsed to.	Press the Data Screen button on the remote to see camera information.
The camera's web UI is available but the camera does not respond to commands sent via RS-232 connection to the OneLINK device.	The RS-232 cable to the OneLINK device is not connected, or is bad.	Connect a known good cable.
	The camera's baud rate setting doesn't match the settings on the controlling device.	Check the baud rate setting at both ends to be sure they match. The camera's baud rate setting is available on the System page in the web UI.
No H.264 video stream.	Streaming is not enabled.	Enable streaming: Streaming page in the web interface.
The laser pointer is off-center in the image area.	The laser pointer is out of alignment.	Contact Vaddio Technical Support.

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
- Lunar environments not pressurized and climate-controlled to Earth-normal
- 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

Compliance testing was performed to the following regulations:

FCC Part 15 (15.107, 15.109), Subpart B	Class A
ICES-003, Issue 54: 2012	Class A
EMC Directive 2014/30/EU	Class A
EN 55032: 2015	Class A
EN 55024: November 2010	Class A
KN24 2008 (CISPR 24: 1997 + A1: 2000 + A2: 2002)	Class A
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

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

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: CE

EMC Directive 2014/30/EU

EN 55032: 2015	Conducted and Radiated Emissions
EN 55024: November 2010	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 + Am 2: 2013	Safety
EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013	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.

Photo Credits

This guide may include some or all of these photos.

European Space Agency (ESA) astronaut Samantha Cristoforetti, a Flight Engineer with Expedition 42, photographs the Earth through a window in the Cupola on the International Space Station
By NASA - https://blogs.nasa.gov/ISS_Science_Blog/2015/03/06/women-in-space-part-two-whats-gender-got-to-do-with-it/, Public Domain, https://commons.wikimedia.org/w/index.php?curid=38834990

Carl Sagan, Bruce Murray, Louis Friedman (founders) and Harry Ashmore (advisor), on the occasion of signing the papers formally incorporating The Planetary Society
By credit NASA JPL - JPL, Public Domain, https://commons.wikimedia.org/w/index.php?curid=1180927

Main Control Room / Mission Control Room of ESA at the European Space Operations Centre (ESOC) in Darmstadt, Germany
By European Space Agency - ESOC flickr, Credit: ESA - Jürgen Mai, CC BY-SA 3.0-igo, https://commons.wikimedia.org/w/index.php?curid=36743173

Expedition 42 on orbit crew portrait, International Space Station, Mar. 7, 2015 – Barry Wilmore (Commander) Top, Upside down, to the right cosmonaut Elena Serova, & ESA European Space Agency Samantha Cristoforetti. Bottom center US astronaut Terry Virts, top left cosmonauts Alexander Samokutyaev and Anton Shkaplerov.
By NASA - https://www.flickr.com/photos/nasa2explore/16166230844/, Public Domain, https://commons.wikimedia.org/w/index.php?curid=38931301

European Space Agency astronaut Luca Parmitano, Expedition 36 flight engineer, outside the International Space Station
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Chris Cassidy, Luca Parmitano, and Karen Nyberg, ISS, 2013. Photo Credit: NASA

Nicolas Altobelli, Rosetta Scientist at ESA's European Space Astronomy Centre, Villanueva de la Cañada, Madrid, Spain
By European Space Agency - Nicolas Altobelli talks to the media, CC BY-SA 3.0-igo, https://commons.wikimedia.org/w/index.php?curid=36743144

Andrea Accomazzo, ESA Rosetta Spacecraft Operations Manager, providing a live update from the Main Control Room at ESA's European Space Operations Centre, Darmstadt, Germany during the Rosetta wake-up day.
By European Space Agency - Live update from the Main Control Room, CC BY-SA 3.0-igo, https://commons.wikimedia.org/w/index.php?curid=36743150

Sleeping goose
By ladypine - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=1695227

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