

# RoboSHOT 20/40 UHD Professional PTZ Camera

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## Current Release

### RoboSHOT® 20/40 UHD 2.3.0

November 30, 2020

#### New Features

- You can now create programmed sequences of shots using the preset chains feature.
- We have placed a link to the company's standard privacy notice on this product's Help page and on the Initial Device Set-Up page. 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. However, the device's IP address is considered "personally identifiable information" for the purposes of the privacy notice. This information is stored for display to the user, but not otherwise shared or transmitted.
- Added VISCA-over-IP support. This is still in beta test.

#### Improvements

- Camera behavior settings previously presented on the DIP Switches tab of the System page are now on the General tab.
- Enhanced compatibility with the new Vaddio Device Controller.
- After updating firmware, the Telnet enabled/disabled status shown in the web interface could become out of sync with device behavior. This has been fixed.
- The permitted range of gain values in the camera ccu get command has been corrected.

#### Notes

- The VISCA-over-IP feature is currently at the beta level. If you encounter issues with it, please report them to Vaddio Technical Support.

## Release History

### RoboSHOT® 20/40 UHD 2.2.0

February 7, 2020

#### New Features

- The RoboSHOT 20 UHD camera's rotary switch now includes a setting to restore factory defaults on the next power cycle. The DIP switches on older RoboSHOT 20 UHD cameras are no longer used for this function.

#### Improvements

- Telnet commands to set hostnames and other user-definable strings now accept hyphens.
- In some cases, firmware updates could fail. This has been fixed.
- In some cases, it was not possible to log in to the web interface after updating a camera that had been using a factory default password. In this situation, the web interface now prompts for initial device set-up.

## RoboSHOT 20/40 UHD 2.1.0

December 16, 2019

### New Features

- If you restore factory defaults, the camera now requires an initial setup step to make the administrative controls and other functionality available. In this initial step, you must set the admin password. This is also required for initial access to cameras that ship with this version of firmware. See [Initial Set-Up Procedure](#). After completing the initial setup, you have the option of enabling streaming and other disabled features. At this time, setting the admin password is the only task in the initial setup procedure.

*Note: You can operate the camera with the remote even if no password is set.*

- When static IP addressing is selected, the administrator can specify a DNS server.
- Added Telnet command `camera ptz-position {{pan | tilt | zoom} <position> [no_wait]}` to specify multiple-axis movements to absolute positions. The optional `no_wait` parameter allows the command to return the command prompt immediately, while the requested camera movement is still in progress. The command `camera ptz-position get` returns the camera's current pan, tilt, and zoom positions.

### Improvements

- Security improvements include changes to the default settings for:
  - HTTP access is disabled. To connect using HTTPS, type `https://` followed by the IP address. Because Vaddio uses self-signed certificates, your browser will present warning messages indicating that you are trying to access an unsafe website; however, this is a secure connection to the camera and traffic will be encrypted.
  - Streaming is disabled.
  - Telnet access is disabled.
- The Telnet command `network settings get` now includes the camera's hostname in the information it returns.
- The Telnet command `camera ccu get` now returns all camera ccu settings if no parameter is specified.
- The top speeds for Global Preset Non-Tri-Sync Speeds have been reduced to provide better control in certain conferencing applications.
- Telnet commands now recognize the appropriate ranges of values for various camera settings, such as iris.
- Occasionally, the camera could lose its HDBaseT connection if it remained in standby for extended periods. This has been fixed.
- Exporting data to an Android device now works properly.

### Notes

- If controlling this camera with any of the following devices, the device may require a firmware update to be able to control the camera via IP.
  - PCC Premier
  - RoboTRAK
  - AV Bridge MATRIX PRO
  - AV Bridge MatrixMIX
  - OneLINK Bridge
- (RoboSHOT 20 UHD) Factory defaults cannot currently be restored using the camera's DIP switches. Other methods (rotary switch, web interface, or Telnet command) can be used.

## RoboSHOT 20/40 UHD 2.0.0

August 30, 2019

### New Features

- Added support for chained presets (preset macros). Chains are defined in the admin web interface and can be started from both the admin and non-admin web interface. A new Telnet command, `camera chained-preset { recall | stop } <chain>` provides start/stop control.
- Added Telnet command `camera ptz-position {{pan | tilt | zoom} <position> [no_wait]}` to specify multiple-axis movements to absolute positions. The optional `no_wait` parameter allows the command to return the command prompt immediately, while the requested camera movement is still in progress. The command `camera ptz-position get` returns the camera's current pan, tilt, and zoom positions.
- Added support for long press right-clicking on iOS devices.
- Added Telnet command `camera icr { get | on | off }` to control the camera's IR cut filter. When the filter is on, the video image is black and white.

### Improvements

- (RoboSHOT 40 UHD only) The previously unused Position E on the rotary switch now enables software control of video output resolution. When the switch is set to software control mode, the administrator sets video resolution via the web interface, on the General tab of the System page.
- Added an obfuscation feature for the RTMP stream key in the web interface.
- In the admin web interface, various camera behavior settings have moved from soft DIP switches to the General tab of the System page.
- In some cases, the web interface did not load properly if the computer had recently accessed another Vaddio device at the same IP address. This has been fixed.
- Disabled TLS v1.1 protocol. More recent protocols continue to be supported.
- Improved camera behavior during lengthy camera operations.
- Executing several pan, tilt, or zoom commands using absolute positions in quick succession could generate error messages. This has been fixed.
- If a custom home preset was stored while the camera was in manual focus mode, and the home preset was subsequently cleared, attempting to select the home preset could generate an error message. This has been fixed.
- In some cases, the camera reported its zoom position inaccurately after a very small change in zoom level. This has been fixed.
- Some parameters were incorrectly stored in CCU scenes and in presets stored with color information. This has been fixed.
- In some cases, if the Color Bar Generator setting was enabled when resolution or color space was changed, color bars would not be generated although the web interface still showed the setting enabled. This has been fixed.
- (RoboSHOT 40 UHD only) In some cases, genlock initialization could generate errors while the camera was booting. This has been fixed.
- (RoboSHOT 40 UHD only) Occasionally, changing the camera ID (IR1/IR2/IR3) soft DIP switches repeatedly and quickly could cause the web interface to become unresponsive for several seconds, leading to the information in the web interface potentially not reflecting the camera's current state. This has been fixed.
- Occasionally, the camera booted without video on the display outputs. This has been fixed.
- Occasionally, the tilt motor did not initialize properly after a firmware update. This has been fixed.
- (RoboSHOT 20 UHD only; this issue did not occur on RoboSHOT 40 UHD) Floating-point values are now handled properly by the `camera zoom set` Telnet command.
- Improved out-of-range error messages for Telnet commands specifying movements by absolute position.
- The RS-232/VISCA command `CAM_Freeze` now behaves as expected.

### **RoboSHOT 40 UHD 1.0.1**

January 4, 2019

#### Improvements

- Changes made to improve manufacturability.

### **RoboSHOT 40 UHD 1.0.0**

December 5, 2018

#### Notes

- Initial Release.

### **RoboSHOT 20 UHD 1.3.0**

November 16, 2017

#### New Features

- Added support for RTMP streaming.
- Added codec compatibility mode for Polycom® Group Series Codecs.
- Added codec compatibility mode for Cisco® SX-20 and SX-80 series codecs. (For SX-20 codecs, Vaddio recommends the codec's firmware be updated to latest CE-series firmware for best operation).
- Added support for UVC proxying from a OneLINK Bridge to enable far-end control when used with some third-party soft codec clients like Zoom that support UVC standards.
- Added ability to forward IR commands over the HDBaseT connection.
- HTTPS access to the camera is now supported and the HTTPS certificate can now be configured from the admin web interface.
- HTTP access to the camera can now be disabled by an admin. When this is disabled, HTTPS must be used to connect to the web interface.
- Added ability for the administrator to disable the camera's Telnet server through the web interface.
- Added public REST API.
- Added support for DNS Service Discovery.
- Added advanced streaming settings for enhanced compatibility with VPN environments.
- Added ability to import configurations from previous versions of software.
- Added ability to rename the browser tab title in the web UI.
- Added one-push white balance function to the web UI.
- Added ability to configure MTU setting for IP streaming packets.
- Added `camera led` Telnet command to enable/disable the front LED.
- Added Telnet command to enable/disable IP streaming: `[streaming ip enable get | on | off |toggle ]`
- Added a serial command for retrieving the camera's IP address: `[81 09 08 4E 00 00 FF]`.

## Improvements

- Discontinued support for DES and 3DES cyphers and TLS v1.0 protocol. More recent cyphers and protocols continue to be supported.
- Improved firewall settings.
- Improved support for USB joystick control.
- Custom CCU scenes can now be reset from the web interface.
- Restored lighting behavior for HDBaseT port and other HDBaseT link performance improvements.
- Updated time zone information.
- Interoperability improvements with Internet Explorer™ 9 through IE11 and recent Chrome releases.
- Added soft DIP switch controls for:
  - Codec Control Mode.
  - Disabling the front LED.
  - Allowing the front LED to be turned off during standby.
  - Preventing DIP switch changes while the device is in standby.
- Updated syntax for `network ping count` Telnet command.
- Absolute pan, tilt, and zoom position control via Telnet commands.
- Added `gamma` to the `camera ccu` Telnet command: `camera ccu {get | set} gamma`
- Various IP streaming improvements.

## Notes

- If previously selected time zone is deprecated during a time zone information update, the settings for the camera will default back to UTC.

## **RoboSHOT 20 UHD 1.2.0**

September 21, 2016

### New Features

- Support for AV Bridge MatrixMIX and PCC MatrixMIX.

### Improvements

- Updated HDBaseT parameters for enhanced interoperability.
- Improvements for IP streaming.
- Enhancements for color space handling for 4K video in RGB mode.
- Improved gamma control handling over serial connections..
- Various cosmetic web updates.

## **RoboSHOT 20 UHD 1.1.1**

November 8, 2016

### Improvements

- Internal update to assist in production requirements.

## **RoboSHOT 20 UHD 1.1.0**

September 21, 2016

### New Features

- The camera has been updated to work with RoboTRAK.
- Default streaming settings have been changed to optimize streaming performance under most conditions.

## Improvements

- Cameras now reach the full 90° upward tilt stated in the technical specifications; however, the correction affects previously stored presets. Vaddio recommends checking existing presets and adjusting them as needed.
- In some cases, turning the video output resolution switch, pausing momentarily, and turning it again could cause errors. This has been fixed.
- In a few instances during testing, using the camera's web interface to enable its IP stream caused an associated PCC Premier to lose the stream for its local video output. This only happened if the camera was in an address book group currently selected as Control A or Control B. This has been fixed.
- The camera has now added the ability to forward IR to Vaddio camera extension systems which support it.

## **RoboSHOT 20 UHD 1.0.0**

July 25, 2016

### Notes

- Initial Release.

## Initial Set-Up Procedure

Recent security improvements to Vaddio products have changed the way you interact with this product when you set it up for the first time.

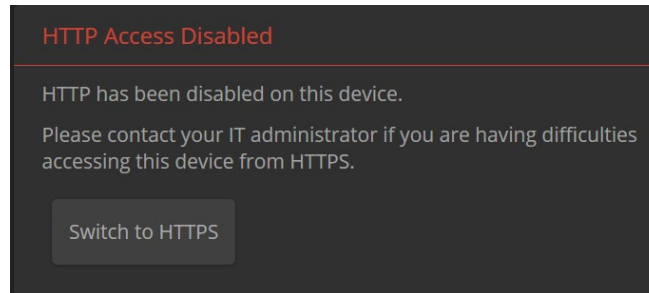
### What's new

- The camera now uses the more secure HTTPS protocol, rather than HTTP.
- You must set the admin password using the web interface. Until the admin password is set and any other initial tasks are completed, the control and administrative interfaces are not available.
- You will not be able to open a Telnet session to the camera until you set the password using the web interface.
- You will need to set the admin password again if you restore factory defaults.

**Refer to the camera's manual for specific instructions to discover its IP address and access its web interface.**

### Connect using HTTPS

Before the camera is configured, HTTP access is disabled. To access the web interface, type `https://` followed by the IP address. Otherwise, you may encounter this message:



Switch to HTTPS if you see this message.

### Expect a security warning from your browser

Different browsers will respond with different messages and options. Your browser will probably present a message indicating one of these things:

- The connection is not private
- The site is not secure
- The site is not trusted
- The site poses a security threat

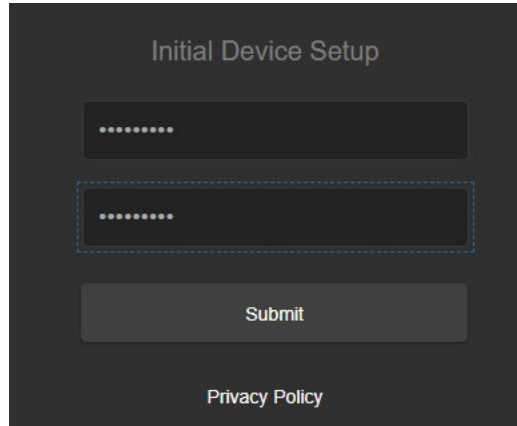
This is because the certificate (the product's website security credential) is self-signed rather than being issued by an external certificate authority. *The connection is secure and traffic to and from the camera is encrypted.*

*To proceed to the product's web interface, you will need to make the selections that your browser's security message discourages.* The security warning page may present an option to learn more, view details, or go to the "Advanced" page. When you select the applicable option, your browser provides a button or link to continue to the IP address you entered, with a reminder that it may be unsafe. Select this option.

After you have accessed the product's web interface once, your browser remembers its IP address and will not present the security message again.

## Device set-up

The first time the camera's web interface is accessed, it presents a landing page for initial set-up tasks. You will also encounter this page after restoring factory defaults. After you complete the initial set-up, you will be able to work with the camera.

The image shows a dark-themed web interface for 'Initial Device Setup'. At the top, the title 'Initial Device Setup' is displayed in a light gray font. Below the title, there are two input fields for text, each containing a series of dots to represent masked characters. The second input field is outlined with a dashed blue border. Below these fields is a large, light gray 'Submit' button. At the bottom of the screen, there is a link labeled 'Privacy Policy' in a light gray font.

Create and confirm the admin password, and complete any other required tasks such as accepting agreements. Then select Submit. The main administrative web interface opens.

In the administrative web interface, you can configure product security features to conform to the IT policies for your environment. Except where otherwise noted, these settings are on the Security page.

- Create a user password – Allow password-protected, non-administrative access to the operator's web interface.
- Enable guest access – Allow non-administrative access to the operator's web interface without requiring a login.
- Choose whether to expire idle sessions – By default, the web interface automatically logs you out after 30 minutes of inactivity.
- Enable HTTP access – Enable connections to the product's web interface using the less-secure HTTP protocol.
- Enable Telnet access – This is disabled by default.
- Enable streaming – This is disabled by default. You can enable it on the Streaming page.



## Firmware Update Instructions – RoboSHOT 20/40 UHD

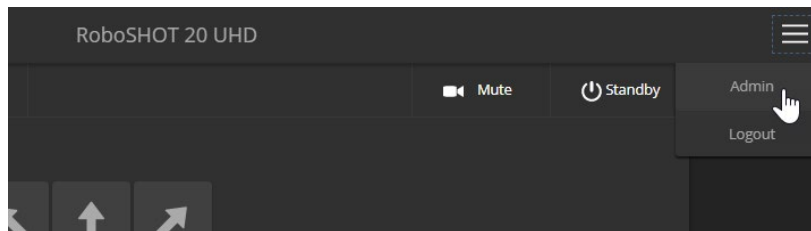
### Requirements

- Network access to the camera.
- The web interface's admin password.
- The .p7m firmware file for the camera – download this from <https://www.legrandav.com/>. It is available on the product page's Resources tab.

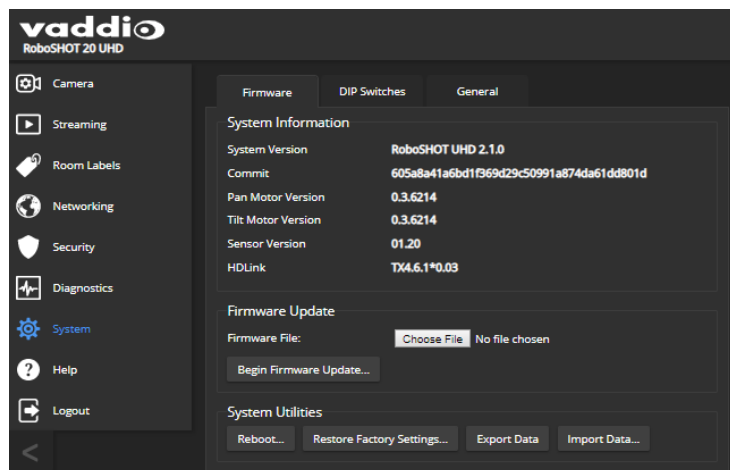
### Step-By-Step Process

Note: Your camera's web interface will display different model and firmware information from the screen shots in this document. The process for updating firmware is the same for all cameras in the RoboSHOT family.

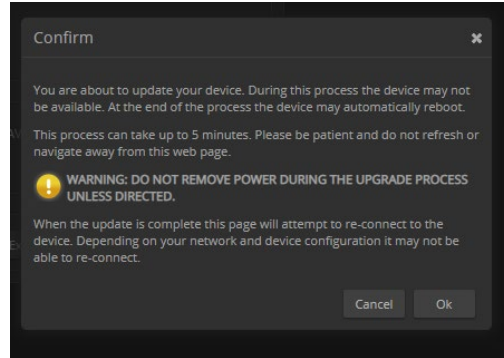
1. Enter the IP address for the camera into the address bar of a web browser.  
*You can obtain the IP address for the camera using the remote.* Aim at the camera and press the Data Screen button. The connected display shows the camera's IP address.
2. Log in as admin.



3. Navigate to the System page. Your camera's System page may present different information than shown in the screen shot.
4. Select Choose File, then browse to the downloaded firmware and select it. The filename ends with .p7m.
5. Select Begin Firmware Update.



6. Read and understand the information in the Confirm dialog box. It's dull, but it could save you some time and aggravation.



7. Select Continue. A progress message box opens and the indicator light on the front of the camera turns yellow. If the update process presents warnings or error messages, read them carefully.
8. The camera reboots when the update is complete.

#### **Caution**

**The camera must remain connected to power and to the network during the update. Interrupting the update could make the camera unusable.**

This update can take up to 5 minutes to complete; the message window will identify the progress of the update.

While you're waiting, you could try the following:

- Make a list of things to do while the firmware update finishes. (Your list could even include making a list of things to do while the firmware update finishes.)
- Decide how to decide.
- Be as recursive as you want.

After the update is complete, the System page will display the new firmware version under System Information. Enjoy that 'New Firmware Smell'!

**If the update procedure is interrupted for any reason the product may need to be returned to Vaddio for updating. If the update does not seem to run, DO NOT TURN OFF THE PRODUCT OR UNPLUG IT. CALL TECH SUPPORT IMMEDIATELY.**

**If you have any questions, call Vaddio Technical Support: (+1) 763-971-4428 or 1-800-572-2011**

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