WIDESHOT SE FIXED CAMERA

WITH QUICK-CONNECT USB OR QUICK-CONNECT USB MINI CAMERA EXTENSION

411-0021-30 Rev C
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TABLE OF CONTENTS

WideSHOT SE Quick-Connect USB Systems:
Model Number 999-6911-200 (North America)
Model Number 999-6911-201 (International)

WideSHOT SE Quick-Connect USB Mini Systems:
Model Number 999-6911-300 (North America)
Model Number 999-6911-301 (International)

OVERVIEW

The Vaddio WideSHOT SE is a fixed lens camera that produces astounding results for small and huddle room applications where the distance between the camera and the subject is limited. The WideSHOT SE camera is a low cost, high value, manual pan/tilt/zoom camera with a super wide angle lens that can be set to provide the best image possible in a small environment. To that end, the WideSHOT SE camera sports a lens with 111° wide horizontal field of view with the 3X digital zoom mode, even the "big" small rooms can be covered too.

Image: WideSHOT SE Camera

The WideSHOT SE was designed from the ground up and is equipped with the Vaddio EZCamera™ Cat-5 wiring interface standard for video, power and control. Using HSDS™ (differential) video outputs over Cat-5 cable, the WideSHOT SE supplies a wide range of video resolutions that are selectable from the rear panel; from 480p/59.94-YPbPr up to and including 1080p/60. The HSDS processing allows delivery of the WideSHOT SE video signals up to 150' (45.72m).

Image: Quick-Connect USB Mini (QMini) Interface

Choose between three (3) IR frequencies for the Vaddio IR SHOT Commander remote to allow multiple cameras to be locally IR controlled with a single remote control. The WideSHOT SE also has an OSD (on screen display) for basic image control that's accessible with the IR remote.

Image: Quick-Connect USB (QUSB) Interface

The WideSHOT SE QMini System

The Quick-Connect USB Mini (or QMini) is the latest product in the popular Vaddio Quick-Connect product line. Designed to address the demands of customers and integrators who required simple and effective USB 2.0, 720p/30 streaming and capture capabilities without the need for local analog or digital video outputs. The USB Mini uses UVC (Universal Video Class) drivers, so whatever resolution the UC application needs, the USB Mini will auto negotiate.

The USB Mini also offers easy mounting either on-wall or under-table with an integrated mounting tab similar to the style used on Vaddio EZCamera™ Interface Module or EZIM™. This provides the end user or integrator many possibilities for mounting in easily accessible locations, as requirements dictate.

WideSHOT SE paired with the Quick-Connect USB Mini Interface in this package represents a superior value for professional installations at a very low price. So relax, and try a WideSHOT SE with a QMini today!

The WideSHOT SE QUSB System

This system features the exciting and robust Quick-Connect USB (or QUSB) Interface, which was designed to have multi-format digital and analog video outputs, to be compatible with all Vaddio cameras with HSDS technology and include USB 2.0 or IP streaming outputs with a built-in web interface for IP control. The outputs include; HDMI, YPbPr, USB Video (UVC standards-MJPEG) and H.264 IP Video (RTSP & HLS). The embedded web interface provides for browser-based access to camera controls, camera presets and basic CCU functions (color and shading controls) as well as the video configuration web pages. The Quick-Connect USB uses UVC (Universal Video Class) drivers, so whatever resolution the UC application needs, the QUSB will auto negotiate.

WideSHOT SE paired with the Quick-Connect USB Interface in this package represents a dynamic system for professional installations at true value. Kick back and enjoy the many outputs of your WideSHOT SE QUSB System!

Intended Use

Before operating the device, please read the entire manual thoroughly. The system was designed, built, and tested for use indoors with the power supply provided. The use of a power supply other than the one provided, or outdoor operation hasn't been tested and may damage the device or create a potentially unsafe operating condition.

Important Safeguards:

Read and understand all instructions before using. Do not operate any device if it has been dropped or damaged. In this case, a Vaddio technician must examine the product before operating. To reduce the risk of electric shock, do not immerse in water or other liquids and avoid extremely humid conditions.

> **Use only the power supply provided with the system. Use of any unauthorized or DC extended power supplies will void any and all warranties.**
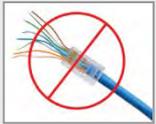
> **Please do not use "pass-thru" type RJ-45 connectors. These pass-thru type connectors do not work well for professional installations and can be the cause of intermittent connections which can result in the RS-232 control line failing and locking up, and/or compromising the HSDS (high speed differential) signals. For best results please use standard RJ-45 connectors and test all cables for proper pin-outs prior to use and connection to Vaddio product.**

Save These Instructions:

The information contained in this manual will help you install and operate your product. If these instructions are misplaced, these documents can be downloaded from www.vaddio.com free of charge.

UNPACKING

Carefully remove the product and all the included parts from the packaging. Identify the following parts for each camera:

WideSHOT SE QUSB Camera System (North America)

Part Number: 999-6911-200

- One (1) WideSHOT SE camera (998-6911-200)
- One (1) Vaddio IR Shot Commander Remote
- Two (2) AAA Batteries
- One (1) Thin Profile Wall Mount
- Two (2) 1-5/8" Nylon self-drilling drywall anchors
- Two (2) #8 x 1.25" sheet metal screws
- Two (2) black oxide ¼-20 x ½" pan head screws
- One (1) Quick-Connect USB Interface (998-1105-038)
- One (1) 24 VDC 2.08 A power supply
- One (1) US Power Cable
- One (1) 6ft USB 2.0 cable, Type A to Type B
- Four (4) Rubber feet for QUSB if not rack mounted
- One (1) EZCamera Control Adapter (998-1001-232)
- One (1) Quick-Start Guide for WideSHOT SE Fixed Camera
- One (1) Quick-Start Guide for Quick-Connect USB

WideSHOT SE QUSB Camera System (Europe/UK)

Part Number: 999-6911-201

- One (1) WideSHOT SE camera (998-6911-200)
- One (1) Vaddio IR Shot Commander Remote
- Two (2) AAA Batteries
- One (1) Thin Profile Wall Mount
- Two (2) 1-5/8" Nylon self-drilling drywall anchors
- Two (2) #8 x 1.25" sheet metal screws
- Two (2) black oxide ¼-20 x ½" pan head screws
- One (1) Quick-Connect USB Interface (998-1105-038)
- One (1) 24 VDC 2.08 A power supply
- One (1) Euro Power Cable
- One (1) UK Power Cable
- One (1) 6ft USB 2.0 cable, Type A to Type B
- Four (4) Rubber feet for QUSB if not rack mounted
- One (1) EZCameras Control Adapter (998-1001-232)
- One (1) Quick-Start Guide for WideSHOT SE Fixed Camera
- One (1) Quick-Start Guide for Quick-Connect USB

WideSHOT SE QMini Camera System (North America)

Part Number: 999-6911-300

- One (1) WideSHOT SE camera (998-6911-200)
- One (1) Vaddio IR Shot Commander Remote
- Two (2) AAA Batteries
- One (1) Thin Profile Wall Mount
- Two (2) 1-5/8" Nylon self-drilling drywall anchors
- Two (2) #8 x 1.25" sheet metal screws
- Two (2) black oxide ¼-20 x ½" pan head screws
- One (1) Quick-Connect USB Mini Interface (998-1105-039)
- One (1) 24 VDC 2.08 A power supply
- One (1) US Power Cable
- One (1) 6ft USB 2.0 cable, Type A to Type B
- One (1) Quick-Start Guide for WideSHOT SE Fixed Camera
- One (1) Quick-Start Guide for Quick-Connect USB Mini Extender

WideSHOT SE QMini Camera System (Europe/UK)

Part Number: 999-6911-301

- One (1) WideSHOT SE camera (998-6911-200)
- One (1) Vaddio IR Shot Commander Remote
- Two (2) AAA Batteries
- One (1) Thin Profile Wall Mount
- Two (2) 1-5/8" Nylon self-drilling drywall anchors
- Two (2) #8 x 1.25" sheet metal screws
- Two (2) black oxide ¼-20 x ½" pan head screws
- One (1) Quick-Connect USB Mini Interface (998-1105-039)
- One (1) 24 VDC 2.08 A power supply
- One (1) Euro Power Cable
- One (1) UK Power Cable
- One (1) 6ft USB 2.0 cable, Type A to Type B
- One (1) Quick-Start Guide for WideSHOT SE Fixed Camera
- One (1) Quick-Start Guide for Quick-Connect USB Mini Extender

ANATOMY OF THE CAMERA

Front View with Feature Call-outs

1. **Lens:** 111° wide fixed focal with 3X digital zoom mode.

2. **IR Sensor and Power/Tally LED:** The IR sensor for the IR SHOT Commander remote is located here. Below it is a light pipe where a blue LED power and a red LED tally reside. Both light up to produce purple during boot-up. The WideSHOT SE's IR sensor will not react to the remote if the IR is turned off with dip switch 3.

3. **The Yoke:** For manual pan and tilt. Tilt range is ± 30° and Pan is limited to the service loop of the cabling.

4. **Really Cool Logo Badge (RCLB):** The RCLB is affixed to the base in a recessed oval area.

5. **The Aluminum Base and Steel Cylindrical Body:** Please don't drop it on your foot, it's fairly substantial.

Rear Panel Connections with Feature Call-outs

1) RS-232 Port: The RS-232 accepts modified VISCA protocol for camera control.

2) EZ Power/Video Port: This RJ-45 connector is only used with the Quick-Connect USB and USB Mini Interfaces to supply power and return HSDS (differential) video from the camera over Cat-5 cable up to distance of 150' (45.72m).

3) WideSHOT SE DIP Switch Settings: Settings for IR remote frequency, IR receiver on/off, image flip, and digital zoom can be configured on these switches.

4) HD Video Select: A rotary switch allows the user to choose the HD output video resolution and format. After setting or changing the resolution, reboot the camera to ensure proper operation. If an unassigned rotary selection position is chosen (3, 9, A, B, C or D), the camera will output a medium grey video privacy mask. Simply set the rotary switch to an assigned position to output video. See rotary switch settings below.

Table: WideSHOT SE Dip Switch Settings

DIP Switch	Function
1	Up = IR1, Down = IR2
2	Up = IR 1 or 2, Down = IR3
3	Up=IR ON, Down = IR OFF
4	Up = Normal Image, Down = Image Flip
5	Up = Wide Angle, Down = Digital Zoom Mode
6	Update Position - Leave UP unless updating firmware

6 - Position
DIP Switch

Table: WideSHOT SE VIDEO Selections

Rotary	Resolutions	Rotary	Resolutions
0	720p/59.94 (USB)	8	576p/50
1	1080i/59.94	9	--
2	1080p/59.94	A	--
3	--	B	--
4	720p/50	C	--
5	1080i/50	D	--
6	1080p/50	E	1080p/30
7	480p/60	F	1080p/25

Point the notch in the switch stem to assign the rotary position.

For USB 2.0 streaming, use position "0" (720p/59.94) for best results.

A medium grey privacy mask is displayed when the rotary switch is on an unassigned position.

IR SHOT COMMANDER REMOTE

The WideSHOT SE camera is shipped with the Vaddio IR SHOT Commander IR remote, which is also compatible with various other Vaddio cameras.

Red LED indicates IR transmission and the brightness indicates battery strength

Power On/Off
Camera Standby

OSD   On Screen Display Menu

OK
Enter, and Select in camera's OSD menu

Arrow Keys
Left, Right, Up and Down when navigating camera's OSD menu

Zoom Out, Zoom In

Used only with the ZoomSHOT 20 camera. WideSHOT SE's zoom mode is toggled with DIP switch 5.

Preset Button - Setting Presets

- Move the camera into position
- Push and hold P-STORE button
- Touch buttons 1 or 2 to set Preset

Recalls ZoomSHOT 20 Preset 1 or Preset 2 (zoom position)

*WideSHOT SE does not have a mechanical lens or PTZ

Select IR Frequencies (3)

Allows up to 3 cameras to be controlled in a room with one (1) IR Remote

Note: Camera DIP switches set IR frequency.

IR SHOT Commander - Quick Specs	
IR Range	20' to 30' (6m to 9m)
Batteries	2 x AAA
Keys (buttons)	15 Silicone Rubber Keys
Dimensions **L x W x H**	4.53" (115mm) x 1.57" (40mm) x 1.1" (28mm)
LED Indicator	Red LED illuminates when transmitting IR, brightness indicates battery strength
Compatible Cameras	Ships with ZoomSHOT 20 and WideSHOT SE. Compatible with all Vaddio HD PTZ cameras (limited function set) and most Sony BRC & EVI cameras.

QUICK-CONNECT USB

Front Panel with Feature Call-outs

1) LCD Blue Backlit Display:
20 x 2 Character, ODV (Omnidirectional view), ABN (advanced black nematic) display with a high contrast and wide viewing angle combined with high visibility. The MAC address (labeled as "HW" for hardware) is on the top line, and the IP address (static of DHCP) is listed on the bottom line. This display with IP and MAC addresses allows for easy access to the embedded web interface and Vaddio camera setting for the PC or BYOD (bring your own device – laptop or tablet) users of UC conference systems. Upon power up or power reset this display will indicate when the unit is in initialization mode.

2) Power/ System Reset Switch:
The System Reset switch on the front panel is a blue back-lit tactile switch that will illuminate when power is present at the rear power connector. Pressing in and holding this switch will restart/reinitialize the Quick-Connect USB interface.

3) Network LED:
The blue panel mount LED indicator will indicate the presence of an Ethernet connection. This LED will blink to indicate network activity. If no network connection is made, the LED will remain off.

4) USB LED:
The blue panel mount LED indicates the presence of a USB connection to a PC (or Mac). Blinking will indicate USB activity. If no USB connection is present the LED will remain off.

Rear Panel with Feature Call-outs

1) **Power Input:** 5.5mm x 2.5mm coaxial power jack for use with provided 24 VDC, 2.08 Amp switching power supply. The Quick-Connect USB supplies power to the attached camera.
2) **5-Position DIP Switch:** A 5-position dip switch allows the user to choose the HD video color space (YCbCr for HDMI and sRGB color space for DVI-D) on the HDMI output, configure for updates, and restore factory defaults when cycling power.
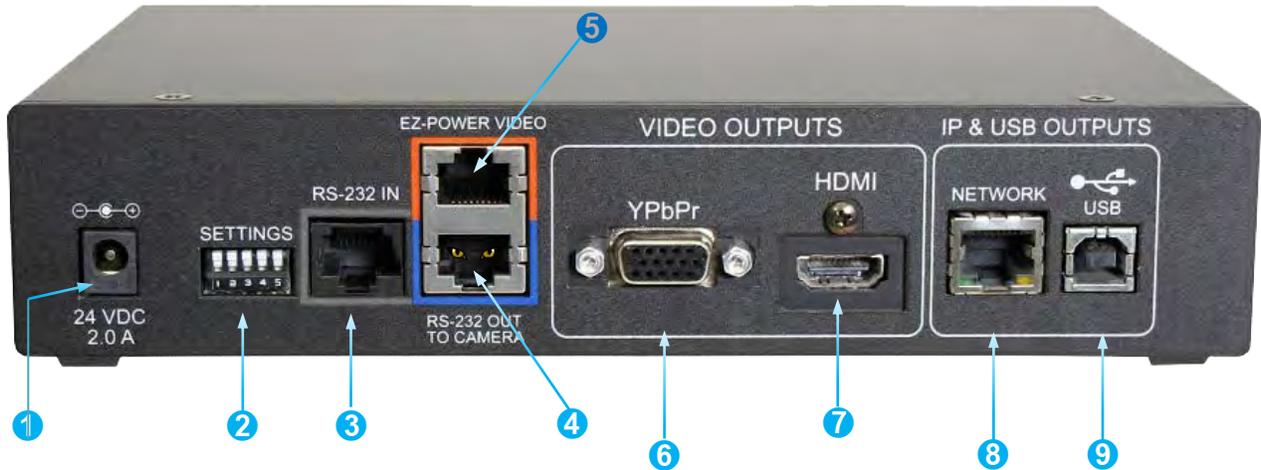
Table: Quick Connect USB Rear Panel Dip Switch Settings

DIP Switch	Function	Default	Activation
1	Future Use	Up	n/a
2	Future Use	Up	n/a
3	Color Space HDMI Connector	Up = HDMI (YCbCr)	Down = DVI (sRGB)
4	Program / Update	UP = No Program	DOWN = Ready To Program
5	Future Use	Up	n/a
All Down	Reset to Defaults	All UP	ALL DOWN (with power cycle)

5 - Position
DIP Switch

3) **RS-232 IN (Color-Coded Grey):** Serial RS-232 input on an RJ-45 connector. This control port allows a Vaddio joystick controller or 3rd party controller (Crestron, Extron, AMX) to control the camera functions if the embedded web interface is not used for real time control.
4) **RS-232 OUT TO CAMERA (Color-Coded Blue):** Serial RS-232 output on RJ-45 connects via Cat-5 to the camera RS-232 input
5) **EZ-POWER VIDEO port (Color-Coded Orange):** The QUSB will automatically show up as a native USB 2.0 device on the connected computer. If not prompted to allow the device as your primary UVC video source, it may be required to configure it as such in the operating system of the streaming/capture computer.
6) **YPbPr Output:** Analog component video output on a DE-15 (HD15) connector (resolution is set on the back of the camera). The YPbPr output resolution will be the same as the HDMI output resolution. SD video resolution (Y/C and CVBS formats) are not supported by the Quick-Connect USB interface; however, some progressive frame analog component SD video is supported.
7) **HDMI Output:** The digital video output on the HDMI connector can either be YCbCr color space (normal HDMI mode) or can be changed to DVI-D color space (sRGB) for older monitors and devices. The HDMI and YPbPr outputs work simultaneously and are the same resolution (set at the camera).
8) **Ethernet 10/100 Network RJ-45 Jack:** The Ethernet jack with have yellow and green lights to indicate connectivity and activity of the network on that jack. The Ethernet jack will stream video up to 1080p/30 (H.264) and can be set from the internal web page. The resolutions are available in a three (3) stage quality format (High Quality, Good Quality, and Standard Quality targets) and includes a range of CIF to 1080p/30.
9) **USB 2.0 Connector:** The USB 2.0 is on a Type-B female jack and connects to a PC running a soft-client video conference system or video capture software that uses UVC (USB Video Class) standard drivers. No other USB 2.0 drivers are required to plug the QUSB into a computer and have it work. The UVC drivers will auto-negotiate the top resolution that the computer, program, and QUSB can accomplish together and auto-implement that resolution.

QUICK-CONNECT USB MINI

Front Panel with Feature Call-outs

1) **USB Port:** USB Type-B port for connectivity to streaming or capture computer.
2) **Power LED**: Indicates presence of 24 VDC power for the Quick-Connect.

The USB Mini will automatically show up as a native USB 2.0 device on the connected computer. If not prompted to allow the device as your primary UVC video source, it may be required to configure it as such in the operating system of the streaming/capture computer.

USB Mini Top Panel Connections
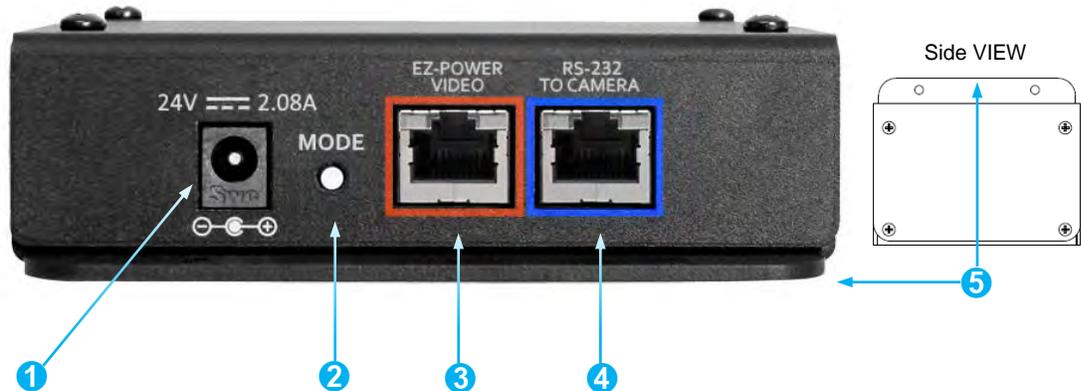
1) **Power Connector:** 5.5mm x 2.5mm coaxial power jack for use with provided 24 VDC, 2.08 Amp switching power supply.
2) **Mode Switch:** White-capped, recessed, momentary tactile push button for switching between USB Streaming and Web Control (Ethernet over USB) modes, as well as a Factory Reset mode.
   Important configuration and operating note:
   a. The USB Mini interface will boot up in UVC streaming video mode. A quick momentary touch will switch to web control mode and video will no longer pass. This allows the administrator to set up the USB Mini with the embedded web pages and when the administrator is finished, toggle back to UVC streaming mode for the end user. It is highly unlikely that the end user will ever need access to the configuration web pages during use of the USB Mini.
   b. For resetting the USB Mini back to factory defaults, push and hold this switch in for approximately 5.0 seconds. The front panel blue LED will blink indicating the reset to factory defaults.
3) **EZ-POWER VIDEO RJ-45 (Color-Coded Orange):** Simultaneously sends power to the camera to and returns HSDS (differential) video from the camera which is used to generate USB 2.0 (UVC) video for the connected PC.
4) **RS-232 Jack (Color-Coded Blue):** RJ-45 control port for sending serial control to the camera. This must be connected to the camera's RS-232 port in order for the Quick-Connect USB Mini to auto-recognize and auto load the correct Vaddio camera control protocols.
5) **Mounting Flange:** The mounting flange is provided for surface mounting the USB Mini (under table or in other clever spots) and for easy access to the USB connection for BYOD laptop or computer.

BASIC APPLICATION DIAGRAMS – WIDESHOT SE QUSB SYSTEM

The following diagrams show representative connections for the WideSHOT SE QUSB and WideSHOT SE QMini systems.

Basic Connections: WideSHOT SE with QUSB, No Network or PC Integration

WideSHOT SE POV Manual Camera shown with the Quick-Connect USB Interface (video application)

WideSHOT SE
Rear View

RS-232 Cat-5 Cable
(blue to blue)

Two Cat-5e/5e/6 Cables
for Video, Power and
Control, up to 150'
(45.72m) cabling
distance.

EZ-POWER VIDEO Cat-5 Cable (orange to orange)

◁ Video - Power ▷

**Quick-Connect
USB Interface**

Rear Panel

24VDC, 2.08 Amp
Power Supply

HDMI or
DVI-D
Video

HD Monitor

(Simulated HD Video Feed)
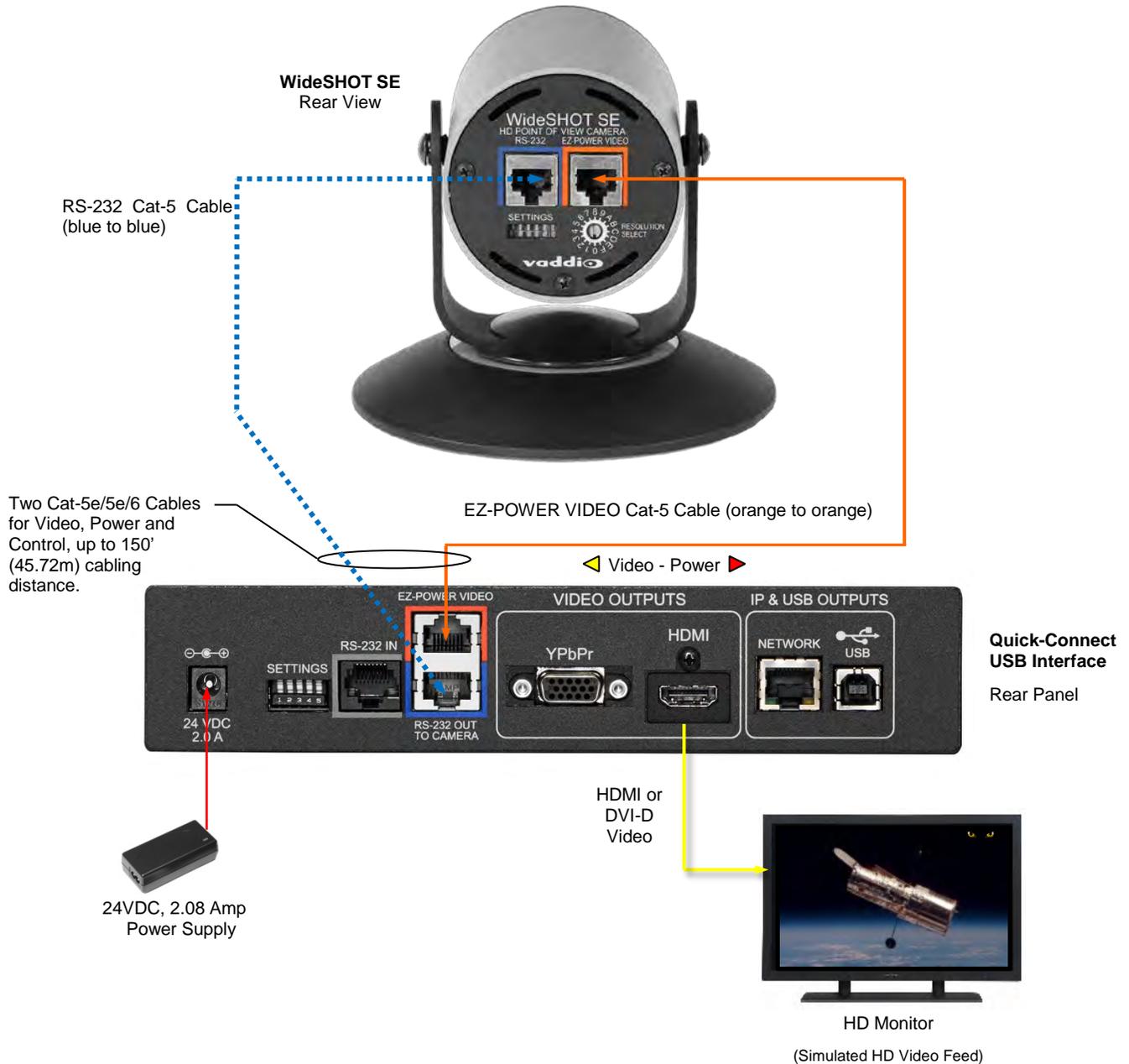
Basic Connections: WideSHOT SE with QUSB, USB 2.0 Streaming

Two Cat-5e/5e/6 Cables for Video, Power and Control, up to 150' (45.72m) cabling distance.

EZ-POWER VIDEO Cat-5 Cable (orange to orange)

RS-232 Cat-5 Cable (blue to blue)

Quick-Connect USB Interface (Rear view)

WideSHOT SE Video Camera

(Rear view)

HDMI

Near End Room Monitor Simulated Video Feed

USB 2.0 - MJPEG Video Using Standard UVC

Ethernet

IP Network

Host PC with Browser for Control and UC Application

PC Video

Far End Video Monitor Simulated Video Feed
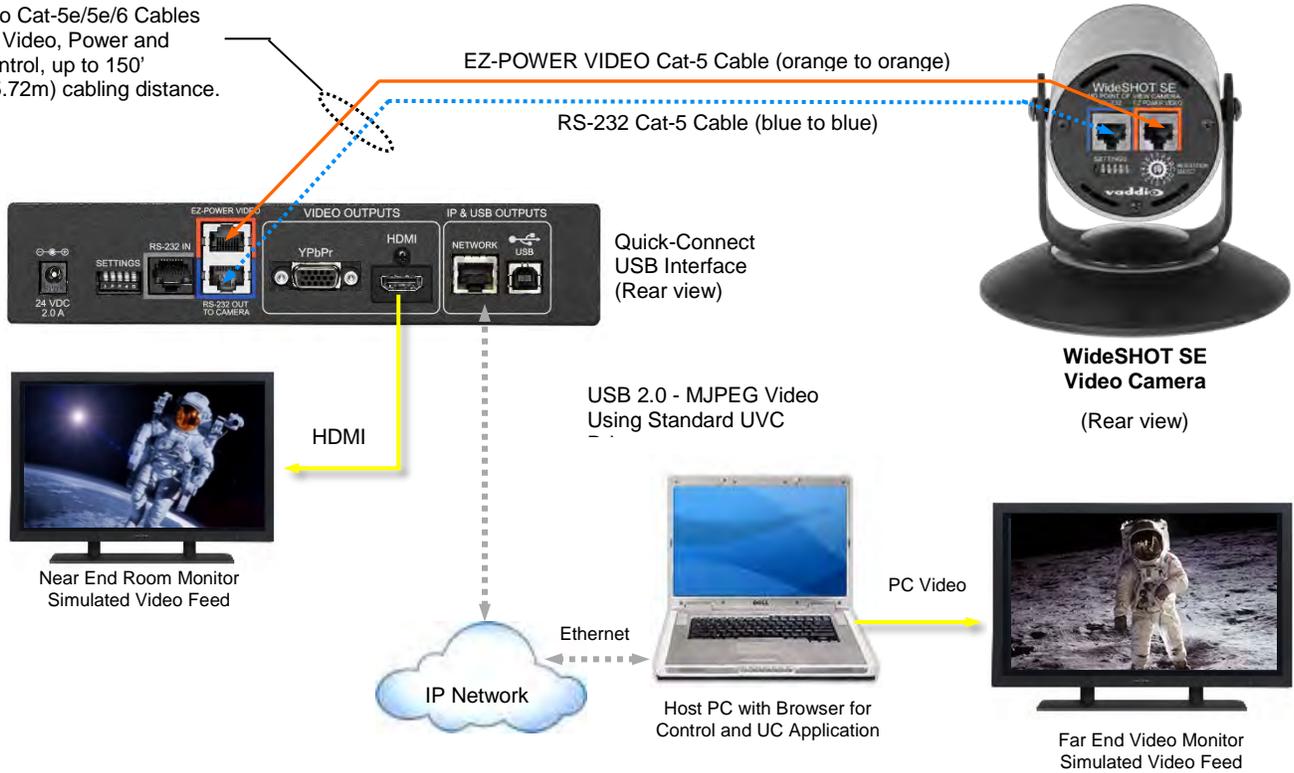
Basic Connections: WideSHOT SE with QUSB, IP Streaming

WideSHOT SE Camera
With Mount

Quick-Connect USB Interface

PC with Browser for Control and UC Application

Two (2) Cat-5 Cables for Power, Video and Control Distance up to 150' (45.72m)

Ethernet

IP (H.264) Streaming RTSP or HLS

Ethernet

IP Network
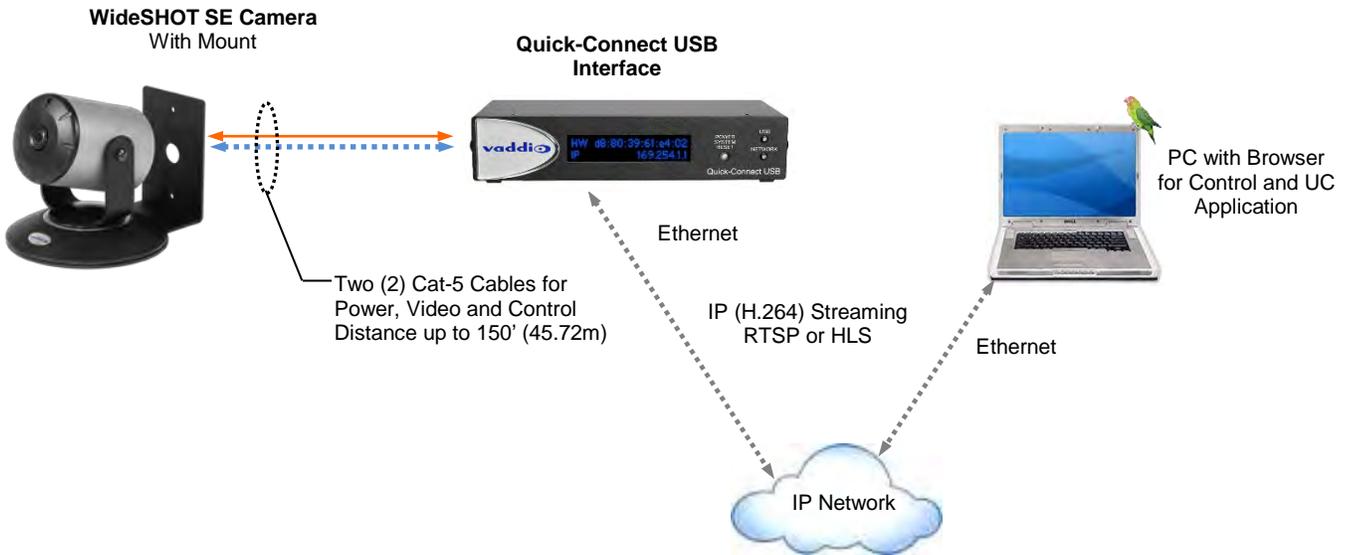
Basic Connections: WideSHOT SE with QUSB, System with Audio and Video

Video, Power and Control
Two Cat-5 Cables
Up to 150' (45.72m)

**Quick-Connect
USB Interface**

PC "A" with Browser for Control
and UC Application to connect to
PC "B" on other side

USB 2.0
UVC Video

A

USB 2.0
UAC Audio

Ceiling
Speakers

8 Ohm   8 Ohm

EasyUSB
Mixer/Amp

Cat-5   Cat-5

WideSHOT SE Camera
With Mount

Ethernet IP Control
from either PC

Ethernet

IP Network

AEC Mics

(EasyMics)

B

PC "B" with Browser for
Control and UC Application
to connect to PC "A" on
other side

Ethernet

Legend

➢ USB UVC Video
➢ USB UAC Audio
➢ IP Web Page Control
➢ UC Application

Basic Connections: WideSHOT SE with QMini, USB Output to Computer

24 VDC, 2.08 Amp
Power Supply

◁ Video from Camera - Power to Camera ▶

EZ-POWER VIDEO Cat-5 (orange to orange)

Two (2) Cat-5/5e/6 Cables
Distance up to 150' (15.26m)

RS-232 Cat-5 (blue to blue)

WideSHOT SE
Camera

Quick-Connect USB Mini
Rear Panel (above), Front Panel (below)

USB 2.0 Connected to
Front Panel

USB 2.0
(UVC
Drivers)

Laptop with UC
Application

HD Video
(HDMI, DVI
or RGBHV)

French bulldog
not required

Room Monitor
(Simulated video feed)

Extension of PC Video
to Room Monitor

WIDESHOT SE CAMERA - FIRST TIME SET-UP

The WideSHOT SE was designed to be very easy to use and operate. There is documentation at the back of this manual for pin-outs for the connectors on the WideSHOT SE camera and the USB Mini Interface.

Before Installing the Camera:

- Choose the camera mounting location while paying close attention to camera viewing angles, lighting conditions, possible line of site obstructions and checking for in-wall obstructions where the camera is to be mounted. Always pick a mounting location that will optimize the performance of the camera.

- Please locate the camera to enable easy positioning of the camera body with the ability to point down and away from the ceiling and a bunch of fluorescent lighting cells. *Cameras generally don't like to be swamped with fluorescent light and very few people sit on the ceiling anyway*.

- The Thin Profile Wall Mount for the WideSHOT SE can be mounted directly to a 1-gang wall box or can be mounted using the two (2) provided spiral drywall anchors.

- For Power/Video and RS-232 signals, use standard Cat-5 cable (568B termination and real RJ-45 connectors) from the EZ-POWER VIDEO and RS-232 ports on the back of the WideSHOT SE to the Quick-Connect USB Mini Interface. The EZ-POWER VIDEO jack on the camera is color-coded as a reminder that there is 24 VDC power on that Cat-5 cable.

Select the appropriate instructions below – WideSHOT SE QUSB System installation or WideSHOT SE QMini System installation.

STEP BY STEP WIDESHOT SE QUSB SYSTEM INSTALLATION INSTRUCTIONS

Step 1: After determining the optimum location of the camera; route, mark and test the two Cat-5 cables from the camera to the Quick-Connect USB Interface located at the table or rack. The two Cat-5 cables should feed-through the hole located on the rear flange of the Thin Profile Wall Mount. If the bracket is to be mounted on a 1-gang wall box, use the screws supplied with the wall box cover plate to attach the Thin Profile Wall Mount. If mounting to the drywall with wall anchors, use two quality wall anchors. The mount provides for easy leveling. Pull the Cat-5 cables though the wall and feed the cables through the back of the mount. Level the mount and tighten the mounting screws.

Step 2: Using the HD VIDEO SELECT rotary switch and CAMERA SETTINGS dip switches on the back of the camera, set up the camera's output resolution and functional preferences. See Table: WideSHOT SE Dip Switch Settings and Table: WideSHOT SE VIDEO Selections…keep these tables handy for future use.

Setting the WideSHOT SE Camera:

- Set the desired HD Resolution with the rotary selection switch. If changing the resolution, always reboot the camera to ensure proper operation.
  Note: For best results Streaming USB 2.0 (MJPEG) or IP Video (H.264), use 720p/59.94 (position "0")

- Set the IR frequency (1, 2 or 3) of the camera (if it is to respond to the IR SHOT Commander Remote).
- Set the desired image orientation (normal or flipped).

Step: 3: Follow the sample wiring diagram for connecting the Cat-5 cables to the WideSHOT SE and Quick-Connect USB Interface (See Basic Application Diagrams – WideSHOT SE QUSB System, but read and understand the rest of these instructions - especially the next note).

NOTE: Check all Cat-5 cables for continuity in advance of the final connection. Label the Cat-5 cables. Plugging the EZ-POWER VIDEO cable into the wrong RJ-45 may cause damage to the camera system and void the warranty. For premise cabling, please use real RJ-45 connectors and crimpers. Please don't use the pull through or EZ type of RJ-45.

Step 4: Place the camera onto the camera mount and use the provided ¼"-20 screws to secure the camera to the mount. To dress the cabling, push the extra cable back into the wall opening. Position and focus the camera.

Step 5: Connect the Vaddio 24 VDC, 2.08 Amp power supply to a power outlet and to the Quick-Connect USB Interface. The Quick-Connect USB will initialize, power will travel down the Power/Video Cat-5 cable to the camera. The camera will boot up and in a few seconds, differential HD video will travel back down the Cat-5 cable to the Quick-Connect. When an image is available, the camera is ready to accept control information from the IR remote control or RS-232 camera controller. The Quick-Connect USB will display the Hardware (HW) MAC Address and the IP address.

To ensure proper continuity of control and operation of the cameras, the RS-232 controller (control system or joystick) should be powered on after the camera.

You have finished installing the WideSHOT SE QUSB system. Unless you also need to install a WideSHOT SE QMini system, you may want to go to Controlling the WideSHOT SE Camera.

STEP BY STEP WIDESHOT SE QMINI SYSTEM INSTALLATION INSTRUCTIONS

Step 1: After determining the optimum location of the camera; route, mark and test the two Cat-5 cables from the camera to the USB Mini Interface located at the table. The two Cat-5 cables should feed-through the hole located on the rear flange of the Thin Profile Wall Mount. If the bracket is to be mounted on a 1-gang wall box, use the screws supplied with the wall box cover plate to attach the Thin Profile Wall Mount. If mounting to the drywall with wall anchors, use two quality wall anchors. The mount provides for easy leveling. Pull the Cat-5 cables though the wall and feed the cables through the back of the mount. Level the mount and tighten the mounting screws.

Step 2: Using the HD VIDEO SELECT rotary switch and CAMERA SETTINGS dip switches on the back of the camera, set up the camera's output resolution and functional preferences. See Table: WideSHOT SE Dip Switch Settings and Table: WideSHOT SE VIDEO Selections…keep these tables handy for future use.

Setting the WideSHOT SE Camera:

- Set the desired HD Resolution with the rotary selection switch. If changing the resolution, always reboot the camera to ensure proper operation.

    Note: Use 720p/59.94 (position "0") for best results for streaming USB 2.0 (MJPEG) video.

- Set the IR frequency (1, 2 or 3) of the camera to respond to the IR SHOT Commander Remote).
- Set the desired image orientation (normal or flipped).

Step: 3: Follow the sample wiring diagram for connecting the Cat-5 cables to the WideSHOT and USB Mini Interface (See Basic Application Diagram – WideSHOT SE QMini System, but read and understand the rest of these instructions especially the next note).

NOTE: Check all Cat-5 cables for continuity in advance of the final connection. Label the Cat-5 cables. Plugging the EZ-POWER VIDEO cable into the wrong RJ-45 may cause damage to the camera system and void the warranty. For premise cabling, please use real RJ-45 connectors and crimpers. Please don't use the pull through or EZ type of RJ-45.

STEP 3a: Connect a Cat-5 cable from the EZ-POWER VIDEO RJ-45 jack of the USB Mini to the EZ- POWER VIDEO jack of the Vaddio camera.
STEP 3b: Connect a Cat-5 cable from the RS-232 TO CAMERA RJ-45 jack on the USB Mini to the RS-232 serial control port of the Vaddio camera.

Diagrams: Connecting the USB Mini

EZ-POWER VIDEO Cat-5 (orange to orange)

RS-232 Cat-5 (blue to blue)

STEP 3a

STEP 3b

STEP 5

STEP 4: Place the camera onto the camera mount and use the provided ¼"-20 screws to secure the camera to the mount. To dress the cabling, push the extra cable back into the wall opening.

HINT: A small piece of black fabric or felt attached to the back of the mount (wall-side) with a small slit to allow cables through may help the overall dressing of the mount and cables.

STEP 5: Connect the supplied 24 VDC, 2.08 Amp switching power supply to the USB Mini. Plug in the AC power cord to the power supply and connect it to a local power outlet. Verify the blue LED power light on the USB Mini and the blue LED on the Vaddio camera are illuminated.

STEP 6: Connect a USB 2.0, Type-A male to USB Type-B male cable from the USB Type-B jack of the USB Mini to the USB 2.0 Type-A port on the laptop or PC.

USB 2.0 Cable

STEP 6

STEP 7: Again, for the best results, set the camera to 720p/59.94 video resolution by turning its rotary resolution switch on the back of the camera to the '**0**' position (at 6:00) with the notch in the rotary switch pointed straight downward.

STEP 8: Using desired third-party software, verify UVC file streaming. Upon applying power to the system, the USB Mini should show up on the connected computer as a UVC video USB 2.0 peripheral (more on this later).

STEP 9: Connect the Vaddio 24 VDC, 2.08 Amp power supply to a power outlet and to the Mini USB Interface. The USB Mini will initialize and power will travel down the EZ-POWER VIDEO Cat-5 cable to the camera. The camera will boot up and in a few seconds, differential HD video will travel back down the Cat-5 cable to the USB Mini. When an image is available, the camera is ready to accept control information from the IR SHOT Commander.

CONTROLLING THE WIDESHOT SE CAMERA

- **IR Remote:** The IR SHOT Commander Remote is the best way to control the camera in real time. The IR remote controller can control the camera's basic functions and enter the OSD (on-screen display) for more advanced controls. The IR remote is the best way to control the camera in real-time.
- **Web Interface (QUSB)**: The Quick-Connect USB's web interface auto-loads the control protocols of the Vaddio camera attached (pretty cool huh?). Full camera controls including CCU (color correction unit) image controls are available from any approved web browser on any computer. The IP address is always displayed on the front panel display of the QUSB so access to the internal web pages is super easy.
- **Web Interface (QMini)**: The USB Mini's web interface auto-loads the control protocols of the Vaddio camera attached. Camera set-up and controls are available to the administrator of the system from any approved browser on any computer. The system has two modes; Video Streaming Mode and Web Control Mode. While using the Web Control mode, the camera image is not available for preview. For this reason, the IR SHOT Commander controlling the camera image through the OSD is the best way to control the camera in real time.
- **Telnet Control (QUSB)**: The camera can be controlled through the Quick-Connect USB via Telnet session. These exciting commands are listed at the back of the manual.
- **RS-232 Control (QUSB):** An API is provided for control of the camera over RS-232 (commands in the back of manual).
- **RS-232 Control (QMini):** This control port is used by the USB Mini to ID the attached camera. Using another control method (joystick or control system) isn't necessarily a great idea, because the camera won't be recognized by the USB Mini and it won't auto-load the control protocols for the camera or serve up the web pages.

Table: WideSHOT SE OSD Menu Structure

Use this OSD menu with the IR SHOT Commander Remote to make video adjustments (Picture, Color, Exposure, etc…) on the WideSHOT SE camera. Using the IR SHOT Commander Remote is the easiest way to set the camera's color and overall picture attributes.

Menu	Controls	Range/Modes	Default	Notes
MODEL		IR-CDS, D&N	IR-CDS	Do not adjust
EXPOSURE	LENS MODE	NORMAL, DEBLUR	NORMAL	
	BRIGHTNESS	0-20	10	Exposure compensation level
	SHUT SPEED	AUTO, MANUAL	AUTO	Sets shutter speed – Do not adjust
	DSS	---	---	Dynamic Show Shutter – NOT USED
	AGC	0-10	10	Automatic Gain Control
	FLICKERLESS	OFF, ON	---	Auto set if WDR is on
	WDR/BLC	WDR (LOW, MID-LOW, MIDDLE, MID-HIGH, HIGH) BLC (POSITION, SIZE), OFF	WDR LOW	WDR = Wide Dynamic Range, the intensity of which can be set. BLC = Backlight compensation, which can adjust size and position.
	DAY&NIGHT	DAY, NIGHT, AUTO	DAY	Auto mode automatically drops from Color to B/W when the light level is to low - NOT USED
WHITE BAL	MODE	AUTO, ONE PUSH, MANUAL, INDOOR, OUTDOOR,	AUTO	
	RED GAIN	0-20	---	Adjusts red in manual mode
	BLUE GAIN	0-20	---	Adjusts blue in manual mode
	CHROMA	0-16	8	Color saturation

Menu	Controls	Range/Modes	Default	Notes
IMAGE	HLC	MODE (OFF, ON, NIGHT), LEVEL (0-20) COLOR (0-13)	OFF	High Light Compensation. When extremely bright light is projected onto the camera.
	DNR	AUTO, OFF, LOW, MIDDLE, HIGH	AUTO	Digital Noise Reduction
	MIRROR	OFF, H, V, H&V	OFF	For image flip – leave off and use dip switch on back of camera only.
	SHARPNESS	0-10	2	
	ACE	OFF, LOW MIDDLE, HIGH	WDR	Select Digital WDR. Disabled if WDR is active, not available is defog is on.
	DEFOG	OFF, ON (AUTO, MANUAL)	WDR	Overrides ACE.
	FREEZE	OFF, ON	OFF	Turns video to still frame.
	GAMMA	0.45 – 0.75	0.45	Adjusts perceived brightness
	E. ZOOM	OFF, ON (LIMIT Max 2x – 32x)	OFF	Extra digital zoom – not recommended
INTELLIGENCE	PRIVACY	OFF, ON (MASK, MODE, POSITION, SIZE, …)	OFF	Places adjustable privacy mask over video
	MOTION	OFF, ON	OFF	Not used – leave off
	DIS	OFF, ON	OFF	Digital Image Stabilization
SPECIAL FUNC	DEFECT	0-255	18	Compensates for bad pixels if they occur. Set threshold and press OK on remote to run.
	IMAGE RANGE	FULL, COMP, USER (0-32)	FULL	Sets image bit range.
	SYSTEM	NTSC, PAL	NTSC	Sets SD image mode.
	HD FORMAT	720p/30-1080p/60	1080p/30	Adjust with camera rotary only
	EX-SDI	OFF, ON	OFF	Not used.
DO NOT ADJUST.	COMM	ID, BAUDRATE, PROTOCOL	---	DO NOT ADJUST.
DISPLAY	DISP SEL	ID, TITLE, ZOOM RATIO, SYSTEM MSG	---	Select display item for plain text over video.
	SET TITLE	[keyboard]	---	Sets upper left text (40 char. limit, requires a save)
	INIT SEL	ON (ID, BAUDRATE, PROTOCOL, VERSION, INIT MSG), OFF	ON	Information displayed on Initialization – Not visible
	SET INIT MSG	[keyboard]		Sets custom initialization message – Not visible
	LANGUAGE	ENGLISH, SIMPLIFIED CHINESE, TRADITINAL CHINESE, JAPANESE	ENGLISH	Sets OSD language
[EXIT]				Return to the previous level of OSD menu or exit if at top level
[SAVE]				Stores changes in sub menus
[DFLT]				Sets the camera's OSD back to default. Recommend hard power cycle after execution.

IMPORTANT: DO NOT CHANGE BAUDRATE OR PROTOCOL! This will remove your ability to control the camera.

OSD recovery

If you change baud rate or protocol in the OSD, here's what happens and how to fix it.

The COMM section of the OSD (under SPECIAL FUNC) is for communication between the WideSHOT SE's camera block and the circuit board which communicates with it. Changes made to the Baud Rate or Protocol will prevent this board from communicating with the camera block, since they need to have matching Baud Rates and Protocols. If they don't match, you'll lose the ability to control nearly all camera functions (so please don't do it to yourself – you'll regret having to perform the following goofy recovery process…).

To recover, you'll have to temporarily change the Baud Rate and Protocol on the circuit board to match the new settings in your camera block. To do this, connect the camera's cat-5 serial cable to a PC running a Windows OS with use of a 998-1001-232 EZ Camera Control adapter (contact Vaddio Support if you need to obtain one) and a USB to serial cable. Download Vaddio Loader from our website and run it on the connected computer. Select the computer's connected COM port within Vaddio Loader and go to File > Serial Commands.

You'll now need to send the camera serial commands that will temporarily change the circuit board's Baud Rate and Protocol. The command(s) you'll send should correspond to the Baud Rate or Protocol change you made within the OSD. If you don't remember what you changed that to, you'll need to try all combinations until communication is restored.

On the Command line, in Vaddio Loader the following commands would be used:

Command	Result
81 01 08 33 00 FF	Change Protocol to VISCA
81 01 08 33 01 FF	Change Protocol to UPDATE
81 01 08 33 02 FF	Change Protocol to PELCO-P
81 01 08 33 03 FF	Change Protocol to PELCO-D
81 01 08 34 00 FF	Change Baud Rate to 38400
81 01 08 34 01 FF	Change Baud Rate to 57600
81 01 08 34 02 FF	Change Baud Rate to 19200
81 01 08 34 03 FF	Change Baud Rate to 4800
81 01 08 34 04 FF	Change Baud Rate to 115200
81 01 08 34 05 FF	Change Baud Rate to 2400

Click 'send' in Vaddio Loader to execute the Command line. A response of "90 41 FF 90 51 FF" to a command means the camera accepted and performed that command.

When communication is restored the camera will start responding to commands from the IR SHOT Commander Remote again. Access the OSD and restore the camera block's Baud Rate to 9600 and Protocol to VISCA. Power-cycle the camera (physically remove and reconnect power to either the camera or the Quick-Connect) to restore the circuit board's communication to defaults.

There are much better things to do with your time. Leave the COMM section of the OSD alone and spend the time you would have spent fixing it crafting an ornate bridge structure out of toothpicks instead.

FRAMING THE VIDEO SHOT

When framing the shot with a WideSHOT SE camera, consider and review the following elements:

- The area should be well lit and without reflective surfaces. For wall surfaces, use a flat paint or wall coverings to minimize light and audio reflections. Use neutral colors, for example; pale grey, pale blue or colors that are easy for any camera to process.
- Avoid white and black or a stark contrast color palette, avoid placing a big old whiteboard, blackboard or black curtain in the background, and avoid complex décor in view of the camera (like busy modern-art-like stuff). Avoid glass, chrome, mirrors, and glass on table tops to minimize the lighting and audio reflections.
- Always avoid having a window in the camera's shot as sunlight can be very disruptive of camera performance. Window treatments are a must for rooms with windows to achieve evenly lit space without direct sunlight.
- Never position the camera so that any ceiling lights are in the video frame. Again, no one sits anywhere near the ceiling and direct lighting in the frame can be problematic for the automatic functions of any camera.

The bottom line is simple, give the camera a chance to work well in the room and excellent video is the result. There are many room set up primers available on today's internet for reference.

Drawing: A Small 8' wide x 10' long Conference Room with a WideSHOT SE

The WideSHOT SE has a horizontal FOV of 111° and is an excellent choice for small (huddle) conferencing spaces that range from 8' (2.44m) to 12' (3.66m) in width x depth.

In this example, the seated subjects are 3.3ft (1m) away from the camera and the WideSHOT SE can easily capture all of the meeting participants from this distance

The WideSHOT SE can be digitally zoomed (with dip switch 5) into a tighter shot for a conference room with fewer participants as well.
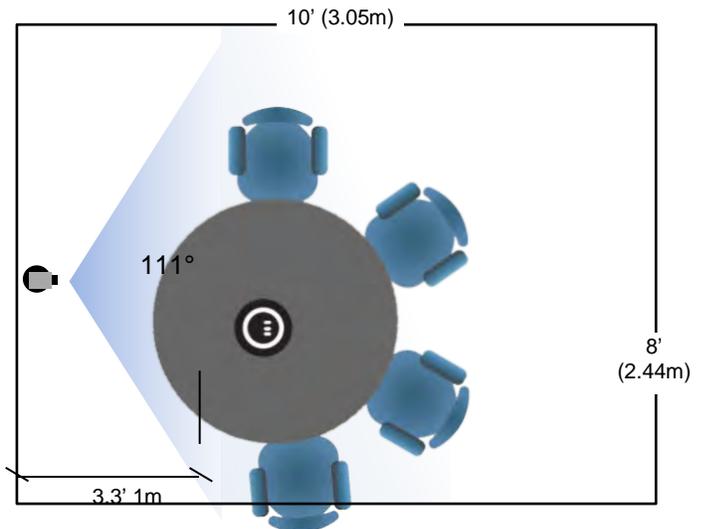
Drawing: A Bigger Small Room, 10' wide x 12' long Conference Room with WideSHOT SE

- WideSHOT SE with no zoom - Blue
- WideSHOT SE with digital zoom - Red

The WideSHOT SE camera set to the full wide end of 111°, in this example, is too wide for this room and will not render any real detail such as facial expressions and other mannerisms of the meeting participants. *Remember*, with a real wide shot, a tall shot is part of the deal too.

The WideSHOT SE can be zoomed into a tighter shot (3 X Digital Zoom Mode with dip switch 5) allowing all the subjects in this room to be seen on camera while still providing the details needed for effective visual communications.

12' (3.66m)

3 X Digital
Zoom Mode

12'
(3.66m)
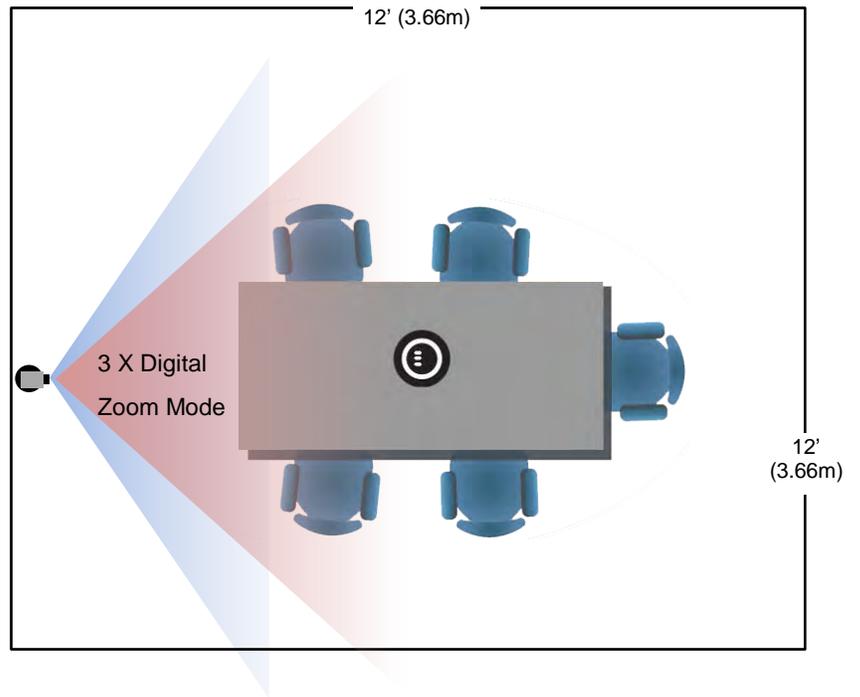
QUICK-CONNECT USB AND QUICK-CONNECT USB MINI DETAILS AND COMPATIBILITY

The Quick-Connect USB and USB Mini Interfaces use UVC (Universal Video Class) drivers for USB 2.0 video and do not require the loading of any other drivers to run on the PC. The maximum USB streaming resolution is 720p/30. Resolution is auto-negotiated.
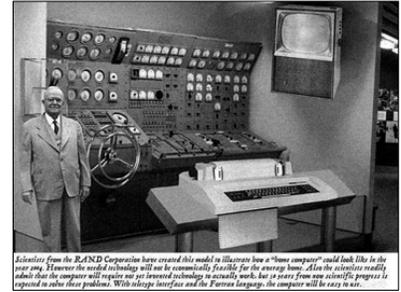
Compatibility - Web Browsers:

- Internet Explorer
- Safari
- Chrome
- Firefox

Compatibility with Soft Conferencing Clients

The Quick-Connect USB and USB Mini are compatible with most soft conferencing clients (such as Google Hangouts, Zoom, Vidyo, and Skype for Business) and with standards-based media players, and new programs that it can provide a video source to are released all the time.

UC soft-client and other software manufacturers update their products to add new features or interfaces. This may introduce changes in the way that they interact with UVC standards-based or MJPEG video sources on your existing hardware. Vaddio provides a continuing research and development effort to ensure compatibility with other manufacturer's products. If incompatibilities are found, contact our Support team and they will investigate for possible solutions.

USB 2.0 UVC Driver Compatibility

The USB 2.0 UVC (Universal Video Class) video driver resolution table is an internal list of resolutions available for the Host PC and the Quick-Connect USB Mini to negotiate and use for any approved/tested USB application. Typically, the highest resolution possible between both the PC and Quick-Connect USB Mini is used.

Table: Supported UVC Resolutions

Format	Resolution	Frame Rate	Aspect Ratio
MJPEG **Note:** The bandwidth of USB 2.0 limits the maximum resolution to 720p/30 using MJPEG compression.	1280 x 720	15/30	16:9
	960 x 544	15/30	16:9
	704 x 576	15/30	4:3
	640 x 480	15/30	4:3
	640 x 360	15/30	16:9
	424 x 240	15/30	4:3
	352 x 240	15/30	4:3
	320 x 240	15/30	4:3
	320 x 180	15/30	16:9

QUICK-CONNECT USB INTERNAL WEB PAGES AND CONTROL

The internal web pages will allow control of the Quick-Connect USB and control of the attached camera via a network connection. These web pages will allow the user or administrator to set security passwords, change the IP address, view diagnostics, access the firmware upgrade page and more!

DHCP IP Set-up (Dynamic Host Configuration Protocol):

If the LAN has a DHCP (dynamic host configuration protocol) server, then the IP address, gateway and routing information will automatically be assigned. The QUSB firmware is defaulted to DHCP and will attempt to dynamically obtain an IP address using DHCP, but it will fall back to the default address of **169.254.1.1** if no DHCP server can be found.

Static IP Set-up:

The static IP can be assigned either through the network or directly with a computer using a network cable (depending on the age of the computer, you may need a cross-over network cable). Either way the steps are the same for network or direct connection to a computer. The default address of the QUSB camera is **169.254.1.1** and the Subnet mask is **255.255.0.0**. Different computer OS types all have their own way of doing things (without question), but they are essentially doing the same stuff, changing the IP address so the web pages of the QUSB are accessible.

### Quick-Connect USB Web Pages Tour:

QUSB Screen Shot: Login

The QUSB web interface is intended as a user's camera control page at one level, and an administrator's management tool at another level, which requires password authentication for access.

The Login Page will appear if there is a user password assigned by the administrator. Assigning a user password can limit access to camera controls to only trusted users. The administrator can set the password for the user account (whose Username will be 'user') from the admin interface. If no user password is assigned, the web page will automatically open to the Camera Control page.

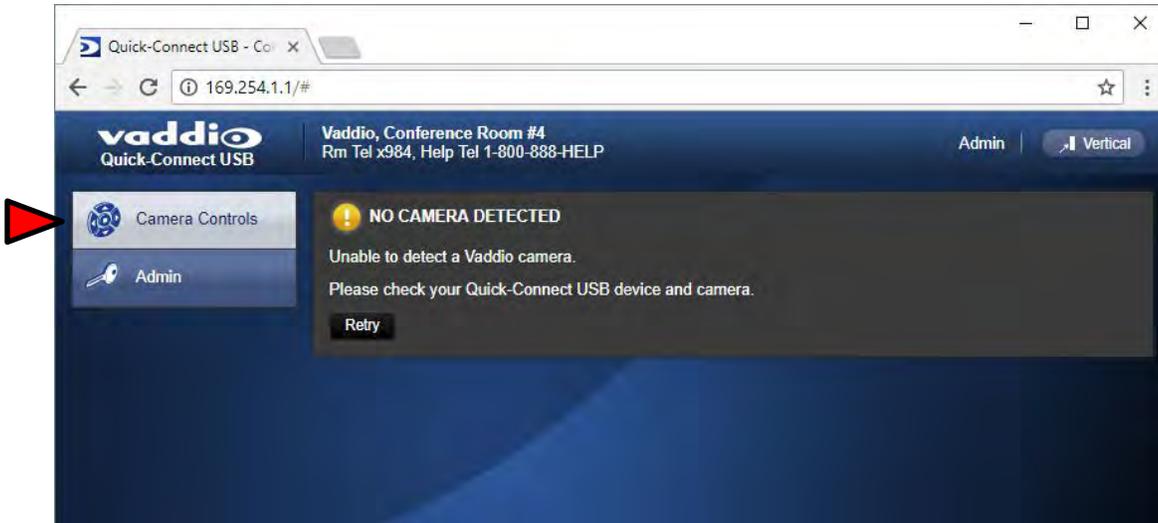Admin access has the following default credentials:
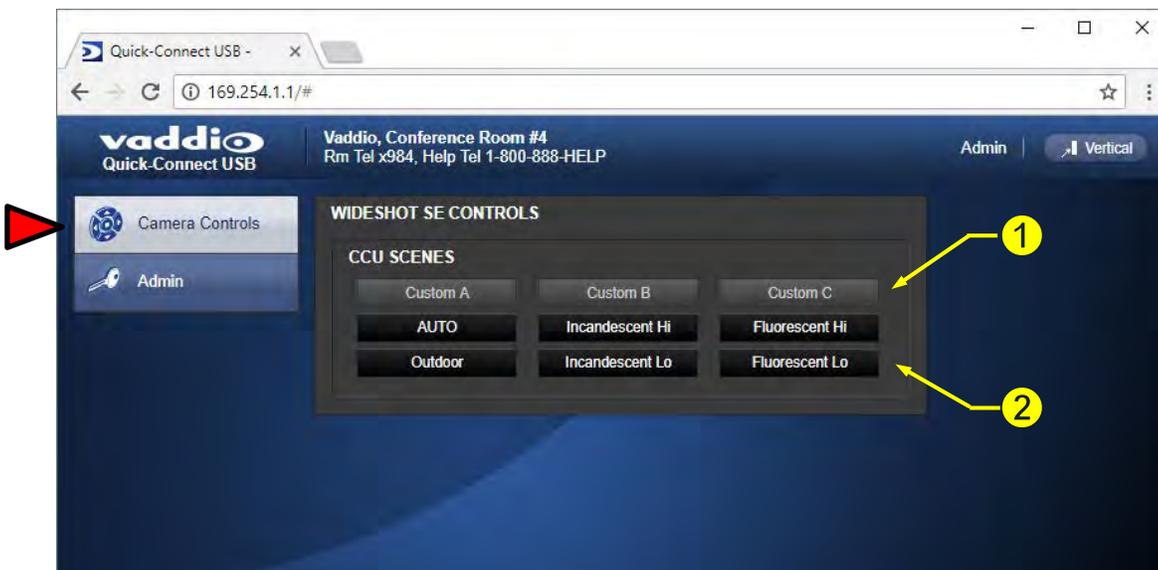
Username: admin

Password: password
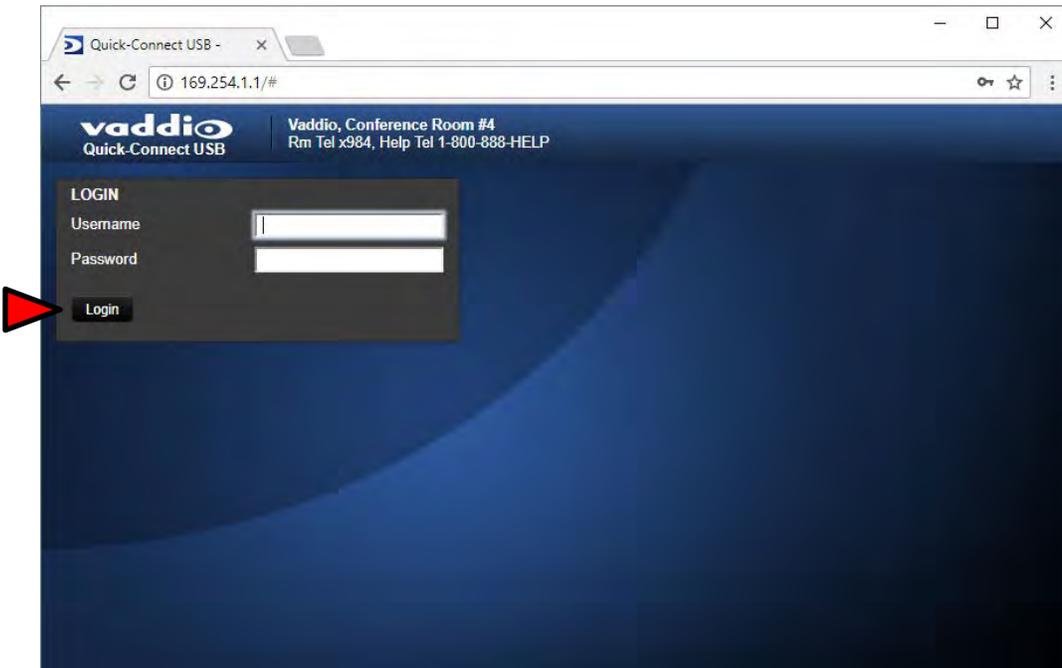
QUSB Screen Shot: Camera Control Page - No Camera Detected

The No Camera Detected window will appear if the Quick-Connect USB has no communication with the camera. Check the camera power and serial connections if no camera is found within 30 seconds of initialization. The QUSB controls the camera over the serial connection.

QUSB Screen Shot: User Menu - Camera Control Page

### 1) CCU Scenes - Custom A, Custom B and Custom C

There are 3 preset memory locations for scenes configured and stored on the Camera Settings Menu Tab on the WideSHOT SE CCU Scenes, under Color Settings. The **Admin** has control to set up the scenes and the **User** can recall these presets by clicking on Custom A, B or C.

2) Preset Lighting Scenes

Six preconfigured lighting presets were set by the technical folks at Vaddio (really…Scott set all the presets) that are meant to be used in certain lighting conditions or scenarios. These lighting presets include; Automatic, Incandescent Hi, Incandescent Lo, Fluorescent Hi, Fluorescent Lo and Outdoor (character limitations are why the names are spelled so gnarly). Set this control to the best setting for the room where the camera is used.

QUSB Screen Shot: Admin Log-in

By selecting the Admin Menu Bar, the Admin Login password pop-up window will appear and await the entry of the password. By entering the Admin menus, 9 more menu keys appear on the left side of the screen. The default Admin password is **password**.
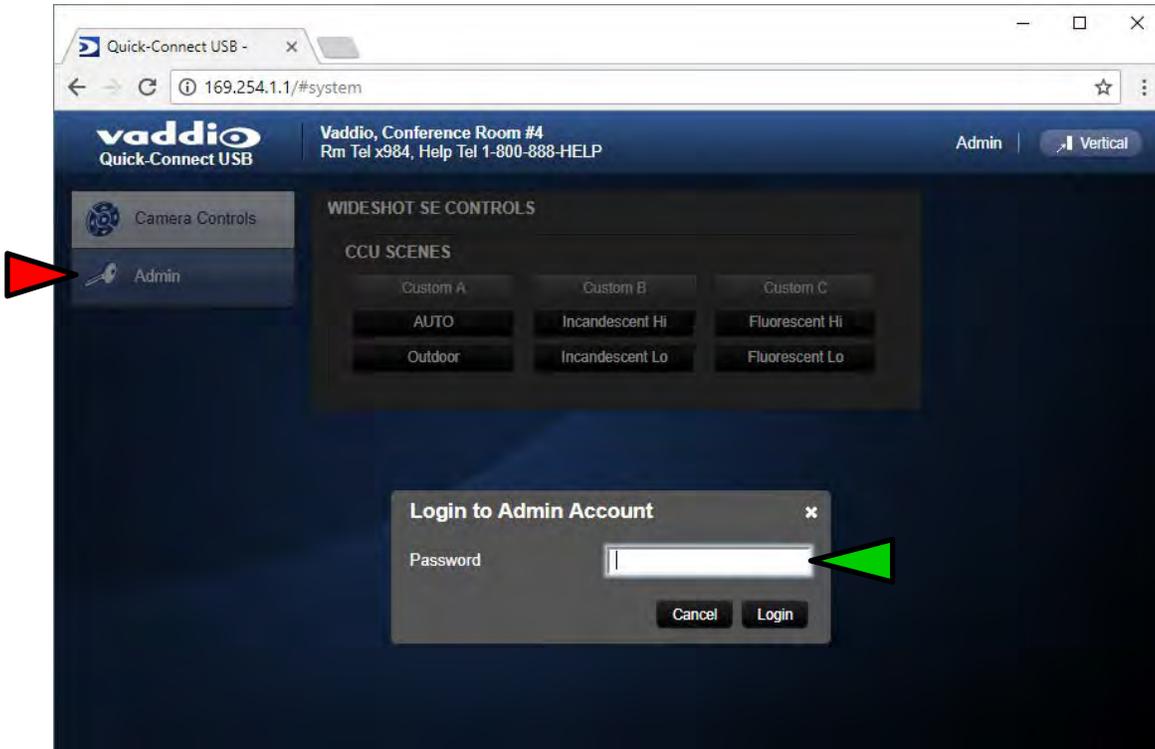
The default Admin Account password is **password**

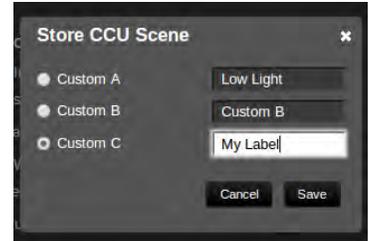**Cancel and Save Buttons**

LOOK HERE **Note:** At the bottom of each of the admin menus, there is a Cancel and Save button. Please click on the Save button before exiting each web page if the changes made require retention. Otherwise hit Cancel to delete any changes made to the page while exiting.

**QUSB Screen Shot: Admin Menu - Camera Settings Page**

The Camera Settings page provides the parameters to allow the end user to match the camera to the environment, set the CCU presets and make startup assignments.

1) **Load CCU Scene at Startup:** Check this box to load a CCU (color correction unit) Scene into the camera when the camera powers up. The pull down menu will allow the selection of one of the 6-factory scenes, or any of the 3-user defined scenes.
2) **CCU Scenes:** Click on any of these 9 buttons to load one of the CCU scenes into the camera. These scenes can be fine-tuned if changes are needed, and stored into any of the three admin defined scenes.
3) **Color Settings:** When painting or shading camera scenes for specific lighting situations or environments, these attributes can be adjusted for matching cameras in the same area. The parameters within the Color Settings section are defined below (top to bottom):
- **Auto White Balance check box:** When checked, camera will operate in Auto White Balance Mode, when unchecked, the camera will be in Manual White Balance Mode to allow for adjustment of Red and Blue Gain.
  - **Red Gain:** Move the adjustment slider as required for amount of Red Gain desired. A numeric value will be displayed in the box to the right of the slider.

- **Blue Gain:** Move the adjustment slider as required for amount of Blue Gain desired. Numeric value will be displayed in the box to the right of the slider.
- **Detail:** Move the adjustment slider as required for amount of detail (Aperture) desired. Numeric value will be displaed in the box to the right of the slider. **Note:** If the detail is too high, the video can look grainy and appear wicked noisy.
- **Chroma:** Move the adjustment slider as required for the amount of Chroma (Color Vibrancy) desired. A numeric value will be displayed in the box to the right of the slider.
- **Store CCU Scene button:** Once the desired scene adjustments have been made, this button will activate a pop-up menu that can be used to store this scene into one of the three User Defined Scene locations. These user defined scenes can be named as required for clarity and can be adjusted and re-saved at any time.

4) **Custom CCU Scene Labels:** The labels for the (3) User Defined customizable Scenes can be changed as needed. Move the cursor into the appropriate window and edit the text. Press Save to store these changes or press Cancel to exit this window.
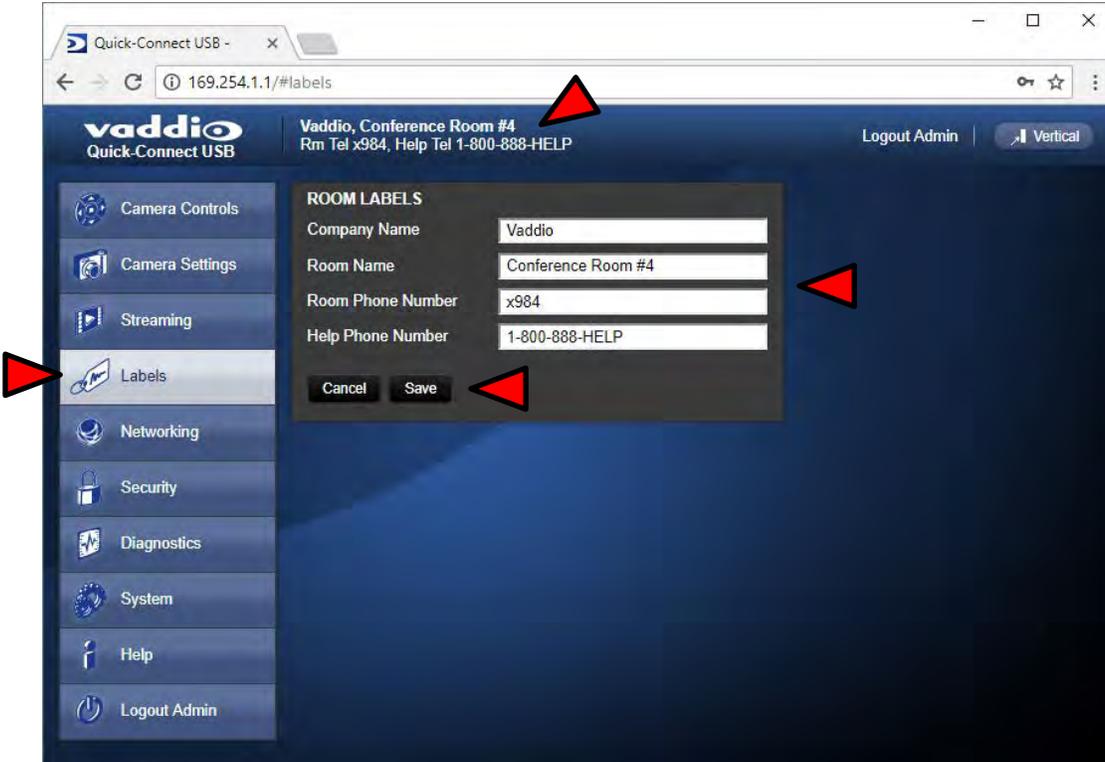
QUSB Screen Shot: Admin Menu - Streaming Page
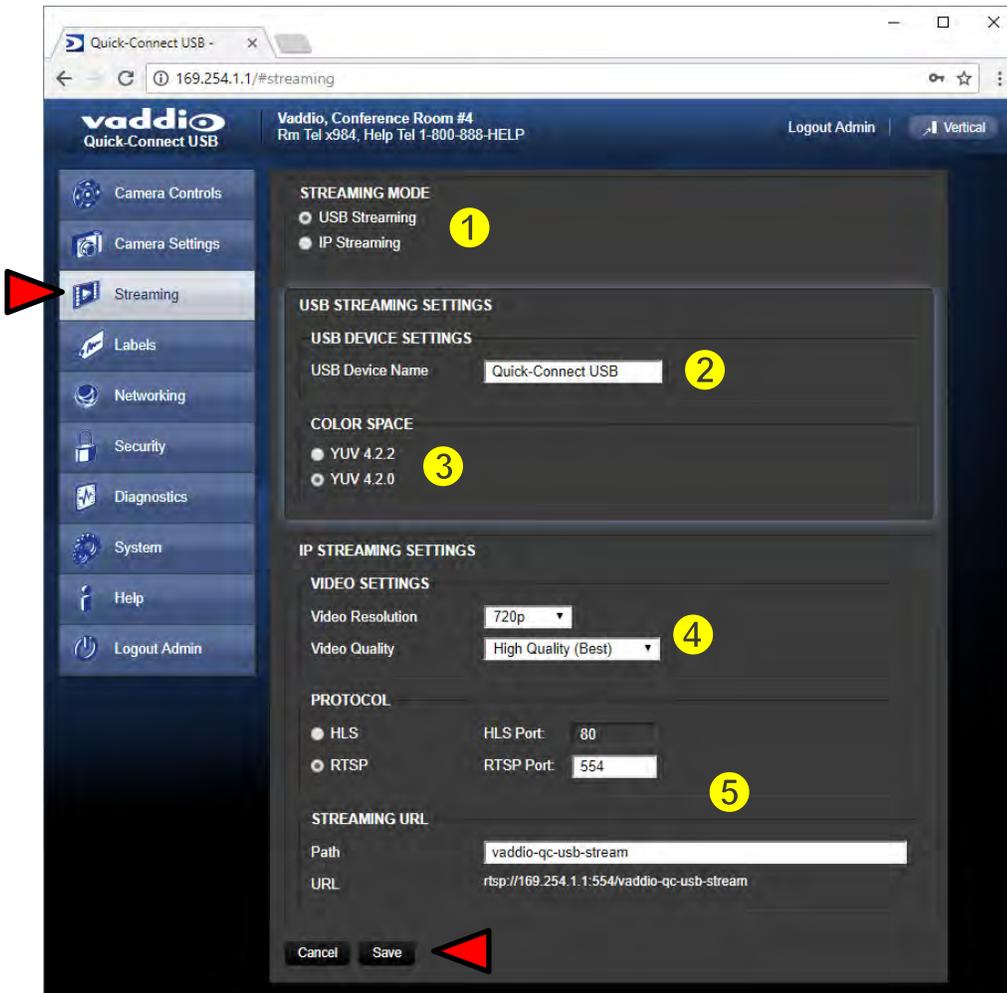
1) **Streaming Mode**: Streaming can be set for either USB 2.0 streaming (MJPEG) or IP streaming (H.264); but not both at the same time. The QUSB can stream USB and accept IP control, or it can IP stream with IP control. Choose the streaming mode here.

2) **USB Device Name:** Allows the user to use a "friendly name" per system. In a BYOD format, the user has the ability to move between different UC conference rooms and have the ability to assign the PC's USB resources to that room.

3) **Color Space**: The UVC drivers will negotiate the color depth, but this parameter allows the user to reduce the color depth to 4:2:0, which is used with the older/cheaper webcams and applications, where image quality is not as critical. The 4:2:2 color is used by many applications that take advantage of the performance of the camera where the colors are more vibrant and precise.

4) **IP Streaming Settings:** The Video Settings allow the selection of the target performance for the IP Streaming. The QUSB is set up for a variable bit rate and the user can select the video resolution and the quality, such as High Quality (Best), Standard Quality (Better) and Low Bandwidth (Good). Every effort to eliminate *stupefyingly bad combinations* with the 5 or 6 parameters that make up the image size, quality, bit rate, bandwidth etc… has been made, so you can't pick 1080p at a bit rate of 128Kbps, which would look totally wicked awful - and probably wouldn't work anyway.

5) **Streaming Protocol and URL**: Admin chooses the streaming type and the port number for RTSP. The HLS port is always on 80. The supported protocols are RTSP and HLS (Apple's HTTP Live Streaming). RTSP is best for live applications, where HLS serves the Apple iOS devices and is better for playback due to the amount of buffering the HLS has built-in. The Streaming URL auto populates and that path can be changed.

When finished setting up the streaming parameters click Save to put the changes into effect or cancel, which will not save the configuration
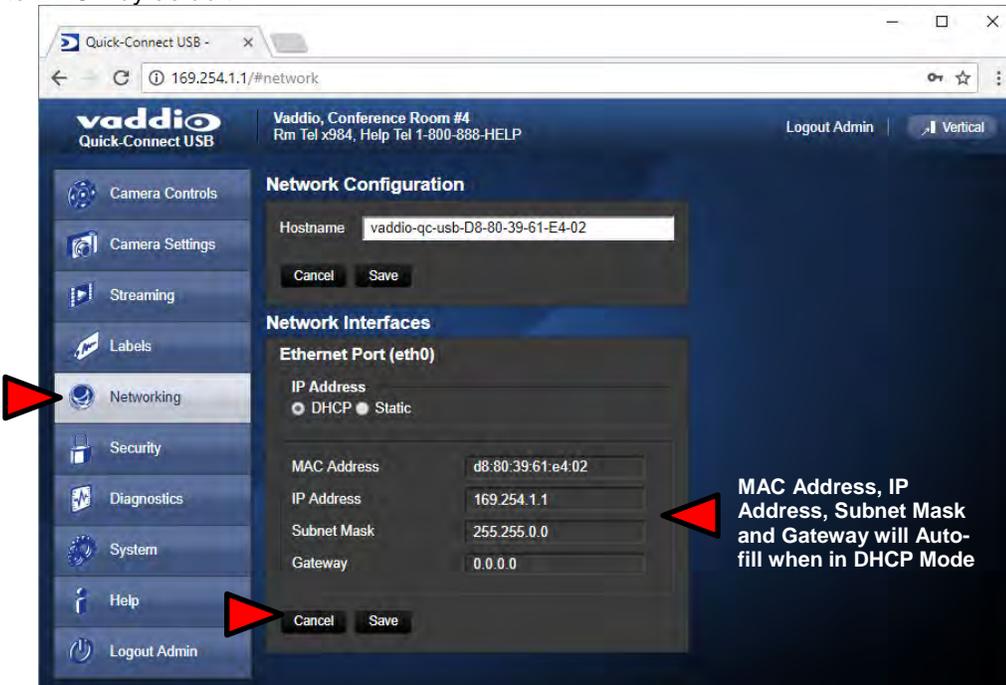
QUSB Screen Shot: Admin Menu - Room Labels

The Room Labels menu allows the administrator to label the company name, room name, room phone and help phone on a per QUSB basis. The labels appear on every page at the top/middle of the page. Simply enter the room information and click Save.


QUSB Screen Shot: Admin Menu – Networking – DHCP Configuration

Under the Networking menu, the Network Configuration and Network Interfaces are displayed. This is where the Network administrator assigns either DHCP or a Static address and the associated parameters. The QUSB is set to DHCP by default.

QUSB Screen Shot: Admin Menu – Networking – Static IP Configuration

If Static IP is used, the IP Address, Subnet Mask and Gateway are manually entered. Click on Save to keep the Static IP information or Cancel to cancel.
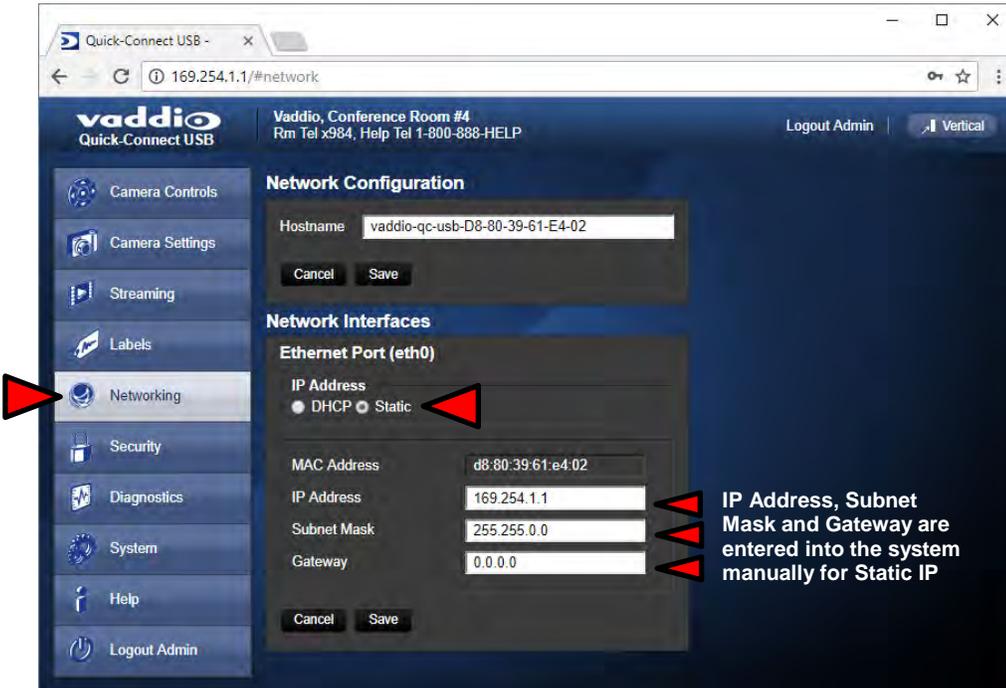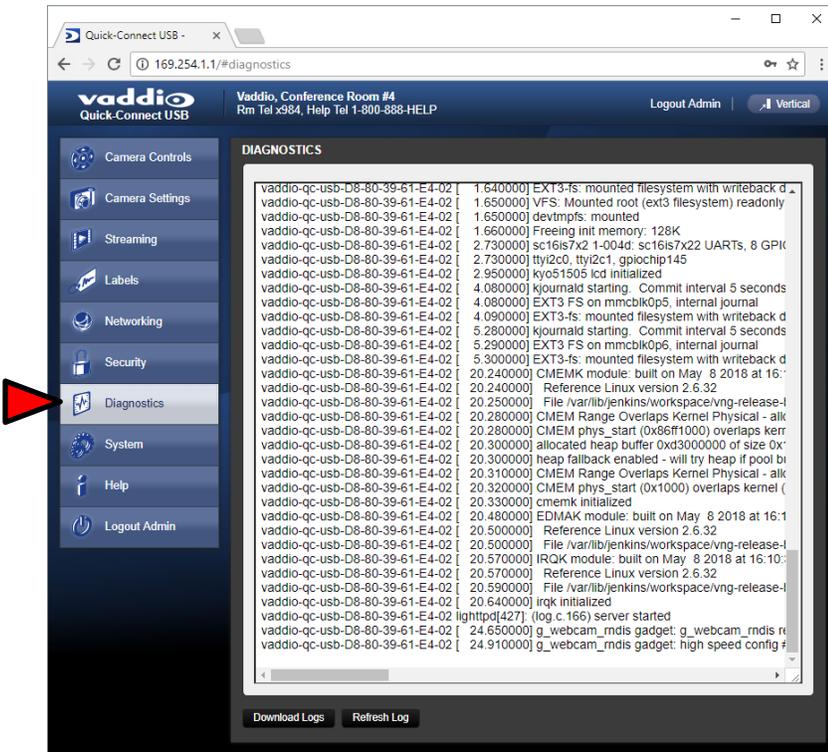

QUSB Screen Shot: Admin Menu - Security

The Security menu allows the Admin to create or update the "user" password and update the default or current "admin" password. Updating the "user" password for the first time will create a secure login page when the web interface is first brought up. The default "admin" password is: **password**. The Network administrator can reassign the user name and password as well as the admin password. There is only one "user" password and one "admin" password at any given time. If changes are made, click on Save to store the change.
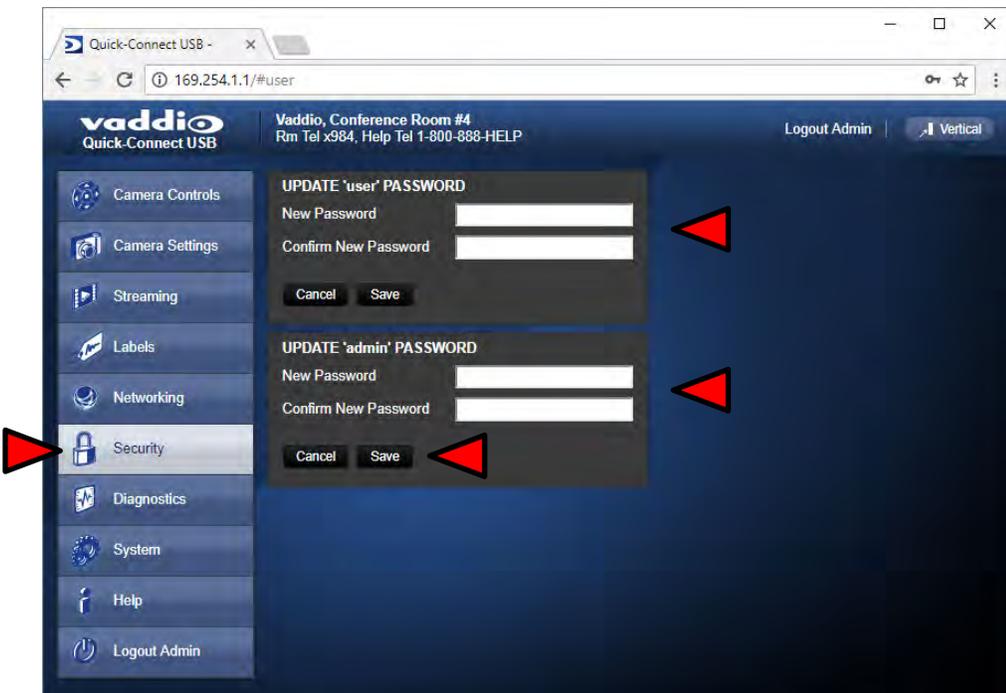
Screen Shot: Admin Menu - Diagnostics

Diagnostics menu button will display the diagnostic log. This may help the Vaddio technical support team diagnose issues with the QUSB and the attached camera.

QUSB Screen Shot: Admin Menu - System Menu

The System Menu is where the Firmware Updates are performed. There will be firmware updates and upgrades over the life of the Quick-Connect USB. The file for the firmware update is chosen in this menu and the update is started here too. A remote system Reboot and Restore to Factory Settings is also available.
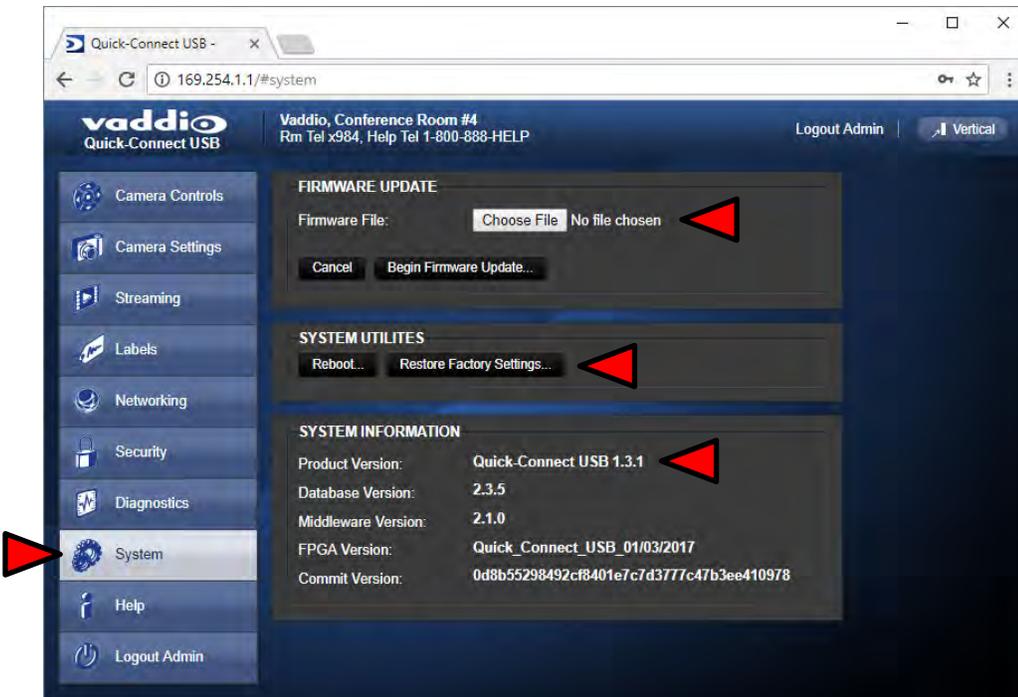
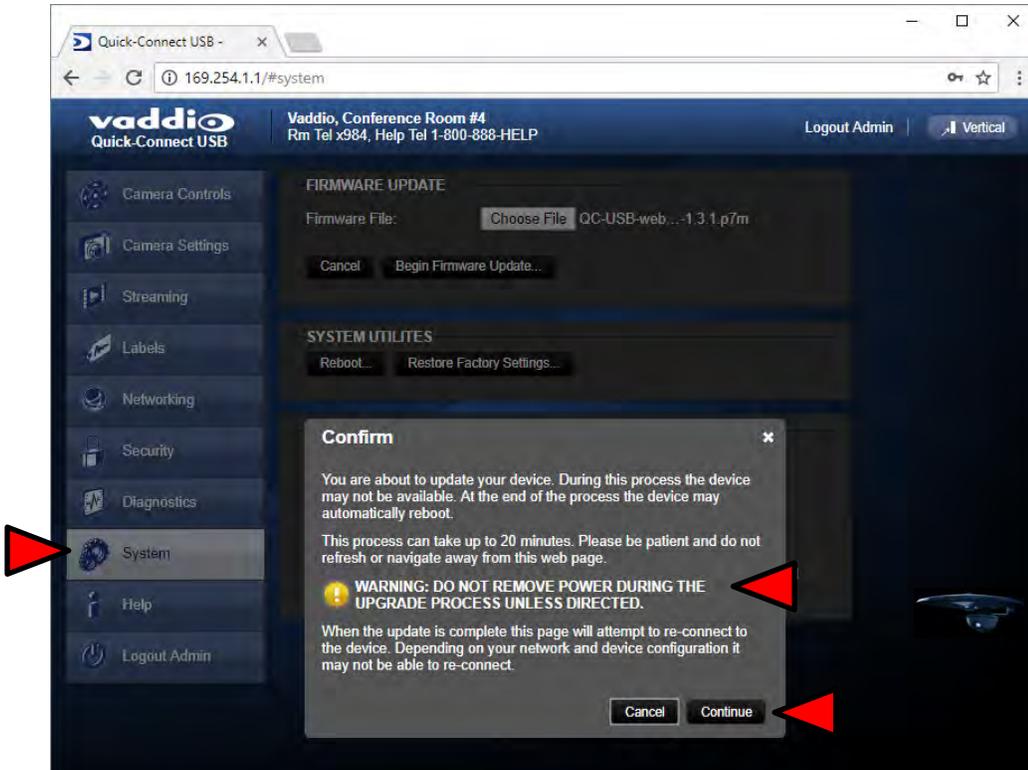## QUSB Screen Shot: Admin Menu - Update Confirmation

After clicking on "Begin Firmware Update…" a confirmation pop-up and warning will be displayed. Please contact Vaddio Technical Support for assistance with updates if required. Please read and completely understand the pop-up warnings as it is easy to lose patience waiting for updates. Click on continue to start the update.

QUSB Screen Shot: Admin Menu - Update in Progress

After the firmware load has been started, a pop-up screen will advise patience and notify, in terms of a percentage completed, the progress of the firmware update load. Again, please don't interrupt the firmware load.

QUSB Screen Shot: Admin Menu - Help

Service/Help information can be found under the Help menu. Phone numbers and e-mail to contact Support are listed here. A direct link to our online support resources like manuals, FAQ's and firmware files is also available.
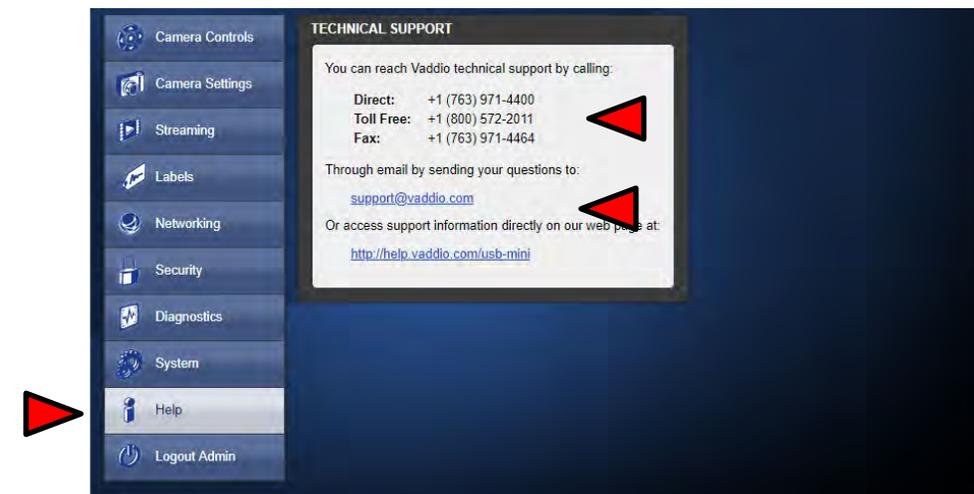
TECHNICAL SUPPORT NOTE:

Please work with your Network Administrator prior to calling Vaddio for technical support.
Please have on-site network personnel initiate tech support calls with Vaddio only.

QUICK-CONNECT USB MINI INTERNAL WEB PAGES AND CONTROL

The QMini is capable of streaming video over USB, or using IP over USB to control the connected camera. To toggle the QMini's control mode press the 'MODE' button on the device See Front Panel with Feature Call-outs. The internal web pages will allow control of the Quick-Connect USB Mini and control of the attached camera via a network connection. These web pages will allow the user or administrator to set security passwords, change the IP address, view diagnostics, access the firmware upgrade page and more!

Quick-Connect USB Mini Web Pages Tour:

QMini Screen Shot: Login

The QMini web server is intended as a user's camera control page at one level, and an administrator's management tool at another level, which requires password authentication for access.

The Login Page will appear if there is a user name assigned by the administrator. The administrator can set the password for the User account. If no user password is assigned, the web page will automatically open to the camera control page when the USB streaming mode is toggled to web server control mode. In web server mode, the video is switched off, so as mentioned repetitively several times earlier, the IR SHOT Commander Remote is the best way to control the camera in real time.
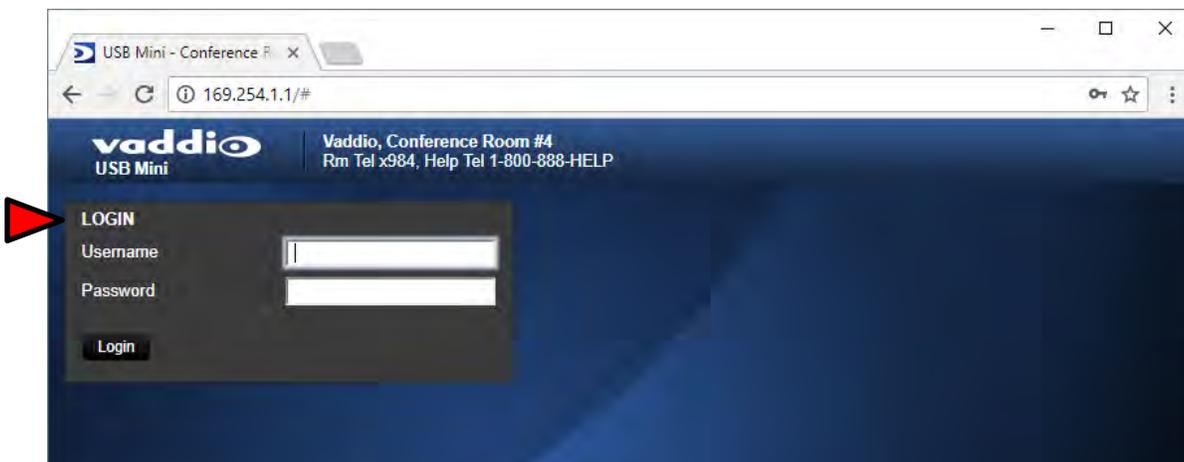
QMini Screen Shot: Camera Control Page - No Camera Detected

The No Camera Detected window will appear if the Quick-Connect USB Mini has no communication with the camera. Check the camera power and serial connections if no camera is found within 30 seconds of initialization. The USB Mini controls the camera over the serial connection.

QMini Screen Shot: User Menu - Camera Control Page
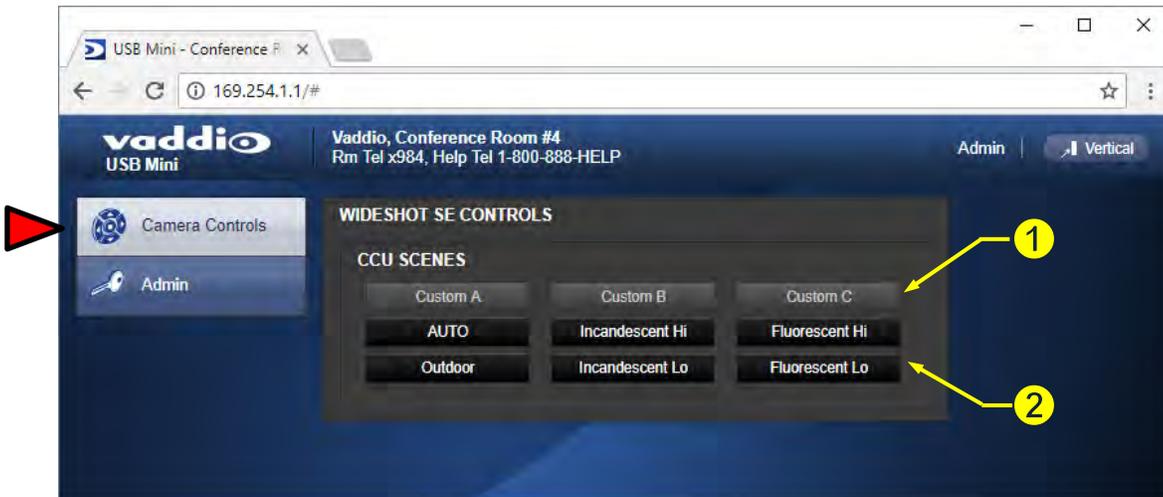

1) CCU Scenes - Custom A, Custom B and Custom C

There are 3 preset memory locations for scenes configured and stored on the Camera Settings Menu Tab on the WideSHOT SE CCU Scenes, under Color Settings. The **Admin** has control to set up the scenes and the **User** can recall these presets by clicking on Custom A, B or C.

2) Preset Lighting Scenes

Six preconfigured lighting presets were set by the technical folks at Vaddio (really…Scott set all the presets) that are meant to be used in certain lighting conditions or scenarios. These lighting presets include; Automatic, Incandescent Hi, Incandescent Lo, Fluorescent Hi, Fluorescent Lo and Outdoor (character limitations are why the names are spelled so gnarly). Set this control to the best setting for the room where the camera is used.

QMini Screen Shot: Admin Log-in

By selecting the Admin Menu Bar, the Admin Login password pop-up window will appear and await the entry of the password. By entering the Admin menus, 9 more menu keys appear on the left side of the screen. The default Admin password is **password**.

The default Admin Account password is **password**

Cancel and Save Buttons

LOOK HERE
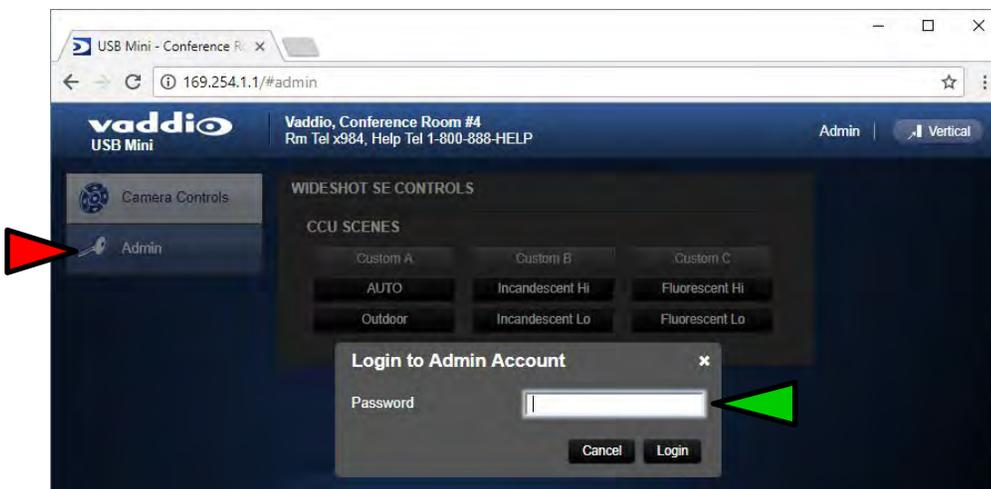
Note: At the bottom of each of the admin menus, there is a Cancel and Save button. Please click on the Save button before exiting each web page if the changes made require retention. Otherwise hit Cancel to delete any changes made to the page while exiting.

QMini Screen Shot: Admin Menu - Camera Settings Page

The Camera Settings page provides the parameters to allow the administrator to match the camera to the environment, set the CCU presets and make startup assignments.

1) **Load CCU Scene at Startup:** Check this box to load a CCU Scene into the camera when the camera powers up. The pull down menu will allow the selection of one of the 6-factory scenes, or any of the 3-user defined scenes.
2) **CCU Scenes:** Click on any of these 9 buttons to load one of the CCU scenes into the camera. These scenes can be fine-tuned if changes are needed, and stored into any of the three admin defined scenes.
3) **Color Settings:**   When painting or shading camera scenes for specific lighting situations or environments, these attributes can be adjusted for matching cameras in the same area. The parameters within the Color Settings section are defined below (top to bottom):
   - **Auto White Balance check box:** When checked, camera will operate in Auto White Balance Mode, when unchecked, the camera will be in Manual White Balance Mode to allow for adjustment of Red and Blue Gain.

- **Red Gain:** Move the adjustment slider as required for amount of Red Gain desired. A numeric value will be displayed in the box to the right of the slider.
- **Blue Gain:** Move the adjustment slider as required for amount of Blue Gain desired. Numeric value will be displayed in the box to the right of the slider.
- **Detail:** Move the adjustment slider as required for amount of detail (Aperture) desired. A numeric value will be displayed in the box to the right of the slider. **Note:** If the detail is too high, the video can look grainy and appear wicked noisy.
- **Chroma:** Move the adjustment slider as required for the amount of Chroma (Color Vibrancy) desired. A numeric value will be displayed in the box to the right of the slider.
- **Store CCU Scene button:** Once the desired scene adjustments have been made, this button will activate a pop-up menu that can be used to store this scene into one of the three User Defined Scene locations. These user defined scenes can be named as required for clarity and can be adjusted and re-saved at any time.

4) **Custom CCU Scene Labels:** The labels for the (3) User Defined customizable Scenes can be changed as needed. Move the cursor into the appropriate window and edit the text. Press Save to store these changes or press Cancel to exit this window.

QMini Screen Shot: Admin Menu - Streaming Page
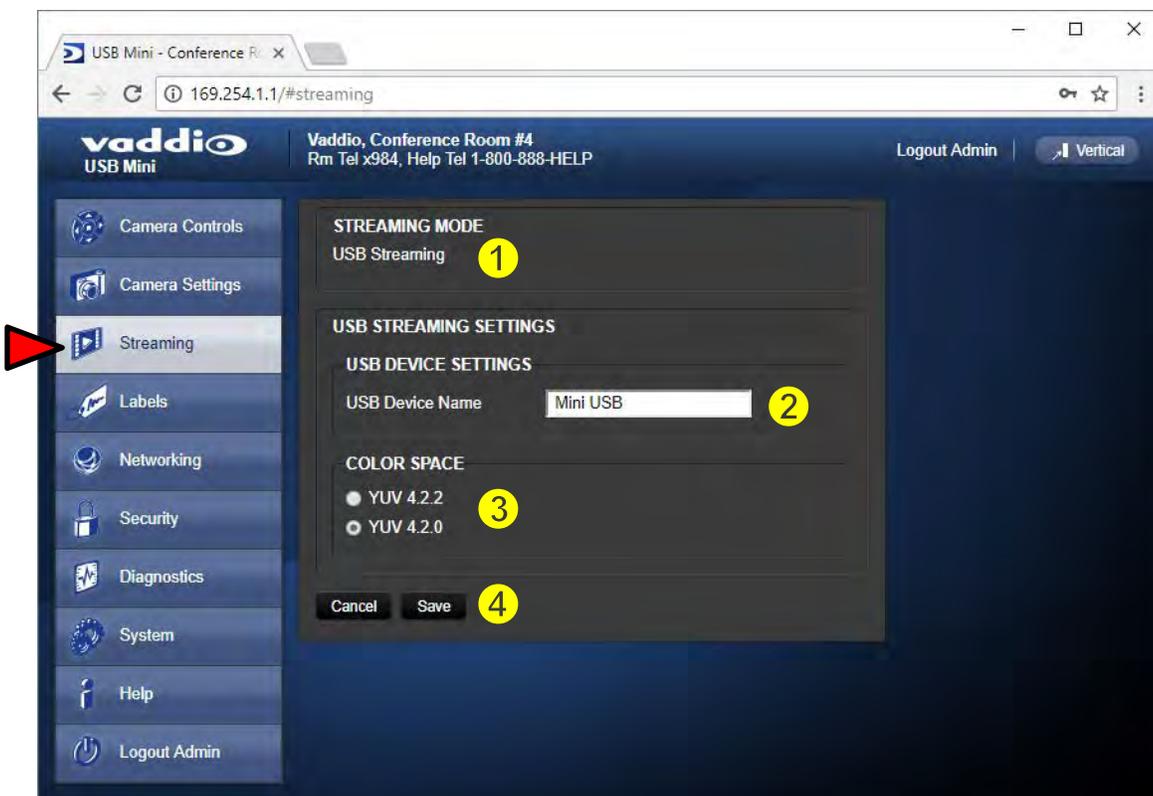
1) **Streaming Mode**: Streaming for the USB Mini is USB 2.0 streaming (MJPEG).
2) **USB Device Name:** The USB device "friendly" name is displayed here. This parameter is editable.
3) **Color Space**: The UVC drivers will negotiate the color depth, but this parameter allows the user to reduce the color depth to 4:2:0, which is used with the older/cheaper webcams and applications, where image quality is not as critical. The 4:2:2 color is used by many applications that take advantage of the performance of the camera where the colors are more vibrant and precise.
4) When finished setting up the streaming parameters, click **Save** to put the changes into effect or cancel, which will not save the configuration.

QMini Screen Shot: Admin Menu - Room Labels

The Room Labels menu allows the administrator to label the company name, room name, room phone and help phone on a per USB Mini basis. The labels appear on every page at the top/middle of the page. Simply enter the room information and click Save.
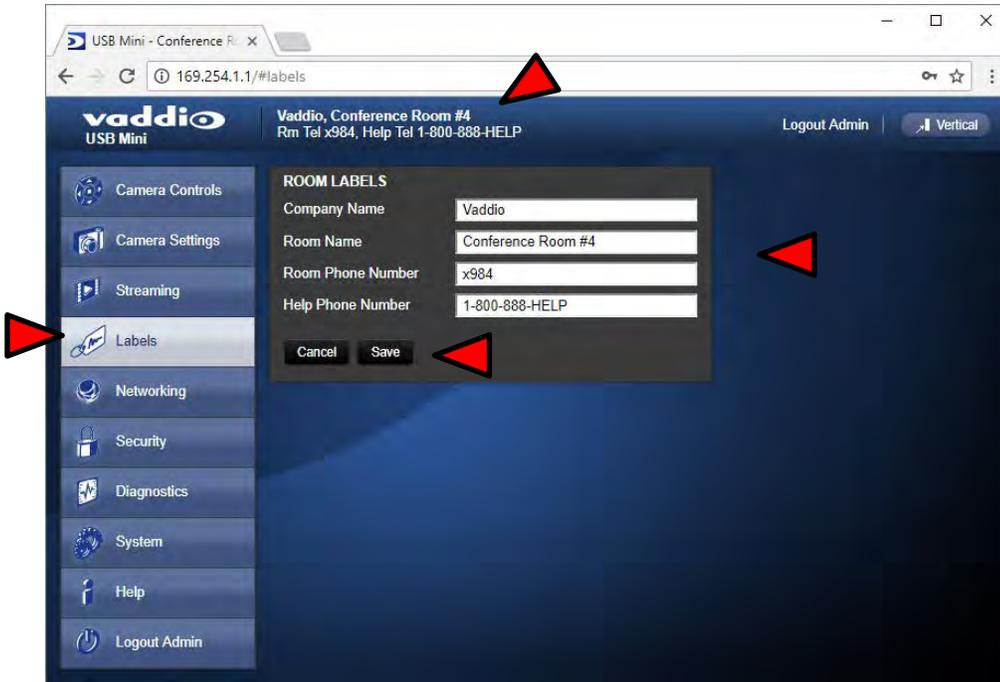
QMini Screen Shot: Admin Menu - Networking

Under the Networking menu, the Network Configuration page displays the Hostname of the device. The USB Mini uses Ethernet over the USB port. The MAC Address is unique, the IP address is set to 169.154.1.1 and the Subnet Mask set to 255.255.0.0. These parameters are not editable.

![Vaddio logo]
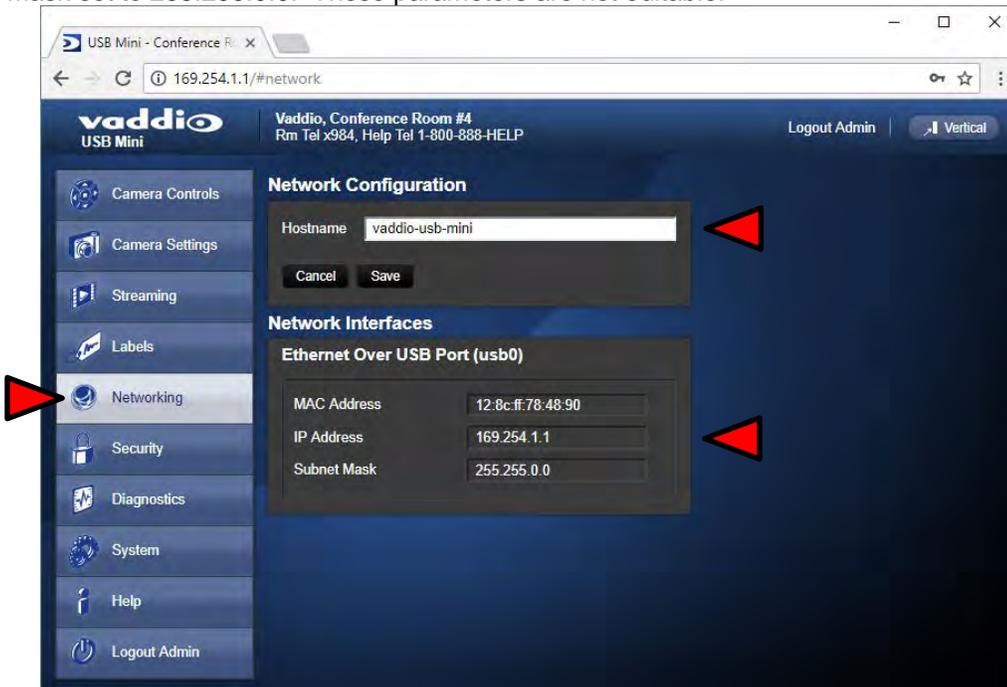
QMini Screen Shot: Admin Menu - Security

The Security menu allows the Admin to **UPDATE "user" PASSWORD** and **UPDATE "admin" PASSWORD.** The default "user" password is: **password.** The default "admin" password is also: **password**. The Network administrator can reassign the user name and password as well as the admin password. There is only one "user" password and one "admin" password at any given time. If changes are made, click on Save to store the change.
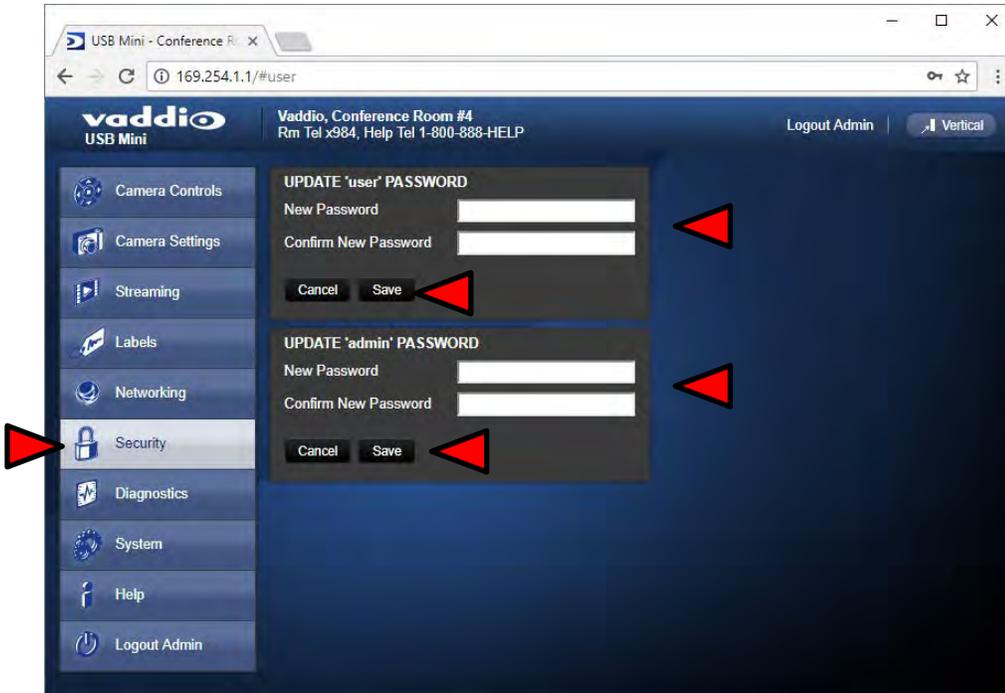
Vaddio

QMini Screen Shot: Admin Menu - Diagnostics

Diagnostics menu button will display the diagnostic log. This may help the Vaddio technical support team diagnose issues with the USB Mini and the attached camera.
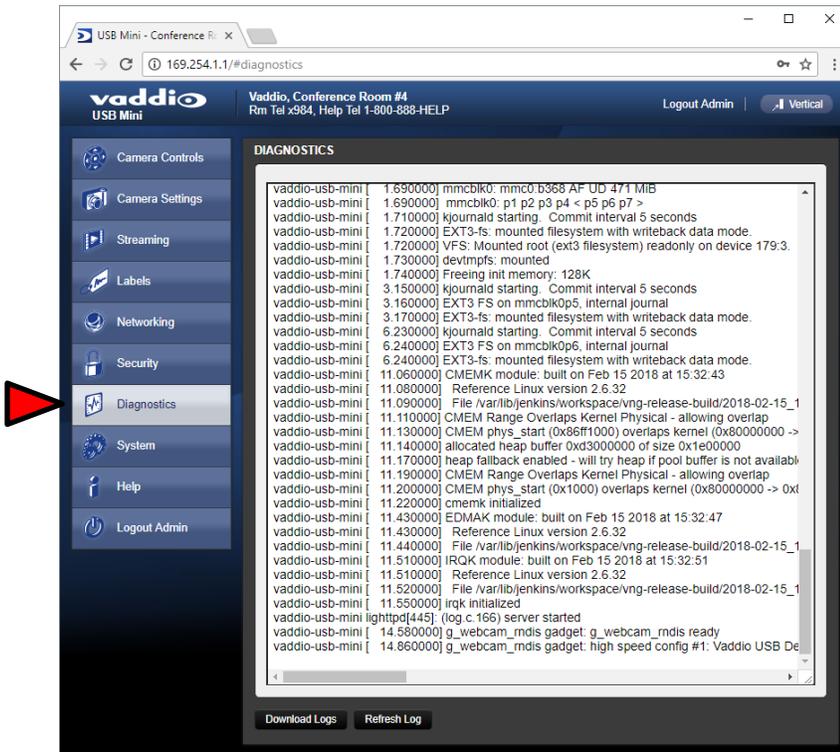
QMini Screen Shot: Admin Menu - System Menu

The System Menu is where the Firmware Updates are performed. There will be firmware updates and upgrades over the life of the Quick-Connect. The file for the firmware update is chosen in this menu and the update is started here too.
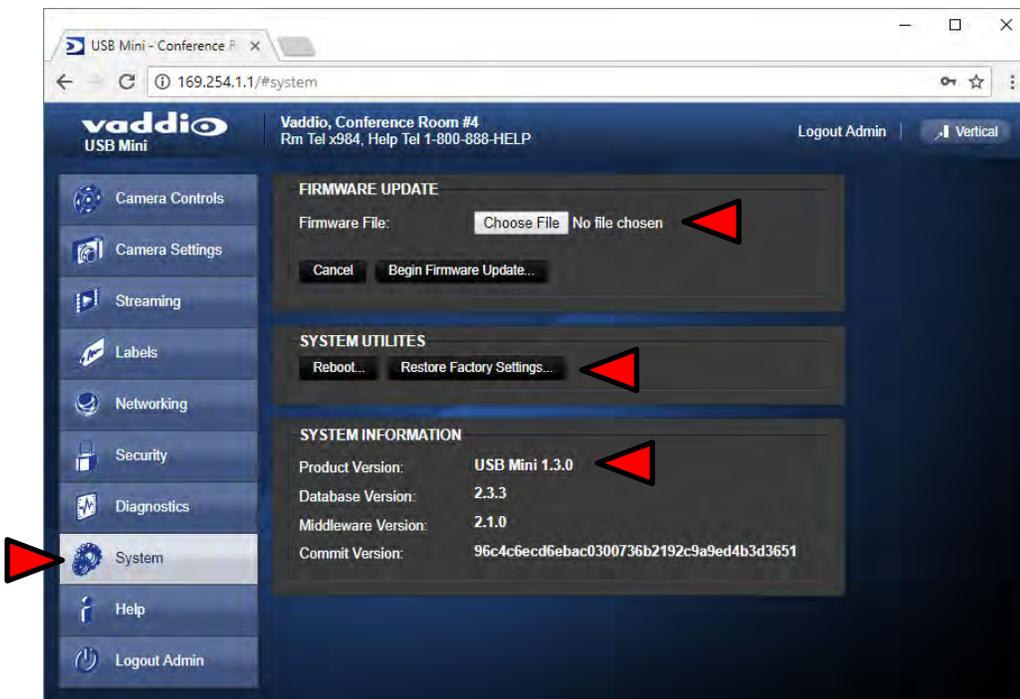
QMini Screen Shot: Admin Menu - Update Confirmation

After clicking on "Begin Firmware Update…" a confirmation pop-up and warning will be displayed. Please contact Vaddio Technical Support for assistance with updates if required. Please read and completely understand the pop-up warnings as it is easy to lose patience waiting for updates. Click on continue to start the update.
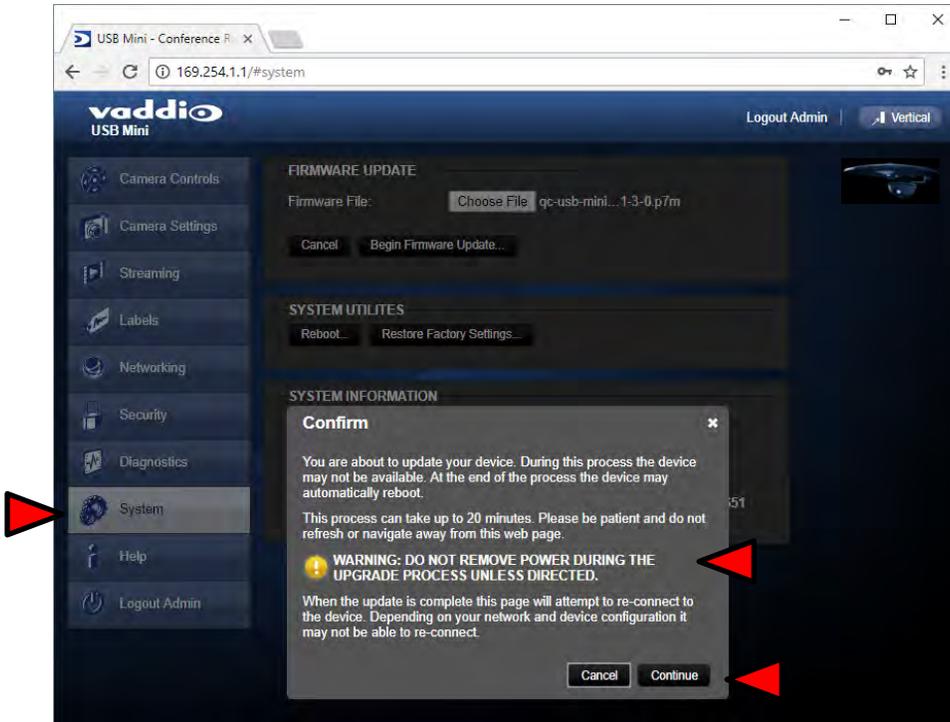
QMini Screen Shot: Admin Menu - Update in Progress

After the firmware load has been started, a pop-up screen will advise patience and notify, in terms of a percentage completed, the progress of the firmware update load. Again, please don't interrupt the firmware load.
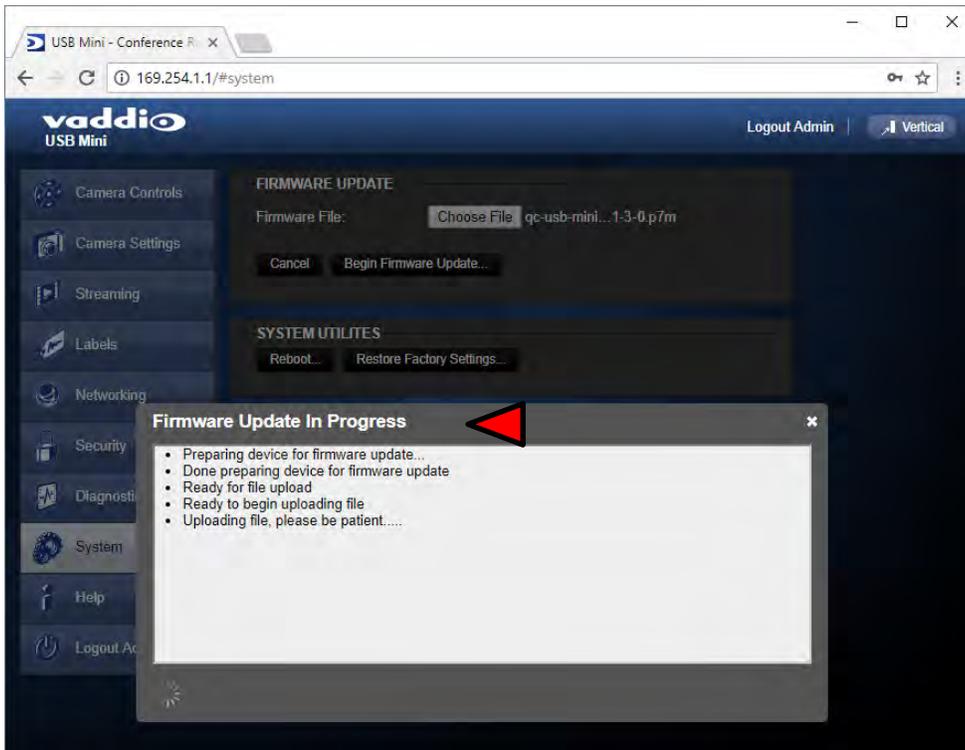
QMini Screen Shot: Admin Menu - Help

Service/Help information can be found under the Help menu. Support phone numbers and e-mail, manuals, FAQ's and System information is listed on this page. Have this page open when calling Vaddio Tech Support.
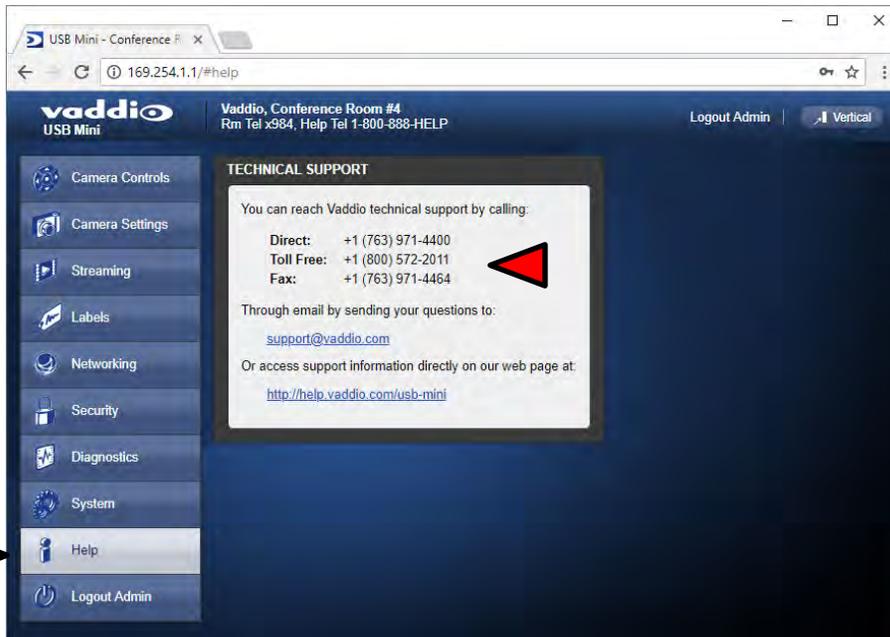
TECHNICAL SUPPORT NOTE:

Please work with your Network Administrator prior to calling Vaddio for technical support. Please have on-site network personnel initiate tech support calls with Vaddio only.

CONNECTING THE WIDESHOT SE TO THE PC AND PROGRAM OF CHOICE

The Quick-Connect USB or Quick-Connect USB Mini and attached camera are compatible with many programs and media players.

Skype Example:

1) After connecting a camera to the Quick-Connect USB or Quick-Connect USB Mini, with a quality USB 2.0 cable, plug the USB-B port of the Quick-Connect Interface to the USB-A port of the computer. A pop up window on the computer monitor will display a message similar to one of these:
   a. Found Mini USB
   b. Found QC-USB
   c. Found USB Composite Device
   d. Found USB Video Device

2) Open Skype and perform the following steps:
   a. Open the Tools Menu and drop down to Options
   b. Click on Video Settings and under Webcam choose USB Video Device or Friendly Name if it has been assigned

The systems will negotiate the highest resolutions possible, depending on the computer speed, network quality, cabling etc..., and display the video signal of the camera. The camera is best controlled with the supplied Vaddio IR SHOT Commander or through IP over USB as described earlier through the Quick-Connect device's web interface. Make a test call to ensure the system is working properly.

VLC Media Player Example:

1) Same first step as above.
2) Open VLC Media Player and perform the following steps:
   a. Click on the Media menu, drop down to Open Capture Device and click it.
   b. Under Device Name, go to the Video Device Name drop down and choose USB Video Device.
   c. Under Options, enter the Video Size as 1280x720
   d. Click on Play
   e. From there, VLC needs some instruction on the aspect ratio, so click on Tools and drop down to Aspect Ratio and drop down again to 16:9 for 720p (1280x720).

VLC is a powerful record/playback system that will buffer the images creating some delay in the way VLC displays the image. This is expected and normal.

With all the compatible software available, in general terms, the video device, aspect ratio, and resolution may need to be set manually the first time through initial set-up. Some systems are easier than others (like Skype) and others are more technical in nature and tend to do more stuff.

Example Program Notes: Most every application or media player is in a state of constant updating and change. The above instructions were first written for the Quick-Connect USB Mini at the beginning of 2013 and some steps may be slightly different. The general idea however is the same.

GENERAL SPECIFICATIONS

Part Numbers	WideSHOT SE QUSB System 999-6911-200 (North America) WideSHOT SE QUSB System 999-6911-201 (International) WideSHOT SE QMini System 999-6911-300 (North America) WideSHOT SE QMini System 999-6911-301 (International)
WideSHOT SE Camera	
Image Sensor	½" CMOS 2.4M Pixels(Total) / 2.1M Pixels(Active)
Video Output Resolutions	HD: 1080/59.94/50/30/25, 1080i/59.94/50, 720p/59.94/50 SD: 480p/59.94 & 576p/50
Lens/ Focus	Approx. 3X Digital Zoom, fixed focus
Horizontal Viewing Angle	111°
Video S/N Ratio	>50 dB
Minimum Illumination	0.2 Lux (Color)
Serial Control Protocol	RS-232 Serial Control
Manual Pan/Tilt Range	Pan: Limited to service loop of cabling, yoke and base are mechanical only Tilt: ± 30° Invertible for Ceiling Mount
Preset Positions	N/A
Tally Light	Red LED available through RS-232 Control
Camera Connectors	Two (2) RJ-45 Jacks: EZ-Power VIDEO RJ-45 Jack for use with Quick-Connect - Supplies power to the camera and returns differential HD video from the camera RS-232 RJ-45 Jack (Serial Communication)
HD Video Select	16-Position Rotary Switch: Used to set HD Video Resolution Output
Camera Settings	6-Position Dip Switch: For IR Freq., Image Flip & Digital Zoom 16-Position Rotary Switch for Output Resolution Settings
Thin Profile Wall Mount	535-2000-237 (included) Black powder coating, sized to fit on 1-gang wall box or with supplied drywall fasteners
User Controls	IR SHOT Commander and RS-232 for control; on-screen display (OSD) for configuration
Materials & Weight	Aluminum & Steel, Weight = 2.25 lbs. (1.02kg)
Dimensions:	Tube: 3.5" (88.9mm) Diameter x 4" (101.6mm) Long (including front bezel) Base: 5.5" (139.7mm) Diameter Overall Height: 5.5" (139.7mm) Tall
Quick-Connect USB (QUSB) Interface	
Video Outputs	USB 2.0 (MJPEG): Resolution up to 720p/30 (USB 2.0 MJPEG) H.264 (IP) of Ethernet: Resolution up to 1080p/30 (H.264 over IP) Analog Component (YPbPr): Resolution up to 1080p/59.94 HDMI: Resolution up to 1080p/59.94
USB Interface	Connector: Type-B, USB 2.0 Compliant, Standard UVC (Universal Video Class) Drivers
Network Interface	Connector: RJ-45 (shielded), 10/100 Base-T, Supported Protocols: RTSP and HLS Streaming
Streaming Protocols	IP: H.264 (RTSP and HLS), USB 2.0: MJPEG (UVC standard drivers)
Connectors	Power: 5.5mm OD x 2.5mm ID Coaxial Connector YPbPr: DE-15 (15-pinHD) Female HDMI: HDMI Female RS-232 IN: RJ-45 Jack RS-232 OUT: RJ-45 Jack EZ-Power Video: RJ-45 Jack (Power and Differential HD Video)
Dip Switches	5-Position: Color Space, Updating and Future Use
H.264 Resolutions	CIF, 640x480 (VGA), 480p, 720p/30 1080p/30 (1080p Ethernet only)
Front Panel	20 x 2 line Character Negative Mode LCD - Displays MAC (HW for Hardware) and IP Address Power/System Reset - Tactile, flush mount, Back-lit Switch Network LED: Indicates connectivity and activity USB LED: Indicates Streaming Mode
Supported Media Players	Quick-Time Media Play - Win 7 & Mac OS10X VLC Media Player - Win 7 & Mac OS10X Real Player - Win 7
Supported Browsers	Internet Explorer, Safari, Safari/iOS, Chrome & Firefox

Power Supply	24 VDC, 2.0 Amp
Dimensions (H x W x D)	½-Rack Size - 8.375" (212.73mm) W x 6.0" (152.4mm) x 1.72" (43.6885643mm) H
Weight	1.4 lbs. (0.6355643Kg)
Accessory	Rack Mount Adapter: 998-6000-004 - 1-RU Offset mount (1-Long Ear & 1-Short Ear)
Quick-Connect USB Mini (QMini) Interface	
Video Outputs	USB 2.0 (MJPEG): Resolution up to 720p/30 (Limits of USB 2.0 with MJPEG Compression)
USB Interface	Connector: Type-B, USB 2.0 Compliant, Standard UVC (Universal Video Class) Drivers
Network Interface	Ethernet over USB 2.0 only
Streaming Protocols	USB 2.0, MJPEG (UVC standard drivers)
Connectors	Power: 5.5mm OD x 2.5mm ID Coaxial Connector RS-232 Port: Shielded RJ-45 Jack EZ-Power Video Port: Shielded RJ-45 Jack (Power and Differential HD Video)
Supported Media Players	Quick-Time Media Play - Win 7, Win 8.1, Win 10 & Mac OS10X VLC Media Player - Win 7, Win 8.1, Win 10 & Mac OS10X Real Player - Win 7, Win 8.1, Win 10
Supported Browsers	Microsoft® Internet Explorer® Safari Chrome Firefox
Power Supply	24 VDC, 2.08 Amp
Dimensions (H x W x D)	3.60" (91.4mm) H x 4.48" (113.8mm) W x 1.25" (31.75mm) D
Weight	1.1 lbs. (0.5Kg)
Accessories	6' (1.83m) USB 2.0 Type-A Male to USB Type-B Male cable (included), 24 VDC, 2.08 Amp Switching Power Supply with AC Cord Set (included) Two (2) Cat-5 cables (not included - unknown length requirement)
Operating Temperatures	0°C to 40°C / 20% to 80% Relative Humidity
Power Consumption	Maximum: <25 watts

Dwarf Planet in Front Page Header: Pluto

OTHER GENERAL INFORMATION

Care and Cleaning

Do not attempt to take this product apart at any time. There are no user-serviceable components inside.
- Do not spill liquids in the product
- Keep this device away from food and liquid
- For smears or smudges on the product, wipe with a clean, soft cloth
- Use a lens cleaner on the lens, OK?
- Do not use any abrasive chemicals

Operating and Storage Conditions:
Do not store or operate the device under the following conditions:
- Temperatures above 40°C (104°F) or temperatures below 0°C (32°F)
- High humidity, condensing or wet environments
- In inclement weather
- In swimming pools or wishing wells
- Dry environments with an excess of static discharge
- In orbit (operating temperature and re-entry issues)
- Under severe vibration

EZ-POWER VIDEO RJ-45 Connector Pin-outs

Pin	Signal
Pin - 1	Power+
Pin - 2	Power-
Pin - 3	Y+
Pin - 4	PB+
Pin - 5	PB -
Pin - 6	Y -
Pin - 7	PR+
Pin - 8	PR-

EZ-POWER VIDEO
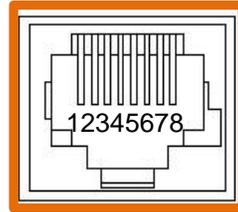
Color-Coded Orange

Differential Video Signals

Important Note: The EZ-POWER VIDEO RJ-45 connector on the WideSHOT SE camera is for use with the **Quick-Connect USB and Quick-Connect USB Mini Interfaces ONLY** (568B Wiring Standard). The video signals are differential (HSDS) and can only be processed by these interfaces.

RS-232 Port

Pin	Camera Pins
Pin - 1	N/A
Pin - 2	N/A
Pin - 3	N/A
Pin - 4	Not Used with QUSB or QMini
Pin - 5	Not Used with QUSB or QMini
Pin - 6	Digital GND
Pin - 7	RXD (from TXD of control source) ⟵
Pin - 8	TXD (to RXD of control source) ⟶

RS-232
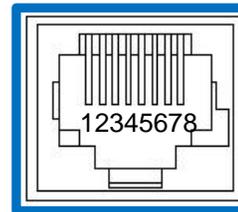
Color-Coded Blue

Quick-Connect USB: DE-15 Pin-Output (Analog Component YPbPr)

Pin	YPbPr
1	Pr
2	Y
3	Pb
4	-
5	-
6	Pr GND
7	Y GND
8	Pb GND
9	-
10	GND
11	-
12	-
13	-
14	-
15	-
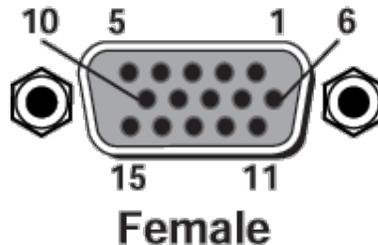
SERIAL COMMUNICATION SPECIFICATION FOR THE WIDESHOT SE

Communication Speed: 9600 bps (default)

Start bit: 1
Stop bit: 1
Data bits: 8
Parity: None
No Flow Control
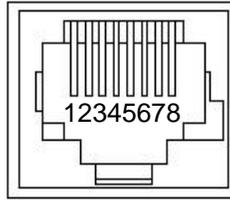
Pin #	RJ-45 RS-232 and IR Out Pins
1)	Unused
2)	Unused
3)	Unused
4)	Unused
5)	Unused
6)	GND
7)	RXD (from TXD of control source)
8)	TXD (to RXD of control source)

12345678

NOTE: The Vaddio WideSHOT SE Control
Protocol is similar, but not identical to the Sony® VISCA™ command set in order to be compatible with several popular control devices. Not all VISCA commands are supported and there are many WideSHOT SE specific commands in the following Command and Inquiry Lists.

WideSHOT SE Command List

Command Set	Command	Command Packet	Comments
Address Set	Broadcast	88 30 01 FF	Address Set (Daisy chain)
IF_Clear	Broadcast	88 01 00 01 FF	IF Clear
		8x 01 00 01 FF	
Command Cancel		8x 2p FF	p:socket number(1,2,3)
CAM_Power	On	8x 01 04 00 02 FF	Power On/Off
	Off(Standby)	8x 01 04 00 03 FF	
CAM_WB	Auto	8x 01 04 35 00 FF	Normal Auto
	Indoor	8x 01 04 35 01 FF	Indoor Auto White Balance
	Outdoor	8x 01 04 35 02 FF	Outdoor Auto White Balance
	One Push AWB	8x 01 04 35 03 FF	One Push White Balance Mode
	One Push Trigger	8x 01 04 10 05 FF	One Push White Balance Trigger (must be in One Push AWB Mode to run)
	Manual	8x 01 04 35 05 FF	Manual White Balance
CAM_RGain	Reset	8x 01 04 03 00 FF	
	Up	8x 01 04 03 02 FF	
	Down	8x 01 04 03 03 FF	
	Direct	8x 01 04 43 00 0p 0q 0r FF	pqr: Red (0x0-0x014)
CAM_BGain	Reset	8x 01 04 04 00 FF	
	Up	8x 01 04 04 02 FF	
	Down	8x 01 04 04 03 FF	
	Direct	8x 01 04 44 00 0p 0q 0r FF	pqr: Blue (0x0-0x014)
CAM_AE	Auto	8x 01 04 39 00 FF	Auto Exposure Mode
	Shutter	8x 01 04 39 03 FF	Shutter priority Mode
CAM_Shutter	Reset	8x 01 04 0A 00 FF	
	Up	8x 01 04 0A 02 FF	
	Down	8x 01 04 0A 03 FF	
	Direct	8x 01 04 4A 00 00 00 0p FF	p: Shutter Speed (0-0x0D)
CAM_Aperture	Reset	8x 01 04 02 00 FF	
	Up	8x 01 04 02 02 FF	
	Down	8x 01 04 02 03 FF	
	Direct	8x 01 04 42 00 0p 0q 0r FF	pqr: (0x0-0x0A)
CAM_ExpComp	On	8x 01 04 3E 02 FF	
	Off	8x 01 04 3E 03 FF	
	Reset	8x 01 04 0E 00 FF	
	Up	8x 01 04 0E 02 FF	
	Down	8x 01 04 0E 03 FF	
	Direct	8x 01 04 4E 00 00 0p 0q FF	pqr: ExpComp (0x0-0x0014)
Tally	On	8x 01 7E 01 0A 00 02 FF	
	Off	8x 01 7E 01 0A 00 03 FF	
GMA.Enhance	Gamma	8x 01 7E 54 00 00 00 0p FF	p: (0-3) 0-0.45, 1-0.55, 2-0.64, 3-0.75)
CRM.Enhance	Chroma	8x 01 7E 55 00 0p 0q 0r FF	pqr: (0x0-0x014)
DNR.Enhance	Noise Reduction	8x 01 7E 58 00 0p 0q 0r FF	pqr: 0-Off, 1-3 manual level, 4- auto
AGC limit	AGC Limit	8x 01 7E 59 0p FF	p: (0x0-0x0a)
CAM_MENUKey	Up	8x 01 04 16 01 FF	To serially navigate the OSD
	Down	8x 01 04 16 02 FF	
	Left	8x 01 04 16 04 FF	
	Right	8x 01 04 16 08 FF	
	Menu/Enter	8x 01 04 16 10 FF	
	ESC/Cancel	8x 01 04 16 20 FF	

WideSHOT SE Inquiry List

Inquiry Command	Command	Response Packet	Comments
CAM_PowerInq	8x 09 04 00 FF	y0 50 02 FF y0 50 03 FF	On Off(Standby)
CAM_WBModeInq	8x 09 04 35 FF	y0 50 00 FF y0 50 01 FF y0 50 02 FF y0 50 03 FF y0 50 05 FF	Auto Indoor Outdoor One Push Manual
CAM_AEModeInq	8x 09 04 39 FF	y0 50 00 FF y0 50 03 FF	Auto Exposure Mode Shutter priority Mode
CAM_ShutterPosInq	8x 09 04 4A FF	y0 50 00 00 00 0p FF	p: Shutter Speed (0-0x0d)
CAM_ExpComp	8x 09 04 4E FF	y0 50 00 0p 0q 0r FF	qr: (0x00-0x014)
CAM_ApertureInq	8x 09 04 42 FF	y0 50 00 0p 0q 0r FF	pqr: (0x00-0x0A)
CAM_RGain	8x 09 04 43 FF	y0 50 00 0p 0q 0r FF	pqr: Red (0x00-0x014)
CAM_BGain	8x 09 04 44 FF	y0 50 00 0p 0q 0r FF	pqr: Blue (0x00-0x014)
TallyInq	8x 09 7E 01 0A FF	y0 50 02 FF y0 50 03 FF	On Off
GMA.Enhance	8x 09 7E 54 FF	y0 50 00 00 00 0p FF	p: (0-3) 0-0.45, 1-0.55, 2-0.64, 3-0.75)
CAM_ExpCompMode	8x 01 04 3 FF	y0 50 00 0p 0q 0r FF	pqr: (0x00-0x014)
CAM_ExpComp	8x 01 04 4E FF	y0 50 00 00 0p 0q FF	pqr: (0x00-0x014)
CRM.Enhance	8x 09 7E 55 FF	y0 50 00 0p 0q 0r FF	pqr: (0x00-0x014)
DNR.Enhance	8x 09 7E 58 FF	y0 50 00 0p 0q 0r FF	pqr: 0-Off, 1-3 manual level, 4- auto
AGC Limit inq	8x 09 7E 59 FF	y0 50 0p FF	p: (0x0-0x0A)

Shutter Speeds:

Step (Hex)	NTSC	PAL
0D	1/30000	1/30000
0C	1/10000	1/10000
0B	1/7000	1/7000
0A	1/5000	1/5000
09	1/2500	1/2500
08	1/1600	1/1600
07	1/1000	1/1000
06	1/700	1/700
05	1/250	1/250
04	1/120	1/100
03	1/60	1/50
02	1/30	1/25
01	1/15	1/12
00	1/8	1/6

QUSB TELNET COMMAND API

The Vaddio Serial Command protocol is a high level text based command line interface supported via telnet session on the Quick-Connect USB.

Note: The Telnet command API is not available on the Quick-Connect USB Mini.

Camera control commands supported on the Quick-Connect USB includes ClearVIEW HD-18, HD-19 and HD-20, PowerVIEW HD-22, HD-30, RoboSHOT 12, RoboSHOT 30, ZoomSHOT, ZoomSHOT 20, WideSHOT and WideSHOT SE. The command application protocol interface is intended to allow external device such as AMX or Crestron to control the camera. The protocol is based upon ASCII format following the VT100 terminal emulation standard and uses an intuitive text command nomenclature for ease of use. The API is accessed by a telnet client on the Ethernet port. All ASCII characters will be **echoed** to terminal program and appended with VT100 string - **ESC[J** (HEX- 1B 5B 4A). Vaddio Command lines are terminated on carriage return. After the carriage return, the VT100 appends with –**ESC[J**. **Note: Most terminal programs automatically strip the VT100 string.** General format usage follows a **get/set** structure. Usage examples for each type are:

Set Example	Get Example	Syntax Error Example
COMMAND: > camera pan right	COMMAND: > stream mode get	COMMAND: > camera pan right
RESPONSE: > OK	RESPONSE: > streaming mode usb	RESPONSE: > ERROR

Additional programming controls associated with the terminal protocol includes:

- **CTRL 5** - Clears the current serial buffer on the device.

Telnet sessions will require access verification and uses the same username and password associated with the Administrator account on the embedded web interface. The default Telnet Port is 23. Command lines are terminated with a carriage return. **NOTE:** The WideSHOT SE camera will not respond to pan, tilt or zoom commands.

Telnet Command List

Camera Home

NAME
camera home - Move the camera to the home position

SYNOPSIS
camera *home*

DESCRIPTION
Method used to move the **camera** to the *home* position

EXAMPLES
camera *home*

Move the **camera** back to the *home* position

Camera Preset

NAME

camera preset - Recall and storing of camera presets

SYNOPSIS
camera *preset* {recall|store} [*1-12*]

DESCRIPTION
Method used to recall and store **camera** presets

OPTIONS
recall   Recall *preset*
store   Store *preset*
preset   Required value from *1-12* used to indicate the *preset* number

EXAMPLES
camera recall 3

Move **camera** to *preset* position 3

camera store 1

Store current **camera** position as *preset* 1

Network Ping

NAME
network ping - send ICMP ECHO_REQUEST to network hosts

SYNOPSIS
network *ping* [*count <count>*] [*size <size>*] <destination-ip>

DESCRIPTION
Use the ICMP protocol's mandatory ECHO_REQUEST datagram to elicit an ICMP ECHO_RESPONSE from a host or gateway. ECHO_REQUEST datagrams have an IP and ICMP header, followed by a struct timeval and then an arbitrary number of pad bytes used to fill out the packet.

OPTIONS
count Stop after sending *count* ECHO_REQUEST packets. With deadline option, *ping* waits for *count* ECHO_REPLY packets, until the timeout expires. The default is 5.
destination The destination IP address where the ECHO_REQUESTS are sent
size The data *size* of the ICMP packet to send. The default is 56 bytes

EXAMPLES
network *ping* 192.168.1.1

Attempt to send 5 ICMP ECHO_REQUESTs with data *size* 56 to the host at 192.168.1.1

network *ping count* 10 *size* 100 192.168.1.1

Attempt to send 10 ICMP ECHO_REQUESTs with data *size* of 100 to the host at 192.168.1.1

Network Settings

NAME
network settings - get current network settings

SYNOPSIS
network *settings* {get}

DESCRIPTION
Method used to get the current **network** *settings* of the device

OPTIONS
get Get the current **network** *settings* for the machine
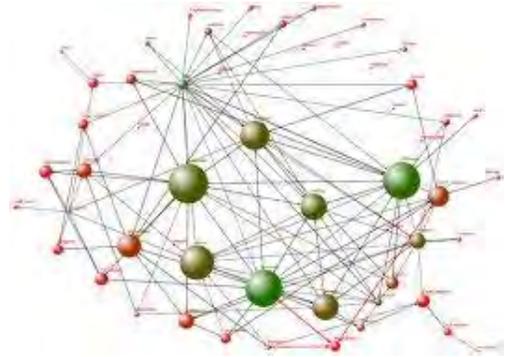
EXAMPLES
network *settings* get

MAC Address:	00:04:a3:85:0a:ee
IP Address:	10.10.8.116
Netmask:	255.255.255.0
Gateway:	10.10.8.100

Returns the current **network** *settings* for mac addres, ip address, netmask, and gateway

Streaming Mode

NAME
streaming mode - Gets or sets the current streaming mode

SYNOPSIS
streaming *mode* {get|usb|ethernet}

DESCRIPTION
Method used to get or set the current **streaming** settings

OPTIONS
get Get the current **streaming** *mode*
usb Set the current **streaming** *mode* to USB
ethernet Set the current **streaming** *mode* to Ethernet

EXAMPLES
streaming *mode* get

*mode***:** usb

Returns the current **streaming** *mode*

streaming *mode* usb

----

streaming *mode* ethernet

OK

Sets the **streaming** *mode* to Ethernet

Streaming Quality

NAME
streaming quality - Gets or sets the current streaming quality

SYNOPSIS
streaming *quality* {get|low|standard|high}

DESCRIPTION
Method used to get or set the current **streaming** *quality*

OPTIONS
get Get the current **streaming** *quality*
low Set video *quality* to low
standard Set video *quality* to standard
high Set video *quality* to high

EXAMPLES
streaming *quality* get

quality:low

Returns the current **streaming** *quality*

----

streaming *quality* standard

OK

Sets the **streaming** *quality* to standard

Streaming Resolution

NAME
streaming resolution - Gets or sets the current streaming quality

SYNOPSIS
streaming *resolution* {get|1080p|720p|4cif|480p|cif}

DESCRIPTION
Method used to get or set the current **streaming** *resolution*

OPTIONS
get Get the current **streaming** *resolution*
1080p Set video *resolution* to 1080p
720p Set video *resolution* to 720p
4cif Set video *resolution* to 4cif
480p Set video *resolution* to 480p
cif Set video *resolution* to cif

EXAMPLES
streaming *resolution* get

resolution:720p

Returns the current **streaming** *resolution*

----

streaming *resolution* 720p

OK

Sets the **streaming** *resolution* to 720p

System Factory-Reset

NAME
system factory-reset - Gets or sets factory reset status

SYNOPSIS
system factory-reset {get|on|off}

DESCRIPTION
Method used to get or set the factory reset status

OPTIONS
get Get the current factory reset status
on Enable factory reset on reboot
off Disable factory reset on reboot

EXAMPLES
system factory-reset get

factory-reset (software):

off

factory-reset (hardware): [Hardware reset is designated by rear panel dip switches in down position]

off

Returns the factory reset status

----

system factory-reset on

factory-reset (software): on

factory-reset (hardware): off

Enables factory reset upon reboot

System Reboot

NAME
system reboot - Reboots system

SYNOPSIS
system reboot [<seconds>]

DESCRIPTION
Method used to reboot system

OPTIONS
seconds

The number of seconds to delay the reboot

EXAMPLES
reboot

Reboot system immediately

reboot 30

Reboot the system in 30 seconds

Version

NAME
version - display the system version information

SYNOPSIS
version

DESCRIPTION
Display an overview of the command line syntax

EXAMPLES
Version

Returns the current software **version**

Help

NAME
help - display an overview of the CLI syntax

SYNOPSIS
help

DESCRIPTION
Display an overview of the command line syntax

History

NAME
history - command history

SYNOPSIS
history [*limit*]

DESCRIPTION
Since many of the programs read user input a line at a time, the command **history** is used to keep track of these lines and also recall historic information

HISTORY NAVIGATION
The command **history** can be navigated using the up and down arrow keys. The up arrow will move up a single entry in the command **history** while the down arrow moves down in the command **history**.

HISTORY EXPANSION
The command **history** 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.

Listed below are examples of **history** expansion:

!! Substitute the last command line.
!N Substitute the Nth command line (absolute as per '**history**' command)
!-N Substitute the command line entered N lines before (relative)

EXAMPLES
history

Displays the current command buffer

history 5

Sets the **history** command buffer to remember the last 5 unique entries

Exit

NAME
exit - ends the current API command session

SYNOPSIS
exit

DESCRIPTION
Exit ends the current API command session. If the session is over telnet, the session is ended and the socket is closed. If the session is over serial, a new session is started.

COMPLIANCE AND CE DECLARATION OF CONFORMITY FOR WIDESHOT SE

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:

EMC Directive 2014/30/EU
EN 55032: 2015   Class A
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

COMPLIANCE AND CE DECLARATION OF CONFORMITY, QUICK-CONNECT USB INTERFACE

Compliance testing was performed to the following regulations:

FCC Part 15 (15.107, 15.109), Subpart B	Class A
ICES-003, Issue 4: 2004	Class A
EN 55022 A: 2006 + A1: 2007	Class A
EMC Directive 2004/108/EC	Class A
EN 55024: A2: 1998 + Amendments A1: 2001 + A2: 2003	Class A

FCC Part 15 Compliance

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

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

Changes or modifications not expressly approved by 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:

EMC Directive 2004/108/EC	
EN 55022 A: 2006 + A1: 2007(CISPR 22:2005/A1:2005)	Class A
EN 55024: A2: 1998 + Amendments A1: 2001 + A2: 2003	Immunity
• EN 61000-4-2: 1995 + Amendments A1: 1998 + A2: 2001	Electrostatic Discharge
• EN 61000-4-3: 2006 + A1: 2008	Radiated Immunity
• EN 61000-4-4: 2004 + Corrigendum 2006	Electrical Fast Transients
• EN 61000-4-5: 2006	Surge Immunity
• EN 61000-4-6: 2009	Conducted Immunity
• EN 61000-4-8: 2010	Power Frequency Magnetic Field
• EN 61000-4-11: 2004	Voltage Dips, Interrupts and Fluctuations
IEC 60950-1: 2005 2nd Edition); AM 1: 2009	Safety
EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12:2011	Safety

COMPLIANCE AND CE DECLARATION OF CONFORMITY FOR USB MINI

Compliance testing was performed to the following regulations:

FCC Part15, Sections 15.107, 15.109 Subpart B	Class A
ICES-003 ISSUE 4, 2004	Class A
EN55022 A1 2007	Class A
EMC Directive 2004/108/EC	Class A
EN 55024: A2: 2003	Class A
IEC 60950-1:2005 (2nd Edition); Am 1:2009	Class A
EN 60950-1:2006+A11:2009+A1:2010+A12:2011	Class A

FCC Part 15 Compliance

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

- Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference including interference that may cause undesired operation of the device.
- Changes or modifications not expressly approved by Vaddio can affect emission compliance and could void the user's authority to operate this equipment.

ICES-003 Compliance

ICES-003, Issue 4: 2004

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 B 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:

EMC Directive 2004/108/EC	
EN 55022 A: 2006 + A1: 2007(CISPR 22:2005/A1:2005)	Class A
EN 55024: A2: 2003	Immunity
• EN 61000-4-2: 1995 + Amendments A1: 1998 + A2: 2001	Electrostatic Discharge
• EN 61000-4-3: 2006 + A1: 2008	Radiated Emissions
• EN 61000-4-4: 2004 + Corrigendum 2006	Electrical Fast Transients
• EN 61000-4-5: 2006	Surge Immunity
• EN 61000-4-6: 2009	Conducted Emissions
• EN 61000-4-8: 2010	Power Frequency Magnetic Field
• EN 61000-4-11: 2004	Voltage Dips, Interrupts and Fluctuations
IEC 60950-1:2005 (2nd Edition); Am 1:2009	Information Technology Equipment - Safety
EN 60950-1:2006+A11:2009+A1:2010+A12:2011	Information Technology Equipment - Safety

WARRANTY INFORMATION

(See Vaddio Warranty, Service and Return Policies posted on 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 period. 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, modified or extended power supply or improper site operation and maintenance. Please note that OEM products and products manufactured by other companies are excluded from the Vaddio warranty and are covered by the original 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 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 through one of the following resources: e-mail support at support@vaddio.com or online at www.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.

Voided Warranty: 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, modified or extended 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.