vaddio

Installation Guide for the

IntelliSHOT

Auto-Tracking Camera

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Contents

Overview

This guide covers:

IntelliSHOT® auto-tracking camera:

- North America – 999-21100-000 (black); 999-21100-000W (white)
- Europe and UK – 999-21100-001 (black); 999-21100-001W (white)
- Australia and New Zealand – 999-21100-009 (black); 999-21100-009W (white)

What's in this Guide

This guide covers:
- Physical features
- Tips for a successful installation
- Pre-installation functional check
- Information on connecting and mounting the camera
- Camera power-on

Complete product information is available in the **Complete Manual for the IntelliSHOT Auto-Tracking Camera**.

If you are responsible for configuring the equipment after installing it, please use the Complete Manual. It includes all the information in this guide, plus information on configuring, operating, and troubleshooting the camera.

Features

- Integrated camera and audio system, ideal for small to medium conference rooms
- IntelliFrame™ intelligent framing algorithm keeps participants in view reliably, without facial recognition
- 30x zoom, horizontal field of view of 70.2°
- Simultaneous HDMI, uncompressed USB 3.0 and H.264 IP streaming (RTSP or RTMP)
- Up to 1080p/30 video; up to 1080p/60 on HDMI output
- Integrated phased microphone array
- Audio line in and line out
- Universal Video Class (UVC) and Universal Audio Class (UAC) drivers supported in Windows®, macOS®, and Linux operating systems, compatible with most UC conferencing applications
- Integration-ready Telnet control
- Full administrative control via web interface; manage the camera remotely while monitoring the stream separately
- Presenter-friendly RF remote control

A Quick Look at the Camera

This section covers the physical features of the camera.

Front of the Camera

The camera is available in black or white.

Camera and zoom lens – Up to 30x zoom.

Integrated microphone – No external microphone needed in typical installations. Echo-canceling microphone picks up the voices of participants up to 10 ft. (3 m) away.

Status lights – The illuminated trim detail on the camera's face indicates the camera's current state. The status lights can be turned off in the administrative web interface.

Pivoting head – Manually tilt the head as needed.

Note
By default, the camera's status lights are active during normal operation; however, they can be configured to remain off when the camera is powered up. The camera may be sending video even if the lights are off.

Connector Panel

The connectors are on the underside of the camera.

PoE+ – RJ-45 connector. Connect to the network and to power via the Power and Data Out port of the mid-span PoE+ power injector. Provides power and network access for IP streaming and camera control via web interface or Telnet.

USB 3.0 – USB Type B connector. Connect to a computer for use with soft conferencing applications. Provides uncompressed USB 3.0 stream.

HDMI output – HDMI video and audio output connector.

IP button – Press to display the camera's IP address on video outputs.

Audio input – Line level balanced audio for an external microphone or other audio source.

Audio output – Line level balanced audio output to amplified speaker or other audio infrastructure.

Installation

This section covers:
- Selecting the location for the camera
- Verifying that the camera is ready to install
- Installing the mount
- Connection diagrams
- Mounting the camera

And a required safety note here:

Note
PoE type networks connected to this equipment are for intra-building use only and should not be connected to lines that run outside of the building in which this product is located.

Don't Void Your Warranty!

Caution
This product is for indoor use. Do not install it outdoors or in a humid environment without the appropriate protective enclosure. Do not allow it to come into contact with any liquid.

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

Before You Install the Camera

Prepare for a successful installation:
- Consider camera viewing angles, lighting conditions, line-of-sight obstructions, and in-wall obstructions where the camera is to be mounted.
- Ensure that the camera points away from the ceiling and lights. The camera will not perform well if it is pointed toward a light source such as a light fixture or window.
- Mounting the camera at eye level is best. If this is not feasible, mounting the camera above eye level typically produces a better experience than mounting it below eye level.
- If you make cables for this installation, check them for continuity.
- Be sure you can identify all cables correctly.

Cabling Notes

Use Cat-5e or better cable. Use shielded cabling if the cables will be coiled, run tightly with other cables, or routed near sources of electromagnetic interference such as power lines or fluorescent light fixtures. We recommend using high-quality connectors and a high-quality crimping tool.

Caution
Do not use pass-through RJ-45 connectors when making cables for this product. Poorly crimped connectors of this type can cause intermittent connections and degraded signal quality. They can also damage the connectors on the product, which will void your warranty.

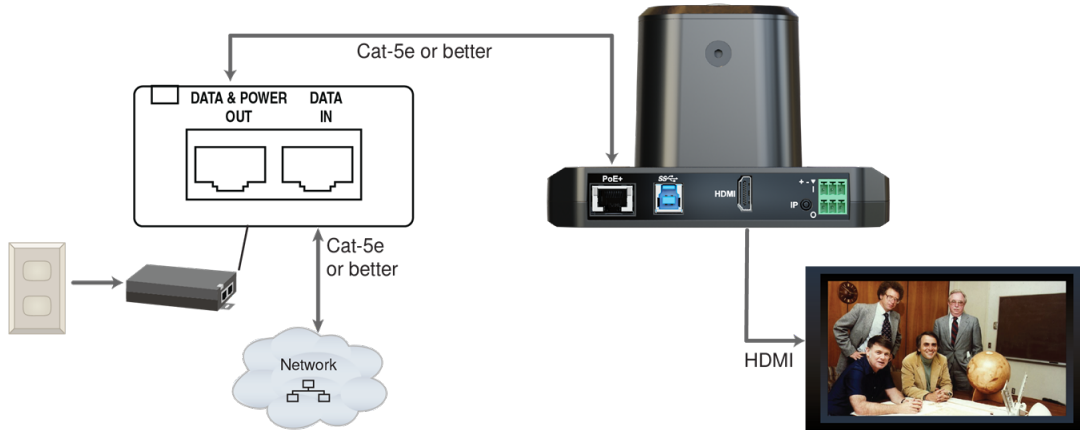**Intact** – will make reliable contact with cable connector
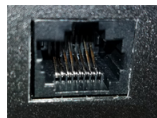
**Damaged** – Bent contact fingers will NOT make reliable contact with cable connector

Pre-Installation Functional Check

If you're installing the camera where it's hard to reach, you may want to verify functionality before you install it.

1. Connect the camera in its minimum functional configuration.

2. Connect power. The camera's status light turns white. If an HDMI display is connected, video is available.

3. *If not using an HDMI display:* Connect the camera's USB port to your computer, then open a media player and verify that you can select the camera as the USB video capture device. These screen shots show how to access a camera's USB stream using VLC Media Player. *In this example, the capture device is a different camera.*
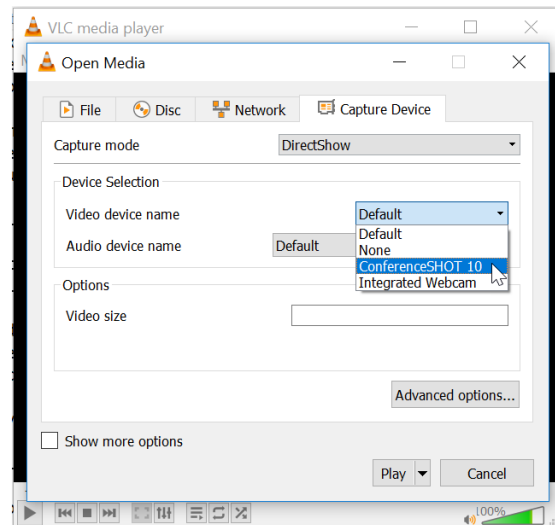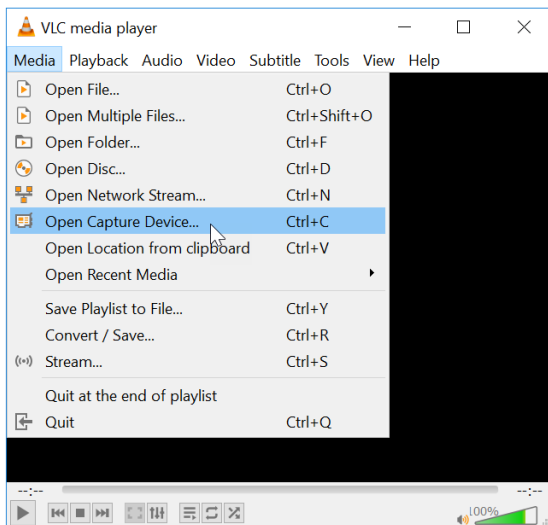
If the camera turns on and sends video, continue with the installation.

Getting the Camera's IP Address

You will need the camera's IP address if you do not use the Vaddio Device Controller or Vaddio Deployment Tool to access its web interface.

Briefly press the IP button on the connector panel. This displays the camera's IP address and MAC address on the video outputs. Press the button again to dismiss the information.

If the Camera Is At 169.254.1.1

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

- The camera's PoE+ power injector is not connected to the network,
  OR
- The network does not automatically assign IP addresses.

If the camera does not receive an IP address when connected to the network, you will need to configure the camera for the network after you have done the initial device set-up.

To communicate directly with the camera for initial device set-up and network configuration, you will need to connect a cable from your computer's network port to the DATA IN port on the PoE+ power injector.

Status Lights

The lights in the camera's head indicate its current state.

- Purple – Initializing
- White – Active
- Red – Audio is muted
- Blinking red – Video is muted
- Yellow – Firmware update is in progress
- Blinking cyan – Remote pairing mode
- Blinking blue – Pairing error

Caution
Do not remove power or reset the camera while the status lights are yellow, showing a firmware update in progress. Interrupting a firmware update can make the camera unusable.

Note
By default, the camera's status lights are active during normal operation; however, they can be configured to remain off when the camera is powered up. The camera may be sending video even if the lights are off.
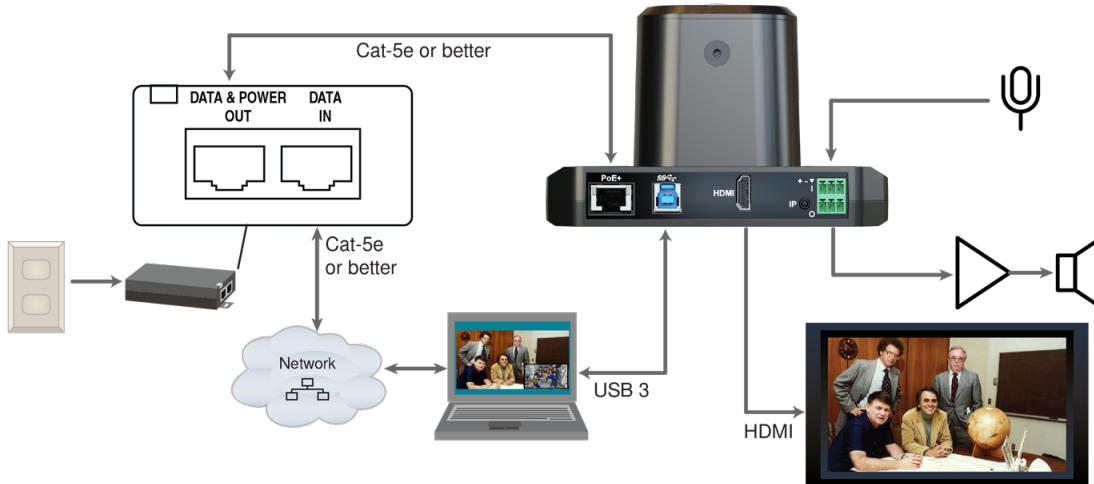
Installing the Wall Mount

The camera is shipped with a wall mount. Other mounting options are available as well. Contact us if you don't have the camera mount you need.

You can install the camera wall mount to a display mount or directly to the drywall. If you mount it to drywall, use wall anchors.

Basic Connections

Here is an example of how the camera might be set up in a medium-size conference room. In this setup, a PC uses a unified communications conferencing application to manage the camera and connected microphones and speaker.

Pro Tip
Label all cables at both ends.

Installing the Camera and Connecting Power

Caution
Check your cables. Connecting a cable to the wrong port or using the wrong pin-out can result in equipment damage and will void the warranty.

1. Connect all required cables to the camera.
2. Slide the camera into the mount.
3. Secure the cable cover to the mount.
4. Connect the mid-span power injector to mains power.

About Inverted Installation

If you use an inverted mount, you will need to select the camera's Image Flip setting when configuring behavior and performance. Image Flip orients the video image correctly and sets the camera to respond appropriately to tilt commands.

Next Steps

The camera is now ready to configure and use. This information is available in the **Complete Manual for the IntelliSHOT Auto-Tracking Camera**.

Operation, Storage, and Care

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

Keep this device away from food and liquids.

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

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

Photo Credits

This guide may include some of these photos.

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

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

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

Expedition 42 on orbit crew portrait, International Space Station, Mar. 7, 2015 – Barry Wilmore (Commander) Top, Upside down, to the right cosmonaut Elena Serova, & ESA European Space Agency Samantha Cristoforetti. Bottom center US astronaut Terry Virts, top left cosmonauts Alexander Samokutyaev and Anton Shkaplerov.
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European Space Agency astronaut Luca Parmitano, Expedition 36 flight engineer, outside the International Space Station
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Chris Cassidy, Luca Parmitano, and Karen Nyberg, ISS, 2013. Photo Credit: NASA

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

Andrea Accomazzo, ESA Rosetta Spacecraft Operations Manager, providing a live update from the Main Control Room at ESA's European Space Operations Centre, Darmstadt, Germany during the Rosetta wake-up day.
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Photo AS11-40-5948, Aldrin assembles seismic experiment, by National Aeronautics and Space Administration, courtesy of the NASA History Office and the NASA JSC Media Services Center

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