

## Installing

# PrimeSHOT HDMI PTZ Cameras

This guide contains only the information required to install this product. Refer to the **Complete Manual for PrimeSHOT HDMI PTZ Cameras** for information on configuring and using this product.

## Overview

This guide covers:

### PrimeSHOT 10 HDMI PTZ camera

- North America – 999-30410-000 (black), 999-30410-000W (white)
- Europe and UK – 999-30410-001 (black), 999-30410-001W (white)
- Australia and New Zealand – 999-30410-009 (black), 999-30410-009W (white)



### PrimeSHOT 20 HDMI PTZ camera

- North America – 999-30420-000 (black), 999-30420-000W (white)
- Europe and UK – 999-30420-001 (black), 999-30420-001W (white)
- Australia and New Zealand – 999-30420-009 (black), 999-30420-009W (white)

## What's in this guide

This guide covers:

- Unpacking the camera
- Tips for a successful installation
- Instructions for installing the camera mount
- Information on connecting and mounting the camera
- Camera power-on

Complete product information is available in the **Integrator's Complete Guide to the PrimeSHOT HDMI PTZ Cameras**.

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

- PrimeSHOT 10 HDMI: PTZ camera for small to medium spaces  
PrimeSHOT 20 HDMI: PTZ camera for medium to large venues such as houses of worship and lecture theaters
- 2.12 Megapixel effective, native 1080p/60 full HD image sensor
- PrimeSHOT 10 HDMI: 10x zoom, 67° horizontal field of view (wide end)  
PrimeSHOT 20 HDMI: 20x zoom, 55° horizontal field of view (wide end)
- Simultaneous HDMI 1.3 and IP (H.264) streaming outputs
- Precise pan and tilt movements at up to 90° per second
- Command Line Interface SHell (CLISH) and VISCA control for ease of integration
- Enterprise-class IT administrative capabilities with full web controls for remote management
- Presenter-friendly IR remote control

## A quick look at the camera

This section covers the physical features of the camera.



**Camera and zoom lens** – The PrimeSHOT 10 HDMI camera (left) has a 10x zoom lens. The PrimeSHOT 20 HDMI camera (right) has a 20x zoom lens.

**IR sensor** – Receives signals from the IR remote. Make sure there's nothing directly in front of the camera base, and point the remote at the camera.

**Status light** – The multi-colored LED indicates the camera's current state. This light can be turned off in the administrative web interface.

### **Note**

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



From left to right:

**Power connector** – Connect the 12 VDC, 3 A power supply shipped with the camera.

**Rotary switch** – Select the video output resolution.

**Ethernet connector** – Connect to the network.

**RS-232 connector** – Optional. Connect to a camera controller to manage the camera.

**HDMI connector** – HDMI 1.3 video output.

Older PrimeSHOT 20 HDMI cameras also have an S-Video connector.

## Installation

This section covers:

- Selecting the location for the camera
- Verifying that the camera is ready to install
- Installing the mount
- RS-232 cable pin-out and communication settings
- Connection diagrams
- Mounting the camera

### Before you install the camera

Camera placement tips:

- 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 body can move freely and will normally point 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.
- If the remote will be used, ensure that nothing blocks the IR lens in the camera's base.

Prepare for a successful installation:

- Be sure you can identify all cables correctly.
- If you make cables for this installation, check them for continuity.
- Ensure that the Video Resolution rotary switch is set appropriately.
- Talk to the network administrator. If installing the camera in a non-DHCP network (one that does not automatically assign IP addresses), you will need to configure the camera with a static IP address as directed by the network administrator.

### Don't void your warranty!



#### **Caution**

*Always support the camera's body when lifting or moving it. Lifting the camera by its head or mounting arm will damage it.*

#### **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.*

#### **Caution**

*Use the power supply included with the camera or recommended for use with it. Always check the output voltage listed on the power supply label, as power supplies of different voltages may look nearly identical. Using the wrong power supply will void the warranty, possibly causing unsafe operating conditions and damage to the product.*

#### **Caution**

*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.*

## Cabling notes

### 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

When making cables for this product, use Cat-5e or better cable. We recommend using high-quality connectors and a high-quality crimping tool.

We recommend shielded cabling if the cables will be coiled, run tightly with other cables, or routed near sources of electromagnetic interference such as power lines or fluorescent light fixtures.

### 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.

### Pro Tip

Label all cables at both ends.

## Video resolution setting

Use the rotary switch on the back of the camera to set the desired HDMI output resolution.



For cameras with S-Video output, the resolution can be set to PAL or NTSC in the administrative interface. Default is NTSC.

## 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.

If the camera turns on and sends video, continue with the installation.

## Status light

The light in the camera's base indicates its current state.

- Purple – Standby mode or booting
- Blue – Camera is active
- Yellow – Firmware update is in progress
- Blinking yellow – Motor out of calibration

### Caution

*Do not remove power or reset the camera while the status light is yellow, showing a firmware update in progress. Interrupting a firmware update can make the camera unusable.*

### Note

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

## Basic connections

This diagram shows a simple installation, with a PCC Premier camera controller providing the option for an operator to control the camera. This is not required; the camera can also be controlled using the remote or the web interface.

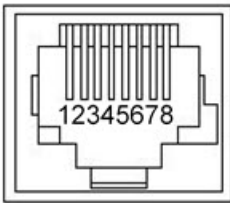


## RS-232 serial communication settings

The RS-232 serial port connects to a third-party device for external control.

Parameter	Value
Communication Speed	9600 bps or 38400 bps, switch-selectable
Number of start bits	1
Number of stop bits	1
Number of data bits	8
Parity	None
Flow control	None

## RS-232 connector pin-out



Connector pin-out:

- Pin 1: Not used
- Pin 2: Not used
- Pin 3: Not used
- Pin 4: Not used
- Pin 5: Not used
- Pin 6: GND
- Pin 7: RXD (from TXD of control source)
- Pin 8: TXD (to RXD of control source)

### **Caution**

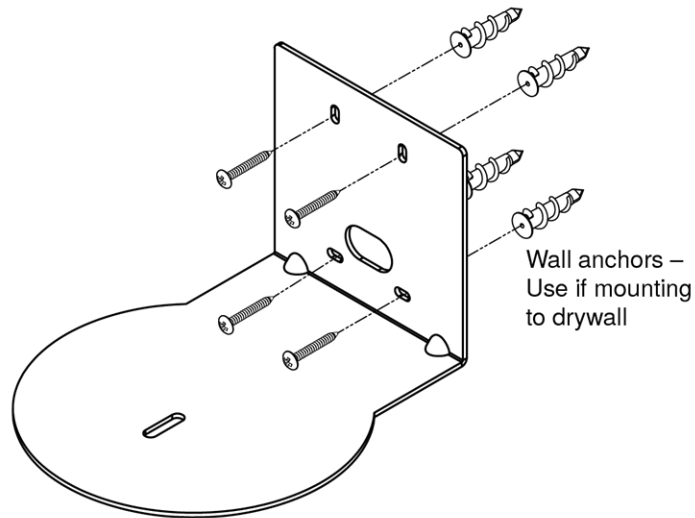
*Check your cables. Connecting a cable to the wrong port or using the wrong pin-out can result in equipment damage and will void the warranty.*

## 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 2-gang wall box or directly to the drywall.

- If you mount it to drywall, use the wall anchors provided with the wall mount.
- If you mount it to a wall box, use the cover plate screws supplied with the wall box.



## About ceiling-mounted cameras

If you use an inverted mount, set the camera's Image Flip mode ON for inverted operation. This orients the video image correctly and sets the tilt motors to respond appropriately to tilt up and down commands from the remote, web interface, and connected control devices. This control is available to the administrator on the web interface's System page.



## Installing the camera

### Caution

Before you start, be sure you can identify all cables correctly. Connecting a cable to the wrong port can result in equipment damage.

### Caution

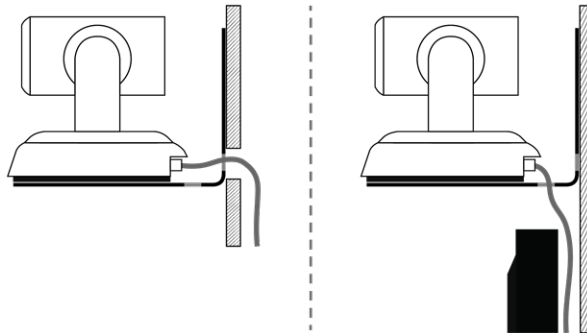
Check your cables. Connecting a cable to the wrong port or using the wrong pin-out can result in equipment damage and will void the warranty.

1. Verify that you have set the switch on the back of the camera to the desired video resolution. See [Video resolution setting](#).
2. Route the cables through the opening in the mounting shelf and connect them to the camera.

### Caution:

Use the power supply shipped with the camera. Using a different power supply will damage the camera and void the warranty, and may create an unsafe operating condition.

3. Place the camera on the mount.



4. Attach the camera to the mount using the mounting screw supplied with the camera.

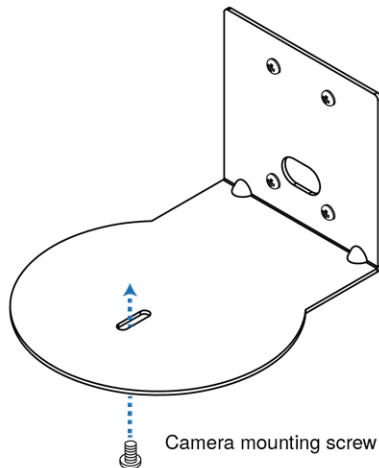


Image for illustration only; not to scale. Camera and mount details may differ.

### Note

If the camera is jostled or bumped while it is connected to power, it may require a pan-tilt reset.

## Powering up the camera

Connect camera power. The camera will initialize and move. This will take a few seconds. When an image is available, the camera is ready to accept control information.

## Status light

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### Caution

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### Note

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## Next steps

The camera is now ready to configure and use. This information is available in the **Complete Manual for PrimeSHOT HDMI PTZ Cameras**.

## Operation, storage, and care

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

Keep this device away from food and liquids.

Do not operate or store the device under any of the following conditions:

- Temperatures above 40° C (104° F) or below 0° C (32° F)
- High humidity, condensing or wet environments
- Inclement weather
- Severe vibration
- On the hull of an orbital launch vehicle
- Dry environments with an excess of static discharge

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

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