



BG-VPTZ-HSU3

Control4 Driver User Manual

Full HD 1080P 10x/20x/30x PTZ Camera (HDMI/SDI/USB/IP, PoE) - VISCA-over-IP controlled

Table of Contents

Statement

Safety Precaution

Introduction

Installation

Properties

Actions

Programming Commands

Events & Variables

Connections (Bindings)

Camera Control Reference

Tech Support

Warranty

Mission Statement

Copyright

Statement

Please read these instructions carefully before connecting, operating, or configuring this product. Please save this manual for future reference.

Safety Precaution

- To prevent damaging this product, avoid heavy pressure, strong vibration, or immersion during transportation, storage, and installation.
- The housing of this product is made of organic materials. Do not expose to any liquid, gas, or solids which may corrode the shell.
- Do not expose the product to rain or moisture.
- To prevent the risk of electric shock, do not open the case. Installation and maintenance should only be carried out by qualified technicians.
- Do not use the product beyond the specified temperature, humidity, or power supply specifications.
- This product does not contain parts that can be maintained or repaired by users. Damage caused by dismantling the product without authorization from BZBGear is not covered under the warranty policy.
- Installation and use of this product must strictly comply with local electrical safety standards.

Introduction

This guide covers the Control4 driver for the BZBGear BG-VPTZ-HSU3 PTZ camera (10x/20x/30x zoom, HDMI/SDI/USB 3.0/IP with PoE). The driver is built on the Control4 DriverWorks SDK using the Camera proxy, so Control4 shows the camera's live H.264 video and provides on-screen pan, tilt, zoom, home and preset controls in the Navigator and touch panels.

Beyond the standard camera controls, the driver adds focus (Auto / Manual / One Push plus manual near/far). The camera is reached over two connections on one IP address: live video over RTSP, and all control (pan/tilt/zoom/focus/presets/home) over VISCA-over-IP (UDP). The driver manages both connections; only the IP address and credentials are required. The BG-VPTZ-HSU3 has no tally light and no auto-tracking.

Installation

Copy the driver (.c4z) into your Control4 driver folder, then in Composer Pro use Driver -> Add or Update Driver... and add it to your project. On the Connections page, bind the sources and displays as described under Connections (Bindings).

1. In System Design, add the "BZBGear BG-VPTZ-HSU3 PTZ Camera" driver to your project (BZBGear manufacturer, Camera / Security category).
2. On the Properties page, enter the camera's IP address in Camera IP Address. Set Username and Password if they differ from the factory default (admin / admin). Confirm Connection Status shows Connected.

3. Open the camera device (the Camera proxy). Its address, HTTP Port (80) and RTSP Port (554) pre-fill from the driver; confirm them and use the Test button to preview the live H.264 stream.

4. Use the H264 Stream property to select Main (full resolution, 0/0/0) or Sub (lower resolution, 0/0/1) for the Navigator video.

5. Tune PTZ Speed (1-100) and PTZ Step Duration (50-3000 ms) so one press of an on-screen arrow moves a comfortable amount.

Connection reference:

Setting	Value
Camera IP Address	The IP address of the camera (set on the Properties page). Factory default is 192.168.1.162.
RTSP Port	554 (factory default) - live H.264 video (streams 0/0/0 and 0/0/1).
VISCA Port	52381 (factory default) - VISCA-over-IP (UDP) for all PTZ/zoom/focus/presets/home.
VISCA Address	1 (factory default). The packet's first byte is 0x80 + address.
Username / Password	admin / admin (factory default).

Properties

The driver exposes the following properties on the Composer Properties page. Read-only properties reflect live status reported by the device.

Property	Access	Description
Camera IP Address	Editable	IP address or hostname of the BG-VPTZ-HSU3 camera. Also set as the camera's network address in the camera device settings so the RTSP stream URL is built.
Username	Editable	RTSP username. Factory default is admin.
Password	Editable	RTSP password. Factory default is admin.
HTTP Port	Editable	TCP port of the camera web/HTTP server. Factory default is 80. (Control is over VISCA, not HTTP; this is for the camera device page.)
RTSP Port	Editable	TCP port of the camera RTSP server. Factory default is 554.
VISCA Port	Editable	UDP port for VISCA-over-IP control (all PTZ/zoom/focus/presets). Factory default is 52381.
VISCA Address	Editable	VISCA device address (1-7). The packet's first byte is 0x80 + address.
H264 Stream	Editable	Which RTSP stream Control4 uses for live video. Main is the full-resolution stream (0/0/0); Sub is the lower-resolution stream (0/0/1).
PTZ Speed	Editable	Pan/tilt speed for nudge moves (1-100), mapped to the VISCA speed range.
PTZ Step Duration	Editable	How long (milliseconds) a single pan/tilt/zoom/focus nudge runs before it is stopped. Larger values move farther per button press.
Connection Status	Read-only	VISCA connection state to the camera.
Last Device Error	Read-only	Most recent error returned by the camera.
Debug Mode	Editable	Diagnostic output. Automatically returns to Off after one hour.
Driver Version	Read-only	Driver version.

Actions

The following actions are available on the Composer Actions tab.

Action	Description
Go To Home Position	
Reconnect VISCA	

Programming Commands

The following device-specific commands are available in the Composer Programming tab. Parameters are chosen from drop-down lists unless noted.

Command	Parameters	Description
Recall Preset	Preset	Move the camera to preset PARAM1
Save Preset	Preset	Save the current position to preset PARAM1
Clear Preset	Preset	Clear preset PARAM1
Go Home	-	Move the camera to its home position
Set Focus Mode	Mode	Set the focus mode to PARAM1
Focus Near	-	Nudge focus nearer
Focus Far	-	Nudge focus farther
Pan Left	-	Nudge the camera left
Pan Right	-	Nudge the camera right
Tilt Up	-	Nudge the camera up
Tilt Down	-	Nudge the camera down
Zoom In	-	Nudge zoom in (tele)
Zoom Out	-	Nudge zoom out (wide)
Send Raw VISCA	Hex	Send a raw VISCA packet as hex (address byte and FF terminator included); the driver wraps it in the VISCA-over-IP header. e.g. 81 01 06 04 FF

Events & Variables

Events (available as "when" triggers in Programming):

This driver defines no custom events; the standard camera proxy state is available.

Variables (available for programming and conditionals):

Variable	Type	Description
CAMERA_IP	String	The camera IP address the driver is currently using.

Connections (Bindings)

On the Composer Connections page, bind the following. Unused bindings are hidden automatically on Control4 OS 3.3.0 and later.

Binding	Type	Description
Camera	Camera	The Control4 camera proxy binding - provides the live H.264 video and on-screen PTZ / preset controls. No physical AV cabling to bind; the

	camera is reached over the network.
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Camera Control Reference

The driver speaks two protocols to the camera, both captured live from the hardware. All PTZ/zoom/focus/presets/home use VISCA-over-IP: each VISCA payload is wrapped in an 8-byte header (type 01 00, 2-byte length, 4-byte sequence) and sent as a UDP datagram to port 52381; live video is H.264 over RTSP. The following summarizes the key messages for reference; day-to-day control uses the on-screen buttons and the programming commands above.

Live Video (RTSP, port 554)

Command	Description
rtsp://<ip>:554/0/0/0	Main stream (full resolution)
rtsp://<ip>:554/0/0/1	Sub stream (lower resolution)

PTZ / Focus / Presets (VISCA-over-IP, UDP 52381)

Command	Description
81 01 06 01 VV WW pp qq FF	Pan/tilt drive (pp/qq dir 01/02, 03 stop; VV/WW speed)
81 01 04 07 02/03/00 FF	Zoom tele / wide / stop
81 01 04 08 02/03/00 FF	Focus far / near / stop
81 01 04 38 02/03 FF, 18 01 FF	Focus mode Auto / Manual / One Push
81 01 04 3F 02/01/00 nm FF	Preset recall / set / clear
81 01 06 04 FF	Go home (recenter)

VISCA-over-IP framing

Command	Description
[01 00][len 2][seq 4][payload]	8-byte header wrapping each VISCA command
02 00 00 01 00 00 00 01 01	Sequence-reset control (sent on connect)

Tech Support

For technical support, please contact BZBGear:

- Email: support@bzbgear.com
- Phone: +1(888)499-9906
- Address: 830 National Drive #140, Sacramento, CA 95834, USA

Warranty

BZBGear products are backed by a limited product warranty. For full warranty details, please visit www.bzbgear.com or contact BZBGear support.

Mission Statement

BZBGear is dedicated to providing high-quality, professional-grade AV equipment that delivers exceptional performance and reliability for both commercial and residential applications.

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