



PTZOptics SuperJoy

Product Manual

SuperJoy G1



Features



Getting Started



Power



Connections



Buttons



OSD



Networking



Programming



Firmware



Technical Specs

SuperJoy G1 Getting Started

Use the guides below to power your SuperJoy controller, configure camera control, connect to your network, and update firmware.



POWER



PROGRAMMING



NETWORKING



FIRMWARE

Part Number

PT-SUPERJOY-G1

Packing List

- PT-SUPERJOY-G1
- 12V 2A International Power Supply
- RS-232C / DB9 female to 8-pin
- Mini-din male cable
- Quick Start Guide
- Grounding Pin

Features

Hive Studio Integration: Control Hive Studio. Achieve far-end camera control through a Hive Studio connection. Adjust & configure camera settings, and operate your cameras remotely from anywhere in the world with a Hive Studio connection using the SuperJoy.

HTTP Authentication & Password Protection: Define a custom password and enable basic HTTP authentication as an added measure of security.

Custom Buttons: Assign, save, or import custom commands to 10 customizable buttons—ability to save, export, and load custom setups onto the Superjoy. Custom buttons 1 through 6 can also be triggered through the web interface.

Multiple Control Modes: Basic Mode: Basic Mode allows you to disable most of the capabilities of the SuperJoy and limit the control to the joystick and/or calling presets. With this mode enabled, the button backlights on the joystick will illuminate only the buttons the operator needs

Matrix Mode: Matrix Mode allows you to disable most of the SuperJoy's capabilities and limit the controls to calling presets 1-3 of cameras 1-3. The illuminated buttons on the joystick will be the only buttons available while in matrix mode. Lock specific settings to prevent users from accessing them. Ideal for new users or volunteers.

Camera Presets: Save as many presets as your camera allows.

Firmware Updates: Let's you update the joystick's firmware directly from the joystick itself. Firmware is the low-level software that controls the hardware of your joystick. Being able to update it directly on the joystick simplifies the process and ensures you can easily have the latest features and bug fixes.

Simple Network Discovery: Trouble-free discovery of any connected PTZOptics joystick on your network. PTZOptics joysticks can be found by entering `http://ptzoptics.local` into any web browser. You can then change your joystick's IP address or set a custom ID. For example, you could set your joystick's ID to "myjoystick.local". Enter that into a web browser and you're there.

PTZ, Focus, and Preset Speed Adjustment Buttons: Let you quickly adjust the camera settings without the need to enter the camera's on-screen display or Web UI.

HDMI 1.3: RTSP Decoder with HDMI Preview Output up to 1080p

Camera OSD Control: Control and operate any PTZOptics camera's on-screen display menu.

Multiple Control Options: Controllable cameras via network connection, RS-232, and RS-485.

Power

The **SuperJoy G1** can be powered using the included **power supply** or **Power over Ethernet**. Please make sure all connections are secure when using either method.

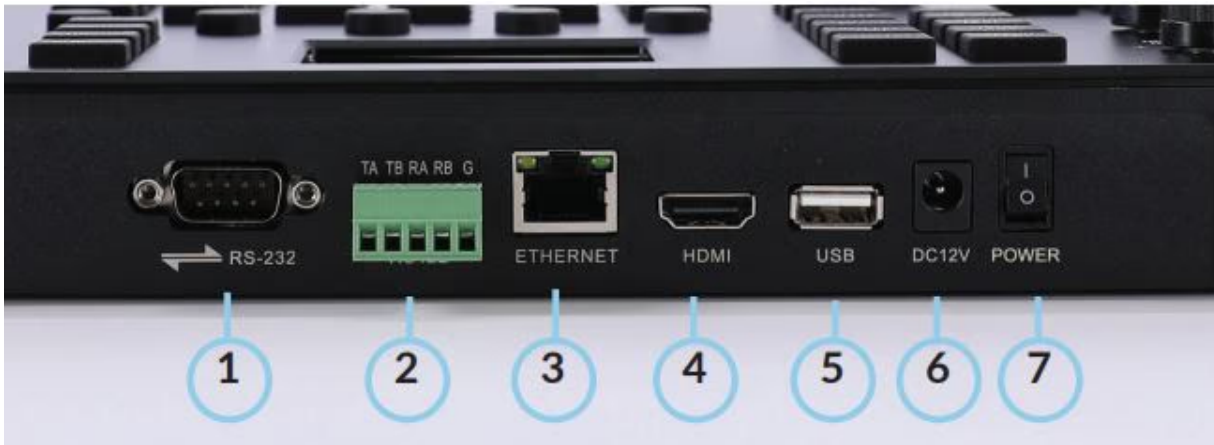
NOTE

Power over Ethernet, or PoE, provides power and network connection. To power your joystick over Ethernet, you will need a PoE source that supports PoE (802.3af). We recommend connecting your joystick to the switch for peak performance using Cat 6 cabling or better. See the example of a power over Ethernet connection below.

Device Powering Options

Product	Power Supply	Power Consumption	Power Over Ethernet Type
Move 4K	JEITA type (DC IN 12V)	Max 2.0A	PoE+ (802.3at)
Move SE	JEITA type (DC IN 12V)	Max 2.0A	PoE (802.3af)
Link 4K	JEITA type (DC IN 12V)	Max 2.0A	PoE+ (802.3at)
Studio Pro	JEITA type (DC IN 12V)	Max 2.0A	PoE (802.3af)
Studio 4K	JEITA type (DC IN 12V)	Max 2.0A	PoE (802.3at)
Studio SE	JEITA type (DC IN 12V)	Max 2.0A	PoE (802.3at)
SimpliTrack3	JEITA type (DC IN 12V)	Max 1.0A	PoE (802.3af)
PT-SUPERJOY-G1	JEITA type (DC IN 12V)	Max 0.5A	PoE (802.3af)
PT-JOY-G4	JEITA type (DC IN 12V)	Max 0.5A	PoE (802.3af)

Connections



SuperJoy Connection List

1. RS-232 Output
2. RS-485 Interface
3. LAN
4. HDMI Display Output
5. USB Service Port
6. DC 12V Power
7. Power Switch

Connect a Network Joystick

PTZOptics joysticks can control the Move 4K over the network using **VISCA over IP**, giving you physical joystick control without serial cables.

Network: What You Need

- A PTZOptics joystick (PT-SUPERJOY-G1 or PT-JOY-G4)
- Camera and joystick on the same network
- Camera's IP address

Network: Steps

1. **Connect the joystick** to your network via Ethernet.
2. **Power on the joystick** and wait for it to boot.
3. **Configure the joystick** with the camera's connection details:
 - Enter the camera's **IP address**.
 - Set the port to **5678** (TCP) or **1259** (UDP).
 - Set the protocol to **VISCA over IP**.
4. **Test control:** use the joystick to pan, tilt, and zoom the camera.



TIP

For multi-camera setups, assign each camera a unique address and configure the joystick to switch between them. The SuperJoy supports managing multiple cameras from a single interface.

This camera supports **RS232** and **RS485** serial control for direct, wired connection to PTZ joysticks, control systems, and automation platforms. This page walks you through connecting each type, explains when to choose one over the other, and provides full pin-out and parameter reference tables.



IMPORTANT

Control connections can be made while the camera is powered on, but we recommend making all connections **before** powering on for proper detection.

When to Use RS232 vs RS485

Both **RS232** and **RS485** provide direct, wired control of a camera without requiring a network connection. They commonly support the same control protocols, such as VISCA, Pelco-D, and Pelco-P. The choice between them comes down to three factors: **distance, number of cameras, and installation environment**.

- **RS232** is the simpler option for small installations. It's primarily designed for a **point-to-point connection** between one controller and one camera, although PTZ cameras support daisy-chaining multiple cameras using their RS232 input and output ports. It works well when the controller is located near the camera, typically within about 98 ft (30 m). Because RS232 uses single-ended signaling, it is more susceptible to electrical noise over longer cable runs. For short distances, however, it provides reliable, straightforward control and remains a common option for single-camera systems.

- **RS485** is the better choice when you need to cover longer distances or control multiple cameras. It uses differential signaling, which transmits data as the voltage difference between two wires instead of referencing a single wire to ground. This makes RS485 much more resistant to electrical noise and interference, making it well suited for large venues, houses of worship, campus buildings, and industrial environments. RS485 supports cable runs of up to 3,937 ft (1,200 m) and allows **multi-drop configurations**, where multiple cameras share the same communication bus. Each camera is assigned a unique address, allowing a single controller to communicate with each device over the same pair of wires.



TIP

Tip: For most modern networked installations, **VISCA over IP** offers greater flexibility and eliminates many of the distance limitations of serial control. RS232 and RS485 remain valuable when working with legacy control systems, dedicated hardware controllers, or installations where network control isn't available.

Connect RS232 to a Controller

RS232 provides a direct, point-to-point wired connection between your controller and the camera. No network configuration is needed.

RS232: What You Need

- **RS232 cable** with **8-pin Mini DIN** connectors
- A **controller or joystick** that supports VISCA, Pelco-D, or Pelco-P
- **12V DC power supply** (included) or **PoE+ switch/injector** (RS232 does not provide power)

Step 1: Connect the RS232 Cable

1. Connect an RS232 cable (8-pin Mini DIN) from your controller's **RS232 output** to the camera's **RS232 Input** port.
2. For daisy-chaining multiple cameras: connect the camera's **RS232 Output** to the next camera's **RS232 Input**.



WARNING

RS232 pinouts vary between manufacturers. If your controller's pinout differs from the camera's, you may need a **null modem adapter** or a **custom cable**. See the [RS232 Pin-Out Reference](#) below for the Move 4K's pin assignments.

RS232 Step 2: Power the Camera

Power the camera using one of the following methods:

- **12V DC**: Connect the included 12V DC adapter to the camera's DC input.
- **PoE+ (802.3at)**: Connect the camera's LAN port to a PoE+ switch or injector.

RS232 Step 3: Configure Your Controller

1. Set your controller to match the camera's protocol: **VISCA** (default), **Pelco-D**, or **Pelco-P**.
2. Set the baud rate to match the camera (default: **9600**).
3. Assign each camera a unique address (default: **1**).



TIP

To change the camera's protocol from the IR remote, press **[Menu]**, navigate to **Communication Setup**, and select your protocol.

RS232 Step 4: Test Control

Use your controller to pan, tilt, and zoom the camera. If the camera doesn't respond:

- Verify the RS232 cable is connected to the correct port (**Input**, not Output).
- Verify the protocol and baud rate match between controller and camera.
- Verify each camera in a daisy chain has a **unique address**.

Connect RS485 to a Controller

RS485 supports long-distance cable runs and multi-drop configurations where multiple cameras share a single communication bus.

RS485: What You Need

- **Twisted-pair cable** (Cat5e, Cat6, or dedicated RS485 cable) with **Phoenix connector** (terminal block)
- A **controller, joystick, or automation system** that supports VISCA, Pelco-D, or Pelco-P
- **12V DC power supply** (included) or **PoE+ switch/injector** (RS485 does not provide power)

Step 1: Connect the RS485 Cable

1. Connect the **positive (red)** wire to the camera's **positive** Phoenix connector port (on the left).
2. Connect the **negative (black)** wire to the camera's **negative** Phoenix connector port (on the right).
3. Connect the positive and negative wires to the matching ports on your joystick controller.
4. For multi-drop: daisy-chain from the first camera's RS485 output to the next camera's RS485 input.

RS485 Step 2: Power the Camera

Power the camera using one of the following methods:

- **12V DC**: Connect the included 12V DC adapter to the camera's DC input.
- **PoE+ (802.3at)**: Connect the camera's LAN port to a PoE+ switch or injector.

RS485 Step 3: Configure Your Controller

1. Set your controller to match the camera's protocol: **VISCA** (default), **Pelco-D**, or **Pelco-P**.
2. Set the baud rate to match the camera (default: **9600**).
3. Assign each camera a **unique address**.

RS485 Step 4: Test Control

Use your controller to pan, tilt, and zoom each camera. If a camera doesn't respond:

- Verify the twisted-pair cable is connected with the correct **polarity** (+ and -).
- Verify the protocol and baud rate match.
- Verify each camera has a **unique address**.

Reference

RS232 Pin-Out Reference

The Move 4K uses **8-pin Mini DIN** connectors for RS232. Pin assignments are as follows:

RS232 Input Port (from Controller)

Pin	Signal	Description
1	DTR	Data Terminal Ready
2	DSR	Data Set Ready
3	TXD	Transmit Data
4	GND	Ground
5	GND	Ground
6	GND	Ground
7	IR Out	Infrared Output
8	NC	No Connection

RS232 Output Port (to Next Camera in Daisy Chain)

Pin	Signal	Description
1	DTR	Data Terminal Ready
2	DSR	Data Set Ready
3	TXD	Transmit Data
4	GND	Ground
5	GND	Ground
6	GND	Ground

Pin	Signal	Description
7	IR Out	Infrared Output
8	NC	No Connection

NOTE

The RS232 Input and Output Mini DIN connectors use the same pin numbering and signal names for daisy-chain wiring.

RS232 Communication Parameters

Parameter	Value
Baud Rate	2400, 4800, 9600 (default), 38400
Start Bit	1
Data Bits	8
Stop Bit	1
Parity	None

RS485 Communication Parameters

Parameter	Value
Baud Rate	2400, 4800, 9600 (default), 38400
Start Bit	1
Data Bits	8
Stop Bit	1

Parameter	Value
Parity	None
Connector	2-pin Phoenix connector (terminal block)
Max Cable Length	~3,937 ft (1,200 m)

Control Protocol Reference

Protocol	Default	Address Range	Notes
VISCA	Yes (default)	1–7	Industry standard for PTZ cameras
Pelco-D	—	0–254	Common in security systems
Pelco-P	—	0–31	Older Pelco variant

Control Method Comparison

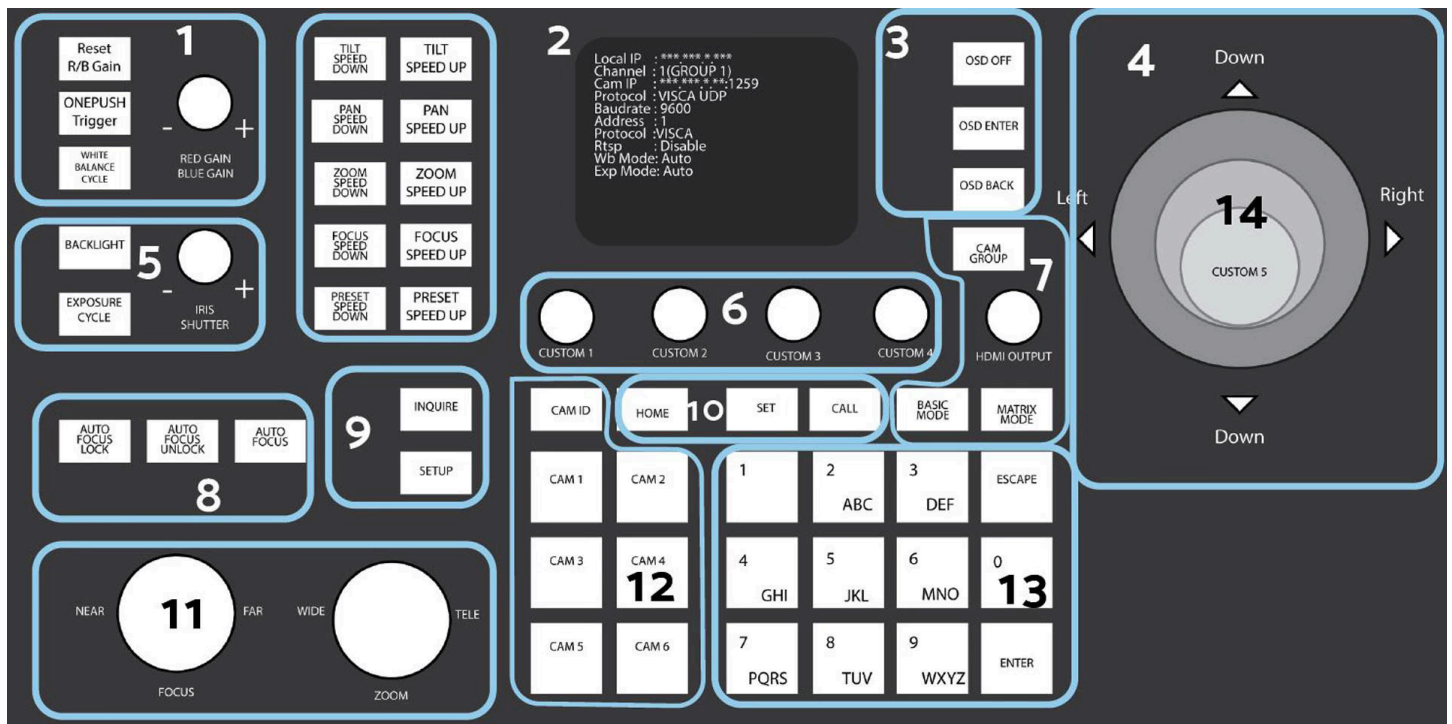
Feature	RS232	RS485
Max Distance	~98.5 ft (30 m)	~3,937 ft (1,200 m)
Connector	8-pin Mini DIN	2-pin Phoenix (terminal block)
Multi-Camera	Daisy-chain	Multi-drop bus
Signaling	Single-ended	Differential (noise-resistant)
Protocols	VISCA, Pelco-D, Pelco-P	VISCA, Pelco-D, Pelco-P
Provides Power	No	No

Joystick Compatibility

Joystick	Connection	Protocols
PT-SUPERJOY-G1	Network (VISCA over IP) or RS232	VISCA, ONVIF, NDI, Panasonic
PT-JOY-G4	Network (VISCA over IP) or RS232	VISCA, ONVIF, Sony VISCA

Buttons

Button Diagram



SuperJoy-G1 Button Descriptions

Number	Control	Number	Control
1	White Balance Control	8	Focus Mode Control
2	Speed Control	9	Controller Information
3	Camera OSD Control	10	Preset Control Buttons
4	Joystick Controller	11	Focus & Zoom Dials
5	Exposure Control	12	Camera Select Control

Number	Control	Number	Control
6	Custom Control Buttons	13	Alpha-Numeric Keypad
7	SuperJoy Unique	14	Custom Button Knob

White Balance Control

Allows you to adjust the white balance settings of the camera.

- **[RESET R/B GAIN] Button:** Press the [RESET R/B GAIN] button to reset the red & blue gain to default values.
- **[ONEPUSH TRIGGER] Button:** Press the [ONEPUSH TRIGGER] button to calibrate the white balance of the room.
- **[WHITE BALANCE CYCLE] Button:** Press the [WHITE BALANCE CYCLE] button to cycle through the White Balance Modes. Options include: Auto, Indoor, Outdoor, OnePush, & Manual.
- **[RED GAIN / BLUE GAIN] Knob:** The [RED GAIN / BLUE GAIN] knob can be used to adjust the red & blue gain values.

NOTE

Cameras must be in OnePush White Balance in order for the OnePush Trigger to function.

Speed Control Buttons

- **[TILT SPEED UP / DOWN] Buttons:** Press the [TILT SPEED UP / DOWN] buttons to adjust the camera tilt speed.
- **[PAN SPEED UP / DOWN] Buttons:** Press the [PAN SPEED UP / DOWN] buttons to adjust the camera pan speed.
- **[ZOOM SPEED UP / DOWN] Buttons:** Press the [ZOOM SPEED UP / DOWN] buttons to adjust the camera zoom speed.
- **[FOCUS SPEED UP / DOWN] Buttons:** Press the [FOCUS SPEED UP / DOWN] buttons to adjust the camera focus speed.
- **[PRESET SPEED UP / DOWN] Buttons:** Press the [PRESET SPEED UP / DOWN] buttons to adjust the camera preset speed.

NOTE

Speed adjustments made via the joystick will be saved to the currently selected camera.

Exposure Mode Controls

- **[BACKLIGHT] Button:** Press the [BACKLIGHT] button to toggle the camera's back light compensation.
- **[EXPOSURE CYCLE] Button:** Press the [EXPOSURE CYCLE] button to cycle through the Exposure Modes. Options include: Auto, Manual, Shutter Priority, Iris Priority, & Brightness Priority.
- **[IRIS / SHUTTER] Knob:** The [IRIS / SHUTTER] knob allows you to adjust the Iris and Shutter values of the camera.

Joystick Controller

The joystick allows you to pan, tilt, and zoom (twist) the camera. The control speed is affected by the Speed Control dial.

Exposure Control

The Exposure Control section allows you to adjust the exposure settings of the camera.

- **[BACKLIGHT] Button:** Press the [BACKLIGHT] button to toggle the camera's backlight compensation.
- **[EXPOSURE CYCLE] Button:** Press the [EXPOSURE CYCLE] button to cycle through the Exposure Modes. Options include: Auto, Manual, Shutter Priority, Iris Priority, & Brightness Priority.
- **[IRIS / SHUTTER] Knob:** The [IRIS / SHUTTER] knob allows you to adjust the Iris and Shutter values of the camera.

Custom Control Buttons

Use the Custom Control buttons to set up custom commands typically not available to the SuperJoy.

- **[CUSTOM 1 - 4] Button:** The four (4) Custom buttons allow you to send custom commands to network based equipment. Options Include: HTTP Trigger, UART, TCP, UDP, & Super Presets.

SuperJoy Unique Control

The SuperJoy includes unique buttons for use with

- **[CAM GROUP] Button:** Press the [CAM GROUP] button to cycle through the five (5) Camera Groups.
- **[HDMI OUTPUT] Button:** Press the [HDMI OUTPUT] button to enable the HDMI output of the connected camera.
- **[BASIC MODE] Button:** Press the [BASIC MODE] button to toggle between Basic Mode control and normal control. While in Basic Mode, only the P/T/Z and preset options will function.
- **[MATRIX MODE] Button:** Press the [MATRIX MODE] button to toggle between Matrix Mode control and normal control. While in Matrix Mode, only presets 1 - 3 can be called on cameras 1 - 3.

Focus Mode Control

The Focus Mode section allows you to change the focus mode of the camera.

- **[AUTO FOCUS LOCK] Button:** Press the [AUTO FOCUS LOCK] button to lock the focus in its current position. Auto Focus is paused while Focus Lock is enabled.
- **[AUTO FOCUS UNLOCK] Button:** Press the [AUTO FOCUS UNLOCK] button to unlock the focus from its current position.
- **[AUTO FOCUS] Button:** Press the [AUTO FOCUS] button to set the camera to auto focus mode.

Controller Information Button

The Controller Information section allows you to find and edit the parameters of the controller.

- **[INQUIRE] Button:** Press the [INQUIRE] button to open the controller's device list.
- **[SETUP] Button:** Press the [SETUP] button to open the controller's OSD menu. Refer to the Joystick OSD Menu Control section of this guide for more information.

Preset Control Buttons

The Preset Control section allows you to set and call presets of the camera.

- **[HOME] Button:** Press the [HOME] button to send the camera to the home position (facing forward).
- **[SET] Button:** Press the [SET] button to set a camera preset. Use the alpha-numeric keypad to set a preset number.
- **[CALL] Button:** Press the [CALL] button to call a camera preset. Use the alpha-numeric keypad to call a preset number. Refer to the Setting and Recalling Presets section of this guide for more information.
- **Quick Set Preset Shortcut:** Press and hold a number on the alpha-numeric keypad for 3+ seconds to set a camera preset in the current location.

- **Quick Call Preset Shortcut:** Quickly press a number on the alpha-numeric keypad to call a camera preset.

Focus & Zoom Control Dials

The Focus & Zoom Control section allows you to adjust the image based on the scene.

- **[FINE TUNE FOCUS] Dial:** The [FINE TUNE FOCUS] dial allows for precise manual control of a selected camera's focus.
- **[FINE TUNE ZOOM] Dial:** The [FINE TUNE ZOOM] dial allows you to finely zoom the camera in and out at the lowest speed (1).

Camera Select Buttons

The Camera Select section allows you to select a camera to control.

- **[CAM ID] Button:** The [CAM ID] button allows you to select any camera on the controller using the alpha-numeric keypad.
- **[CAM #] Button:** The [CAM #] button allows you to quickly select a camera to control. Options include: 1 - 6.

Alpha-Numeric Keypad

The alpha-numeric keypad allows you to use many of the controller features that require numbers and letters as well as input custom commands when selecting a camera.

Custom Button Knob

5th customizable button, best utilized for the most frequently needed custom commands.

OSD

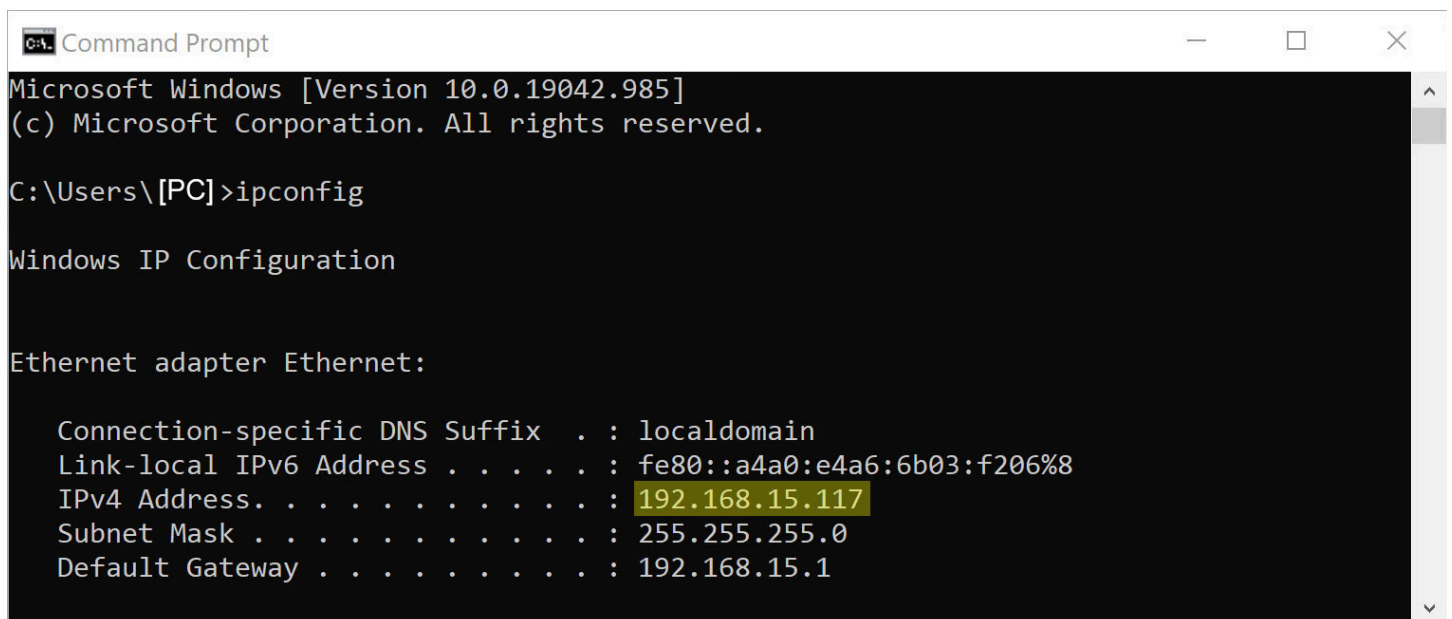
1. **Local IP:** Displays the Joystick's IP address. Type this into a web browser to reach the web UI.
2. **Channel:** Shows the currently selected camera ID and the group it's assigned to.
3. **Cam IP:** Shows the IP address of the currently selected camera.
4. **Protocol:** Shows the protocol the joystick and the currently selected camera use to communicate for control.
5. **Baudrate:** The communication speed between the joystick and the currently selected camera.
6. **Address:** Shows the camera control address.
7. **RTSP:** The selected camera can send it's RTSP feed to the joystick, to be sent out by joystick using the HDMI display output. This can be enabled or disabled.
8. **WB Mode:** Shows the white balance mode being used by the currently selected camera.
9. **Exp Mode:** Shows the exposure mode being used by the currently selected camera.

Networking

Discovering Your Network

Windows

1. Open the Start menu and type “CMD” into the search bar.
2. Once the Command Prompt is open, type in “ipconfig” and press the Enter key.
3. Scroll down to the section titled “Ethernet adapter Ethernet” or “Ethernet adapter Wireless Network Connection”.
4. Locate the “IPv4 Address” in that section. This is your computers local IP address.
5. In the example below, the PC’s local address is “192.168.15.117”, making the network range “192.168.15.xxx”.

A screenshot of a Windows Command Prompt window. The title bar says "Command Prompt". The text inside shows the command prompt version and copyright information, followed by the command "C:\Users\[PC]>ipconfig". Below this, it says "Windows IP Configuration". Then, it shows the configuration for the "Ethernet adapter Ethernet:". The IPv4 Address is highlighted in yellow and is "192.168.15.117".

```
Microsoft Windows [Version 10.0.19042.985]
(c) Microsoft Corporation. All rights reserved.

C:\Users\[PC]>ipconfig

Windows IP Configuration

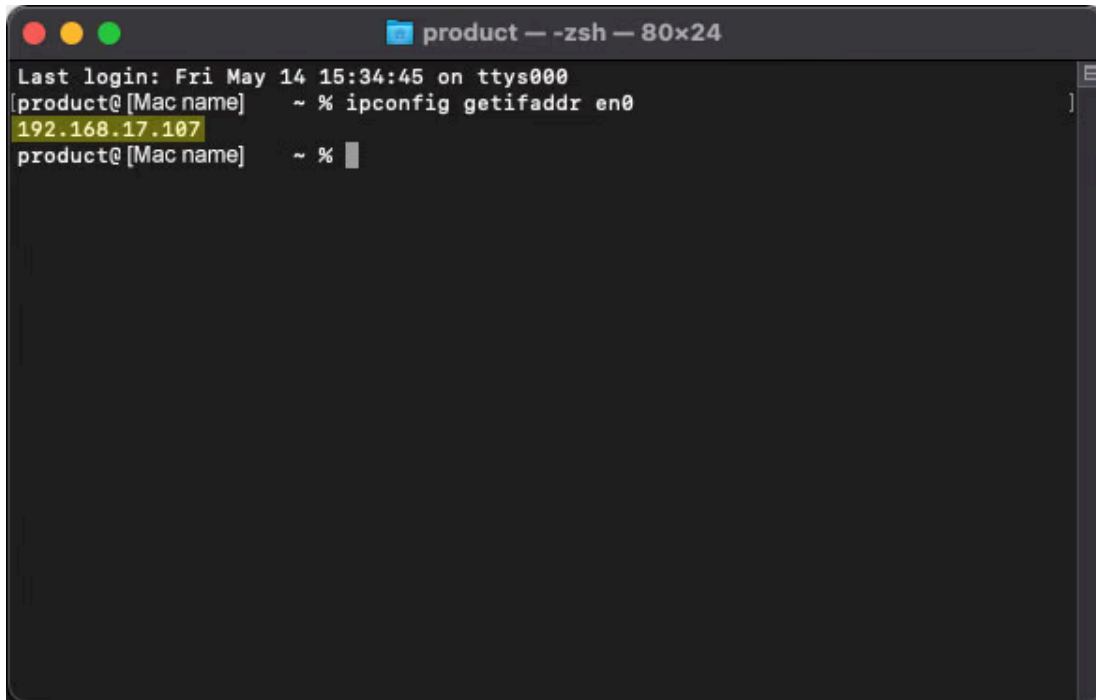
Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : localdomain
    Link-local IPv6 Address . . . . . : fe80::a4a0:e4a6:6b03:f206%8
    IPv4 Address. . . . . : 192.168.15.117
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.15.1
```

Mac

1. Open a new Finder window and go to the Applications folder.

2. Open the Utilities folder and select the Terminal program.
3. Once the Terminal program is open, type in "ipconfig getifaddr en0" and press the Enter key.



```
product — zsh — 80x24
Last login: Fri May 14 15:34:45 on ttys000
product@[Mac name] ~ % ipconfig getifaddr en0
192.168.17.107
product@[Mac name] ~ %
```

Network Joystick Connection

PTZOptics carries multiple joysticks including the **PT-SUPERJOY-G1**, and **PT-JOY-G4**, that can be used to control a camera via a network connection.

Steps

1. Ensure the camera and the PTZOptics IP joystick are connected to the same network.
2. Press the **[SETUP]** button on your joystick, and select option one (1) "Network Device" for IP.
3. Fill in the Network Device field to connect the camera. The fields are as follows:
 - **Channel:** (For SuperJoy users enter 1 ~ 9 in the **Group** field) Joystick Camera Address [CAM ID]
Options include 1 - 255.
 - **Protocol Select**
 - **PT-JOY-G4 Protocol Options:**
VISCA (UDP), VISCA (TCP), Sony VISCA (UDP), ONVIF.
 - **HC-JOY-G4 Protocol Options:**
VISCA (UDP), VISCA (TCP), Sony VISCA (UDP), ONVIF.

- **PT-SUPERJOY-G1 Protocol Options:**

VISCA (UDP), VISCA (TCP), Sony VISCA (UDP), ONVIF, NDI, & Panasonic Control

- **IP:** Enter the Camera IP Address Here
- **Ctrl Port:** Enter the camera control port.

4. Once the above fields are filled, press the **[ENTER]** button to save the camera to the controller.

Control Port Numbers

- **UDP 1259**
- **TCP 5678**
- **Sony VISCA Protocol 52381**



TIP

One way to find the camera's control port number is to go to its web user interface.

Type the camera's IP address into a web browser and log in using your credentials.

Click the Control tab, then click the Ports tab below. Here, you can see the available control protocols.

Programming

Setting and Calling Presets

Presets let you save commonly used camera shots and recall them when needed. On supported PTZOptics cameras, each preset stores the camera's pan, tilt, and zoom position along with the image settings active when the preset is saved.

AUTOMATIC MODES REMAIN ACTIVE

If auto exposure, auto white balance, or auto focus is enabled, the camera may continue adjusting the corresponding settings after the preset is recalled. These settings will need to be disabled manually before saving a preset if you want the preset to retain specific settings.

Before You Begin

Set the room lighting to the conditions you expect to use during production. Changing the lighting after creating your presets may affect exposure, white balance, and the consistency between shots.

TIP

Evenly distributed lighting is generally easier to work with because it reduces large differences in brightness and color across the room.

Starting from the camera's default image settings can provide a useful baseline, but it is not required. If the camera is already producing the desired image, you can use the current settings as your starting point.

Step 1: Save Your First Preset

Save Preset 1 with the Web Interface (Recommended)

1. Open the **Horizon Web UI** and locate the live preview and PTZ controls.
2. Zoom out to a wide view of the room.

3. Pan and tilt the camera toward the center of the primary shooting area.
4. Adjust the exposure, white balance, focus, and other image settings until you are satisfied with the image.
5. Locate the **Preset Control** section and select Set.
6. Type **1** as the preset number and press Enter on your keyboard to confirm the selection.
7. Select **Call**, enter **1**, and confirm that the camera returns to the expected position and image settings.

Saving Preset 1 with the IR Remote

If you do not have access to the **Horizon Web UI**, you can establish Preset 1 with the IR remote:

1. Use the arrow and zoom buttons to create a wide, centered view of the primary shooting area.
2. Adjust the camera's image settings through the on-screen display as needed.
3. Press **[PRESET]**, followed by **[1]**, to save the position and image settings.
4. Press **[HOME]** to recall **Preset 1** and confirm that the camera returns to the expected position and image settings.

MATCH THE IMAGE, NOT NECESSARILY THE SETTINGS

Different areas of a room may require different exposure or color settings. The settings do not need to be identical across every preset. The resulting images should look consistent when switching between shots.

For easier comparison, monitor every shot on the same display. You can also capture a reference image of Preset 0 or compare the shots in production software such as OBS or vMix.

WARNING

Saving a preset to an occupied number replaces the previously stored shot.

Step 2: Calling Presets

Call Presets with the Web Interface

1. Locate the **Preset Control** section.
2. Select **Call**.
3. Enter the preset number and confirm the selection.

Calling Presets with the IR Remote

Press the desired number button to recall **Presets 0–9**.

Using a PTZ Controller

Select the preset number and use the controller's preset-call command. The exact procedure varies by controller, so refer to the controller's documentation for the correct button sequence.

NOTE

The **Horizon Web UI** and compatible PTZ controllers can access preset numbers beyond the ten presets available directly from the IR remote.

AUTOMATIC MODES AND PRESET INTERACTION

If **Image Presets are disabled**, when the camera recalls the start location, stop location, or target-lost preset, it will only move to the saved position. The camera will continue using the current image settings and will not recall any image parameters from the preset.

If **Image Presets are enabled**, when one of those presets is recalled, the camera will restore both the saved camera position and the image settings stored with that preset.

Clearing Presets

Clear Presets with the Web Interface

Click the **Pencil** icon in the bottom right corner of the **Preset Control** section to open the **Edit Presets** dialog. From there, you can click the **Trash** icon next to a preset to clear it.

Clearing Presets with the IR Remote

Clearing an Individual Preset

1. Press **[RESET]**.
2. Press the number of the preset you want to clear.

Clear All Presets

1. Press **[RESET]**.

2. Press **[RESET]** again.

 WARNING

Clearing all presets cannot be undone. Confirm that you no longer need any of the saved camera positions before clearing them.

Firmware

[Firmware Instructions](#)

[Firmware Changelog](#)

Latest Firmware Files



**SuperJoy
Firmware**

Instructions

Checking Your SuperJoy-G1 Firmware

There are two ways to view the firmware currently running on your joystick.

Method 1

Visit your joystick's Web UI.

Web UI Steps

1. Enter the joystick's IP address into a web browser and log in using your credentials.

IMPORTANT

If this is your first time logging in, you will be prompted to create a username and password.

2. Once logged in, click the **Settings** menu button, then click on the **Version** tab.
3. The firmware version will be displayed in the software field.

Method 2

The Joystick's Display menu

Display Menu Steps

1. Press the **Setup** button on your joystick.
2. Using the joystick, scroll down to **System Info** and press the **Enter** button.
3. The firmware version will be displayed in the software field.

Upgrading Your SuperJoy-G1 Firmware

Upgrade Steps

1. To upgrade your firmware, navigate to [our Downloads page](#).
2. Scroll down the page and click **SuperJoy-G1** then click **Download Firmware**.
3. Return to the joystick's Web UI and go to the **Settings** menu.
4. Click **Browse**. Then, select the firmware file and click **Open**.

 NOTE

You may need to extract the files from the zip file you downloaded earlier.

5. Click **Upgrade**.
6. A pop-up will appear stating that the file is uploading. Upon completion, another pop-up will appear, indicating that the upload was successful. Click the **Upgrade and Restart** button.
 - The joystick's display will state that it is "**Initializing**"
7. The page will automatically refresh and redirect you to the login screen.
8. Click the joystick's "**Setup**" button, then scroll down to the factory reset option. Perform the reset by pressing enter. This will properly load the new features.
9. Congratulations! You can now log back in with the latest firmware.

SuperJoy Release Notes

Updates on new features, fixes, and known issues for the SuperJoy.

Releases

- [04/16/2025](#)
- [10/11/2024](#)
- [11/16/2023](#)
- [08/03/2022](#)
- [01/05/2022](#)
- [10/29/2021](#)
- [09/03/2021](#)

04/16/2025

SuperJoy - v2.4.5

New Features

- Increased the Hex Custom Command length from 16bit to 32bit.
- Allows Matrix Mode to utilize the Camera Name and Preset Name instead of Cam 1 Preset 1 | Cam 1 Preset 2 | etc.
- The Devices > Modify > Trigger Command List size has been increased.
- The SuperJoy now remembers if HDMI was enabled or disabled when last powered and will return to that state.

Bug Fixes

- Fixed a bug that prevented certain ASCII characters such as \r (carriage return) from being sent along with Custom Commands.
- Fixed a bug that caused all saved Preset Names saved to Group 1, Device 1 to be saved to all devices.
- Fixed a bug that caused the SuperJoy to exit Matrix Mode when the Group is changed.
- Fixed a bug that prevented the SuperJoy from sending Custom commands to port 8088 on a closed network without internet access.
- Corrected the buttons names on the Settings > Upgrade page in the web interface.
- Improved Panasonic control performance.
- Improved the performance of exporting and importing configuration files.

Known Bugs

- When saving a TCP ASCII Custom Command, certain characters such as \r (carriage return) are visually removed from the web interface. The command that is sent is unaffected.
- Device and Custom export files produced from older firmware (for example, 2.3.6 or 2.3.8) are not compatible with 2.4.5.

10/11/2024

SuperJoy - v2.3.6

New Features

- Increased web security by prompting the user to define a password upon first accessing the web interface.
- Added the ability to toggle all of the button lights on and off by long pressing the Setup button.
- Added the ability to lock certain settings to prevent users from using them. You can configure these locked settings in the web interface, and toggle Lock Mode on and off by long pressing the joystick Custom Button. To disable Lock mode, you will need to enter the password used to login to the web interface.
- The button lights and Lock Mode will function in tandem. If a button has been disabled from use, that button will not illuminate when the button light and Lock Mode are both enabled.
- Reordered the web interface to make setup more fluid.
- Added the ability to save more than 10 Custom Buttons.
- Added the ability to export and import Custom Buttons.
- Added the ability to use the joystick top button as a 5th Custom Button when short pressed.
- Added the ability to trigger Custom Buttons 1 - 6 from the web interface.
- Added the ability to query the PTZOptics Firmware Server for new firmware updates.
- Added the preview feature that allows naming presets for device 1, channel 1. When a preset is called, that name will show up on the SuperJoy's LCD screen. Named presets will be implemented for all channels in the future.
- Added the ability to define an NDI Receive Group.
- Added the ability to define an NDI Discovery Server.
- Added the option for Basic HTTP Authentication for connected devices.

Bug Fixes

- Resolved the bug that prevented control of Sony cameras.
- Resolved the bug that prevented the RTSP URL from being changed.

- Resolved the bug where opening the On Screen Display Menu on a camera then switching to a different camera caused unreliable PTZ control.
- Improved reliability in applying firmware updates.
- Resolved the bug that was causing a `recv timeout` error when using the HDMI Output with a PTZOptics Move SE.
- Changed the default Panasonic control port to `80`.
- Resolved a bug where the RTSP didn't auto populate when adding a camera from NDI Search.

11/16/2023

SuperJoy - v2.2.9

New Features

- The SuperJoy now saves the Pan, Tilt, Zoom, and Focus speed per camera.
- The SuperJoy now allows you to use non-alphanumeric characters in the password field when adding the RTSP feed to the HDMI output.
- The SuperJoy now allows you to send out a Custom Command when changing cameras.
- The SuperJoy now displays the Exposure and White Balance mode on the LCD.
- Added a setting to prevent the joystick from sending the Pan, Tilt, and/or Zoom commands when moved.
- Added the ability to use a PTZOptics camera's `.local` address instead of the IP address. You can also type in `ptzoptics.local` in the Address field in the SuperJoy's web interface when adding a camera.
- Added Panasonic control.
- Added support for a Camera Stub when sending Custom Commands via TCP, UDP, and HTTP-CGI, for example:

```
http://{{CURRENT_CAM}}/cgi-bin/ptzctrl.cgi?ptzcmd&home
```

- Added support for VISCA WebSockets.

Bug Fixes

- Removed the address offset associated with Pelco-D.
- Fixed an issue where the SuperJoy couldn't send commands to itself using the Custom Buttons.
- Fixed an issue where diagonal movement through ONVIF was always performed at maximum speed.
- Fixed an issue where ONVIF and serial VISCA didn't set or call presets.
- Fixed an issue that prevented an HTTP-CGI command to be saved to a custom button if it included a question mark.

- Fixed an issue that prevented the joystick from calling any presets above 24 when using the SuperJoy's HTTP-CGI API.
- Changed the field order when assigning a static IP address.

08/03/2022

SuperJoy - v2.1.7

New Features and Bug Fixes

- Added Network Time Protocol (NTP) to web interface.
- Added ability to send HTTP-CGI Custom Button toggles.

First press sends one string of commands. Second press sends a second string of commands.

- Bugfix: USB port didn't allow for firmware updates every time.

01/05/2022

SuperJoy - v2.0.7-211217

New Features and Bug Fixes

- Added the MAC address to the Settings > Network page.
- Added the ability to use special characters in the password (!@#\$%^&*).
- Added the ability to NDI Search for multiple sources under a single IP address.
- Added the ability to assign Pan/Tilt/Zoom/Focus speeds per camera.
- Added the ability to disable Pan/Tilt/Zoom/Focus.
- Fixed issue with Focus dial not being affected by Focus Speed buttons.
- Fixed issue with HTTP-CGI Custom Buttons requiring certain characters.

10/29/2021

SuperJoy - v2.0.6-211022

New Features and Bug Fixes

- Added the ability to send HTTP-CGI commands to the SuperJoy.
- Added the ability to change the anti-flicker of the HDMI output (50Hz / 60Hz).
- Added Gain control to the Iris/Shutter dial. (Now Iris/Shutter/Gain)

Iris = Blue
Shutter = Red
Gain = Purple

- Current models only have the text Iris/Shutter. Future models will have the full Iris/Shutter/Gain.
- Added Dynamic DNS function to the web interface.
- Added the ability to search for PTZOptics and NDI cameras on the network from the web interface.
- Added the ability to change the web port of the SuperJoy in the web interface.

09/03/2021

SuperJoy - v2.0.5-210902

New Features and Bug Fixes

- HDMI Output bugfix: SuperJoys with Serial Number 20210601#### and beyond would lose the HDMI Output functionality after applying the 2.0.4-210430 firmware. The 2.0.5-210902 firmware restores the HDMI Output functionality.

Technical Specs

General Specifications

Feature	Specification
Protocol	• PTZOptics VISCA and VISCA over IP • PELCO-D and PELCO-P via Serial Ports • Limited Sony VISCA and VISCA over IP support • Limited ONVIF support • Limited NDI support • Limited Panasonic Support (HTTP) • WebSockets
Baud Rate	1200 to 19200 bps
Maximum Cameras	253 channels / cameras; Groups 1-4: 7 channels / cameras; Group 5: 225 channels / cameras
Maximum Recommended Distance	Ethernet: 328 feet / 100 Meters
Maximum Recommended Distance	RS-232: 50 feet / 15 Meters
Maximum Recommended Distance	RS-485: 3,937 feet / 1200 Meters
Maximum Recommended Distance	RS-422: 50 feet / 15 Meters

Connections

Feature	Specification
Power Connector	12DC Power Connection
Power Requirements	12V DC

Feature	Specification
Power Consumption	6 Watts
HD Video Output	HDMI 1.3 (Up to 1080p)

Communication Interface

- RS-232 Control Connection
- RS-422 / RS-485 Control Connection
- Ethernet / RJ-45 (PoE) Network Connection
- Supports 802.3af PoE power
- Network: NIC (TCP and UDP)
- Serial/Analog: RS-232 Full Duplex, RS-485 Semi Duplex, RS-422 Full Duplex

Physical Specifications

Feature	Specification
USB 2.0 Interface	USB 2.0 Service Port (Update Firmware, Import Config, Export Config) DC12V Power required to activate.
Product Material	Aluminum
Dimensions (L x W x H)	7.09" L x 13.94" W x 3.98" H; 180mm L x 354mm W x 101mm H
Weight	3.75 lbs, 1.70 kg
Box Dimensions (L x W x H)	8.46" L x 14.57" W x 4.61" H; 215mm L x 370mm W x 117mm H
Box Weight	5.80 lbs, 2.63 kg
Operating Environment	Indoor
Operating Temperature	14° F ~ 122° F (-10° C ~ +50° C)

Feature	Specification
Operating Humidity	10% ~ 90% (non condensation)
Warranty	2 Year Manufacturer Warranty

Covered by one or more claims of the HEVC patents listed at patentlist.accessadvance.com



Certifications

This joystick has been tested and certified for the standards shown below:

- FCC Class B - Tested under FCC 47 CFR Part 15 Subpart B, Class (sDoC), ANSI C63.4 -2014
- CE - Tested under EMC Directive 2014/30/EU
- EN 55032: 2015+A11:2020
- EN 55035:2017+A11:2020
- EN IEC 61000-3-2:2019
- EN 61000-3-3:2013/A1:2019
- RoHS - Tested under RoHS Directive 2011/65/EU