



PTZOptics MiniJoy

Product Manual

MiniJoy



Getting Started



**Controlling Your
Cameras**



Using the Web UI



Buttons



OSD



Firmware



Technical Specs

Getting Started



To Get Started, Choose Your Connection Method

There are two ways to configure and operate your MiniJoy controller. Choose the method that works best for your setup.

- Choose **Network** to access the Web UI and control cameras over IP.
- Choose **Serial Port** to control cameras through a direct RS-422/485 connection.

Connect via
Network

Connect via
Hardwire

Connect via Network

[Network Guide](#)[Back to Getting Started](#)

This setup walks you through powering on the MiniJoy, connecting it to your network, and accessing the web management interface.

Step 1: Power On

Power Setup

Choose one power method:

DC Power Adapter

1. Connect the included 12V DC adapter to the **DC-12V** power input.
2. Toggle the **Power Switch** to turn the controller on.

PoE Switch (802.3af)

2. Connect the **LAN** port to a PoE-enabled switch using a CAT 5e or CAT6 cable.
2. Toggle the **Power Switch** to turn the controller on.

Step 2: Connect to the Network

Via Ethernet Switch

Connect the controller's **LAN** port to a port on an Ethernet switch. The controller supports both DHCP (dynamic IP) and static IP addressing. Check the MiniJoy's On-Screen Display to view its IP address.

Can't Find the MiniJoy on Your Network?

If the MiniJoy controller is not detected by your computer, check the following:

1. **Check Power and Cable:** Make sure the controller is powered on and connected to your computer using an Ethernet cable.
2. **Confirm Network Segment:** If you are using a direct computer connection, ensure your computer is on the same network segment as the controller.

3. **Verify MiniJoy Network IP:** Open the joystick on-screen display, go to network settings, and check the controller IP address.

Step 3: Access the Web User Interface

1. Open a web browser and enter the controller IP address. The controller is set to DHCP by default. You can find its IP address in the MiniJoy's On-Screen Display in the **Network** tab.
2. Enter your login credentials.



FIRST TIME LOGGING IN?

You will be prompted to set up a password on your first login.

- Default Username: **admin**
- Create a strong password.

Step 4: Explore the Web Interface

The MiniJoy Web UI provides the following main sections:

Section	Purpose
Devices	Discover, add, edit, view, or remove camera entries
Knobs	Assign functions to four programmable knobs across six pages
Settings	Configure Network, NDI, Firmware, System, and Help options

The sidebar provides controller status, **Reboot**, and **Logout** controls. For complete instructions, see [Getting Started with the Web UI](#).

Now that you can access the MiniJoy Web UI and manage the controller, follow [Adding and Managing Cameras](#) to configure your first camera.

If you would like to add cameras using the Joystick, refer to the [Controlling Your Cameras](#) guide.

Connect via Serial Port

[Hardware Guide](#)[Back to Getting Started](#)

This guide connects a camera to the MiniJoy through its RS-422/485 serial port and verifies basic camera control.

Step 1: Before You Begin

You need the camera's serial connector pinout, supported control protocol, address, and baud rate. The camera and MiniJoy settings must match. Do not assume that the camera uses the same connector pin order as the MiniJoy.

Step 2: Power the Controller

Power Setup

Choose one power method:

DC Power Adapter

1. Connect the included 12V DC adapter to the **DC-12V** power input.
2. Toggle the **Power Switch** to turn the controller on.

PoE Switch (802.3af)

2. 1. Connect the **LAN** port to a PoE-enabled switch using a CAT 5e or CAT6 cable.
2. Toggle the **Power Switch** to turn the controller on.

Step 3: Connect Control Wiring

1. Turn off the MiniJoy and camera before connecting serial wiring.
2. Compare the MiniJoy pin definitions below with the camera manufacturer's pinout.
3. Connect the required transmit, receive, and ground conductors for the selected interface.
4. Secure the conductors in the MiniJoy's **RS-422/485** Phoenix connector.

Pin No.	RS-422 Function	RS-485 Function
1	TXD-	TXD+
2	TXD+	TXD-
3	GND	RXD+
4	RXD-	-
5	RXD+	-

Step 4: Configure the Serial Camera

1. Turn on the camera and MiniJoy.
2. Press **MENU**, then open **Device Manager > Add New Device**.
3. Select the camera's serial protocol: **VISCA (Serial)**, **Pelco-D**, or **Pelco-P**.
4. Set the camera address and baud rate to match the camera.
5. Save the device to a camera slot, then exit the OSD menu.

Step 5: Test Camera Control

1. Press **CAM LIST** and select the serial camera.
2. Move the joystick left, right, up, and down.
3. Confirm that the camera pans and tilts in the expected directions.

If the camera does not respond, recheck the wiring polarity, protocol, address, and baud rate on both devices.

Step 6: Interface Reference

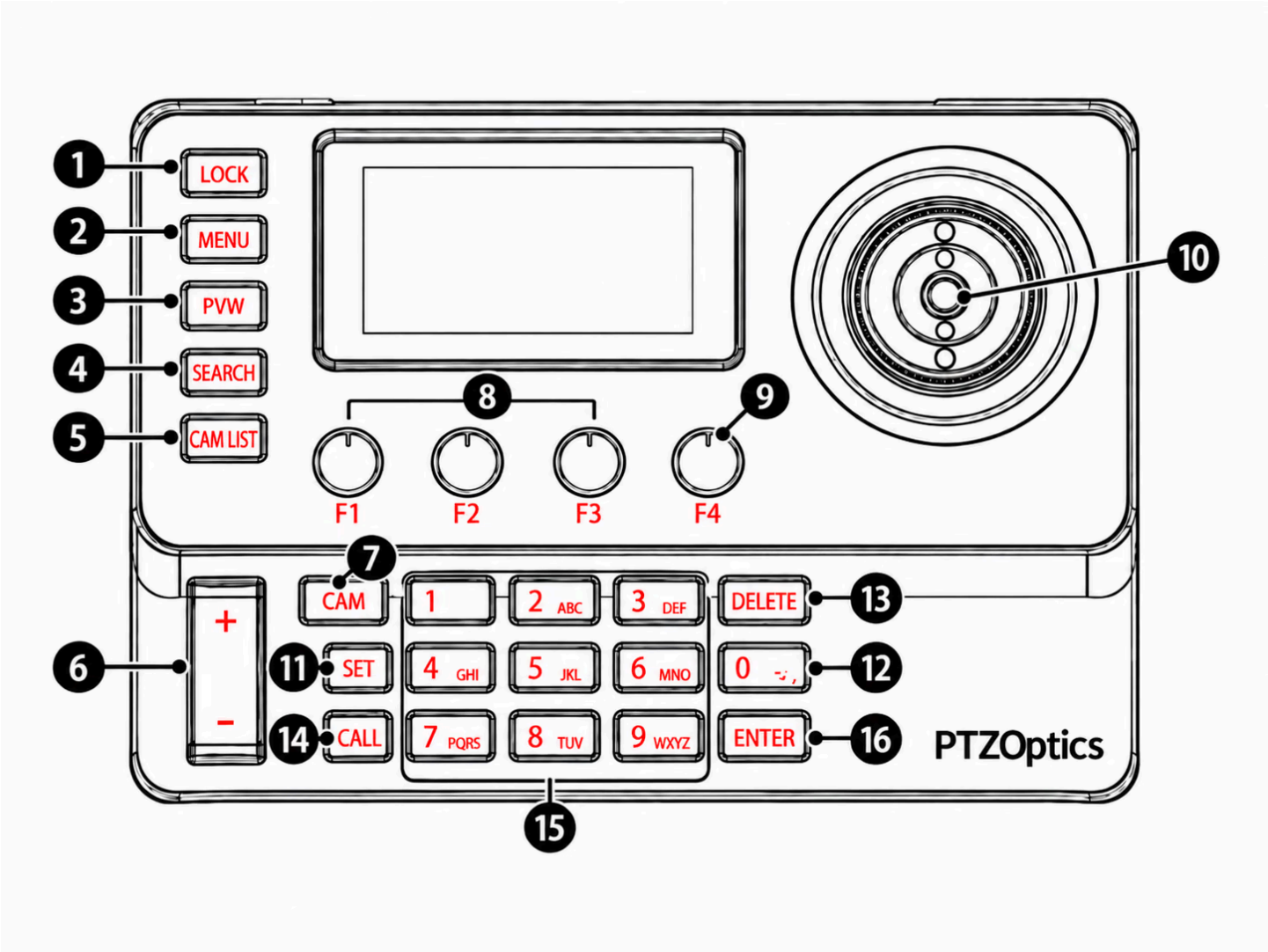
The MiniJoy has the following physical interfaces:

Port	Description
RS-422/485	Phoenix connector for serial camera control
LAN (RJ45)	Network connection (supports up to 1000 IP cameras)

Port	Description
DC-12V	Power input
Power Switch	Power on/off

Buttons

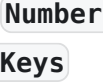
This page documents every control, indicator, and display element on the MiniJoy PTZ Controller.



Buttons and Controls

#	Control	Camera Control / Joystick Operation	Menu Navigation
1	LOCK	Press: Lock/unlock the keyboard to prevent accidental operation.	N/A

#	Control	Camera Control / Joystick Operation	Menu Navigation
2	MENU	Short Press: open keyboard settings menu.	Long Press (3s): open a selected camera's OSD menu.
3	PVW	Press: Preview the currently controlled device's video stream.	N/A
4	SEARCH	Press: Search for IP cameras on the local network.	N/A
5	CAM LIST	Press: Open the camera device list.	N/A
6	Focus	Press + Symbol to focus in or - Symbol to focus out.	N/A
7	CAM	Press: Press CAM , enter the camera number, then press ENTER .	N/A
8	F1-F3 Knobs	Rotate: Adjust assigned parameter. Press: Activate assigned function.	N/A
9	F4 Knob	Rotate: Change knob pages. Press: Activate the assigned function.	Rotate: Navigate menu options. Press: Select.
10	PTZ Joystick	Move: Pan, tilt, and Twist to zoom the selected camera in or out. Press the top button to return a selected camera to its home position.	Move: Navigate through the OSD menu. Press: Select.
11	SET	Press: Store a preset position for the selected camera. Long Press: Default duration (3s) secondary function assigned in settings.	N/A
12	0 key (* / -)	Press: Enter the digit 0 or use the symbols for text entry.	N/A
13	DELETE	Press: Delete the last digit entered on the numeric keypad.	Press: Delete the last digit entered in the menu.

#	Control	Camera Control / Joystick Operation	Menu Navigation
14		Press: Recall a preset position for the selected camera. Long Press: Default duration (3s) secondary function assigned in settings.	N/A
15		Press: Enter camera numbers, preset numbers, and other numeric values.	Multi-tap: Enter text using the numeric keypad.
16		Press: Confirm a camera, preset, or menu selection.	Press: Confirm a menu selection.

PTZ Joystick

The joystick provides 4-axis control. It can be used to navigate the MiniJoy's On-Screen Display (OSD) menu as well as control the pan, tilt, and zoom functions of the selected camera.

Axis	Movement	Function
Horizontal	Left / Right	Pan (horizontal movement)
Vertical	Up / Down	Tilt (vertical movement)
Rotation	Twist clockwise	Zoom telephoto (ZOOM TELE)
Press Top Button	Press the top button	Return the selected camera to its home position
Rotation	Twist counter-clockwise	Zoom wide-angle (ZOOM WIDE)

Horizontal, vertical, and zoom movements can be performed simultaneously.

Knobs F1-F4

The **4 knobs** (F1, F2, F3, F4) are customizable. Their current function is displayed at the bottom of the LCD screen.



CUSTOM KNOBS IN PRACTICE

Knobs 1-3 can send three distinct commands: rotate clockwise, rotate counter-clockwise, and press.

During normal camera operation, **Knob 4** activates its assignment only when pressed; rotating it cycles through knob pages. While the MiniJoy OSD is open, rotate Knob 4 to navigate and press it to select a menu item.

Knob Interaction

Interaction	Function
Rotation	Adjust parameters (e.g., Iris, Shutter, Gain, Zoom, Focus)
Push (button)	Toggle modes or select options

During normal camera operation, rotating F4 changes knob pages and pressing it activates the assigned function. While the MiniJoy OSD is open, rotating F4 navigates menu options and pressing it selects the highlighted item.

Knob Pages

The knob area supports 6 custom pages, each with 4 assignable functions. Use the F4 knob to switch between pages.

► Available Knob Functions

Screen Display

The 3" LCD screen displays the following elements:

Area	Description
Network Connection Indicator	Shows if the controller is connected to the network

Area	Description
Preview Video Indicator	Indicates the current device has an active preview stream
Device Info	Device name, control protocol, and IP address (or device ID and baud rate for serial connections)
Operation Record Area	Displays recent actions (for example, "Save Preset 1" or "Recall Preset 1")
Custom Function Display Area	Shows the current F1-F4 knob functions and supports page switching
Camera Mode Display Area	Shows the current camera's mode information, such as exposure mode

Button Backlight

The silicone buttons feature two-color white-and-red backlighting. Backlight settings are configurable in the Display settings menu.

Controlling Your Cameras

This guide covers how to add cameras, select active devices, and control PTZ movement and presets with MiniJoy.

- [Add and manage cameras](#)
- [Select and move a camera](#)
- [Save and recall presets](#)
- [Record and replay PTZ Traces](#)

Adding Cameras

There are two ways to add cameras to MiniJoy: network search or manual entry. The following sections cover both methods.

Via Network Search

Use this method to discover and add IP cameras automatically on your local network.

1. Press the **SEARCH** button on the controller.
2. Wait for the search to complete. The screen displays "Searching for devices, please wait."
3. Browse the list of discovered cameras using the joystick or **F4** knob.
4. For each discovered camera, you can:
 - **Edit camera settings before adding**
 - **Add to the device list:** make the camera available for control
5. Press **CAM LIST** to view the device list and select a camera to control.

Cameras 1 Through 7

The first time you open the MiniJoy's OSD or Cam LIST, these camera slots will be shown as **CAM 1** through **CAM 7**. See the table below.

Camera Slot	Protocol	IP Address
CAM 1	VISCA (UDP)	0.0.0.0
CAM 2	VISCA (UDP)	0.0.0.0
CAM 3	VISCA (UDP)	0.0.0.0
CAM 4	VISCA (UDP)	0.0.0.0
CAM 5	VISCA (UDP)	0.0.0.0
CAM 6	VISCA (UDP)	0.0.0.0
CAM 7	VISCA (UDP)	0.0.0.0

These are essentially blank canvases. As you discover and add cameras, you can assign them to these slots for easy access and control.

We recommend performing your search using the **SEARCH** button. Then when you want to add a camera select it from the list of discovered devices and assign it to one of the available camera slots. You can also rename the camera for easier identification during this process.

Camera Slots Beyond 7

The MiniJoy controller supports additional camera slots beyond the initial seven. When adding a camera, instead of selecting 1 through 7, scroll down the OSD sub menu until you reach the **Save** option. This allows you to assign the camera to a slot beyond the first seven.

ⓘ IMPORTANT

Pressing the **Search** button will not initiate a search while in the MiniJoy's On Screen Menu. Pressing the **Cam LIST** button will not display your added cameras, unless you exit the On Screen Menu. Added cameras no longer appear in the search list.

Add a Camera Manually

Use this method when you know the camera IP address or when the camera is not discovered by search.

1. Press **MENU** to open the keyboard settings menu.
2. Navigate to **Device Manager > Add New Device**.
3. Configure the fields required by the selected protocol:

Field	Requirement
Camera Name	Optional descriptive name for the camera
Protocol	VISCA UDP, VISCA TCP, VISCA Serial, ONVIF, NDI, Pelco-P, or Pelco-D
IP Address	Camera network address; not required for serial connections
Port	Control port for network protocols
Address	Camera serial address for serial connections
Baudrate	Communication speed for serial connections; must match the camera
Video Stream Address	Camera streaming URL for preview video
RTSP Transport Protocol	TCP for reliability or UDP for lower latency; UDP is recommended for PTZOptics cameras
Authentication	Enable when the camera service requires authentication
RTSP Username / Password	Credentials used for RTSP authentication
Reset Camera Address	Reset the camera address to its default value

4. Select **Add to Device List**.
5. Select the camera ID. Choose **CAM 1** through **CAM 7**, or select **Save** to use an ID beyond **CAM 7**.
6. Exit the menu and press **CAM LIST** to select the added camera.

Editing & Removing Cameras

1. Press **MENU > Device Management > Device List**.
2. Select the camera you want to edit. You can:
 - Edit the camera name
 - Change the control protocol
 - Modify the IP address
 - Adjust compatibility mode
 - **RTSP transport method:** select either TCP or UDP. We recommend UDP for PTZOptics cameras.
 - **RTSP over TCP:** Prioritizes reliability by retransmitting lost data. This may add latency if the network is congested, but it generally provides a more stable preview.
 - **RTSP over UDP:** Prioritizes low latency and does not retransmit lost data. This provides a more responsive preview, but dropped packets may cause brief artifacts or interruptions.
 - Edit the RTSP Authentication username and password
 - Delete the device from the list

 CHANGING THE RTSP TRANSPORT METHOD

TCP and UDP do not change the stream address itself. They determine how RTSP video is transported from the camera to the joystick.

Select and Move a Camera

Choose a Camera

Choose one of the following methods:

Method	Steps
Device List	Press CAM LIST , then select a device using the joystick or F4 knob
Direct Selection	Press CAM + a number key followed by ENTER to directly select a camera

Moving the Camera

The MiniJoy's 4D joystick allows for simultaneous pan, tilt, and zoom control.

Movement	Description
Pan	Move the joystick left or right
Tilt	Move the joystick up or down
Zoom	Rotate the joystick clockwise (telephoto) or counter-clockwise (wide-angle)
Return to Home	Press the top joystick button to return the currently selected camera to the home position. Additionally, the joystick's top button can be used to make selections within the MiniJoy OSD.

Save and Recall Presets

Control Modes

The MiniJoy uses three different control modes:

- **SET:** Pressing the **SET** button transitions the joystick into preset saving mode. The button will remain backlit while in this mode.
- **CALL:** Pressing the **CALL** button transitions the joystick into preset recall mode. The button will remain backlit while in this mode.
- **DELETE:** Pressing the **DELETE** button transitions the joystick into preset deletion mode. The button will remain backlit while in this mode.

Saving a Preset Camera Position: SET Mode



TIP

Before setting presets, we recommend choosing your desired **Keypad Numeric Mode**. The MiniJoy supports **Keypad Numeric Mode 10**, which allows setting presets **1** through **10**, and **Keypad Numeric Mode 255**, which allows for setting presets up to **255**. To configure the keypad numeric mode, refer to the [MiniJoy OSD settings](#).

With the desired camera selected, follow the steps below to save a preset camera position.

1. Move the camera to the desired position.
2. Press the **SET** button to enter preset saving mode.
3. Press a number key (e.g., **1**) to choose the preset slot for saving the current camera position.
4. Press **ENTER** to save the preset.

i NOTE

Many PTZOptics cameras provide a feature called **Image Presets**. This feature can be toggled **ON** or **OFF** in the camera's settings. When enabled, the camera will store additional image settings (such as exposure and white balance) along with the preset position.

Please keep this in mind when saving preset camera positions using the MiniJoy.

You can also enable a custom knob function called, **Image with Presets**, which enables the MiniJoy to store image settings along with the preset camera position.

Recall a Preset Position: **CALL Mode**

Follow the steps below to recall a preset camera position.

1. Press the **CALL** button to enter preset recall mode.
2. Press the desired preset's number key (e.g., **1**).
3. Press **ENTER** to recall the preset.

Record and Replay PTZ Traces

PTZ Trace

PTZ Trace records a custom pan, tilt, and zoom movement to a preset number. You can then replay the movement once or continuously on a loop.

Configure PTZ Trace

Before using PTZ Trace, open the [MiniJoy OSD knob settings](#) or the [Web UI knob configuration page](#) and assign each of these functions to its own knob:

Function	Purpose
PTZ Trace Record	Record a camera movement
PTZ Trace Call	Replay a recorded movement
PTZ Trace Delete	Delete a recorded movement

In the MiniJoy OSD, navigate to **Controls > PTZ Trace** to configure playback behavior:

Setting	Description
Loop Playback	Enable to repeat the recorded movement until playback is stopped; disable to replay it once
P/T	Enable or disable recorded pan and tilt movements during playback
Zoom	Enable or disable recorded zoom movements during playback
Focus	Enable or disable autofocus during playback

Record a PTZ Movement

With the desired camera selected, follow these steps:

1. Press **SET** to enter preset saving mode.
2. Press the number key for the preset where you want to store the movement (for example, **1**).
3. Press the knob assigned to **PTZ Trace Record**.
4. Perform the desired camera movement, including any pan, tilt, or zoom actions.
5. Press **ENTER** to save the movement.

Call a Recorded PTZ Movement

1. Press **CALL** to enter preset recall mode.
2. Press the number key for the preset where the movement was saved.
3. Press the knob assigned to **PTZ Trace Call**. The camera begins replaying the recorded movement.

When **Loop Playback** is enabled, the movement repeats until you stop it. Press **ENTER** at any time to stop playback.

Delete a Recorded PTZ Movement

1. Press **DELETE** to enter preset deletion mode.
2. Press the number key for the preset containing the recorded movement.
3. Press the knob assigned to **PTZ Trace Delete**.
4. Press **ENTER** to confirm the deletion.

Getting Started with the Web UI

The MiniJoy Web UI provides browser-based camera management, knob configuration, and controller settings.



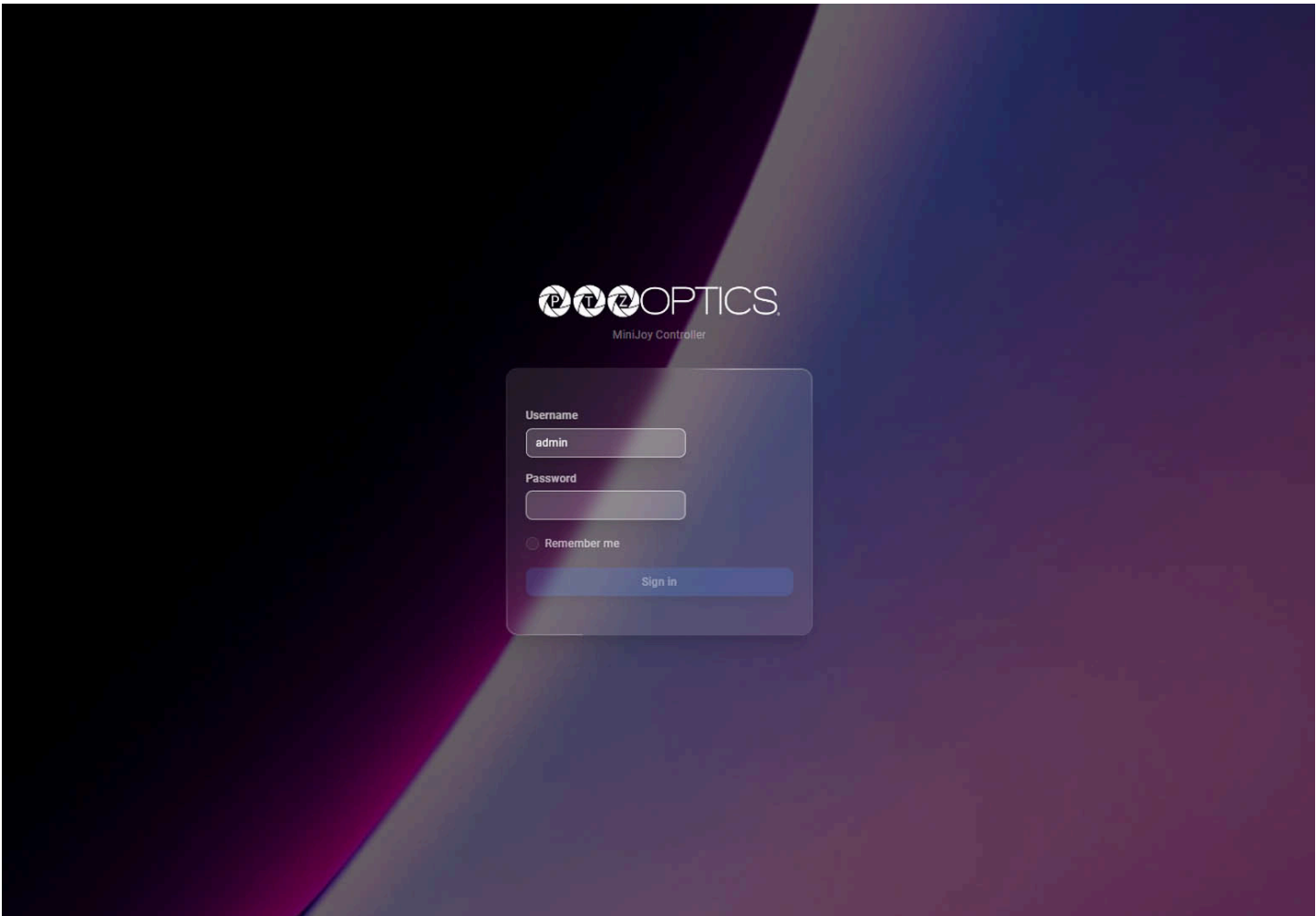
WHAT YOU NEED

- The MiniJoy IP address
- A MiniJoy account
- A computer that can reach the controller over the network

The controller IP address appears in the MiniJoy on-screen display under **Network**. For initial network setup, see [Connect via Network](#).

Sign In

1. Open a web browser and enter your MiniJoy's IP address.
2. Enter your username and password.
3. Select **Sign in**. You will be taken to the MiniJoy Web UI dashboard on the **Devices** page.



Devices Page

The Devices page provides a table that shows each configured camera's **number**, **name**, (*referred to as **friendly name** when modifying settings*), **control protocol**, **IP address**, and modification controls.

In the **Modify** column, each camera has controls to request a **snapshot**, **edit device** settings, or remove the **camera**.

In the top-right corner of the Devices page, a search bar filters the camera list. A set of **view controls** switches between a **list** and a **grid layout**.

The Devices page is set to the list view by default.

The grid layout displays the most recently retrieved still snapshot for each camera.

The browser interface displays still snapshots. It does not provide continuous video or on-screen PTZ controls.

ptzoptics.local

Devices

Knobs

Settings

RebootLogout

fplaystopin

Serial Number

0

Device Model

PT-MINIJOY-G1

MAC Address

dc:ed:84:e2:99:99

Firmware Version

1.0.8

Uptime

65h : 42m : 16s

Ask a Question!

Please enter search...

CAM	Name	Protocol	Address	Modify
1	My 30X Move 4K	VISCA (UDP)	192.168.15.138	
2	Camera	VISCA (UDP)	192.168.15.248	

Add Camera

ptzoptics.local

Devices

Knobs

Settings

RebootLogout

fplaystopin

Serial Number

0

Device Model

PT-MINIJOY-G1

MAC Address

dc:ed:84:e2:99:99

Firmware Version

1.0.8

Uptime

65h : 57m : 42s

Ask a Question!

Please enter search...

1

My 30X Move 4K

192.168.15.138

2

Camera

192.168.15.248

3

Manual 177

192.168.15.177

4

Manual 147

192.168.15.147

5

Manual 73

192.168.15.73

6

Snapshot of Manual 138

7

Manual 132

192.168.15.132

8

CAM 7

0.0.0.0

9

Manual 191

192.168.15.191

10

Manual 163

192.168.15.163

11

Manual 157

192.168.15.157

12

Manual 119

192.168.15.119

13

Camera

192.168.15.127

Add Camera

Main Navigation

Item	Purpose
Devices	Discover, add, inspect, edit, or remove camera entries
Knobs	Assign functions to four programmable knobs across six pages
Settings	Configure Network, NDI, Firmware, System, and Help options
Logout	End the current Web UI session
Reboot	Restart the controller

The sidebar also displays controller identity and status information. See [Controller Settings](#) for the complete list.

 WARNING

Reboot interrupts controller operation. Use it only during an appropriate maintenance window.

Adding and Managing Cameras

Use the **Devices** page to discover, add, edit, view, and remove camera entries.

Adding Your First Camera

This walkthrough uses a PTZOptics camera as an example to add your first camera to the MiniJoy Web UI. You can follow the same workflow for other supported cameras.

The **Search** stage provides a list of all devices that the MiniJoy discovers as available to add. Discovery can identify a camera and populate some fields, but it does not confirm every setting required for control, video, and snapshots.

⚠ BEFORE YOU BEGIN

Open your camera Web UI in another browser tab or window so that you can reference its configuration. If you cannot keep it open, write down the following information before continuing:

1. Camera IP address
2. Enabled control protocol and its port, when applicable
3. Whether **HTTP authentication** is enabled and the required credentials (*Most PTZOptics cameras have this setting enabled by default. If you are trying to add a PTZ camera from another manufacturer, check its documentation for this setting.*)
4. Video streaming method and its stream or connection details

Keep this information available as you complete the **Control**, **Video**, and **Snapshot** stages.

Additionally, if HTTP Authentication is not enabled, you will not need to enter credentials for the snapshot and video stages.

[Gen 3 Web UI documentation](#) for more details.

[Horizon Web UI documentation](#) for more details.

Open Add Camera

1. Make sure you are on the **Devices** page.

2. Click **Add Camera** in the bottom-right corner of the page to start searching for cameras. Results are grouped under **All**, **VISCA (UDP)**, and **ONVIF**. Select **NDI** to start a separate NDI source search.

The screenshot shows the PTZOptics web interface with the 'Add Camera' modal open. The modal has a sidebar with navigation links: Devices, Knobs, Settings, Reboot, and Logout. The main area displays a table of discovered cameras. The table has columns for Name, Address, and Protocol. The 'All' tab is selected, showing 33 cameras. The 'Continue' button is at the bottom right.

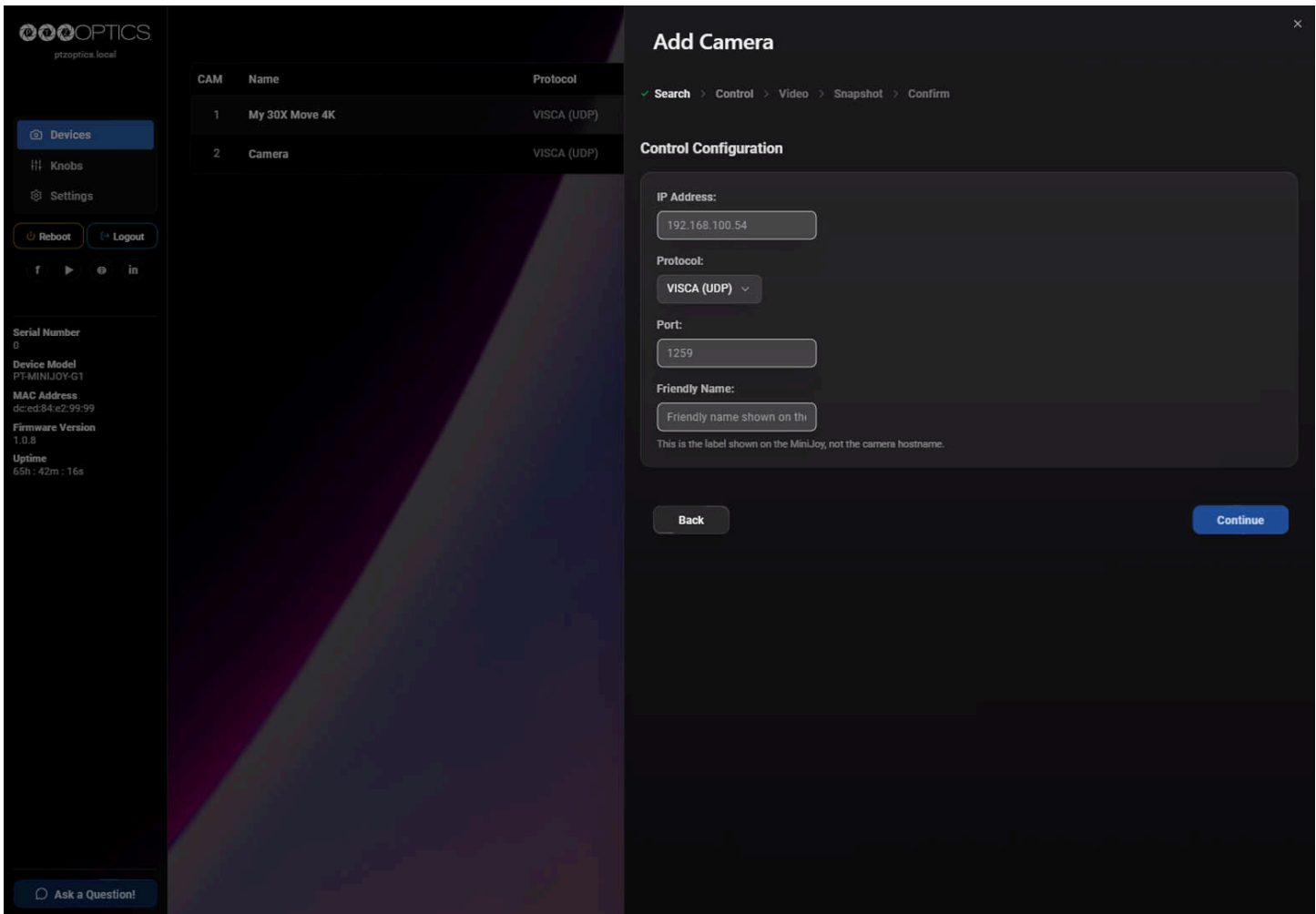
Name	Address	Protocol
Camera	192.168.15.239	VISCA (UDP)
Camera	192.168.15.130	VISCA (UDP)
Camera	192.168.15.127	VISCA (UDP)
Camera	192.168.15.154	VISCA (UDP)
Camera	192.168.15.118	VISCA (UDP)
Camera	192.168.15.220	VISCA (UDP)
Camera	192.168.15.177	VISCA (UDP)
Camera	192.168.15.101	VISCA (UDP)
Camera	192.168.15.165	VISCA (UDP)
Camera	192.168.15.147	VISCA (UDP)
Camera	192.168.15.142	VISCA (UDP)
Camera	192.168.15.129	VISCA (UDP)
Camera	192.168.15.158	VISCA (UDP)
Camera	192.168.15.171	VISCA (UDP)
Camera	192.168.15.200	VISCA (UDP)
Camera	192.168.15.206	VISCA (UDP)
Camera	192.168.15.103	VISCA (UDP)
Camera	192.168.15.155	VISCA (UDP)

Select Your Camera

1. Locate your PTZOptics camera in the list of discovered devices. Click its row to select it, then click the **Continue** button.

If the camera is not listed:

- Double-check that the camera is powered on and connected to the same network as the MiniJoy.
- If it still does not appear, try selecting **Manual Add**, then enter the connection details from the camera Web UI.



Configure Your Camera

Complete each stage using the settings shown in your PTZOptics camera's Web UI:

1. **Control:** Verify the IP address and select the control protocol used by the camera. *(For PTZOptics cameras, we recommend using VISCA (UDP) for control. The default port number is **1259**.)*

TIP

We recommend entering a **friendly name** at this stage. This will make it easier to differentiate the camera later if your list of added cameras continues to grow.

2. **Video:** Select the camera's video streaming method. We recommend RTSP (UDP) *(The default port number is **554**).*
3. **Snapshot:** Enter the still-image path. Configure authentication to match the camera's HTTP authentication setting. *(Choose **Digest** for PTZOptics cameras. If using another manufacturer, refer to*

its documentation for the appropriate setting.)

4. **Confirm:** Review all three configurations, then select **Save**.

Verify Your Camera

1. Confirm that the new row appears on **Devices** with the expected name, protocol, and address.
2. Open **Edit Device** and confirm the saved video method.
3. Select **Show Snapshot** and confirm that the current still image loads.
4. Use the physical MiniJoy to test an approved PTZ control and the configured continuous preview.

If you would like to view the snapshots from all currently added cameras, select the **grid view** option on the **Devices** page.

For complete field and protocol details, see the [Camera Configuration Reference](#).

Find a Configured Camera

To quickly locate a configured camera, open **Devices**, then enter part of a friendly name or IP address in the search field. Use the list and grid controls to change the layout.

Adding a Camera Manually

You can add a camera manually if it does not appear in the search results. Follow these steps:

1. Select **Add Camera**.
2. Select **Manual Add**.
3. Enter the camera IP address.
4. Select the control protocol and enter its port when required.
5. Enter a friendly name.
6. Complete **Video**, **Snapshot**, and **Confirm**, then select **Save**.

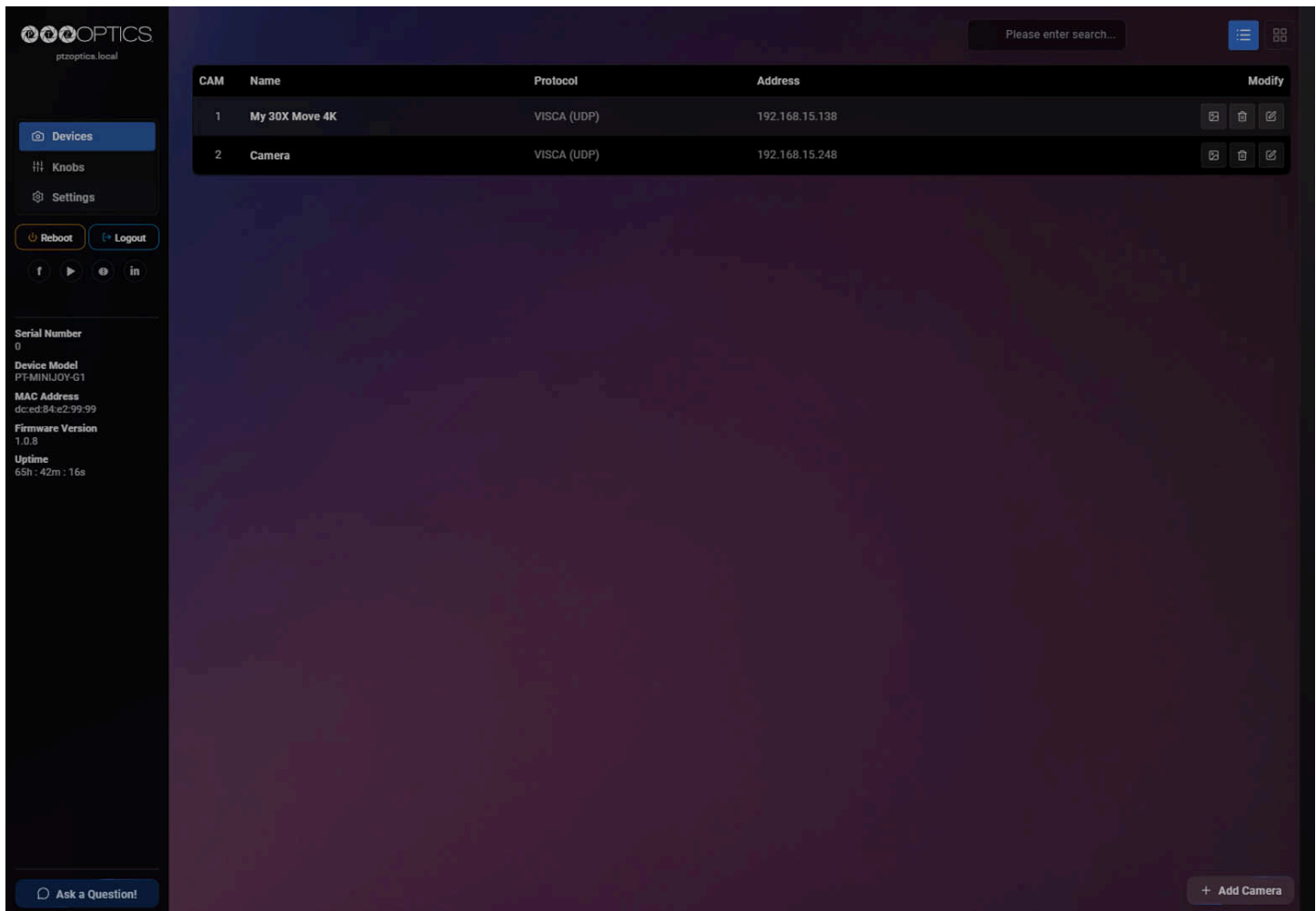
Editing a Camera

1. On **Devices**, select **Edit Device** for the camera.
2. Update the required stage:

- **Control:** Address, protocol, port, friendly name, and applicable credentials
- **Video:** Method, quality or RTSP fields, and applicable credentials
- **Snapshot:** Still-image path and HTTP authentication type

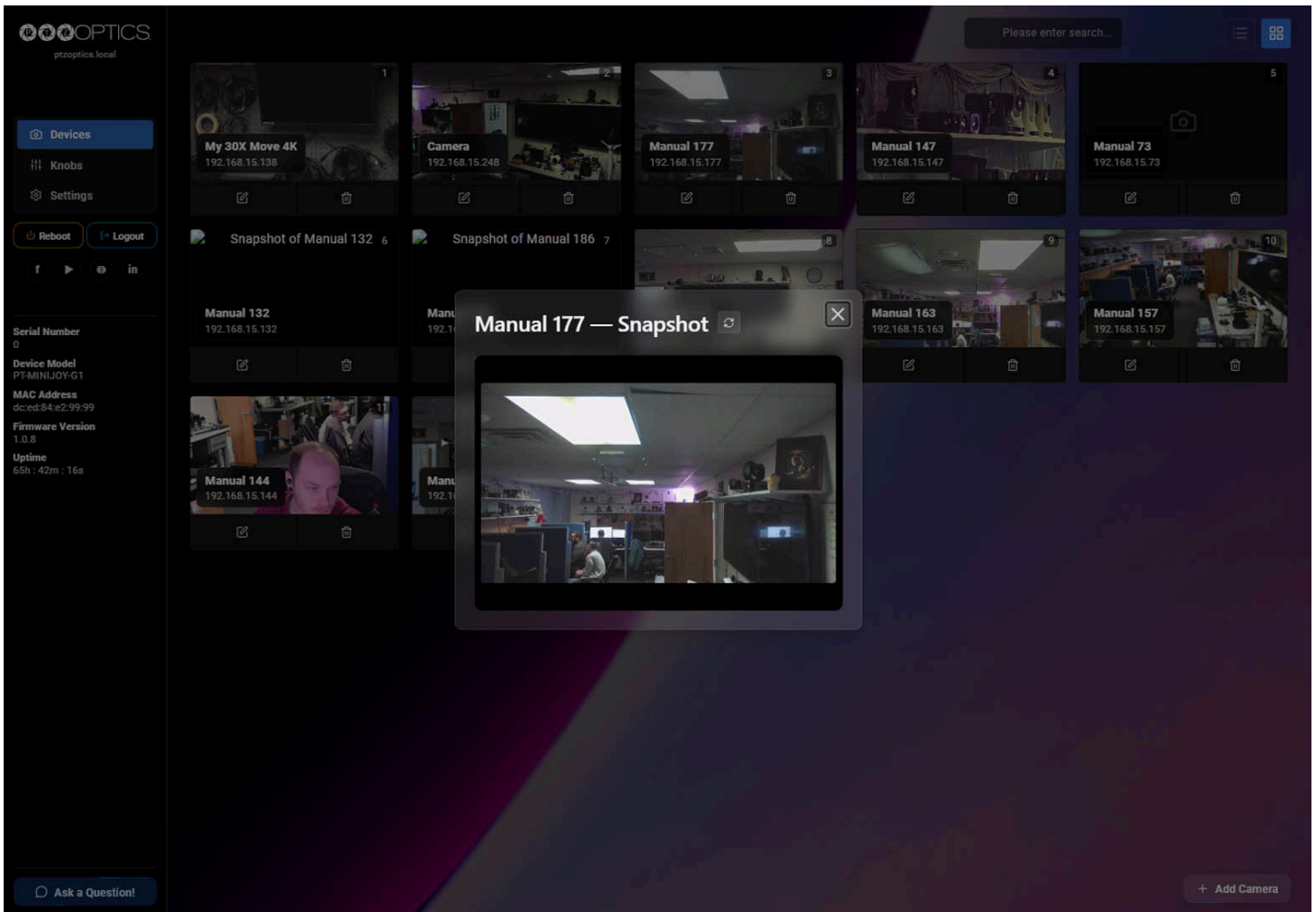
3. Open **Confirm** and review all sections.

4. Select **Save**.



Viewing a Camera Snapshot

Select **Show Snapshot** in list view, or select a camera image in the grid view. Click the **refresh** button in the snapshot pop-up to request another still image.



Removing a Camera

1. On **Devices**, select the **Delete Device** icon (trash can) for the camera.
2. Confirm the deletion when prompted.
3. Confirm that the camera no longer appears in the Devices list.

Deleting a device removes its configuration from the MiniJoy. It does not reset or delete settings stored on the physical camera.

Camera Configuration Reference

Adding and Editing Cameras

The following actions can be performed from the **Devices** page:

Workflow	Stages
Add Camera	Search, Control, Video, Snapshot, Confirm
Edit Camera	Control, Video, Snapshot, Confirm

Search Controls

Control	Function
All	Show current VISCA UDP and ONVIF discovery results
VISCA (UDP)	Show VISCA UDP results
ONVIF	Show ONVIF results
NDI	Start and show the separate NDI source search
Rescan	Run VISCA UDP and ONVIF discovery again
Manual Add	Continue without selecting a discovered result

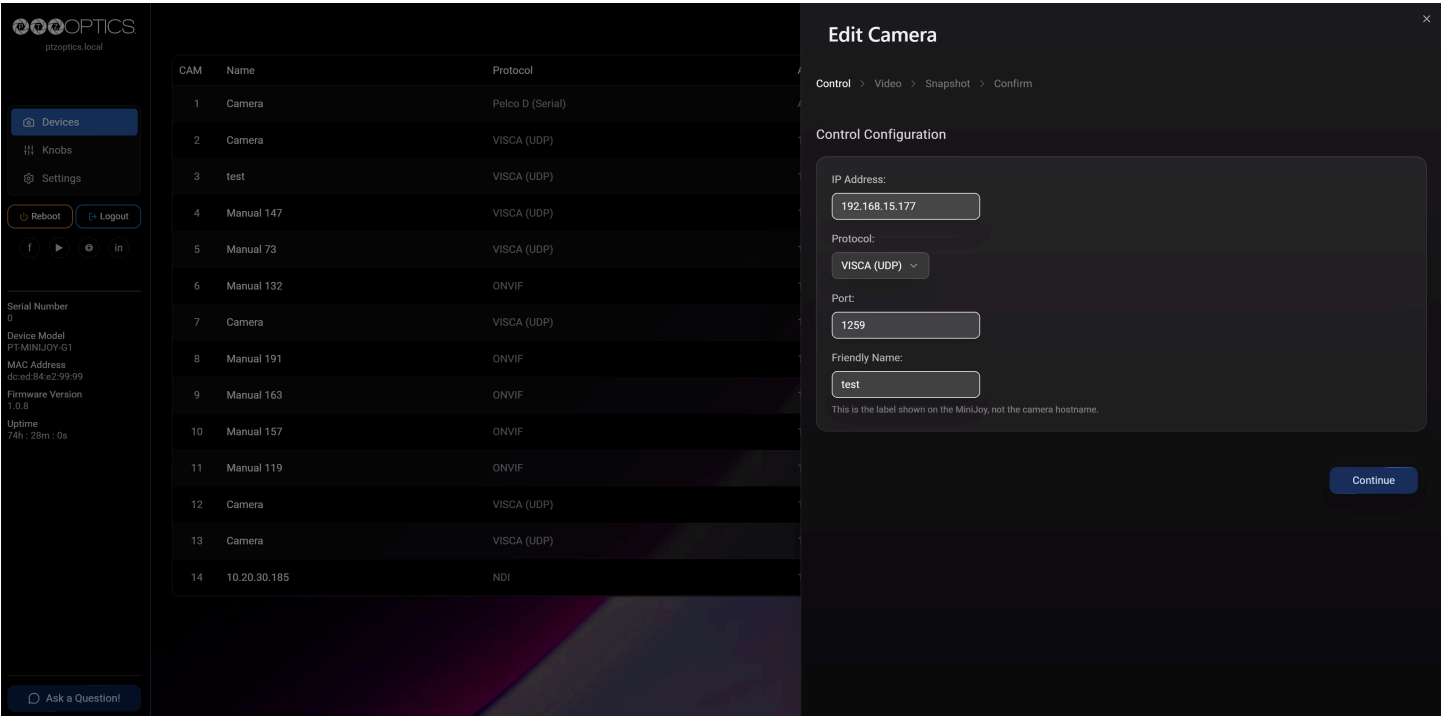
Control Fields

Field	Availability	Purpose
IP Address	Network protocols	Camera address used by the selected control method
Protocol	All cameras	Camera control method
Port	Network protocols that require a port	Camera control port
Address	Serial protocols	Camera serial address; the MiniJoy supports addresses 1 through 7
Baudrate	Serial protocols	Serial communication speed; must match the camera
Friendly Name	All cameras	Label shown by the MiniJoy; this does not change the camera hostname
Username / Password	Applicable network protocols	Credentials used by the selected control service

Protocol	Default or Required Configuration
ONVIF	Camera address and ONVIF credentials when authentication is enabled
NDI	Discovered NDI source
VISCA (UDP)	Camera address and port; PTZOptics default port: 1259
VISCA (TCP)	Camera address and port; PTZOptics default port: 5678
VISCA (Serial)	Serial address and matching baud rate
Pelco D (Serial)	Serial address and matching baud rate
Pelco P (Serial)	Serial address and matching baud rate

Supported serial baud rates are 2400, 4800, 9600, 19200, 38400, and 115200.

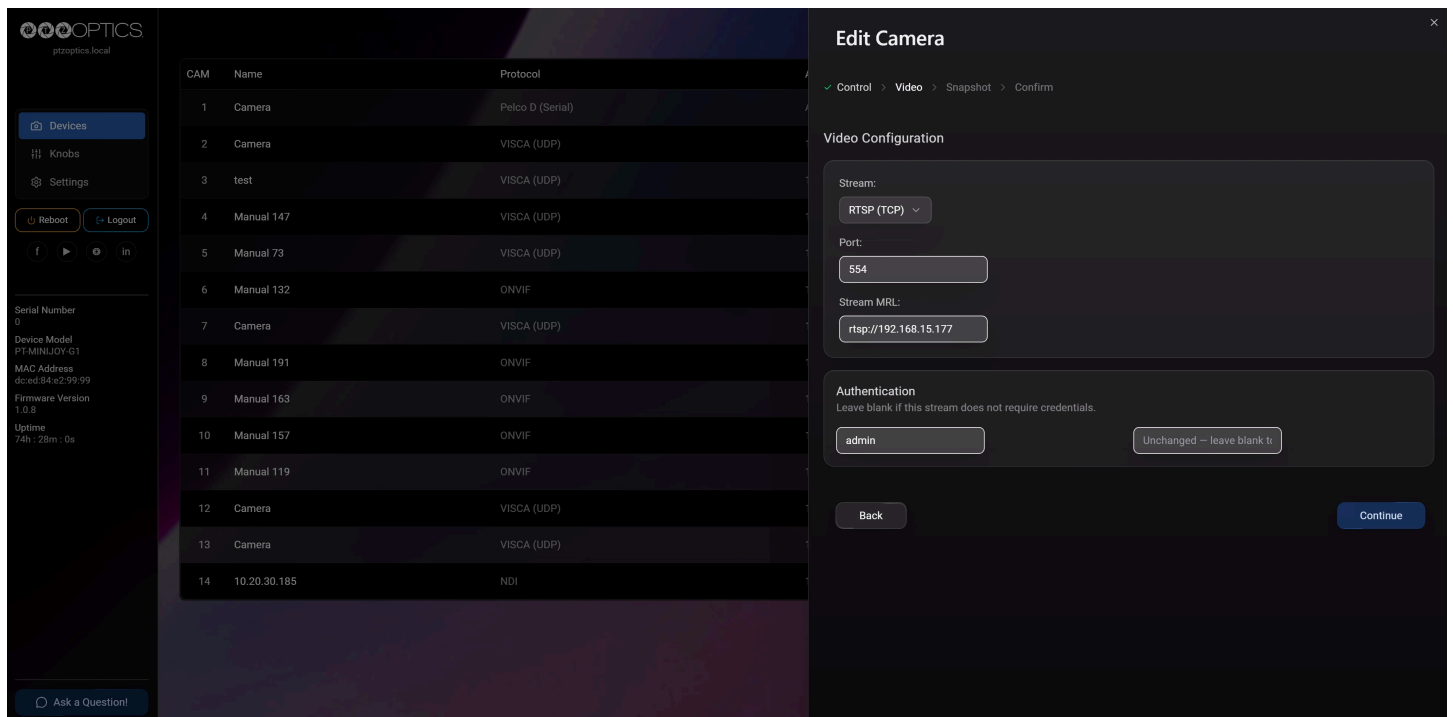
Discovery can populate fields such as the address, port, protocol, and friendly name. Verify all populated values against the camera configuration before saving.



Video Fields

Method	Fields
NDI	Stream
ONVIF	Stream, and optional Username / Password
RTSP (TCP)	Stream, Port, Stream MRL, and optional Username / Password
RTSP (UDP)	Stream, Port, Stream MRL, and optional Username / Password

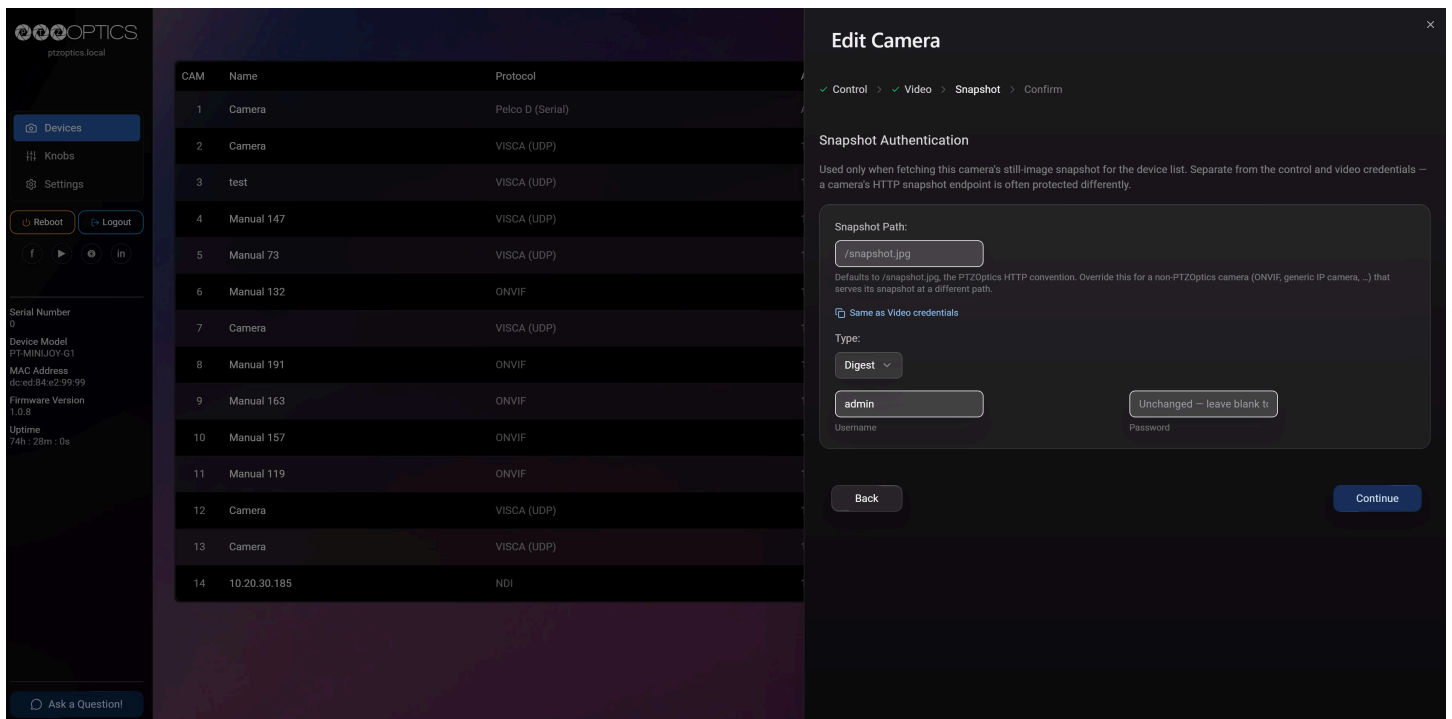
For RTSP, **Port** defaults to 554. **Stream MRL** is the complete media resource locator used to open the stream, such as rtsp://192.168.15.138. Include any camera-specific stream path required after the address.



Snapshot Fields

Field	Purpose
Snapshot Path	Camera still-image path; the default is <code>/snapshot.jpg</code>
Type	None, Basic, Digest, or Bearer authentication
Username	Snapshot-endpoint username when required
Password	Snapshot-endpoint credential when required

Snapshot authentication is separate from credentials entered in Control or Video.

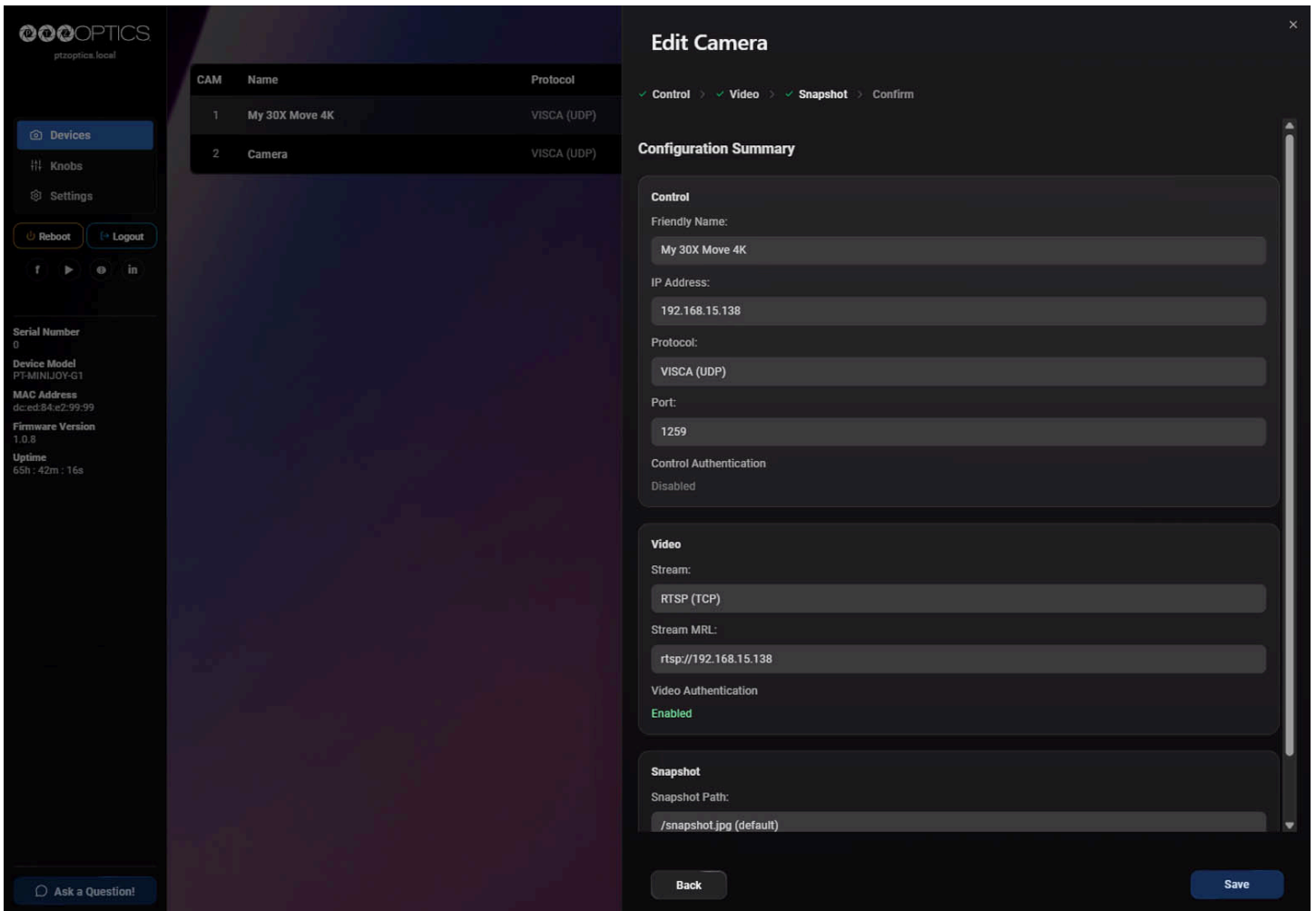


Confirm

The Confirm stage summarizes:

- Friendly Name, IP Address, Protocol, Port, and Control Authentication status
- Stream, Stream Quality when applicable, and Video Authentication status
- Snapshot Path and Snapshot Authentication type

Review the summary, then select **Save** to apply the configuration.



Camera Authentication

Credentials can appear in more than one workflow stage because they protect different camera services. Do not assume that one set of credentials applies to every stage.

Control Credentials

When shown, the username and password in **Control** are used by the selected network control method. ONVIF credentials can be left blank only when the camera's ONVIF service does not require them.

Video Credentials

When shown, the username and password in **Video** are used to obtain the selected video source or stream. Leave them blank only when that camera service does not require authentication.

Snapshot Authentication

Type	Use
None	Send no authentication; use only when the snapshot endpoint requires none.
Basic	Send Basic HTTP authentication.
Digest	Use HTTP challenge-response authentication. PTZOptics cameras expect Digest authentication. Sending Basic authentication when Digest is required will return a 401 error.
Bearer	Use token-based HTTP authentication as required by the camera.

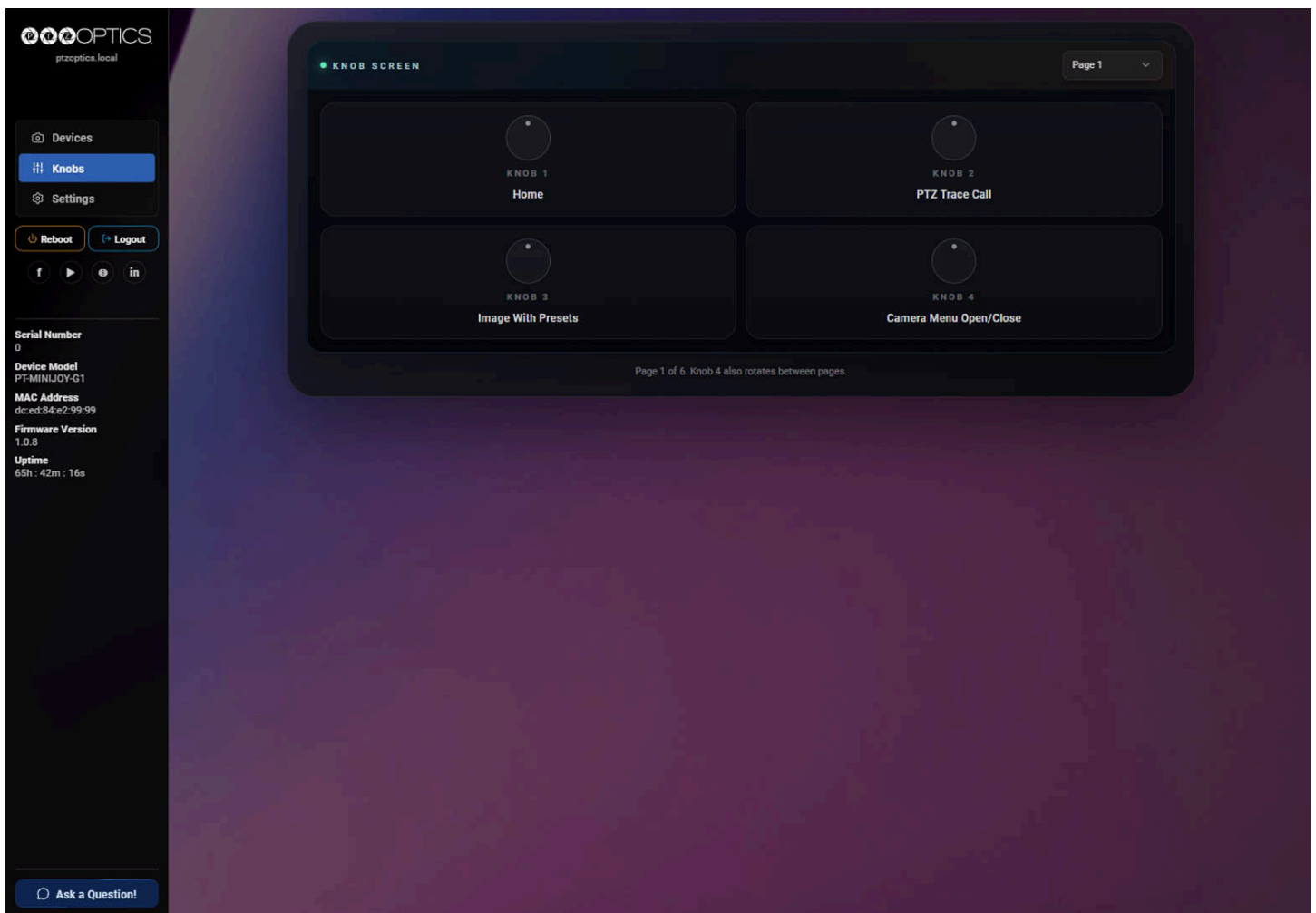
Consult the camera documentation or administrator for the required method and credentials.

Configuring the Knobs

The MiniJoy provides six knob pages. Each page stores one assignment for each of the four physical knobs.

Select a Page

1. Select **Knobs**.
2. Use the **Page** selector to choose Page 1 through Page 6.

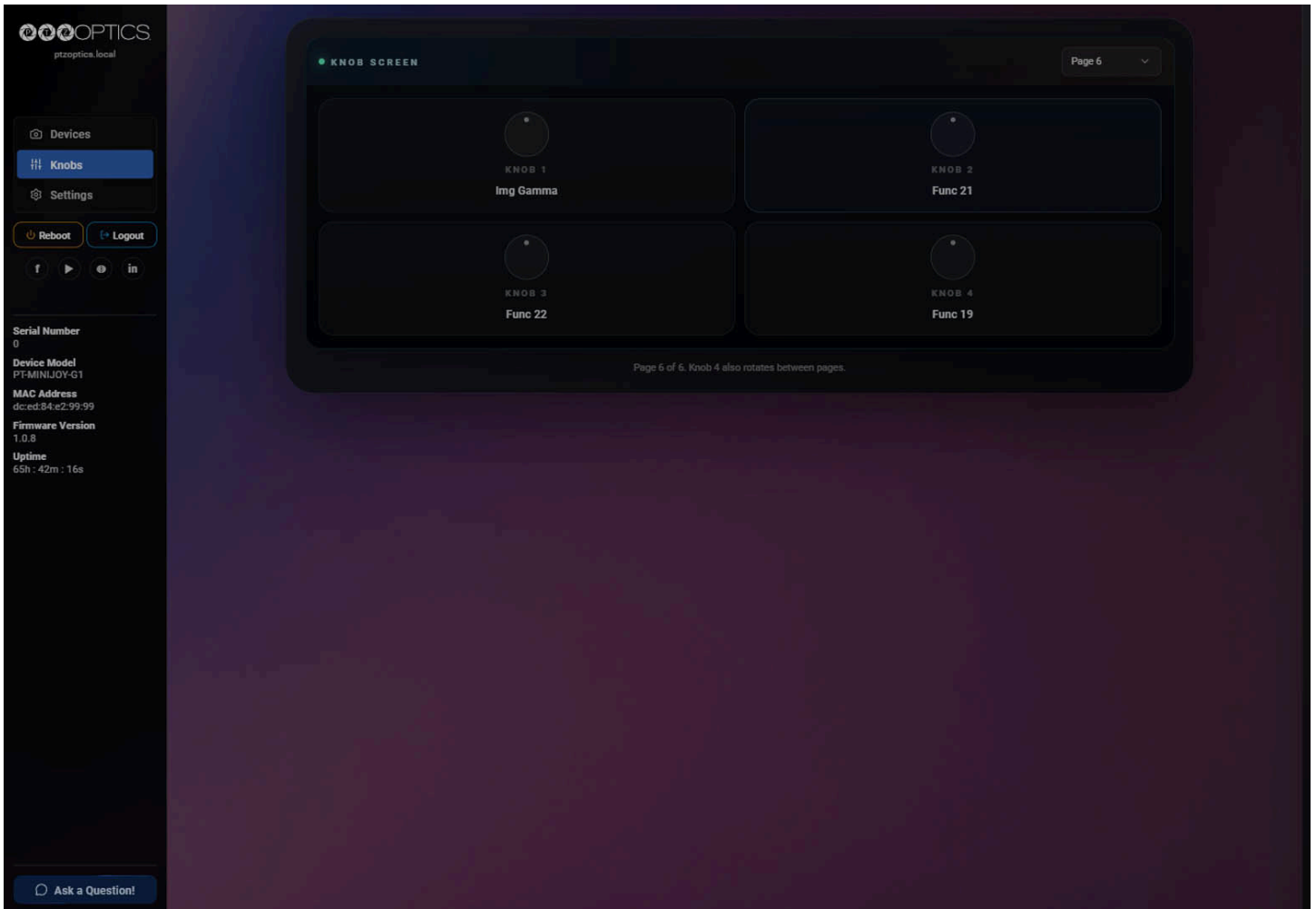


The labels below each knob show the functions currently saved on the selected page.

Changing Knob Functions

1. Select any knob tile on the current page.

2. In the configuration drawer, select an assignment for Knob 1, Knob 2, Knob 3, and Knob 4.
3. Select **Save all knobs** to save all four assignments for the current page.
4. Select another page and repeat as needed.



Verify the Page

After saving, close the drawer and reopen the same page. Confirm that all four tile labels match the intended assignments. Configure and verify each page independently.

The labels shown in the screenshots are example assignments, not factory defaults.

Knob Functions Reference

Knobs 1-3 support both rotate and press functions. During normal camera operation, **Knob 4** supports press functions only because rotating it changes knob pages. The **Knob 4** column shows which functions can be assigned to it.

Knobs 1-3

#	Function	Interaction	Knob 4	Description
1	PT Speed	Rotate	No	Adjusts the camera's pan and tilt movement speed.
2	Zoom Speed	Rotate	No	Adjusts the camera's zoom movement speed.
3	Focus Speed	Rotate	No	Adjusts the camera's manual focus movement speed.
4	Exp Iris	Rotate	No	Adjusts the lens aperture and the amount of light reaching the image sensor.
5	Exp Shutter	Rotate	No	Adjusts how long each video frame is exposed to light.
6	Exp Gain	Rotate	No	Adjusts electronic image-signal amplification and brightness.
7	Exp Mode	Press	Yes	Cycles through the camera's exposure modes.
8	WB RGain	Rotate	No	Adjusts the red channel gain for manual white balance.
9	WB BGain	Rotate	No	Adjusts the blue channel gain for manual white balance.
10	WB One Push Trigger	Press	Yes	Performs a one-push white balance adjustment.
11	WB Mode	Press	Yes	Cycles through the camera's white balance modes.
12	Exp Gain Limit	Rotate	No	Sets the maximum gain the camera can apply in low light.

#	Function	Interaction	Knob 4	Description
13	Exp Compensation	Rotate	No	Adjusts the target brightness used by automatic exposure.
14	Exp Backlight	Press	Yes	Toggles backlight compensation for a subject against a bright background.
15	Img Gamma	Press	Yes	Cycles through the camera's gamma correction settings.
16	Exp Anti-Flicker	Press	Yes	Cycles through anti-flicker settings for artificial lighting.
17	PTZ Reset	Press	Yes	Resets the camera's pan, tilt, and zoom mechanism.
18	PTZ Trace Record	Press	Yes	Records a custom pan, tilt, and zoom movement to a selected preset.
19	PTZ Trace Call	Press	Yes	Plays the PTZ Trace stored in a selected preset.
20	PTZ Trace Delete	Press	Yes	Deletes the PTZ Trace stored in a selected preset.
21	Camera	Press	Yes	Activates camera selection mode.
22	Camera Select	Rotate	No	Selects which configured camera the controller operates.
23	Toggle Auto Tracking	Press	Yes	Enables or disables the selected camera's auto-tracking mode.
24	Auto Tracking Subject Select	Rotate	No	Selects the subject for the camera to track.

#	Function	Interaction	Knob 4	Description
25	Snap Focus	Press	Yes	Refocuses the image once while keeping the camera in manual focus mode.
26	Standby	Press	Yes	Toggles the selected camera between active and standby modes.
27	Manual/Auto Focus	Press	Yes	Toggles the selected camera between manual and automatic focus.
28	Focus Lock/Unlock	Press	Yes	Locks focus at its current position or restores autofocus operation.
29	Focus Zone	Press	Yes	Cycles through the regions used for autofocus detection.
30	Image With Presets	Press	Yes	Toggles whether image settings are stored and recalled with presets.
31	Preset Recall	Press	Yes	Recalls the selected camera preset.
32	Home	Press	Yes	Returns the selected camera to its home position.
33	Privacy Mode	Press	Yes	Toggles privacy mode, which points the camera down and disables video.
34	Image Luminance	Rotate	No	Adjusts the overall brightness of the processed image.
35	Image Contrast	Rotate	No	Adjusts the difference between the darkest and brightest image areas.
36	Image Sharpness	Rotate	No	Adjusts edge enhancement and perceived image detail.

#	Function	Interaction	Knob 4	Description
37	Exp One Push Trigger	Press	Yes	Performs a one-push automatic exposure adjustment.
38	WB RTuning	Rotate	No	Fine-tunes the red component of the calculated white balance.
39	WB BTuning	Rotate	No	Fine-tunes the blue component of the calculated white balance.
40	WB Hue	Rotate	No	Adjusts the overall color tint of the image.
41	WB Saturation	Rotate	No	Adjusts the intensity of colors in the image.
42	WB Color Temp	Rotate	No	Adjusts the white balance color temperature.
43	RTMP Stream 1	Press	Yes	Starts or stops RTMP Stream 1.
44	RTMP Stream 2	Press	Yes	Starts or stops RTMP Stream 2.
45	Camera Menu Open/Close	Press	Yes	Opens or closes the selected camera's OSD menu.
46	Camera Menu Back	Press	Yes	Returns to the previous level of the selected camera's OSD menu.

Knob 4

During normal camera operation, rotate Knob 4 to change knob pages and press it to activate its assigned function. While the MiniJoy OSD is open, rotate Knob 4 to navigate and press it to select the highlighted menu item.

Devices

Knobs

Settings

Reboot

Logout



Serial Number

0

Device Model

PT-MINIJOY-G1

MAC Address

dced:84:e2:99:99

Firmware Version

1.0.8

Uptime

65h : 42m : 16s

Ask a Question!

• KNOB SCREEN

KNOB 1

Img Gamma

KNOB 3

Func 22

Page 6 of 6. Knob 4 also rotates between pages.

Page 6 · Knobs

Set all four knobs, then Save. Switch pages to configure the rest.

KNOB 1

Img Gamma

KNOB 2

KNOB 3

KNOB 4

Manual/Auto Focus

Knob 4 rotates between pages, so only toggle-style functions are available here.

Snap Focus

Focus Zone

Image With Presets

Preset Recall

Home

Toggle Auto Tracking

Privacy Mode

PTZ Trace Record

PTZ Trace Call

PTZ Trace Delete

Camera

Img Gamma

Exp Mode

Exp One Push Trigger

Exp Backlight

Exp Anti-Flicker

WB Mode

Save all knobs

Controller Settings

Open **Settings** to configure controller-level options. These settings affect the MiniJoy, not an individual camera.

Network

Setting	Behavior
IP Configuration Type	Select DHCP or Static
IP Address	Supplied automatically for DHCP; editable for Static
Subnet Mask	Supplied automatically for DHCP; editable for Static
Gateway	Supplied automatically for DHCP; editable for Static
DNS1	Supplied automatically for DHCP; editable for Static
DNS2	Supplied automatically for DHCP; editable for Static
Save	Apply the displayed network configuration

PTZOPTICS
ptzoptics.local

Devices

Knobs

Settings

RebootLogout

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Serial Number
0

Device Model
PT-MINIJOY-G1

MAC Address
dced:84:e2:99:99

Firmware Version
1.0.8

Uptime
65h : 42m : 16s

Ask a Question!

NetworkNDIFirmwareSystemThemeHelp

Network Settings

IP Configuration Type:

DHCP

IP Address:

192.168.15.213

Subnet Mask:

255.255.255.0

Gateway:

192.168.15.1

DNS1:

192.168.15.1

DNS2:

8.8.8.8

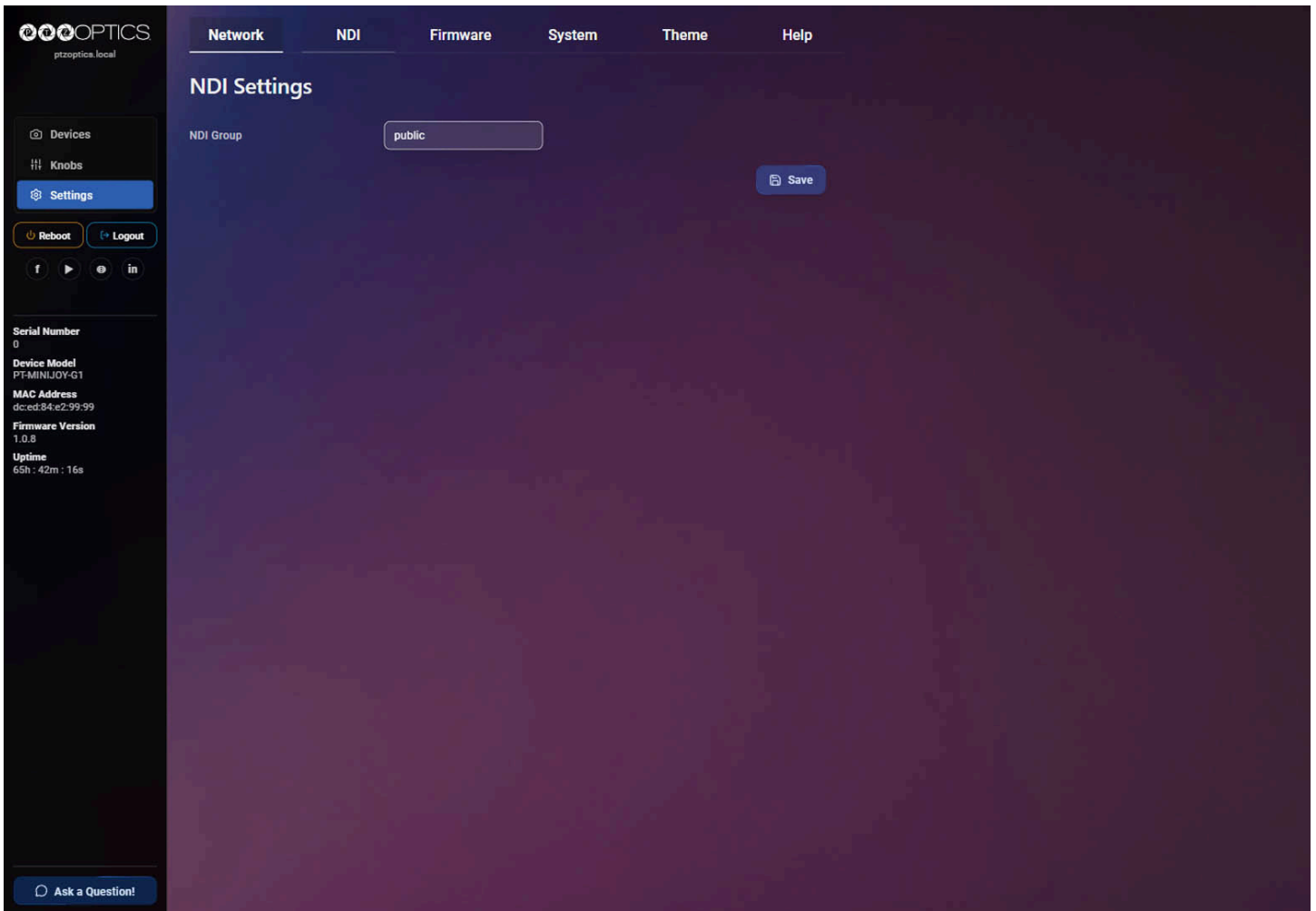
Save

 **WARNING**

Changing network settings can disconnect the browser session. Record the new IP address before saving a static configuration.

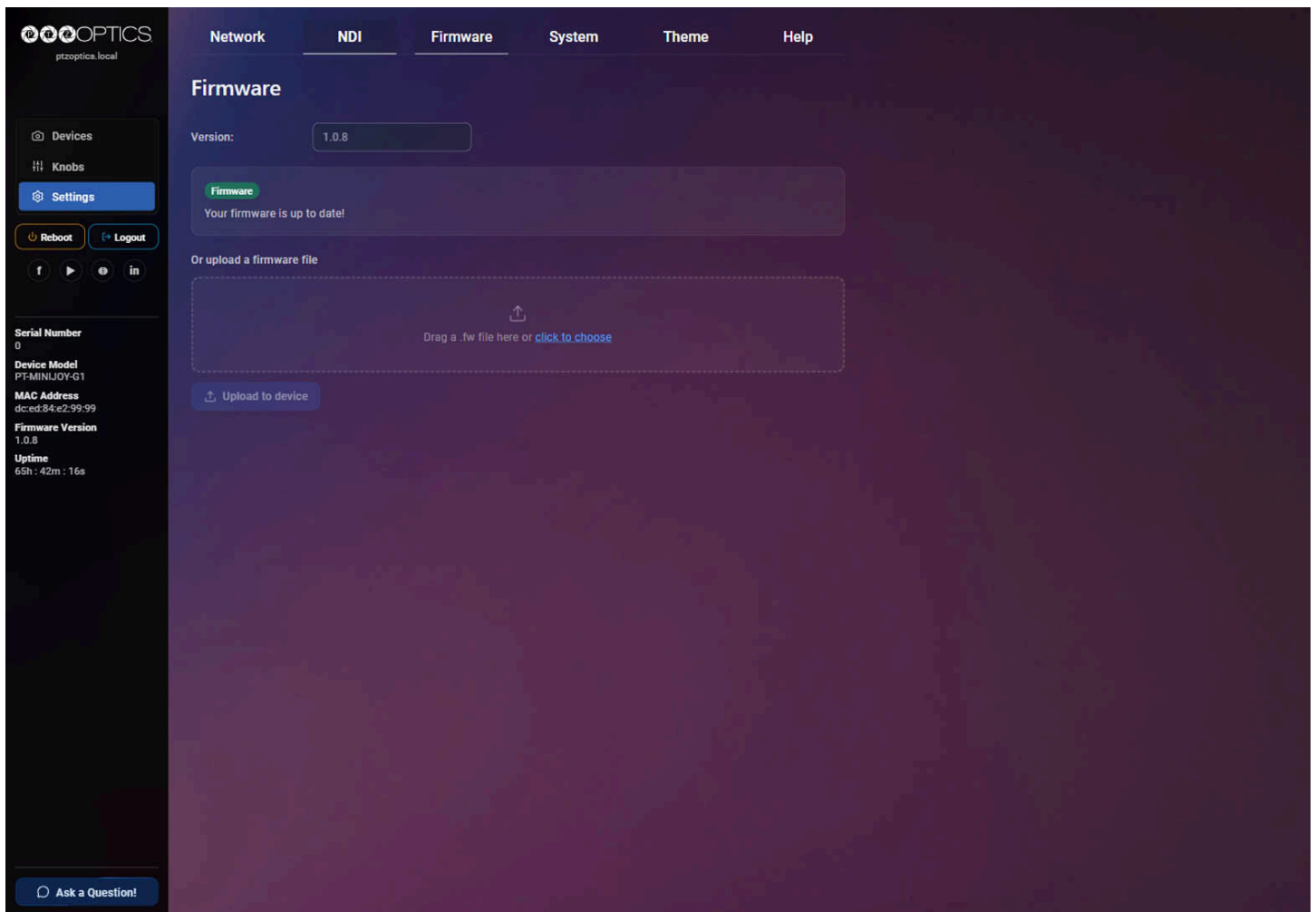
NDI

Enter the NDI group used by the MiniJoy, then select **Save**. The group name must exactly match the group used by the NDI sources the MiniJoy needs to discover. The screenshot uses `public` as an example; use the group required by your environment.



Firmware

The Firmware page displays the installed firmware version and update status. To install an update, choose or drop an approved `.fw` file, then select **Upload to device**.



WARNING

Use only firmware intended for the MiniJoy. Do not disconnect power or the network while an update is in progress.

System

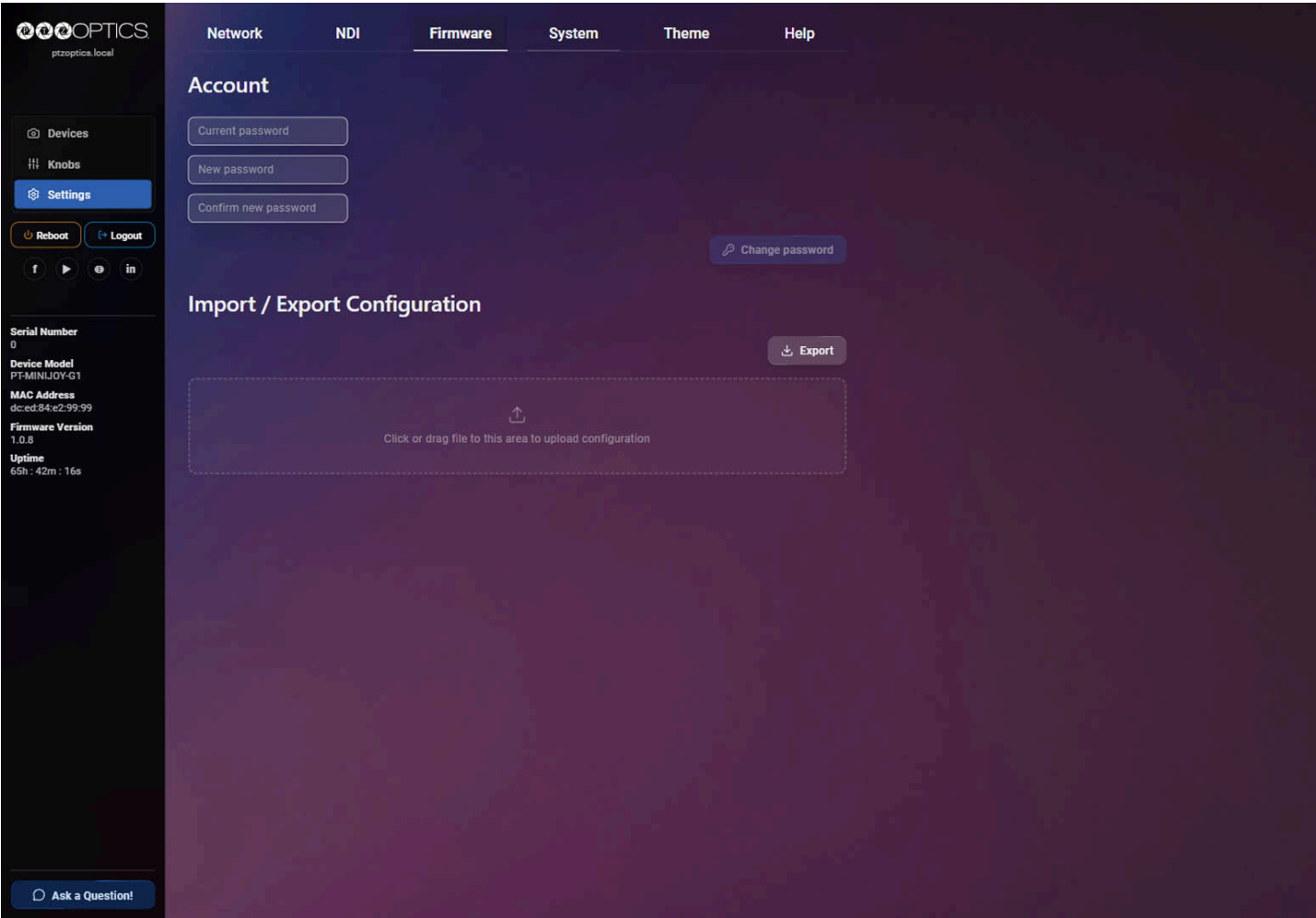
Account / Change Password

Enter the current password, the new password, and the new password again, then select **Change password**.

Import and Export Configuration

- Select **Export** to download a backup of the current controller configuration.
- Choose or drop a compatible MiniJoy configuration file in the upload area to import it.

Export the current configuration before importing another file. An import can replace controller settings; after it finishes, verify the network, camera, knob, and system settings required by your workflow.



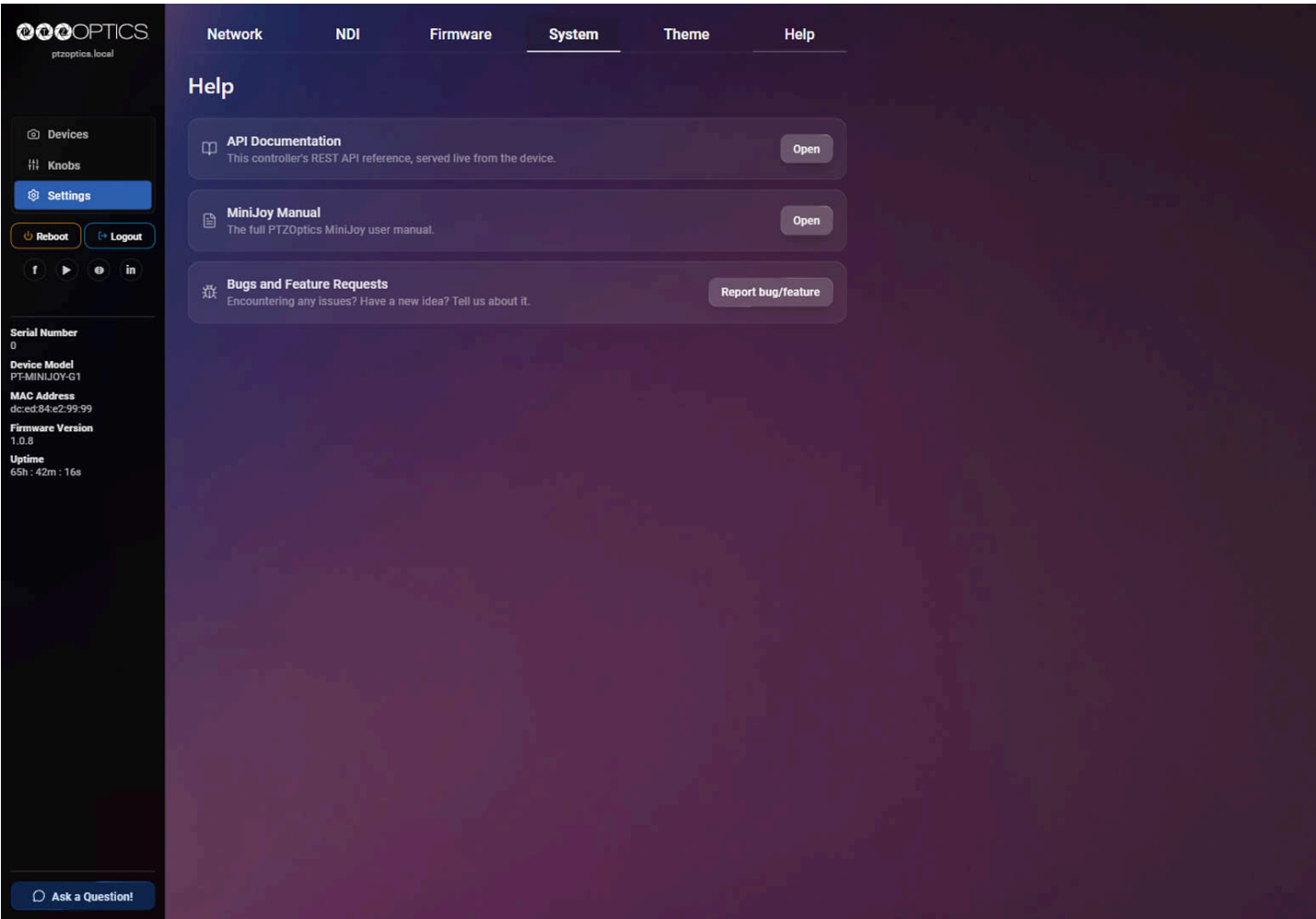
 WARNING

Import only a configuration intended for a compatible MiniJoy. Do not disconnect power while the configuration is being applied.

Help

Item	Purpose
API Documentation	Open the REST API reference served by the controller
MiniJoy Manual	Open the PTZOptics MiniJoy documentation

Item	Purpose
Bugs and Feature Requests	Report a problem or product idea



Controller Status Sidebar

The Web UI sidebar displays:

- Serial Number
- Device Model
- MAC Address
- Firmware Version
- Uptime

The sidebar also provides **Reboot**, **Logout**, PTZOptics links, and **Ask a Question!**.

Logout ends the current Web UI session. **Reboot** restarts the controller and interrupts controller operation until startup completes.

The OSD Menu

Menu Navigation

Press the **MENU** button to open the MiniJoy's On-Screen Display (OSD) menu.

Press the **F4** knob, click the **Joystick** button, or press the **Enter** button to make a selection. Rotate **F4** or move the **joystick** to navigate through menu options.

Press the **F3** knob or move the **joystick** to the left to go back.

Press the **F1** knob to exit the menu.

These controls apply while the MiniJoy OSD is open. During normal camera operation, rotating F4 changes knob pages and pressing F4 activates its assigned function.

Main Menu

Press the **MENU** button to access the main menu. From here, you can navigate to different submenus to configure various settings of the MiniJoy controller.

Submenu	Description
Device Manager	Use the Device Manager to add, edit, or remove connected devices
Network	Configure the MiniJoy's network settings
Controls	Configure the MiniJoy's control settings
Settings	Access various system settings

Device Manager

The following options can be found inside the **Device Manager**:

Submenu	Description
Device List	Use the Device Manager to edit or remove connected devices
Add New Device	Add a new device to the MiniJoy controller
Ignored Device List	Manage the list of ignored devices
Add an Ignored Device	Add a new device to the ignored devices list
NDI	Configure the MiniJoy's NDI group. Enter the appropriate group name or ID, to add the MiniJoy to your existing NDI group.
RTSP	Display and modify the RTSP streaming URL suffix (Use /1 for the main PTZOptics stream or /2 for the low resolution stream)

Device List

The **Device List** displays all devices currently connected to the MiniJoy controller. Select any device to view and edit its settings.

Each device listed displays the following information:

- The device **Number & Name**
- The **Control Protocol** the device is using
- The device **IP address**

Camera Information

When you select a device from the **Device List**, the **Camera Information** menu will display detailed information about that camera.

From this menu, the following settings can be configured:

Setting	Description	Options, Defaults, and Notes
Device Name	Change the camera's name	
Protocol	Select the camera's control protocol	Default port numbers: ONVIF: N/A VISCA (TCP): 5678 VISCA (UDP): 1259 VISCA (Serial): N/A Pelco-D: N/A Pelco-P: N/A NDI: N/A
IP Address	Edit the selected camera's IP address	
Address	Edit the camera's serial address	1 through 7. Available only for cameras using a serial control protocol.
Baudrate	Configure the camera's serial communication speed	2400, 4800, 9600, 19200, 38400, or 115200. Available only for cameras using a serial control protocol.
Port	Configure the camera's control port	The port automatically updates to the default for the selected control protocol, but you can change it manually. The system may not communicate with the camera if the port numbers do not match.
Video Stream	View the camera's selected video stream setting	Example: RTSP
Stream URL	View the camera's stream URL	Example: rtsp://<camera-ip>
RTSP Transport Protocols	Select the transport protocol used for the	UDP or TCP

Setting	Description	Options, Defaults, and Notes
	camera's RTSP stream	
RTSP Authentication	Enable or disable RTSP authentication	☐ ON or ☐ OFF
RTSP Username	Edit the RTSP username	
RTSP Password	Edit the RTSP password	
Reset Camera Address	Reset the camera's serial address to its default value	Available only for cameras using a serial control protocol.

⚠ IMPORTANT

Whenever you change the camera's control protocol, the control port number will automatically change to the default port number for the selected protocol. For example, if you switch a camera's control protocol from **VISCA (UDP)** to **VISCA (TCP)**, the control port will automatically update to the default port for **VISCA (TCP)**.

Whenever you switch a camera's control protocol to a serial protocol, its **serial address** and **baudrate** will be shown as configurable from the **Camera Information** menu. You can set the camera's serial address anywhere between 1 and 7. The baudrate should match the settings of the connected serial device.

Add New Device

The **Add New Device** submenu allows you to add a new device to the MiniJoy controller. Follow the on-screen prompts to complete the addition process. The configurable options are the same as the **Camera Information** menu shown above.

Ignored Device List

The **Ignored Device List** displays all devices that are currently being ignored by the MiniJoy controller, meaning these devices will not appear during a device search or in the main device list.

Devices can be removed from the ignored list by selecting them and choosing the **Delete** option. The device will then be discoverable again during a search.

Add an Ignored Device

To add a device to the ignored list, select the **Add an Ignored Device** submenu. This is a manual process, so you will need to input the following:

- **Device Protocol**
- **Device IP Address**

With the information added, scroll down to the **Save** button to add the device to the ignored list.

NDI

The **NDI** submenu allows you to configure NDI-related settings for the MiniJoy controller. You can enable or disable NDI functionality and set the NDI group name for the controller.

RTSP

This menu lets you adjust the URL suffix for the RTSP stream for cameras connected to the MiniJoy controller.

Use **/1** for the main PTZOptics stream or **/2** for the low resolution stream.

Network

Use this menu to adjust the **MiniJoy** controller's network settings, including IP address, subnet mask, gateway, and DNS servers.

Setting	Description	Example Network Configuration
DHCP	ON automatically obtain IP address. OFF manually enter static IP	ON

Setting	Description	Example Network Configuration
IP Address	Displays or sets the controller's static IP address	192.168.1.1
Net Mask	Set the subnet mask (default: 255.255.255.0)	255.255.255.0
Gateway	Set the network gateway	192.168.1.1
DNS1	Set the primary DNS server	192.168.1.1
DNS2	Set the secondary DNS server	0.0.0.0

Controls

The **Controls** menu houses the following submenus:

- Page 1 to Page 6
- Speed Setting
- Keypad
- Joystick
- PTZ Trace.

Page 1 to Page 6

Use this menu to configure the [F1], [F2], [F3], and [F4] custom knob buttons. You can configure up to 6 pages of button assignments with each page assigning one function to each button.

Shown below is an example configuration for the first three pages of button assignments:

Page 1	Button	Function	Page 2	Button	Function	Page 3	Button	Function
	[F1]	Exp Shutter		[F1]	PT Speed		[F1]	Camera Select

Page 1	Button	Function	Page 2	Button	Function	Page 3	Button	Function
	[F2]	WB Color Temp		[F2]	Zoom Speed		[F2]	Auto Tracking Subject Select
	[F3]	Image Sharpness		[F3]	Focus Speed		[F3]	Focus Zone
	[F4]	WB Mode		[F4]	Manual/Auto Focus		[F4]	Toggle Auto Tracking

Think of each page as a separate layer of button assignments, allowing you to quickly switch between different sets of functions depending on your workflow. Additionally, functions can be assigned to multiple pages.

NOTE

Buttons [F1], [F2], and [F3] support both rotate and press functions. During normal camera operation, [F4] supports press functions while rotation changes knob pages. While the MiniJoy OSD is open, rotating F4 navigates menu options.

Go to the [Knob Functions Reference](#) for the current lists and Web UI configuration instructions.

Speed Setting

The **Speed Setting** submenu allows you to configure the number of speed increments the joystick recognizes during **pan**, **tilt**, and **zoom** movements.

WARNING

This setting does not directly set the speed at which your camera will move, but rather the granularity of speed control. **Lower** values result in fewer speed increments, making the joystick less sensitive to small movements, while **higher** values provide finer control with more speed increments.

Setting	Description	Explanation
Maximum PT(Pan & Tilt) Speed	Determine the number of speed increments for pan and tilt movements. Range 7 to 21	The lowest increment of 7: while panning or tilting the joystick, there are 7 increments of speed between the minimum and maximum speeds. The highest increment of 21: while panning or tilting the joystick, there are 21 increments of speed between the minimum and maximum speeds.
Maximum Zoom Speed	Determine the number of speed increments for zoom movements. Range 7 to 21	The lowest increment of 7: while zooming the joystick, there are 7 increments of speed between the minimum and maximum speeds. The highest increment of 21: while zooming the joystick, there are 21 increments of speed between the minimum and maximum speeds.

ⓘ IMPORTANT

A camera's maximum pan, tilt, and zoom speeds are set independently of the joystick's maximum PT speed. For PTZOptics cameras, this setting can be adjusted in the camera's OSD (On-Screen Display) menu or through the camera's web interface.

Keypad

Use the **Keypad** menu to configure the keypad settings.

Keypad Numeric Mode

Navigate to the **Keypad Numeric Mode** setting to choose the maximum preset number range: **10** or **255**.

SET (Button Configuration)

You can adjust the following settings for the **SET** button, including its behavior and assigned functions:

Setting	Description
Short Press	Determine whether a short press triggers the joystick to enter SET mode or CALL mode

Setting	Description
LONG Press	Determine what the SET button does when long pressed. Choose between SET mode or CALL mode.
Long Press Time	Set the duration required in seconds for a long press to be recognized. Range 1 to 60

CALL (Button Configuration)

You can adjust the following settings for the **CALL** button, including its behavior and assigned functions:

Setting	Description
Short Press	Determine whether a short press triggers the joystick to enter SET mode or CALL mode
LONG Press	Determine what the CALL button does when long pressed. Choose between SET mode or CALL mode.
Long Press Time	Set the duration required in seconds for a long press to be recognized. Range 1 to 60

Joystick

Setting	Description
Key Enable	When enabled, pressing the top joystick button returns the camera to home position
Zoom Enable	When enabled, rotating the joystick controls camera zoom
Pan Reverse	Reverse the left/right pan direction
Tilt Reverse	Reverse the up/down tilt direction

Setting	Description
Calibration	If the joystick is behaving abnormally, follow the on-screen prompts to calibrate. Press the F3 knob to exit calibration mode

PTZ Trace

Setting	Description
Loop Playback	Enable to repeat the recorded movement until playback is stopped; disable to replay it once
P/T	Enable or disable recorded pan and tilt movements during playback
Zoom	Enable or disable recorded zoom movements during playback
Focus	Enable or disable autofocus during playback

Settings

Display

Setting	Description
Language	Set the display language
HDMI Resolution	Set the HDMI output resolution: 1920x1080p60, 1920x1080p50, 1920x1080p59, 3840x2160p20, 3840x2160p25, 3840x2160p30
Theme Color	Change the display theme color
Brightness	Adjust screen brightness
Key Brightness	Adjust button backlight brightness

Setting	Description
Auto Sleep	When enabled, the controller sleeps after 30 minutes of inactivity. Screen and button brightness dim

System

Discovery Settings

Choose the types of devices the controller should discover.

Protocol	Description	Toggle
VISCA (UDP)	Discover devices using the VISCA over UDP protocol	On/Off
ONVIF	Discover devices using the ONVIF protocol	On/Off
NDI	Discover devices using the NDI protocol	On/Off

Beep (Controller Button Prompt Tone)

Setting	Description
Enable	Turn button press sound on/off
Style	Select the prompt tone style

About Device

Setting	Description	Information
Brand	Controller brand	Mini Joy
Model	Controller model	PT-MINIJOY-G1
Firmware Version	Installed controller firmware	Varies by installed version

Setting	Description	Information
Authorization	Current license status	Varies by controller
Serial Number	Unique controller serial number	Varies by controller
MAC Address	Unique controller network address	Varies by controller
Website	Official PTZOptics website	ptzoptics.com
Contact Us	PTZOptics support website	ptzoptics.com
More Information	Additional controller information	QR code screen

Reset Device

Option	Description
Reset Settings	Restore menu settings to factory defaults. Network settings, language, and user-added device data are preserved
Reset Settings and Data	Restore all settings to factory defaults and clear all user-added device data

Firmware

ⓘ COMING SOON

The MiniJoy is coming soon! Keep an eye out for future firmware updates and our changelog to stay up to date.

Firmware update instructions and firmware release notes will be available after the MiniJoy launches. Both pages currently contain availability notices.

Firmware Instructions

Firmware Changelog

Latest Firmware Files

Firmware downloads will be available after the MiniJoy launches.

Latest Firmware Files

Firmware Instructions

ⓘ COMING SOON

The MiniJoy is coming soon! Keep an eye out for future firmware updates and our changelog to stay up to date.

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Firmware Changelog

ⓘ COMING SOON

The MiniJoy is coming soon! Keep an eye out for future firmware updates and our changelog to stay up to date.

Firmware release notes will be published here when they become available.

Technical Specs

Hardware

Component	Specification
Joystick	4D precision joystick (pan, tilt, zoom, twist)
Knobs	3D rotary knobs with push-button — support scale rotation for parameter adjustment and button function for mode selection
Buttons	High-quality silicone buttons with white/red two-color backlight
Screen	3" LCD color display
Button Prompt Tone	On/Off, selectable tone style
Lock Button	One-key keyboard lock

Control

Parameter	Value
Maximum Controlled Cameras	1000
Maximum Preset Positions	255 per camera
Customizable Knobs	4 (F1, F2, F3, F4) with 6 customizable pages

Connections

Interface	Type
Network Port	RJ45
Serial Port	RS-422 / RS-485 (Phoenix connector)
HDMI Display Output	HDMI 2.0 (supports 4K 30 fps)

Protocols

Type	Protocols
IP Control	ONVIF, VISCA Over IP, VISCA TCP, NDI
Serial Port	VISCA, Pelco D, Pelco P
Baud Rate	2400, 4800, 9600, 19200, 38400, 115200

Power

Parameter	Value
Input Voltage	12V DC
Input Current	0.25A
PoE Standard	802.3af
Rated Power	3W

Physical

Parameter	Value
Dimensions	Joystick Height Included: 210 x 138 x 101 mm (8.27 x 5.43 x 3.98 in)
Weight	0.8 kg (1.76 lbs)
Operating Environment	Indoor only

Environmental

Condition	Range
Operating Temperature	-10 deg C to 40 deg C (14 deg F to 104 deg F)
Storage Temperature	-20 deg C to 60 deg C (-4 deg F to 140 deg F)