

FoMaKo

Professional PTZ Controller

User Manual V1.3



- Support E-mail: Support@fomako.net
- Website: www.fomako.net

Please feel free to contact us if you have any questions.

Quick Start

◆ Compatibility Statement

- FoMaKo PTZ Controller supports standard Visca, Onvif, NDI, and Pelco-D/P PTZ control protocols. Some PTZ cameras from certain brands may have undergone custom modifications to their PTZ protocols. This can lead to compatibility issues, resulting in the FoMaKo PTZ Controller being unable to control those cameras or causing certain control functions to not work properly.

- Some advanced functions of the FoMaKo PTZ Controller are only compatible with select popular PTZ camera models from FoMaKo.

- If you encounter compatibility issues, please contact us. Our R&D team will perform compatibility matching based on your specific camera model, but we cannot guarantee successful matching for your camera.

◆ Power on/off and Login

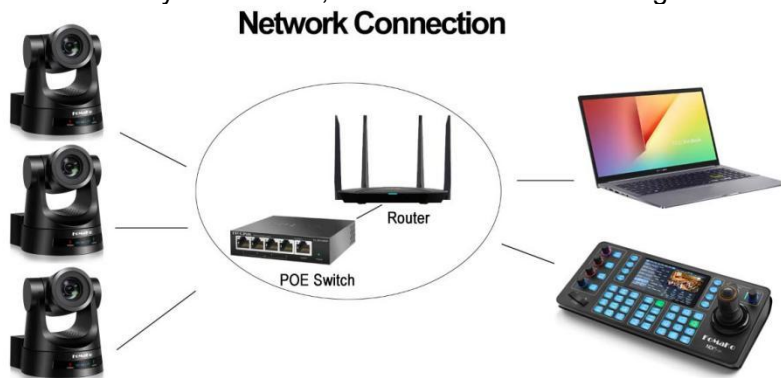
Long press the power button for 2~3 seconds, the PTZ controller will power on/off.

User Name: admin

Password: 111111

◆ Add Controller&Cameras to Your Network

Please do the connections as the following. You'd better have a router in your network, then router will assign IP addresses for the PTZ controller and cameras automatic. If you don't have router in your network, controller&cameras can't get IP address from your network.



Note: All FoMaKo devices have DHCP enabled by default. After you complete the system setup, it is recommended that you disable DHCP on all devices; otherwise, when the devices or router restart, the router will reassign IP addresses to the devices.

◆ About cameras and PTZ controller's IP addresses

The first three parts of IP address must be the same for controller and cameras.

For example:

192.168.1.100 and **192.168.1.150**, the first three parts are the same. You can add the camera to controller.

192.168.1.100 and **192.168.12.150**, the first three parts are not the same. You can't add the camera to the controller.

You have to change camera or controller's ip address, to make the first three parts become the same.

FoMaKo cameras and controller are optimized, normally, you don't need change ip addresses for them.

◆ Add IP PTZ Cameras to Controller

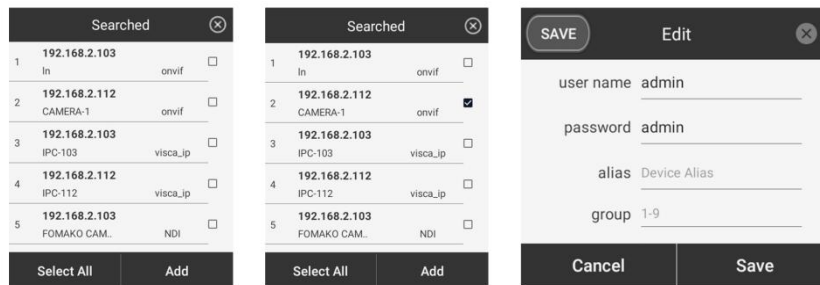
Please make sure that you have added the PTZ cameras and PTZ controller to the network

successfully.

We recommend using the ONVIF control protocol, as it has better compatibility.

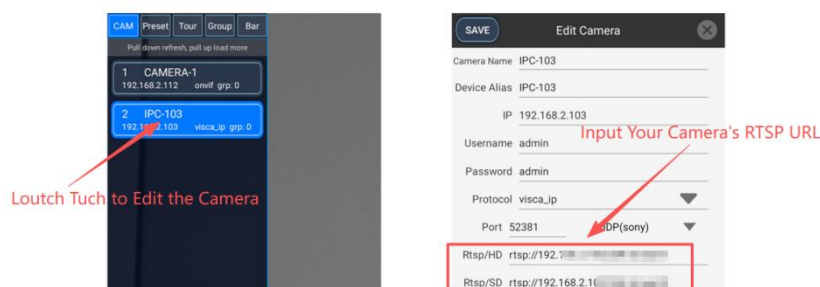
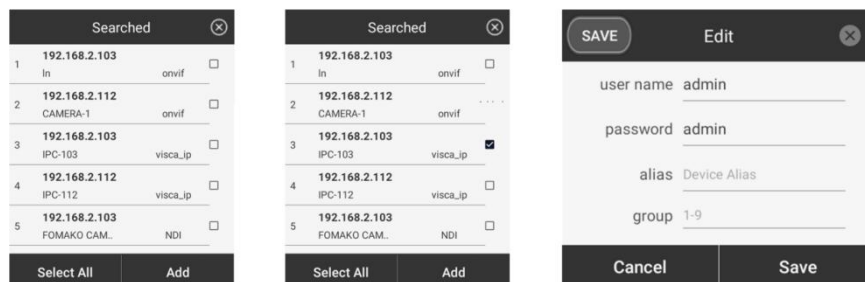
- Add Cameras to PTZ control by “Onvif”.

1. Press “search” button;
2. choose the camera you want to add
3. Input user name and password
4. Save, now you added the PTZ camera to this PTZ controller successfully.



- Add Cameras to PTZ controller by “Vsica_IP”

1. Press “search” button;
2. Choose the camera you want to add
3. Input user name and password
4. Save.
5. If your cameras are FoMaKo brand, now you added the PTZ camera to this PTZ controller successfully.
6. If your cameras are not FoMaKo brand, and you can't see the camera's preview video on the PTZ controller's LCD screen. Please long touch the camera's name in the camera list to input the right RTSP/HD , RTSP/SD information of the camera.



*****About RTSP/HD , RTSP/SD*****

The PTZ control can preview camera's SD and HD videos.
FoMaKo PTZ controller and PTZ cameras are optimized, the PTZ controller can read FoMaKo camera's SD/HD RTSP URL directly.

If the SD/HD RTSP URL doesn't work, please check the camera's user manual or contact the camera's supplier to get the Main stream and sub stream RTSP URL.
RTSP/HD URL = RTSP Main Stream URL (max support 4K 30fps);
RTSP/SD URL = RTSP Sub Stream URL (max support 4K 30fps)

- Add Cameras to PTZ controller by “NDI”

Please make sure your camera can support and enabled NDI function.
Add NDI cameras to the PTZ controller is very simple,
Search out the NDI camera -> Choose the NDI cameras -> Add to PTZ controller.

Please note: Some functions of this PTZ controller are unavailable under the NDI protocol, caused by functional issues with the NDI protocol itself.

◆ PTZ Speed Control

This control keyboard uses force control to adjust the camera's PTZ speed by default.

- When you move the joystick with light force, the camera will rotate at a low speed.
- When you increase the force applied to the joystick, the camera's rotation speed will also increase.

If you want to change the PTZ control speed via speed levels, go to "setup" -> "system setting" to turn on "Fixed Joystick PT/Zoom Speed".

Any questions please contact us at: support@fomako.net.
Normally, we will reply within 24hours.

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Statement

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

Safety Precaution

- To prevent damaging this product, avoid heavy pressure, strong vibration, or immersion during transportation, storage, and installation.
- The housing of this product is made of organic materials. Do not expose to any liquid, gas, or solids which may corrode the shell.
- Do not expose the product to rain or moisture.
- Unplug this device during lightning storms
- Clean only with a soft dry microfiber cloth.
- To prevent the risk of electric shock, do not open the case. Installation and maintenance should only be carried out by qualified technicians.
- Do not use the product beyond the specified temperature, humidity, or power supply specifications.
- This product does not contain parts that can be maintained or repaired by users.
Damage caused by dismantling the product without authorization from our is not covered under the warranty policy.
- Installation and use of this product must strictly comply with local electrical safety standards.
- Only use accessories specified by the manufacture
- Product specifications may be subject to technical upgrades without further notice
- Do not hot plug when it is working.

Introduction

The PTZ CONTROLLER is a powerful PTZ camera joystick controller with a 5.5" touch screen that allows for real-time video previews. The Controller Pro is versatile with its Android 10 operating system and H.265/H.264 decoding .

Create and output a video via connected cameras RTSP or NDI HX streams. It also features touch and total PTZ control including preset points, focus, zoom, tour, and exposure. The unit is highly customizable with the ability to add and control over 1000 devices.

Features

- 5.5" Capacitive touchscreen
- Android 10 operating system
- H.264/H.265 compression
- Real time preview of videos up to 4K30FPS
- Ability to be control with connected mouse and keyboard
- PTZ control including presets, focus, zoom, exposure, and more
- Photo capture directly on the Controller
- Integrated search functions to assist in easily adding cameras
- Most popular control protocols supported: VISCA (TCP/UDP/UART), Pelco-P, Pelco-D, ONVIF, and NDI HX
- Add up to 1024 devices
- Easily upgradable using USB or Browser
- 1 RS422/485 port
- 1 RS232 port to support legacy systems
- 1 TALLY (8PIN)

Package Contents

- | | |
|---------------------------------|-------------------|
| ● 1 x PTZ CONTROLLER-PRO | ● 1 x User Manual |
| ● 1 x Power Adapter (12V DC 2A) | |
| ● 1 x DB9 to VISCA-8pin (RS232) | |

Specifications

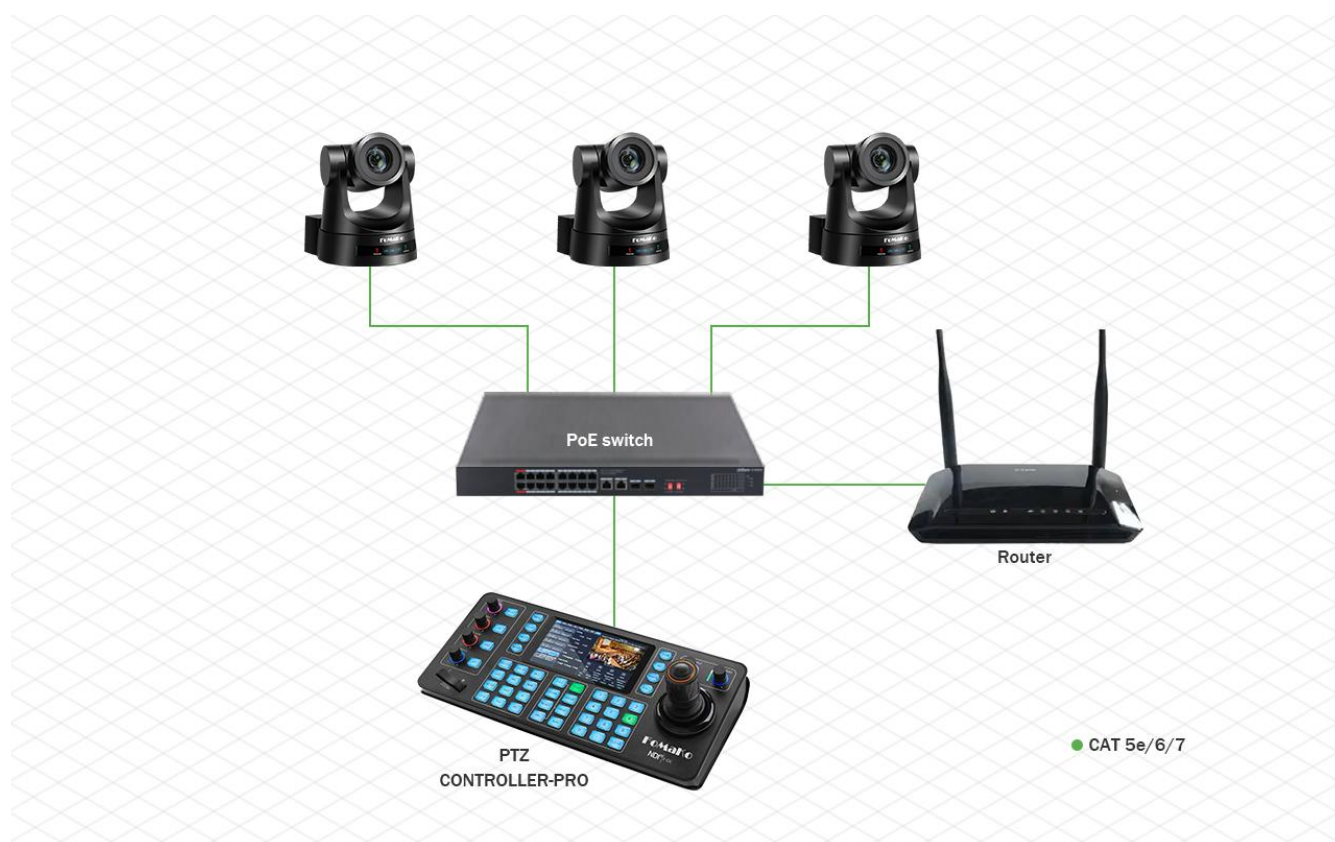
Technical Specifications	
Operating System	Android 10
Screen Size	5.5" capacitive touchscreen / resolution 1280x720
Decoding	1. Supports H264/H265 2. Max supported H264/H265: 1x1080p@60fps 3. Max supported H264/H265: 1x4K@30fps
Protocols	ONVIF,VISCA-IP,VISCA, Pelco-P, Pelco-D, NDI HX
Power	Standard 5.5/2.1 power interface, DC 12V2A±10%
Interface Ports	1. 1x RJ45 (POE) 2. 1x RS485/RS422 3. 1x RS232 4. 1x USB-HOST/OTG 2.0 5. 1x TALLY(8PIN)
Mechanical Specifications	
Power Consumption	<1.5W
Working Humidity	10%-90% RH(no frost)
Working Temperature	-10°C - 50°C
Storage Temperature	-40°C - 60°C
Dimensions	(W*L*H) 351.8 * 163 * 112.5 mm
Weight	1.63 kg

Dimensions

351.8 * 163 mm



Application Example

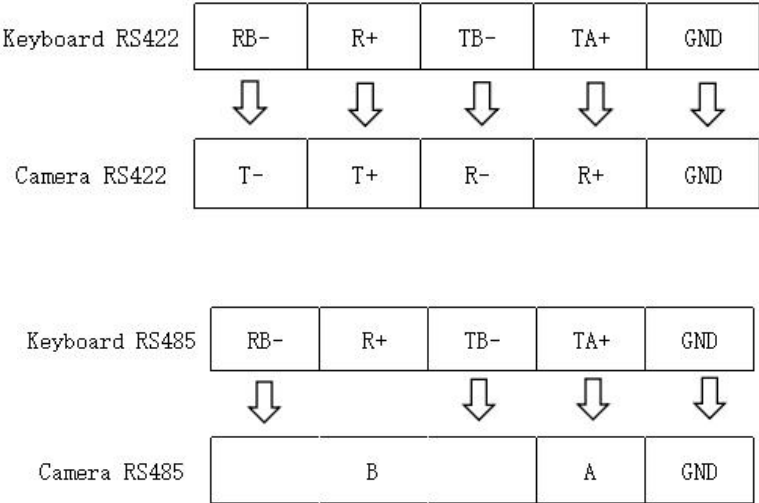


Panel Descriptions



No.	Name	Function Description
1	POWER	x1 Power toggle switch (Long press to turn on/off)
2	DC 12V	x1 12V 2A power supply port
3	USB 2.0	x1 USB-HOST/OTG Type-A female
4	POE	x1 RJ45(POE) Power/TCP/IP connection
5	RS232	x1 3PIN 3.0mm
6	TALLY	x1 8PIN(7 IO) 3.0mm
7	RS485/RS422	X1 3PIN/5PIN 3.0mm

RS422/485 interface description



TALLY : When switching cameras 1-7, automatic control of Tally light .

Button Descriptions









- **[PT Speed]:** Adjust the pan and tilt speed of the joystick.
- **[Zoom Speed]:** Adjust the zoom speed of the joystick.
- **[BAR]:** Adjust the progress of the BAR selected on the right side. Press the knob to expand the BAR list on the right.
- **[I/S/G]:** Manually open or close the selected camera's IRIS/Shutter/Gain. Press the knob down to toggle between the different modes (Shutter/Gain NDI not applicable).
- **[R/B GAIN]:** Adjust the Red or Blue gain of the selected camera. Press the knob for automatic white balance (NDI not applicable).
- **[Focus]:** Adjust the focus of the selected camera. Press the knob to automatically focus.
- **[B-LIST]:** Adjust the progress of the BAR selected on the right side. Press the knob to expand the BAR list on the right.
- **[AE]:** Adjust the selected camera's automatic exposure.
- **[AWB]:** Adjust the automatic white balance of the selected camera.
- **[AF]:** Adjust the selected camera's autofocus automatically.
- **[Zoom]:** Set the selected camera to zoom in and zoom out.

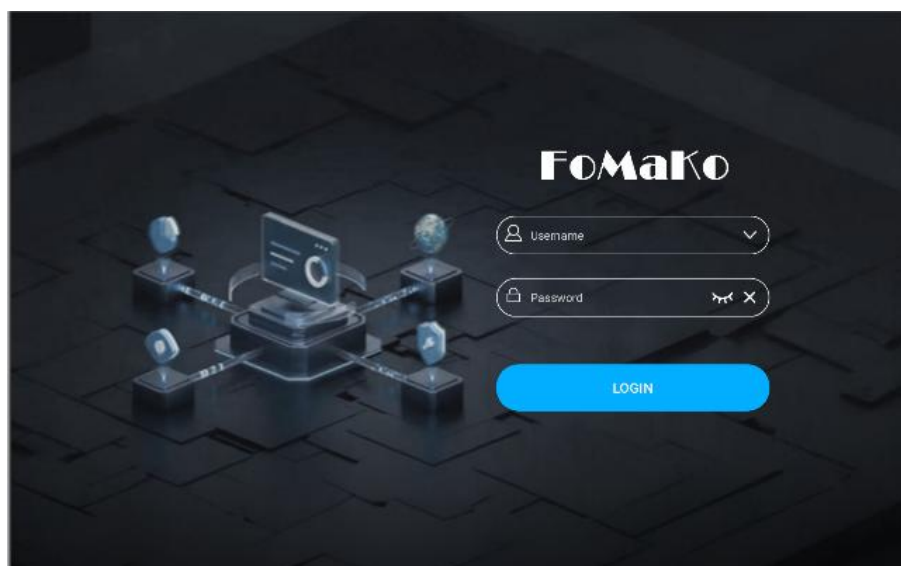
- **[Menu]:** From the Main Screen or the PTZ Control menu pressing the <Menu> button will open the controller settings menu.
- **[C-LIST]:** Expand the camera list on the right.
- **[NEXT]:** Next step or page.
- **[BACK]:** Return to the previous step or page.
- **[PVW]:** Enable or disable video preview.
- **[HD]:** High definition or standard definition mode.
- **[PHOTO]:** Capture the current preview screen.
- **[FULL]:** Enable or disable full screen preview.
- **[SEARCH]:** Automatically search for LAN cameras.
- **[ADD]:** Manually add camera.
- **[SETUP]:** Enter the system settings page.
- **[LOCK]:** Lock all physical buttons and joystick functions.
- **[COLOR]:** Switch from the list on the right to the color page (NDI not applicable).
- **[IMG]:** Switch from the list on the right to the image page (NDI not applicable).
- **[OSD]:** Switch from the list on the right to the OSD page (NDI not applicable).
- **[FN]:** Switch from the list on the right to the F1-F10 custom buttons page.
- **[BLC]:** Turn on or off backlight (NDI not applicable).
- **[WEB]:** Enter the camera's WEB GUI interface.
- **[F1]:** Enable automatic camera tracking.
- **[F2]:** Turn off camera auto tracking.
- **[CAM]:** Expand the camera list and switch the number keys to the camera's quick selection mode.
- **[GROUP]:** Expand the group list and switch the numeric keys to the group quick selection mode.
- **[PRESET]:** Expand the preset list and switch the number keys to the preset quick call mode.
- **[NUM]:** Expand the preset list and switch the number keys to numeric input mode.

- **[CALL]:** Call the camera preset position.
 - **[STORE]:** Save camera preset position.
 - **[RESET]:** Reset camera preset position.
 - **[DEL]:** Remove camera preset position.
-
- **[0-9]:** Digital input or quick call.
 - **[CLEAR]:** Clear the numerical input content.

Joystick Controls

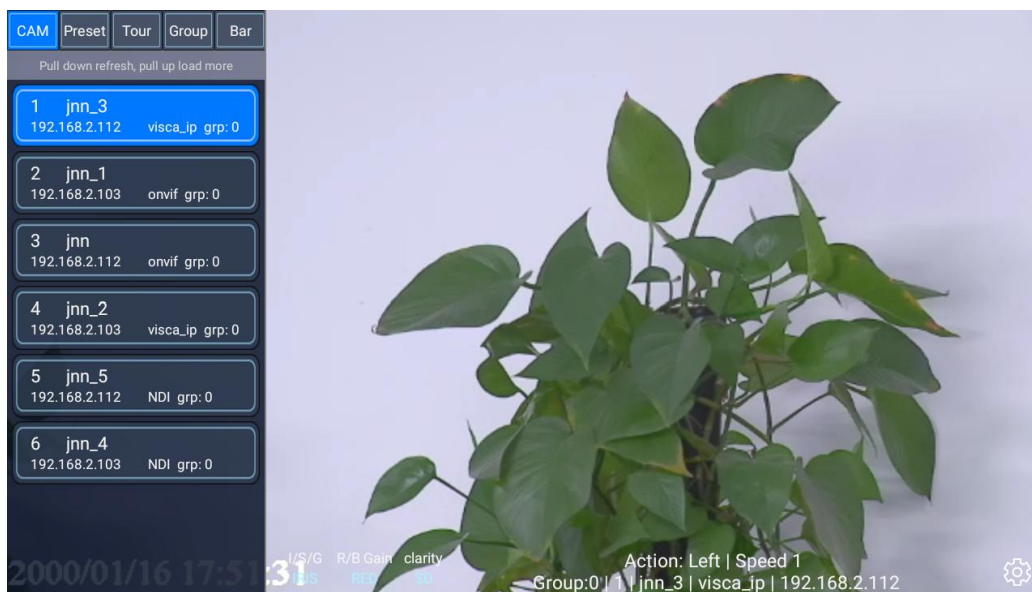
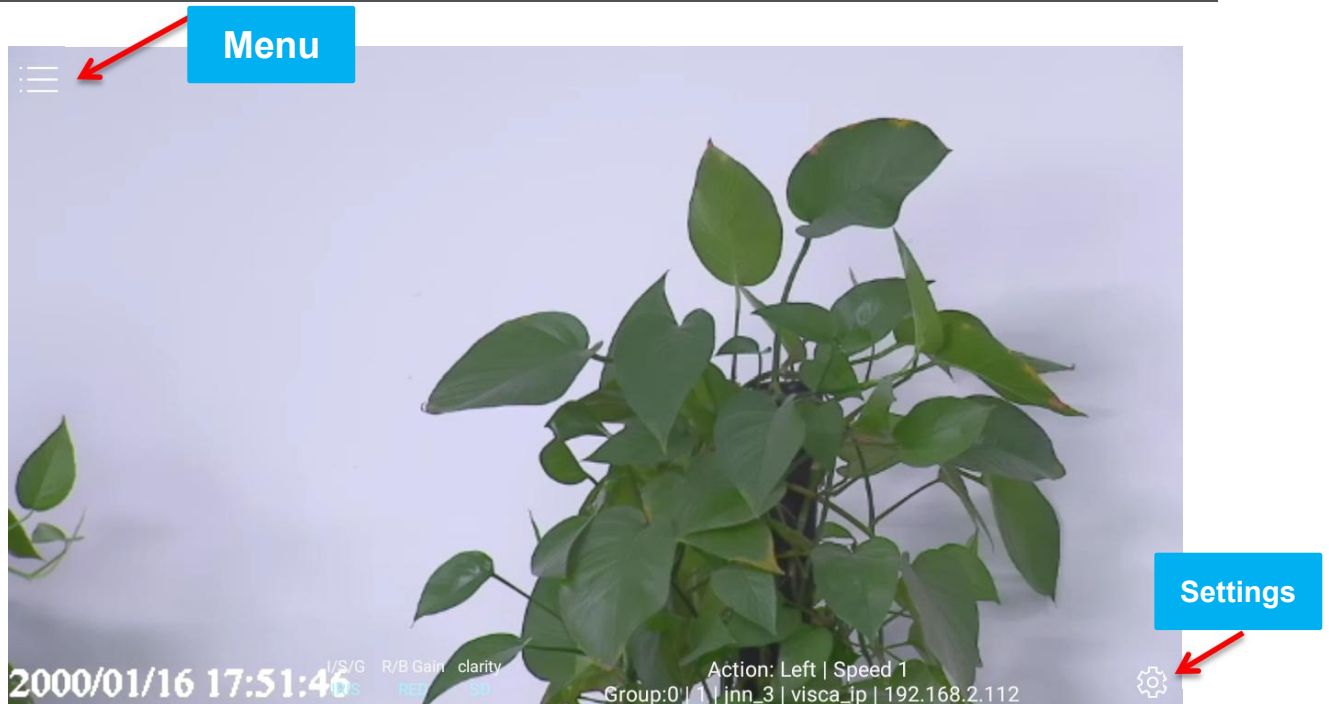
Operation	Output control	Operation	Output control	Operation	Output control
	Up		Down		Left
Operation	Output control	Operation	Output control	Operation	Output control
	Right		Zoom+		Zoom-

Login Screen



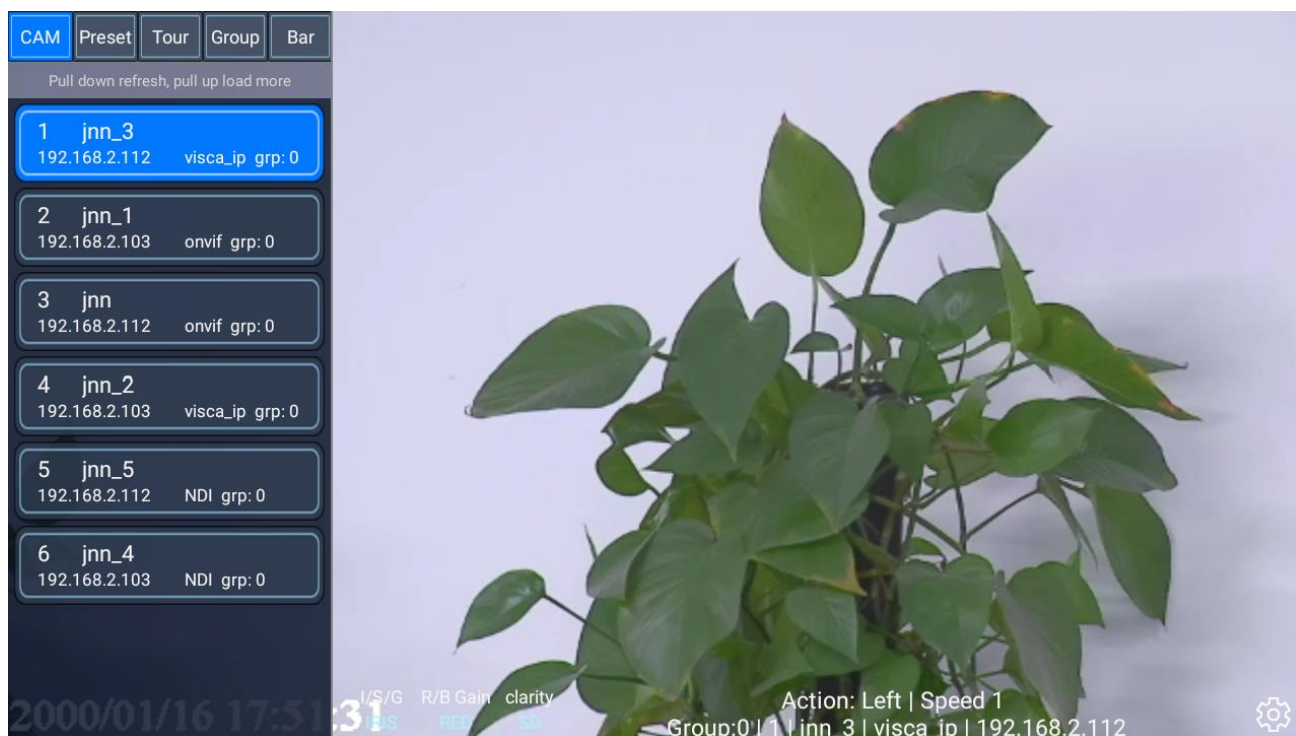
- On initial login type in the default Username and Password and then press <Login>.
 - **Default Username:** admin
 - **Default Password:** 111111

Main Menu



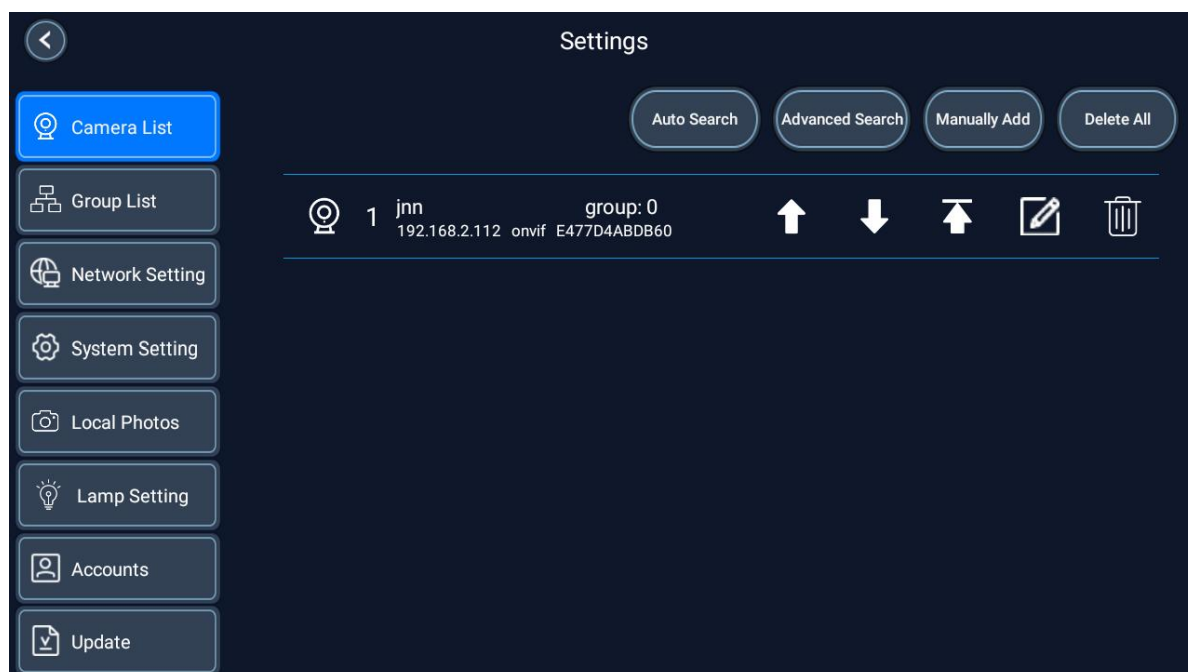
- **Menu:** Show or hide camera list and control menu.
- **System Settings:** Access the controllers settings for items such as adding or editing a camera, network settings, language, and more.

PTZ Control and Managing Cameras



From the PTZ Control Screen users will have several options in which to control a camera.

System settings - Devices :

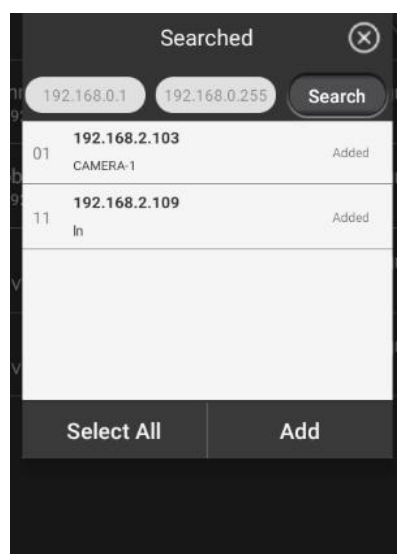


Using the Search Functions when Adding a Camera

By default, the controller is set to DHCP so it only needs to be connected to your network to begin functioning and looking for devices. If there is no DHCP server or router present, see the Network Settings section of this manual for further instructions before continuing.

To add a camera select one of the search options at the top to automatically search your network for available cameras or use the <Manually Add> function.

NOTE: The automatic searches are based on camera control protocols (ONVIF, Visca, and NDI) and not every camera supports every protocol. Please also keep in mind that due to the complexity of some networks, some or all cameras may not be listed. In this case, it is recommended to use the <Manually Add> function.



- After selecting a desired protocol to search for a camera a window will appear with any available cameras that can be seen by the controller.
- Select the desired camera(s) and click <Save> to begin adding them to the system.

ONVIF/NDI

A screenshot of a mobile application window titled 'Edit' with a close button (X) in the top right corner. It contains four input fields: 'Username' with the value 'admin', 'password', 'alias' with the placeholder 'Device Alias', and 'group' with the value '1-9'. At the bottom are two buttons: 'Cancel' and 'Save'.

VISCA

A screenshot of a mobile application window titled 'Rtsp Url' with a close button (X) in the top right corner. It contains three input fields: 'Rtsp Url' with the value 'rtsp://192.168.2.112:554/live/av1', 'alias' with the placeholder 'Device Alias', and 'group' with the value '1-9'. At the bottom are two buttons: 'Cancel' and 'Save'.

- Depending on the search mode used one of two window options will appear as seen above.
 - For ONVIF or NDI cameras the camera's password will be required (typically 'admin' by default). Enter a camera Name and Alias if desired to make the camera(s) easily identifiable on the camera list.
 - For VISCA searches the RTSP stream link will be listed at the top and can be edited if necessary. Enter a camera Name and Alias if desired to make the camera(s) easily identifiable on the camera list.

Manually Adding a Camera

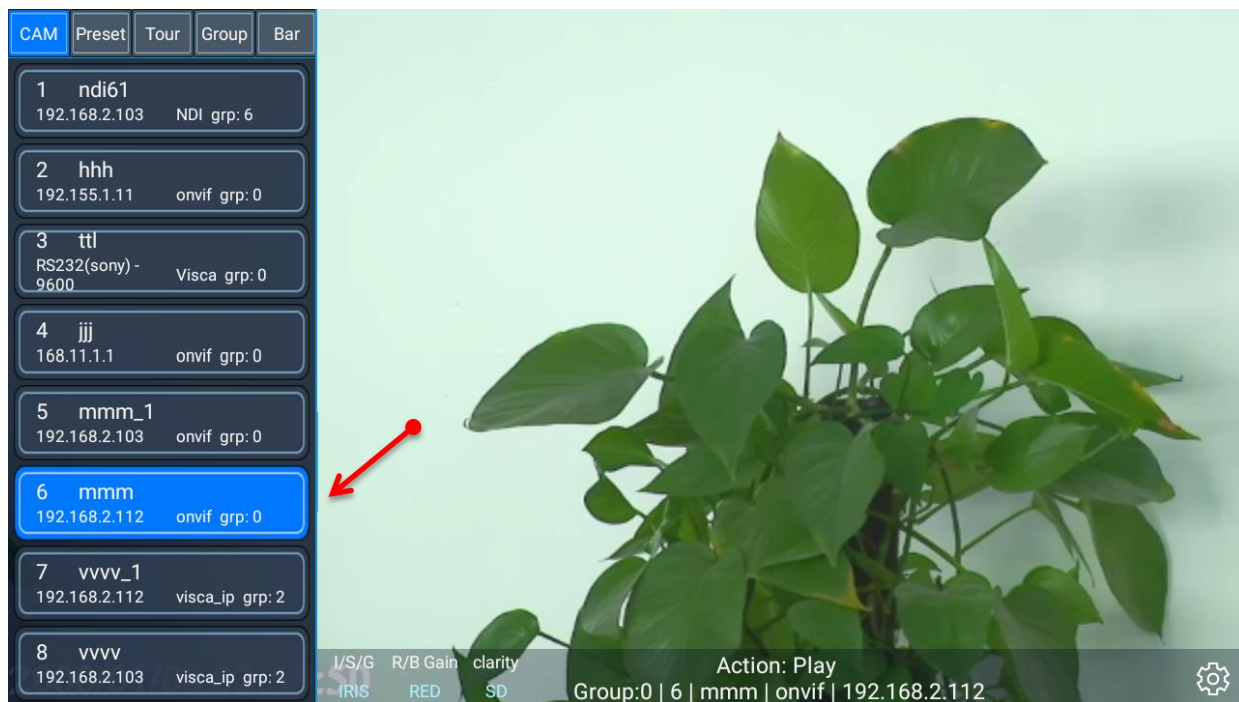


The screenshot shows a 'Manually Add' dialog box with a save icon in the top left and a close icon in the top right. The dialog contains several input fields and a dropdown menu. The fields are: 'UID' (with a placeholder 'UUID'), 'Device Alias' (with a placeholder 'Device Alias'), 'IP' (empty), 'Onvif Port' (with a value of '2000'), 'Username' (with a value of 'admin'), 'Password' (empty), and 'Protocol' (with a value of 'onvif'). To the right of these fields is a dropdown menu currently showing 'Network' options: 'onvif', 'visca_ip', and 'NDI'. Below these are 'Analog' options: 'PelcoD', 'PelcoP', and 'Visca'.

Use the <Manually Add> option at the top if the search functions are having difficulty locating a camera(s) on your network.

- Type in a Camera Alias, the Camera IP address, the camera's password, select a Protocol, and type in the camera's RTSP stream URL. Once complete press the save icon in the top left corner.

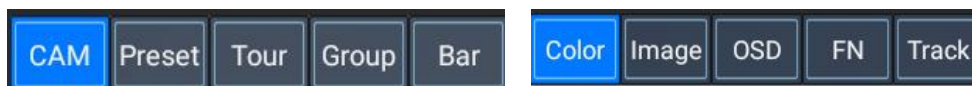
Controlling Cameras





- Select a device from the camera list or quickly switch cameras by using the number keys.
- Default first one.

Camera Control Options

- There are several camera control options once a camera is added to the unit and selected.

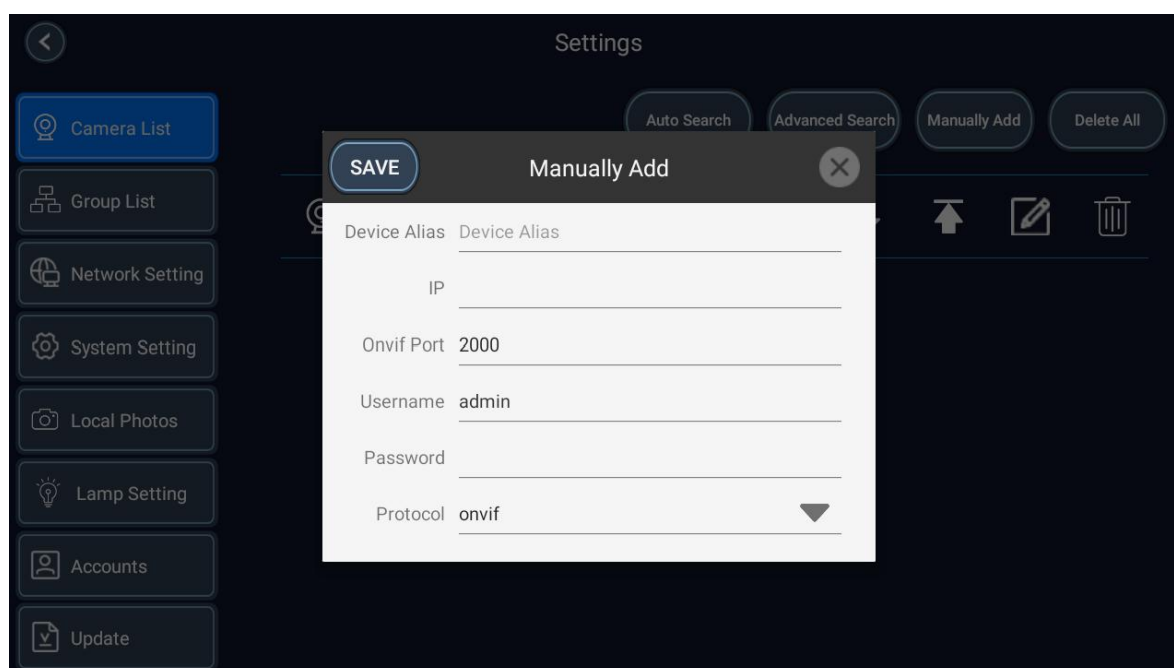
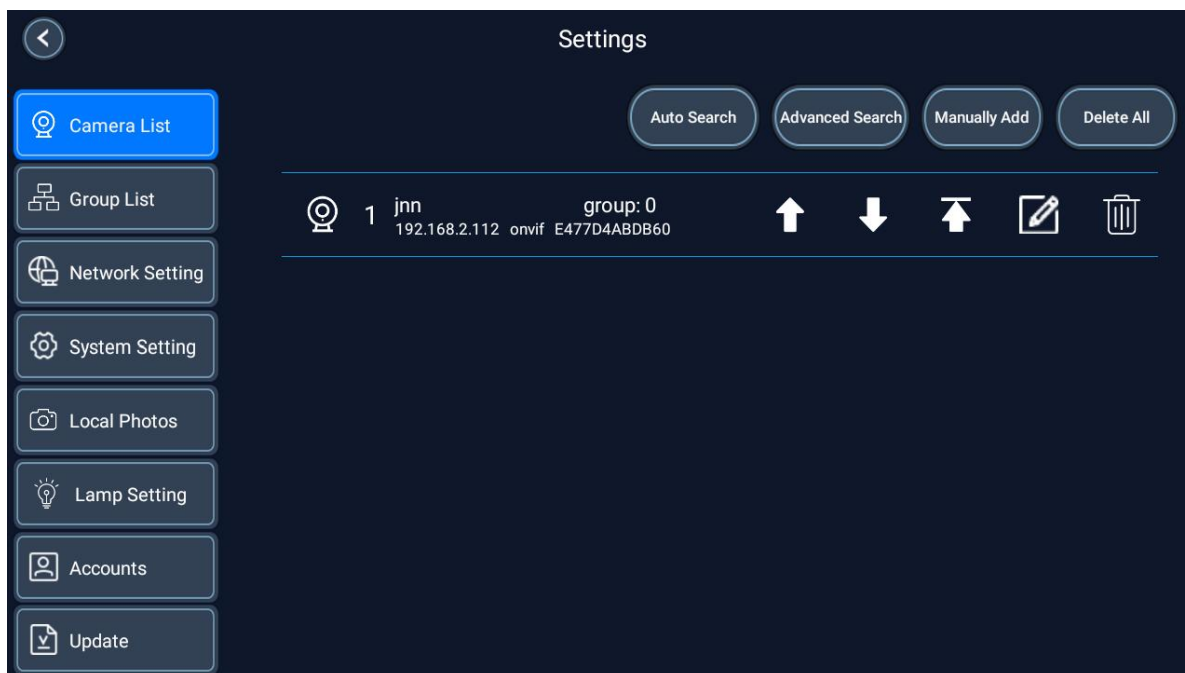


Button Name	Button Icon	Description
Settings		Access the controllers settings for items such as adding or editing a camera, network settings, language, and more.
menu		Open the settings menu.
Color		Switch from the list on the right to the color page.
Image		Switch from the list on the right to the image page.
OSD		Switch from the list on the right to the OSD page.
FN		Switch from the list on the right to the F1-F10 custom buttons page.
Track		Expand the track page.
Preset		Expand the preset list and switch the number keys to the preset quick call mode.
Tour		Expand the tour list.
Bar		Adjust the progress of the BAR selected on the right side. Press the knob to expand the BAR list on the right.

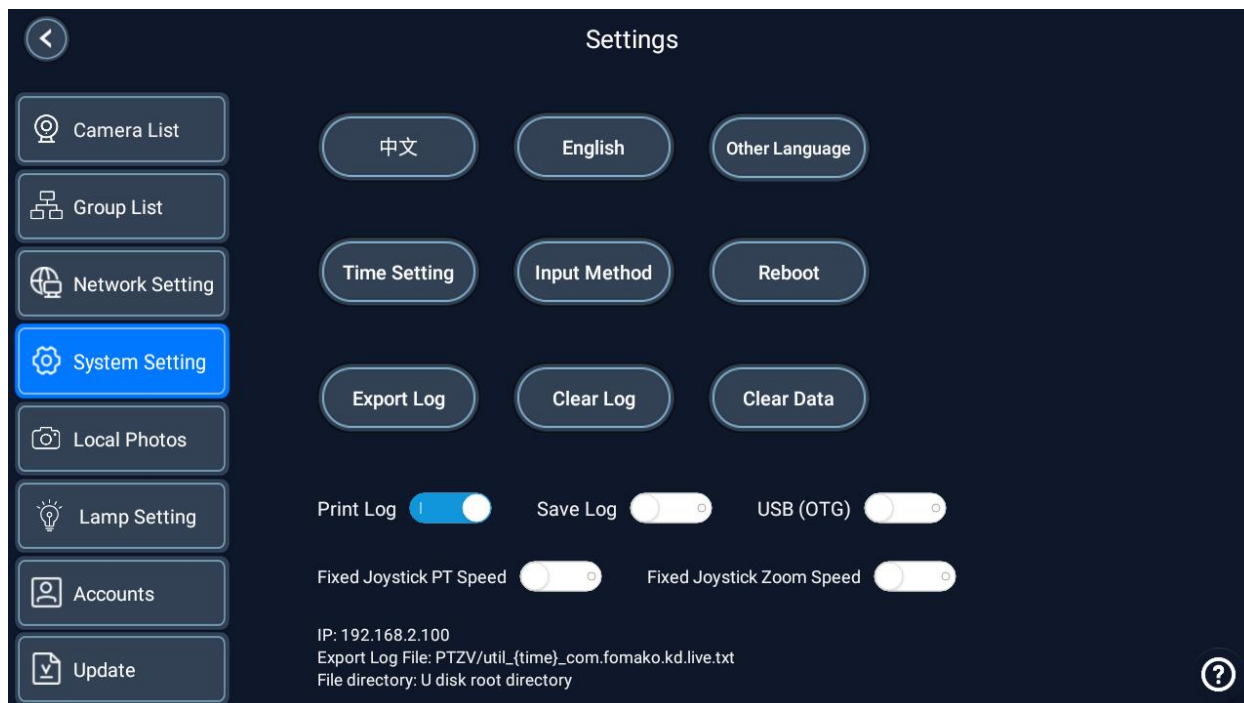
Settings

The Settings menu can be accessed from the main screen. There are several sub menus within settings which include Camera List ,Group List, Network Setting, System Setting, Local Photos, Lamp Setting, Accounts and Update .

- **Camera List:** Camera List is used to add and manage cameras to the system. section of this manual for more information.



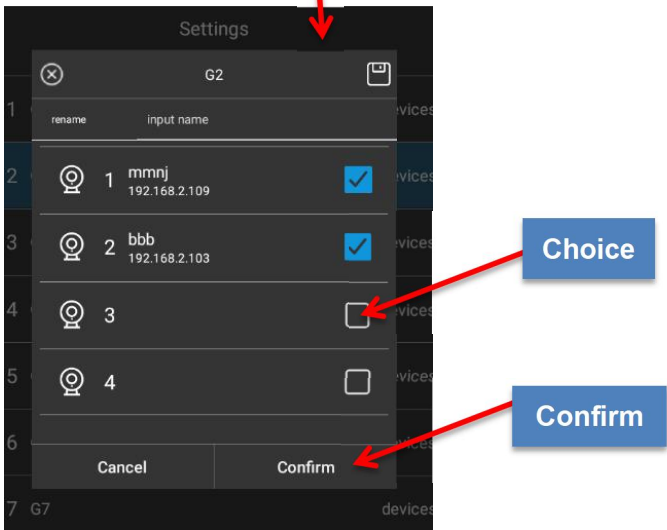
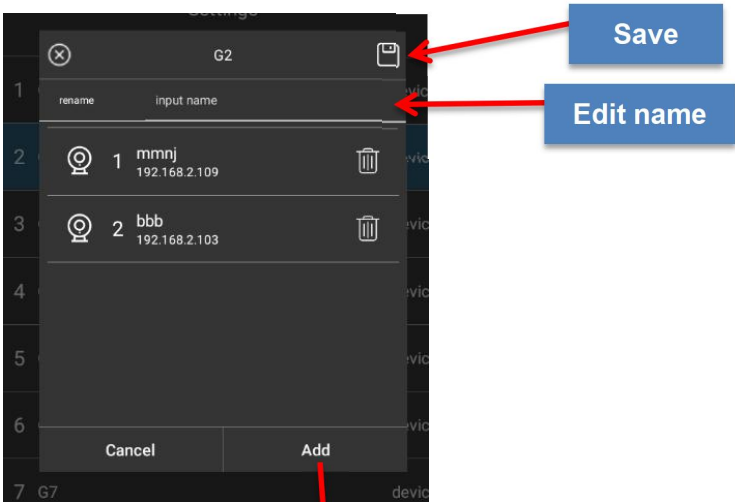
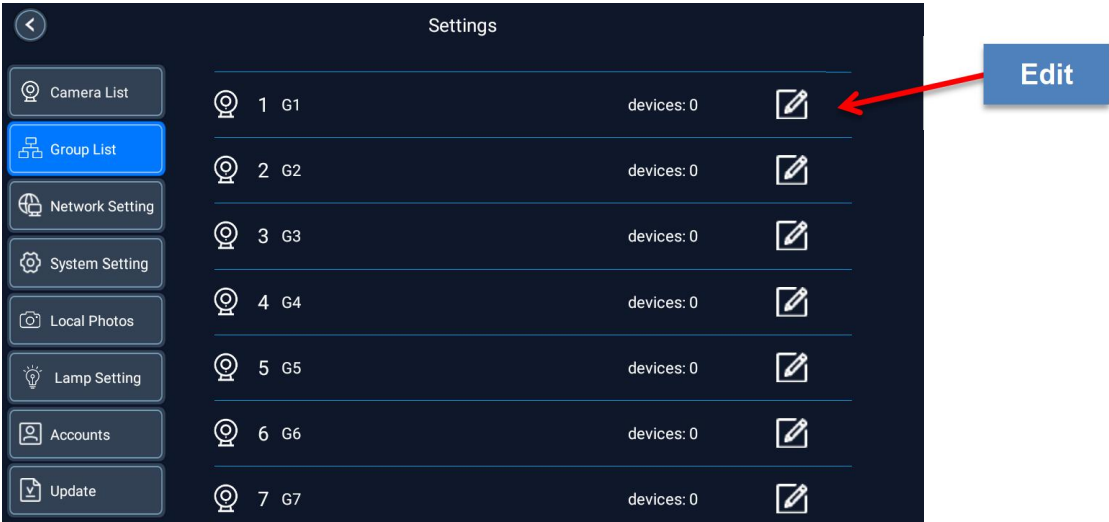
- **System Setting:** System Settings contains several sub menus including turning on/off key Print Log and Save Log, System Network, Language Setting ,Time Setting , Input Method,NDI License,Export Log, Clear Log, Clear Data.



- **System Network:** Click Network Setting to manage the controllers ethernet settings. Tap Ethernet to view the current IP configuration of the controller or click Ethernet IP Mode to change from DHCP to static mode to configure your controller settings manually.** **NOTE:** While other options such as WiFi are available in the Network Settings page they are not actually functional. ** After changing the Ethernet mode for the controller please wait for 15 seconds before power cycling the unit or navigating away from the page.
- **Language Setting:** Use this submenu to add more languages to the tablet (default English and Chinese only).
- **Clear Data:** Clear all added devices and restore the app to its original settings
- **Export Log:** Export the system log.
- **Accounts:** Modify the password that allows access to the controller.
- **Update:** View software version information and perform application updates or system updates.

GROUP

Supports up to 9 groups, each group can be bound to multiple cameras.
The group name can be modified.



Tech Support

Have technical questions? We may have answered them already!

Need more in-depth support? Connect with one of our technical specialists directly:

E-mail: support@fomako.net

Website: www.fomako.net

Warranty

keyboard products come with a three-year warranty.

Mission Statement

Focus Your Streaming

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