

Keypad User Manual

Keypad

Programmable 10-button Keypad with PoE Function



Important Safety Information

1. Read, follow, and keep these instructions.
2. Heed all warnings.
3. Do not use this product near water. Keep away from wet places, such as: spas, pools, sinks, laundries, wet basements, etc.
4. When cleaning, unplug the switcher and wipe with a dry cloth. Do not use damp cloths, cleaning fluids, or aerosols which may result in electric shock, fire, or switcher damage.
5. Operate this product using only the included power supply and/or power cable. Use of an unapproved power implement may impair performance, damage the product, or cause fires.
6. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
7. Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the product.
9. Only use attachments/accessories specified by BC to avoid fire, shock, or other hazards.
10. To reduce the risk of electric shock and/or damage to this product, never handle or touch this switcher or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
11. Unplug this product during lightning storms or when unused for long periods of time.
12. Never open, remove switcher panels, or make any adjustments not described in this manual. Attempting to do so could result in electric shock, damage to the switcher, or other hazards.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

TO REDUCT THE RISK OF ELECTRIC SHOCK
DO NOT OPEN ENCLOSURE OR EXPOSE
TO RAIN OR MOISTURE.
NO USER-SERVICEABLE PARTS
INSIDE REFER SERVICING TO
QUALIFIED SERVICE PERSONNEL.

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1. Introduction

HDTV Supplys Keypad is a 10-button IP enabled keypad controller aimed at providing customers simple and economic control solutions. With built-in PoE, it can receive power from PoE enabled ethernet switch. The keypad can control devices like presentation switches through LAN(PoE) port or RS232 port. It supports button configuration and control, also system firmware update on web UI.

2. Features

- WEB GUI programming
- Ten buttons
- Supports TCP/IP and RS232
- Supports PoE function
- US or UK single panel for selection

3. Package Contents

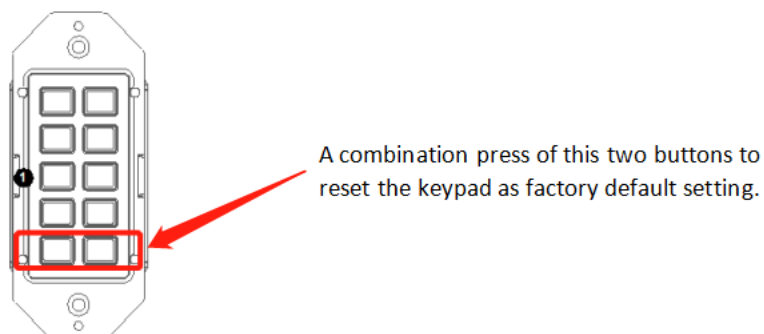
- 1 x BYOD-1000
- 1 x 1-Gang US Plastic Decora Plates, White
- 1 x Phoenix Male Connector (3.5mm, 2 Pins)
- 1 x Phoenix Male Connector (3.5mm, 3 Pins)
- 2 x #6-32*20mm Cross-Head Screws, Silver
- 1 x Sheet of pre-printed button labels

4. Panel Description



No.	Name	Description
1	Buttons	Ten buttons on front panel. The buttons are not defined by default. Users can configure functions for the buttons through WEB GUI
2	RS232	Connect to a RS232 enabled device for RS232 control.
3	LAN (PoE)	Connect to a network device such as an Ethernet switch, router for LAN control (Web UI & Telnet).
4	DC 12V	Connect to DC 12V power adapter (Power adapter is not included in the package).

* Factory default setting (The factory default IP address is 192.168.1.254)



* Press the two buttons shown in the above picture at the same for at least until all the backlights of the buttons blink 3 times, the keypad will be reset to factory defaults.

5. Specification

Technical	
Front panel	10 x Buttons (silicone soft buttons)
Back panel	1 x LAN (RJ45, PoE), 1 x RS232; 1 x DC 12V Power In
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	10% to 90%, non-condensing
ESD Protection	Human-body Model, ±8kV (Air-gap discharge)/±4kV (Contact discharge)

Technical	
Power Supply	DC 12V 0.5A (Power adapter is not included in the package)
Consumption (Max)	1.3W
Device Dimension (W x H x D)	45mm x 105.6mm x 36mm/ 1.77" x 4.16" x 1.42"
Product Weight	0.18kg/0.40lb

6. Installation

If the ethernet switch doesn't support PoE and keypad can't get power from PoE, users will need to make a power adapter with supplied phoenix connector to power the keypad through DC 12V port externally.

*Check and ensure that the power adapter is with 12V, and its current is equal to or more than 0.5A.



Plug in the 2-pin cable equipped phoenix connector to DC 12V port of the keypad. Connect the adapter to the power, the keypad should start work (press the any button, it will flash).

7. Configuration settings

The keypad supports WEB GUI to setup devices and configure commands for the Keypad buttons, it also supports to set network and system information. The Web UI can be accessible through a browser with latest version, e.g. Chrome, Firefox, Safari, Opera, IE10+, etc.

Step 1: Connect LAN (PoE) port of the keypad to an Ethernet switch using a straight UTP cable.

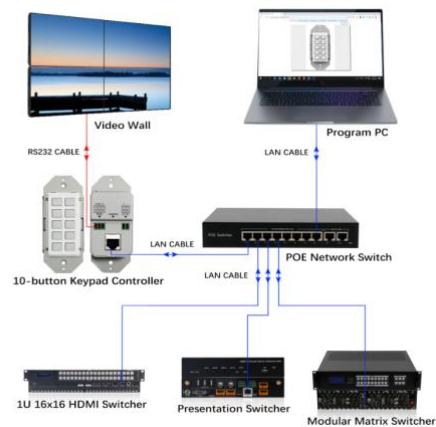
Note:

- If the switch supports PoE, the keypad can receive power from it. Otherwise, connect a DC 12V power adapter to the keypad. The power adapter is not included, for how to make a power adapter, please refer to "Make a Keypad Power Adapter with Phoenix Connector" section.
- The default network mode of the keypad is DHCP, ensure the ethernet switch is connected to a DHCP server such as a router.

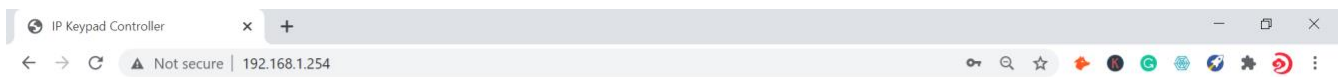
Step 2: Connect a PC to the same network.

Step 3: Power on all devices.

See the following diagram:

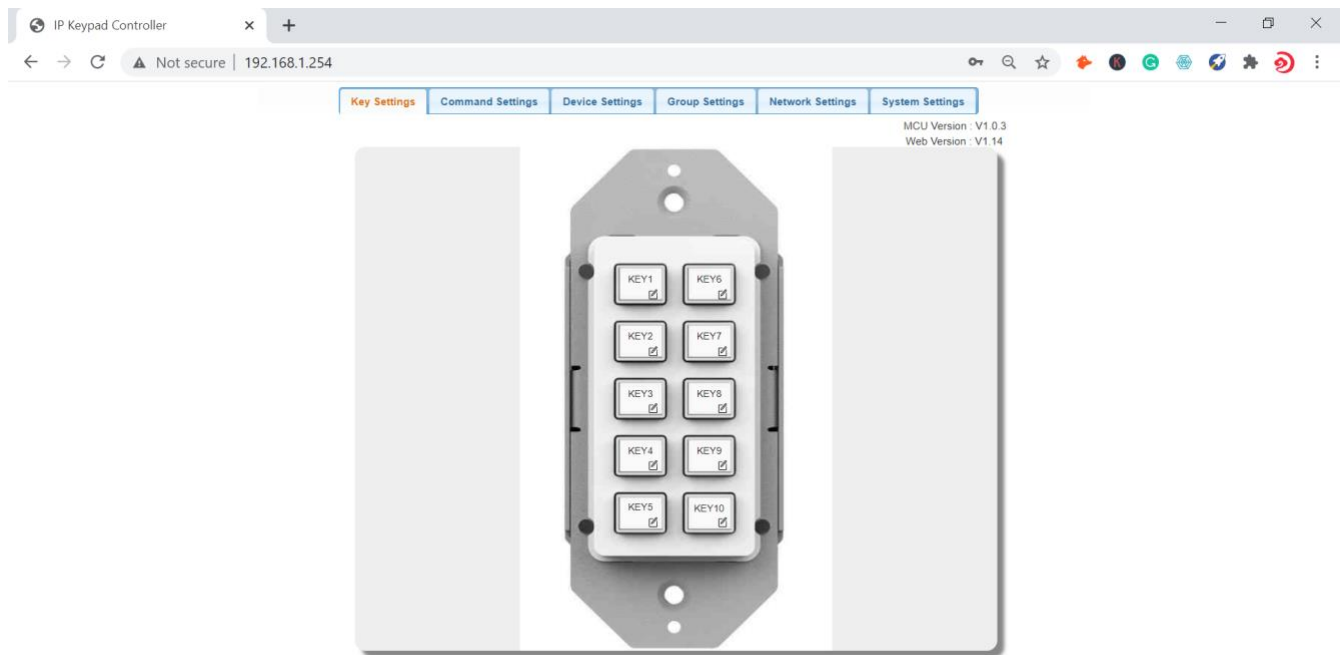


Input the IP address(the factory default IP address is 192.168.1.254) to the browser and press Enter. The following Login window will display. Input the default Username(admin) and Password(admin):



The login form consists of two input fields. The first field is labeled with a user icon and contains the text "admin". The second field is labeled with a lock icon and contains five asterisks "*****". Below these fields is a button labeled "Login".

Click "Login" to enter the following page.



The main page includes 5 interfaces: **Key settings**, **Command Settings**, **Device Settings**, **Network Settings**, **System Settings**.

[“Device Settings”](#), [“Command Settings”](#) and [“Key Settings”](#) are used to configure and store functions for buttons.

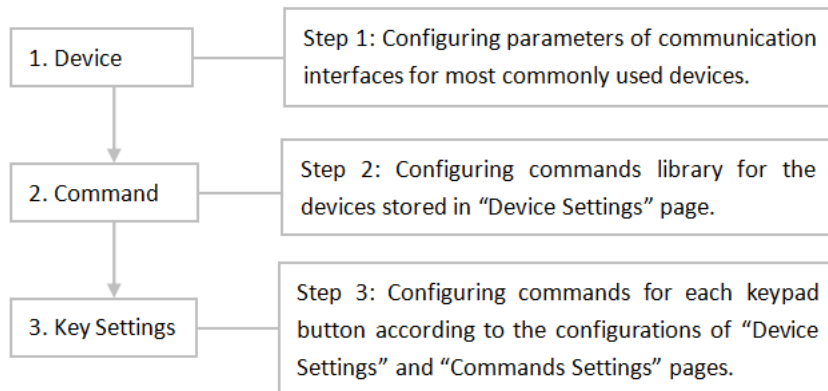
[“Network Settings”](#) is used to configure DHCP/Static IP information.

[“System Settings”](#) is used to configure general system settings.

Configure Functions for Buttons

[“Device Settings”](#), [“Command Settings”](#) and [“Key Settings”](#) submenus allows you to set up mostly used devices and commands for quick button function definition.

The configuration sequence should be as follows:



Device Settings

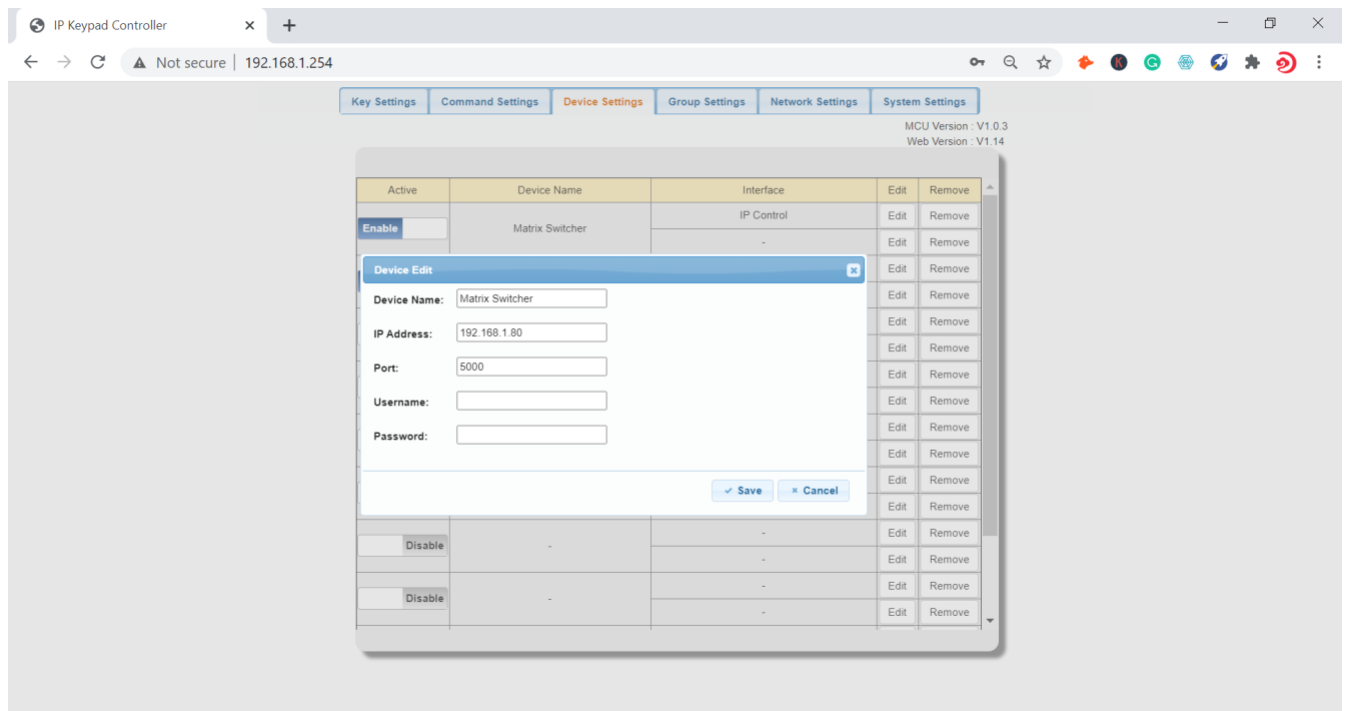
This section allows you to configure device library for most commonly used devices. See operation in detail as below.

Key Settings Command Settings **Device Settings** Network Settings System Settings

MCU Version: 1.2
Web Version: 1.03

Active	Device Name	Interface	Edit	Remove
<input type="checkbox"/> DISABLE	-	-	1 Edit	Remove
		-	2 Edit	Remove
<input type="checkbox"/> DISABLE	-	-	Edit	Remove
		-	Edit	Remove
<input type="checkbox"/> DISABLE	-	-	Edit	Remove
		-	Edit	Remove
<input type="checkbox"/> DISABLE	-	-	Edit	Remove
		-	Edit	Remove
<input type="checkbox"/> DISABLE	-	-	Edit	Remove
		-	Edit	Remove
<input type="checkbox"/> DISABLE	-	-	Edit	Remove
		-	Edit	Remove
<input type="checkbox"/> DISABLE	-	-	Edit	Remove
		-	Edit	Remove

The controlled devices can be connected to LAN (via network) port or RS232 port of the keypad. Users can configure IP control parameters and RS232 control parameters for these most commonly used devices by clicking the “Edit” to start:

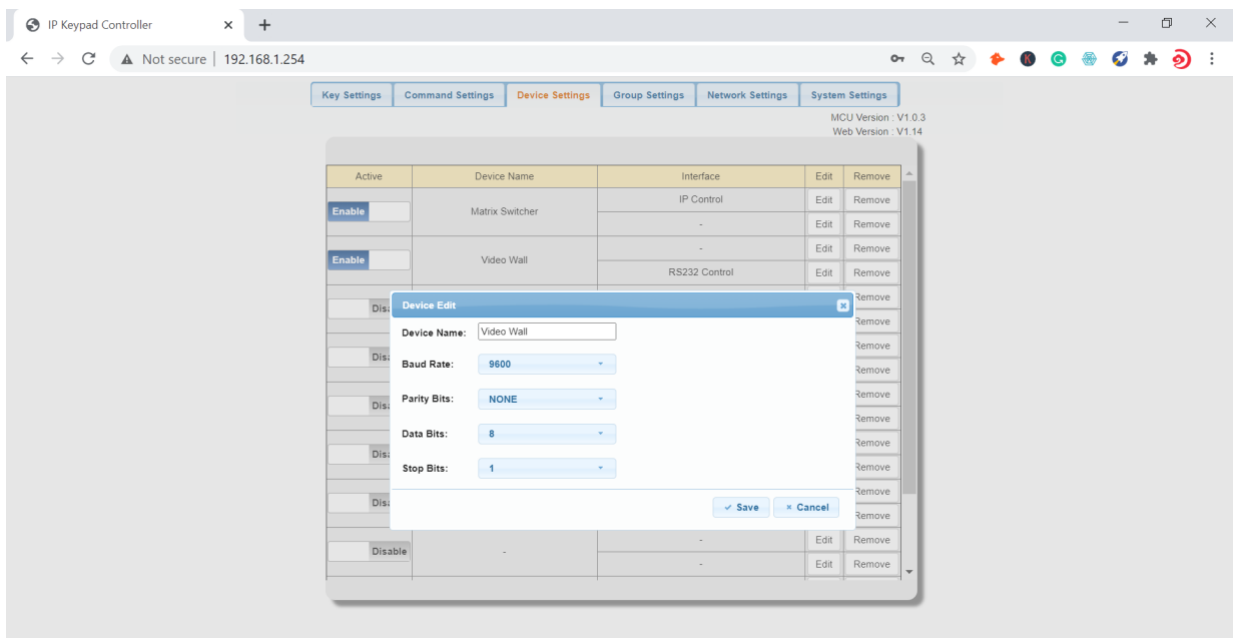


Note: If you don't want to save the configurations, you can click "Cancel" to cancel the operations.

Configurations of RS232 Control:

- (1) Click the second "Edit" to enter the following page.
- (2) Configure the items in the picture above. These parameters are provided by third-party devices manufacturers and can be found in instructional documentations.
 - **Device Name:** The "Device Name" configured in the first "Edit" tab.
 - **Baud Rate:** Select the baud rate from the drop-down menu.
 - **Parity Bits:** Select the parity bits from the drop-down menu.
 - **Data Bits:** Select the data bits from the drop-down menu.
 - **Stop Bits:** Select the stop bits from the drop-down menu.
- (3) Click "Save" or "Cancel" to save or cancel the configurations above.

If you click "Save", the page will return to the "Device Settings" tab automatically. After successful configuration, the "Device Settings" page will look as the following:

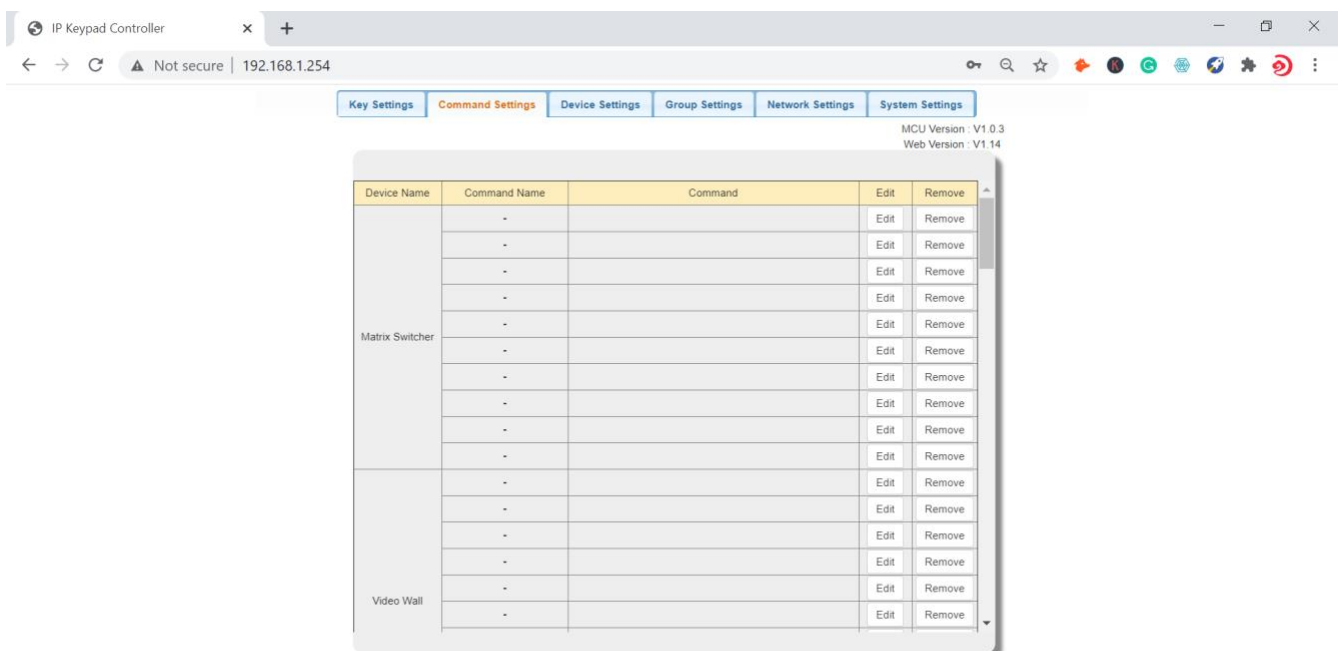


Note: The “Remove” buttons in last column allow you to remove the corresponding configurations for IP Control/RS232.

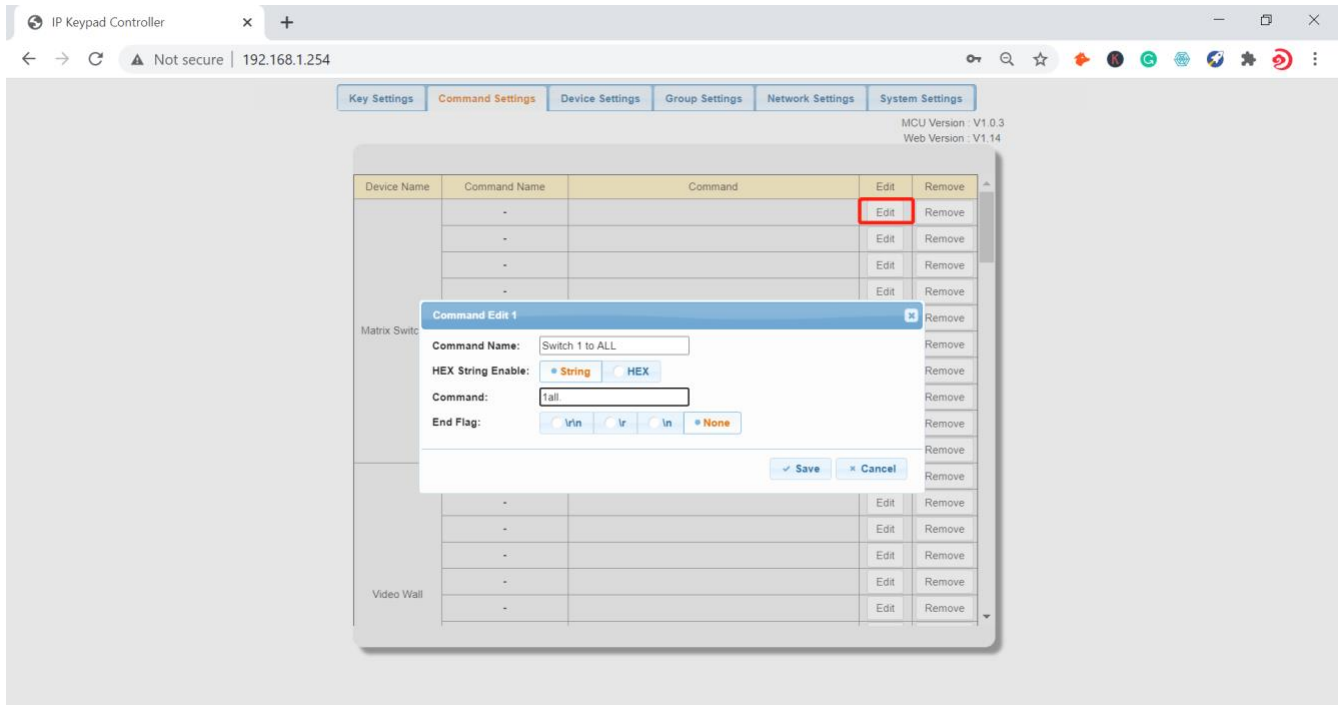
Command Settings

After “[Device Settings](#)” is configured successfully, click “Command Settings” to set control commands for the stored devices in “Device Settings” section.

Note: The control commands are provided by third-party devices manufacturers and can be found in instructional documentations.



(1) Click “Edit” to enter the following page.



(2) Configure the items in the picture above.

- **Command Name:** Set a name for this command.

Note: The length of each “Command Name” shall not exceed 32 characters and can include letters, numbers and underscores.

- **HEX String Enable:** Select the command type accordingly to the controlled devices
- **Command:** When the command is string, it will have the end flag for selections, but when use HEX, it will be no end flag.



(3) Click “Save” or “Cancel” to save or cancel the configurations above.

If you click “Save”, the page will return to the “Command Settings” tab automatically.

Note: The “Remove” button in last column allow you to remove the corresponding command of third-party device.

(4) Repeat steps from (1) to (3) to program other commands.

Key Settings

After “[Command Settings](#)” is configured successfully, click “Key Settings” to configure commands for each keypad button. For each button, it can configure 6 commands at most.

- (1) Click the bottom right corner of the button (red box of Fig 1, take KEY1 as an example) to enter the following page (Fig 2).



Fig 1

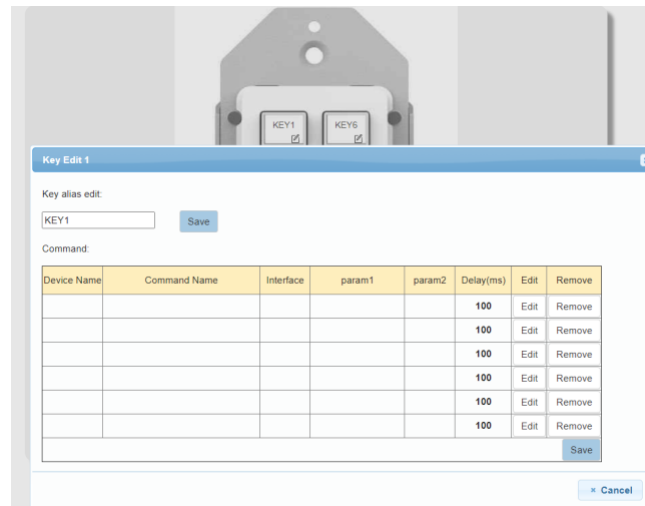


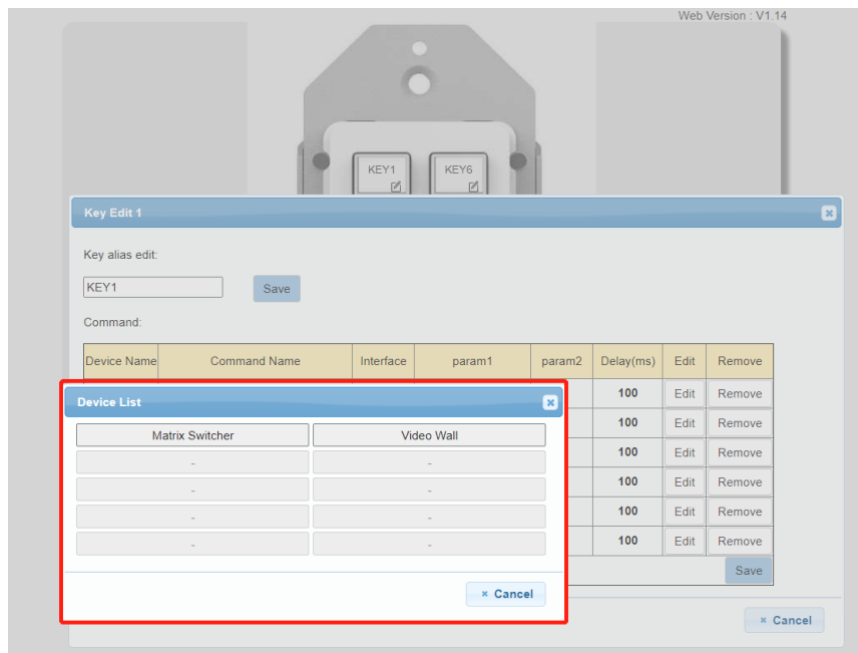
Fig 2

- (2) Configure the items in the picture above.

- **Key alias edit:** Configure a name for the button. then click “Save” to take effect.

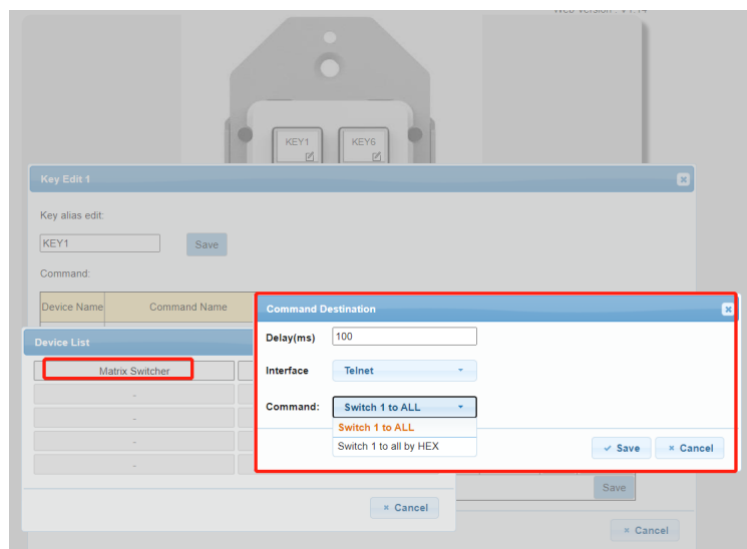
Note: The length of each button’s name shall not exceed 24 characters and can include letters, numbers and underscores.

- **Command:** Click “Edit” in the web table to choose devices that are needed to program.



This window displays the Device Names you set in “Device Settings” section.

- a) Click “Matrix Switcher” button in the above window to enter the following page:



- b) Configure the items in the picture above.

- **Delay (ms):** Set the delay time for the command to be sent to the controlled device when press the button. It can be left blank.
 - **Interface:** Select the control interface from pull-down list. (Telnet or RS232).
- Note:** Select the interface according to the actual connection requirements.
- **Command:** Select one command from the drop-down menu.

- c) Click “Save” to save the configurations.

Note: If you don't want to save the configurations, click "Cancel".

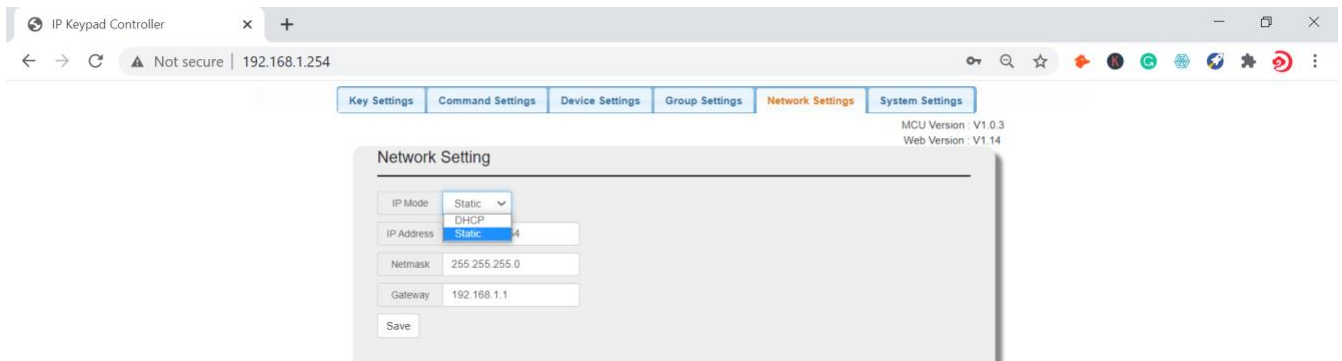
- d) Repeat steps from a) to c), configure other commands.

Note: The "Remove" buttons in last column allow you to remove the corresponding commands configured for the button.

- e) Click "Save" to save all the configured commands to KEY1 button.

Network Settings

"Network Settings" is available to configure keypad network information. Click "Network Settings" submenu to enter the configuration page.



The screenshot shows a web browser window titled "IP Keypad Controller" with the address bar displaying "192.168.1.254". The page has a navigation bar with tabs: "Key Settings", "Command Settings", "Device Settings", "Group Settings", "Network Settings" (highlighted), and "System Settings". The "Network Setting" page contains a form with the following fields:

- IP Mode: A dropdown menu with "Static" selected.
- IP Address: A text input field with "192.168.1.254" entered.
- Netmask: A text input field with "255.255.255.0" entered.
- Gateway: A text input field with "192.168.1.1" entered.
- Save: A button.

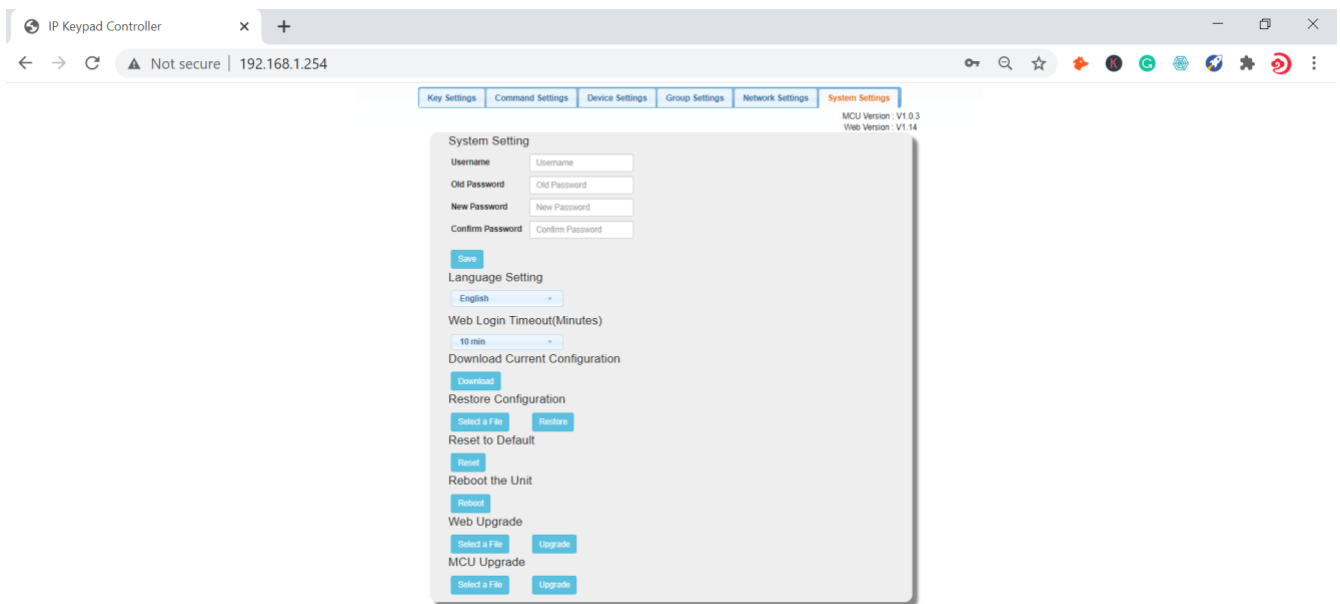
Version information is displayed in the top right corner: "MCU Version : V1.0.3" and "Web Version : V1.14".

- **DHCP:** When keypad DHCP mode is enabled, the keypad should connect to network with DHCP server. The IP address, Netmask, and gateway parameters will be automatically assigned by DHCP server.
- **Static:** When keypad is set to Static IP mode, the IP address, netmask, and gateway parameters can be assigned manually.
- **Save:** Save the configuration changes.

Note: The keypad default network setting is Static, and the default IP address is 192.168.1.254.

System Settings

"System Settings" is available to configure system functions. Click "System Settings" submenu to enter the configuration page like below.



(1) Web User Settings

This tab is used to change web login user Name and password.

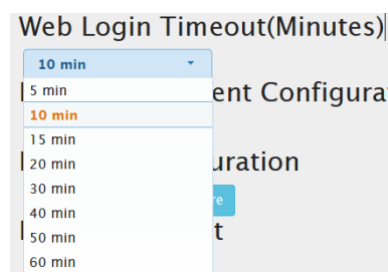
- **Save:** Click “Save” to take effect.

The default User Name and Password are both set to “admin”.

Note: Password starts with letters, numbers or underscores, it must be within 4 to 16 characters in length.

(2) Web Login Timeout (Minutes)

Configure web login timeout to automatically exit web in certain time. Click to configure the timeout from the drop-down menu (5-60 minutes optional).



The default timeout is 10 min.

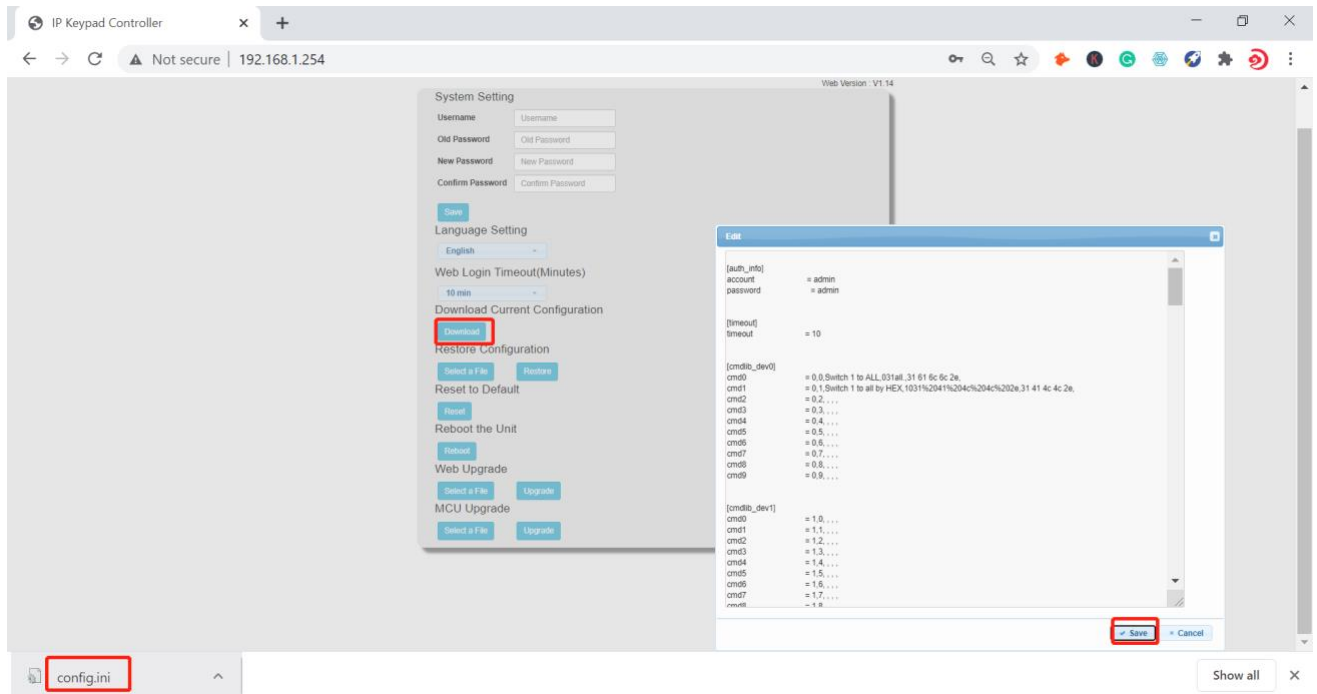
(3) Download Current Configuration

Click “Download” to save current configurations.

- **Save:** Click “Save” to save the configuration file to local

- **Cancel:** Click “Cancel” to cancel saving the settings.

Note: The saved .bin file name cannot be changed, otherwise keypad will not be able to restore the configuration.



(4) Restore Configuration

- **Select a File:** Click “Select a File” to select a saved configuration bin file from local PC.

Note: After selecting the wanted .bin file, it may show fakepath message on the page. This is designed to hide the .bin file path for protection.

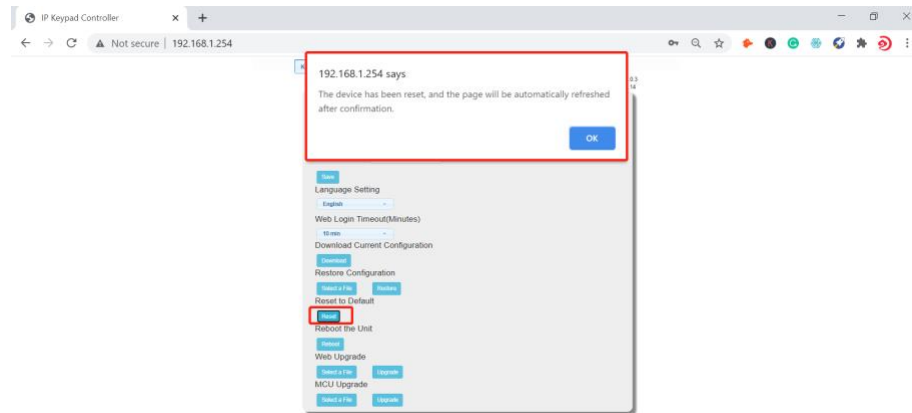
- **Restore:** Click “Restore” to begin to restore the configuration from the selected bin file.

Note: Users can customize the config file by adding the name after config, but not able to delete the config.

Name	Date modified	Type	Size
config <u>Matrix switcher</u>	9/10/2020 6:11 PM	Configuration settings	9 KB
config <u>MatrixTVBYOD</u>	9/12/2020 9:14 AM	Configuration settings	11 KB

(5) Reset to Default

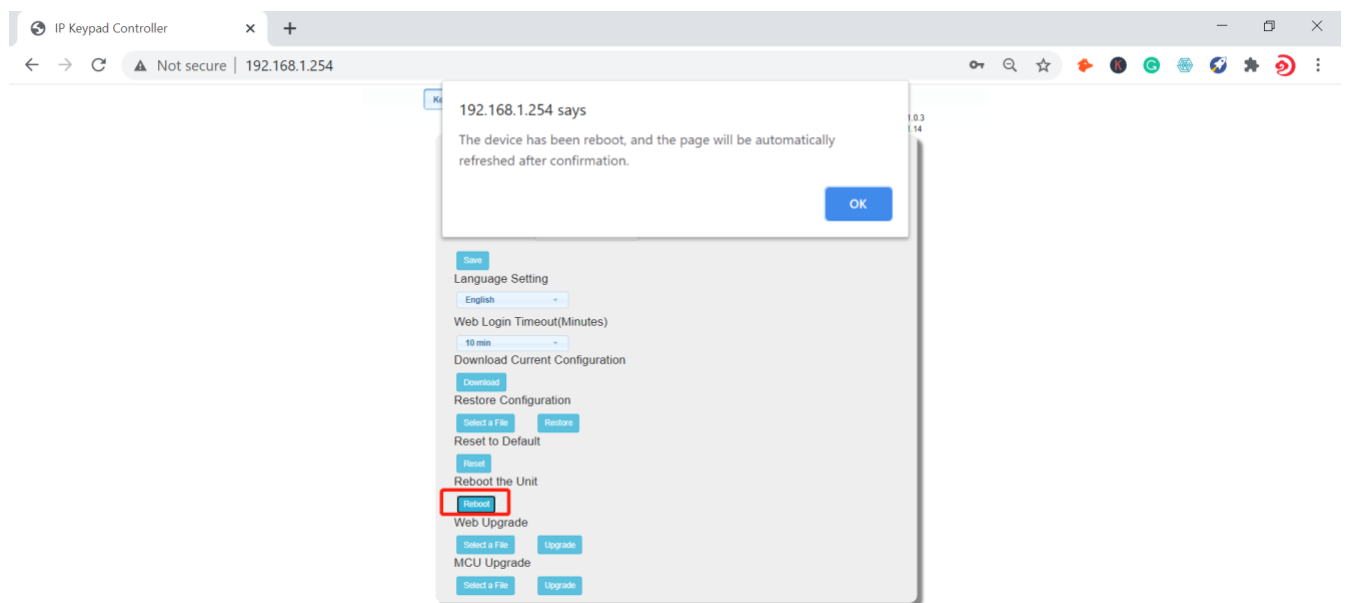
Click “Reset” to reset the keypad to factory default settings. The following window will pop up.



Note: The keypad will reboot automatically and keypad settings will be cleaned after successfully reset.

(6) Reboot the Unit

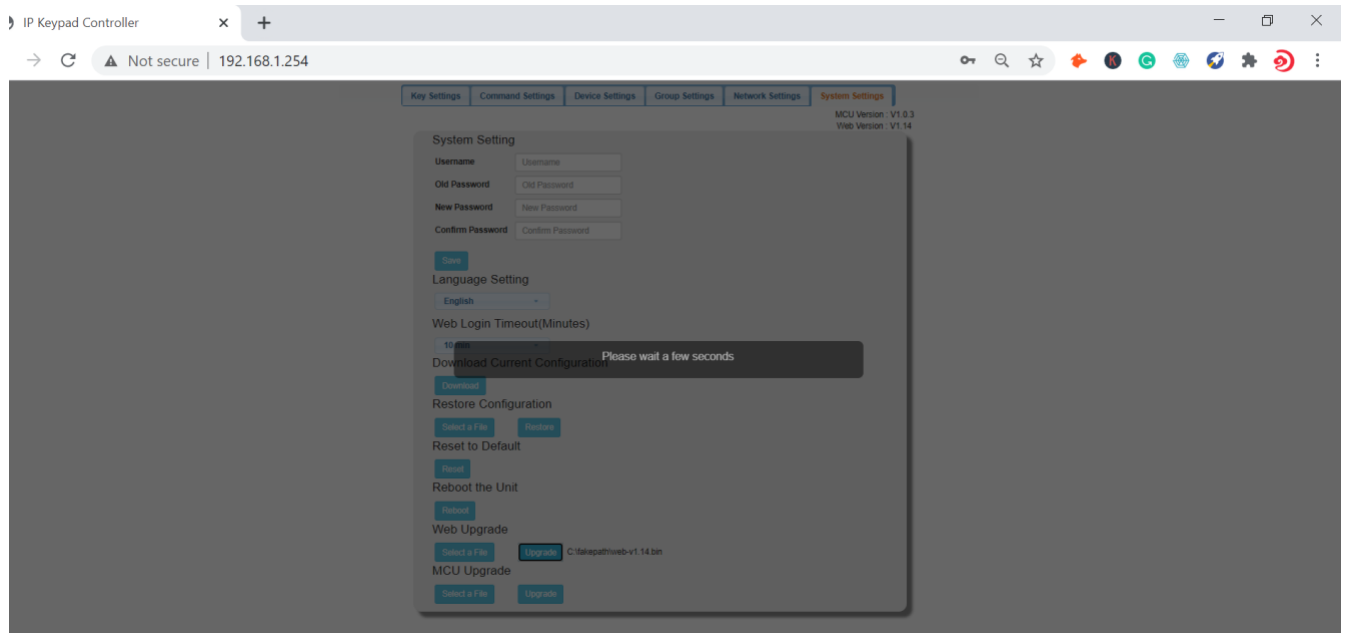
Click “Reboot” to reboot the unit. A notice window will pop up as follows:



After rebooting the keypad successfully, the buttons on front panel blink 3 times and the web page returns to the login page.

(7) Web Upgrade

- **Select a file:** Select a Web UI upgrade .bin file from the local PC.
- **Upgrade:** Click “Upgrade” to start Web UI upgrade. A notice window will pop up as follows:



When web UI upgrading is completed, the keypad will reboot automatically, and the web page will be refreshed automatically.

(8) MCU Upgrade

- **Select a file:** Select an MCU upgrade bin file from the local PC.
- **Upgrade:** Click “Upgrade” to start MCU upgrade.

The keypad will reboot and the web page will be refreshed automatically when MCU upgrading is completed.

Application

The keypad can control the third-party devices through LAN(PoE) or RS232 port. Before installation, ensure the keypad has been configured functions for buttons through web UI (See "[Configure Functions for Buttons](#)" on "**Configurations on Web UI**" section).

1. Connect the controlled third-party device to LAN(PoE) port or RS232 port of the keypad.
2. Connect the DC 12V power adapter to the keypad

Note: If the controlled device connected to LAN (PoE) port supports PoE function, the keypad can receive power from it and no additional power adapter is needed.

3. Power on all devices.
4. Press the buttons on front panel of the keypad to control the third-party devices.