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ALFATRON ELECTRONICS GmbH GERMANY

ALF-IP6

Wallplate Control Panel- 6 buttons

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Version: ALF-IP6_2021V1.1

Preface

Read this user manual carefully before using the product. Pictures are shown in this manual for reference only, different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated January 2018. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

FCC Statement

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.

SAFETY PRECAUTIONS

To ensure the best from this product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment.
- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration, or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills onto the housing, unplug the module immediately.
- Do not twist or forcefully pull the ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat as normal electrical waste.

Contents

1. Introduction

1.1 Introduction to ALF-IP6

The Alfatron ALF-IP6 Wallplate Control Panel has three built-in programmable RS232 connectors and two Infrared (IR) connectors.

The Programmable Control Panel can fully control the compatible switches, as well as third-party devices such as a matrix switcher, compact scaler switcher, projectors, screens, etc. Use the device for presentations in showrooms, classrooms, and boardrooms.
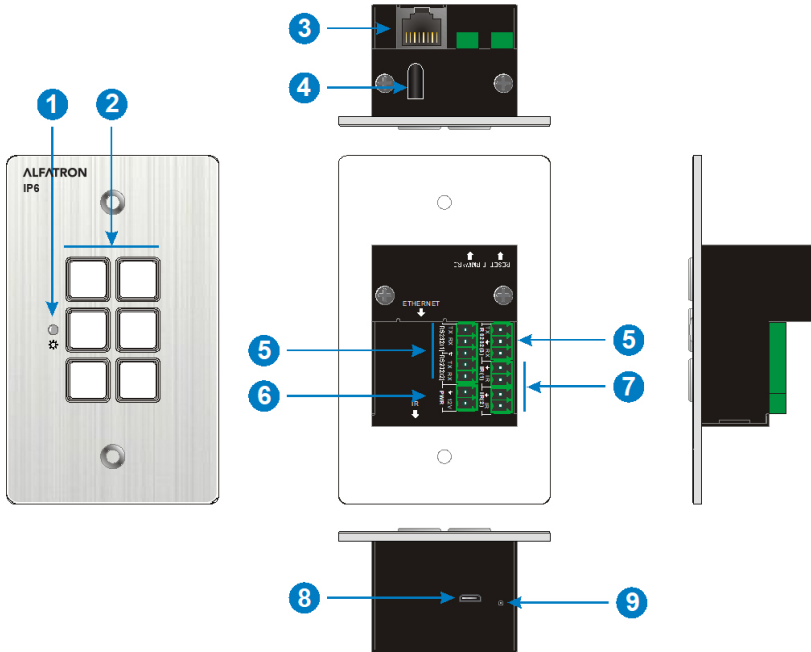
1.2 Features

● Each button can be programmed to send bi-direction RS232 commands simultaneously to control third party devices.

● Each button can be programmed to send the IR codes simultaneously to control the third-party devices and support IR code learning function.

● The unit may be programmed through the Ethernet port, via the Control Software.

● Crystal and backlit buttons with easy user-friendly customizable changeable labels.

● The backlit brightness is controllable.

● Dimension: 70mm long and 41mm wide.

1.3 Package List

● 1 x ALF-IP6

● 1 x Power adapter (12VDC 1A)

● 1 x 3-Pin Pluggable terminal block

● 1 x Button label

● 1 x User Manual

● 2 x Screw (M4*35)

● 3 x 2-Pin Pluggable terminal blocks

● 1 x 5-Pin Pluggable terminal block

● 6 x Button caps

Note: Please confirm if the product and the accessories are all included, if not, please contact your local agent.

# 2. Panel Description

No.	Name	Description
1	Power LED	Illuminates red when powered on.
2	Button	Six crystal and luminescent programmable buttons: Each button can be programed with the Control Panel Software. Each label within a button can be easily changed. Simply select the label you need and change it as shown below:

3	ETHERNET	RJ45 connector. Connects with a PC to run the Control Panel Software to customize button control. After setting button functions, the port can be connected to a third-party device to control it via buttons.
4	IR Sensor	Receives and learns the IR code to build the IR database.
5	RS232(1) ~ RS232(3)	Total of three RS232 ports. Connect to third-party devices which need to be controlled via the Control Panel Software.
6	PWR (12V)	Connects with 12V DC power adaptor.
7	IR (1) ~ IR (2)	Two IR output ports. Connects with IR Emitter to control other devices via the Control Panel Software.
8	FIRMWARE	Micro USB port for firmware updating.
9	RESET	Long-press this button for three (3) seconds until the power LED goes out to restore factory default. When the LED lights up, the reset is successful.

3. System Connection

The ALF-IP6 can activate different ports at the same time. This means every button can send RS232 commands, IP and IR codes at the same time.

The system diagram as below:

System Diagram
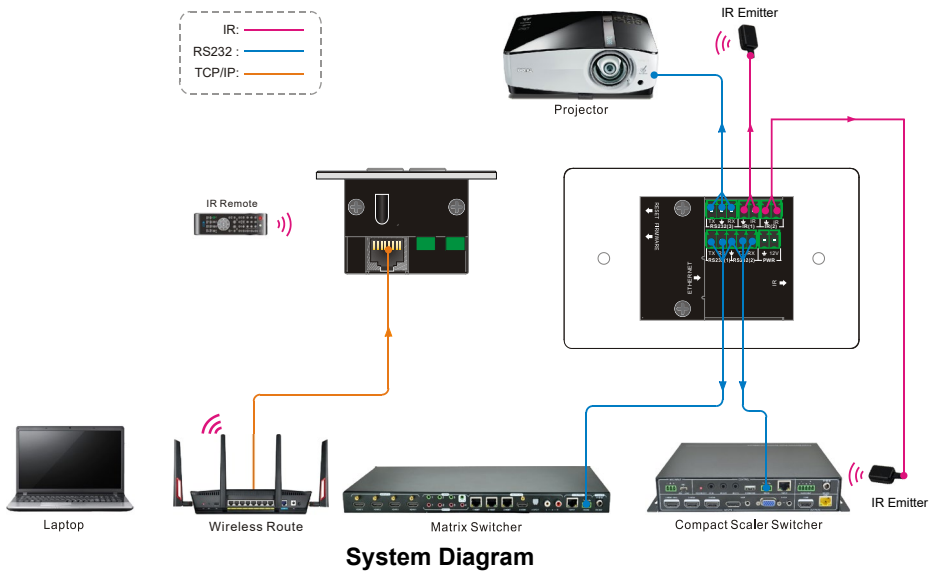
1) Connect the ALF-IP6 to the LAN port of a Wireless Router or control device (PC) to the ETHERNET port.

2) Connect the third-party device (Matrix Switchers, Compact Scaler Switchers, or a Projector) that need to be controlled to the RS232 (1) ~ RS232 (3) ports.
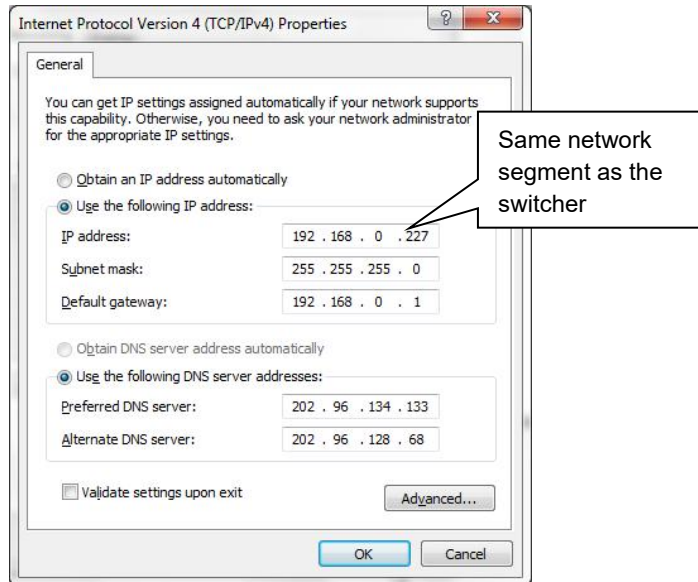
3) Connect the IR Emitters to IR (1) ~ IR (2) ports.

4. Control Panel Software

4.1 Basic Setting

You can use Control Panel Software to easily set functions for each button.

1) Connect the control PC to the ETHERNET port.

2) The default IP of the ALF-IP6 wallplate is *192.168.0.178* (modifiable); the control PC should have its network segment the same as the ALF-IP6's.
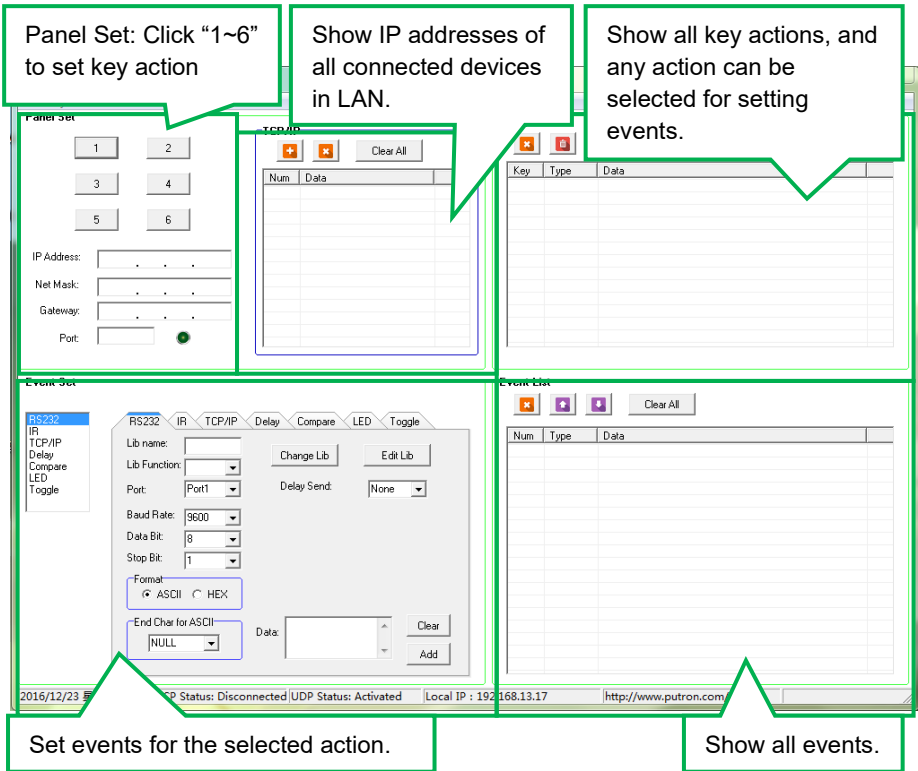

Modify the IP of the PC

3) Install / uninstall Control Panel Software:

● Install: Copy the software file to the computer connected with ALF-IP6

● Uninstall: Delete all the software files in corresponding file path.

4) Double-click the below software icon to run this software:

The main window of the Control Panel Software has five parts:

Panel Set, TCP/IP, Action List, Event Set and Event List.

The main window of the Control Panel Software is shown as below:

Panel Set: Click "1~6" to set key action

Show IP addresses of all connected devices in LAN.

Show all key actions, and any action can be selected for setting events.

Set events for the selected action.

Show all events.

The header of the main window has four titles including File, System, Connection, and Help.

- Click "File" → "Save" to save the current setting.

- Click "File" → "Save as" to save all configuration information as a file.

- Click "File" → "Open" to recall a configuration file.

- Click "System" → "Version" to query the current software version.

- Click "System" → "Message" to query the Link Status, Machine Type, Software Version, IP Information, and MAC address.

- Click "File" → "Software Update"

  Hold down the "3" button and power on the system until the button lights up to enable update mode → Open upgrade Web page (*http://192.168.0.178:4001/*) on IE → Type User ID (admin) and Password (123456) → upload update file → Click "Upload"

- Click "System" → "Factory Defaults" to restore to factory default.

- Click "Connection" → "TCP/IP" → "Reconnect" to reconnect all ALF-IP6's.

- Click "Connection" → "Upload" → to load the MCU information from the selected ALF-IP6 to the control software.

- Click "Connection" → "Download" → to download the current setting information to the selected ALF-IP6 from the control software.

4.2 Panel Set

Total of six customizable buttons on the front panel can be set via this software. Add a button action to show the action list, then add events to ensure this action will execute the events.

How to set up a button example:

Buttons 1 through 6, correspond to the physical buttons on ALF-IP6. Click on button 1, the following dialog window will pop up:

Key Type:
1. Press: Execute events when button is pressed.
2. Release: Execute events when button is released.
3. Toggle: The button can be regarded as composite key, press the button twice to execute different events.

Built key group for LED setting.

Dialog

Key Tpye: Press

Add

Key Group   Key Name

Group 1   1   Set

Cancel
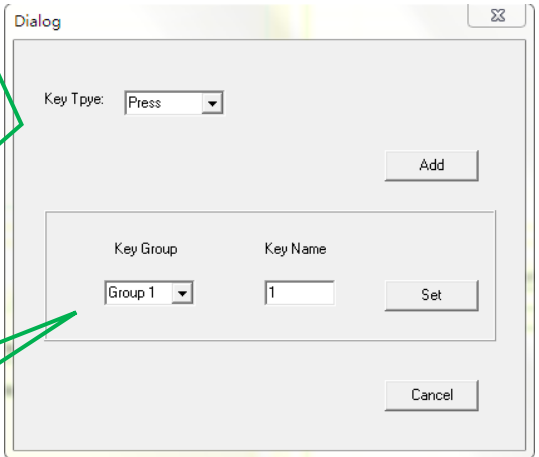
4.3 Action List

All Panel Set actions will be shown on the action list and available actions must be added to the list. The action list is as the picture below:

Action List

Clear All

Empty all actions.

Key	Type	Data
1	Key1	Press
2	Key2	Press
3	Key3	Toggle

Delete the selected action.

Delete all invalid actions.

4.4 Event setting

Event Set window includes RS232, IR, TCP/IP, Delay, Compare, LED, and Toggle settings. Before setting events, an action must be added first. The following introduction is about how to set events for each action.

4.4.1 RS232 Setting

This item is used for setting the events for RS232 (1) ~ RS232 (3) ports. Click "RS232", it will show as below:

Operation procedure:

1) Select the button action in action list.

2) Set the "Lib name" and "Lib Function". This is an optional function, not compulsory.

3) Select the RS232 port. The port must be same as model setting, otherwise the event cannot be added.

4) Confirm and set the baud rate, data bit, stop bit, and parity.

5) Enter RS232 command in data box, then press "add" to save setting.

6) The RS232 data also can be selected from the library. Click "Change Lib" to select a library file and open it, or, click "Edit Lib" to create a library file as below:

Open/create a library   Create/delete the function name of the command

RS232 Lib Name: 123   Open Lib   New Lib   Function: Open   New Function   Delete Function

Data
Format
ASCII   HEX

End Char for ASCII Format
NULL

Set
Baud Rate: 9600
Data Bit: 8
Stop Bit: 1

Power ON   Clear

Save as   OK   Cancel

Enter the RS232 command for device control.
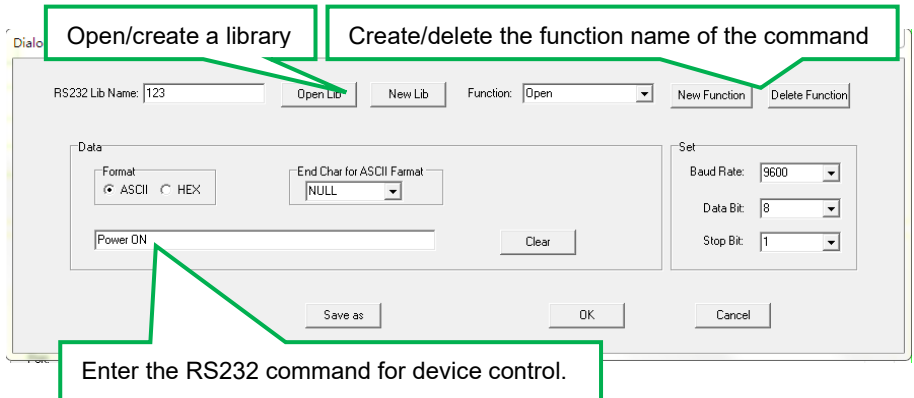
Note: Once set up, please press "Save" to save the edit or "Save as" to save as a file, and then press "OK".

7) There are two "Delay Send": Set and None. When selecting "Set", the number of sending strings and the delay time between strings can be set.

Event Set

RS232
IR
TCP/IP
Delay
Compare
LED
Toggle

RS232   IR   TCP/IP   Delay   Compare   LED   Toggle

Lib name: 123
Lib Function: Open
Port: Port1

Baud Rate: 9600
Data Bit: 8
Stop Bit: 1

Format
ASCII   HEX

End Char for ASCII
NULL

Change Lib   Edit Lib

Delay Send: Set

Send no.of transmission strings
1

Delay time between string
1

Data: Power ON   Clear   Add

4.4.2 IR Setting

This item is used for setting the events for IR (1) ~ IR (2) ports. Click "IR", it will display as follows:
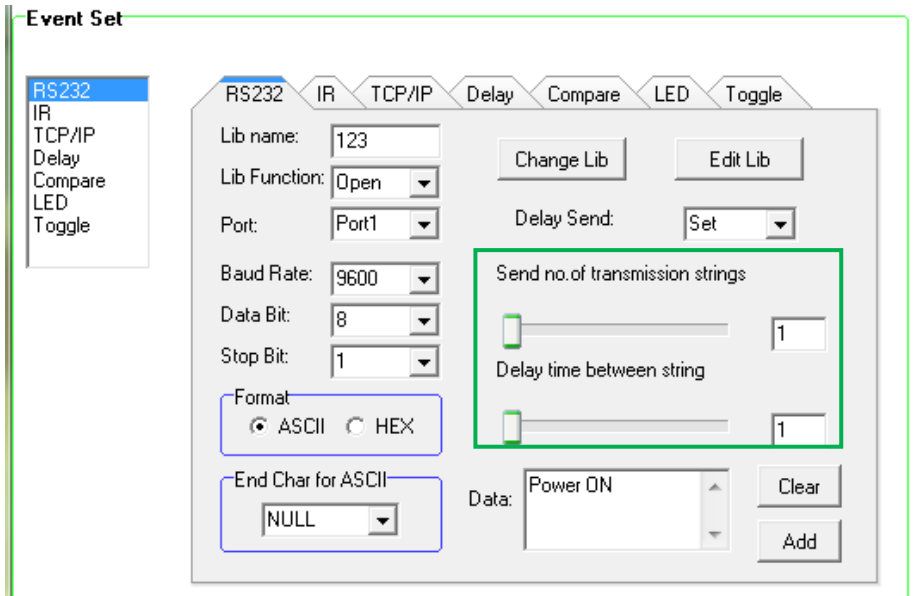
Operation procedure:

1) Select the button action in action list.

2) Set the "Lib name" and "Lib Function". It is an optional function, not compulsory.

3) Select the IR port. The port must be the same as the model setting, or the event cannot be added.

4) Set the IR carrier mode: On/Off

5) The IR data needs to be selected from library. Click "Change Lib" to select a library file and open it. Click "Edit Lib" to create or edit a library file as below:

Create/open a library

Create/delete/rename the function name of the IR data

Show IR data.

IR Edit

IR Lib Name: OPEN   Open Lib   Creat Lib

Edit

New Function   Delete Function   Rename For Function

No. | name | Data
1 | CEC ON | FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF

Learn   Save Edit   Save as   Exit
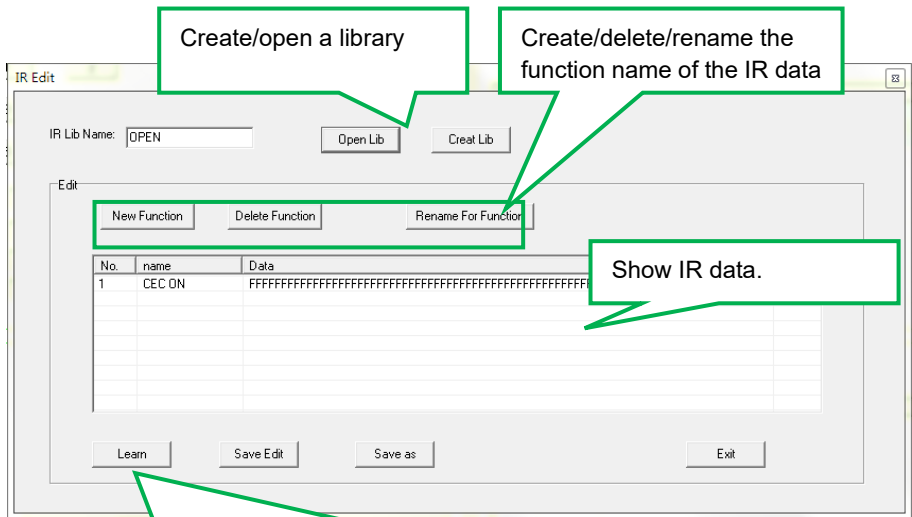
IR Learning Procedure:

1. Click "learn" to enter IR learning mode.

2. Put the IR Remote close to the IR sensor of the ALF-IP6.

3. Press any button on the IR Remote to send the IR code to the IR sensor, it will then refresh the IR data.

4. Following the above steps enables the device to learn any function of the remote buttons.

Note: The IR learning mode will be exited automatically if there is no operation within 3 seconds.

Note: Once set up, please press "Save Edit" to save the edit or "Save as" to save as a file, and then press "OK".

6) There are two "Delay Send": Set and None. When selecting "Set", the number of sending strings and the delay time between strings can be set.

4.4.3 TCP/IP Setting

The TCP/IP port supports pass-through function. You can set the events for different IP port via commands.

Type the IP address of the device that needs to be set.

Type in the control command.

4.4.4 Delay setting

This item is to add a delay between two events; when one event is completed, it will delay a certain time then start the next event. The delay setting is as picture below:

4.4.5 Compare Setting

This item is used for comparing the feedback of the RS232 commands. When the ALF-IP6 sends an RS232 command to the controlled device, the device will send feedback. If the correct feedback is added in the data, the ALF-IP6 will compare it with the feedback received from controlled device, to verify whether the command is working or not. The "Compare" setting is as below:
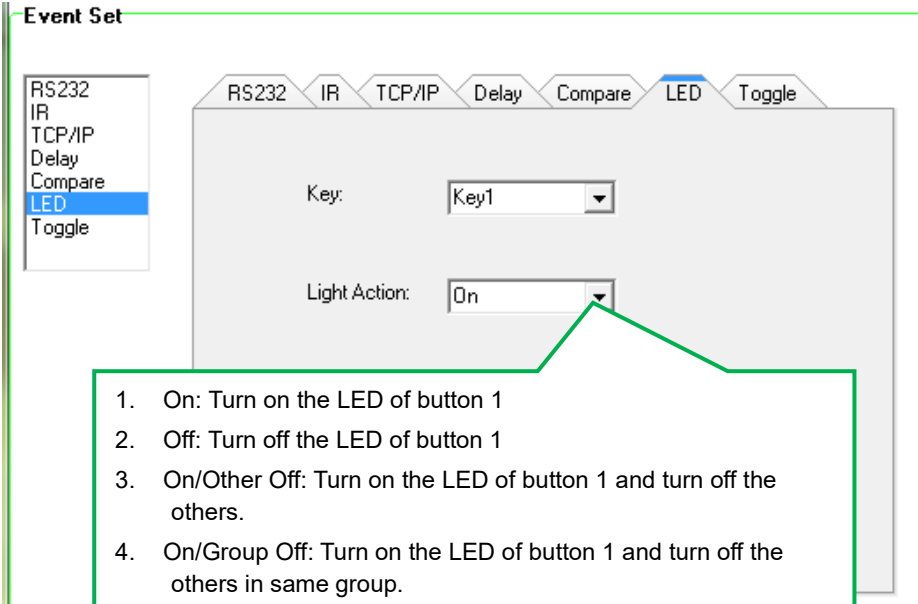
Enter the compare commands, DO NOT miss any characters.

Operation procedure:

1) Select the button action in the action list.

2) Select the RS232 port. The port must be same as the model setting, or the event cannot be added.

3) Set the command format ASCII or Hex, if selecting ASCII then the end character must be set.

4) Enter the RS232 command which needs to be compared in data box, then press "add" to save the setting.

5) Add an event that the LED lights up to indicate the comparative result.

6) For events in one event list, a priority is followed, from top to bottom, so that the compare function can be used in action which has three or more events.

4.4.6 LED setting

This item is used for setting the button LEDs in ALF-IP6 to turn on or off. The setting is as follows:

1. On: Turn on the LED of button 1
2. Off: Turn off the LED of button 1
3. On/Other Off: Turn on the LED of button 1 and turn off the others.
4. On/Group Off: Turn on the LED of button 1 and turn off the others in same group.

4.4.7 Toggle Setting

The button type can be set as "Toggle", in this type, the button can be regarded as a composite key. Below is an example to show you the use of this function:

Operation procedure:
1) Take Key 1 for example, click "1" and select the action type "Toggle".

Action List

Key	Type	Data	
1	Key1	Toggle	

2)   Add toggle & RS232 events for the Button 1.

Event Set

Rs232	Rs232	IR	TCP/IP	Delay	Compare	LED	Toggle
IR							
TCP/IP							
Delay							
Compare							
LED							
Toggle							

Button   Toggle Start

Button1 ▼   1 ▼

Event name: 1

Add

Event List

[×] [↑] [↓]   Clear All

Num	Type	Data
1	Toggle	Key1,Toggle Start No.1
2	RS232	Lib name:123 Function:Open Port:1,9600bps 8 1,Send No....
3	Toggle	Key1,Toggle Start No.2
4	RS232	Lib name:456 Function:Open Port:1,9600bps 8 1,Send No....

3) Press the Button 1, event Num 2 will be executed, press Button 1 again, and the event of Num 4 will be executed.

4.5 Event List

The event list shows all events of the selected action. The executing priority abides by the Num order, as displayed below. If there is an event executed incorrectly, all the events that follow it will not be executed.

Num	Type	Data
1	Toggle	Key1,Toggle Start No.1
2	RS232	Lib name:123 Function:Open Port:1,9600bps 8 1,Send No....
3	Toggle	Key1,Toggle Start No.2
4	RS232	Lib name:456 Function:Open Port:1,9600bps 8 1,Send No....

Delete the selected event.

Adjust the execution order for events.

Clear all events.

5. Specification

Program Port	TCP/IP
Output Port	3 x RS232, 2 x IR
Output Connector	3 x 3-Pin Pluggable terminal blocks, 2 x 2-Pin Pluggable terminal blocks,
Baud Rate and Protocol	9600 baud, 8 data bits, 1 stop bit, no parity
Software	ALF-IP6
Power Consumption	1W (Max)
Operation Temperature	0 ~ +40℃
Storage Temperature	-10 ~ +55℃
Relative Humidity	10% ~ 90%
Power Supply	Input: 100VAC~240VAC, 50/60 Hz; Output: 12VDC
Net Weight	150g
Case Dimensions（W*H*D）	70mm x 114mm x 41mm

6. Panel Drawing
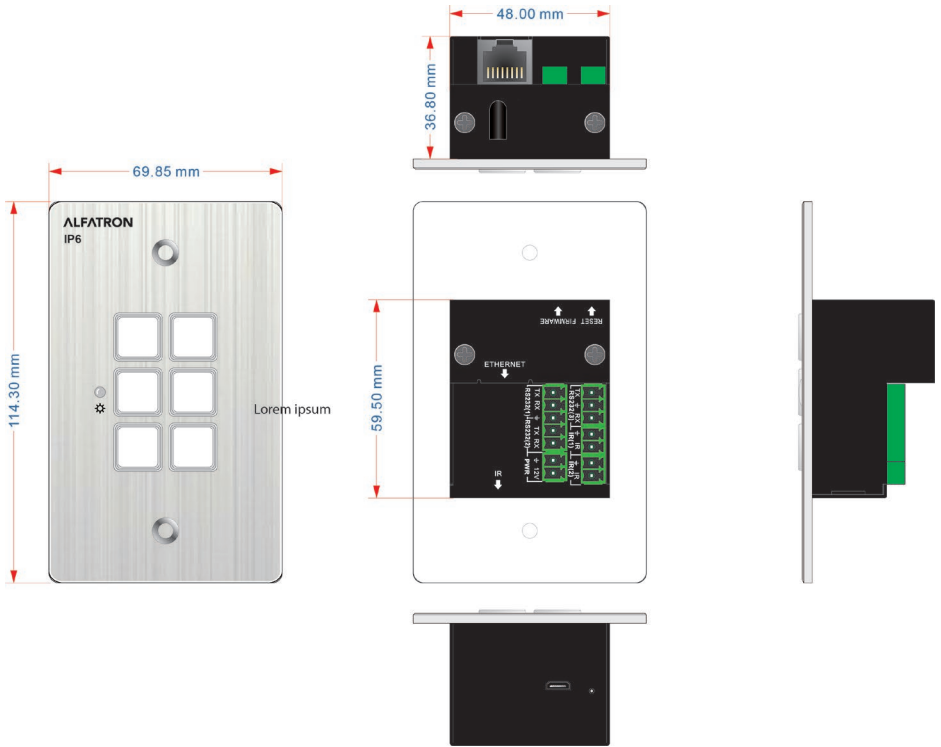
7. Troubleshooting & Maintenance

1) Should the ALF-IP6 not power up, please check, and ensure the power cord is well connected; the power connections cannot be mixed or incorrectly connected. Then restart the device, should the error persist, the ALF-IP6 may be defective. Please send it to the dealer for repair.

2) If connection is unsuccessful, please ensure the network segment of the control PC and the ALF-IP6 is the same.

3) When the LED of a button does not light up, please check if there is a compare event in this button. If yes, delete the 'compare' and try again. Should the error persist, the LED may be damaged. Please send the unit to the dealer for repair.

4) When serial commands are sent without the functions being executed, please check the baud rate, and make sure it is correct and that the serial connection is well connected.

Remarks: For further assistance or solutions, please contact your local distributor.

After-sales Service

Should you experience problems using the Alfatron ALF-IP6 please refer to the Troubleshooting and Maintenance (7) section. Should the error persist, note that any transport costs of the equipment to the distributor are borne by the user during the warranty.

Product Limited Warranty: Alfatron warrants that its products will be free from defects in materials and workmanship for **seven years,** which starts from the first day of purchase.

Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the unit is within the warranty period must be presented to obtain warranty service.

What the warranty does not cover (servicing is available at a fee):

• Warranty expiration.

• Factory applied serial number has been altered or removed from the product.

• Damage, deterioration, or malfunction caused by:

• Normal wear and tear.

• Use of supplies or parts not meeting product specifications.

• No certificate or invoice as the proof of warranty.

• The product model showed on the warranty card does not match with the product or if the product had been altered.

• Damage caused by force majeure.

• Servicing not authorized by Alfatron.

• Any other causes which do not relate to a product defect.

• Delivery, installation or labour charges for installation or setup of the product.

Technical Support: Contact our after-sales department at

www.alfatronelectronics.com

Warranty

1.1 This limited warranty covers defects in materials and workmanship in this product.

1.2 Should warranty service be required, proof of purchase must be presented to the Company. The serial number on the product must be clearly visible and not have been tampered with in any way whatsoever.

1.3 This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing, and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by the Company to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover equipment enclosures, cables or accessories used in conjunction with this product.

This limited warranty does not cover the cost of normal maintenance. Failure of the product due to insufficient or improper maintenance is not covered.

1.4 The Company does not warrant that the product covered hereby, including, without limitation, the technology and/or integrated circuit(s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.

1.5 Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.

1.6 Unless otherwise specified, the goods are warranted in accordance with the manufacturer's product specific warranties against any defect attributable to faulty workmanship or materials, fair wear and tear being excluded.

1.7 This limited warranty only covers the cost of faulty goods and does not include the cost of labor and travel to return the goods to the Company's premises.

1.8 In the event of any improper maintenance, repair or service being carried out by any third persons during the warranty period without the Company's written authorization, the limited warranty shall be void.

1.9 A 7 (seven) year limited warranty is given on the aforesaid product were used correctly according to the Company's instructions, and only with the use of the Company's components.

1.10 The Company will, at its sole option, provide one of the following three

remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1.10.1 Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition.; or

1.10.2 Replace this product with a direct replacement or with a similar product deemed by the Company to perform substantially the same function as the original product; or

1.10.3 Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

1.11 The Company is not obligated to provide the Customer with a substitute unit during the limited warranty period or at any time thereafter.

1.12 If this product is returned to the Company this product must be insured during shipment, with the insurance and shipping charges prepaid by the Customer. If this product is returned uninsured, the Customer assumes all risks of loss or damage during shipment. The Company will not be responsible for any costs related to the removal or re-installation of this product from or into any installation. The Company will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

1.13 Please be aware that the Company's products and components have not been tested with competitor's products and therefore the Company cannot warrant products and/or components used in conjunction with competitor's products.

1.14 The appropriateness of the goods for the purpose intended is only warranted to the extent that the goods are used in accordance with the Company's installation, classification, and usage instructions.

1.15 Any claim by the Customer which is based on any defect in the quality or condition of the goods or their failure to correspond with specification shall be notified in writing to the Company within 7 days of delivery or (where the defect or failure was not apparent on reasonable inspection by the Customer) within a reasonable time after discovery of the defect or failure, but, in any event, within 6 months of delivery.

1.16 If delivery is not refused, and the Customer does not notify the Company accordingly, the Customer may not reject the goods and the Company shall have no liability and the Customer shall pay the price as if the goods had been delivered in accordance with the Agreement.

1.17 THE MAXIMUM LIABILITY OF THE COMPANY UNDER THIS LIMITED

WARRANTY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID FOR
THE PRODUCT