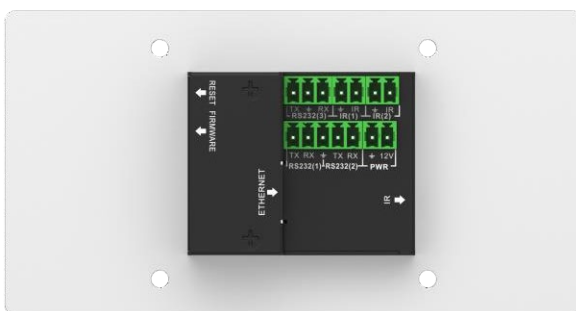
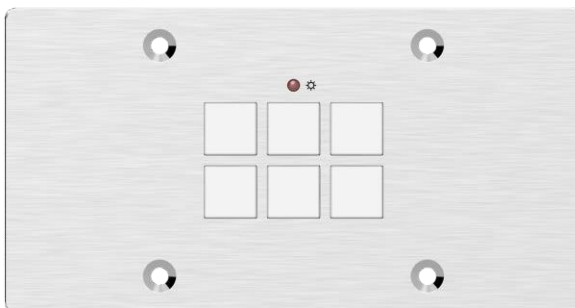


CP6IP-EU

Wallplate Control Panel-6 buttons

Program buttons to send RS232 commands to control projectors, screens and other third-party devices.



All Rights Reserved

Version: CP6IP-EU_2018V1.0

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 till 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 insure the best from the 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 on to the housing, unplug the module immediately.
- Do not twist or pull by force 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 them as normal electrical wastes.

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1. Introduction

1.1 Introduction to CP6IP-EU

The Wallplate Control Panel has (3) built-in programmable RS232 connectors and (2) Infrared (IR) connectors.

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

1.2 Features

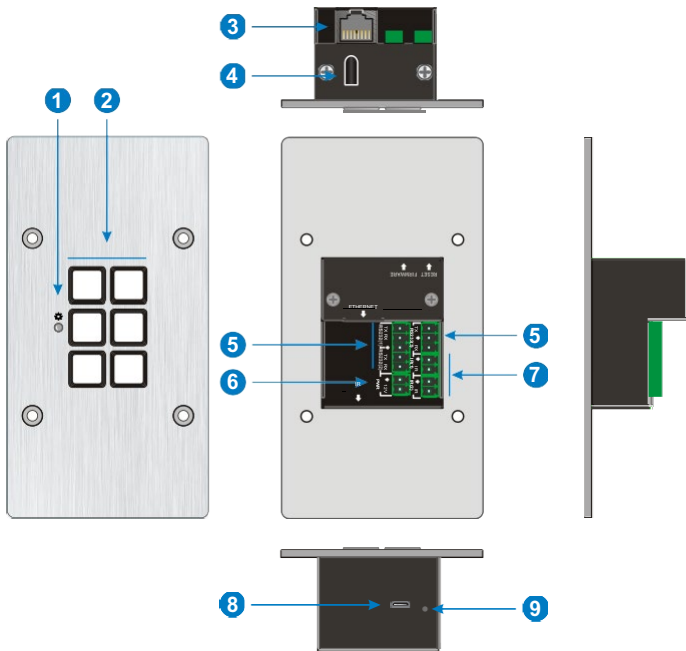
- Each button can be programmed to send bi-direction RS232 commands simultaneously to control third party devices.
- Each button can be programmed to send the infrared codes simultaneously to control the third-party devices and support infrared code learning function.
- The unit may be programmed through the ENTERNET 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.

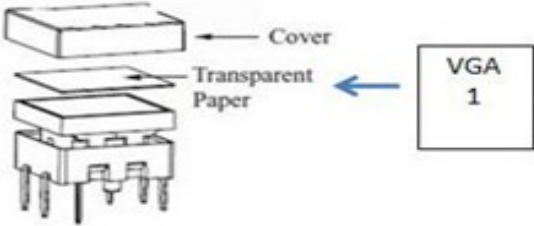
1.3 Package List

- | | |
|---------------------------------------|--------------------------------------|
| ● 1 x CP6IP-EU | ● 1 x Power adapter (12VDC 1A) |
| ● 1 x Button label | ● 6 x Button caps |
| ● 3 x 2-pin pluggable terminal blocks | ● 1 x 3-pin pluggable terminal block |
| ● 1 x 5-pin pluggable terminal block | ● 1 x User Manual |

Note: Please confirm if the product and the accessories are all included, if not, please contact with the dealers.

2. Panel Description



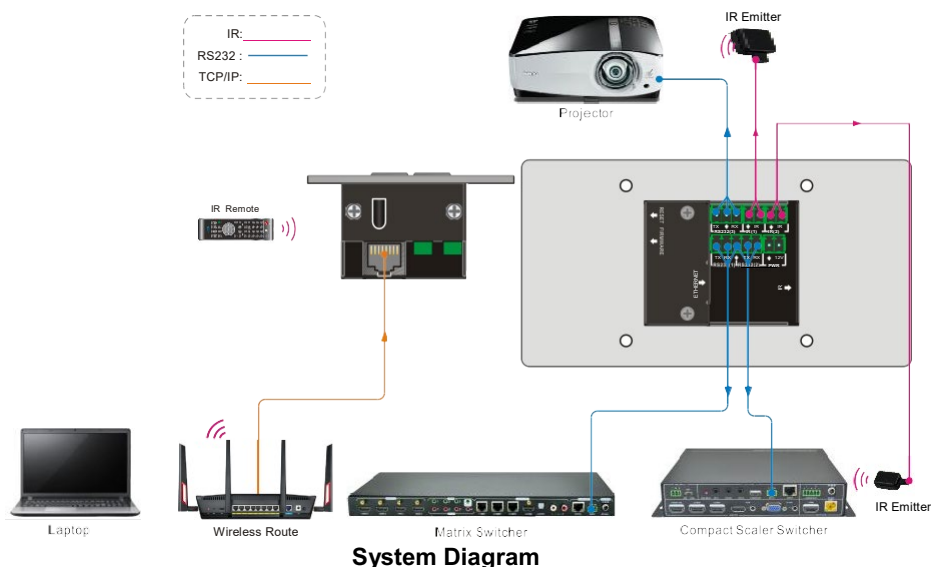
No.	Name	Description
1	Power LED	Illuminates red when power on.
2	Button	<p>(6) crystal and luminescent programmable buttons: Each button can be programed with the Control Panel Software. Each label within a button can be easily changed. Simply select the label you need and change it as shown below:</p> 

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

3. System Connection

The CP6IP-EU can active different ports at one time. It means every button can send the RS232 commands, IR code at the same time.

The demo system diagram as below:



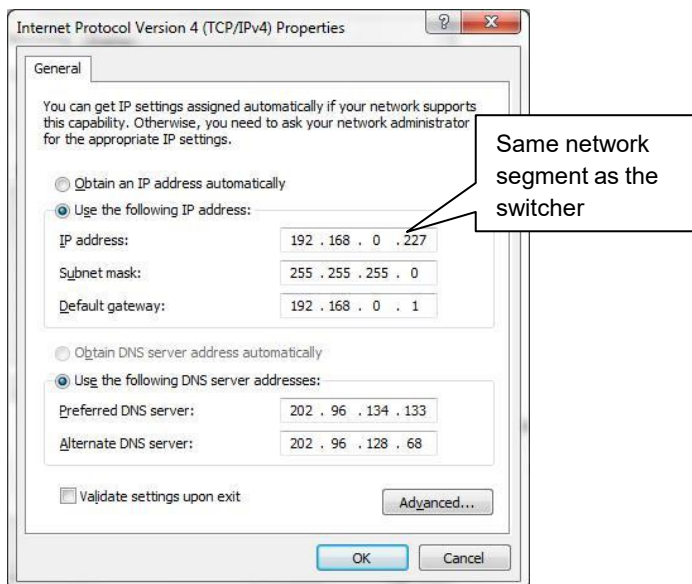
- 1) Connect the CP6IP-EU to the LAN port of Wireless Route, or control device (such as PC) to ETHERNET port.
- 2) Connect the third-party devices (such as Matrix Switcher, Compact Scaler Switcher or Projector) that need to be controlled to RS232 (1) ~RS232 (3) ports.
- 3) Connect the IR Emitters to IR (1) ~ IR (2) ports.

4. Control Panel Software

4.1 Basic Setting

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

- 1) Connect the control PC to the ETHERNET port.
- 2) The default IP of CP6IP-EU is 192.168.0.178 (modifiable), the control PC should be set its network segment to the same as the CP6IP-EU's.



Modify the IP of PC

- 3) Installation/uninstallation of Control Panel Software:
 - Installation: Copy the software file to the computer connected with CP6IP-EU.
 - Uninstallation: 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 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.

The screenshot shows the main window of the Control Panel Software. It is divided into several sections:

- Panel Set:** Located at the top left, it contains six buttons numbered 1 to 6, and fields for IP Address, Net Mask, Gateway, and Port.
- TCP/IP:** Located at the top middle, it contains a table with columns 'Num' and 'Data' for displaying IP addresses of connected devices.
- Action List:** Located at the top right, it contains a table with columns 'Key', 'Type', and 'Data' for displaying key actions.
- Event Set:** Located at the bottom left, it contains a list of actions (RS232, IR, TCP/IP, Delay, Compare, LED, Toggle) and a configuration panel for the selected action. The configuration panel includes fields for Lib name, Lib Function, Port, Baud Rate, Data Bit, Stop Bit, Parity, Format (ASCII/HEX), and End Char for ASCII.
- Event List:** Located at the bottom right, it contains a table with columns 'Num', 'Type', and 'Data' for displaying events.

Callouts point to specific features:

- 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 invoke 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, MAC address.
- Click “File” → “Software Update”
Hold the button “3” and power on 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 factory defaults.
- Click “Connection” → “TCP/IP” → “Reconnect” to reconnect all CP6IP-EU.
- Click “Connection” → “Upload” → to load the MCU information from the selected CP6IP-EU to control software.
- Click “Connection” → “Download” → to download the current setting information to the selected CP6IP-EU from the control software.

4.2 Panel Set

Total 6 customizable buttons on the front panel can be set via this software. Add a button action to show on the action list, and then add events to make this action will execute the events.

Here set one button for example:

Panel Set

1

2

3

4

5

6

IP Address:

.

.

.

Net Mask:

.

.

.

Gateway:

.

.

.

Port:

Keys 1-6, correspond to the buttons on CP6IP-EU. Click the key 1, it will pop up dialog as below:

Key Type:

- 1. Press: Execute events when press button.
- 2. Release: Execute events when release button.
- 3. Toggle: The button can be regard as composite key, press the button twice to execute different events.

The dialog box is titled "Dialog" and contains the following fields and buttons:

- Key Type:** A dropdown menu currently showing "Press".
- Add:** A button to add a new key configuration.
- Key Group:** A dropdown menu currently showing "Group 1".
- Key Name:** A text input field currently containing "1".
- Set:** A button to save the configuration.
- Cancel:** A button to cancel the configuration.

Built key group for LED setting.

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

The Action List interface includes a toolbar with three buttons: a delete icon (orange square with a white 'x'), an invalid icon (red square with a white 'x'), and a "Clear All" button. Below the toolbar is a table with three columns: "Key", "Type", and "Data".

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

Empty all actions.

Delete the selected action.

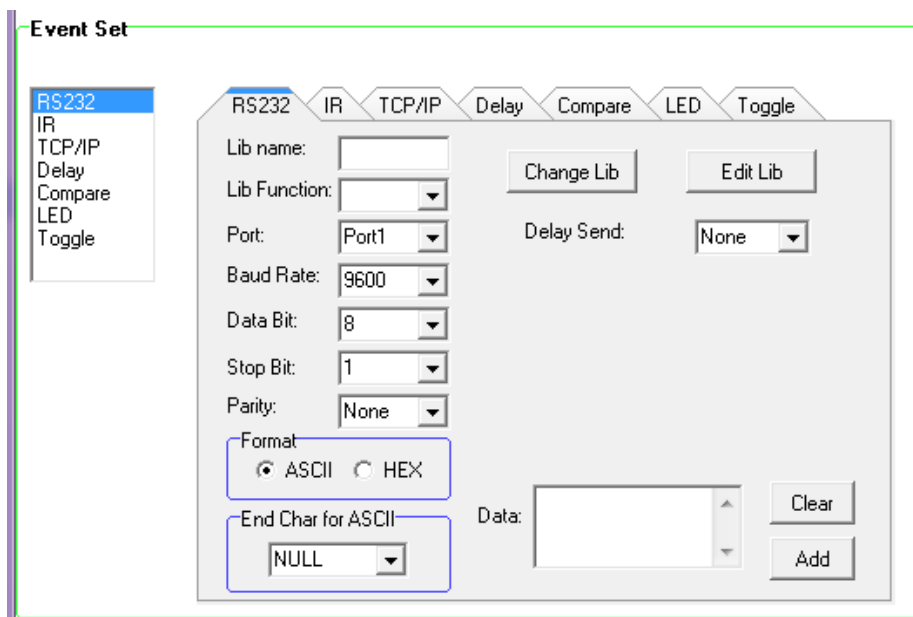
Delete all invalid actions.

4.4 Event setting

Event Set part includes RS232, IR, TCP/IP, Delay, Compare, LED and Toggle setting. Before set 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:



The screenshot shows the 'Event Set' dialog box with the 'RS232' tab selected. On the left, a list of event types includes RS232, IR, TCP/IP, Delay, Compare, LED, and Toggle. The main area contains the following fields and controls:

- Lib name:** A text input field.
- Lib Function:** A dropdown menu.
- Port:** A dropdown menu showing 'Port1'.
- Baud Rate:** A dropdown menu showing '9600'.
- Data Bit:** A dropdown menu showing '8'.
- Stop Bit:** A dropdown menu showing '1'.
- Parity:** A dropdown menu showing 'None'.
- Format:** Radio buttons for 'ASCII' (selected) and 'HEX'.
- End Char for ASCII:** A dropdown menu showing 'NULL'.
- Change Lib** and **Edit Lib** buttons.
- Delay Send:** A dropdown menu showing 'None'.
- Data:** A large text input area.
- Clear** and **Add** buttons.

Operation procedure:

- 1) Select the button action in action list.
- 2) Set the “Lib name” and “Lib Function”. It is optional function, not necessary.
- 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, and then press “add” to save setting.

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

Note: Once set up, please press “Save” to save the editing or “Save as” to save as a file, and then press “OK”.

- 7) There are two delay send: Set and None. When select “Set”, the number of sending strings and the delay time between strings can be set.

4.4.2 IR Setting

This item is used for setting the events for IR (1) ~ IR (2) ports. Click “IR”, it will show as below:

Event Set

RS232
IR
TCP/IP
Delay
Compare
LED
Toggle

RS232
IR
TCP/IP
Delay
Compare
LED
Toggle

Lib name:
Delay Send:

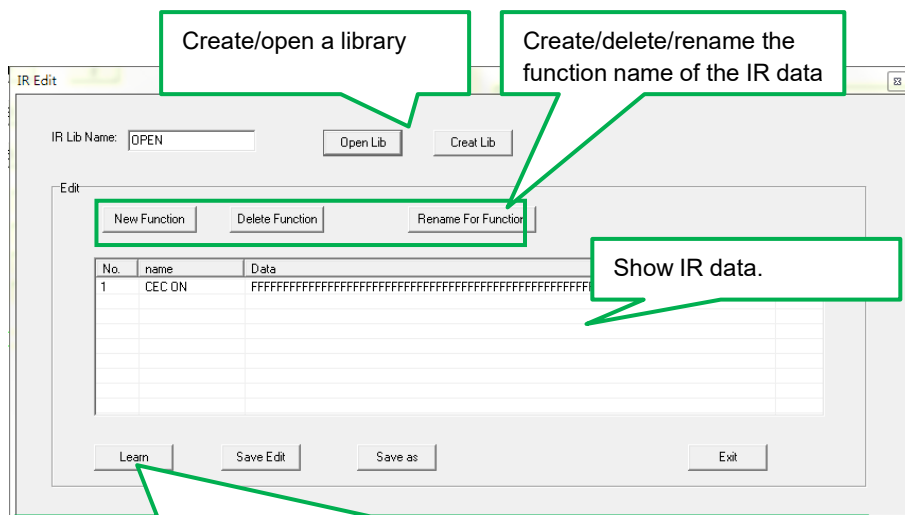
Lib Function:
Send no.of transmission strings

Port:

Carrier:

Operation procedure:

- 1) Select the button action in action list.
- 2) Set the “Lib name” and “Lib Function”. It is optional function, not necessary.
- 3) Select the IR port. The port must be same as model setting, otherwise the event cannot be added.
- 4) Set the IR carrier mode: On/Off
- 5) The IR data need 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:



IR Learning Procedure:

1. Click “learn” to enter IR learning mode.
2. Put the IR Remote close to the IR sensor of WP6-IP.
3. Press any button on the IR Remote to send the IR code to IR sensor, and it will refresh the IR data.
4. Follow the same steps can learn any function of the remote buttons.

Note: The IR learning mode will be exit automatically while if no operation within 3 seconds.

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

- 6) There are two delay send: Set and None. When select "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:
Delay Send:

Lib Function:

Send no. of transmission strings

Delay time between string

Port:

Carrier:

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.

Event Set

RS232
IR
TCP/IP
Delay
Compare
LED
Toggle

RS232 IR **TCP/IP** Delay

IP:

Port:

Format
☒ ASCII ☐ HEX

End Char for ASCII

Data:

Clear
Add

Type the IP address of the device need to be set.

Type the control command.

4.4.4 Delay setting

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

Event Set

RS232

IR

TCP/IP

Delay

Compare

LED

Toggle

RS232

IR

TCP/IP

Delay

Compare

LED

Toggle

Hour:

◀

▶

Minute:

◀

▶

Second:

◀

▶

Reset

1

11

18

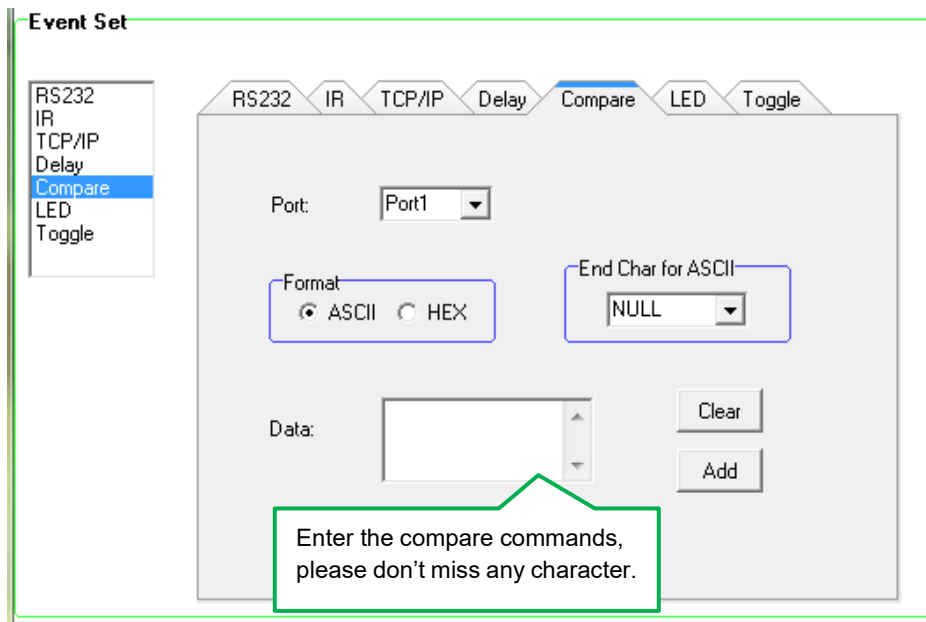
Hour: 0~24;

Minute: 0~60

Second: 0~60

4.4.5 Compare Setting

This item is used for compare the feedback of RS232 commands. When CP6IP-EU send a RS232 command to the controlled device, the device will send back a feedback. If we add the correct feedback in the data, CP6IP-EU will compare it with the feedback received from controlled device, to verify the command is work or not. The compare setting is as the picture below:



Event Set

RS232 IR TCP/IP Delay **Compare** LED Toggle

Port: Port1

Format: ☒ ASCII ☐ HEX

End Char for ASCII: NULL

Data:

Clear

Add

Enter the compare commands, please don't miss any character.

Operation procedure:

- 1) Select the button action in action list.
- 2) Select the RS232 port. The port must be same as model setting, otherwise the event cannot be added.
- 3) Set the command format ASCII or Hex, and then set the terminator for ASCII.
- 4) Enter the RS232 command needed to be compared in data box, and then press "add" to save setting.
- 5) Add an event that the LED lights up to indicate the comparative result.
- 6) For the events in one event list have priority, from top to bottom, so that the compare function can be used in action which with three or more events.

4.4.6 LED setting

This item is used to set the button LEDs in CP6IP-EU to turn on/off. The setting is as below:

Event Set

RS232
IR
TCP/IP
Delay
Compare
LED
Toggle

RS232
IR
TCP/IP
Delay
Compare
LED
Toggle

Key:

Key1

Light Action:

On

- 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 others.
- 4) On/Group Off: Turn on the LED of button 1, and turn off others in same group.

4.4.7 Toggle Setting

The key type can be set as “Toggle”, in this type, the button can be regard as composite key. Here takes 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

[illegible]

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

Event Set

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

Button	Toggle Start
Button1	1

Event name: 1

Add

[illegible]

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

4.5 Event List

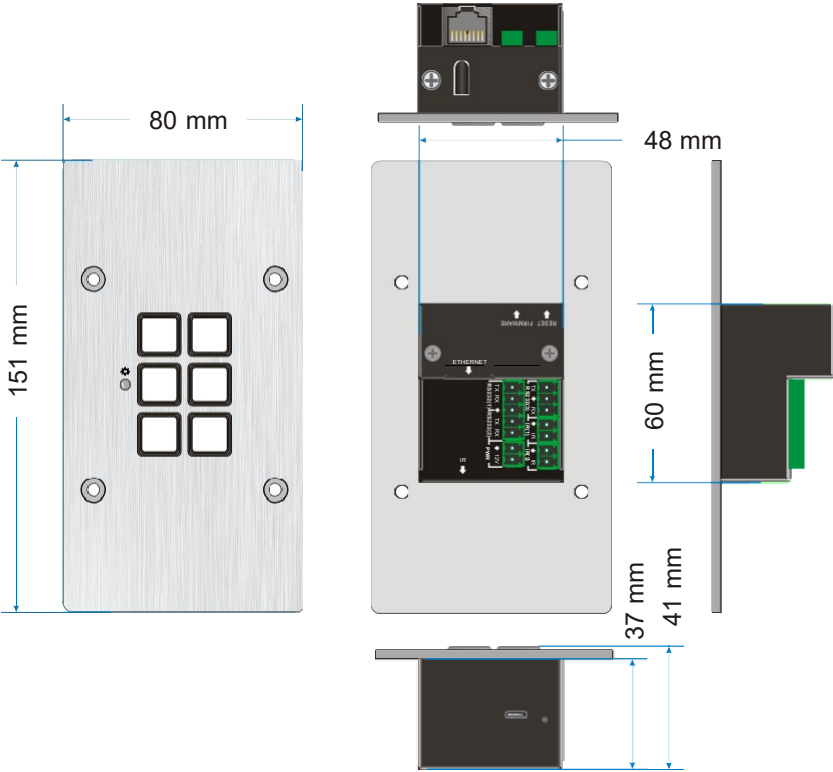
The event list shows all events of the selected action. The executing priority abides by the serial number, see the picture below. If there is an event execute incorrectly, all the events behind it will not be executed.

[illegible]

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	CP6IP-EU
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 1A
Net Weight	About 200g
Dimension (W*H*D)	80mm x 151mm x 41mm

6. Panel Drawing



7. Troubleshooting & Maintenance

- 1) When CP6IP-EU cannot work, please check and make sure the power cord connection is well, power connector cannot be mixed or connect wrong. Then restart, if still not work, the CP6IP-EU may be broken. Please send it to the dealer for repairing.
- 2) When connect unsuccessfully, please make sure the network segment of control PC and the CP6IP-EU is same.
- 3) When the LED of a button cannot be lighted, please check if there is a compare event in this button. If yes, delete the compare and try again. If still not work, the LED may be broken. Please send the unit to dealer for repairing.
- 4) When serial commands sending without function executed, please check the baud rate and make sure is correct, and the serial connection is well.
- 5) If the controlling queue is confused when use loop function, please reboot the CP6IP-EU.

If your problem still remaining after following the above troubleshooting steps, please contact your local dealer or distributor for further assistance.

8. Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. These terms and conditions may be changed without prior notice.

1) Warranty

The limited warranty period of the product is fixed three years.

2) Scope

These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

3) Warranty Exclusions:

- 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 our specifications.
 - ✓ No certificate or invoice as the proof of warranty.
 - ✓ The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
 - ✓ Damage caused by force majeure.
 - ✓ Servicing not authorized by distributor.
 - ✓ Any other causes which does not relate to a product defect.
- Shipping fees, installation or labor charges for installation or setup of the product.

4) Documentation:

Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defect has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of distributor.

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



TESCA ALTIMIUM

587 avenue Blaise Pascal

77550 Moissy Cramayel

01 64 13 31 00

Altimum.com