

SDCP9

Wallplate Control Panel-9 buttons

8 programmable buttons plus 1 audio mute button, 3 built-in programmable RS232, 2 RS485 and 2 IR connectors.

SEADA

Showing the World

User Manual

VER 1.0

Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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1. Introduction

1.1 Product Introduction

The SDCP9 is a wallplate control panel with 8 programmable buttons plus 1 audio mute button. It features 3 built-in programmable RS232, 2 RS485 and 2 IR connectors.

The programmable control panel can fully control the compatible device via TCP/IP, RS232, RS485 and IR, such as matrix switcher, scaler switcher, projectors, screens, etc. Use the device for presentations in showrooms, classrooms, and boardrooms.

1.2 Features

- ✦ Features 8 programmable buttons plus 1 audio mute button, 3 built-in programmable RS232, 2 RS485 and 2 IR connectors.
- ✦ Each button can be programmed to send RS232, RS485, IR or TCP/IP commands simultaneously to control third party devices.
- ✦ The unit can be easy configured using the supporting control panel via the ENTERNET port.
- ✦ The volume control buttons is specially designed for various applications.
- ✦ Crystal and backlit buttons with easy user-friendly customizable changeable labels.
- ✦ The backlit brightness is controllable.

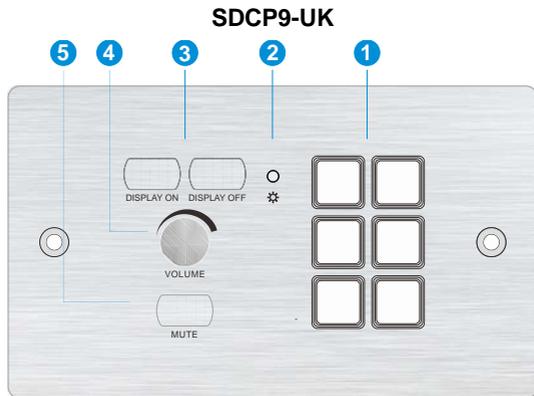
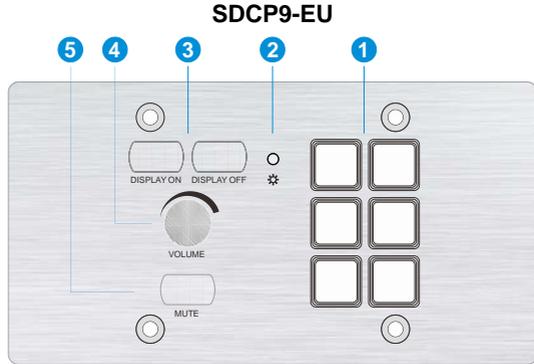
1.3 Package List

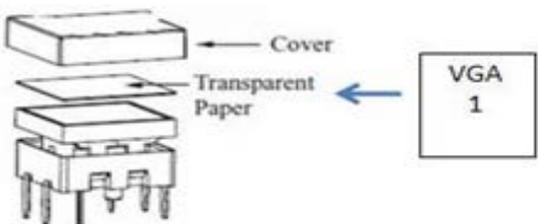
- ① 1x SDCP9
- ② 5x 2-pin pluggable terminal blocks
- ③ 3x 3-pin pluggable terminal blocks
- ④ 6x Button caps
- ⑤ 1x Button label
- ⑥ 1x Power adapter (12VDC 1A)
- ⑦ 1x User manual

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

2. Panel Description

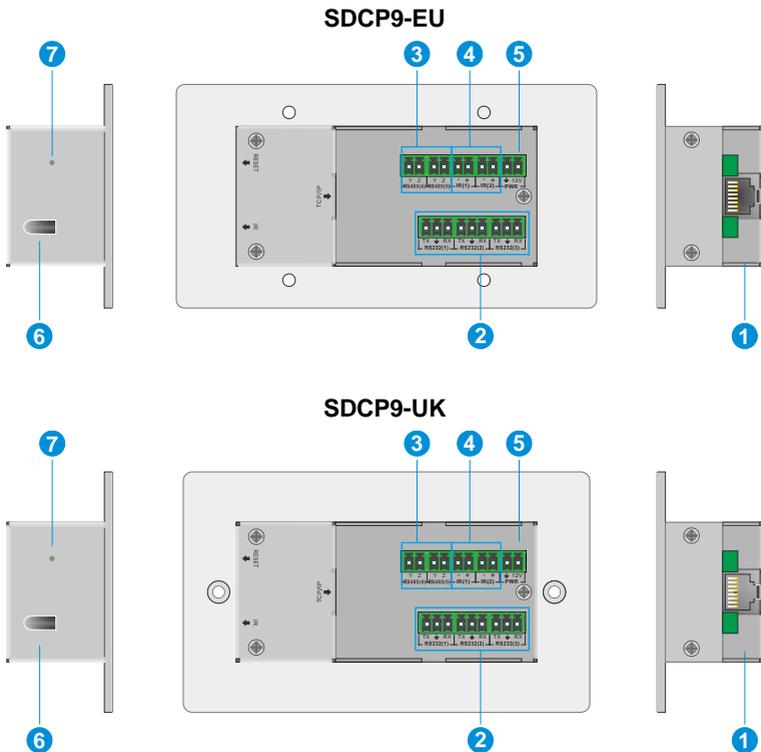
2.1 Front Panel



| No. | Name | Description |
|-----|--------|--|
| 1 | Button | <p>6 crystal and luminescent buttons, programmable functions can be customized via the Control Software.</p> <p>Each label within a button can be easily changed. Simply select the label you need and change it as shown below:</p>  |

| | | |
|---|-------------|--|
| 2 | Power LED | The LED illuminates red when power is applied. |
| 3 | DISPLAY ON | The button can be customized to turn on the third-party device. |
| | DISPLAY OFF | The button can be customized to turn off the third-party device. |
| 4 | VOLUME | The rotary knob can be customized as Volume Up and Volume Down buttons for specific application. |
| 5 | MUTE | The button can be customized as Toggle Mute and Unmute buttons for specific application. |

2.2 Rear Panel



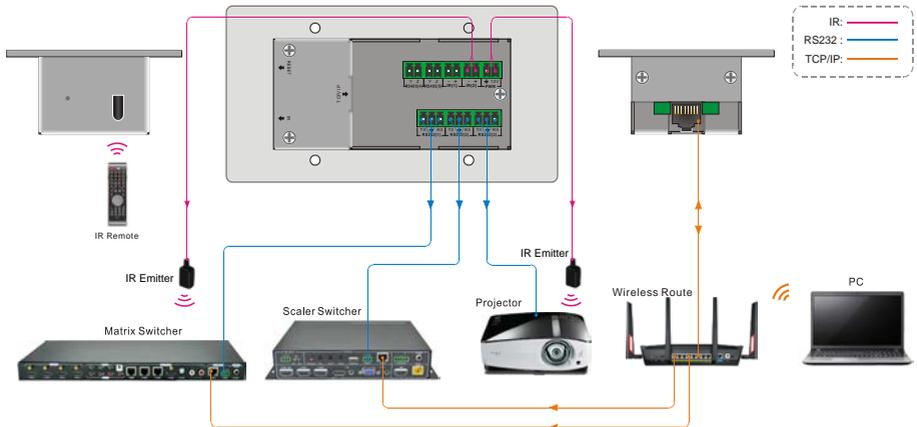
| No. | Name | Description |
|-----|----------|---|
| 1 | ETHERNET | RJ45 connector for connecting PC to run the Control Software to customize the programmable functions for all buttons. After buttons programming, the RJ45 connector should be connected to the third-party device which needs |

| | | |
|---|-----------------------|---|
| | | to be controlled via TCP/IP. Note: <i>The wallplate control panel and third-party devices can connected to the LAN to facilitate remote control and simplify system connection.</i> |
| 2 | RS232 (1) ~ RS232 (3) | 3-pin RS232 terminal blocks for connecting the third-party devices which need to be controlled via RS232. |
| 3 | RS485 (4) ~ RS485 (5) | 2-pin RS485 terminal blocks for connecting the third-party devices which need to be controlled via RS485. |
| 4 | IR (1) ~ IR (2) | 2-pin IR terminal blocks for connecting with IR emitters to control the third-party devices via IR. |
| 5 | PWR(12V) | 2-pin terminal block for connecting 12V DC power adaptor. |
| 6 | IR Sensor | Built-in IR receiver for receiving IR code from IR remote to build the IR database. |
| 7 | RESET | Press and hold this button for 3 seconds until the power LED goes out. Then the LED will light up while the device is restored to factory defaults successfully. |

3. System Connection

The SDCP9 can active different ports at the same time. It means that every button can send RS232, RS485, TCP/IP and IR control signal synchronously.

The demo system diagram as below:



- 1) Connect the SDCP9 to a **LAN** port of Wireless Route.
- 2) Connect a control PC to the Wireless Route.
- 3) Connect the third-party devices (such as matrix switcher and scaler switcher) to the **LAN** port of Wireless Route.
- 4) Connect the third-party devices (such as matrix switcher, scaler switcher and projector) to **RS232 (1)**, **RS232 (2)** and **RS232 (3)** ports.
- 5) The third-party devices which support RS485 communication can be connected to **RS485 (4)** and **RS485 (5)** ports.
- 6) Connect the IR Emitters to **IR (1)** and **IR (2)** ports.
- 7) Plug in 12V DC power supply adapter.

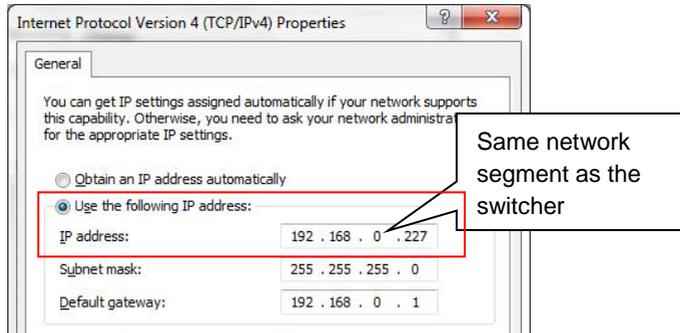
Note: The control PC can be directly connected to the **TCP/IP** port of SDCP9 to customized button functions. After buttons programming, disconnect the PC, and then connect the third-party device to the **TCP/IP** port.

4. Control Software

4.1 Basic Setting

The Control Software is used to easily set functions for every button.

- 1) According to the system diagram to establish system connection.
- 2) The default IP of SDCP9 is 192.168.0.178 (modifiable), the network segment of control PC must be set the same as the SDCP9's.



- 3) Installation/uninstallation of Control Software:
 - Installation: Copy the software package to the control PC.
 - Uninstallation: Delete all the software files in corresponding file path.
- 4) Double-click the below icon to run this software:



The below main window has five parts: Panel Set, TCP/IP, Action List, Event Set and Event List.

Panel Set: Click any key to set its action.

Show IP addresses of all connected wallplate control panels in LAN.

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

The screenshot shows a software interface with the following sections:

- Panel Set:** A grid of 6 numbered buttons (1-6) and controls for AUDIO (KNOB, MUTE), DISPLAY (ON, OFF), and IP Address, Net Mask, Gateway, and Port fields.
- TCP/IP:** A table with columns 'Num' and 'Data' and a 'Clear All' button.
- Action List:** A table with columns 'Key', 'Type', and 'Data' and a 'Clear All' button.
- Event Set:** A configuration panel for RS232/485, IR, TCP/IP, Delay, Compare, and LED. It 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:** A table with columns 'Num', 'Type', and 'Data' and a 'Clear All' button.

The status bar at the bottom shows: 2018/1/25 14:00, Status: Disconnected, UDP Status: Activated, Local IP: 192.168.12.25

Set events for the selected key action.

Show all events for the selected key action.

Menu Options of Control Software:

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

- Click “File” → “Open” to invoke an available configuration file.
- Click “File” → “Save” to save the current configuration data into the installation directory.
- Click “File” → “Save as” to export all configuration information and save as a 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 “System” → “Software Update” → 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 “Reset MCU”.
- Click “System” → “Factory Defaults” to restore factory defaults.

- Click “Connection” → “TCP/IP” → “Reconnect” to refresh all connected SDCP9.
- Click “Connection” → “Read from Device” → to load the MCU data of the selected SDCP9 to control software.
- Click “Connection” → “Write to Device” → to download the current configuration data of control software to the selected SDCP9.

Button Setting Procedure:

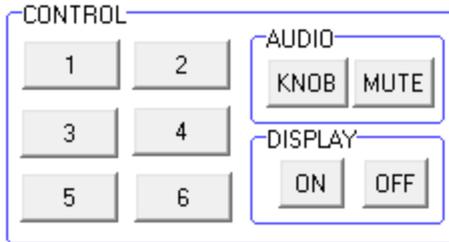
The nine programmable buttons should be set by the following steps:

- 1) Click any button to set key actions, refer to **4.2 Panel Set**.
- 2) Select any key action, refer to **4.3 Action List**.
- 3) Set the button functions for the selected key action, refer to **4.4 Event Setting** and **4.5 Event List**.

4.2 Panel Set

The below Panel Set part shows 9 customizable buttons can be programmed via the control software.

Panel Set

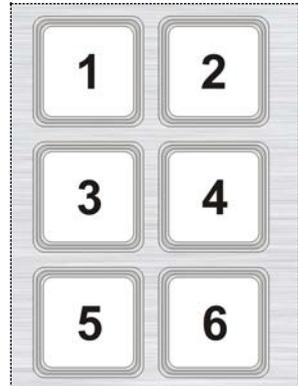


IP Address: . . .

Net Mask: . . .

Gateway: . . .

Port:



Buttons 1-6, KNOB, MUTE, ON, OFF, correspond to the buttons on SDCP9. For example, click the button 1 to set its key action as below:

Key Type:

- Press: Execute events when press button.
- Release: Execute events when release button.
- Toggle: The button can be regard as composite key, press and press again to execute different events.

Built key group for LED setting.

The screenshot shows a 'Dialog' window for configuring a key action. It has a title bar with a close button (X). The 'Key Type' is set to 'Press' in a dropdown menu. There is an 'Add' button to the right. Below this is a table with two columns: 'Key Group' and 'Key Name'. The 'Key Group' dropdown is set to 'Group 1' and the 'Key Name' text box contains '1'. There is a 'Set' button to the right of the 'Key Name' field. At the bottom right of the dialog is a 'Cancel' button.

4.3 Action List

All key actions will be shown on the below action list.

Action List

The screenshot shows an 'Action List' interface. At the top, there are three buttons: a red square with a white 'x', a red square with a white trash can icon, and a grey button labeled 'Clear All'. Below these buttons is a table with three columns: 'Key', 'Type', and 'Data'. The table contains three rows of data. Callouts with green boxes and arrows point to the buttons and table rows:

- A callout box containing the text 'Delete the selected action.' points to the red 'x' button.
- A callout box containing the text 'Delete all invalid actions which have no events.' points to the red trash can button.
- A callout box containing the text 'Empty all actions.' points to the 'Clear All' button.

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

4.4 Event setting

The Event Set part supports RS232, RS485, IR, TCP/IP, Delay, Compare, LED and Toggle setting. Before set events, at least one key 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 of the selected key action to control the third-party device through RS232 (1~3) and RS485 (4~5) ports.

Event Set

The screenshot displays the 'Event Set' configuration window. On the left, a vertical list of actions includes RS232 (highlighted), IR, TCP/IP, Delay, Compare, LED, and Toggle. The main window has a tabbed interface with 'RS232/485' selected. The configuration fields are as follows:

- Lib name: [Empty text box]
- Lib Function: [Dropdown menu]
- Port: [Port1 dropdown]
- Baud Rate: [9600 dropdown]
- Data Bit: [8 dropdown]
- Stop Bit: [1 dropdown]
- Parity: [None dropdown]
- Format: ASCII HEX
- End Char for ASCII: [NULL dropdown]
- Delay Send: [None dropdown]
- Data: [Text input box]
- Buttons: Change Lib, Edit Lib, Clear, Add

Operation procedure:

- 1) Select a key action in action list.
- 2) Set the "Lib Name" and "Lib Function" as needed.
- 3) Select the RS232/485 port.
- 4) Confirm and set the baud rate, data bit, stop bit and parity.
- 5) Type RS232 command in data box, and then press "add" to save.

- 6) The RS232 data also can be selected from library. Click “Change Lib” to select an available library file, or click “Edit Lib” to create a new 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: Set

Format: End Char for ASCII Format: NULL

ASCII HEX

Power ON Clear

Save Save as OK Cancel

Type RS232 command for device control.

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

- 7) The number of transmission strings and the delay time between strings can be set.

Event Set

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

RS232/485 IR TCP/IP Delay Compare LED Toggle

Lib name: Change Lib Edit Lib

Lib Function: Delay Send: Set

Port: Port1

Baud Rate: 9600

Data Bit: 8

Stop Bit: 1

Parity: None

Format: ASCII HEX

End Char for ASCII: NULL

Send no. of transmission strings: 1

Delay time between string: 1

Data: Clear Add

4.4.2 IR Setting

This item is used for setting the events of the selected key action to control the third-party device through IR (1~2) ports.

Event Set

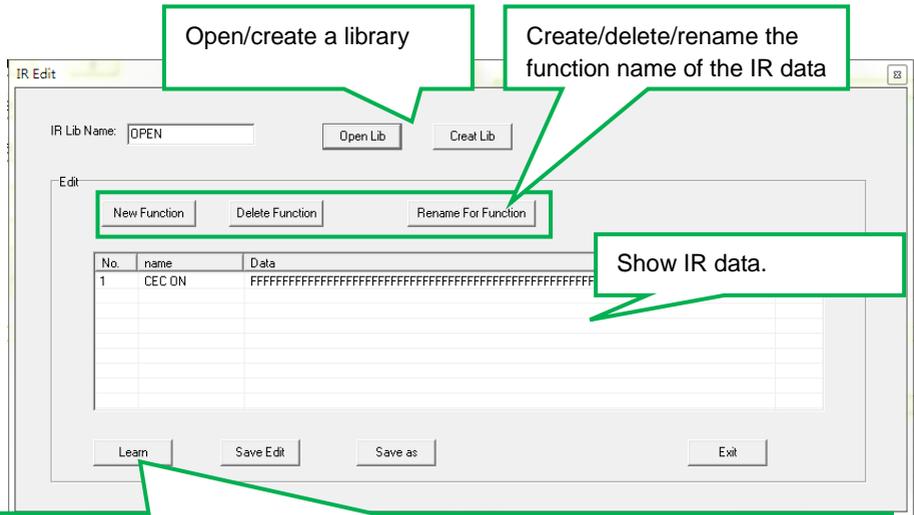
| | | | | | | | |
|---------|-----------|----|--------|-------|---------|-----|--------|
| RS232 | RS232/485 | IR | TCP/IP | Delay | Compare | LED | Toggle |
| IR | | | | | | | |
| TCP/IP | | | | | | | |
| Delay | | | | | | | |
| Compare | | | | | | | |
| LED | | | | | | | |
| Toggle | | | | | | | |

| | | | |
|---------------|-------------------------------------|-------------|-----------------------------------|
| Lib name: | <input type="text" value="Open"/> | Delay Send: | <input type="text" value="None"/> |
| Lib Function: | <input type="text" value="CEC ON"/> | | |
| Port: | <input type="text" value="Port1"/> | | |
| Carrier: | <input type="text" value="On"/> | | |

| | | |
|---|---|------------------------------------|
| <input type="button" value="Change Lib"/> | <input type="button" value="Edit Lib"/> | <input type="button" value="Add"/> |
|---|---|------------------------------------|

Operation procedure:

- 1) Select the key action in action list.
- 2) Set the “Lib name” and “Lib Function” as needed.
- 3) Select the IR port.
- 4) Set the IR carrier mode: On/Off.
- 5) Click “Change Lib” to select an available library file or click “Edit Lib” to create or edit a library file as below:



IR leaning procedure:

- 1) Click “Learn” to enter IR learning mode.
- 2) Put the IR Remote close to the IR sensor of wallplate control panel.
- 3) Press any button on the IR Remote to send the IR code to the IR sensor, and the IR edit box will refresh the IR data.
- 4) Follow the above steps can learn other 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 setting or “Save as” to save as a file, and then press “OK”.

8) The number of transmission strings and the delay time between strings can be set.

Event Set

| | | | | | | | |
|-------|-----------|----|--------|-------|---------|-----|--------|
| RS232 | RS232/485 | IR | TCP/IP | Delay | Compare | LED | Toggle |
|-------|-----------|----|--------|-------|---------|-----|--------|

Lib name: Delay Send:

Lib Function:

Port:

Carrier:

Send no.of transmission strings

Delay time between string

4.4.3 TCP/IP Setting

This item is used for setting the events of the selected key action to control the third-party device through TCP/IP port.

Event Set

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

Type the IP address of third-party device.

IP: 192.168.0.178

Port: 4001

Format: ASCII HEX

End Char for ASCII: NULL

Data: []

Clear

Add

Type the control command.

4.4.4 Delay Setting

This item is used for setting the delay time between two events. If set the delay time to be 3 seconds, it means that the first event starts executing at 12:00:00, followed by the second event executing at 12:00:00:03.

The delay time setting showed as below:

Event Set

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

Hour: 0~23
Minute: 0~59
Second: 0~59

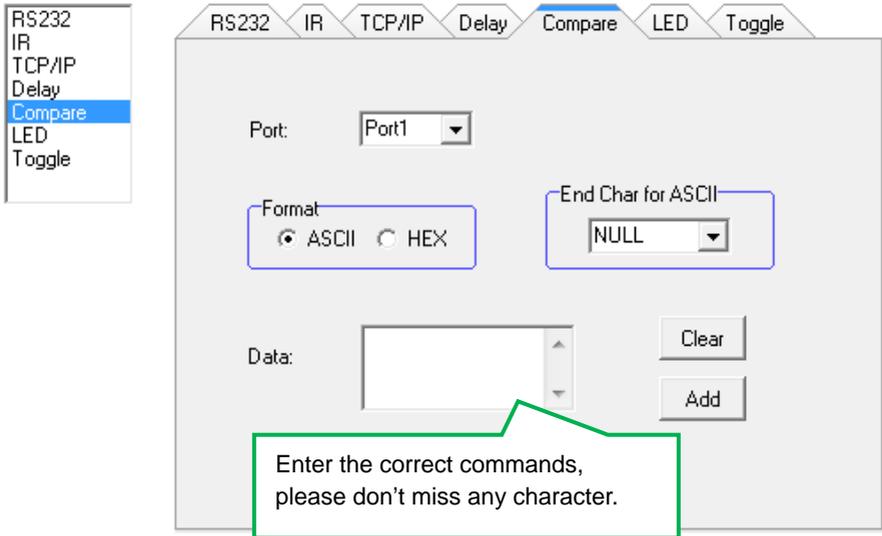
Hour: 1
Minute: 11
Second: 18

Reset Add

4.4.5 Compare Setting

This item is used for comparing the RS232 feedback commands. When trigger button to send RS232 command to the third-party device, the device will send back a feedback command. If we add the correct command in the data box, the SDCP9 will compare it with the received feedback command to verify the availability of sending command. The compare setting showed as below:

Event Set



RS232 IR TCP/IP Delay Compare LED Toggle

Port: Port1

Format: ASCII HEX

End Char for ASCII: NULL

Data: [Text Box] Clear Add

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

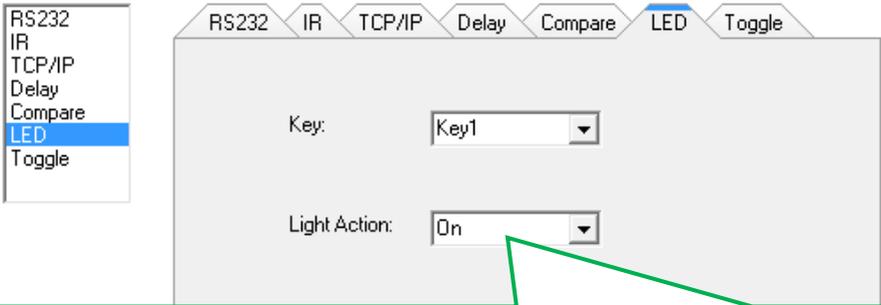
Operation procedure:

- 1) Select the key action in action list.
- 2) Select the RS232 port.
- 3) Set the command format ASCII or Hex, and then set the terminator for ASCII.
- 4) Type the correct RS232 command in data box, and then press "add" to save the command.
- 5) Add an event that the LED lights up to indicate the comparison result.
- 6) The executing priority of events in event list is from top to bottom, so that the comparing function can be used for the key action which with three or more events.

4.4.6 LED Setting

This item is used for setting the LEDs status of programmable buttons to indicate the results of executing event.

- Event Set

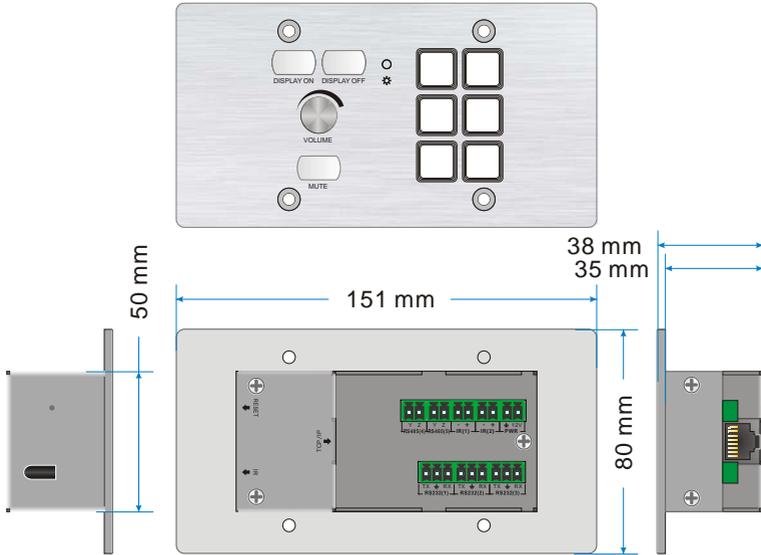


- ① On: Switch on the LED of the selected Key1.
- ② Off: Switch off the LED of the selected Key1.
- ③ On/Other off: Switch on the LED of the selected Key1 and switch off the others.
- ④ On/Group off: Switch on the LED of the selected Key1 and switch off the others in the same group.

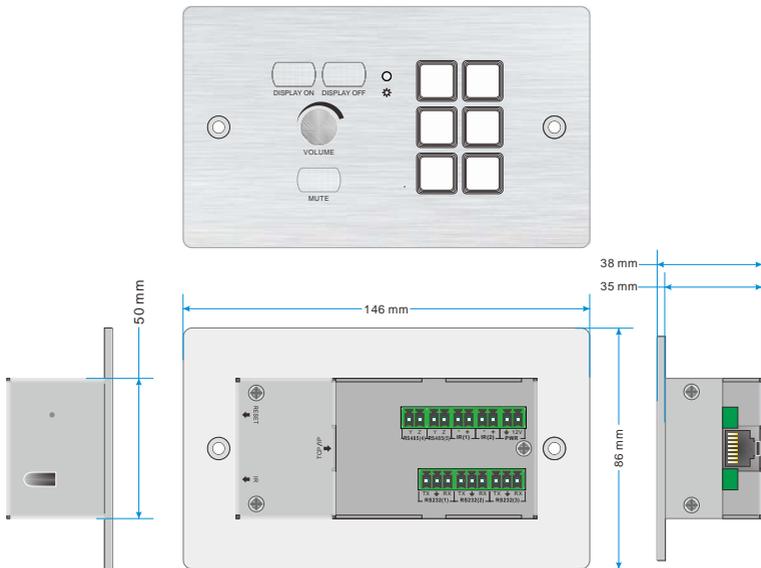
5. Specification

| | |
|------------------------|--|
| Control Port | (1) TCP/IP, (3) RS232, (2) RS485 and (2) IR out |
| Control Port Connector | (1) RJ45 (3) 3-pin pluggable terminal blocks (4) 2 pin pluggable terminal blocks |
| Control Buttons | (6) Programmable buttons (2) Programmable display control buttons (1) Programmable volume knob (1) Programmable MUTE button |
| Other | (1) Built-in IR sensor |
| Baud Rate | Supports 2400, 4800, 9600, 19200, 38400, 56000, 57600, 115200. |
| Software | SDCP9 |
| Power Consumption | 1W (Max) |
| Operation Temperature | -10 ~ +55°C |
| Storage Temperature | -25~ +70°C |
| Relative Humidity | 10% ~ 90% |
| Power Supply | Input: 100VAC~240VAC, 50/60 Hz; Output: 12VDC 1A |
| Net Weight | About 300g |
| Dimension (W*H*D) | 151mm x 80mm x 38mm |

6. Panel Drawing



SDCP9-EU



SDCP9-UK