

User manual
QuickControl 4.0 IP

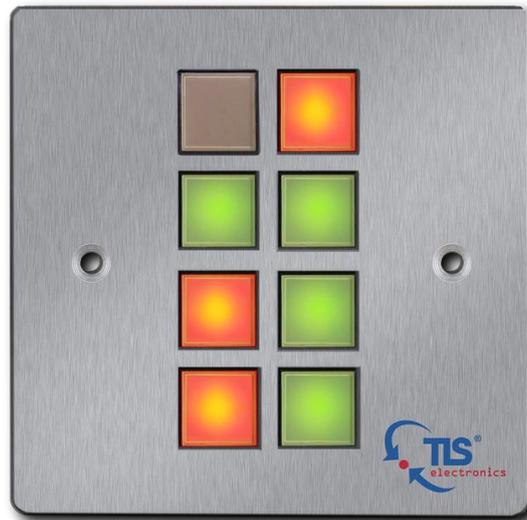


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Safety Information



To reduce the risk of electric shock, do not expose this product to rain or moisture



Do not modify the wall plug. Doing so will void the warranty and safety features



If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.



This equipment should be installed near the socket outlet and the device should be easily accessible in the case it requires disconnection

Specifications

8 buttons, backlighted, off / red / green

2 x RS232, bidirectional, PTR 3pin

1 x IR out, 5V / 10V switchable, PTR 2pin

1 x IR Sensor, 38 KHz

2 x Relay, electronic switch, max. 24V DC, 2xPTR 2pin

1 x LAN, RJ45

PoE (Power over Ethernet), PoE 802.3af, class 3

1 x power supply 110/240V, 50/60Hz, 12-24V DC 0,5A, PTR 2pin

Temperature 0-45° Celsius

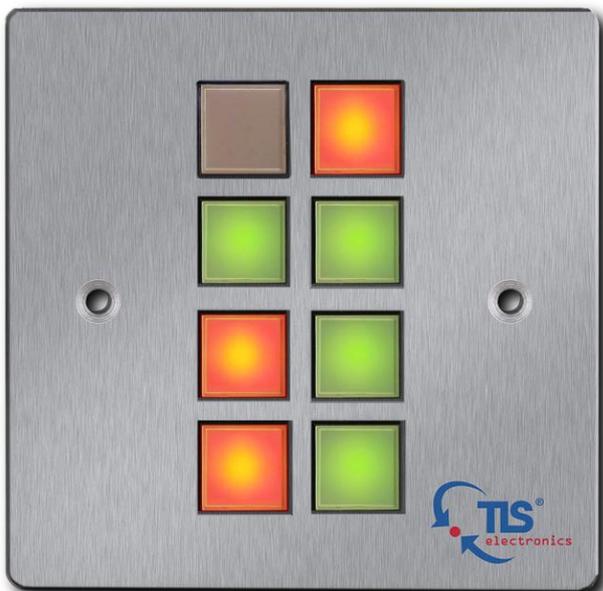
Weight 0,15 kg

Introduction

The QuickControl 4.0 IP is a 8 button controller with 2 x RS-232, 2 x Relay, 1 IR and LAN. QuickControl 4.0 IP supports webserver and IP control for button controller programming, it also supports IR learning. The controller has Europe and US standard front panel.

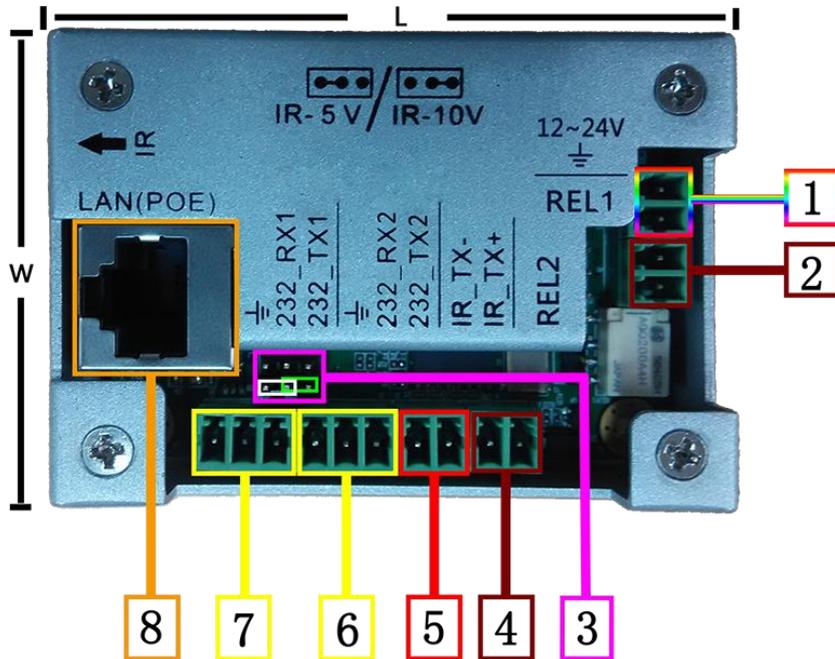
Panel Description

Front panel



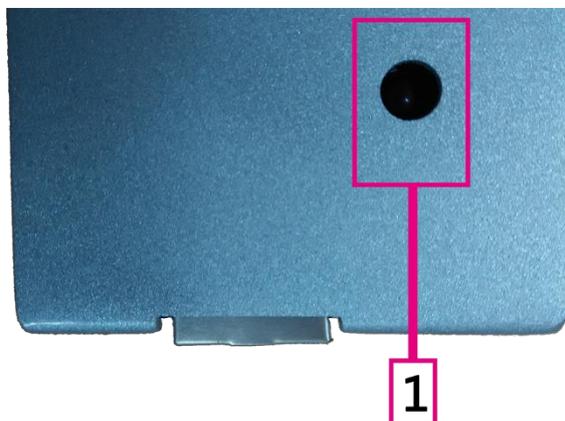
All the buttons can be programmed to control each RS-232, relay, IR, timer, and IP control. The cover of each button can be taken out easily for labeling with the vacuum cup.

Rear panel



1. Power: DC Power Input; 12-24V DC input
2. Relay 1: An electrically operated switch;
3. IR output power jump: left 2 pin jump for output 5V, right 2 pin jump for output 10V;
4. Relay2: An electrically operated switch;
5. IR: Infrared radiation digital data output;
6. RS-232_2: RS-232 data output;
7. RS-232_1: RS-232 data output;
8. LAN(PoE): LAN port with PoE power and web server control.

Top Panel

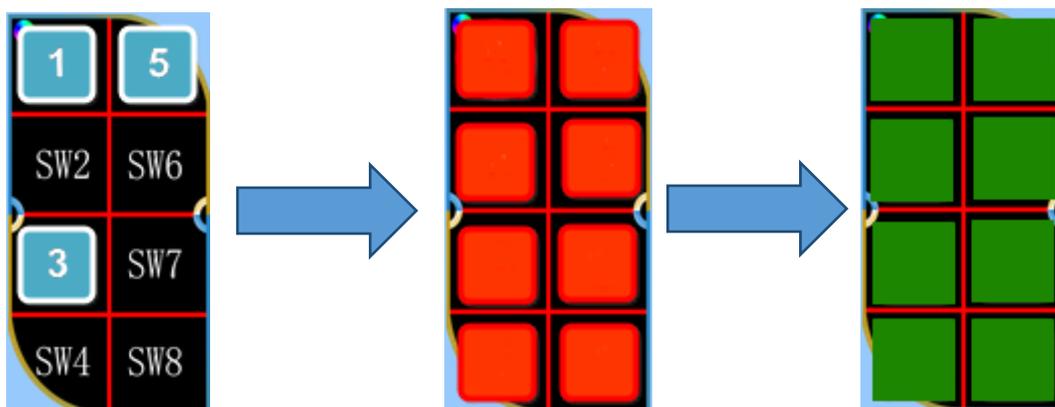


1. IR reader: Learning IR sensor. Frequency is 38K.

Initialization configure

Before first use, user need to initial QuickControl 4.0 IP configuration. Keep pressing first, third and fifth button, the light of the buttons will off, after that the red light one by one. Pressing the buttons until all the buttons become red and flash to green. The process as below.

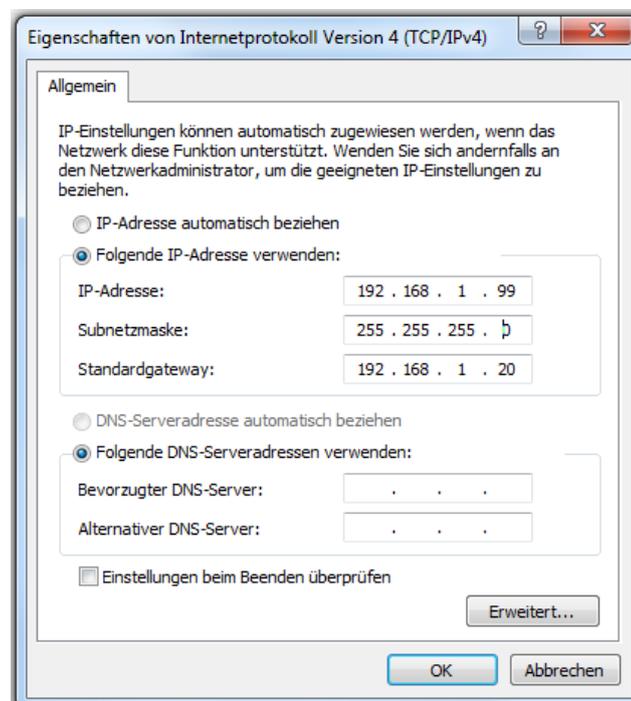
Beware: This method also restores factory settings.



Web Server

The factory default IP address : 192.168.1.20

To access to the product web server, user could direct connect the PC LAN port to the QuickControl 4.0 LAN port with the straight RJ45 cable. After making the connection, go to network connection of the PC and revise the IP property to static IP as below. Once done, open a web browser and enter the 192.168.1.20 to access to the web server.





For the QuickControl 4.0 connected to the local area network, please update the QuickControl 4.0 product IP to match the LAN network setting from the web server.

For example if the LAN IP is set as 192.168.88.XXX, then please revise the product to 192.168.88.1XX. Once the IP is set, then you could access to the device from the PC in the same network.

The factory default: IP: 192.168.1.20 User ID: user Password: 132456

Once access to the QuickControl 4.0 web server, the factory default user ID is **user** and the password is **123456**.

Setting Menu

After login to web server, at **Setting** Menu there are IR, LAN and RS-232 parameter settings.

IR_Learning

Please go to IR Event chapters on page 13 to learn detail info.

Lan _Control

User could set DHCP, IP Address, Net Mask, Gateway, TCP Server or Client and Host IP TCP Port info in the Net Control Menu.

System hardware, boot loader and software version info is listed in Version information Menu

Net Control

Use DHCP:	<input type="radio"/> On	<input checked="" type="radio"/> Off
IP Address:	<input type="text" value="192.168.1.20"/>	
Net Mask:	<input type="text" value="255.255.255.0"/>	
Gateway:	<input type="text" value="192.168.1.1"/>	
TCP Protocol:	<input checked="" type="radio"/> Server	<input type="radio"/> Client
Host IP:	<input type="text" value="192.168.1.67"/>	
TCP Port:	<input type="text" value="1001"/>	
<input type="button" value="Apply"/>		

Version Information

System Software:	<input type="text" value="V3.0"/>
System Hardware:	<input type="text" value="V1.0"/>
Bootloader Software:	<input type="text" value="V2.0"/>

RS-232 Setting

User can set RS-232_1 and RS-232_2 Baud Rate, Data Bits, Stop bit and Parity. The factory default as below.

Rs232 Setting

Rs232_1		Rs232_2	
Baud rate:	<input type="text" value="56000"/>	Baud rate:	<input type="text" value="56000"/>
Data bits:	<input type="text" value="8"/>	Data bits:	<input type="text" value="8"/>
Stop bits:	<input type="text" value="1"/>	Stop bits:	<input type="text" value="1"/>
Parity bits:	<input type="text" value="None"/>	Parity bits:	<input type="text" value="None"/>



Virtual Keypad Menu

User could click Virtual Keypad to toggle real button function on web page.

KeyBoard

Button1	Button5
Button2	Button6
Button3	Button7
Button4	Button8

Commands Menu

Commands Menu is for button function setting. There are 8 buttons inside, each button 6 Action, timer control between each Action, and 11 Events selection of each action.

Action	Event	Time(s)	Command Data	IR	Hex	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	Led	0	12345678		<input type="checkbox"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	None	0			<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	None	0			<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	None	0			<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	None	0			<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	None	0			<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Init Led:

Event Selection

QuickControl 4.0 IP supports 11 events

Event	Description
None	Do nothing
IR	Send out IR code
IP_Send	Send data to TCP Server by LAN
IP_Ack	Get data from TCP Client by LAN
Led	LED color control
Relay1_NO	Trigger Relay1
Relay2_NO	Trigger Relay2
RS232_1	Send data to RS232 Port 1
RS232_2	Send data to RS232 Port 2
RS232_1Ack	Get data From RS232 Port 1
RS232_2Ack	Get data from RS232 Port 2

None Event

None event does nothing and will clear all the Command Data.

Mode Standard ▾

Action	Event	Time(s)	Command Data	IR	Hex	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	None ▾	0			<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

IR Event

User should learn IR code before using the IR code sending function. Go to Setting\IR Learning menu.

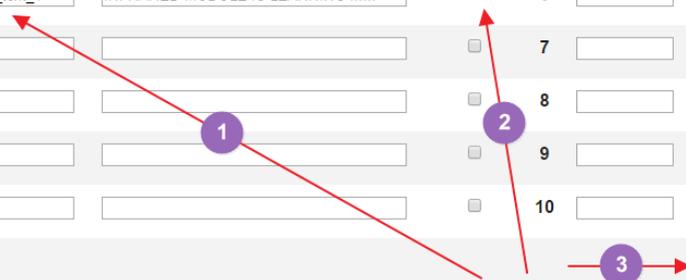
Virtual Keypad

- Commands
- Setting
- IR_Learning**
- Lan_Control
- Rs232_Set
- User_Manage
- Button_Rename

- System support 10 IR code storage.
1. input the name of IR code(use underscore to replace space bar)
 2. click IR Learning
 3. click Save, "INFRARED MODULE IS LEARNING..." will display on the State Frame
 4. present an IR signal to the IR receiver port within 30 seconds
 5. "INFRARED MODULE STUDY COMPLETED" display on the State Frame mean learning is finish
 6. If IR receiver did not get IR signal input within 30 seconds, it will close the learning action and display "learning over time...."

IR Learning

N	Label	State	Learning	N	Label	State	Learning
1	<input type="text" value="IR_text_1"/>	<input data-bbox="391 1323 694 1350" type="text" value="INFRARED MODULE IS LEARNING"/>	<input checked="" type="checkbox"/>	6	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	7	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	8	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	9	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	10	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>



IR Learning

N	Label	State	Learning
1	<input type="text" value="IR_text_1"/>	INFRARED MODULE STUDY COMPLETED	<input type="checkbox"/> 

IR Learning

N	Label	State	Learning	N	Label	State	Learning
1	<input type="text" value="IR_text_1"/>	<input type="text" value="Learning over time....."/>	<input checked="" type="checkbox"/>	6	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	7	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	8	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	9	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	10	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

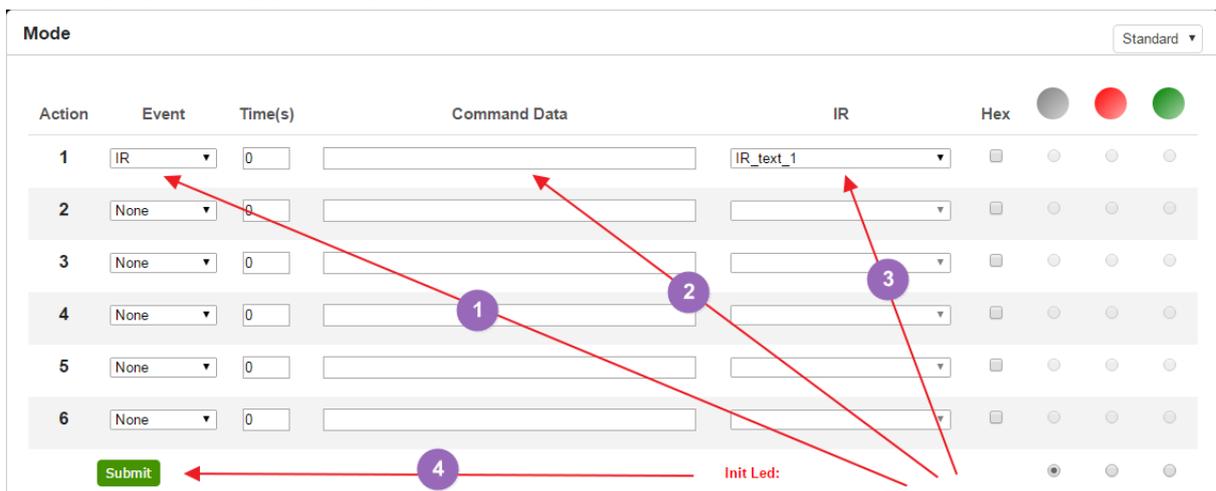
IR code sending

Connect IR transmitter to system and select the IR code in the IR pull-down menu and click Submit button.

Mode Standard ▾

Action	Event	Time(s)	Command Data	IR	Hex			
1	<input type="text" value="IR"/>	<input type="text" value="0"/>	<input type="text"/>	<input type="text" value="IR_text_1"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="text" value="None"/>	<input type="text" value="0"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="text" value="None"/>	<input type="text" value="0"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="text" value="None"/>	<input type="text" value="0"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="text" value="None"/>	<input type="text" value="0"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="text" value="None"/>	<input type="text" value="0"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Init Led:



User also could input IR code directly into the Command Data area



Action	Event	Time(s)	Command Data	IR	Hex
1	IR	0	0891683108705500F011000D9168311	IR_text_1	<input type="checkbox"/>

IP_Send Event

IP Send Event could send ASCII or HEX to IP address.

Format: IP address*Port*Data

Example:

Send 123456789 to 192.168.2.51, the format is 192.168.2.51*1001*123456789, ASCII, so do not click Hex.

Action	Event	Time(s)	Command Data	IR	Hex
1	IP_Send	0	192.168.2.51*1001*123456789		<input type="checkbox"/>

IP_Ack Event

IP Ack Event is for the IP controller get the feedback of device and compare with predefined data to decide the action continue or stop. If controller did not get feedback, it will auto resend data 5 times again. If there are many IP_Send event in the system, IP address and port of IP_Ack event will relate to the previous IP_Send event. Make Sure there is a IP_Send event before IP_Ack event.

Action	Event	Time(s)	Command Data	IR	Hex
1	IP_Send	0	192.168.2.51*1001*123456789		<input type="checkbox"/>
2	IP_Ack	0	helloworld		<input type="checkbox"/>

IP Button Trigger Command >BtnX<cr>

IP Button Trigger command is a command for many QuickControl 4.0 to work together. It could trigger another QuickControl to execute a button event.

>BtnX<cr>

X is button number in 1-8, <cr> is HEX 0D

Example: Send IP command " >Btn3<cr> " to

trigger IP address 192.2.168.2.100 ,Port 1001 QuickControl Button 3 event.

1. Select IP_Send event
2. Input 192.2.168.2.100*1001* 3E 42 74 6E 33 0D at Command Data area and click Hex (3E 42 74 6E 33 0D is the Hex code of >Btn3<cr>)
3. Click Submit Button

IP_Send/ IP_Ack Event and IP Button Trigger Command is a main feature of IP control, user could build up flexible IP control application by making good use of them.

LED Event

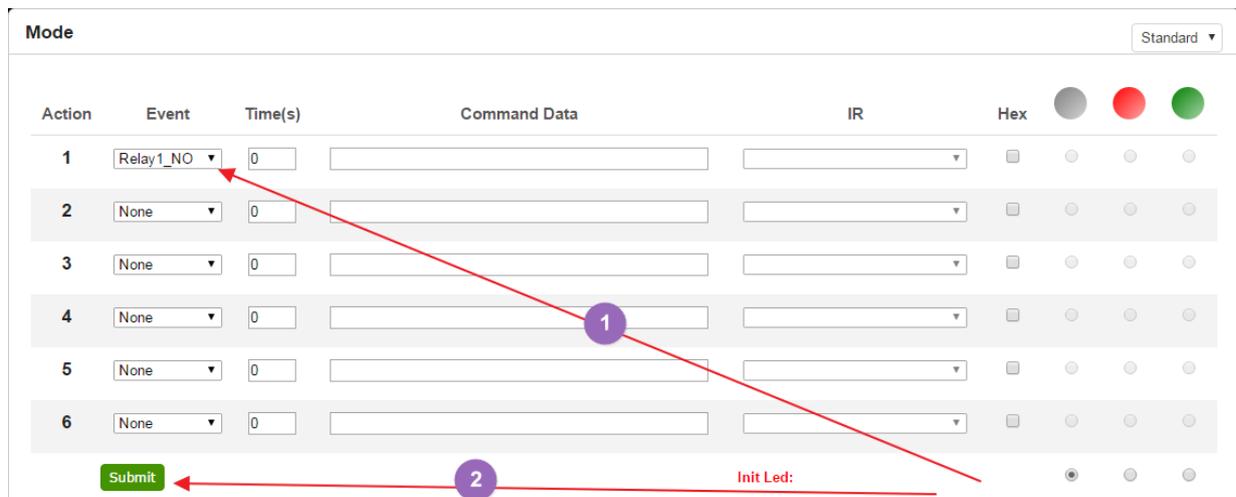
LED Event is for changing button LED color, system offer LED off, LED Green and LED Red function. User could select LED Event than input button number at the Command Data area and select the color.

Action	Event	Time(s)	Command Data	IR	Hex
1	Led	0	12345678		<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

Relay1_NO/Relay2_NO Event

Connect QuickControl relay port with power supply (Up to DC 24V) and the device user want to control (or other relay to control high voltage). The relay contact of QuickControl is normally open. Select Relay and press Submit, shows as below.

Once press button, Relay is closed and will open when press it again.

The screenshot shows a web interface titled 'Mode' with a 'Standard' dropdown menu. Below the title is a table with columns: Action, Event, Time(s), Command Data, IR, Hex, and three status indicators (grey, red, green). The table has six rows. Row 1 has 'Relay1_NO' in the Event column. Row 2 has 'None' in the Event column. Row 3 has 'None' in the Event column. Row 4 has 'None' in the Event column. Row 5 has 'None' in the Event column. Row 6 has 'None' in the Event column. Below the table is a green 'Submit' button. A red arrow points from the 'Submit' button to the 'Relay1_NO' dropdown in row 1. Another red arrow points from the 'Submit' button to a purple circle with the number '2' located below the table. A third red arrow points from the 'Submit' button to a purple circle with the number '1' located in the 'Command Data' column of row 4. The text 'Init Led:' is visible below the table.

RS232_1/RS232_2 Event

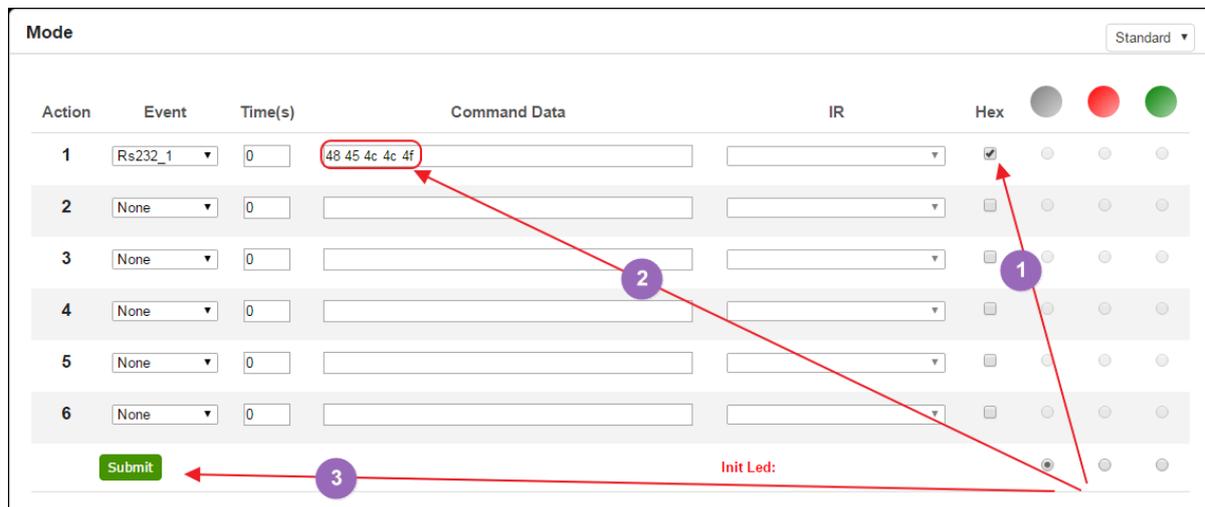
User can choose RS232_1 or RS232_2 port to send data, the factory settings: Baud rate 56000, Data bits 8, Stop bits 1 and none Parity bits.

When press the button the QuickControl will send command data through RS232 port showed below.

Action	Event	Time(s)	Command Data
1	Rs232_1	0	Welcome to the QuickControl 4.0
2	Rs232_2	2	Welcome to the QuickControl 4.0

Note: With an appropriate terminalprogram (Hterm, CommUART assistant, Hercules) you can control this function

Hex: When click Hex, user can type Hex data in Command Data the QuickControl will send Hex data through RS232 port.



The screenshot shows the 'Mode' configuration window with a 'Standard' dropdown. It features a table with columns for Action, Event, Time(s), Command Data, IR, and Hex. Row 1 is highlighted with a red box around the 'Command Data' field containing '48 45 4c 4c 4f'. A red arrow points from this field to the 'Hex' checkbox, which is also checked. Another red arrow points from the 'Hex' checkbox to a 'Submit' button at the bottom left. A third red arrow points from the 'Submit' button to the 'Init Led:' label at the bottom right. The table has 6 rows, with rows 2-6 having 'None' in the Event column.

Note: With an appropriate terminalprogram (Hterm, CommUART assistant, Hercules) you can control this function



RS232_1Ack and RS232_2Ack Event

RS232_1Ack and RS232_2Ack Event is for the QuickControl getting the feedback of RS232 device and compare with predefined data to decide the action continue or stop. If QuickControl did not get feedback, it will auto resend data 5 times again. Make sure there is a RS232 event before RS232_Ack event.

Mode Standard ▾

Action	Event	Time(s)	Command Data	IR	Hex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	Rs232_1 ▾	<input type="text" value="0"/>	<input type="text" value="123456789"/>	<input type="text"/>	<input type="checkbox"/>				
2	Rs232_1Ack ▾	<input type="text" value="0"/>	<input type="text" value="helloworld"/>	<input type="text"/>	<input type="checkbox"/>				
3	None ▾	<input type="text" value="0"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>				
4	None ▾	<input type="text" value="0"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>				
5	None ▾	<input type="text" value="0"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>				
6	None ▾	<input type="text" value="0"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>				

Init Led:

IP pass through RS232 Command

IP pass through RS232 command is for user to send data from IP to RS232 or opposite. It means QuickControl acts as a control repeater.

>CSNUMTXMsg<CR>

NUM: 0 LAN 1:Rs232 port 1 2:Rs232 port 2

MSG: Data for pass through

<CR> is 0D of HEX

Example:

Hello from RS232 to LAN

```
3E 43 53 30 54 58 48 65 6C 6C 6F 0D
```

>CS0TXHello<CR>

```
>CS0TXHello
```

Hello from LAN to RS232 port 1

```
3E 43 53 31 54 58 77 6F 72 6C 64 0D
```

>CS1TXworld<CR>

```
>CS1TXworld
```

Time(S) application

Each button could execute 6 events in maximum. Time(S) is the time space between 2 events.

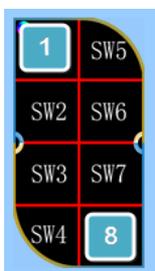
Action	Event	Time(s)	Command Data	IR	Hex
1	Rs232_1	5	Hello World		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2	Led	5	123456		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
3	Relay1_NO	5			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
4	Relay2_NO	5			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5	IP_Send	5	192.168.2.51*1001*IP_Send		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6	Led	5	123456		<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Submit Init Led:

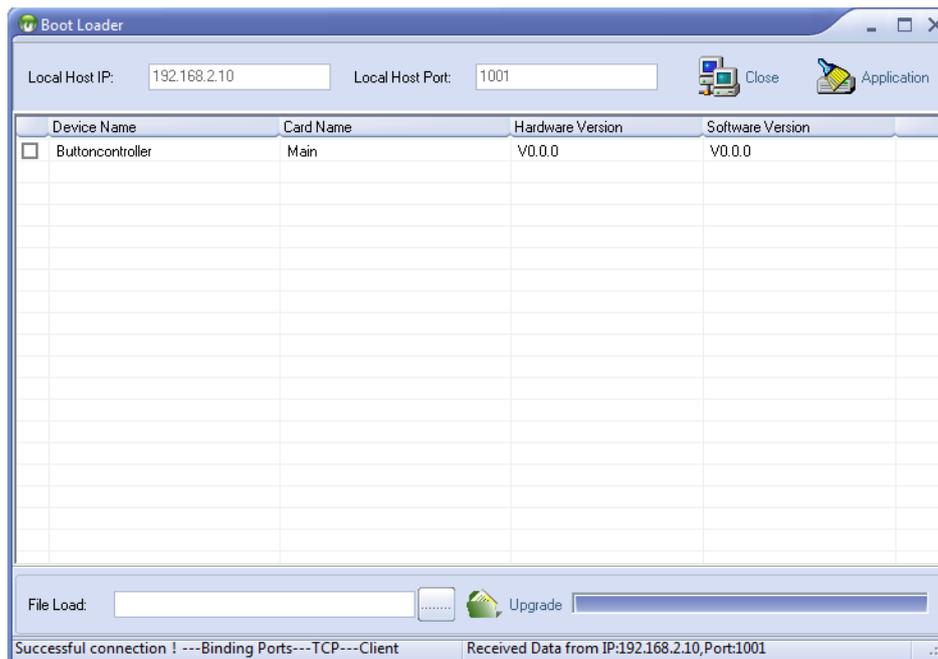
Update Firmware

Connect the Button controller with the PC with a network cable.

Press the first and the last button then connect the QuickControl 4.0 with power supply. The device will go into bootloader mode and all the LED will flash green from first button to last button with a red button moving around.



Open Boot Loader software, type the IP address and TCP Port of the QuickCpontrol as below.



Click the Button Controller and select the file, after that click Upgrade. Waite for few seconds for upgrading.

Restore factory settings with hold the first, third and fifth buttons at the same time.

Upgrade succeeded.

Be aware, factory restore will delete all command data. If you leave the boot loader with the application button, you don't loose the configuration.



Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

Warranty Policy

TLS electronics products are warranted against defects in material and workmanship for two years from the date of shipment. During the warranty period, TLS electronics will, at its option, repair or replace products that prove to be defective. Repairs are warranted for the remainder of the original warranty or a 90 day extended warranty, whichever is longer.

For equipment under warranty, the owner is responsible for freight to TLS electronics and all related customs, taxes, tariffs, insurance, etc. TLS electronics is responsible for the freight charges only for return of the equipment from the factory to the owner. TLS electronics will return the equipment by the same method (i.e., Air, Express, Surface) as the equipment was sent to TLS electronics.

All equipment returned for warranty repair must have a valid RMA number issued prior to return and be marked clearly on the return packaging. TLS electronics strongly recommends all equipment be returned in its original packaging.

TLS electronics obligations under this warranty are limited to repair or replacement of failed parts, and the return shipment to the buyer of the repaired or replaced parts.

Limitations of Warranty

The warranty does not apply to any part of a product that has been installed, altered, repaired, or misused in any way that, in the opinion of TLS electronics, would affect the reliability or detracts from the performance of any part of the product, or is damaged as the result of use in a way or with equipment that had not been previously approved by TLS electronics.

The warranty does not apply to any product or parts thereof where the serial number or the serial number of any of its parts has been altered, defaced, or removed.

The warranty does not cover damage or loss incurred in transportation of the product.

The warranty does not cover replacement or repair necessitated by loss or damage from any cause beyond the control of TLS electronics, such as lightning or other natural and weather related events or wartime environments. The warranty does not cover any labor involved in the removal and or reinstallation of warranted equipment or parts on site, or any labor required to diagnose the necessity for repair or replacement.

The warranty excludes any responsibility by TLS electronics for incidental or consequential damages arising from the use of the equipment or products, or for any inability to use them either separate from or in combination with any other equipment or products.

A fixed charge established for each product will be imposed for all equipment returned for warranty repair where TLS electronics cannot identify the cause of the reported failure.

Exclusive Remedies

TLS electronics's warranty, as stated is in lieu of all other warranties, expressed, implied, or statutory, including those of merchantability and fitness for a particular purpose. The buyer shall pass on to any purchaser, lessee, or other user of TLS electronics's products, the aforementioned warranty, and shall indemnify and hold harmless TLS electronics from any claims or liability of such purchaser, lessee, or user based upon allegations that the buyer, its agents, or employees have made additional warranties or representations as to product preference or use.

The remedies provided herein are the buyer's sole and exclusive remedies.

TLS electronics shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory.



RMA Policy

When returning product to TLS electronics for any reason, the customer should fill out the official RMA form to obtain a RMA number. Without the permission or approval, TLS electronics will be no responsible for any return. This can be initiated by emailing or calling your related sales.

All requests are processed within 48 hours.

Standard Replacement

For customers that agree to return defective product to TLS electronics first, a Standard Replacement option is available.

An RMA number must first be issued by sales. This RMA number will need to be referenced on the outside of the return shipment.

Upon receipt of the defective product, TLS electronics will, at its discretion, either repair or replace the product and ship it out in the most expeditious manner possible. Subject to availability, the replacement product will be shipped on the business day following receipt of the defective product.

In the event the product returned to TLS electronics has been discontinued (i.e. the product is no longer being manufactured by TLS electronics but is still under warranty), TLS electronics will, at its discretion, either repair or replace with recertified product.

Once you have obtained an RMA number

After obtaining an RMA number from TLS electronics, you must send the product - freight prepaid - to TLS electronics. The TLS electronics RMA number must be prominently displayed on the outside of your package. If you send your product to TLS electronics without the RMA number prominently displayed on the outside of the package, it will be returned to you unopened.

Please use a shipping company that can demonstrate proof of delivery. TLS electronics does not accept responsibility for any lost shipments unless proof of

delivery to TLS electronics is provided.

Please note:

Product shipped to TLS electronics must be properly packaged to prevent loss or damage in transit.

Shipping your RMA to TLS electronics using regular mailing envelopes is not acceptable, as they do not protect the product from damage during shipping.

TLS electronics will not repair or replace a module that is shipped in such a way that the product is not properly protected.

TLS electronics will not accept any product that has been damaged as a result of accident, abuse, misuse, natural or personal disaster, or any unauthorized disassemble, repair or modification.

Warranty

Warranty time is two year and from the date of original shipment. This warranty shall be void if a serial number has been removed from the product.

Upon determination of a legitimate defect covered by this warranty and at TLS sole discretion, user should bear the transport cost during the warranty.

If product is out of warranty then repair charge is required. Minimum repair charge: 10% of the retail price plus the cost of failed components. We will repair the failed product after repair cost has been approved by Customers and proper financial arrangements are made. Customer must cover round trip shipment expenses.



Return and RMA Policies

Shipments will not be receiver and processed for warranty repair/replacement without an TLS electronics RMA(Return Materials Authorization).

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