LonHand Series Product Specification

USR-IO88

File version: V1.0
Directory

LonHand Series Product Specification ................................................................. 1
1 Quick start ........................................................................................................ 3
   1.1 Product introduction .................................................................................. 3
   1.2 Preparation ................................................................................................ 4
   1.3 USR-IO88 Quick start ................................................................................ 5
      1.3.1 WIFI control ...................................................................................... 5
      1.3.2 Direct Connect Control ....................................................................... 6
      1.3.3 Remote Control ................................................................................... 7

2 Function Specification ....................................................................................... 11
   2.2 Indicator and Key Function Introduction .................................................. 12
   2.2 Timing Function Instruction ....................................................................... 15
   2.5 Restore Factory Defaults ........................................................................ 16

3 Directions for Use ............................................................................................ 16
   3.1 Wiring Schematic Drawing ....................................................................... 16
   3.2 Revise device IP ......................................................................................... 17

4 LonHand of Windows Introduction .................................................................. 20

5 USR-IO88 Typical application scenario .......................................................... 22

6 FAQ .................................................................................................................. 22

7 Contact ............................................................................................................. 23

8 Disclaimer ........................................................................................................ 23

9 Update History ................................................................................................ 24
1 Quick start

1.1 Product introduction

USR - IO88 is our company's new 8 inputs and 8 outputs of control equipment, users can control devices at any time under three modes of Wifi, direct connection and remote connection. As for output, all three relay terminals are extracted and used by users; as for input, web page configuration mode are provided. Users can switch freely between pure input mode and controlled relay mode, derivation input part we provide web page configuration mode, can be in pure input mode, arbitrary switching between control relay mode. Product control software support platforms, such as Windows、IOS、android and users can control device remotely and conveniently.

Handware Parameters:
USR-IO88
Machine dimension | 190*118*23mm (L*W*H)  
Working voltage | USR-IO88: DC 12V/15~60V  
Power consumption | 12V: Max: 7W  
 | 15~60V: MAX: 8W  
Operating temperature | -40~85°C  
Storage environment | Temperature: -40~85°C  
 | Humidity: 5%~95%RH  
Relay voltage | 10A 277VAC/28VDC  
 | 12A 125VAC  
delivery order | USR-IO88*1  
 | 12VDC  
 | Ethernet Cable  

Default Parameters

| Network Mode | TCP-Client  
 | Device name | USR-IO88  
 | Password | admin  
 | Default IP | 10.10.100.254  
 | Web account password | account: admin  
 | password: admin  

1.2 Preparation

Download and install LonHand software into your mobile phone.  
As for Windows or other systems, you can download Lonhand software from the url below.  
http://www.usr.so/Download/cat-44.html  
As for IOS system, search for “LonHand” in app store then download and install. Also you can scan the below two-dimensional code.

![IOS QR Code](image1)

![Android QR Code](image2)
1.3 USR-IO88 Quick start

1.3.1 WIFI control

The default factory Setting of USR - IO88 is AP mode, Use the computer wireless network card or mobile phone to search WIFI, you can find wireless device, whose WIFI name is USR - IO88, and connect to it.

2. If the light is on, it is connectly to the device successfully.

3. Open the software. You can click If the device doesn’t appear are not displayed.

4. Click the USR-IO88 then enter into control menu.
1. You can click the switch button to control the USR-IO88 now.

### 1.3.2 Direct Connect Control

Confirm whether equipment IP (10.10.100.254) and the are within the same network segment. If they are in the same segment, it is connected to the router directly. If not, users should refer to 3.2 when revising the IP of the device.

The device is connected to router through net gape. Controlled device such as PC, mobile phone, etc. join the same LAN, and open the software.
1.3.3 Remote Control

USR-IO88 and PC are under the same router and make sure PC is connected to the Internet. Open Lonhand software and find USR-IO88.
1. Click Register, set account and the password, then login.

2. Click “Device”.

3. Click USR-IO88 to enter control menu. Then click the button.

4. Click the button "Activation"
5. Click “User” then “Synchronized to local”.
Disconnect the wireless network, change to other network, then click “Synchronized to local”.
You will see the wifi icon become remote one, now you can control it.
2 Function Specification

1. TCP interface, control switch through local area and remote network
2. 8 access relay outputs under the open/close condition at all times
3. 8 access configurable inputs which can report the input state
5. Double net gapes and support LAN and WAN
6. Support the password verification and realize the safety control of the device
7. Each relay access has 6 accesses switch function at certain times.
8. Input light-coupled isolation and isolate the interference of the outside
9. Output the latch and prevent the relay from the interference
10. The controlled software supports 5 platform: Windows, IOS, Android, Webpage, you can choose freely
11. Restore the factory setting and return to the original state
2.2 Indicator and Key Function Introduction

Indicator light:

<table>
<thead>
<tr>
<th>Name</th>
<th>Color</th>
<th>Function</th>
<th>Normal State</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER</td>
<td>Green</td>
<td>Power</td>
<td>Keeps On</td>
</tr>
<tr>
<td>WORK</td>
<td>Green</td>
<td>Work Instruction</td>
<td>Keeps On</td>
</tr>
<tr>
<td>Connect</td>
<td>Green</td>
<td>Network Connection</td>
<td>Keeps On</td>
</tr>
<tr>
<td>Relay Indicator light</td>
<td>Red</td>
<td>Relay Switch Indicator</td>
<td>On or Off</td>
</tr>
<tr>
<td>RJ45 DATA1</td>
<td>Green</td>
<td>Data1 Transmission</td>
<td>Keeps Flashing</td>
</tr>
<tr>
<td>RJ45 DATA2</td>
<td>Green</td>
<td>Data2 Transmission</td>
<td>Keeps Flashing</td>
</tr>
<tr>
<td>D2 MODULE</td>
<td>Yellow</td>
<td>TCP Module Work Instruction</td>
<td>Keeps Flashing</td>
</tr>
</tbody>
</table>

KEY:

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
<th>key-press time (S)</th>
<th>Equipment Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>All OFF</td>
<td>All the device is turned off</td>
<td>0-2</td>
<td>All the Indicator lights up</td>
</tr>
<tr>
<td>ALL ON</td>
<td>All the device is turned on</td>
<td>0-2</td>
<td>All the Indicator goes out</td>
</tr>
<tr>
<td></td>
<td>Reset to defaults</td>
<td>5-10</td>
<td>WORK out to light up</td>
</tr>
<tr>
<td></td>
<td>Upgrade mode</td>
<td>On hold before equipment on electricity, electricity after release</td>
<td>WORK out</td>
</tr>
</tbody>
</table>

2.1 Input function

The device has 8 access configurable input interfaces and the default input mode is the input state reporting. It shows as follows.
Users can access to the switch by extracting COM and input of a certain access. When the switch is turned off and the circuit is conducted, the light of the software is yellow which shows it is available in this access. Users can dispose the way of input through web page. There are four input modes:

- Input state reporting
- Relay is in accordance with the state of the button.
- Relay is not in accordance with the state of the button.

When you set the input mode, you should firstly ensure that the device and the computer are in the same local web. Then open the software and click search button.
After you click the icon of device, you will see ‘opening web page’ button. Then click it.
First there is the equipment interface, here you can control relay, check the input state and configuration of the input pattern, also can click the connection Settings of setting the button configuration module.

Click one certain access and configure it. Users can see four configuration mode when you click the drop-down list. You can choose one mode on the basis of your need. When you finish choosing, you should save it through clicking the button of saving the configuration. If you don’t choose Mode 1, please open software and refresh it after saving it successfully. Then you will find the input of this access is hidden. After controlling the input of the access, relayer carries out the action according to the input mode of Settings.

2.2 Timing Function Instruction

Users can add at most 6 timer function to each access relay. It supports many timing mode, such as one-time, cycle and user-defined timing.

Click the icon of timing, you can add the timing task.
2.5 Restore Factory Defaults

You can restore factory defaults via restoring the key and web page. You can refer to the indictator and key function of 2.3 as for the restoring of the key. As for key configuration, pls refer to Chapter 2.1 Indicator and Key Function Introduction.

3 Directions for Use

3.1 Wiring Schematic Drawing

1. Power supply 12V, 15V to 60V select an input.
2. The product is a single switch control, each relay control only a line.
3. Each relay are divided into two contacts of opening and closing at all times. Users can choose freely.
4. The internal circuit of 6 accesses relay are unconnected. Users provide each relay with the power independently.
5. The maximum power of controlled equipment:
   - DC: 28V/10A
   - AC: 277V/10A 125V/12A
3.2 Revise device IP

1. Users can modify the device connection through WIFI and direct connection of Network Cable. You can enter the web page setting through refer to web page control. Here we mainly introduce how to configured through the direct connection of Network Cable.

2. The USR - IO88 factory default IP is 10.10.100.254. When the IP of a computer or router is not 10.10.100.254, it can not be communicated with the device. Therefore, user should set 10.10.100.254 for the IP of the comuter before connecting directly with USR-IO88.

3. If users want to control the device via router, but the IP of the router is not 10.10.100.XX, the users need to revise IP Setting under the state of direct connection or get it automatically.

4. Modify the computer IP

5. Open the control panel - > network and Internet - > network connections, select local connection, right-click the view attributes, double-click the IPV4. change computer IP to 10.10.100.XXX, For example

6. Connect USR - IO88 with the computer through Network cable, then check whether the equipment is working normally

7. Open a browser and enter 10.10.100.254, enter the account( admin)and the password admin(admin).Note: the lower right corner to switch interface in both Chinese and English

Users can switch the interface of Chinese and English through the button in the lower right corner.

1. Click on the button below.
2. Change the device mode

Here you can set the WIFI module working mode, can choose the AP and the STA mode. There are two network interfaces. Users can set the mode through the left one and choose LAN or WAN.
The default module WIFI works in AP mode, so both work in LAN mode, and WIFI STA model and WAN can't exist at the same time.

3. Change the STA node Settings

8. Here we can set the information of connecting router. Click the SCAN button to search the WIFI around, then click the WIFI which is needed to connect and enter the password of the WIFI, you can join the current network.

9. 4. Modify the Settings of the AP hot spots
Here you can set the name of AP, encryption, DHCP and other parameters.

4 LonHand of Windows Introduction

Please refer to the manual of LonHand for detailed operation.

Open the LonHand software

The software will search USR-IO88 automatically. If you don’t see USR-IO88 in software, please click . Then you can see the information as follows.
Equipment information

- Full open close
- Relay on and off
- Locked
- Timing control
5 USR-IO88 Typical application scenario

6 FAQ

Figure 1 Hardware check
To check whether the power connection is normal and whether the inline module and the battery are loose.

Figure 2 Device does not work
Cause analysis: the POWER light does not work, whether the positive and negative charges are connected improperly, whether the power supply interface of 2V and 15V to 60V is chosen wrongly. Connect the power cord correctly according to the labeling.
Figure 3 Find the device but it showed the password is wrong.

Cause analysis: The passwords match is wrong.
Solution: The default password of equipment is admin. The changed password is at most five digits. If you change the password but forget it, you can change it within the web page and restore directly the factory Settings.

Figure 4 Can't control equipment remote

Cause analysis: The router is not connected with the Internet, the device is not activated, the software has not the corresponding login account, or the user has not synchronized the device with the local.
Solution: confirm the network connection, and activate USR - IO88. The software login the account successfully(ensure this is an activated account) and and synchronize the equipment to the local.

7 Contact

Company: Jinan USR IOT Technology Limited
Address: Floor 11,Building1,No.1166 Xinluo Street,Gaoxin Distric,Jinan,Shandong,250101 China
Tel: 86-531-55507297, 86-531-88826739
Web: http://www.usriot.com
Support : http://h.usriot.com
Email: sales@usr.cn

8 Disclaimer

This document provides information about USR-IO88, this document does not grant any license to intellectual property rights. Except the responsibility declared in the product sale clause, USR does not assume any other responsibilities. In addition, USR does not make any warranties for the sale and use of this product, including the suitability of the product for a particular purpose, merchantability or fitness for any patent, copyright or other intellectual property infringement, etc. USR may make changes to specifications and product descriptions without notice.
9 Update History

V 1.0  28-06-2015  First Version