

SYUR03N-U1

UHF TCP/IP fixed Reader

Manual



Version 01.01
2015/12/31

I. Features & Specification

Features:

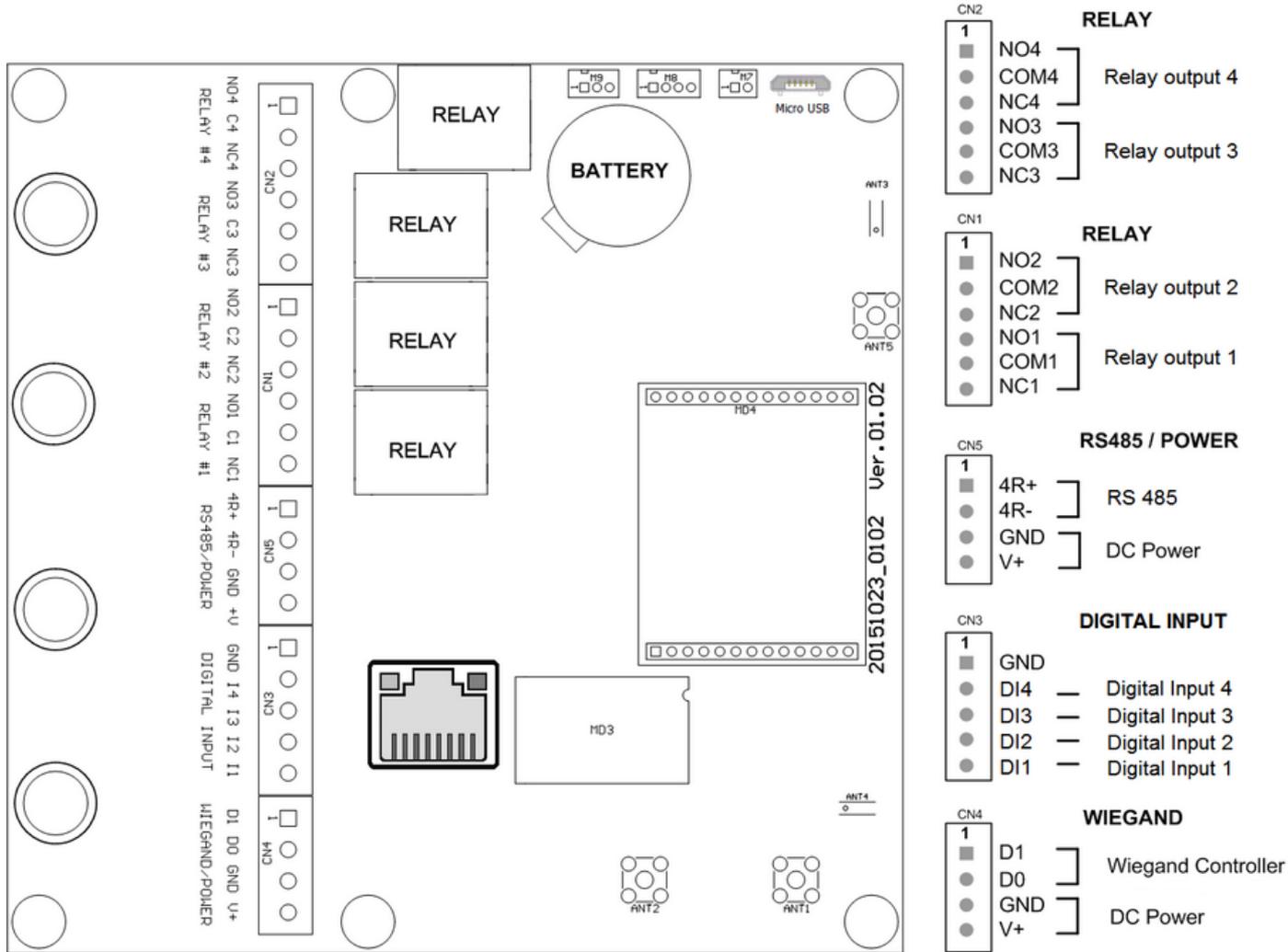
- Support for full 860 to 960 MHz UHF RFID carrier frequency range to accommodate worldwide regulations
- Compatible with EPC Class 1 Gen 2;ISO-18000-6C
- Multi communication interface
- IP65 splash resistant case
- Provide protocol to develop.

Specifications:

Frequency	860~960MHz
Interface	Ethernet / Wi-Fi / RS485 / Wiegand
Wiegand	1 Wiegand output
RS485 baud rate	19,200 bits/sec (4,800~460,800)
Ethernet	10M/100M Ethernet Port
Wi-Fi	802.11 b/g/n
Indication	LED & Beeper (Extend 2W Speaker)
DI / DO	4 DI · 4 RELAY
Protocols	EPC Class 1 Gen 2; ISO 18000-6C
Built-in antenna	8 dbi circularly polarized antenna
Read range	Up to 6 m (depends on tag's antenna)
*Optional extend module	Xtive RFID module, 13.56MHz HF RFID module, Bluetooth module
Power Supply	9 ~28 VDC (12 VDC)
Power consumption	2W~4W
Dimensions (mm)	231 x 231 x70 mm
Operating temperature	-20°C to 60°C
Storage temperature	-40°C to 85°C
Sealing	IP65 splash resistant case

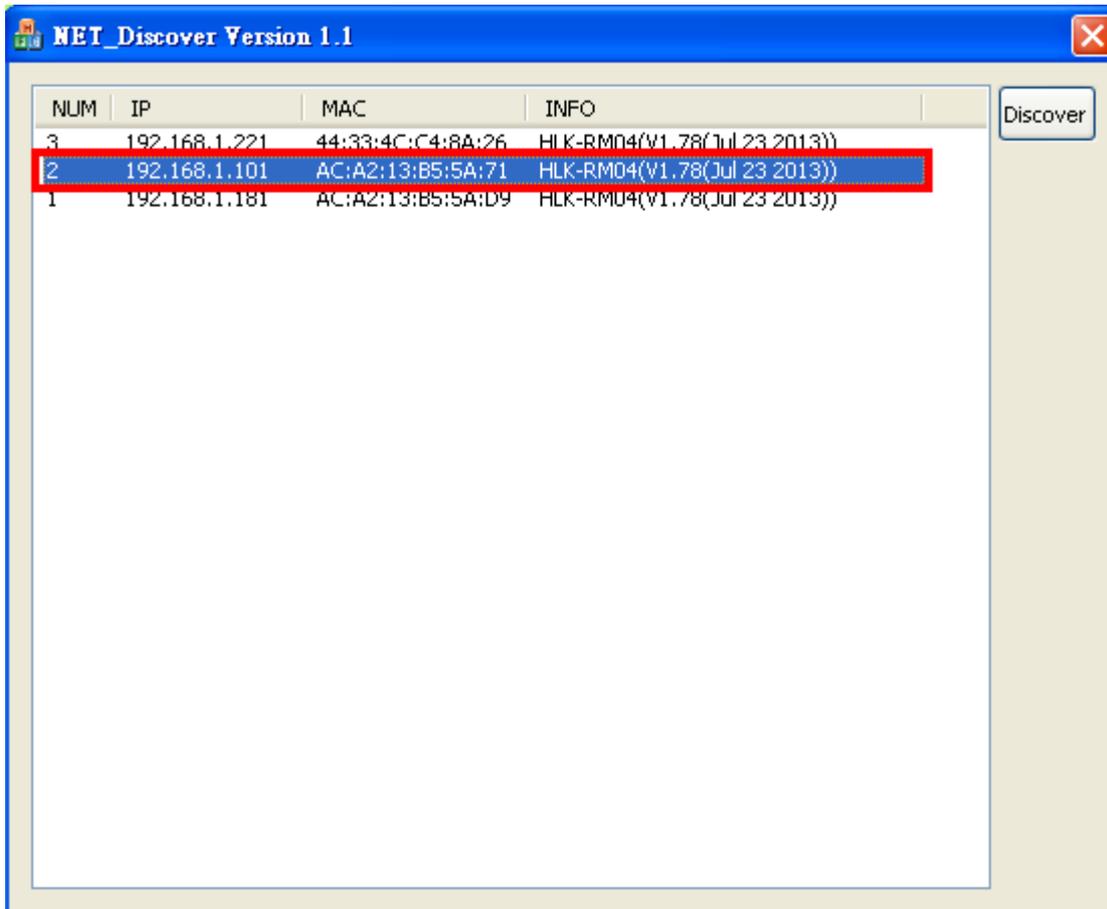
II. Wiring Diagram

SYUR03N-U1 WIRING DIAGRAM



III. Network Parameter Setting

1. Execute "NET_Discover_V0110.exe" and press  to search SYUR03N product.
2. Factory default IP is "192.168.1.101". User can check the MAC address from product sticker with IP to confirm the device.



3. Double click IP (192.168.1.101) to open the web configure page(<http://192.168.1.101>)

Default login ID / Password : admin / admin



- Default Net Mode is the same as the following. User can modify Net Mode and other parameters. If device cannot communicate properly after setting, user can reset NET module via Micro USB.

HLK-RM04 Serial2Net Settings

NetMode:

IP Type:

IP Address:

Subnet Mask:

Default Gateway:

Primary DNS Server:

Secondary DNS Server:

	Current	Updated
Serial Configure:	230400,8,n,1	<input style="width: 100%;" type="text" value="230400,8,n,1"/> *
Serial Framing Lenth:	1050	<input style="width: 100%;" type="text" value="1050"/>
Serial Framing Timeout:	10 milliseconds	<input style="width: 50px;" type="text" value="10"/> milliseconds (< 256, 0 for no timeout)
Network Mode:	server	<input style="width: 80px;" type="text" value="Server"/>
Remote Server Domain/IP:	192.168.11.245	<input style="width: 100%;" type="text" value="192.168.11.245"/>
Locale/Remote Port Number:	5001	<input style="width: 80px;" type="text" value="5001"/>
Network Protocol:	tcp	<input style="width: 80px;" type="text" value="TCP"/>
Network Timeout:	0 seconds	<input style="width: 50px;" type="text" value="0"/> seconds (< 256, 0 for no timeout)

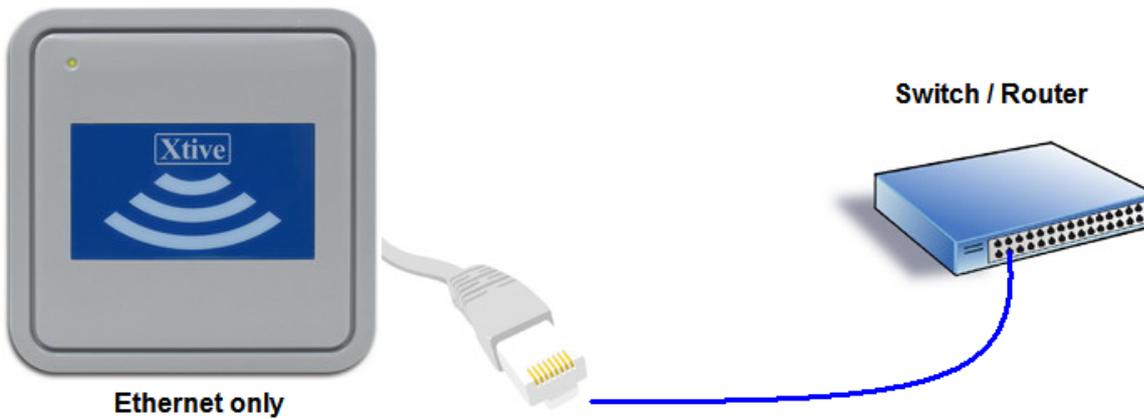
Communication Parameter	Factory Default
Serial Configure	230400,8,n,1
Serial Framing Length	1050
Locale/Remote Port Number	5001

IV. Network Mode Switch

SYUR03N device support 4 network modes: Dual mode 、 ETH(Ethernet) 、 Wi-Fi AP 、 Wi-Fi client.

Default	Ethernet (DHCP) +Wi-Fi AP mode	HLK-RM04 Serial2Net Settings NetMode: <input type="text" value="Default"/> SSID: Password:
ETH-SERIAL	Ethernet only (Factory Default)	
WIFI(CLIENT)-SERIAL	Wi-Fi client mode	
WIFI(AP)-SERIAL	Wi-Fi AP mode	

1. **ETH-SERIAL** : Factory default is **ETH-SERIAL**. (Standard TCP/IP Reader)



When user modify the IP and click on Apply button, device will reboot and apply the setting after 30 seconds.

HLK-RM04 Serial2Net Settings

NetMode:

IP Type:

IP Address:

Subnet Mask:

Default Gateway:

Primary DNS Server:

Secondary DNS Server:

2. Wi-Fi client mode : SYUR03N can be set to communicate via Wireless AP without Ethernet.



HLK-RM04 Serial2Net Settings

NetMode:

SSID: *

Encrypt Type:

Password:

IP Type:

SSID:

Enter the SSID from AP you will connect to network.

Scan: User can scan AP in range of SYUR03N and select one to connect. But user cannot scan the AP after changing default network mode (Ethernet only) to Wi-Fi (Client). SYUR03N need to power off / on to enable the scan function.

Encrypt Type : Select Encrypt type for AP connection.

Password: Enter password for AP.

IP Type: DHCP is default mode. If user has to setup a static IP, please select Static.

3. Wi-Fi AP mode : Setup SYUR03N as AP (Wireless Access Point) for client device to communicate. This mode is usually for setting device.



HLK-RM04 Serial2Net Settings

NetMode:	<input type="text" value="WIFI(AP)-SERIAL"/>
SSID:	<input type="text" value="HI-LINK_0508"/> *
Encrypt Type:	<input type="text" value="WPA2 AES"/>
Password:	<input type="text" value="12345678"/>
IP Address:	<input type="text" value="192.168.1.206"/>
Subnet Mask:	<input type="text" value="255.255.255.0"/>

SSID: Setup device's SSID.

Encrypt Type : Select Encrypt Type for the AP.

Password: Setting device's Wi-Fi password.

IP address: Setting device's Wi-Fi IP address.

Subnet Mask: Setting device's Wi-Fi subnet mask.

4. Default mode : Ethernet (DHCP) +Wi-Fi AP mode.

It's Dual-Mode (Ethernet and Wi-Fi AP · but Ethernet only support DHCP.)



HLK-RM04 Serial2Net Settings

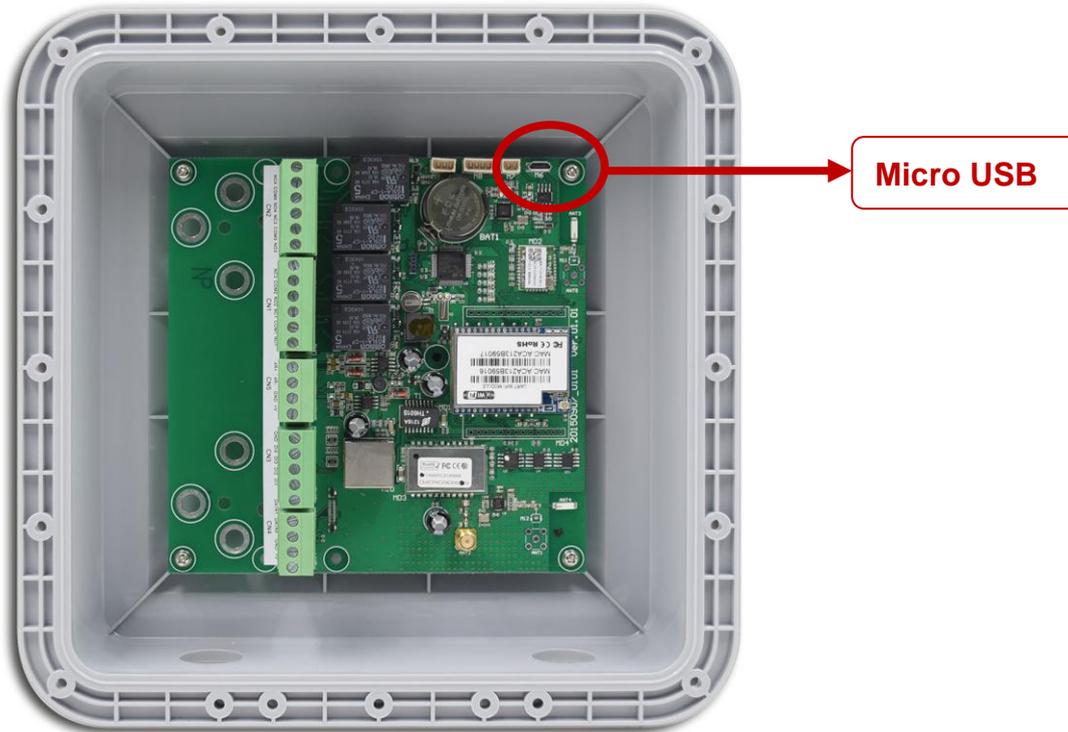
NetMode:	<input type="text" value="Default"/>
SSID:	<input type="text" value="HI-LINK_0508"/>
Password:	<input type="text" value="12345678"/>

SSID: Setup device's SSID.

Password: Setting device's Wi-Fi password.

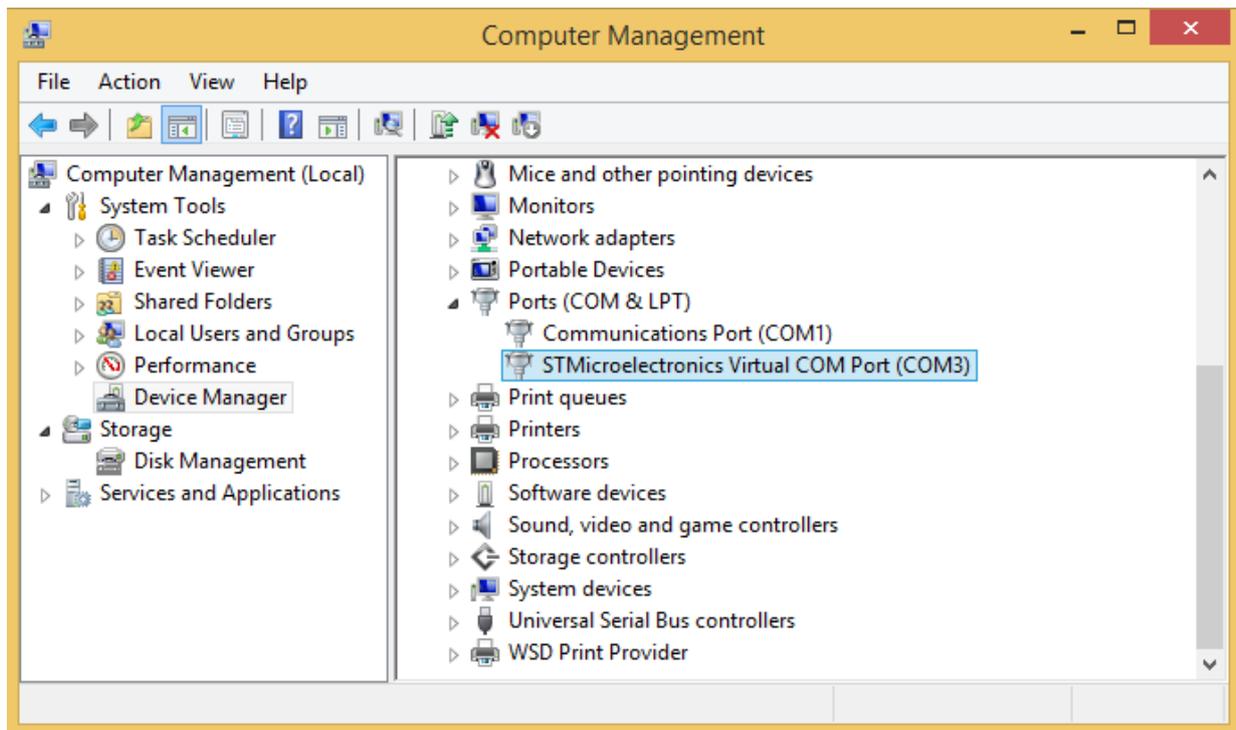
V. USB Connection

Setup SYUR03N parameter via micro USB.

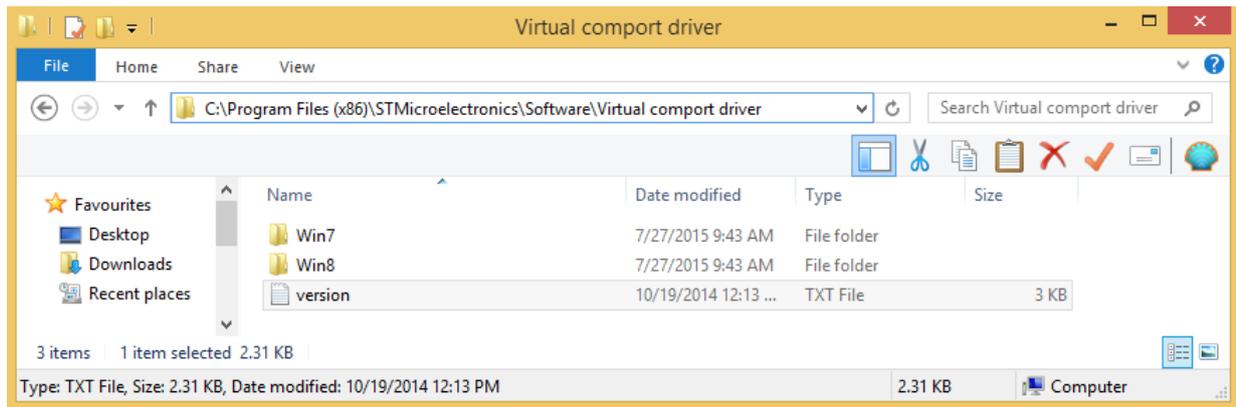


1. Install USB driver "CDC_USB_Driver_VCP_V1.4.0_Setup.exe"
2. System will generate a virtual COM port.

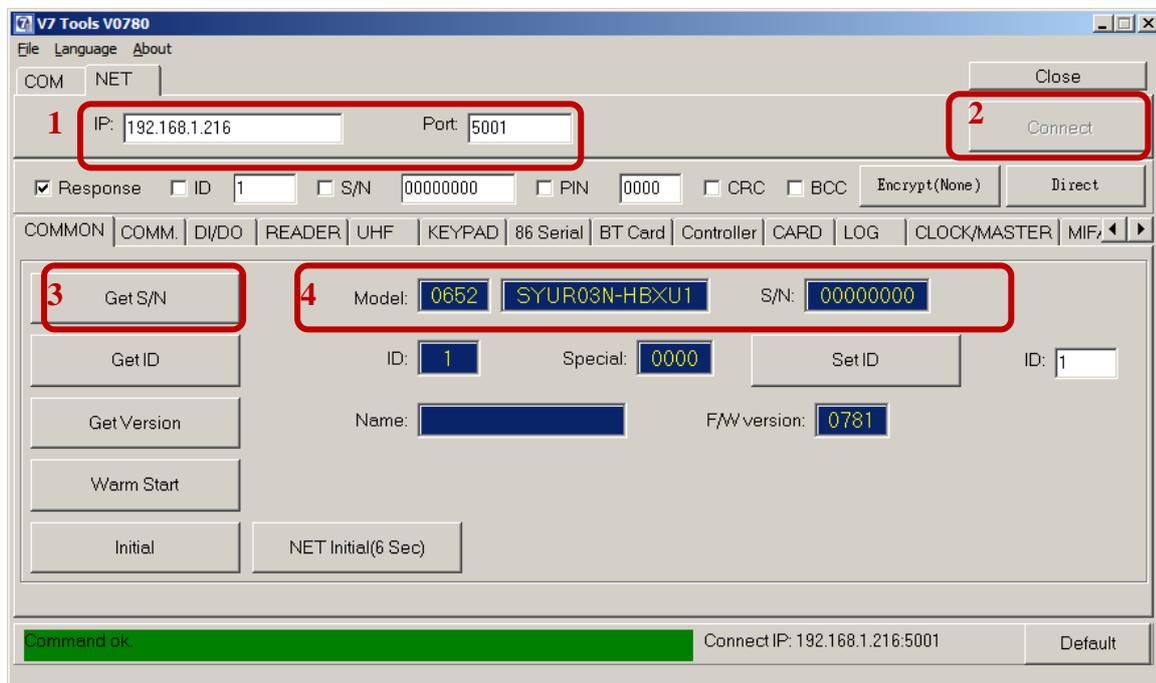
For example. Check port in device manager.(below picture is COM 3)



User also can update driver manually. The driver is saved in the folder that is same as following.



3. Get device Model information and serial number by using V7 Tools with correct COM port or TCP connection.

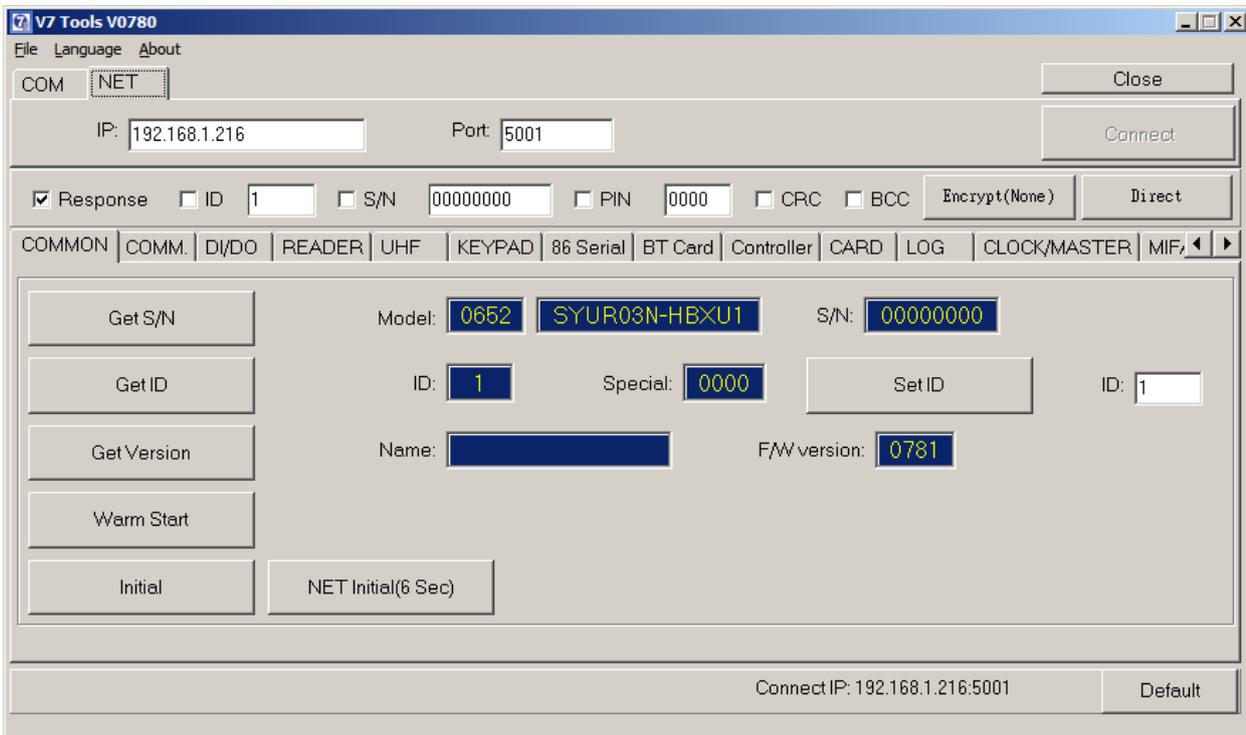


4. V7 Tools also provides Ethernet mode. User only needs to fill-in correct IP and Port and click  to setup.



VI. V7 Tools configuration

1. Common:



Get device serial number \ device ID and firmware version.

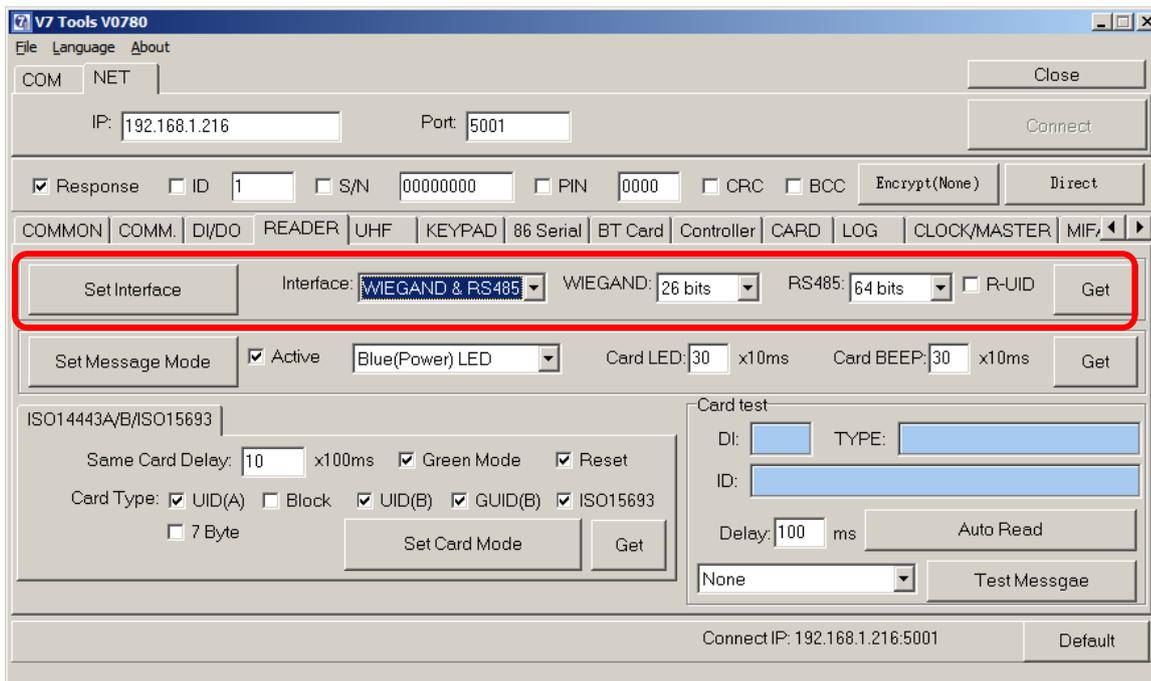
Warm Start: Reboot device.

Initial: Restore device to factory default (It is NOT including network setting).

NET Initial (6 sec): Restore network parameter of device to default mode. User has to setup by referring the following information after restore device to factory default.

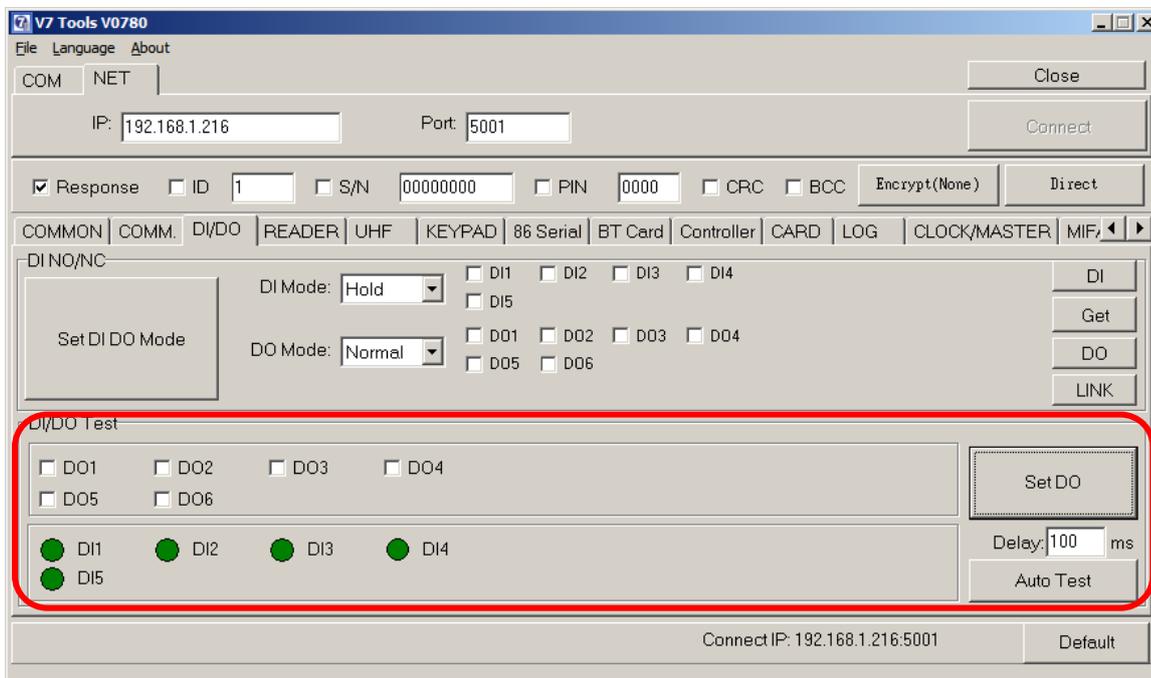
Communication Parameter	Factory Default
Serial Configure	230400,8,n,1
Serial Framing Length	1050
Locale/Remote Port Number	5001

2. Reader



Set Interface: Setup reader's communication interface. Default is "Wiegand & RS485".

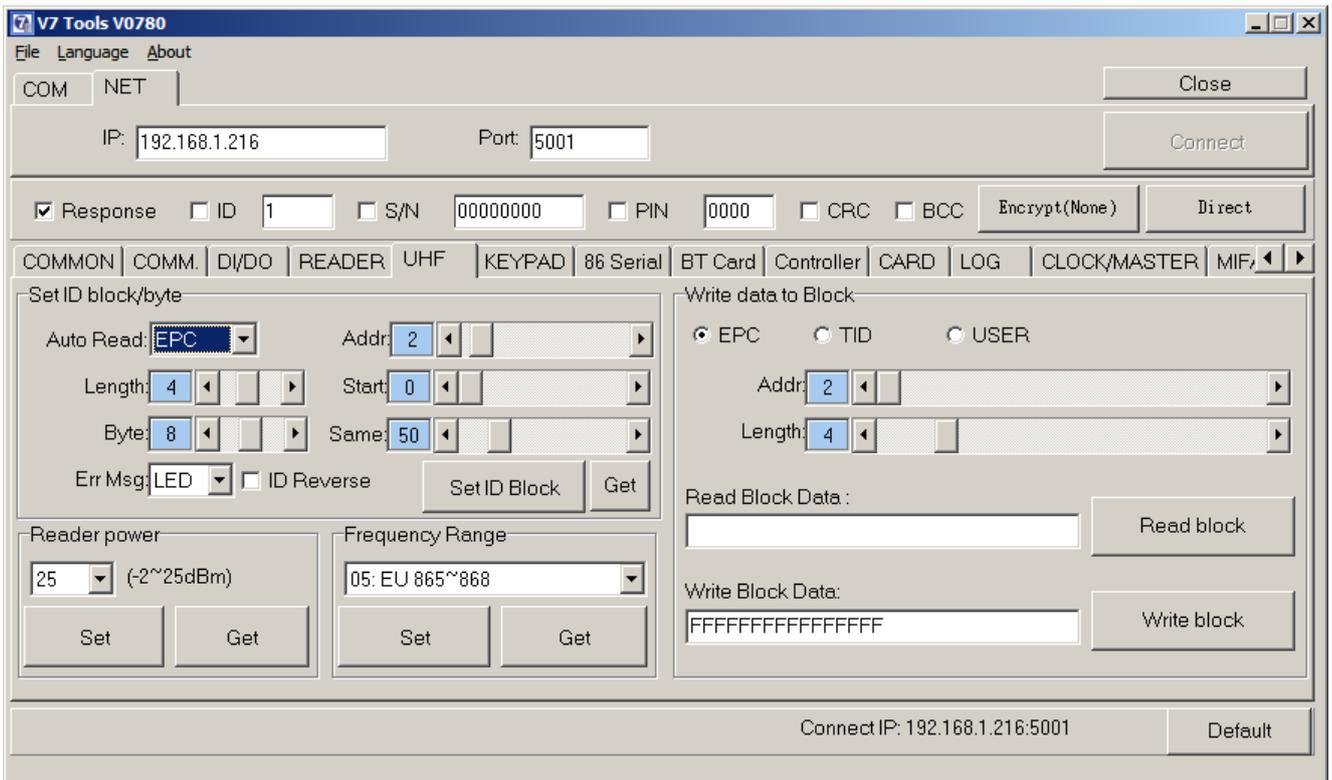
3. DI/DO



SYUR03 support 4 digital inputs and 4 relay outputs.

Click "auto test" to test DI/DO command.

4. UHF



Set ID block/byte: Select correct bank (EPC, TID or USER), address and length to setup SYUR03N auto read data.

Auto read: Support read EPC, ~~TID and USER~~ block. (Only EPC is available now.)

Length: Setup auto read data's length.

Byte: Setup auto read data's byte.

ID Reverse: Reverse read data.

Addr: Setup auto read data's address.

Start: Setup auto read data's address start byte.

Same: Same card time. Default is 50 (50 x 0.1=5 seconds)

Reader power: Setup UHF RFID power (-2~25 dbm) to control reader's read range.

Frequency Range: Setup UHF frequency range for different RF regulation.

Country	Frequency range
US	902~928 MHz
TW	922~928 MHz
CN	920~925 MHz
CN2	840~845 MHz
EU	865~868 MHz

Write data to block: Test read/write EPC tag data in this area.

VII. SYUR03N Controller extend slave reader.

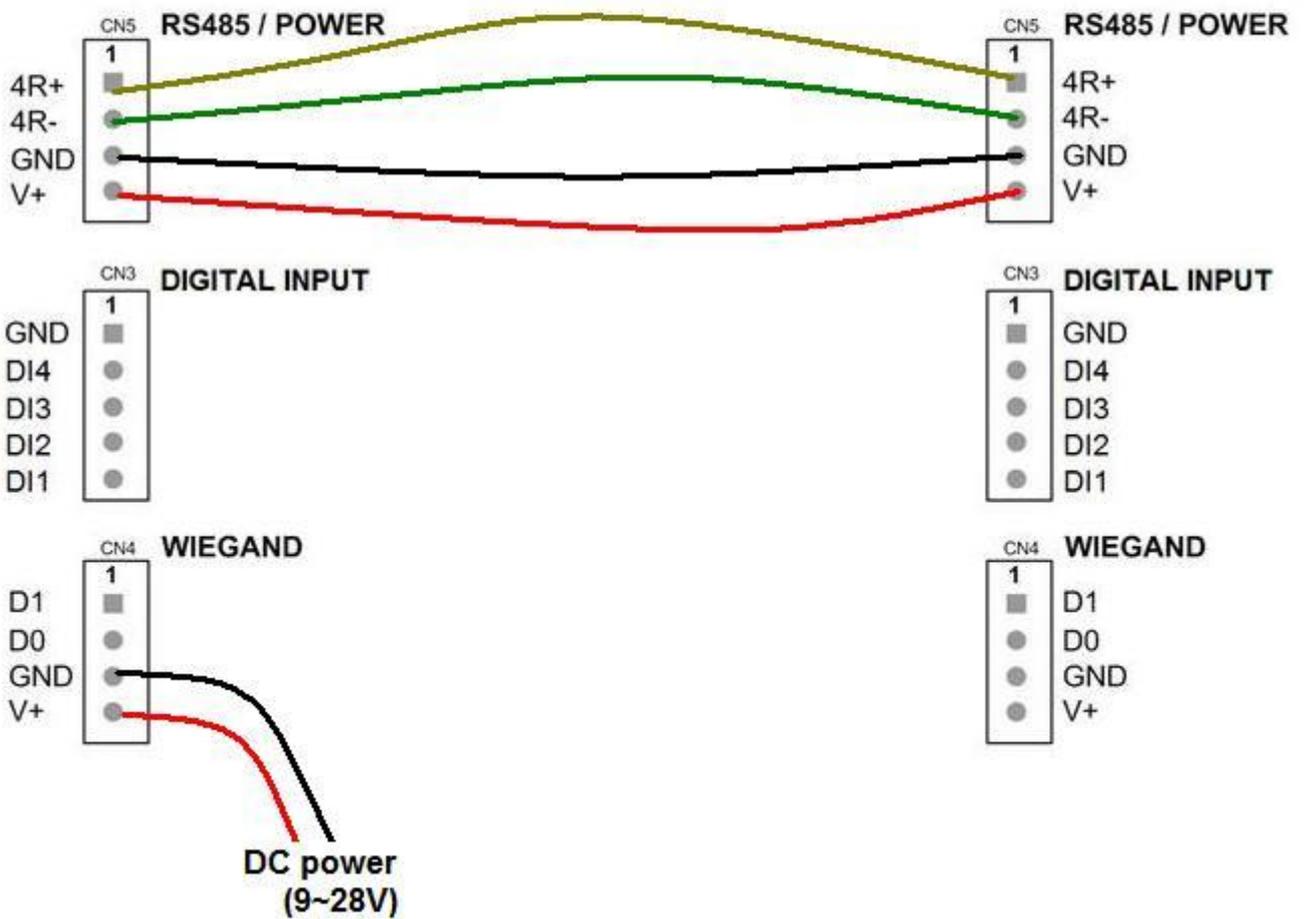
Extend slave reader via RS-485

1. Connect RS485 wire (4R+ to 4R+, 4R- to 4R-)

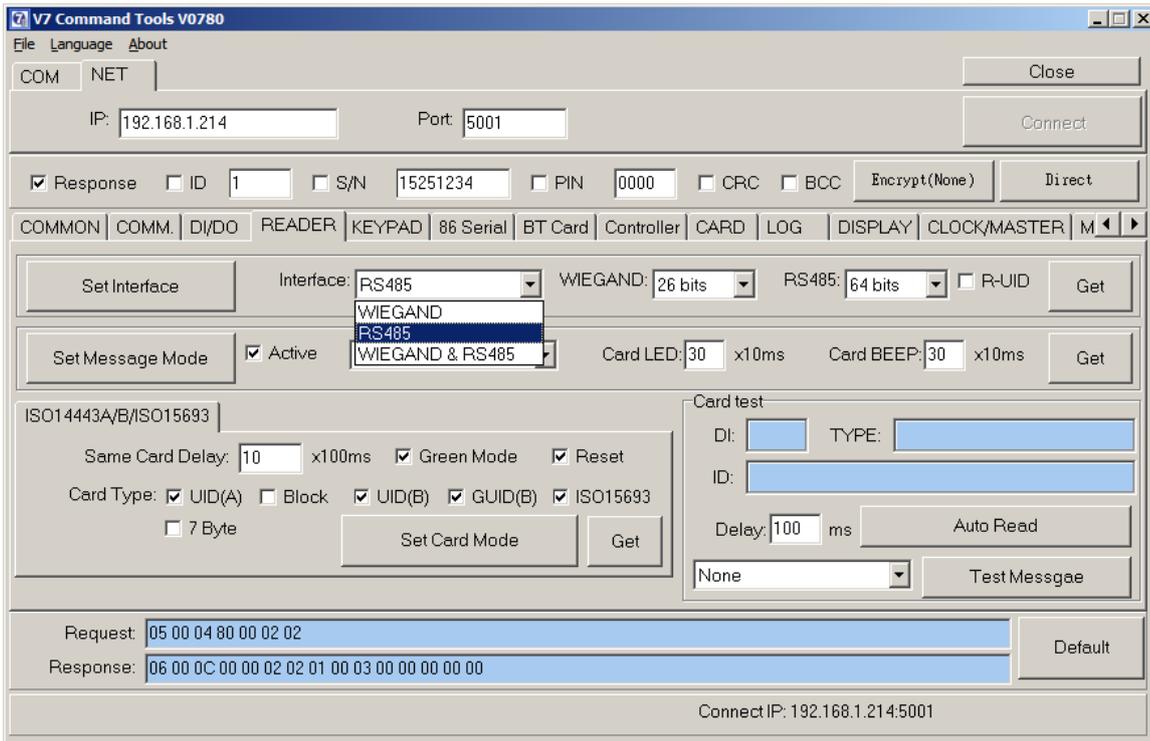
SYUR03 Master controller



SYUR03 slave reader



2. Select “READER” tab to setup interface to RS485.



3. Check controller and reader’s RS485 communication rate are the same (Default is 64 bits).

4. Select “86 Serial” tab to setup “Controller mode” and “RS485 Master Mode”.

