

SYSR86N-HBX1

Standard TCP/IP Reader

Manual



Version 01.04

2016/04/25

I. Features & Specification

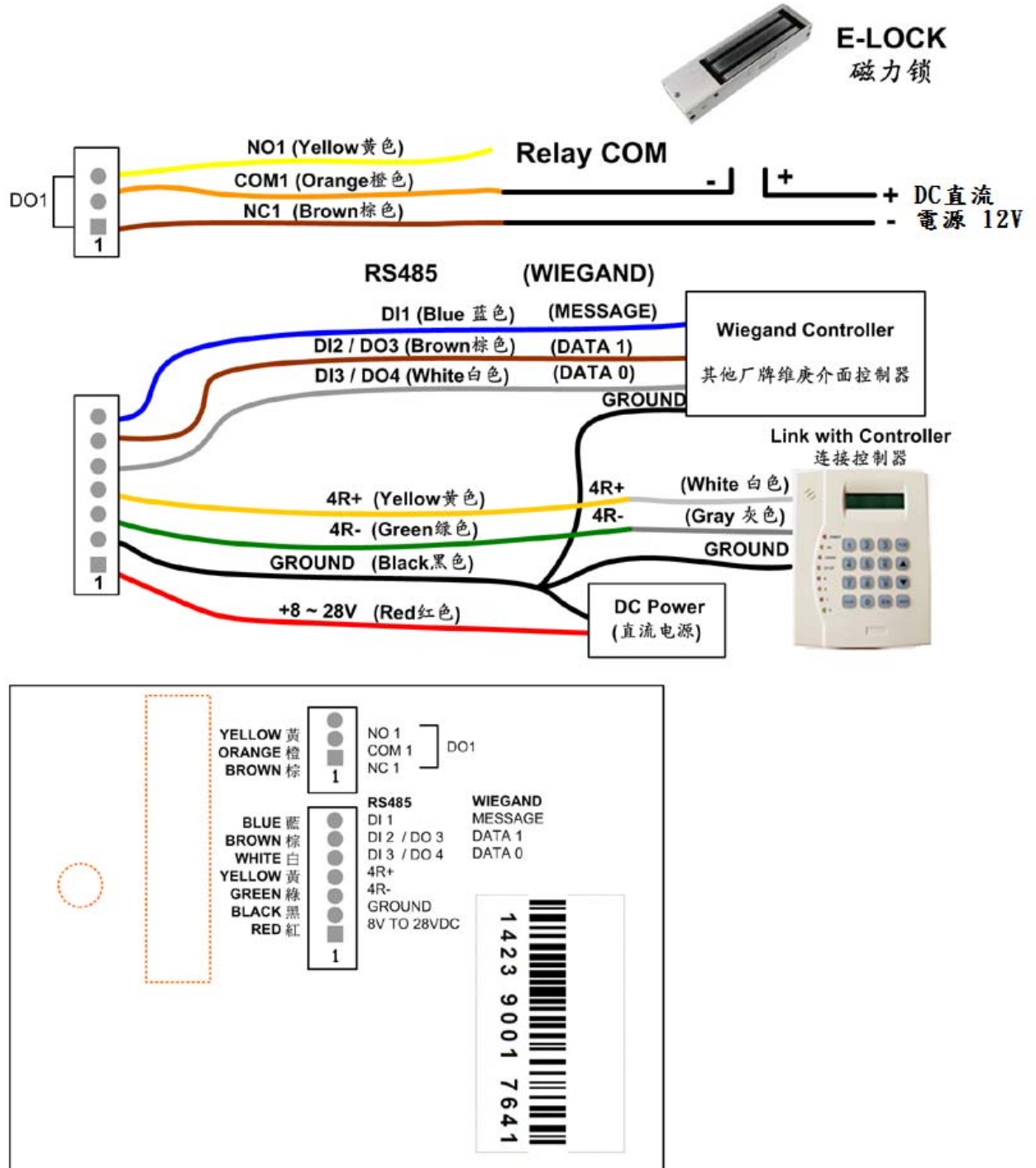
Feature:

- Standard 86.0(W)x86.0(H) mm
- Waving Hand / Touch Panel to Access Door
- Support to read standard 13.56MHz RFID card
- Relay for door bell 、 light or EM lock
- Quick Setup via Micro USB
- Support Standard Wiegand interface
- Door sensor detective (Door Open Timeout 、 Forcible Entry Alarm)
- Support Black card List
- Support to access door via Bluetooth 、 Xtive RFID Tag

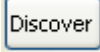
Specification:

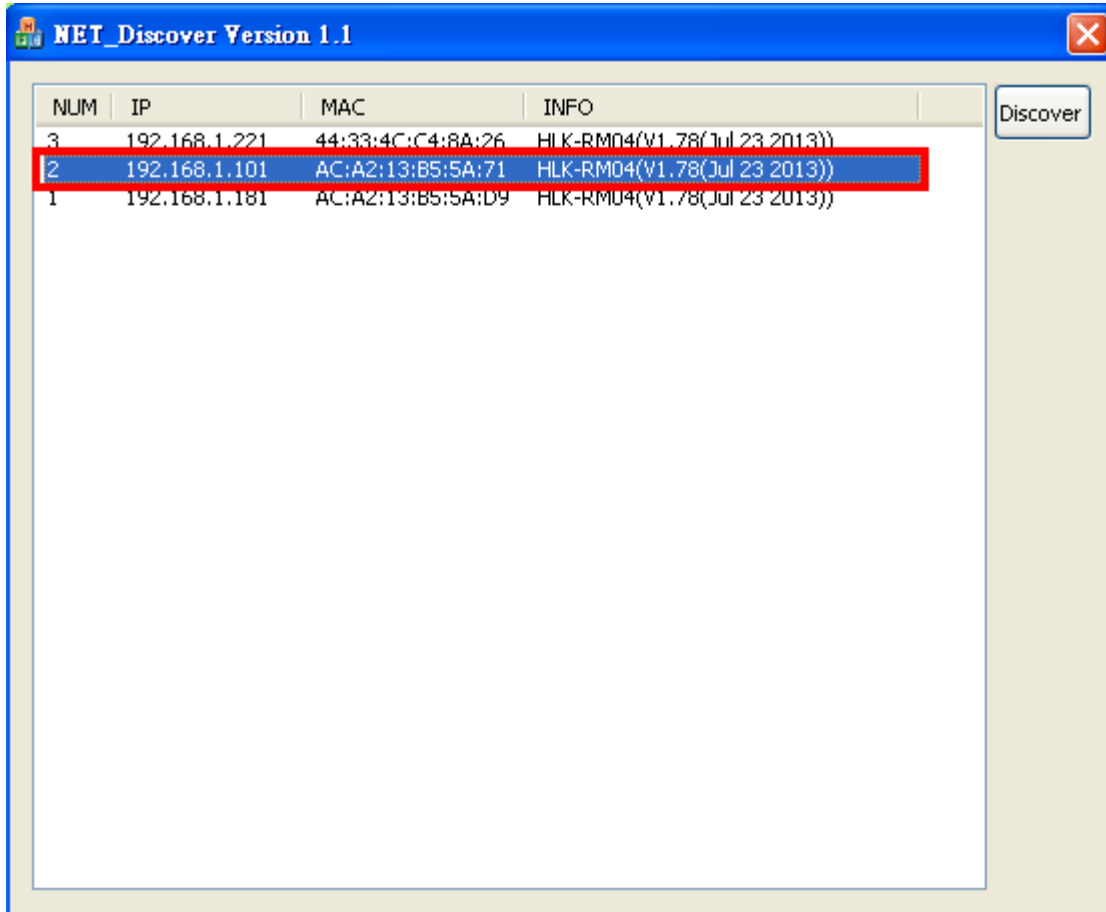
Card Frequency	13.56MHz
Card Types	ISO14443A/B / ISO15693 / Mifare / NTAG203/ DESFire
Card Read Range	1~5 cm
Ethernet	10/100 base-T Ethernet
Wi-Fi	802.11 b/g/n
Black/White List	500
Event Log	1180
Baud Rate	19,200 bps (4,800~230,400 bps)
Read Card Time	0.1 second
Keypad	1 Key (Capacitive Touch)
IR Sensor	1 IR Sensor, adjustable range 0-10 cm
Status Indicator	Tricolor LED(RGB)
Touch Status Indicator	Tricolor LED(RGB)
Interface	Ethernet, Wi-Fi, Wiegand, RS-485, USB
Device ID	0001~9999
Digital Input	Up to 3 (1 no-voltage DI +2 no-voltage DI share the same port with Wiegand)
Digital Output	Up to 4 (2 Relay + 2 output share the same port with Wiegand)
Voice Output	On-Board Buzzer
Operation/Storage Temperature	-10°C~+60°C / -20°C~+70°C
Power	8V ~ 28V DC / 1W ~ 6W
Size(mm)	86(W) x 86(H) x 41.6(D) mm (No Wire Included)

II. Wiring Diagram



III. Network Parameter Setting

1. Execute "NET_Discover_V0110.exe" and press  to search SY86N series 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:

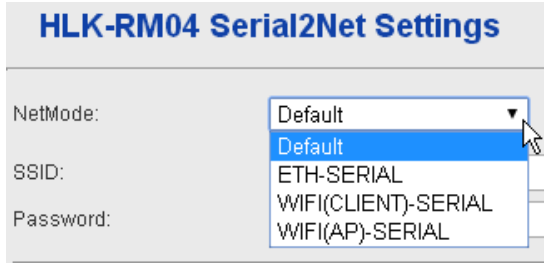
	Current	Updated
Serial Configure:	230400,8,n,1	<input style="width: 150px;" type="text" value="230400,8,n,1"/> *
Serial Framing Lenth:	1050	<input style="width: 150px;" type="text" value="1050"/>
Serial Framing Timeout:	10 milliseconds	<input style="width: 50px;" type="text" value="10"/> milliseconds (< 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: 150px;" 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

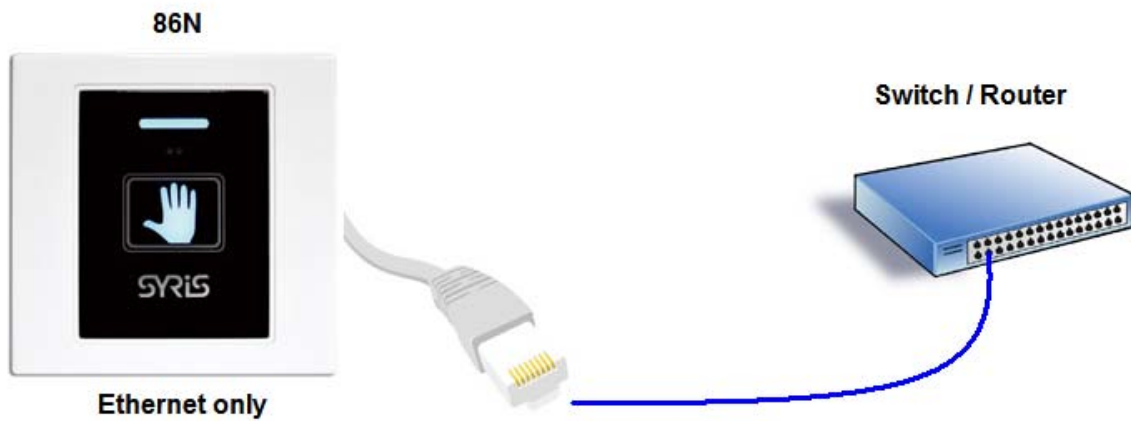
IV. Network Mode Switch

86N series device support 4 network modes: Dual mode、ETH(Ethernet)、Wi-Fi AP、Wi-Fi client.

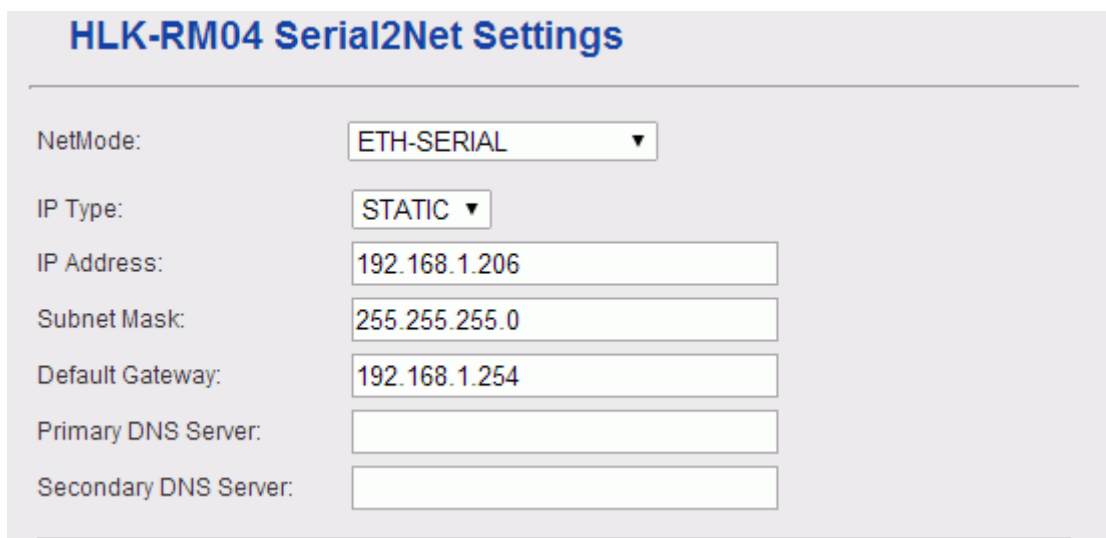
Default	Ethernet (DHCP) +Wi-Fi AP mode
ETH-SERIAL	Ethernet only (Factory Default)
WIFI(CLIENT)-SERIAL	Wi-Fi client mode
WIFI(AP)-SERIAL	Wi-Fi AP mode



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.



2. Wi-Fi client mode : 86N 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 86N and select one to connect. But user cannot scan the AP after changing default network mode (Ethernet only) to Wi-Fi (Client). 86N 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 have to setup a static IP, please select Static.

PS: Wi-Fi MAC address is Ethernet MAC subtract 1.

Ex. Ethernet MAC : AC:A2:13:B5:5A:B5 · Wi-Fi MAC : AC:A2:13:B5:5A:B4

3. Wi-Fi AP mode : Setup 86N as AP(Wireless Access Point) for client device to communicate. This mode is usually for setting device.



HLK-RM04 Serial2Net Settings

NetMode:	WIFI(AP)-SERIAL ▼
SSID:	HI-LINK_0508 *
Encrypt Type:	WPA2 AES ▼
Password:	12345678
IP Address:	192.168.1.206
Subnet Mask:	255.255.255.0

SSID: Setup 86N device's SSID.

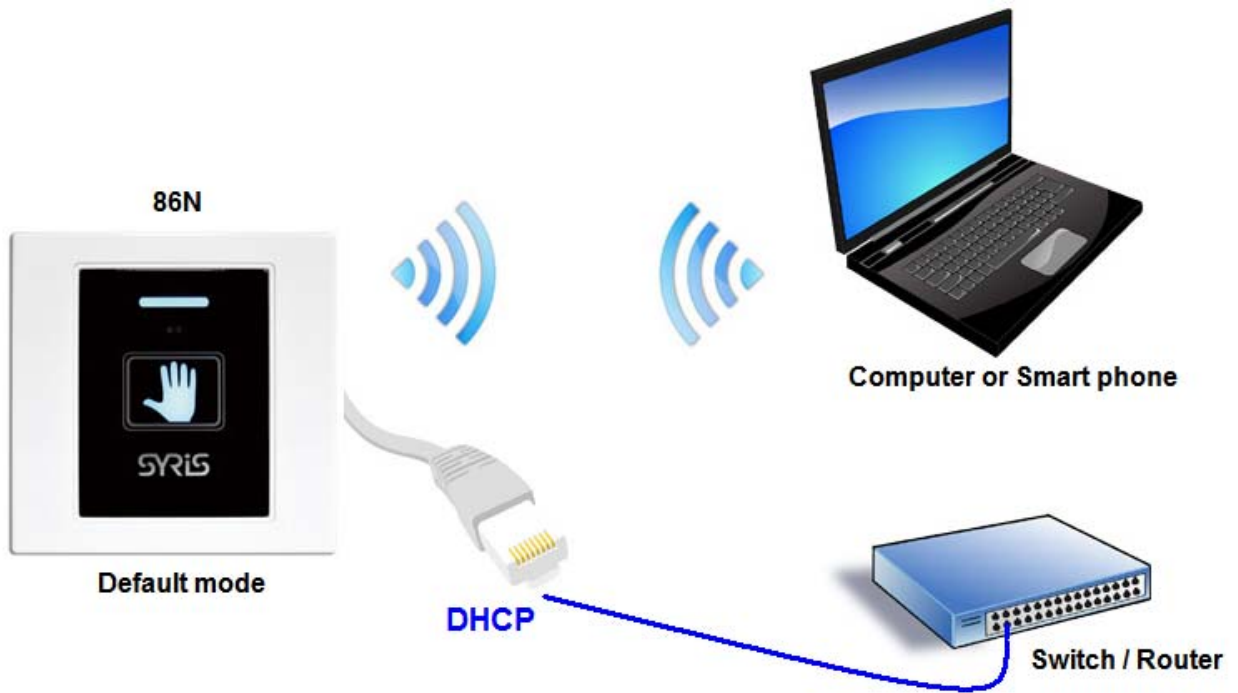
Encrypt Type : Select Encrypt Type for the AP.

Password: Setting 86N device's Wi-Fi password.

IP address: Setting 86N device's Wi-Fi IP address.

Subnet Mask: Setting 86N 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

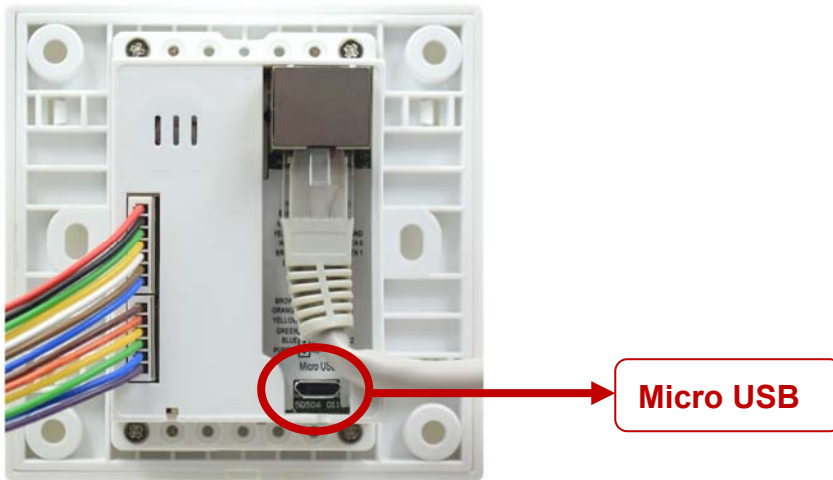
NetMode:	<input type="text" value="Default"/>
SSID:	<input type="text" value="HI-LINK_0508"/>
Password:	<input type="text" value="12345678"/>

SSID: Setup 86N device's SSID.

Password: Setting 86N device's Wi-Fi password.

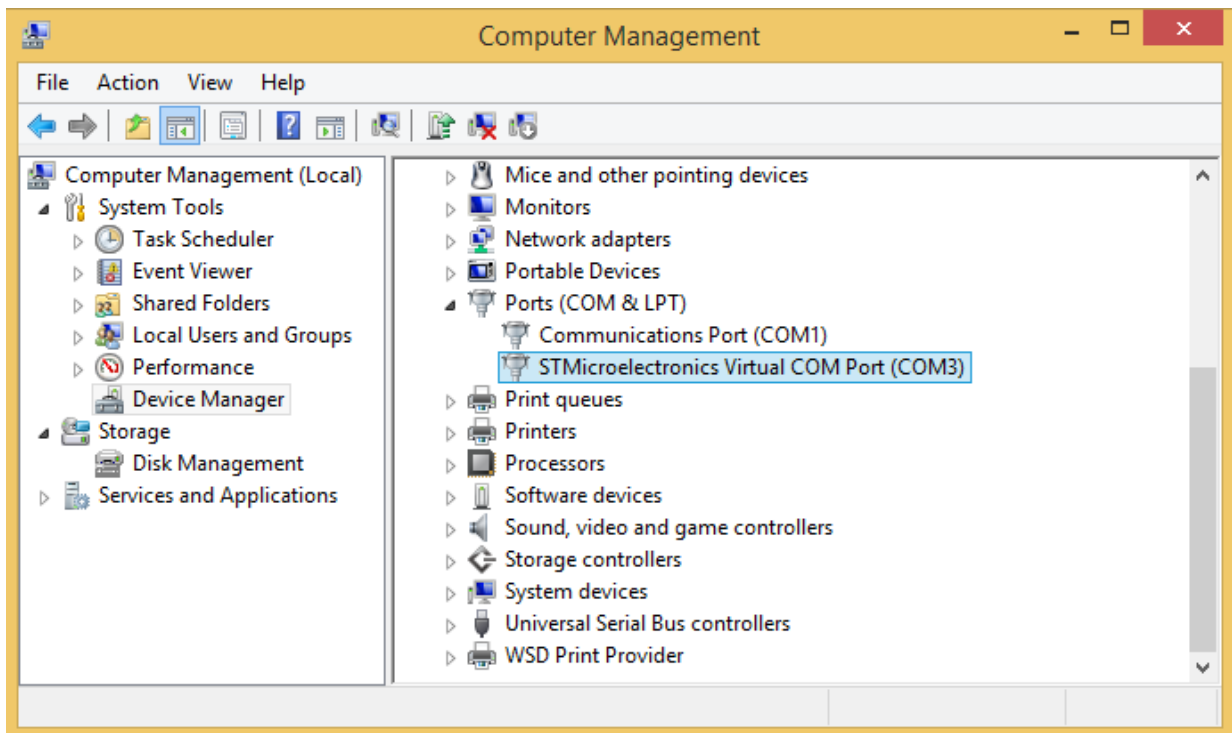
V. USB Connection

Setup 86N parameter via Micro USB.

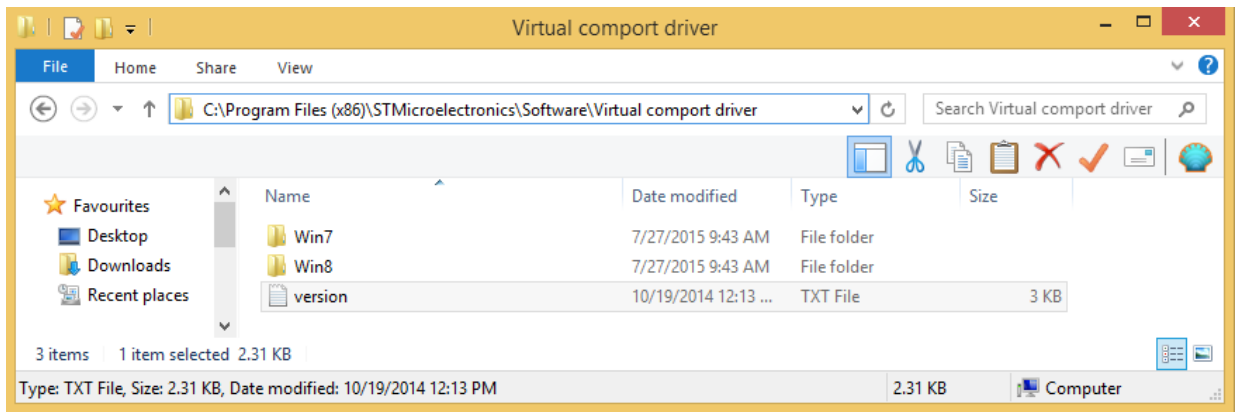


1. Install USB driver "CDC_USB_Driver_VCP_V1.4.0_Setup.exe"
2. System will generate a virtual COM port.

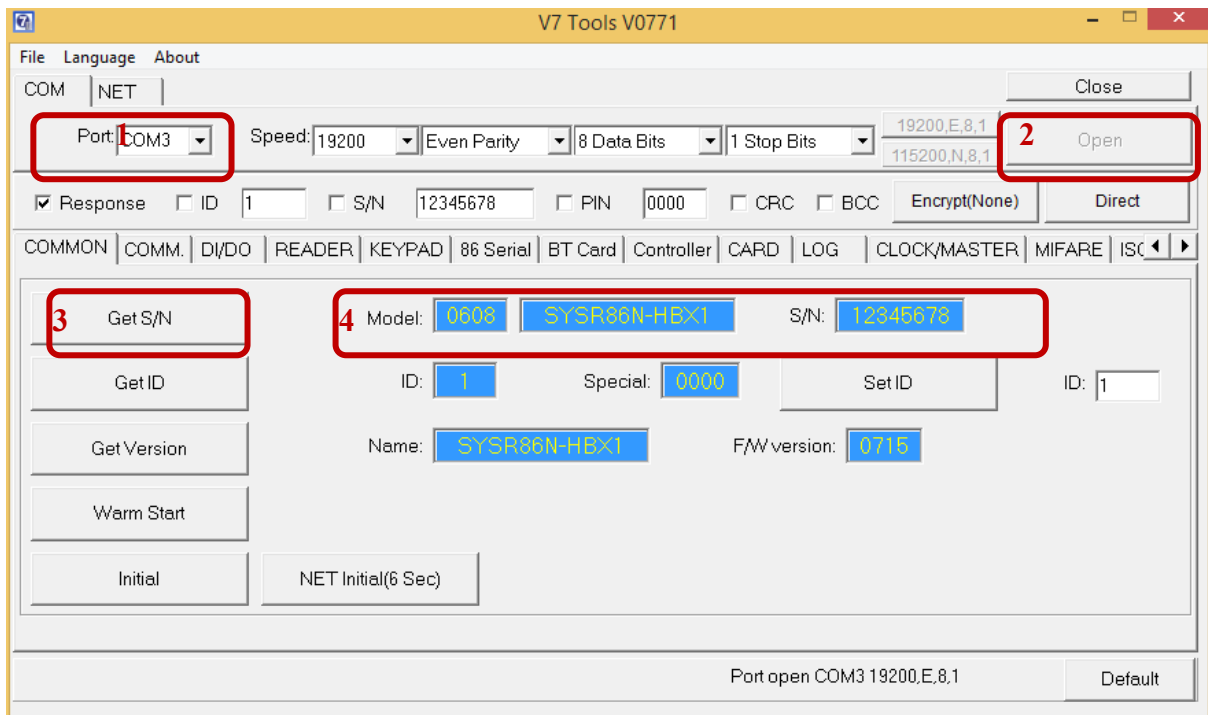
For example. Check port in device manager.(below picture is COM 3)

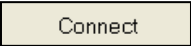


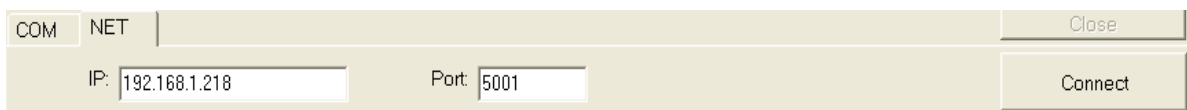
User also can update driver manually. The driver is saved in the folder that is same as following.



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

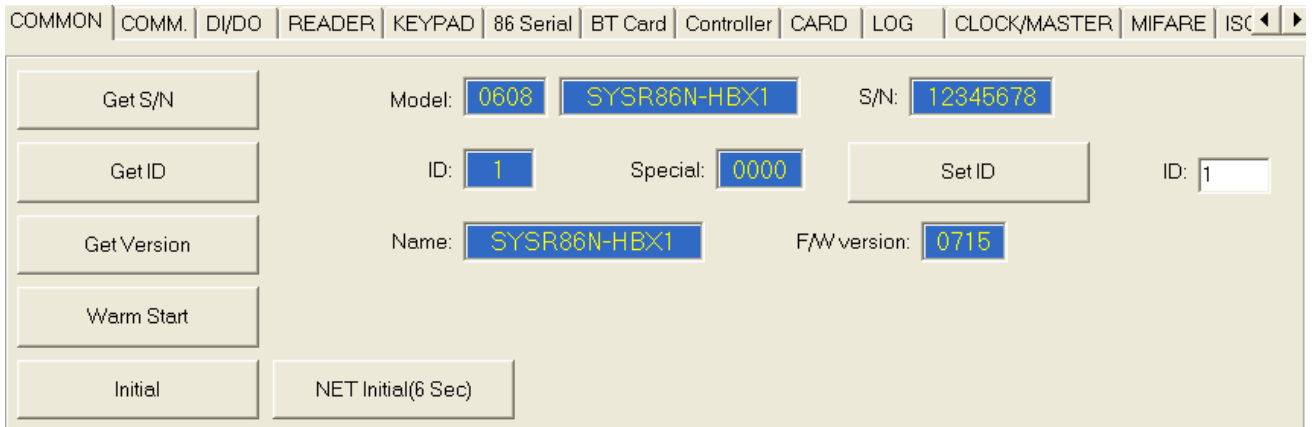


4. V7 Tools also provides Ethernet mode. User only needs to fill-in correct IP and Port and click  to setup.



VI.V7 Tools Tool Parameter Setting

1. Basic:



Basic: Get device serial number \ device ID and firmware version

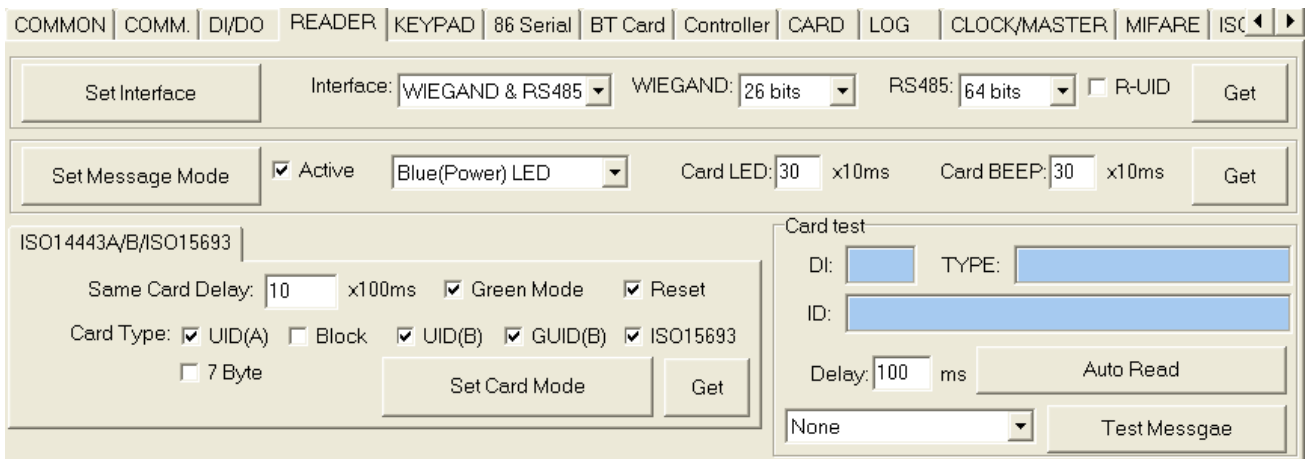
Warm Start: Reboot 86N

Initial: Restore 86N to factory default (It is NOT including network setting).

NET Initial (6 sec): Restore network parameter of 86N 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”.

Set Message Mode: Click on the option active to enable message mode setting. User can setup 86N message display on panel.

Card LED: Time for read card LED ON, default is 30 x 10ms

Card Beep: Time for read card beep on, default is 30 x 10ms

ISO14443A/B/ISO15693 :

Same Card Delay: Setup time gap for reading the same card, default is 10 x100ms (1 second)

Green Mode: Slow down the card read speed to power saving.

Reset: Reset RF IC after read card.

Card Type: Choose card type to enable 86N read specific card.

UID(A): Read ISO14443A Card UID.

Block: Read Block data (Must disable other card type).

UID(B): Read ISO14443B Card UID.

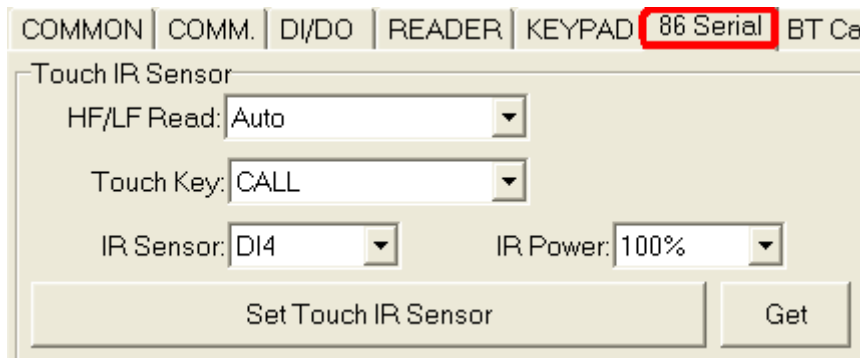
GUID(B): Read the China second generation of resident identification card.

ISO15693: Read ISO15693 Card UID

7 byte: Read 7byte format Card UID

Card Test: Test the reader function.

86 Series-Touch IR Sensor:



HF/LF Read : Setup read card mode

Auto : Read card automatically. Users do not have to touch 86N panel or trigger IR sensor.

Touch Key : Only read card when device panel is touched. Flash card time is within 10 seconds. The LED indicator will turns red in the period.

IR Sensor : Only read card when IR is triggered. Flash card time is within 10 seconds. The LED indicator will turns red in the period.

Touch Key or IR Sensor : Users can flash card when device panel is touched or IR is triggered. Flash card time is within 10 seconds. The LED indicator will turns red in the period.

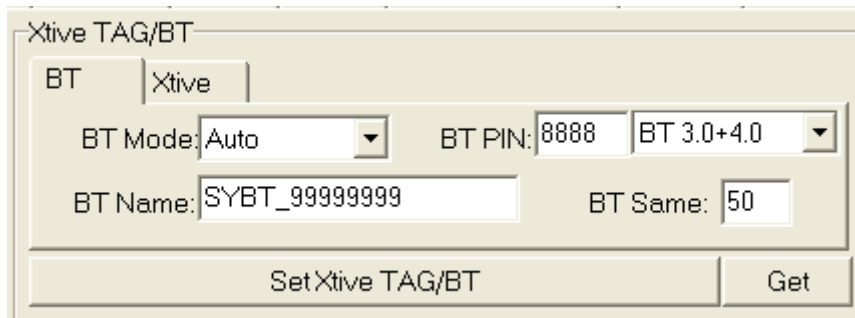
Off : Turn off read card function.

Touch Key: Setup output mode when Touch Key is triggered.

IR Sensor: Setup output mode when IR is triggered.

IR Power: Setup IR sensor power. It's related working range. (100% is farthest · 10% is closest).

3. **86 Series-Bluetooth:**



Bluetooth Mode : Setup receiving mode for Bluetooth signal.

Auto : Receive Bluetooth signal automatically.

IR Sensor : Receive Bluetooth signal after triggering IR sensor. Initial time is 10 second. (the time is fixed)

Off : Turn off Bluetooth.

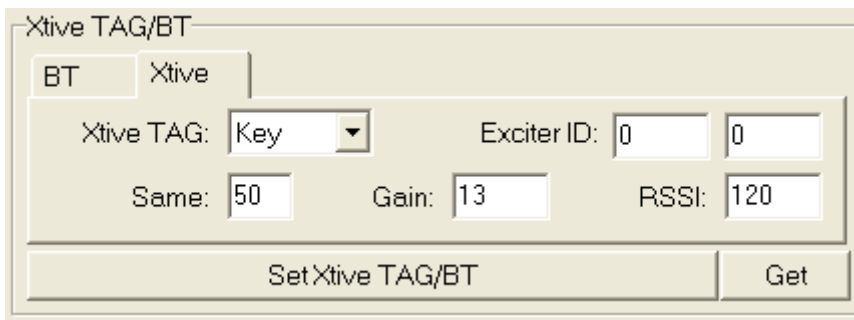
Bluetooth PIN: Default pin is **8888**

BT3.0+4.0 : Setup Bluetooth working mode. Default is BT3.0+4.0.(Auto detect)

BT Name: Setup device Bluetooth name. Default is SYBT_(+S/N). It's the name for searching with Bluetooth.

BT Same: Setup Bluetooth Open Door time of same card. Default is 50 (50 x 0.1=5 second).

4. 86 Series-Xtive TAG



Xtive TAG: Setup read mode for xtive RFID tag.

Key : Only receive signal from xtive RFID tag that pressed button.

Auto : Receive xtive RFID Tag signal automatically.

IR Sensor : 86N only receive xtive RFID Tag signal when IR is triggered. Start read time is about 10 seconds.

Off : Turn off the function to read Active RFID tag

Exciter ID: This parameter should use with SYRIS exciter, default values are "0" means disable. If this function enable, reader will only receive tag's signal which include set exciter ID.

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

Gain: Set Gain (1~13) to control reader's read range.

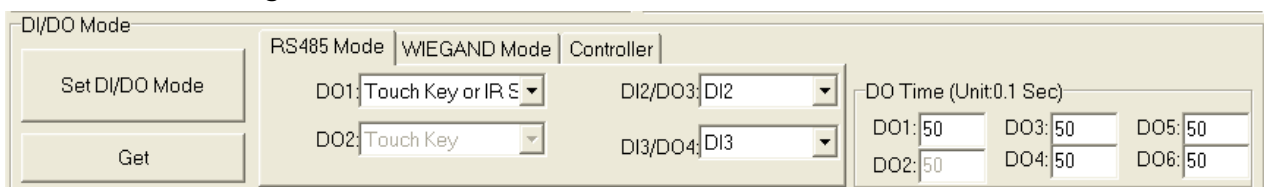
Level 13 is the max range (default setting), Level 1 is the shortest read range.

RSSI: Adjust RSSI level (0~250) to filter TAG which have low RSSI signal in reader.

Ex. Set RSSI Level to 120, Reader will receive tag which RSSI are stronger than 120.

5. 86 Series-DI/DO Mode

DI/DO Mode Setting-RS485 Mode (Communication interface have to switch into RS485)



DO1 : Setup DO1 motion parameter

RS485 : Control DO1 motion via RS485.

Touch Key : To activate DO1 by using touch panel keypad.

IR Sensor : To activate DO1 by using IR sensor.

Touch Key or IR Sensor : To activate DO1 by using touch panel keypad OR IR sensor. (Default)

DI2/DO3 : Setup the contact mode (DI2 or DO3)

DI2 : Setup the contact does work as DI2 (Default)

DO3 RS485 : Setup the contact does work as DO3. It is triggered via RS485.

DO3 Touch Key : The contact does work as DO3. It is triggered by touch key.

DO3 IR Sensor : The contact does work as DO3. It is triggered by IR.

DO3 Touch Key or IR Sensor : The contact does work as DO3. It is triggered by touch key or IR.

DI3/DO4 : Setup the contact mode (DI3 or DO4)

DI3 : Setup the contact does work as DI3 (Default)

DO4 RS485 : Setup the contact does work as DO4. It is triggered via RS485.

DO4 Touch Key : The contact does work as DO4. It is triggered by touch key.

DO4 IR Sensor : The contact does work as DO4. It is triggered by IR.

DO4 Touch Key or IR Sensor : The contact does work as DO4. It is triggered by touch key or IR.

PS. DO3 and DO4 need connect extra Relay module (MDRL02) to work.

MDRL02 WD0 connects DO3(86N). MDRL02 WD1 connects DO4(86N).

DI/DO Mode Setting – Wiegand Mode (Communication interface have to switch into Wiegand)

DO1 : Setup DO1 motion parameter

Touch Key : To activate DO1 by using touch panel keypad.

IR Sensor : To activate DO1 by using IR sensor.

Touch Key or IR Sensor : To activate DO1 by using touch panel keypad OR IR sensor. (Default)

MESSAGE→Setup contact motion mode

LEDGI : MESSAGE contact is grounding, reader indicator green on (Default).

LEDRI : MESSAGE contact is grounding, reader indicator red on.

BEEPI : MESSAGE contact is grounding, reader buzzer on.

DO1 : MESSAGE contact is grounding, reader DO1 on.

DO2 : MESSAGE contact is grounding, reader DO2 on.

DO Time : DO outputs activate time

DO1:50	DO3:50	DO5:50
DO2:50	DO4:50	DO6:50

Setup activated time to each DO point. DO1 ∙ DO2 are reader Relay. DO3 ∙ DO4 are extra Relay module.

All of the default time is 50 x 0.1 sec (5 seconds).