

SYRD245-1N-PW

2.45 GHz RFID Network Reader

User Manual



Version 2.00
2020/10/21

I . Product Specification


Communication	2.45 GHz Support read and write
Frequency	2.40~2.48 GHz
Channel	316
RSSI	0-255
LQI	0-255
Programmable	Set Parameter
LED	Multi-LED visual indication
Wi-Fi	802.11 b/g/n
Ethernet	10/100 base-T Ethernet (RJ-45)
RS-232	RX, TX
DI/DO	4 digital input point and 2 relay output
Operation mode	TCP(Server/Client), UDP
Baud Rate	2,400 bps ~ 115,200 bps
Power Input	7 VDC ~ 15 VDC / 1W ~ 6W
POE (option)	IEEE802.3af compliant
Operating Temperature	-20 °C to 65 °C, 5 to 95%RH
Storage Temperature	-30 °C to 85 °C, 5 to 95%RH
Dimension	107W x 138H x 30D (mm)

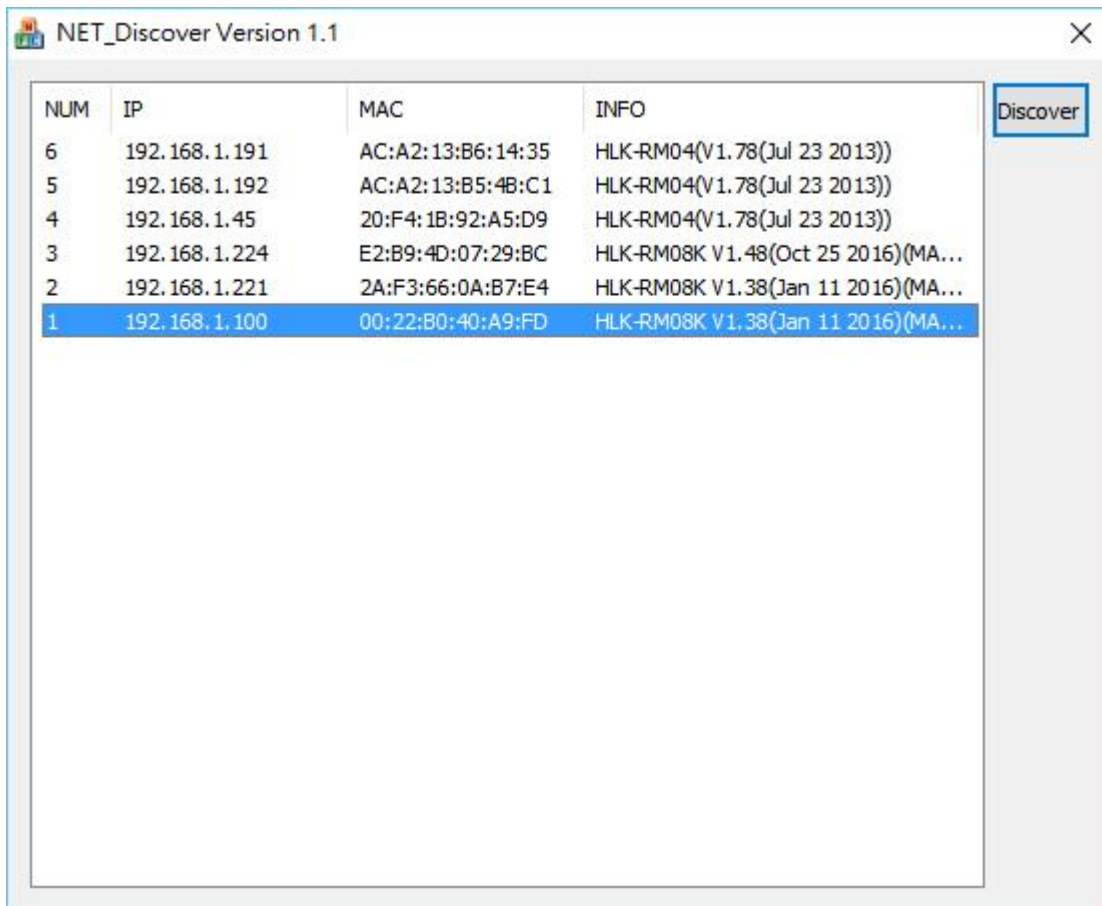
II. The Diagram of the System Connection

SYRD245-1N-PW Network Reader can connect with 4 different interfaces :

Wi-Fi, Ethernet, RS-485 or RS-232.

III. Network Parameter Setting

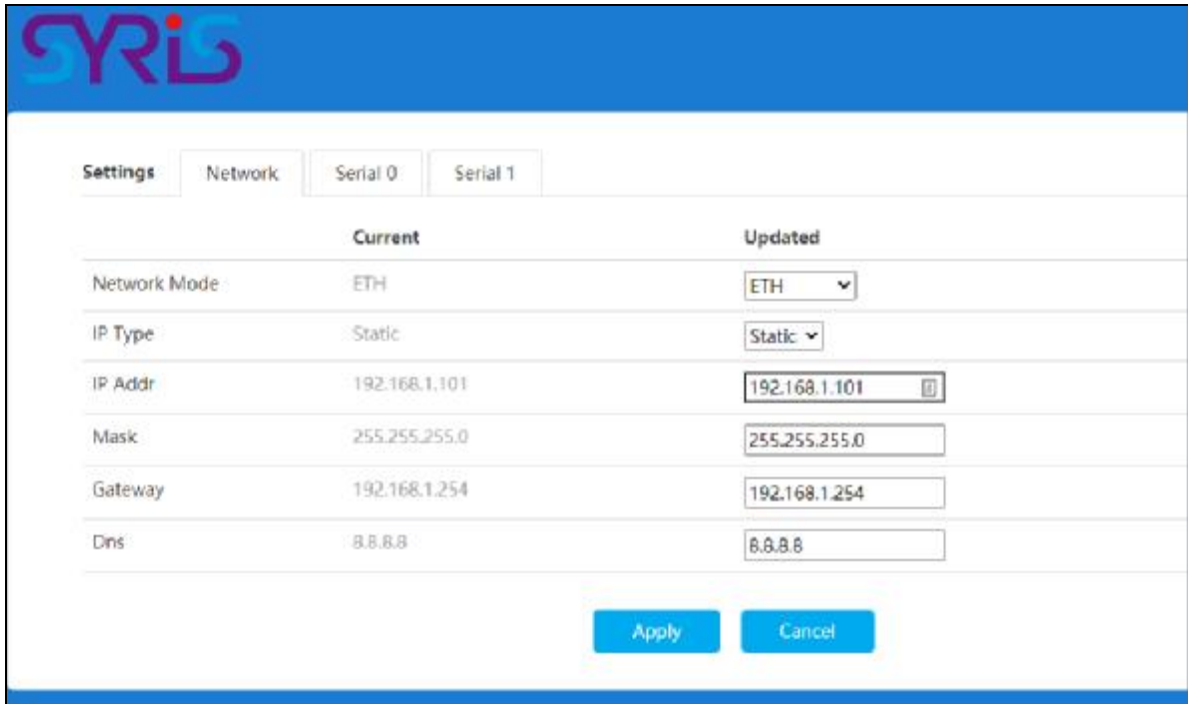
1. Execute "NET_Discover_V0110.exe" and press  to search SYRD245-1N series product.
2. Factory default IP is "**DHCP**" or "**192.168.1.101**". User can check the MAC address from product sticker with IP to confirm the device.



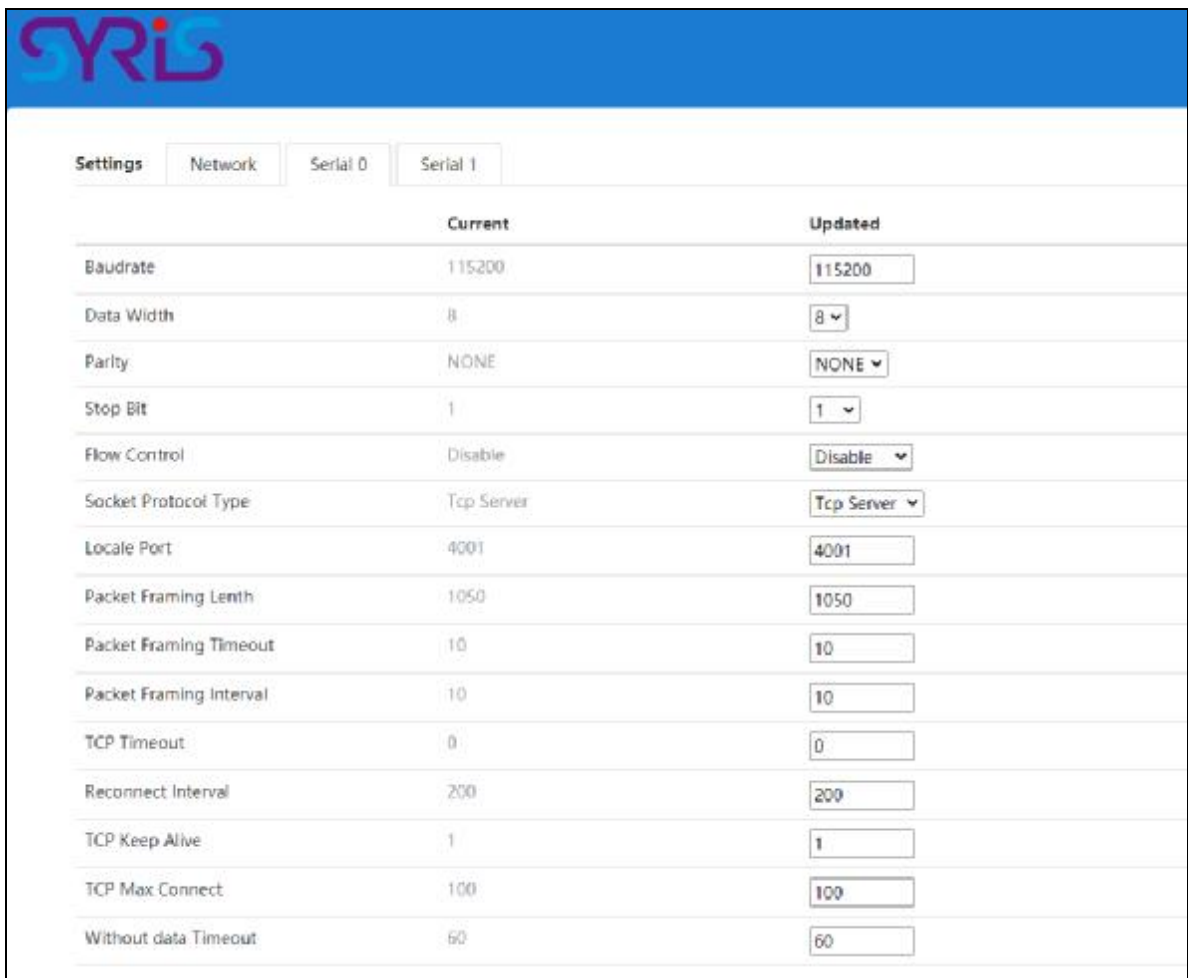
- Double click IP to open the web configure page (ex. <http://192.168.1.101>)

Default login ID / Password : admin / admin

- Default network mode as the following.



	Current	Updated
Network Mode	ETH	ETH
IP Type	Static	Static
IP Addr	192.168.1.101	192.168.1.101
Mask	255.255.255.0	255.255.255.0
Gateway	192.168.1.254	192.168.1.254
Dns	8.8.8.8	8.8.8.8



	Current	Updated
Baudrate	115200	115200
Data Width	8	8
Parity	NONE	NONE
Stop Bit	1	1
Flow Control	Disable	Disable
Socket Protocol Type	Tcp Server	Tcp Server
Locale Port	4001	4001
Packet Framing Length	1050	1050
Packet Framing Timeout	10	10
Packet Framing Interval	10	10
TCP Timeout	0	0
Reconnect Interval	200	200
TCP Keep Alive	1	1
TCP Max Connect	100	100
Without data Timeout	60	60

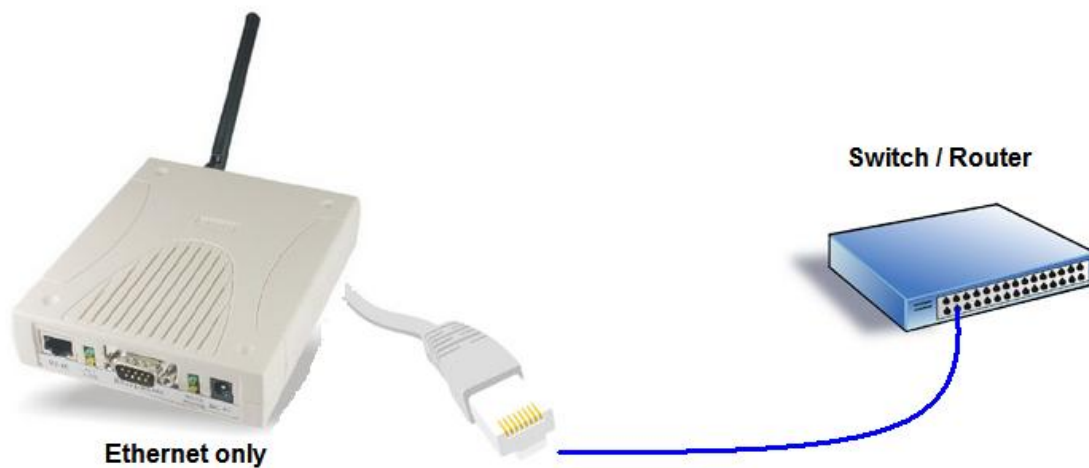
Communication Parameters	Factory Default
Serial Configure	115200,8,n,1
Serial Framing Length	1050
Locale/Remote Port Number	4001

IV. Switch Network Mode

SYRD245-1N-PW support 4 network modes: Default \ ETH(Ethernet) \ Wi-Fi STA \ Wi-Fi AP.

Default	Ethernet (DHCP) +Wi-Fi AP mode(for setting)
ETH	Ethernet only (Factory default)
WIFI(STA)	Wi-Fi client mode
WIFI(AP)	Wi-Fi AP mode(for setting)

1. ETH : Standard TCP/IP Reader



When user modify the IP and click on Apply button, device will reboot and apply the setting after 10 seconds.

2. Wi-Fi (STA) : SYRD245-1N-PW can set to communicate via Wireless AP without Ethernet.



Settings
Network
Serial 0
Serial 1

	Current	Updated
Network Mode	ETH	WIFI(STA) ▾
STA SSID	Delta-IoT	Test Scan
STA EncType	Open	WPAWPA2AES ▾
STA Passwd		12345678
IP Type	Static	DHCP ▾

Apply
Cancel

STA SSID: Enter the correct AP's SSID.

STA EncType : Select Encrypt type for AP connection.

STA Passwd: Enter correct AP's password.

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


3. Wi-Fi AP mode : Setup SYRD245-1N-PW as AP (Wireless Access Point) for client device to communicate. This mode is usually for setting device.



Wi-Fi AP mode



Computer or Smart phone



Settings
Network
Serial 0
Serial 1

	Current	Updated
Network Mode	ETH	WiFi(AP) ▾
AP SSID	SerialWiFi_C57C	<input type="text" value="SerialWiFi_C57C"/>
AP EncType	WPA2AES	WPA2AES ▾
AP Passwd	12345678	<input type="text" value="12345678"/>
LAN IP Addr	192.168.16.254	<input type="text" value="192.168.16.254"/>
LAN Mask	255.255.255.0	<input type="text" value="255.255.255.0"/>
DHCP Server	Disable	Enable ▾

AP SSID: Setup SYRD245-1N-PW's SSID.

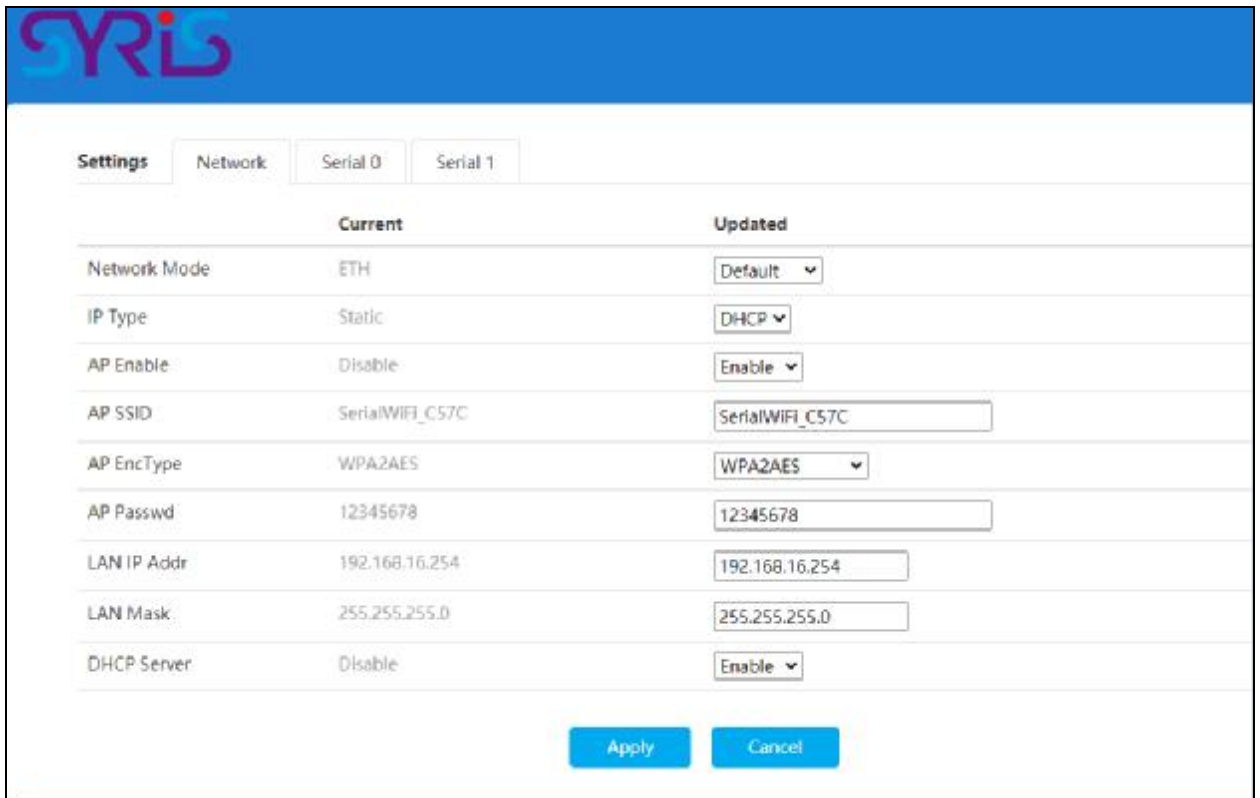
AP EncType : Select Encrypt Type for the AP.

AP Passwd: Setting SYRD245-1N-PW's Wi-Fi password.

LAN IP Adder: Setting SYRD245-1N-PW's Wi-Fi IP address.

LAN Mask: Setting SYRD245-1N-PW'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.)

The screenshot shows the SYRIS web interface with the "Settings" tab selected. The "Network" sub-tab is active. The settings are displayed in a table with "Current" and "Updated" columns.

	Current	Updated
Network Mode	ETH	Default ▾
IP Type	Static	DHCP ▾
AP Enable	Disable	Enable ▾
AP SSID	SerialWIFI_C57C	SerialWIFI_C57C
AP EncType	WPA2AES	WPA2AES ▾
AP Passwd	12345678	12345678
LAN IP Addr	192.168.16.254	192.168.16.254
LAN Mask	255.255.255.0	255.255.255.0
DHCP Server	Disable	Enable ▾

At the bottom of the settings table, there are two buttons: "Apply" and "Cancel".

Default SSID: SerialWIFI_C57C (C57C is depends on MAC address)

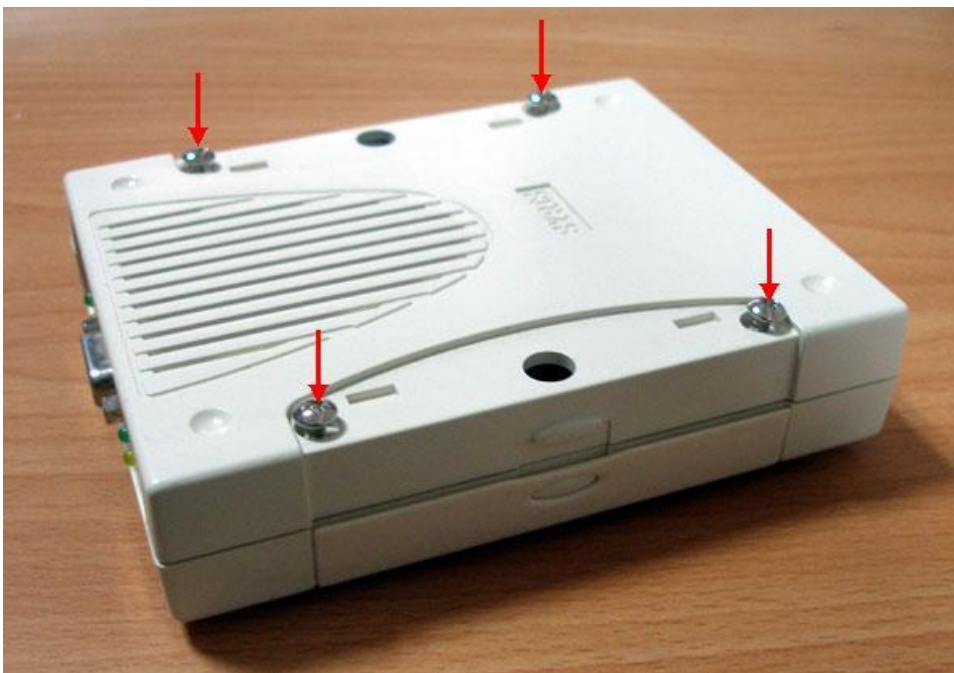
Default Password: 12345678

V. Reset network to Default.

1. Open the side cover of reader with coin or flat head screwdriver.



2. Screw the lid of Reader by the proper screwdriver.



3. Press initial button for 10 seconds and wait reader to reboot.

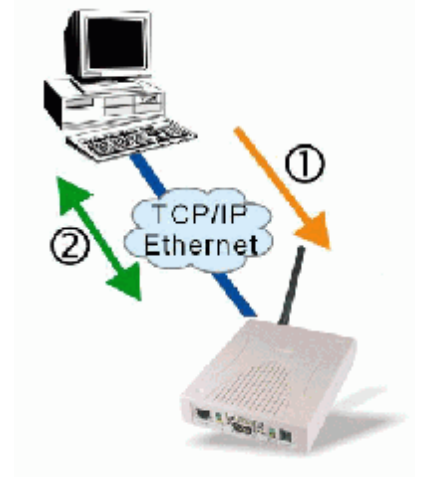


- 4.

Communication Parameters	Factory Default
IP address	192.168.1.101
Serial Configure	115200,8,n,1
Serial Framing Length	1050
Locale/Remote Port Number	4001

VI. TCP Server Mode

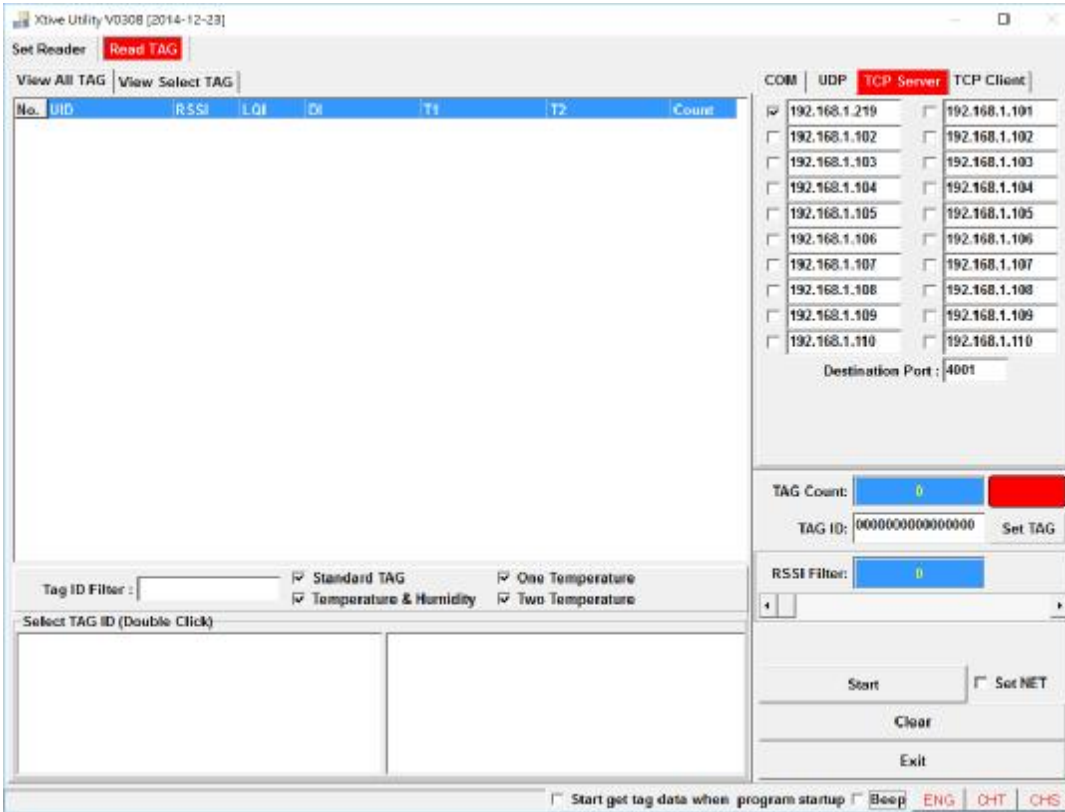
In TCP Server mode, SYRD245-1N reader provides a unique IP:Port address on a TCP/IP network. SYRD245-1N reader wait passively to be contacted by the host computer, allowing the host computer to establish a connection with and get data from the serial device.



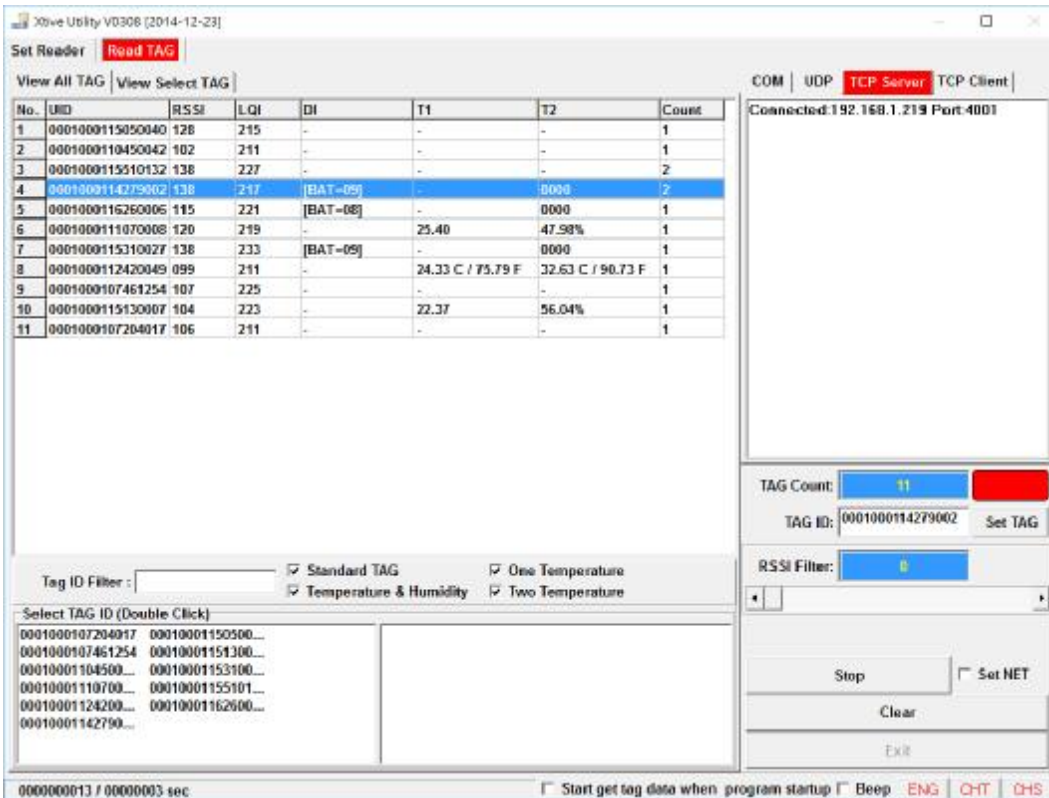
1. Setting Operating Mode

Settings			
	Network	Serial 0	Serial 1
		Current	Updated
Baudrate		115200	<input type="text" value="115200"/>
Data Width		8	<input type="text" value="8"/>
Parity		NONE	<input type="text" value="NONE"/>
Stop Bit		1	<input type="text" value="1"/>
Flow Control		Disable	<input type="text" value="Disable"/>
Socket Protocol Type		Tcp Server	<input type="text" value="Tcp Server"/>
Locale Port		4001	<input type="text" value="4001"/>
Packet Framing Lenth		1050	<input type="text" value="1050"/>

- When you finished change operating mode, you can execute [SYRIS Xtive utility](#) to read TAG.
([SYRIS Xtive DVD-ROM\SYRD245-1\Utility\Xtive.exe](#))



- Select and modify correct IP address to communicate with Reader.
(You can communicate multi-reader at the same time)



Starting read TAG will receive Tag information from reader.

4. Field Introduction:

- a. UID: Tag's identification number.
- b. RSSI: Received Signal Strength Indication (0-255). Reading range and RSSI are inverse proportion.
- c. LQI: Link quality indicator (0-255).
- d. DI: TAG status and indicator.

[BAT] means TAG battery voltage level.(0~15, 15 is full voltage)

[SW] means TAG call button was clicked.

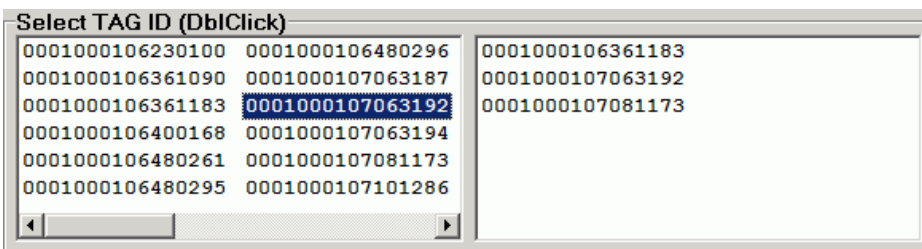
[SENSOR] means light sensor have detect light. (Only for Wristband TAG)

[START] means TAG reboot.

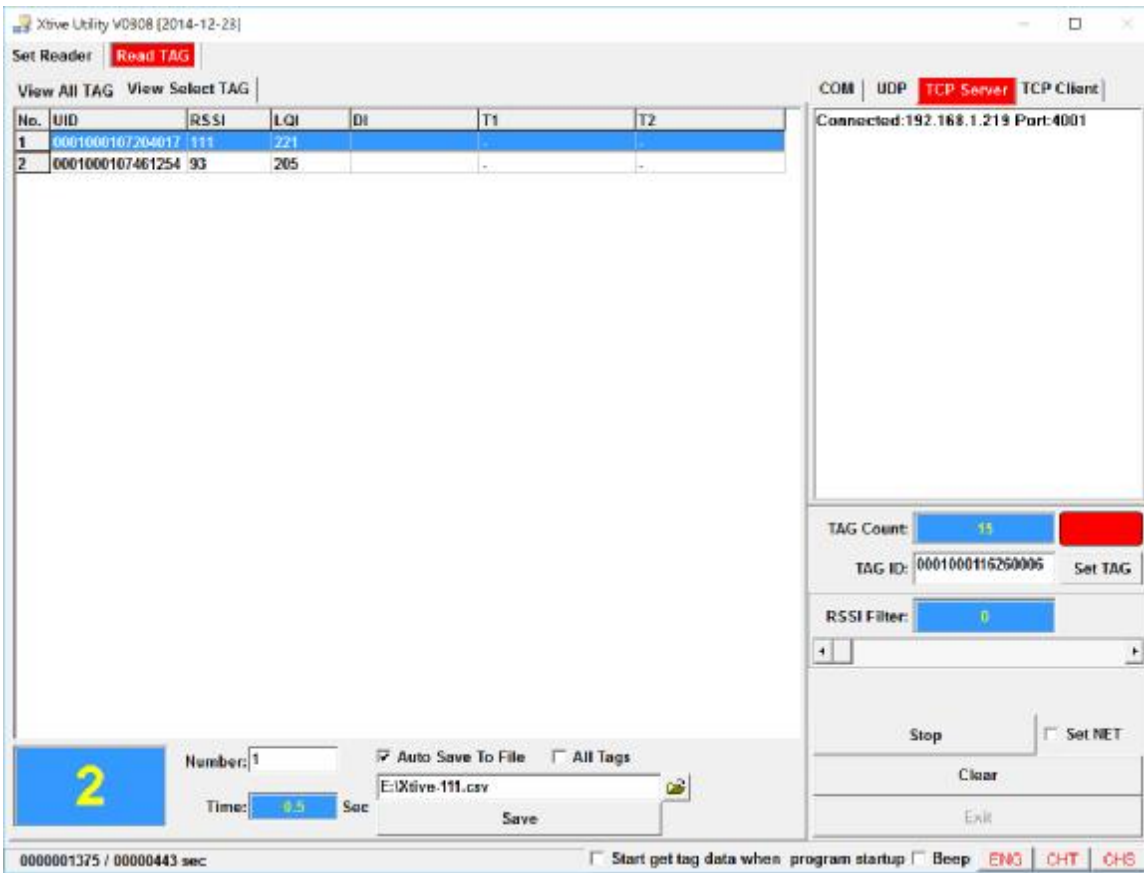
- e. T1: Ambient temperature sensor (Only for Wristband TAG)
- f. T2: Skin temperature sensor (Only for Wristband TAG)

Note: T1 / T2 / SENSOR use for anti-tamper capability.

5. Select TAG ID to sift the target TAG from left window to right window.

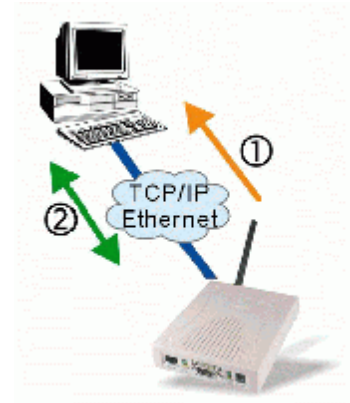


6. Select “View Select TAG” tab to get target TAG information.



VII. TCP Client Mode

In TCP Client mode, SYRD245-1N-PW reader can actively establish a TCP connection to a pre-defined host computer when serial data arrives.

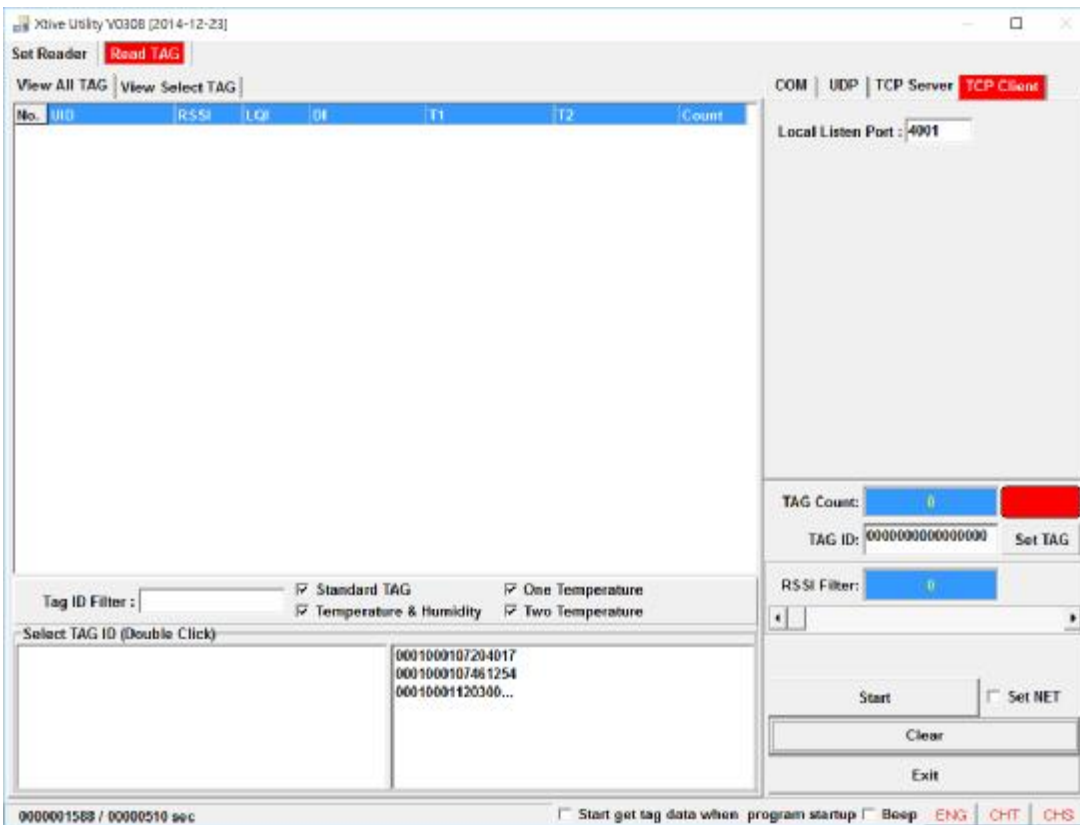


1. Setting Operating Mode

Socket Protocol Type	1	Tcp Client ▾
Remote Domain	192.168.16.100	192.168.1.125
Remote Port	0	5001

Change operating mode to “TCP Client” and “Remote Domain” IP address and Port.

2. When you finished change operating mode, you can execute [SYRIS Xtive utility](#) to read TAG.



- Select "TCP Client" Tab and starting read TAG will receive Tag information from reader.

Set Reader **Read TAG**

View All TAG | View Select TAG

No.	UID	RSSI	LQI	DI	T1	T2	Count
1	0001000115130007	122	211	-	22.39	55.98%	2
2	0001000111070008	121	219	-	25.43	48.21%	2
3	0001000107461254	108	227	-	-	-	4
4	0001000114279002	143	217	[BAT-09]	-	0000	5
5	0001000116260006	132	211	[BAT-06]	-	0000	4
6	0001000116040292	156	227	-	-	-	3
7	0001000107204017	106	219	-	-	-	2
8	0001000115310027	128	215	[BAT-09]	-	0000	4
9	0001000110450042	124	231	-	-	-	3
10	0001000115510132	142	231	-	-	-	3
11	0001000112420049	099	191	-	24.33 C / 75.79 F	32.63 C / 90.73 F	3
12	0001000112030045	100	211	-	21.63	59.46%	1
13	0001000115050040	126	217	-	-	-	2

COM | UDP | TCP Server | **TCP Client**

192.168.1.219:4001

TAG Count: **13**

TAG ID: 0001000114279002 Set TAG

RSSI Filter: **0**

Stop Set NET

Clear

Exit

000000038 / 00000005 sec Start get tag data when program startup Beep **ENG** **CHT** **CHS**