

XT200

Intelligent Network Router

Installation Manual

V0103



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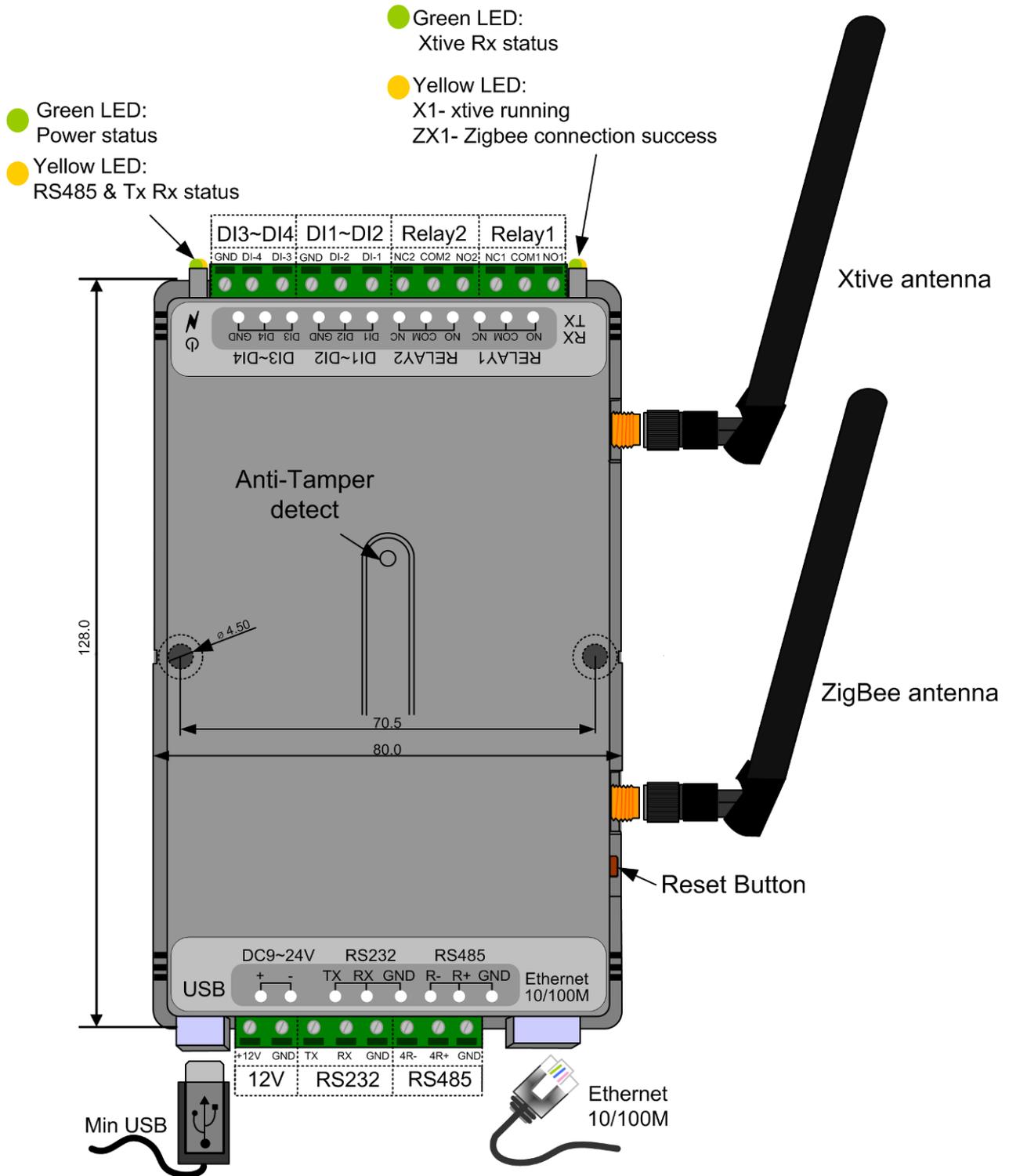
Email : service@syris.com

Website : <http://www.syris.com>

1. 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 Parameters
LED	Multi-LED visual indication
Function	Built-in anti-tamper switch
Interface	RJ-45, RS-232, RS-485, USB
Ethernet	10/100 base-T Ethernet (RJ-45)
RS-232	RX, TX
RS-485	+, -
Network Protocols	ICMP, ARP, IP, TCP(Server/Client), UDP, DHCP, HTTP
USB	USB 2.0
Baud Rate	2,400 bps ~ 115,200 bps
Input points (DI)	4 NV input
Relay output (DO)	2 Relay output
Power Input	7.5 VDC ~ 28 VDC
Operating Temperature	-20 °C to 65 °C, 5 to 95%RH
Storage Temperature	-30 °C to 85 °C, 5 to 95%RH
Antenna	2 dbi external omni-directional antenna (replaceable)
Dimension	138W x 78H x 30D (mm)

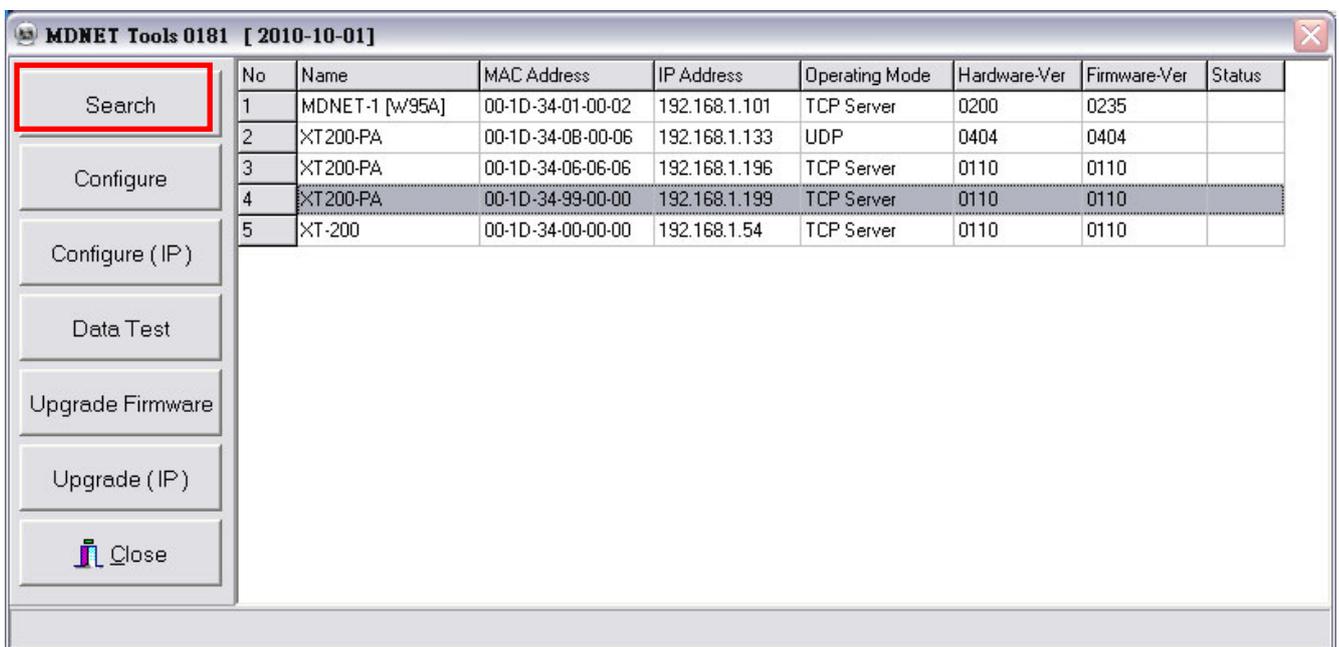
2. XT200 Hardware Diagram



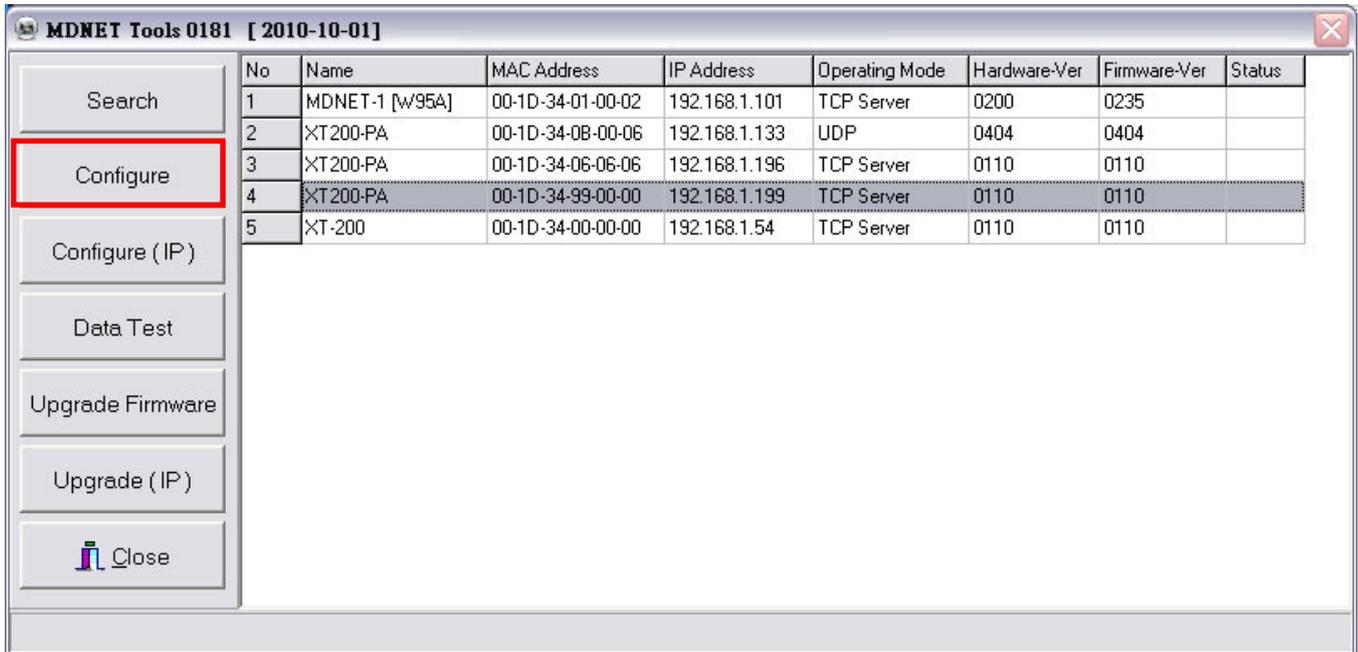
● To avoid wireless interference, please keep more than 50cm interval for each device.

3. Network module Setting (X1, ZX1)

- 3-1. Connect to device: Follow the wiring diagram (Page 2) plug the power, network and antenna in then execute MDNET Tool.
- 3-2. Click on Search Button, showing that the program is searching for network module connected to this network. Please check the device be banned by anti-virus software or firewall when it can NOT find any device; or check the device is in the same network segment (Device default IP: 192.168.1.101).



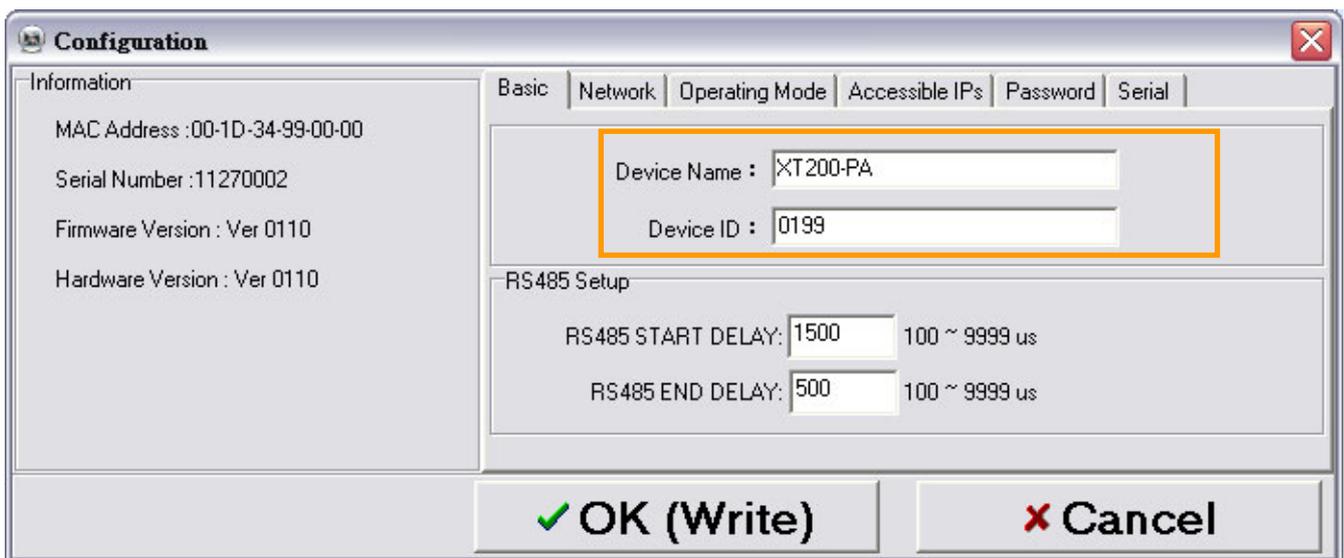
- 3-3.** After the search is finished, all network module found will be shown in the right panel of the window. If you locate more than one module connected to this network, refer to the MAC address on the module(s) to determine which modules are the ones you wish to configure.



- 3-4.** Double click selected network module you wish to configure, the Configuration window will open.

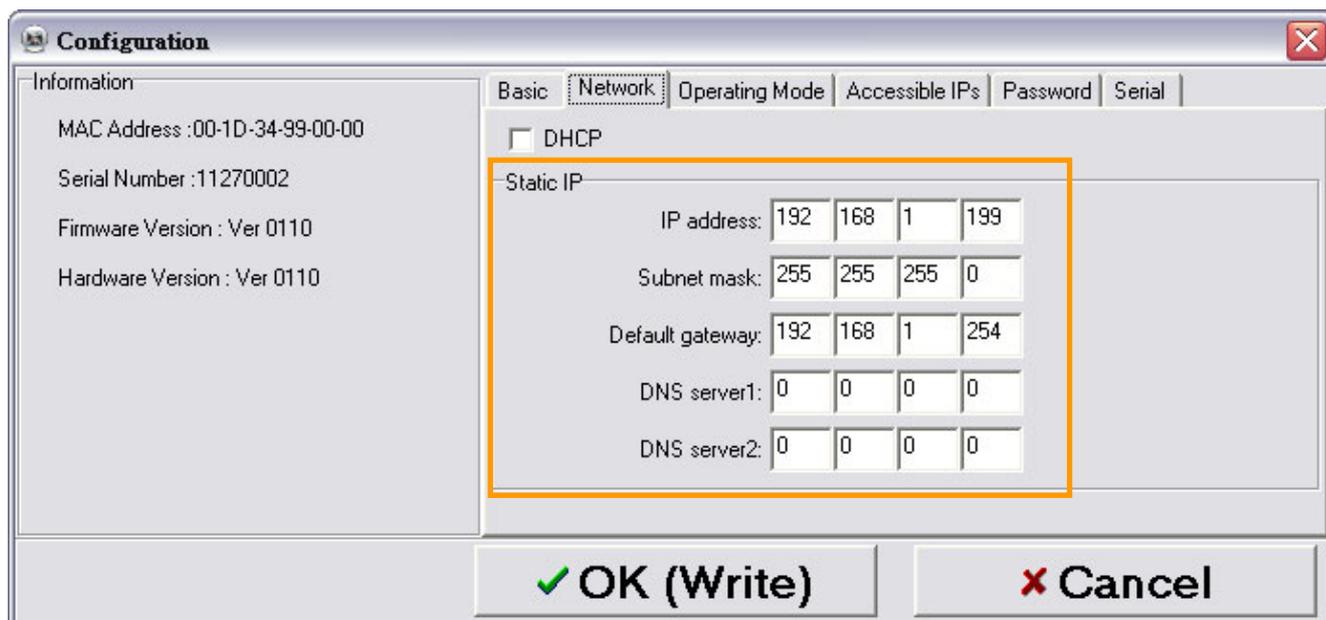
- 3-5.** The Configuration window has 6 tabs: Basic, Network, Operating Mode, Accessible IPs, Password and Serial.

- 3-6.** Basic: You can set Device Name and Device ID here.

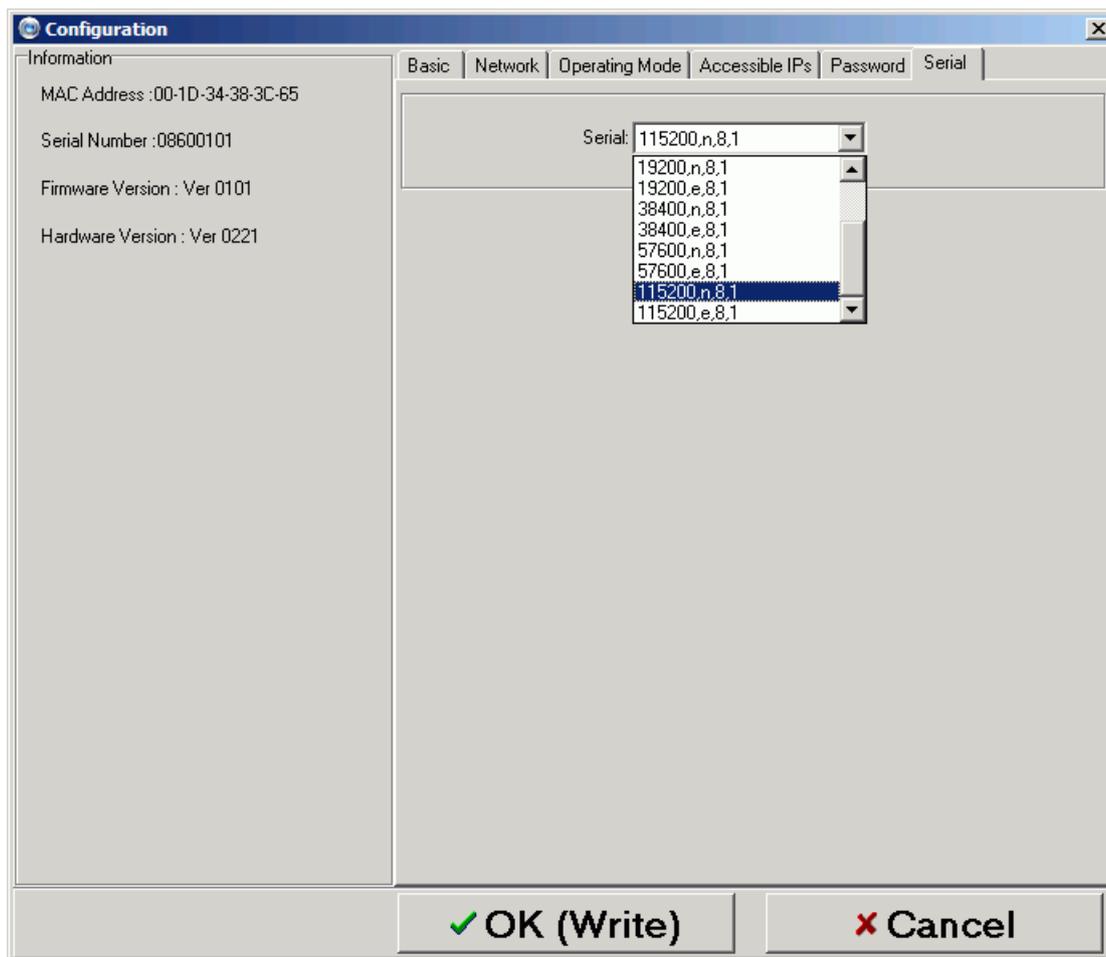


3-7. Network: You must assign a valid IP address to network module before it will work in your network environment. Your network system administrator should provide you with an IP address and related settings for your network. The IP address must be unique within the network. You can choose from 2 possible IP Configuration modes: Static, DHCP.

Method	Function Definition
Static	User defined IP address, Netmask, Gateway.
DHCP	DHCP Server assigned IP address, Netmask, Gateway and DNS



3-8. Serial: You should set up network module serial parameters as below diagram



3-9. Operating Mode:

Three different Socket Modes are available: TCP Server, TCP Client, and UDP mode. The main difference between the TCP and UDP protocols is that TCP guarantees delivery of data by requiring the recipient to send an acknowledgement to the sender. UDP does not require this type of verification, making it possible to offer speedier delivery. UDP also allows multicasting of data to groups of IP addresses.

3-10. In Data packing, please disable **Delimiter 1**、**Delimiter 2** and set **Force Tx Timeout** to **10**.

When you finished setting, please click **OK (Write)** button.

Configuration

Information

MAC Address : 00-1D-34-99-00-00

Serial Number : 11270002

Firmware Version : Ver 0110

Hardware Version : Ver 0110

Basic | Network | **Operating Mode** | Accessible IPs | Password | Serial

TCP Server Mode

Local TCP Port: 5001 Max Connection: 4

TCP Client Mode

Connect Mode: **Stop**

Destination IP 01: 0 0 0 0 Port: 5001

Destination IP 02: 0 0 0 0 Port: 5001

Destination IP 03: 0 0 0 0 Port: 5001

Destination IP 04: 0 0 0 0 Port: 5001

UDP Mode

Local TCP Port: 5001

Destination IP 01: 0 0 0 0 Port: 5001

Destination IP 02: 0 0 0 0 Port: 5001

Destination IP 03: 0 0 0 0 Port: 5001

Destination IP 04: 0 0 0 0 Port: 5001

Data Packing(Optional)

Delimiter 1 00 (0 - ff,Hex)

Delimiter 2 00 (0 - ff,Hex)

Force Tx Timeout: 10 (0 - 65535 ms)

Miscellaneous(Optional)

TCP Alive Check Timeout

0 (0 - 255 min)

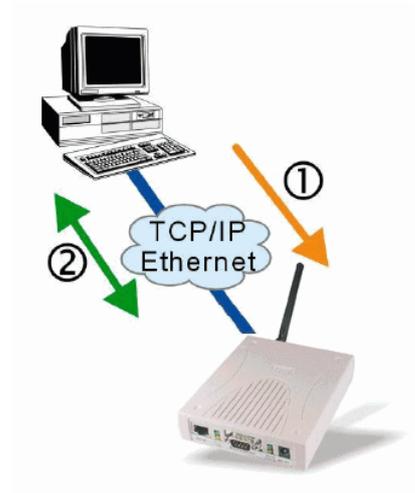
Inactivity Timeout

0 (0 - 65535 ms)

OK (Write) **Cancel**

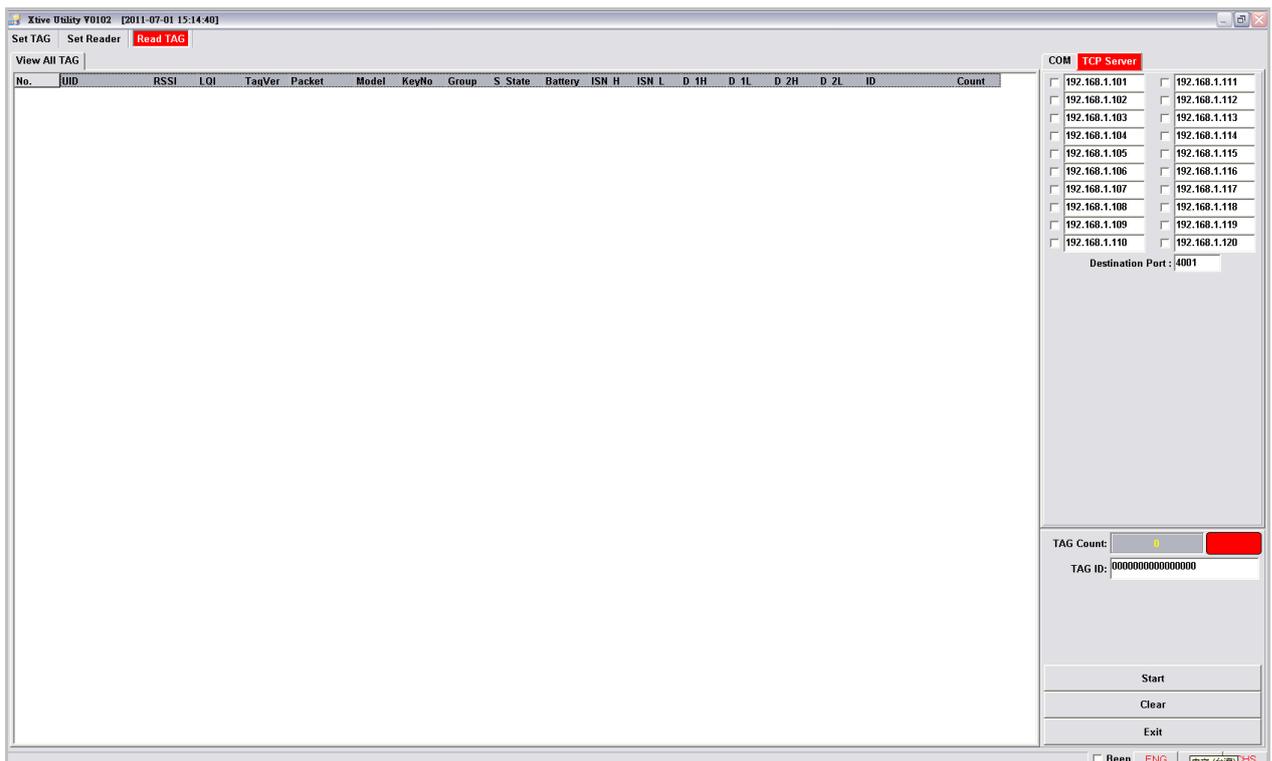
4. XT200 TCP Server Mode

In TCP Server mode, SYRD245-1N-N reader provides a unique IP:Port address on a TCP/IP network. SYRD245-1N-N 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.



4-1. Setting Operating Mode to TCP server mode.

4-2. When you finished change operating mode, you can execute [SYRIS Xtive_XT200.exe](#) to read TAG.



4-3. Select and modify correct IP address to communicate with Reader.

(You can communicate multi-reader at the same time)

COM **TCP Server**

<input type="checkbox"/>	192.168.1.101	<input type="checkbox"/>	192.168.1.111
<input type="checkbox"/>	192.168.1.102	<input type="checkbox"/>	192.168.1.112
<input checked="" type="checkbox"/>	192.168.1.103	<input type="checkbox"/>	192.168.1.113
<input checked="" type="checkbox"/>	192.168.1.104	<input type="checkbox"/>	192.168.1.114
<input checked="" type="checkbox"/>	192.168.1.105	<input type="checkbox"/>	192.168.1.115
<input type="checkbox"/>	192.168.1.106	<input type="checkbox"/>	192.168.1.116
<input type="checkbox"/>	192.168.1.107	<input type="checkbox"/>	192.168.1.117
<input type="checkbox"/>	192.168.1.108	<input type="checkbox"/>	192.168.1.118
<input type="checkbox"/>	192.168.1.109	<input type="checkbox"/>	192.168.1.119
<input type="checkbox"/>	192.168.1.110	<input type="checkbox"/>	192.168.1.120

Destination Port : 4001

4-4. Starting read TAG will receive Tag information from reader.

Xtvs Utility V0102 [2011-06-28 14:08:10]

Set TAG Set Reader **Read TAG**

View All TAG

No.	UID	RSSI	LOI	TagVer	Packet	Model	KeyNo	Group	S State	Battery	ISN H	ISN L	D 1H	D 1L	D 2H	D 2L	ID	Count
1	0001000110880011	108	211	10	00000001	02	00	00	00001111	15	00	00	FA	A6	3A	98	1234	9
2	0001000107461512	116	221	10	00000001	00	00	00	00001111	15	00	00	00	00	00	00	1234	2
3	2011061300000001	143	219	10	00000001	02	00	00	00001111	15	00	00	40	00	00	00	1234	2
4	0001000111230007	104	213	10	00000001	02	00	00	00001111	15	00	00	FB	33	3C	4D	1234	2
5	0001000111801159	121	221	10	00000001	00	00	00	00001101	15	00	00	00	00	00	00	1234	2
6	0001000109291029	100	185	10	00000001	00	00	00	00001111	15	00	00	00	00	00	00	1234	2
7	0001000107340328	123	163	10	00000001	00	00	00	00001111	15	00	00	00	00	00	00	1234	2
8	0001000111060275	102	211	10	00000001	00	00	00	00001111	15	00	00	00	00	00	00	1234	2
9	0001000107240004	111	223	10	00000001	00	00	00	00001111	15	00	00	00	00	00	00	1234	2
10	2010072910309009	160	223	10	00000001	02	00	00	00001111	15	00	00	40	00	00	00	1234	1
11	0001000108180928	107	223	10	00000001	00	00	00	00001111	15	00	00	00	00	00	00	1234	2
12	0001000111550010	196	235	10	00000001	00	00	00	00001001	15	00	00	00	00	00	00	1234	3
13	0001000107340322	127	227	10	00000001	00	00	00	00001111	15	00	00	00	00	00	00	1234	2
14	0001000111090014	94	213	10	00000001	00	00	00	00001101	15	00	00	00	00	00	00	1234	1
15	2010030900000007	111	217	10	00000001	02	00	00	00001111	15	00	00	40	00	00	00	1234	2
16	2011061300000002	183	233	10	00000001	02	00	00	00001111	15	00	00	40	00	00	00	1234	1
17	0001000110072001	111	231	10	00000001	00	00	00	00001111	15	00	00	00	00	00	00	1234	1
18	0001000110409503	130	239	10	00000001	00	00	00	00001001	15	00	00	00	00	00	00	1234	4
19	2010072910309003	175	231	10	00000001	02	00	00	00001111	15	00	00	40	00	00	00	1234	1
20	0001000107340318	120	223	10	00000001	00	00	00	00001111	15	00	00	00	00	00	00	1234	1
21	000100011102551	114	221	10	00000001	00	00	00	00001111	15	00	00	00	00	00	00	1234	1
22	0001000110261336	149	39	10	00000001	00	00	00	00001111	15	00	00	00	00	00	00	1234	1
23	0001000120100302	146	217	10	00000001	01	00	00	00001101	7	00	00	00	00	00	00	1234	1
24	0001000110483191	91	183	10	00000001	02	00	00	00001111	15	00	00	03	5F	03	5B	1234	1
25	0001000111070038	114	65	10	00000001	02	00	00	00001111	15	00	00	99	AA	07	22	1234	1
26	0001000110460007	158	237	10	00000001	02	00	00	00001111	13	00	00	FA	AA	3A	D1	1234	3
27	0009000900010001	158	237	30	00000000	25	00	00	00000010	103	F9	BF	00	00	00	00	1234	1
28	0009000900010003	144	239	30	00000000	25	00	00	00000010	103	C8	DF	00	00	00	00	1234	1
29	0009000900010005	178	235	30	00000000	25	00	00	00000010	104	6F	0D	00	77	F8	00	1234	1
30	1111222233334444	168	223	30	00000000	25	01	00	00000010	105	CD	A1	52	62	FE	00	1234	1

COM **TCP Server**

<input type="checkbox"/>	192.168.1.193	<input type="checkbox"/>	192.168.1.101
<input checked="" type="checkbox"/>	192.168.1.154	<input type="checkbox"/>	192.168.1.102
<input type="checkbox"/>	192.168.1.198	<input type="checkbox"/>	192.168.1.103
<input type="checkbox"/>	192.168.1.104	<input type="checkbox"/>	192.168.1.104
<input type="checkbox"/>	192.168.1.105	<input type="checkbox"/>	192.168.1.105
<input type="checkbox"/>	192.168.1.106	<input type="checkbox"/>	192.168.1.106
<input type="checkbox"/>	192.168.1.107	<input type="checkbox"/>	192.168.1.107
<input type="checkbox"/>	192.168.1.108	<input type="checkbox"/>	192.168.1.108
<input type="checkbox"/>	192.168.1.109	<input type="checkbox"/>	192.168.1.109
<input type="checkbox"/>	192.168.1.110	<input type="checkbox"/>	192.168.1.110

Destination Port : 5001

TAG Count: 30

TAG ID: 0001000107340322

Start

Clear

Exit

Beep ENG CHT CHS

4-5. Field Introduction:

UID: Tag's identification number.

RSSI: Received Signal Strength Indication (0-255). Reading range and RSSI are inverse proportion.

LQI: Link quality indicator. (0-255)

TagVer: Tag's data format version. (10 is V1, 20 is V2, 30 is V3)

Packet: Tag's data information.

Bit 1 - AES (1 = AES on / 0 = AES off)

Bit 0 - C/UID(0 = CID / 1 = UID) °

Model: Tag's model type.

Key NO: If AES is on, this column will show AES key depart number.

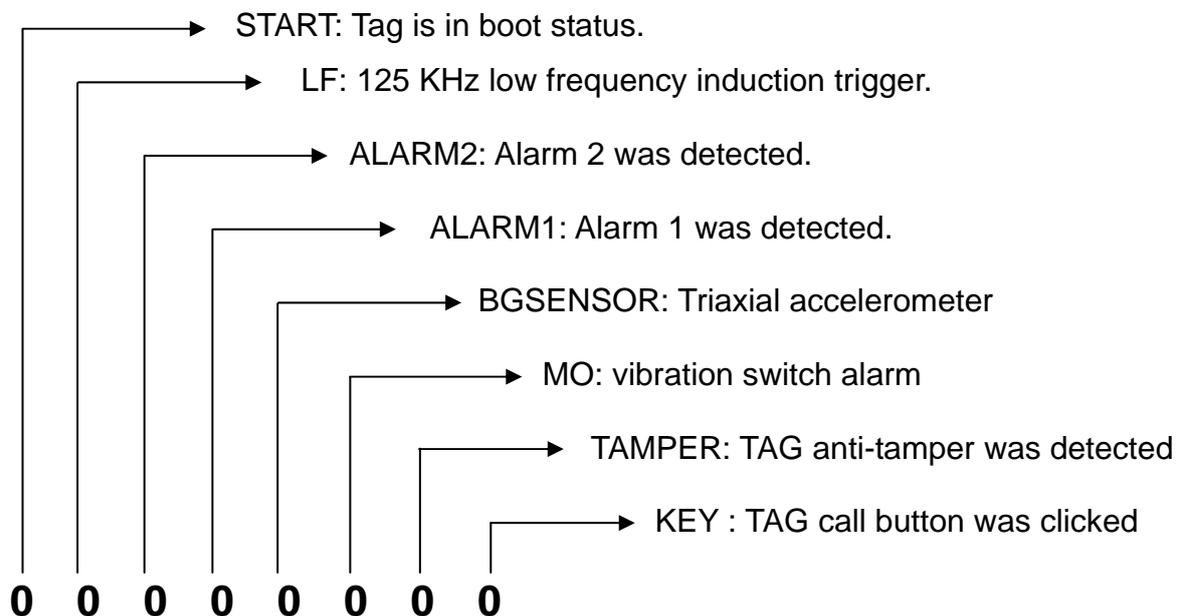
Group: Tag's group number.

Battery: Tag's battery status (V1: battery level 0~15, V3: Voltage is "Battery: x 0.0293)

ISN: Tag's packet serial number.

D1, D2: Tag's data (ex. Temperature sensor, humidity sensor.)

ID: Reader's device ID(XT200).



5. Set Reader

Click Set Reader and select correct operating mode to communicate with Reader

Set TAG	Set Reader	Read TAG	
COM	TCP Server		
IP :	<input type="text" value="192.168.1.101"/>	Port : <input type="text" value="4001"/>	<input type="checkbox"/> ID <input type="text" value="0000"/>
Select Function			
Reader Reset		Reader Initial	
Get Version		Get Reader S/N	
Get Reader ID	<input type="text" value="0001"/>	Set Reader ID	
Get Zigbee GID	<input type="text" value="0001"/>	Set Zigbee GID	
Get Zigbee MODE	<input type="text" value="Coordinator"/>	Zigbee MODE	
TAG SEND MODE		Version Filter	
MODE	GET	<input checked="" type="checkbox"/> TAG VER 1	
<input type="text" value="STOP SEND"/>		<input checked="" type="checkbox"/> TAG VER 2	
		<input checked="" type="checkbox"/> TAG VER 3	
RSSI Filter		VERSION GET	
RSSI	GET		
<input type="text" value="0"/>			
AES128	ADMAIN	GUEST	
Exit			

Select Function		
Reader Reset		Reader Initial
Get Version		Get Reader S/N
Get Reader ID	0001	Set Reader ID
Get Zigbee GID	0001	Set Zigbee GID
Get Zigbee MODE	Coordinator	Zigbee MODE

Reader Reset : Reset online reader. Reader will warm restart.

Reader Initial : Initial online reader. All setting will set to factory default.

Get version : Get reader's firmware version.

Get Reader S/N : Get reader's serial number.

Get Reader ID: Get the ID of the reader.

Set Reader ID: Input the number to ID field and then click "**Set Reader ID**" to change Reader's ID.

Get Zigbee GID: Get the Zigbee group ID of the reader.

Set Zigbee GID: Input the number to group field and then click "**Set Zigbee ID**" to change Zigbee group ID.

Get Zigbee MODE/ Set Zigbee MODE : Get / set Zigbee operating mode to coordinator or router.

GUEST tab

TAG SEND MODE MODE GET STOP SEND	Version Filter <input checked="" type="checkbox"/> TAG VER 1 <input checked="" type="checkbox"/> TAG VER 2 <input checked="" type="checkbox"/> TAG VER 3 VERSION GET
RSSI Filter RSSI GET ◀ 0 ▶	
AES128 ADMIN GUEST	

TAG SEND MODE: Set reader's auto send mode when receive tag.

STOP SEND - Stop to receive tag.

AUTO SEND - Receive tag's data automatically.

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

Version Filter: Filter the version of tag.

ADMAIN tab

The screenshot shows a web interface for the 'ADMAIN' tab. At the top, there is a 'SELECT KEY' section with a 'SELECT KEY' button, a 'GET' button, and a 'PIN:' field containing '0000000000000000'. Below this, there is a 'SELECT KEY' label followed by eight checkboxes labeled 'KEY-1' through 'KEY-8', all of which are checked. At the bottom of the interface, there are three tabs: 'AES128', 'ADMAIN' (which is selected), and 'GUEST'.

PIN: Input correct PIN to configure key.

SELECT KEY: Select to active AES key (1~8).

AES128 tab

The screenshot shows a web interface for the 'AES128' tab. At the top, there is an 'AES-128 KEY SET' section with a 'SET AES KEY' button and a 'PIN:' field containing '0000000000000000'. Below this, there is a dropdown menu labeled 'KEY 1' and an 'AES KEY:' field containing '00000000000000000000000000000000'. At the bottom of the interface, there are three tabs: 'AES128' (which is selected), 'ADMAIN', and 'GUEST'.

PIN: Input correct PIN to configure key.

SET AES KEY: Select key number and input new AES KEY to setup.

(Please remember configured AES key, You can't read from reader when you forgot.)

6. Set TAG

Click Set TAG and select correct operating mode to communicate with Reader to set selected TAG's parameters

TAG ID : Select current ID mode and input correct ID to configure tag.

The screenshot shows the 'Xtive Utility_XT200 V0102 [2011-12-01]' window. The 'Set TAG' tab is active. Under the 'COM' section, 'TCP Server' is selected. The IP is set to 192.168.1.203, the Port is 5001, and the ID checkbox is checked with the value 0264. A 'Select Function' button is present. The 'TAG ID' section shows 'ID Mode' set to 'UID Mode' and 'ID' set to '2011081922000002'. Below this are several parameter settings: 'Active Time' (0.01 Sec), 'Active Count' (1), 'Receive Count' (0), 'Beep' (0.1 Sec), 'LED-R' (0.1 Sec), and 'LED-G' (0.1 Sec). At the bottom, there are tabs for 'AES-128', 'TAG-ADMIN', 'TAG-GUEST', and 'V1 TAG SET'. An 'Exit' button is also visible. The status bar at the bottom shows '0000000004 / 00000000 sec'.

TAG-GUEST tab

PIN: Input correct PIN to configure.

Active Time: Tag's transmits frequency

Active Count: Tag's transmits frequency multiple (1~255)

TAG Active Time = Multiple x Transmits Frequency

Ex. Set TAG active time to 1 minute:

Multiple (6) x Transmits Frequency (10 sec) = 60 sec

Receive Count : Modify receive frequency of selected TAG.

TAG receive frequency = TAG Active Time x Receive Count

Ex. TAG Active time = 1 x 2.5sec Receive Count =10

TAG receive frequency = 1 x 2.5sec x 10 = 25 sec

Note: Set TAG receive count=0, TAG will stop received any signal from reader. Remove the TAG case and reload battery to set factory default will solve this problem.

Beep : Remote TAG to beep. Adjust the beep second to set time of beep on.

LED-R : Turn on the red LED of selected TAG. Adjust the LED second to set time of LED on.

LED-G : Turn on green the LED of selected TAG. Adjust the LED second to set time of LED on.

TAG-ADMAIN tab

Tag only can be configure these parameters in boot status.

When you reboot tag, tag will in boot status 30 seconds, and then auto switch to normal status.

The screenshot shows the TAG-ADMAIN configuration screen. On the left, there is a PIN input field containing '0000000000000000'. In the center, the 'CID SET' section contains four input boxes, each with '0001', and a 'SET CID' button below them. On the right, the 'UID/CID Mode' section has three dropdown menus: 'ID MODE SET' (set to 'CID MODE'), 'AES ON/OFF' (set to 'AES128 OFF'), and 'SELECT KEY' (set to 'KEY-1'). At the bottom, there are three tabs: 'AES-128', 'TAG-ADMAIN', and 'TAG-GUEST', with 'TAG-ADMAIN' being the active tab.

PIN: Input correct PIN to configure.

CID SET : Set tag's ID to Customize ID, This

UID/CID Mode : 1. ID MODE SET: Select Tag's ID mode to CID or UID.

2. AES ON/OFF: Select to active AES key or not.

3. SELECT KEY : Select active AES key number.

TAG-AES128 tab

The screenshot shows the TAG-AES128 configuration screen. It has a 'SET TAG KEY' button, a 'KEY 1' dropdown menu, and a 'KEY:' input field containing '00000000000000000000000000000000'. Below these is a 'PIN:' input field with '0000000000000000'. At the bottom, there are three tabs: 'AES-128', 'TAG-ADMAIN', and 'TAG-GUEST', with 'AES-128' being the active tab.

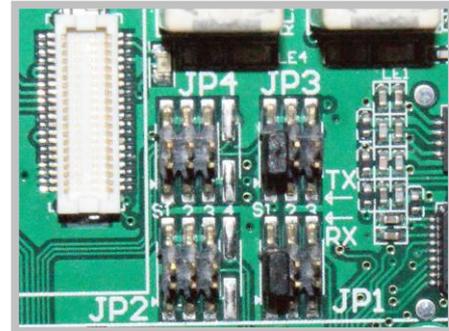
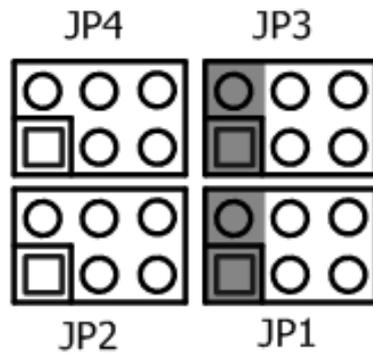
PIN: Input correct PIN to configure.

SET TAG KEY : Select key number and input new AES KEY to setup.

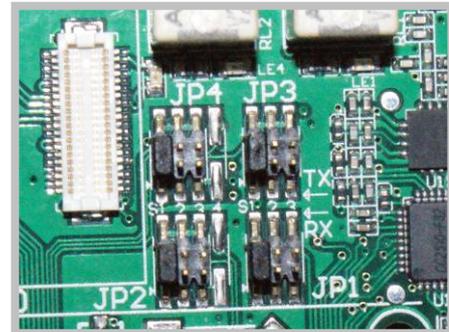
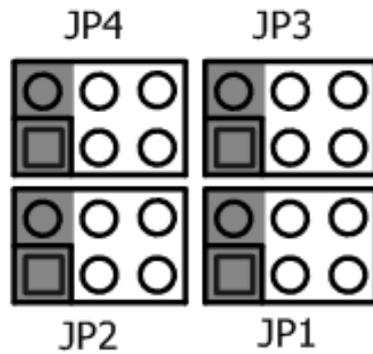
(Please remember AES key, You can't read from tag when you forgot.)

7. Zigbee, Wi-Fi and GPRS JUMPER Switch

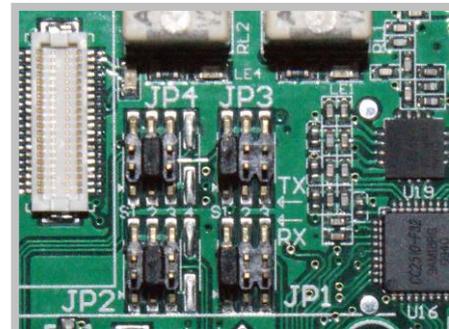
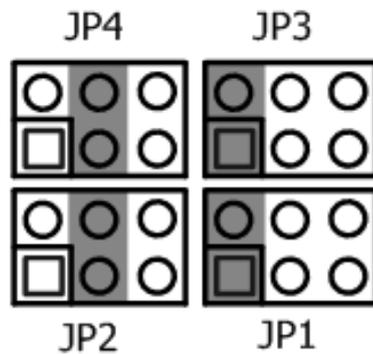
Ethernet



Zigbee



GPRS (MDGPRS)
MDWIFI-2
MDBT-2



MDWIFI-3
MDBT-3

