XT200

Intelligent Network Router

Installation Manual

V0103

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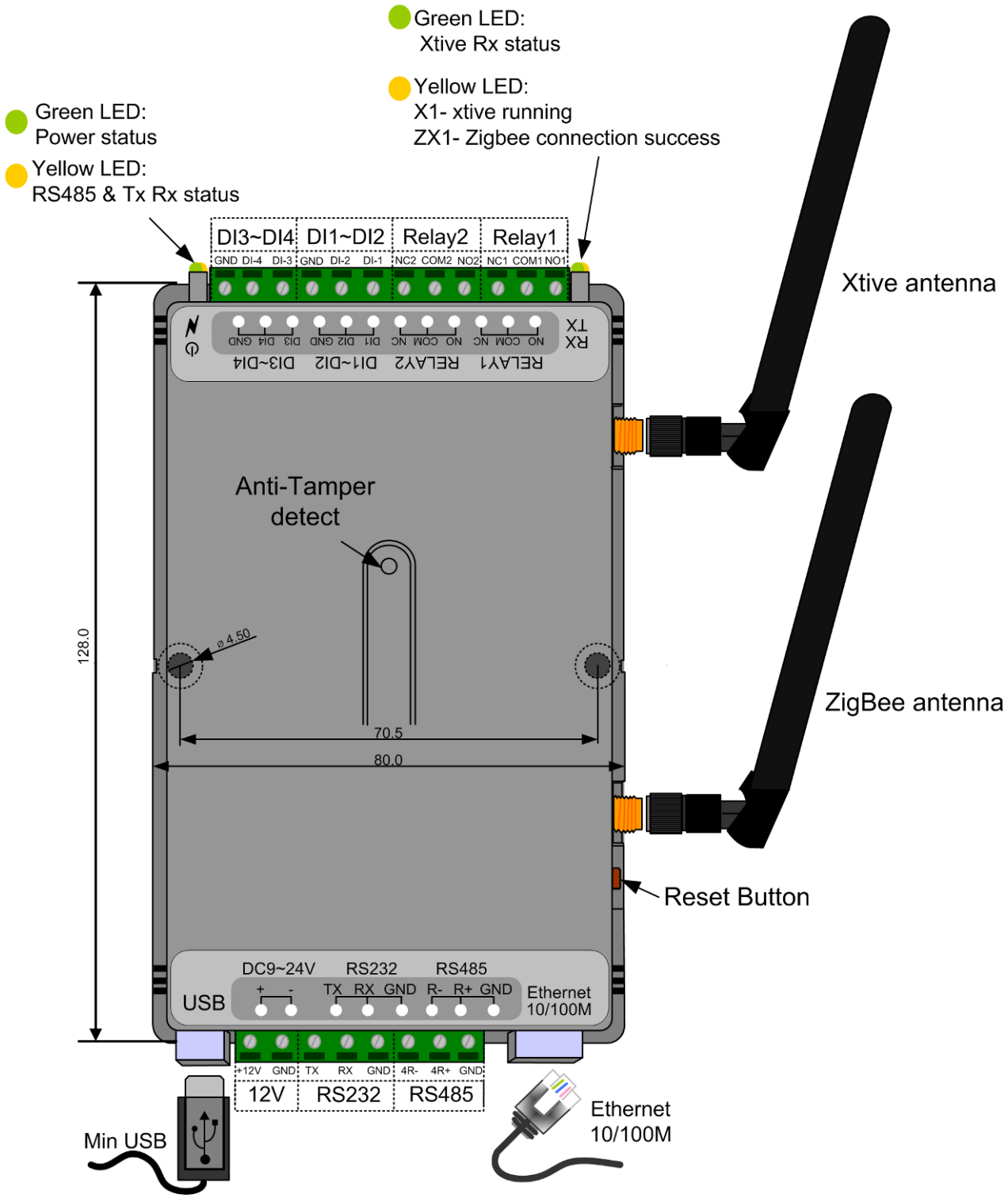
1. Product Specification

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 ^{o}C to 65 ^{o}C, 5 to 95%RH
Storage Temperature	-30 ^{o}C to 85 ^{o}C, 5 to 95%RH
Antenna	2 dbi external omni-directional antenna (replaceable)
Dimension	138W x 78H x 30D (mm)

2. XT200 Hardware Diagram

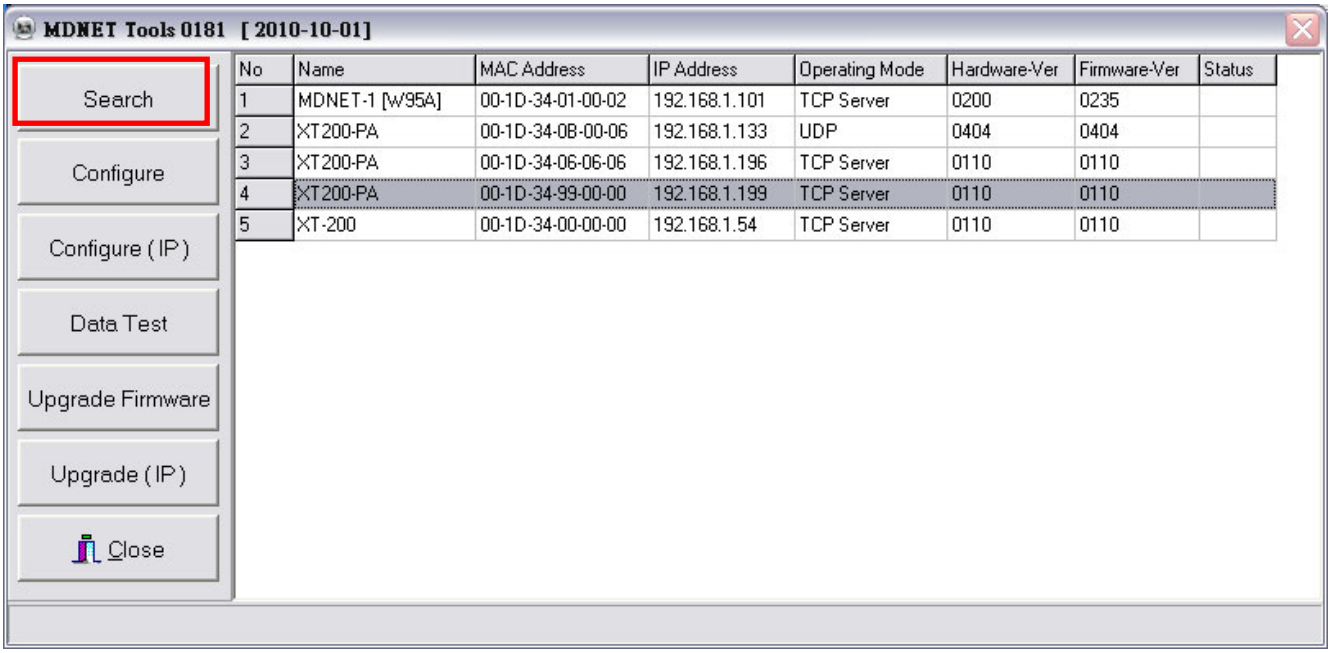


- **To avoid wireless interference, please keep more than 50cm interval for each device.**

3. Network module Setting (X1，ZX1)

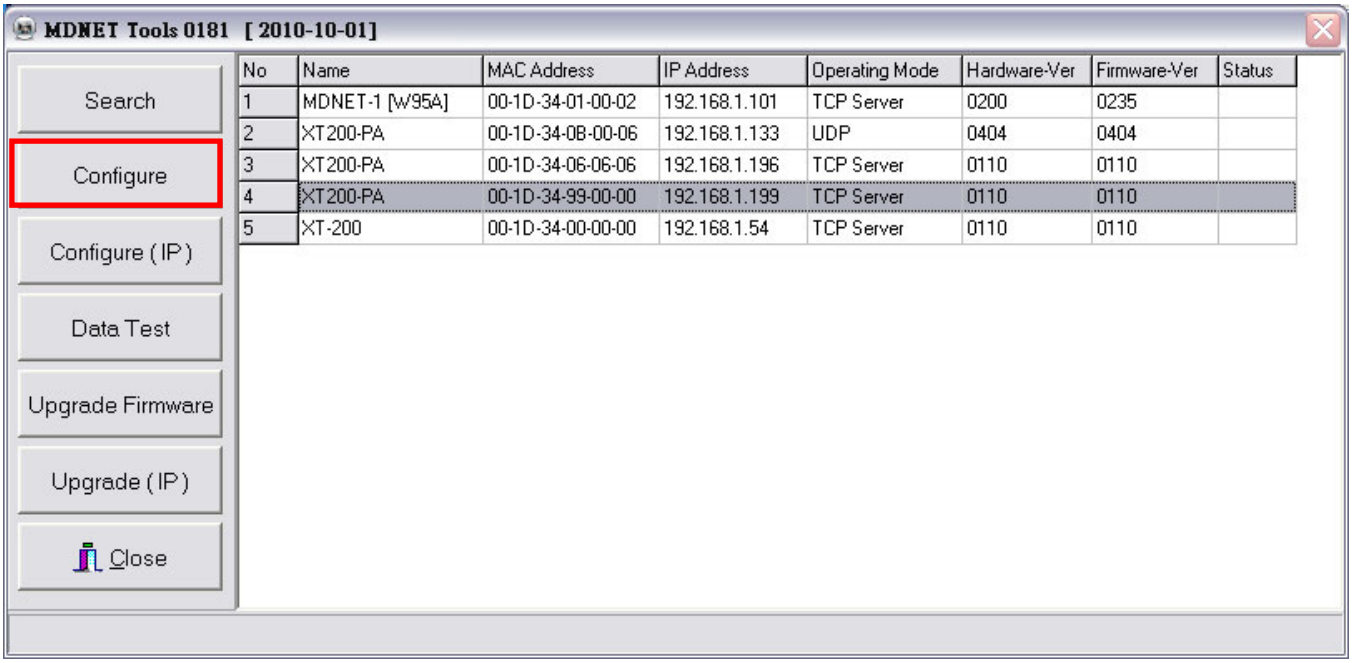
3-1. Connect to device: Follow the wiring diagram (Page 2) plug the power, network and antenna in then execute MDNET Tool.

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).



No	Name	MAC Address	IP Address	Operating Mode	Hardware-Ver	Firmware-Ver	Status
1	MDNET-1 [W95A]	00-1D-34-01-00-02	192.168.1.101	TCP Server	0200	0235	
2	XT200-PA	00-1D-34-0B-00-06	192.168.1.133	UDP	0404	0404	
3	XT200-PA	00-1D-34-06-06-06	192.168.1.196	TCP Server	0110	0110	
4	XT200-PA	00-1D-34-99-00-00	192.168.1.199	TCP Server	0110	0110	
5	XT-200	00-1D-34-00-00-00	192.168.1.54	TCP Server	0110	0110	

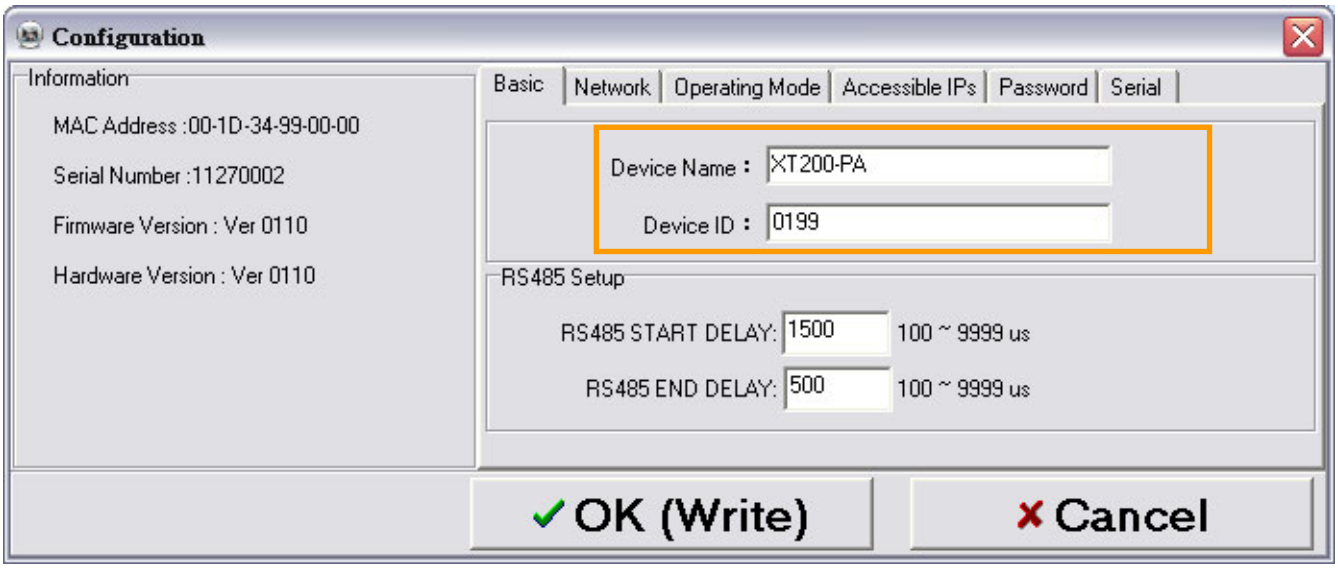
3-3. After the search is finished, all network module found will be shown in the right panel of the window. If you locate more than one module connected to this network, refer to the MAC address on the module(s) to determine which modules are the ones you wish to configure.



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

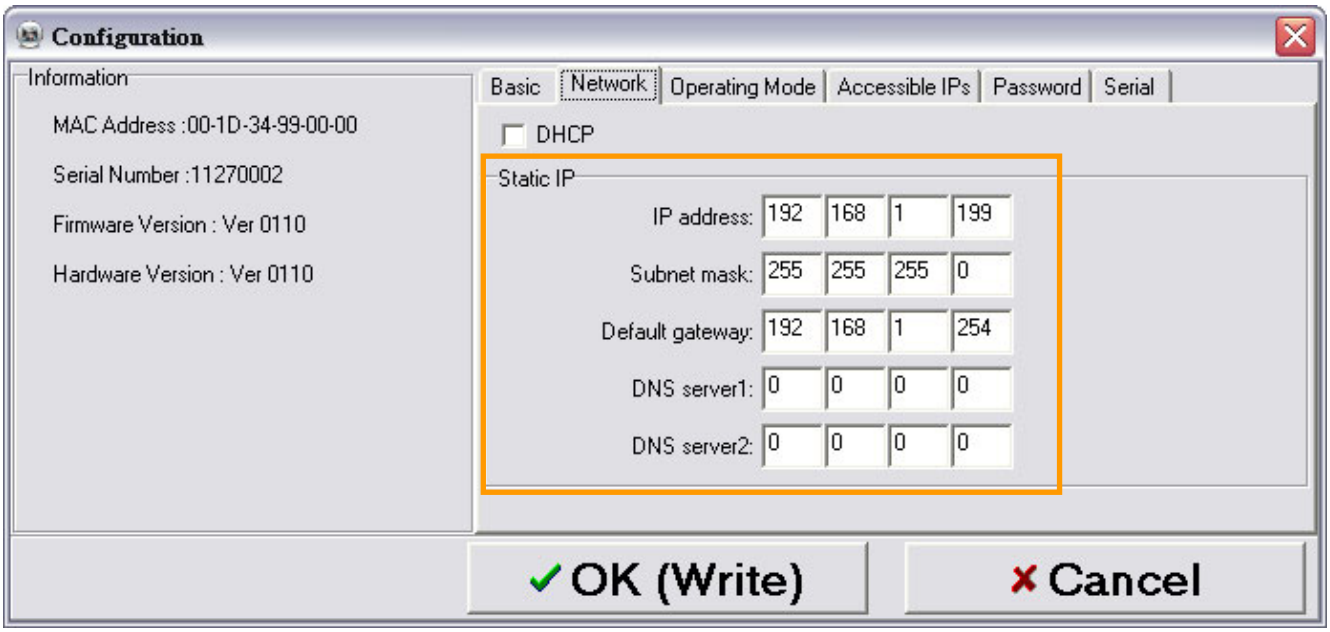
3-5. The Configuration window has 6 tabs: Basic, Network, Operating Mode, Accessible IPs, Password and Serial.

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

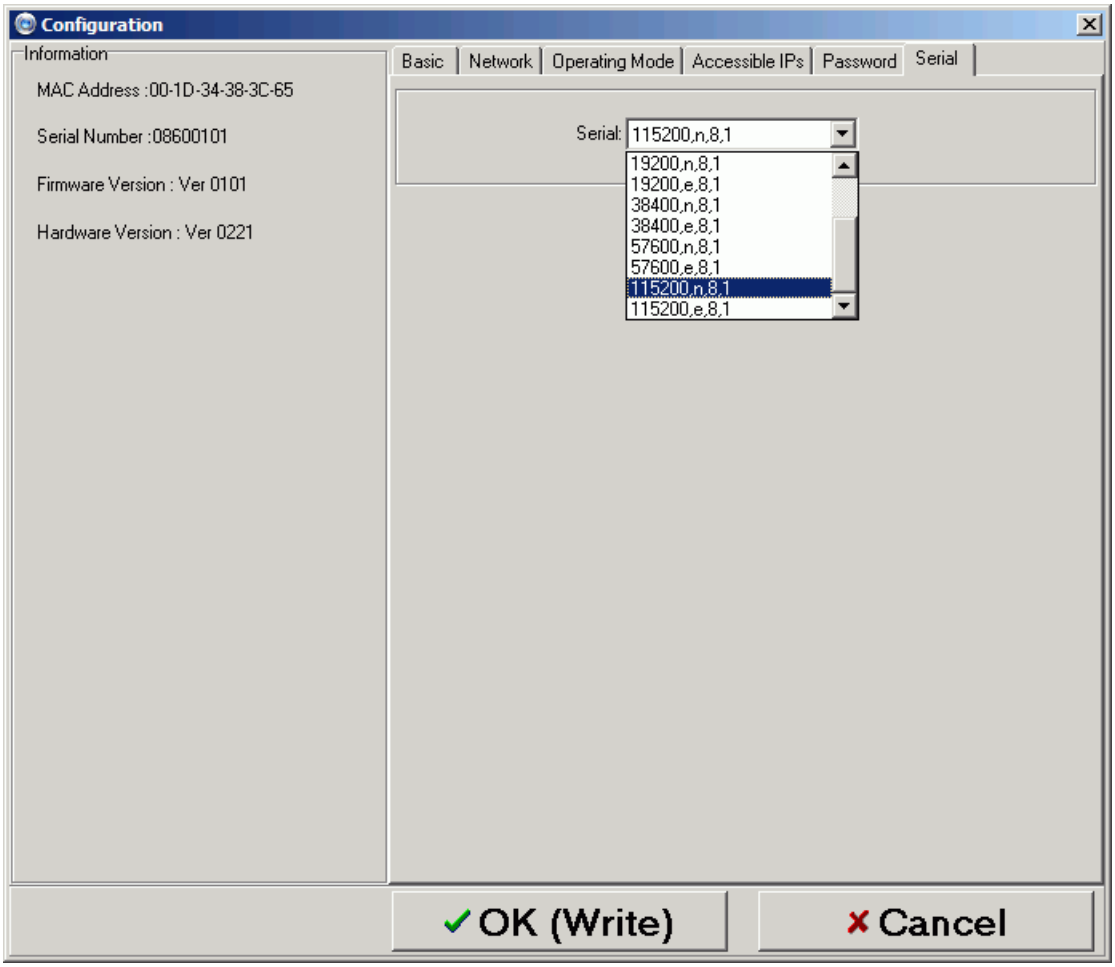


3-7. Network: You must assign a valid IP address to network module before it will work in your network environment. Your network system administrator should provide you with an IP address and related settings for your network. The IP address must be unique within the network. You can choose from 2 possible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

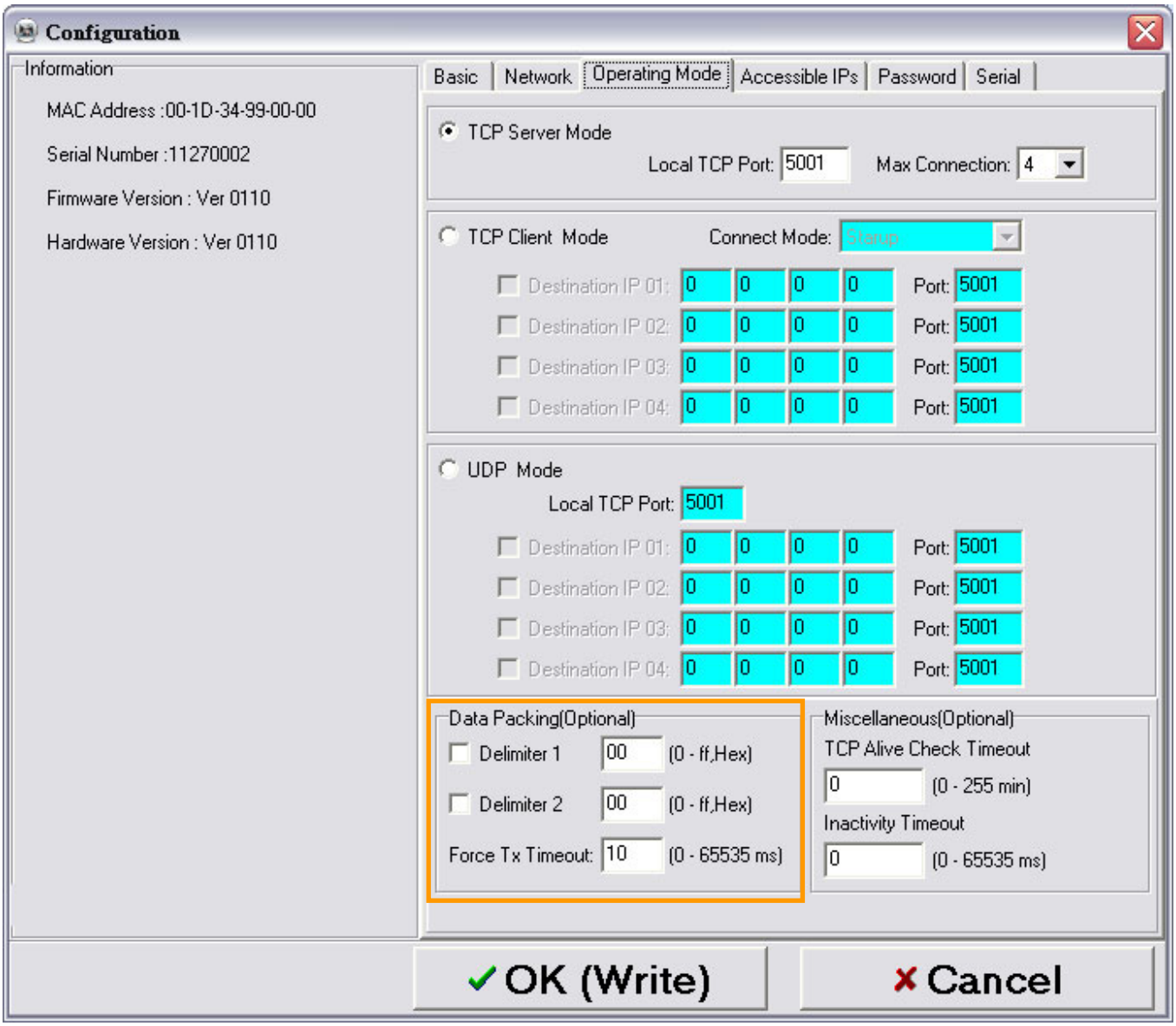


3-9. Operating Mode:

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.

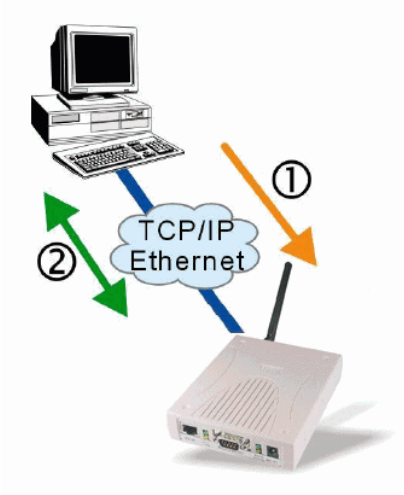
3-10. In Data packing, please disable **Delimiter 1**、**Delimiter 2** and set **Force Tx Timeout** to **10**.

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



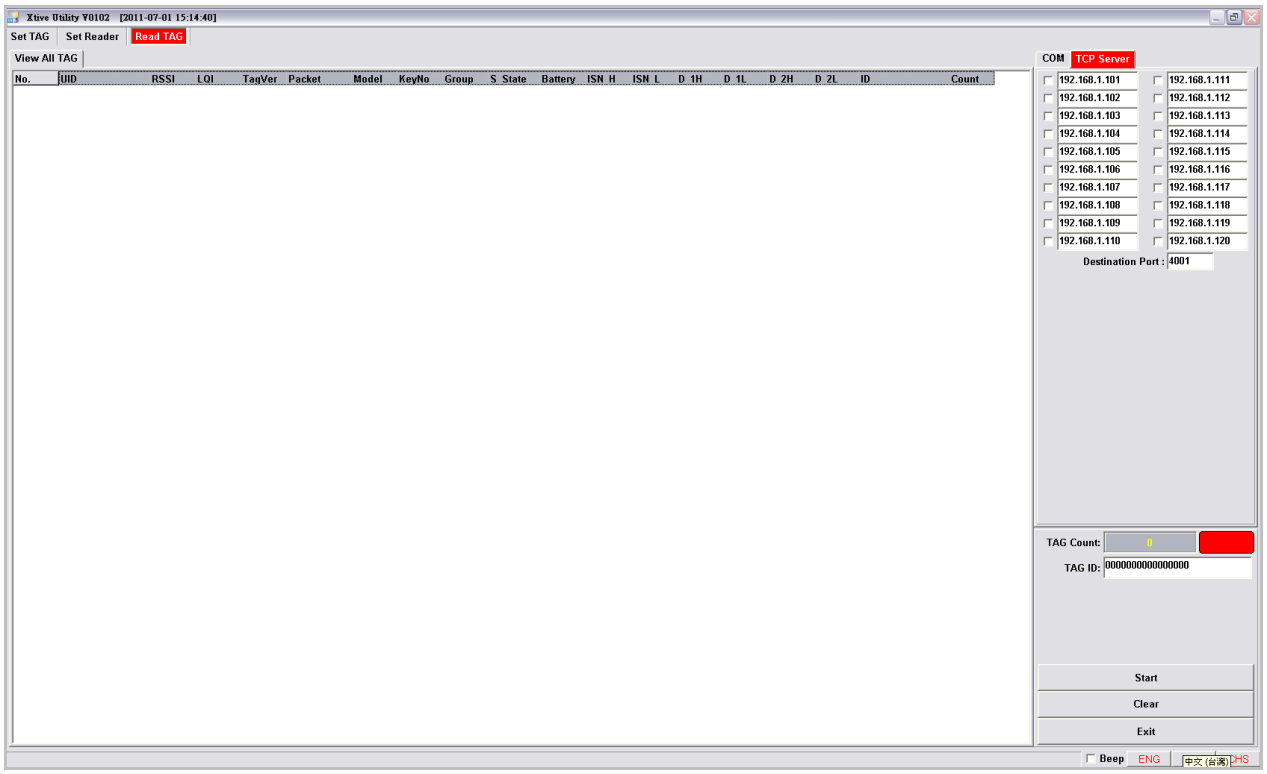
4. XT200 TCP Server Mode

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.



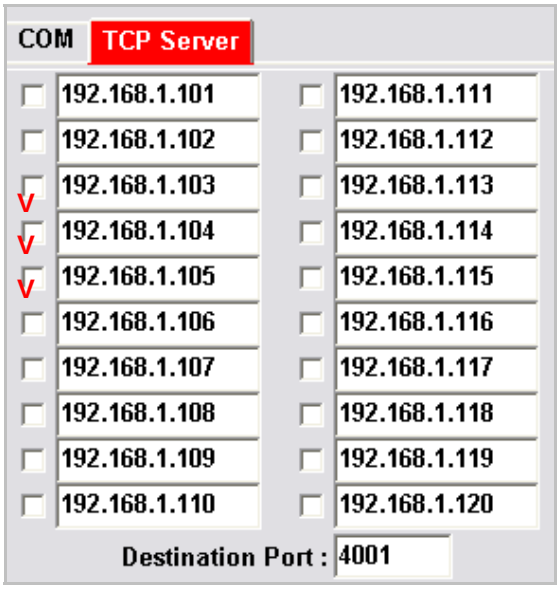
4-1. Setting Operating Mode to TCP server mode.

4-2. When you finished change operating mode, you can execute SYRIS Xtive_XT200.exe to read TAG.

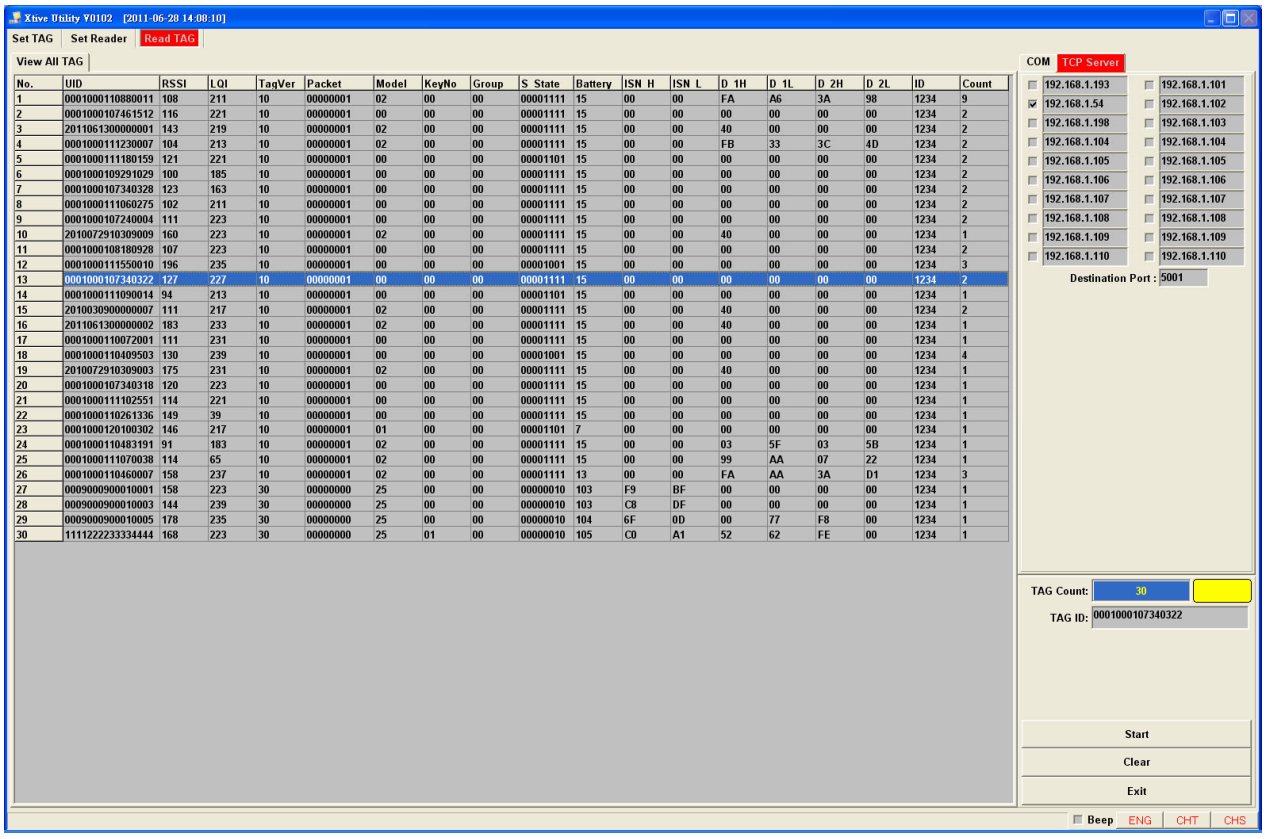


4-3. Select and modify correct IP address to communicate with Reader.

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



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



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.

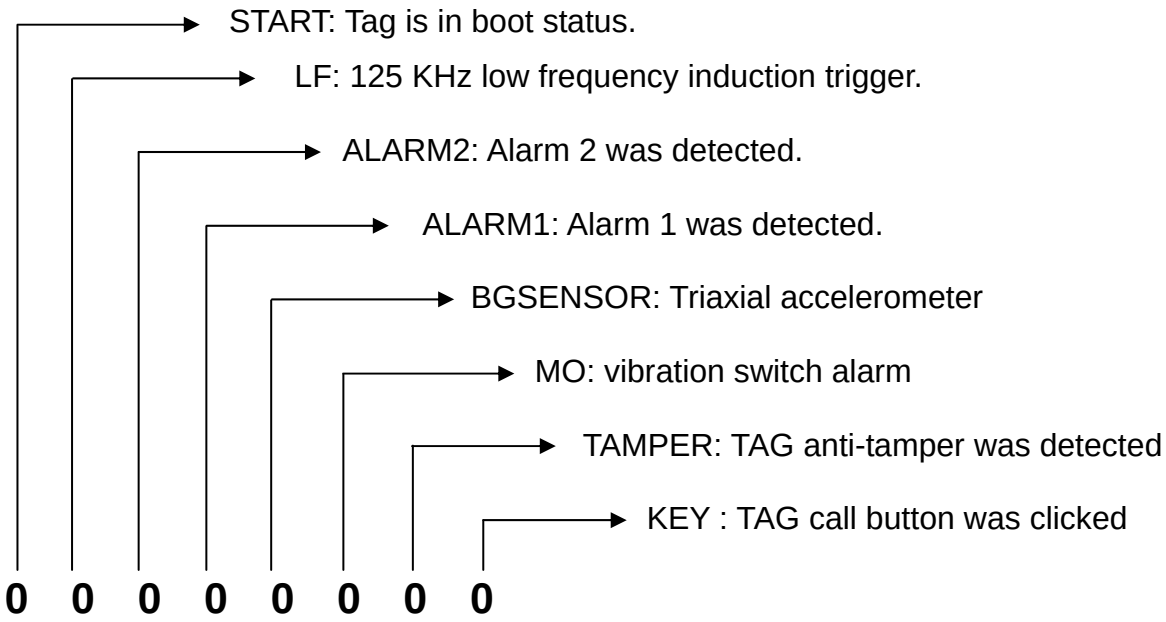
Group: Tag's group number.

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

ISN: Tag's packet serial number.

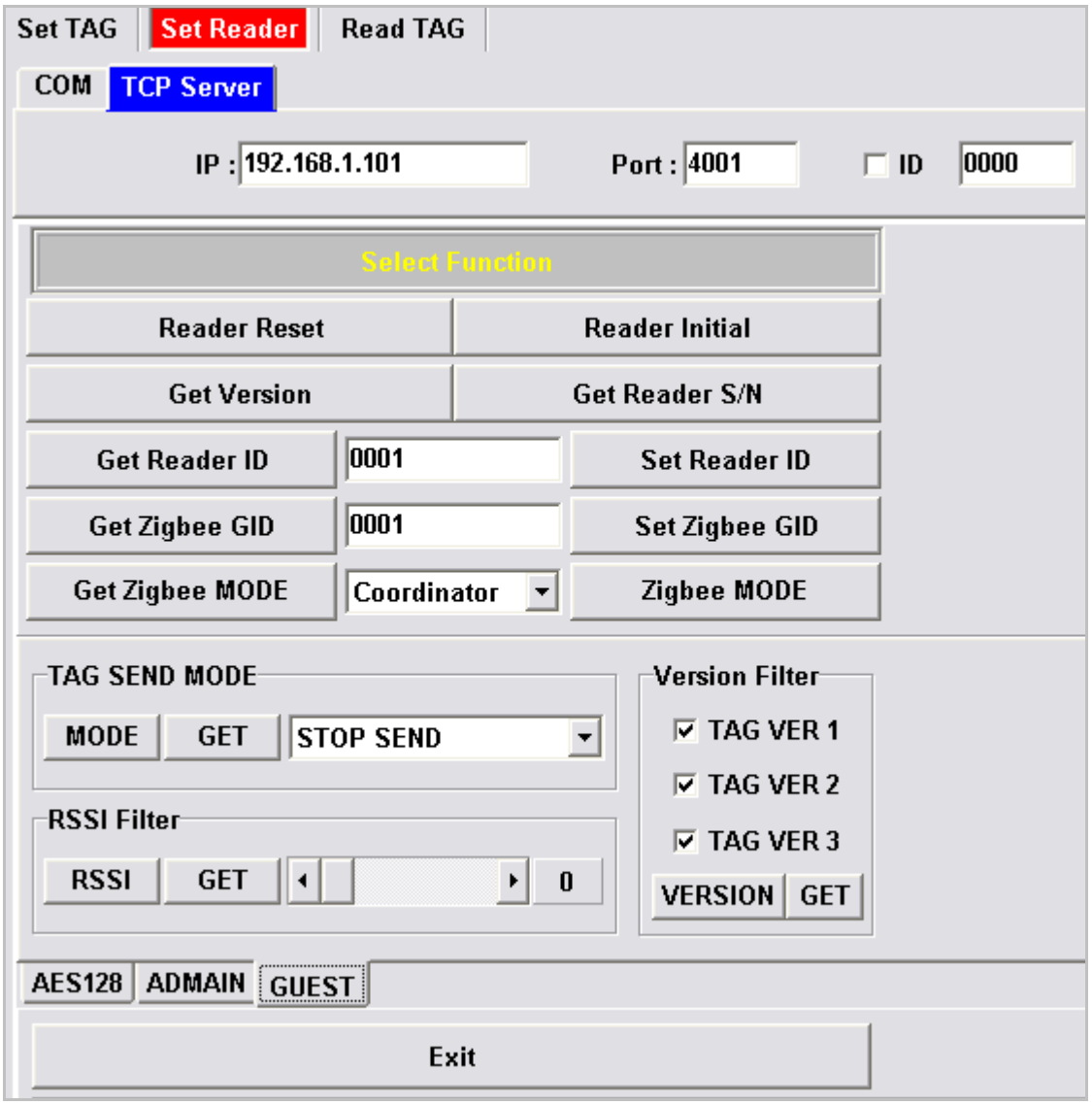
D1, D2: Tag's data (ex. Temperature sensor, humidity sensor.)

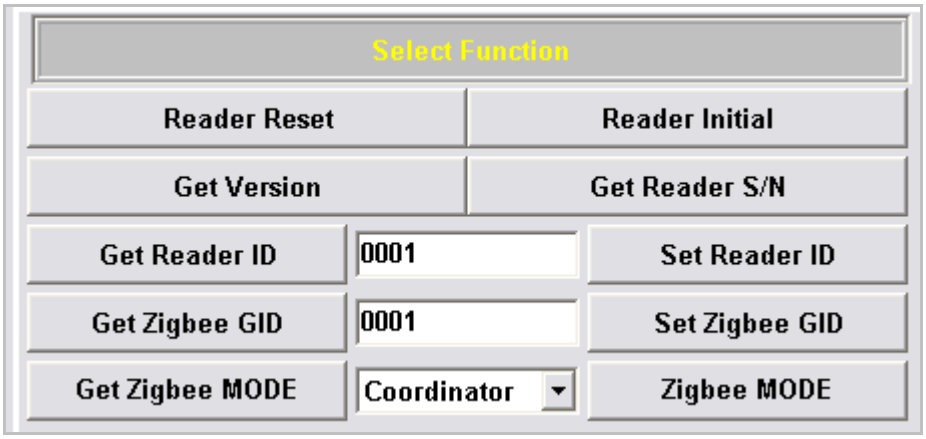
ID: Reader's device ID(XT200).



5. Set Reader

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





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.

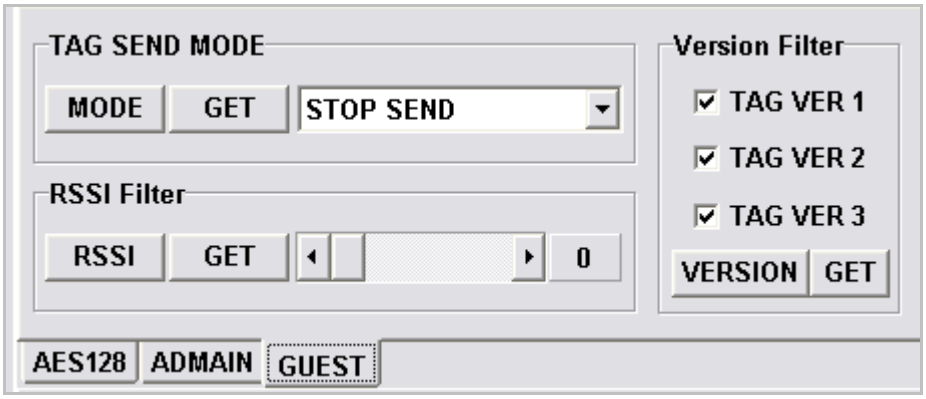
Set Reader ID: Input the number to ID field and then click "**Set Reader ID**" to change Reader's ID.

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: 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.

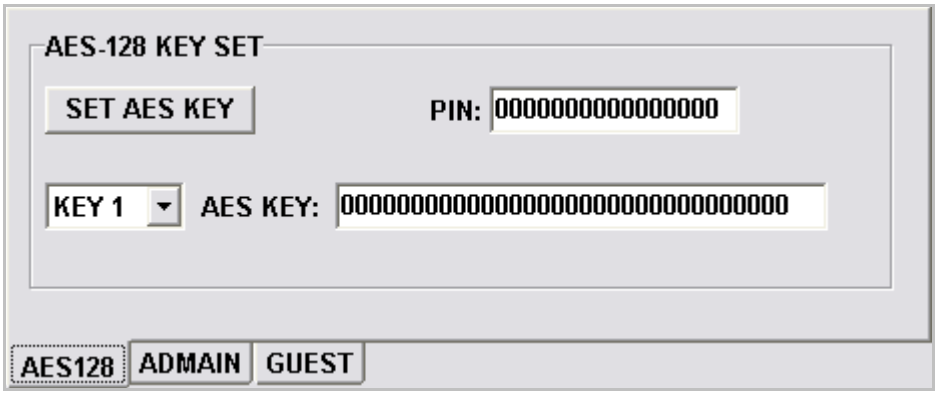
Version Filter: Filter the version of tag.

ADMAIN tab

PIN: Input correct PIN to configure key.

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

AES128 tab



PIN: Input correct PIN to configure key.

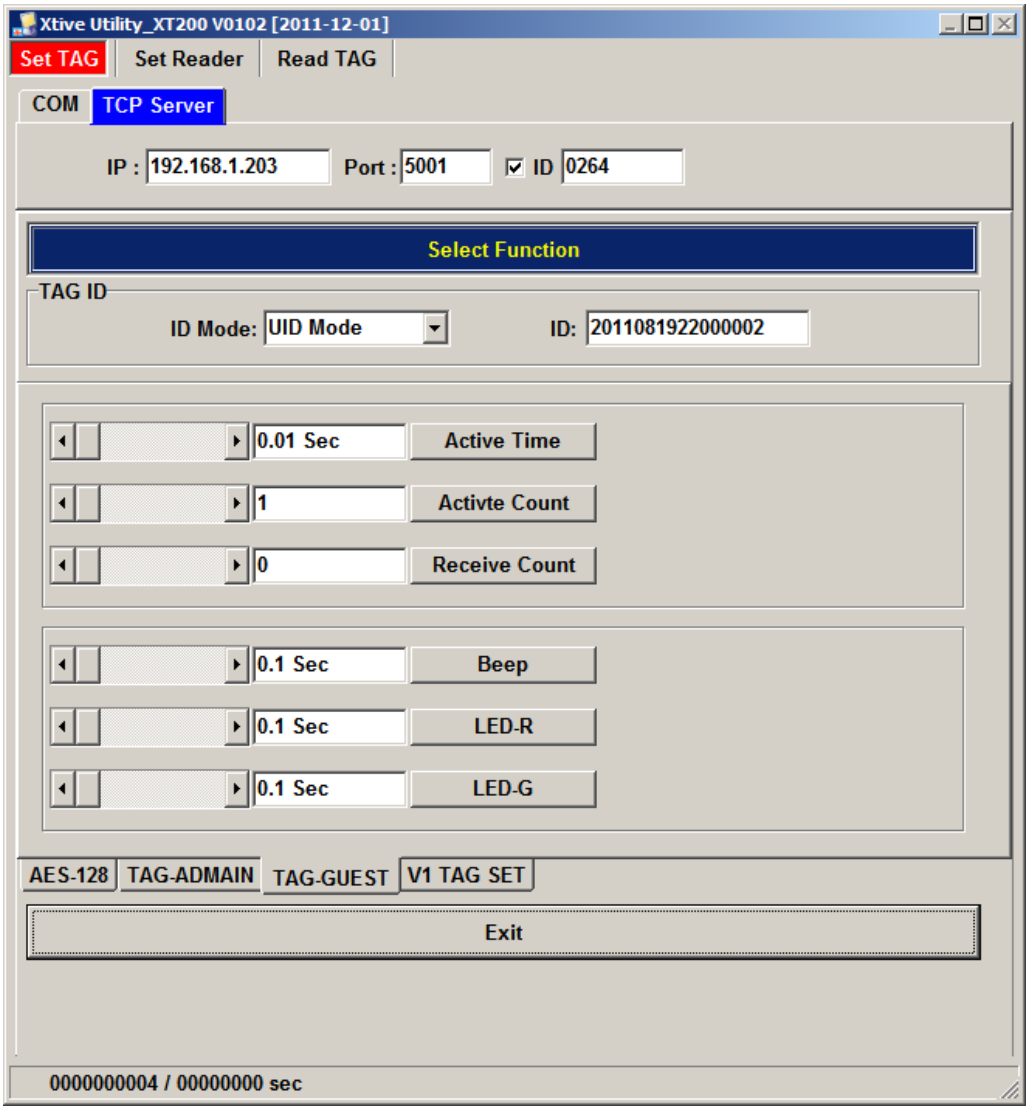
SET AES KEY: Select key number and input new AES KEY to setup.

(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.



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.

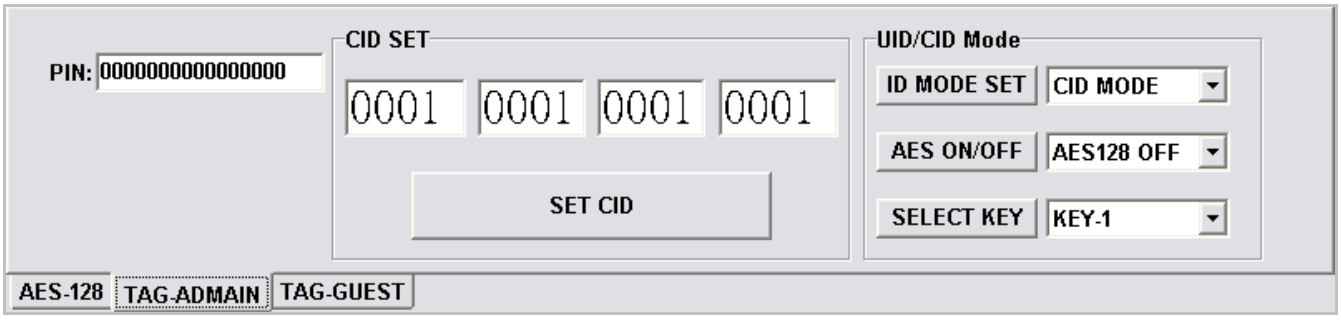
LED-R：Turn on the red LED of selected TAG. Adjust the LED second to set time of LED on.

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.



PIN: Input correct PIN to configure.

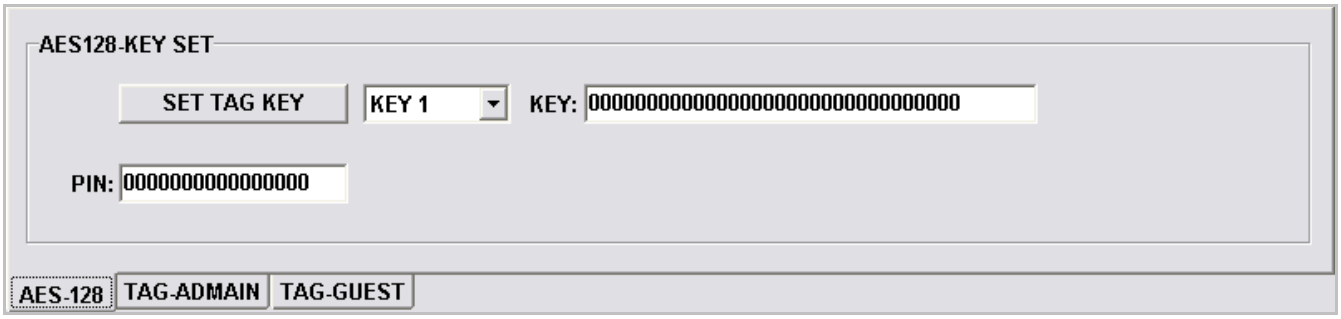
CID SET：Set tag's ID to Customize ID, This

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



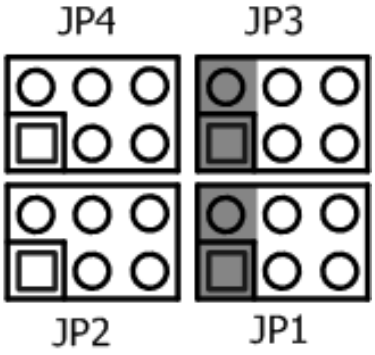
PIN: Input correct PIN to configure.

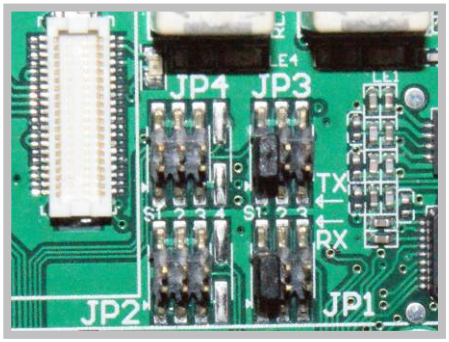
SET TAG KEY：Select key number and input new AES KEY to setup.

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

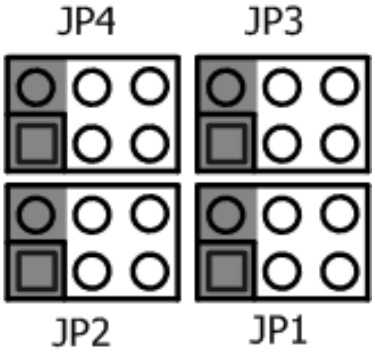
7. Zigbee, Wi-Fi and GPRS JUMPER Switch

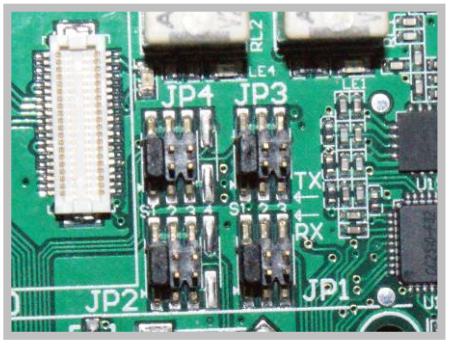
Ethernet



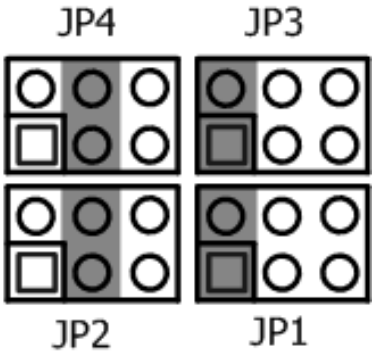


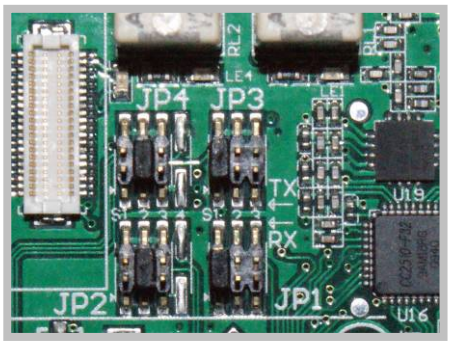
Zigbee





GPRS (MDGPRS)
MDWIFI-2
MDBT-2





MDWIFI-3
MDBT-3