

RS232/RS485/RS422 to TCP/IP Converter

ITEM NO.: RS007



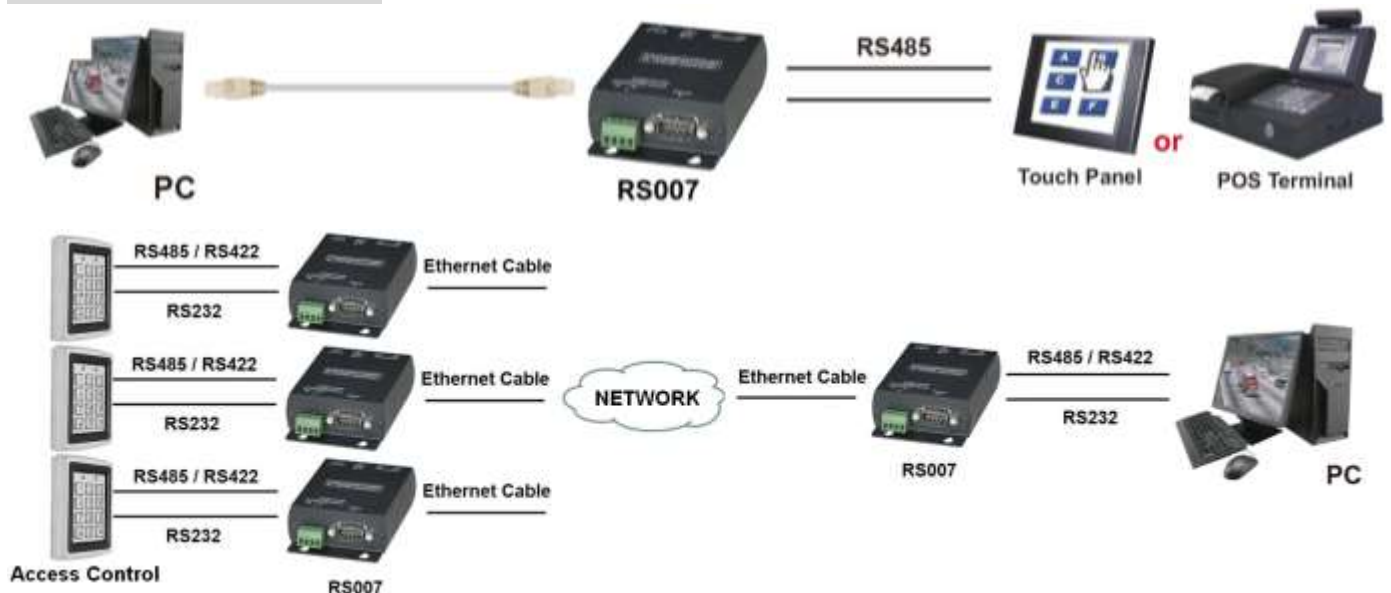
RS007 is a universal data converter which support serial RS232, RS422 and RS485 to the TCP / IP intelligent communication converter, it offers RS485/RS422 and RS232 to TCP / IP network, as well as TCP / IP network to the RS485 and RS232 transparent data transmission, it converter RS485 and intelligent communication the data received on the RS232 serial port, transparent transmission of data to the network server, data server data issued by the network at the same time conveying to intelligent communication converter, RS485 and RS232 serial port. The RS007 10M/100M Ethernet interface up and down a standard RS485/422 and an RS232 serial port communication parameters can set your browser, the baud rate from 1200bps ~ 115200bps. Applicable to a variety of network environments.

RS007 RS232/RS422/RS485 to Ethernet (TCP/IP) Converter

Features:

- RS232: Standard DB9 connectors.
- RS422, RS485: Terminal Block
- Ethernet: RJ45 network interface, use the interface through the network line of intelligent communication converter access TCP / IP network.
- Support Data Baud rate: 1200 ~ 115200 bps
- Support three operation mode :TCP Server, TCP Client, UDP Mode
- Support Virtual COM Port
- Support full duplex transmission
- Auto detection network 10/100 Mbps
- Support auto MDI / MDIX
- Built in LED indication

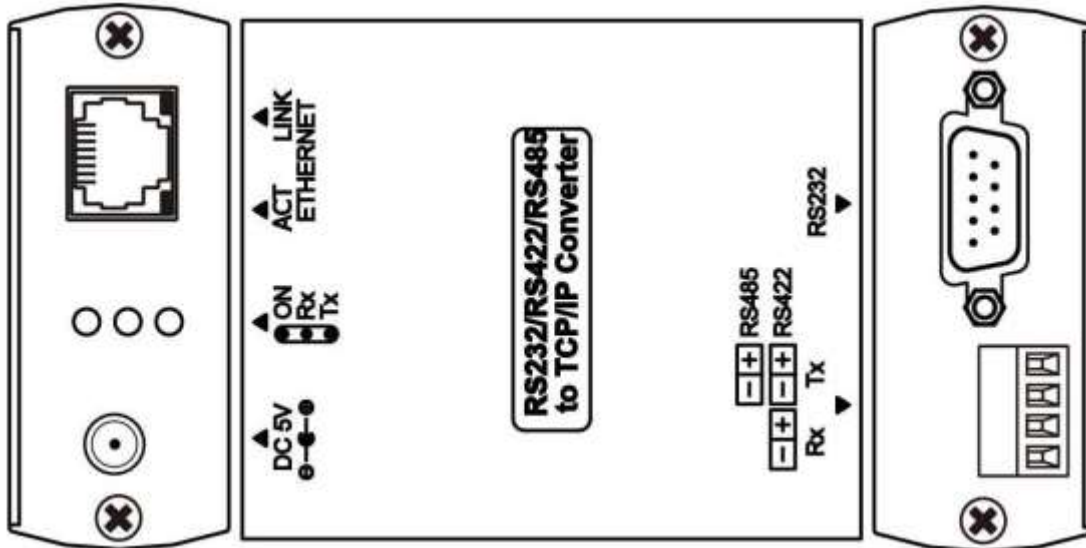
Installation View:



Cable:

Link cable recommend use high quality CAT.5e · CAT.6 · CAT.6a · CAT.7 UTP / STP and RS232/RS485/RS422 cable. Poor quality cable or network connection or improper construction will cause unstable connection.

Panel View:



LED Indication

POWER (Green)	Power	ON / OFF
RX (Blue)	Data Transmission	FLASH
TX (Blue)	Data Transmission	FLASH
RJ45 (Green/Yellow)	10/100Mbps Link Data Transmission	ON / OFF FLASH

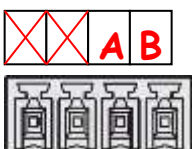
RS007 Connector

Ethernet	use network cable to connect RS007 and PC
RS232	use RS232 cable to connect RS007 and PC
RS485	use two wire to connect RS007 and RS485 Device
RS422	use four wire to connect RS007 and RS422 Device
DC Jack	use external power adapter DC5V 1Amp (2.5mm)

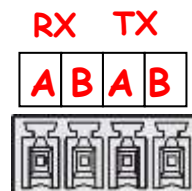
Caution

1. RS232, RS485, RS422 interface selection, only one interface could be used at one time.
2. Make sure to use correct RS232 cable.
3. Check RS485, RS422 polarity connection.

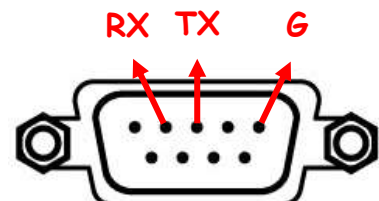
★ RS485 connection



★ RS422 connection

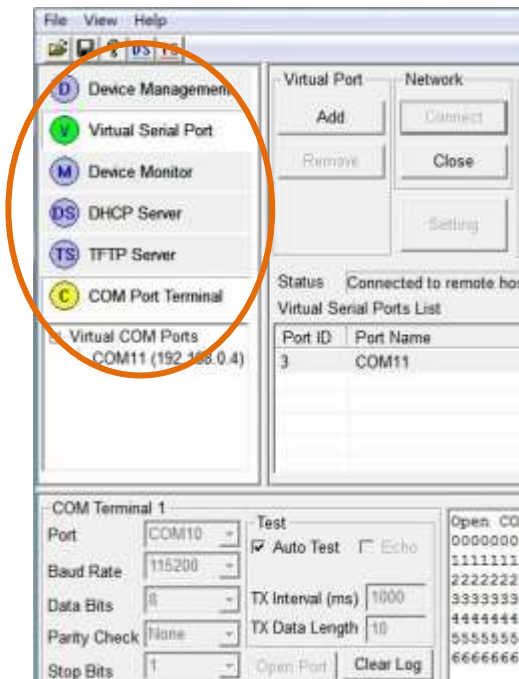


★ RS232 Pin

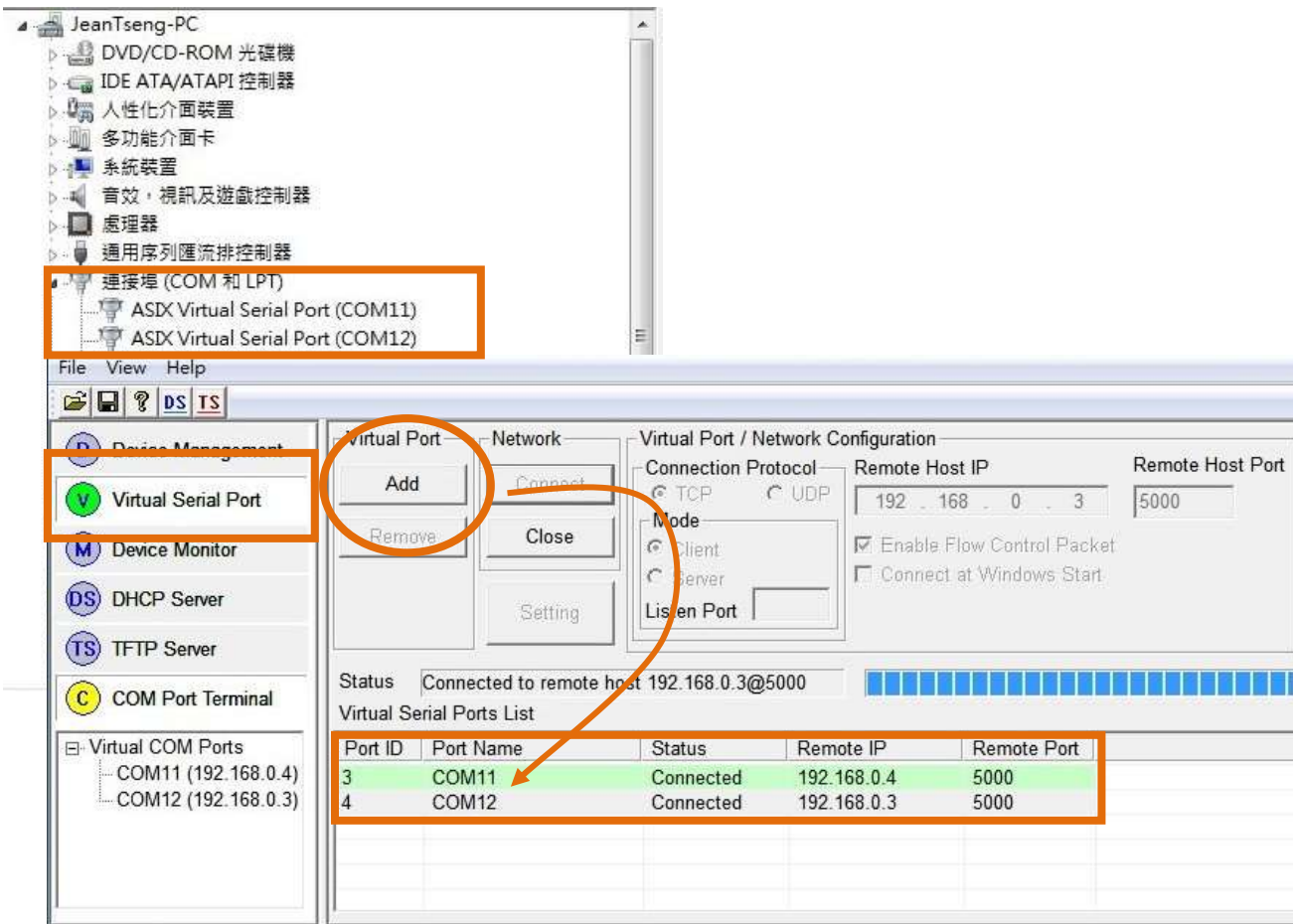


RS007 Device Application Software Illustration :

RS007 could use software "AXR2E Configuration Utility" in CDROM to setup all functions Setup COM Port , DHCP Server, TFTP Server as below diagram



RS007 could use provide software to add Virtual Serial Port setting:

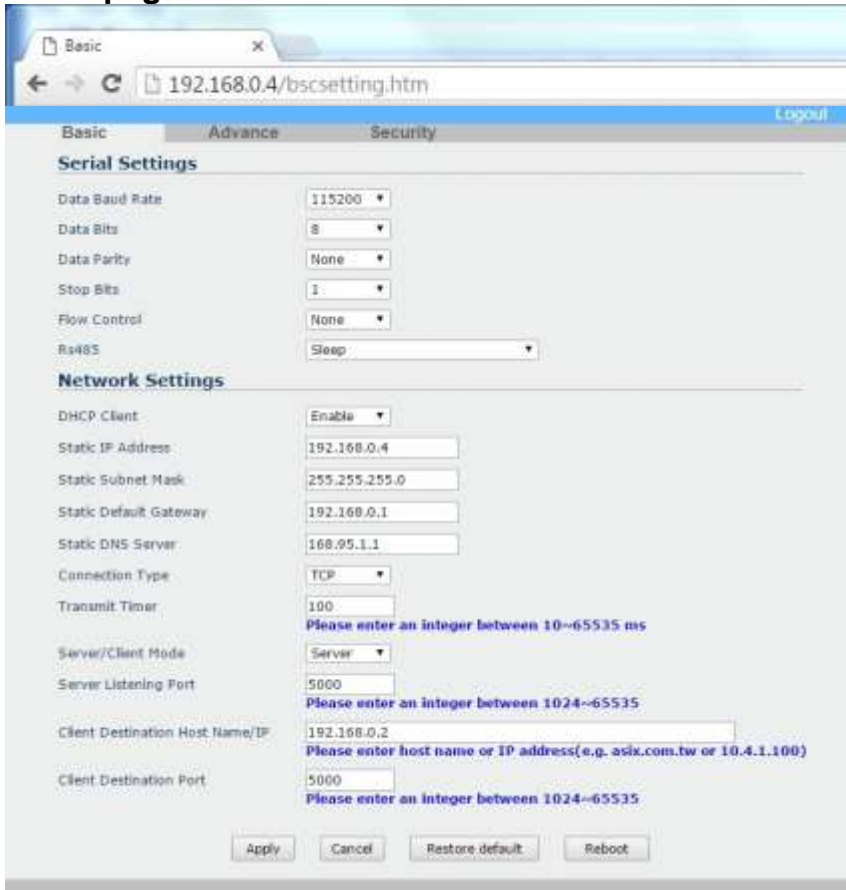


WebGUI

RS007 could use IE or other browsers and key in IP address to enter setup page as below Diagram, default IP address is **192.168.0.3**, Username/Passwrod **admin**



Basic page:



Serial Settings:

Data Baud Rate: 1200~115200bps

Data Bits: 5, 6, 7, 8

Data Parity: None, Even, Odd

Stop Bits: 1 or 2

Flow Control: None, Hardware, Xon/Xoff

RS485: Sleep, Single Twisted Pair HD, Double Twisted Pair FD (Slave), Double Twisted Pair FD (Master)

Network Settings:

DHCP Client:

DHCP client mode could be enabled/disabled statuses. If DHCP is enabled, there should be a DHCP server on the network. If DHCP is disabled, [IP address], [Subnet mask], and [Default Gateway] should be manually assigned.

Static IP Address:

The IP address of converter device, 4 digits separated by '.' Don't let it conflict with the other devices on the network.

If DHCP client mode is enabled and there's a DHCP server on the network, this field will be assigned by DHCP server automatically.

Static Subnet Mask:

Subnet mask of the converter device has connected to. "255.255.255.0" is usually used for small network, "255.255.0.0" for larger network, 4 digits separated by '.'

If your IP address is provided by an ISP or the internal network administrator, please inquire of them that information and type it correctly.

If DHCP client mode is enabled and there's a DHCP server on the network, this field will be assigned by DHCP server automatically.

Static Default Gateway:

Gateway or Router IP address. 'Gateway' is a device which connects local network to external network. If you need to communicate with other networks or your device owns a real IP address on the internet, please inquire of them that information and type it correctly. If there's no gateway on the network, just leave it as "0.0.0.0".

If DHCP client mode is enabled and there's a DHCP server on the network, this field will be assigned by DHCP server automatically.

Static DNS Server:

IP address of DNS server to translates memorized domain names to the numerical IP addresses.

Connection Type: TCP or UDP

Transmit timer:

Server/Client Mode:

TCP Server: TCP protocol, passive open, to be connected from the TCP clients.

TCP Client: TCP protocol, active open, connect to the TCP server.

UDP Mode: UDP protocol, connectionless

Server Listening Port:

The server listening port would be connected in TCP Client and UDP Client mode for a certain serial port.

Client Destination Host Name/IP:

The IP address or host name of the client.

Client Destination Port:

The client destination port would be connected in TCP Server and UDP Server mode for a certain serial port.

Advance page:

The screenshot shows a web interface with three tabs: 'Basic', 'Advance', and 'Security'. The 'Advance' tab is selected. The page is titled 'Firmware Upgrade Settings' and contains the following fields and controls:

- Firmware Upgrade Settings:**
 - TFTP Server IP: 192.168.0.1
 - File Name: ax.bin
 - Buttons: Apply, Cancel, FirmwareUpgrade
- E-mail Settings:**
 - E-mail Server Address/IP: Please enter host name or IP address(e.g. asix.com.tw or 10.4.1.100)
 - From E-mail Address: [Empty field]
 - To E-mail Address 1: [Empty field]
 - To E-mail Address 2: [Empty field]
 - To E-mail Address 3: [Empty field]
- Auto Warning Report Settings:**
 - Cold Start: Disable
 - Authentication Failure: Disable
 - Local IP Address Changed: Disable
 - Password Changed: Disable
 - Buttons: Apply, Cancel

Firmware Upgrade Settings:

TFTP Server IP:

IP address of TFTP server to update firmware.

File Name:

File name of firmware in TFTP server.

E-mail Server Address:

IP address or host name of SMTP server to send E-mail.

From E-mail address:

E-mail address of sender.

To E-mail address 1~3:

E-mail address of receivers.

Auto Warning Report Settings:

Auto report when Cold Start, Authentication Failure, Local IP Address Changed, Password Changed if function enabled.

Security Page:

Basic Advance Security Logout

Change Username Setting

New Username

Apply Cancel

Change Password Setting

Old Password

New Password

Confirm Password

Apply Cancel

Accessible IP Setting

IP #1

IP #2

IP #3

IP #4

Control

Attention:
When you change the accessible IP successful, you must reboot device to take it effect. please confirm settings before reboot device.

Apply Cancel

Change Username Setting:

Enter new username and apply to change.

Change Password Setting:

Enter old password, new password and confirm password to change password.

Accessible IP Setting:

IP #1~4: IP address of accessible devices.

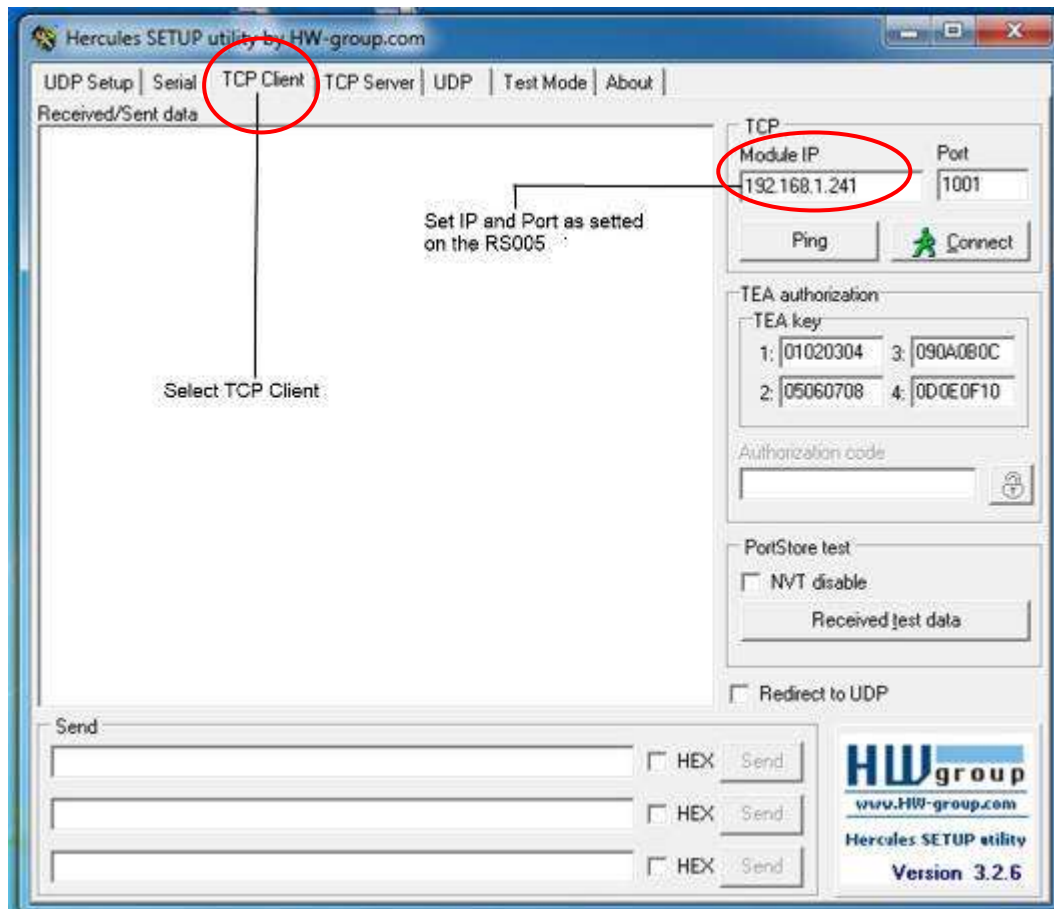
Control: Enable or disable access permission of above IP.

Run a software able to perform a serial port terminal (RS-232 terminal) , UDP/IP terminal and TCP/IP Client Server terminal.

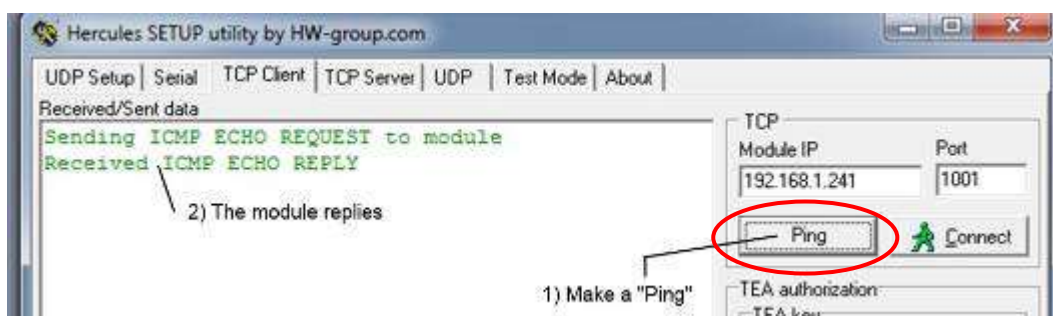
The free software "**hercules_3-2-6.exe**" that can be downloaded from web site <http://bit.ly/1Od8KJ> is a very useful and powerful interface.

To provide a step-by-step example, see the following pages that show how the "**hercules_3-2-6.exe**" works. This software is provided by **HW Group** and is in its **integral version**.

1. First of all, because you act from PC side you must select the window **TCP Client**. Then you insert Module IP and Port numbers.



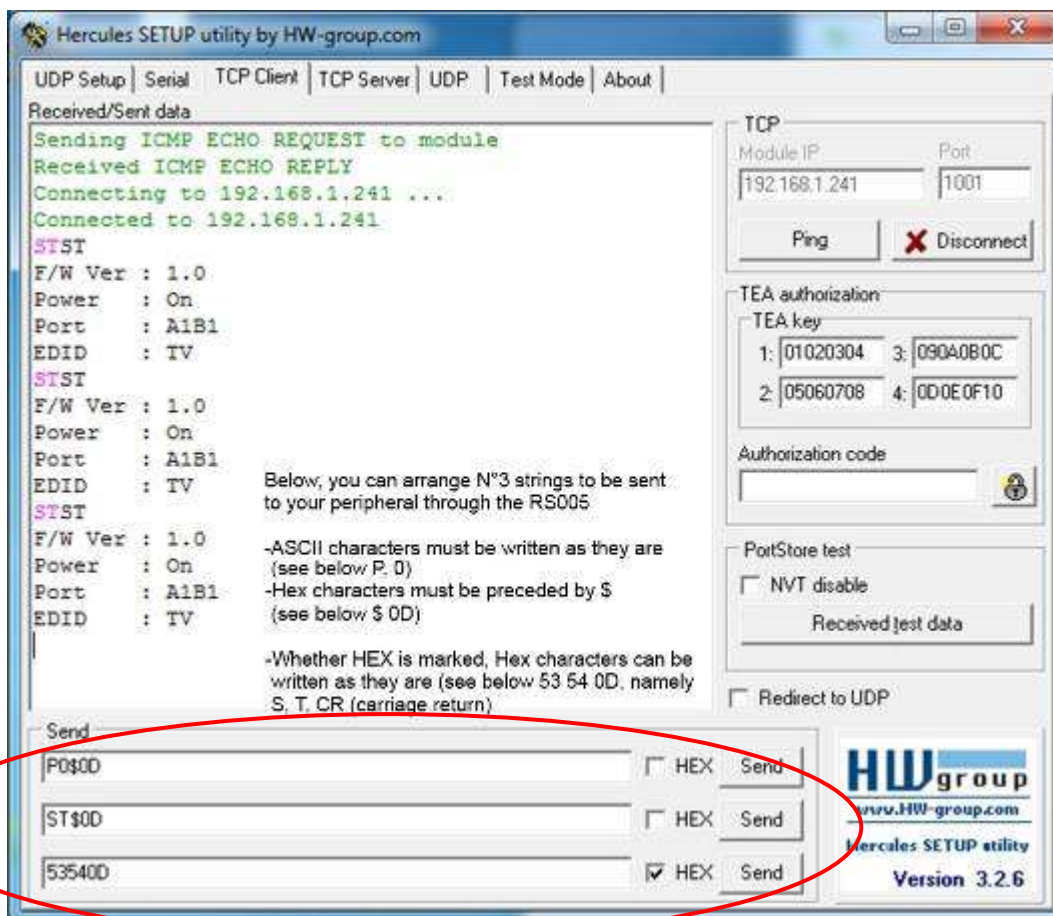
2. make a "Ping" to the device that must responds as shown



3. Establish a permanent connection to the device, clicking on "Connect". The device replies and the button "Connect" becomes "X Disconnect"



4. You have at your disposal 3 window where to edit your strings to the peripheral device through the RS007. The single string is sent only pressing the button "Send".



5. ASCII and Hex characters can be mixed. ASCII are written as they are, Hex are preceded by \$.

In the example shown, P0\$0D means that the characters sent on RS232 line will be:

-ASCII "P" (Hex 50), ASCII "0" (Hex 31), ASCII "CR" (Hex 0D)

6. Whether the HEX box is marked (see third line) the Hex characters can be written as they are. In the example shown, 53 54 0D means S T CR.

Troubleshooting:

Under 64bit Windows operation system:

To have RS007 with Virtual Serial Port you have to run "AXR2E Configuration Utility" by right click to **run as administrator** to get system permission, if still not work please use below installation step:

Under C:\Program Files (x86)\AX110xx RS232-to-Ethernet Configuration Utility\
Copy "NETVSPD.inf & NETVSPD.sys" to below folder separately:

NETVSPD.inf copy to C:\Windows\inf\

NETVSPD.sys copy to C:\Windows\System32\drivers\

Specification:

ITEM NO	RS007
TCP/IP Ethernet	RJ-45 Connector × 1
RS232 Interface	DB9 Male × 1
RS485/RS422 Interface	Terminal Block 4 Pin × 1
Operation Mode	TCP Server, TCP Client, UDP Mode
Network	10 / 100 Mbps
Distance	Ethernet Cable 100M (Max)
Data Baud Rate	1200 ~ 115200 bps
Modem Control Function	CTS, RTS, DSR, DTR, RI and DCD
LED Indication	Power: Green, RX TX: Blue Red, RJ45: Green, Orange
Power Adapter	DC5V 1Amp
Power Consumption	3W (Max)
Temperature	Operation: 0 to 70°C, Storage: -20 to 85°C, Humidity: up to 95%
Dimension mm	67 × 110 × 27
Weight g	180

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