



Data Transmission Series

User Manual

Model : RS007

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



Introduction

RS007 is a data converter that converts RS232, RS422 or RS485 to TCP/ IP signal. The converter can setup up to one client and 4 servers and easily configure the parameters via a PC software or a web browser..

Features

- Converts RS232, RS485, or RS422 to IP signal or the other way around.
- Support network bandwidth at 10/100 Mbps.
- Supports data baud rate at 1200 to 115200 bps.
- Supports TCP Server, TCP Client, UDP Mode.
- Supports full duplex transmission.
- Supports virtual com port.
- Supports auto MDI / MDIX.
- Managed via PC software, and WebGUI..

Application Diagram

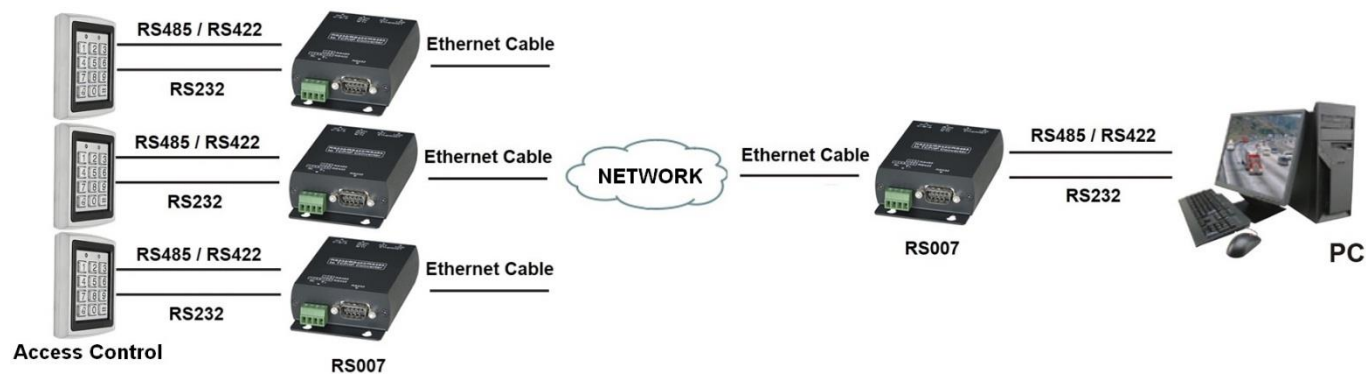
(1) TCP/IP to RS422/RS485/RS232 Conversion



(2) Point to point connection



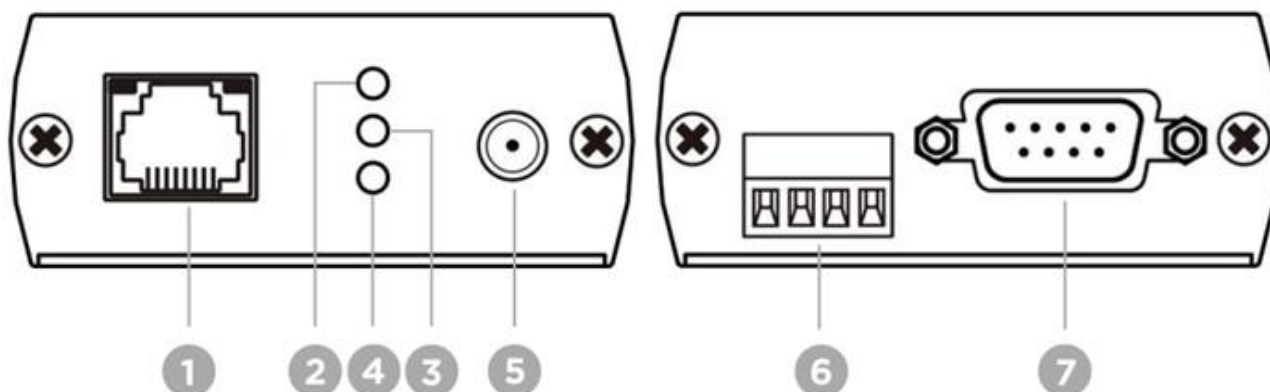
(3) Multi-mode



To activate the Multi-Mode, please scan the QR code in the left, or type in the URL: <https://bit.ly/2sKXICC> to update the firmware.



Panel View



No.	Interface	Functionality
1	RJ45 Connector	To use network cable to connect RS007 with PC (Refer to Description 1)
2	Power LED Indication	To indicate the power status (Refer to Description 2)
3	Rx LED Indication	To indicate Rx connection status (Refer to Description 3)
4	Tx LED Indication	To indicate Tx connection status (Refer to Description 3)
5	Power Jack	To connect DC 5V 1A adapter
6	4 Pin Terminal	To use two wire cable to connect RS007 with RS485 Device To use four wire cable to connect RS007 with RS422 Device (Refer to Description 4)
7	RS232 Port	To use RS232 cable to connect RS007 with PC (Refer to Description 5)

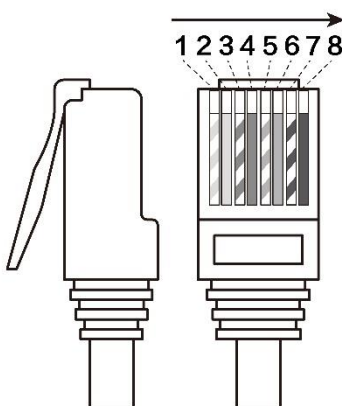
Description

1. RJ45 LED

Data Rate	Disable	Enable	Data Transferring
100Mbps	Yellow Off	Yellow On	LED Blinking
10Mbps	Green Off	Green On	LED Blinking

RJ45 Pin out (TIA/EIA-568-B)

(PIN TIA/EIA-568B)	
PIN	Wire Color
1	Orange-white
2	Orange
3	Green-white
4	Blue
5	Blue-white
6	Green
7	Brown-white
8	Brown



High quality CAT.5e、CAT.6、CAT.6a、CAT.7 UTP / STP and RS232/RS485/RS422 cable are highly recommended, since bad quality cables may cause unstable connection.

2. Power LED Indication

Green On	Green Off
Power On	Power Off

3. Rx/Tx LED Indication

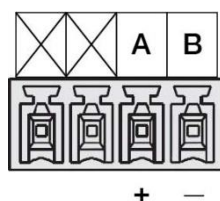
Interface	Unlinked	Linked	Data Transferring
Rx	Blue Off	Blue On	LED Blinking
Tx	Blue Off	Blue On	LED Blinking

4. 4 Pin Terminal

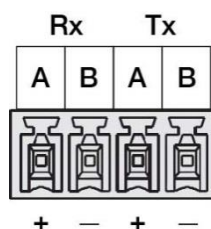
4.1 Be aware of the connection of the positive and the negative electrode.

4.2 RS485 & RS422 Wiring

RS485 Wiring



RS422 Wiring

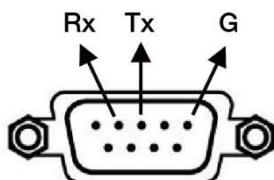


5. RS232 Port

5.1 Among RS232, RS485, and RS422, only one signal can be transferring at once.

5.2 To transfer RS232 signal with PC, please use the RS232 Female to Female Serial Null Modem Cable to connect the devices.

5.3 RS232 Pin Wiring



Setting via PC Software

Run the "AXR2E Configuration Utility" in CDROM to setup COM Port 、 DHCP Server 、 TFTP Server



Scan the QR code in the left to follow the instructions
Or type in the URL: <https://bit.ly/30hGtQB>

Virtual Serial Port setting



Scan the QR code in the left to follow the instructions
Or type in the URL: <https://bit.ly/30puJeV>

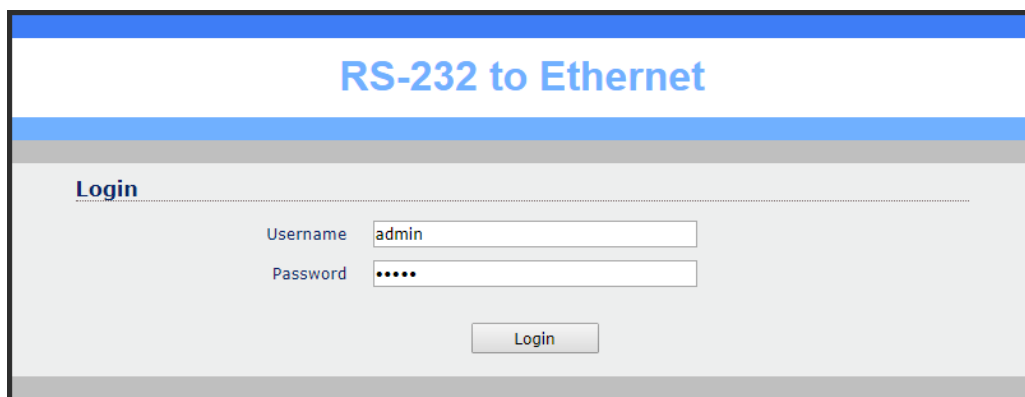
Setting via WebGUI

RS007 setup can be accomplished via IE and other browsers



Scan the QR code in the left to follow the instructions
Or type in the URL: <https://bit.ly/2R7jX8A>

Or refer to the diagram below to set up the device.
Type in IP address **192.168.0.3** to enter user interface
Type in Username/Password: **admin**



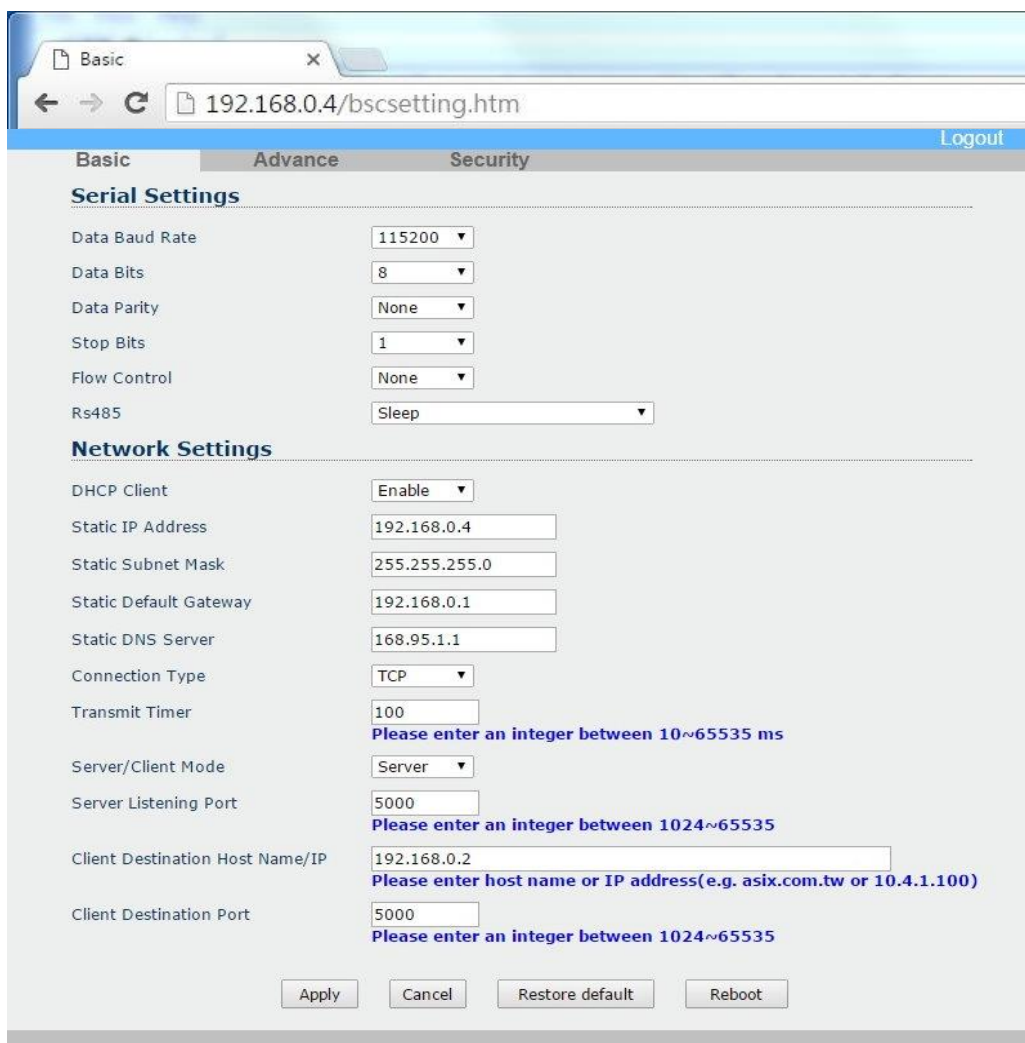
RS-232 to Ethernet

Login

Username:

Password:

Basic page



Basic Advance Security Logout

Serial Settings

Data Baud Rate:

Data Bits:

Data Parity:

Stop Bits:

Flow Control:

Rs485:

Network Settings

DHCP Client:

Static IP Address:

Static Subnet Mask:

Static Default Gateway:

Static DNS Server:

Connection Type:

Transmit Timer:
Please enter an integer between 10~65535 ms

Server/Client Mode:

Server Listening Port:
Please enter an integer between 1024~65535

Client Destination Host Name/IP:
Please enter host name or IP address(e.g. asix.com.tw or 10.4.1.100)

Client Destination Port:
Please enter an integer between 1024~65535

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 the RS007 is consist of 4 set of numbers separated by “.” (Dot symbol).

Use distinctive IP address for different networking devices or they may conflict with each other's

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

Static Subnet Mas:

Subnet mask set as “255.255.255.0” is usually used for small network, “255.255.0.0” for larger network, 4 sets of numbers separated by ‘.’ (Dot symbol)

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

Transmitter:

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 displays a web interface with three tabs: 'Basic', 'Advance', and 'Security'. The 'Advance' tab is selected. The interface is divided into three sections:

- Firmware Upgrade Settings:** Includes a text input for 'TFTP Server IP' (192.168.0.1) and 'File Name' (ax.bin). Below these are three buttons: 'Apply', 'Cancel', and 'FirmwareUpgrade'.
- E-mail Settings:** Includes a text input for 'E-mail Server Address/IP' with a blue prompt: 'Please enter host name or IP address(e.g. asix.com.tw or 10.4.1.100)'. Below are four text inputs for 'From E-mail Address', 'To E-mail Address 1', 'To E-mail Address 2', and 'To E-mail Address 3'.
- Auto Warning Report Settings:** Includes four dropdown menus for 'Cold Start', 'Authentication Failure', 'Local IP Address Changed', and 'Password Changed', all set to 'Disable'. Below these are 'Apply' and 'Cancel' buttons.

A 'Logout' link is visible in the top right corner of the interface.

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.

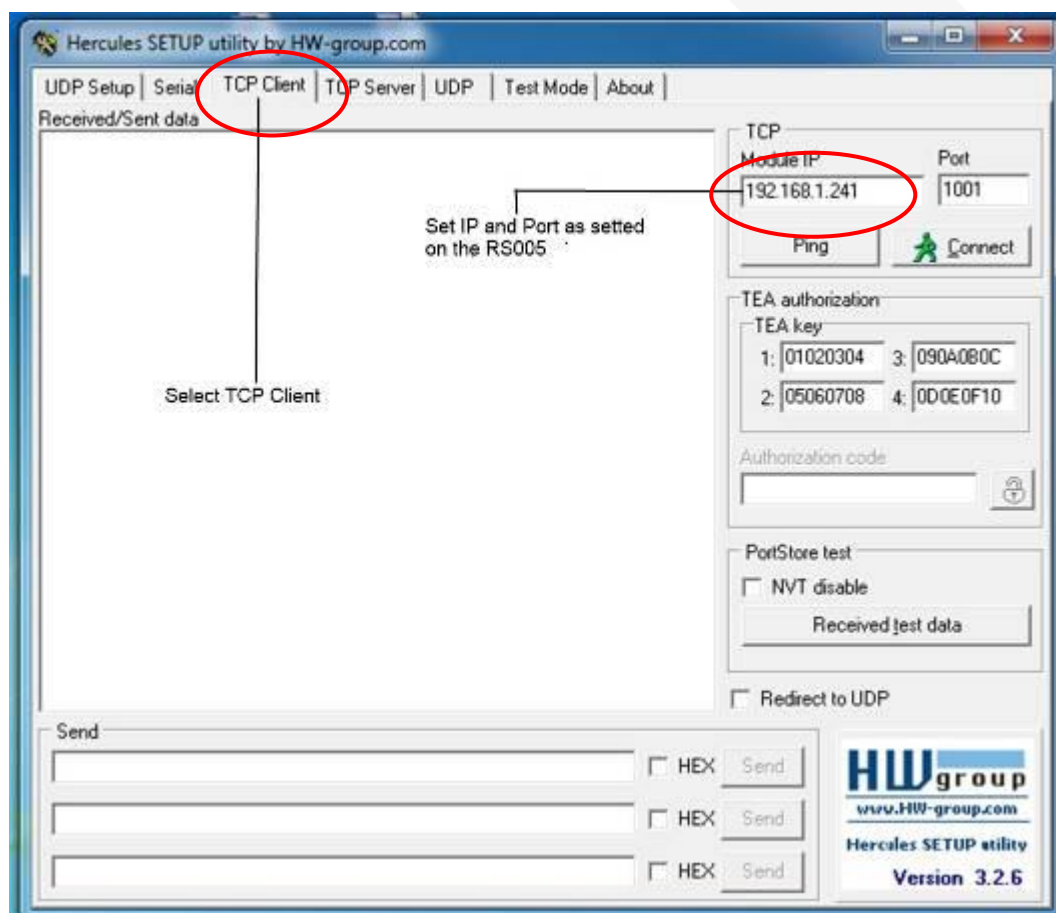
Control: Enable or disable access permission of above IP

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

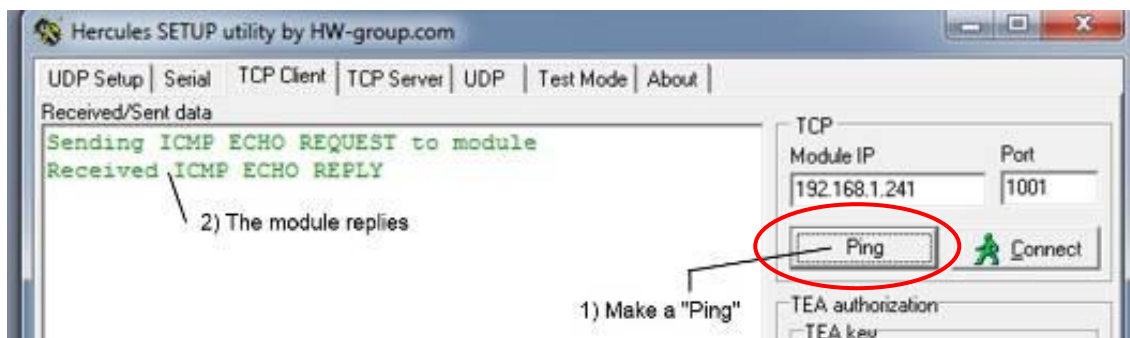
The free software “**hercules_3-2-6.exe**” that can be downloaded from <http://bit.ly/1Od8KJ>

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.



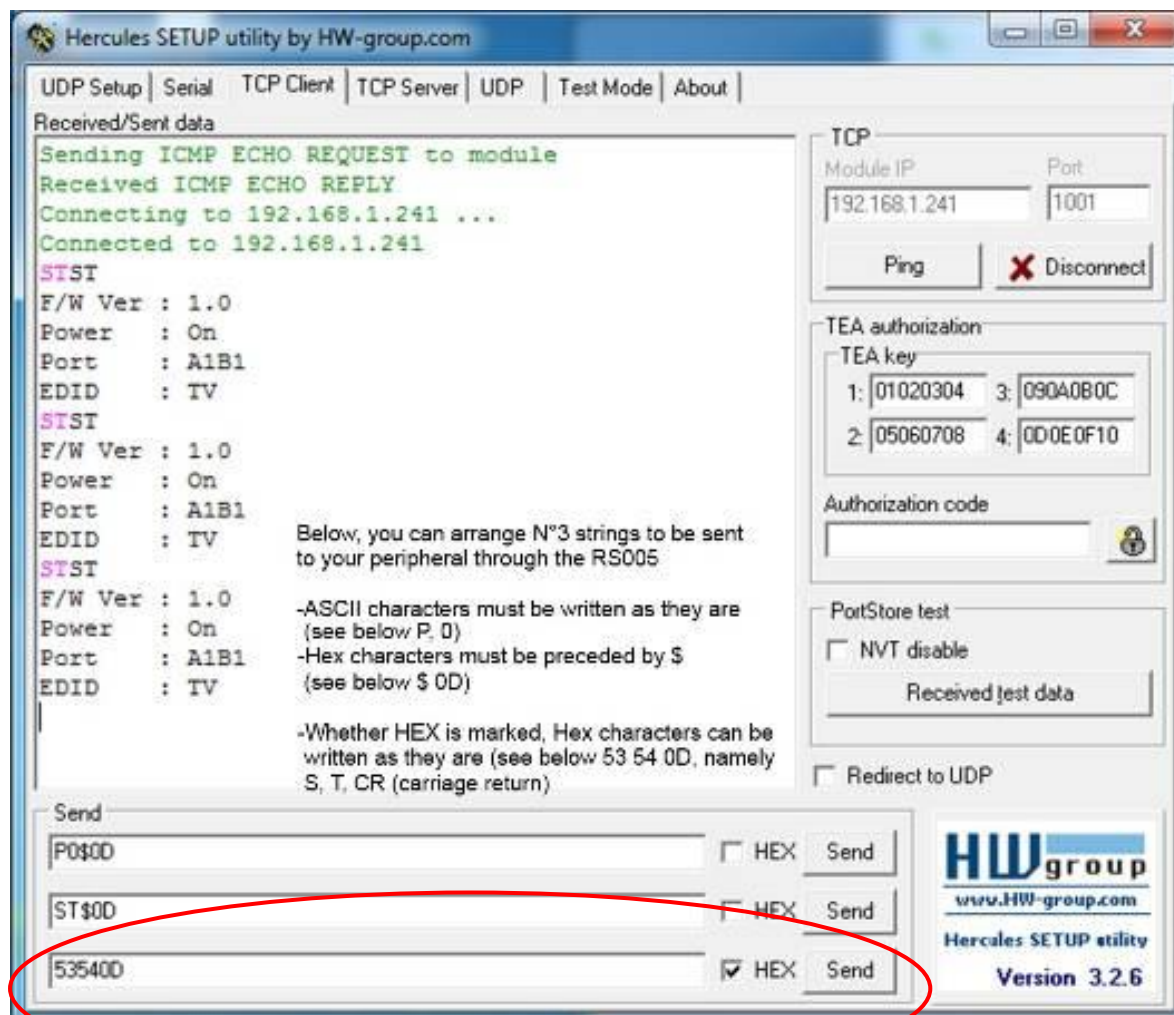
2. make a "Ping" to the device that must responds as shown



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



- 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".



- 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)
- 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, run "AXR2E Configuration Utility" by right click to **run as administrator** to get system permission, if still not working, please follow the steps below:

Under C:\Program Files (x86)\AXI10xx RS232-to-Ethernet Configuration Utility\

Copy "NETVSPD.inf & NETVSPD.sys" to folder below separately:

Copy NETVSPD.inf into C:\Windows\inf\

Copy NETVSPD.sys into C:\Windows\System32\drivers

Specification

ITEM NO.	RS007
Support	
Standard	RS232, RS485, RS422, TCP/ IP
Max. Baud Rate	1200 to 115200 bps
Network Bandwidth	10/ 100 Mbps
Communication	TCP Server, TCP Client, UDP
Max. Transmission Distance	100M for RJ45 end
Ports & Interfaces	
Data Input/ Output	1 x DB9 Male (RS232), 1 x 4-pin Terminal Block (RS485, RS422)
Data Output/ Output	1 x RJ45
Power	
Power Supply	DC 12V 1A
Power Consumption	3W (Max)
Ambient Temperature	
Operation	0 to 70°C
Storage	-20 to 85°C
Humidity	Up to 95%
Physical Characteristics	
Dimensions	67 x 110 x 27mm
Weight	180g