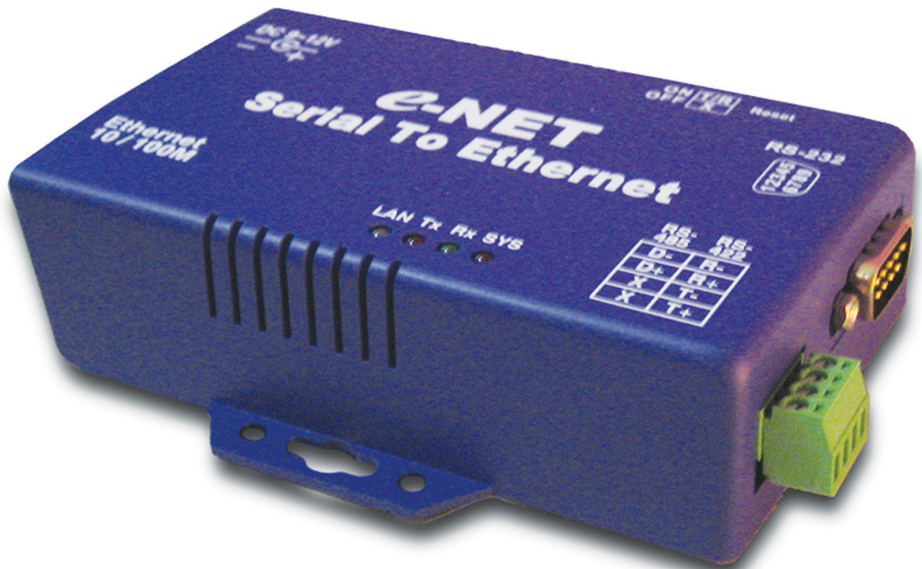


EP-132

Serial To Ethernet Converter





SAFETY INFORMATION



1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.
2. Follow all instructions printed on unit chassis for proper operation.
3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.
4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.
5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.
6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.
8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.
9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
10. Turn power off and disconnect unit from AC current before making connections.
11. Never hold a power switch in the "ON" position.
12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically "blown free" of foreign dust and matter.
14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.
15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.
16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.
17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.
18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.
19. Service Information Equipment should be serviced by qualified service personnel when:
 - A. The power supply cord or the plug has been damaged.
 - B. Objects have fallen, or liquid has been spilled into the equipment.
 - C. The equipment has been exposed to rain
 - D. The equipment does not appear to operate normally, or exhibits a marked change in performance
 - E. The equipment has been dropped, or the enclosure damaged.

▶ CONTENTS

INTRODUCTION & PACKAGE CONTENTS1
 BLOCK DIAGRAM / DOWNLOAD LINKS2
 FEATURES & SPECIFICATIONS3
 CONVERTER DESCRIPTION4
 WIRING ARCHITECTURE6
 CONVERTER CONFIGURATION7
 WEB CONSOLE CONFIGURATION9
 SELF-TESTING13
 APPENDIX - PIN OUTS & CABLE WIRING16

DEAR CUSTOMER

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

INTRODUCTION

EP-132 TCP/IP converter is designed to make your serial devices Internet ready instantly. EP-132 Series of GDI2000 TCP/IP converter makes the ideal choice for connecting your RS-232 or RS-422/485 serial devices—such as PLCs, meters and sensors to IP-based Ethernet LAN, making possible for your software to access serial devices anywhere and anytime over local LAN or the Internet.

EP-132 Series converter ensures the compatibility of network software that uses standard network API (Winsock or BSD Sockets) by providing TCP Server Mode, TCP Client Mode and UDP Mode. EP-132 Series Virtual COM driver, software that works with COM port can be set up to work over TCP/IP network in no time. This excellent feature preserves your software investment and lets you enjoy the benefits of networking your serial devices instantly.

EP-132 Series converter supports manual configuration via the handy web browser console and many protocols including TCP, IP, UDP, HTTP, DHCP, ICMP and ARP. It is the best solution to network your serial devices.

PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

- EP-132 Converter
- Power Adaptor (9VDC 500mA) North American Plug

SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

DISCLAIMERS

The information in this manual has been carefully checked and is believed to be accurate. We assume no responsibility for any infringements of patents or other rights of third parties which may result from its use.

We assume no responsibility for any inaccuracies that may be contained in this document. We make no commitment to update or to keep current the information contained in this document.

We reserve the right to make improvements to this document and/or product at any time and without notice.

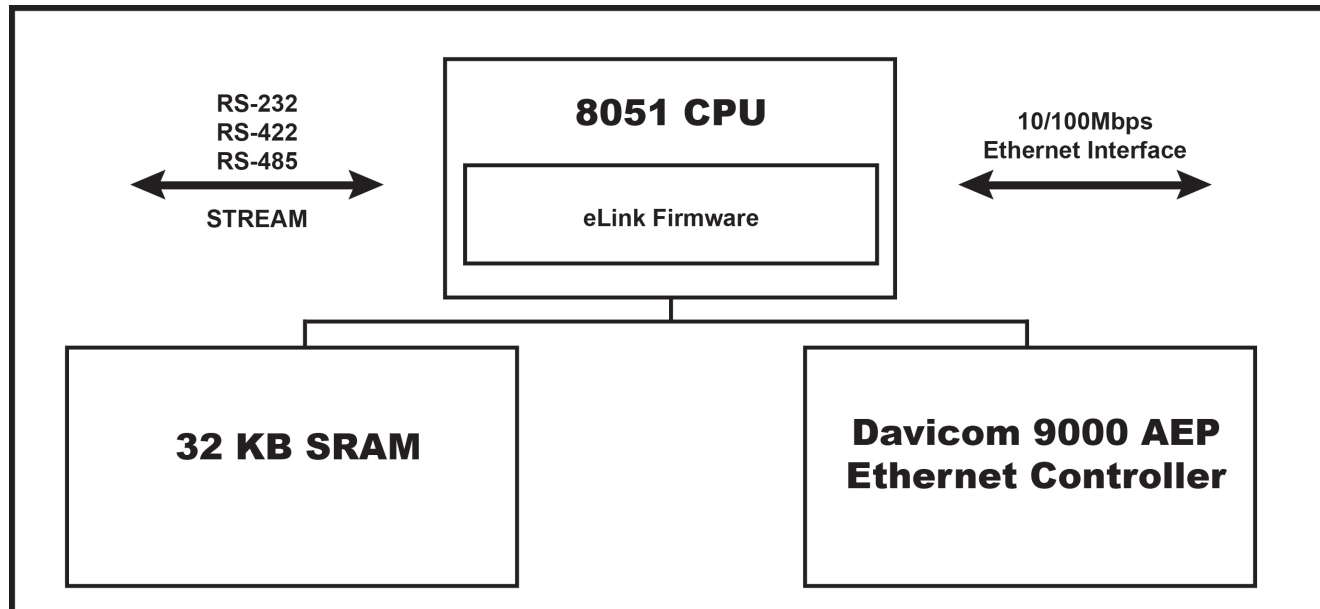
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 Version 2.0 JUNE 2015

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BLOCK DIAGRAM

Low-cost devices usually are equipped with low speed processors and limited memories. In reality, they are neither having capability nor practicality to manage complicated network TCP/IP protocols. EP-132 Series is low cost while providing high performance network solution by converting data stream between network TCP/IP and popular serial port signals. In stead of processing TCP/IP packets directly, devices need only deal with those interface signals, which greatly simplifies the complexity of TCP/IP network in linkage.

DIRECT DOWNLOAD LINKS**DEMO SOURCE CODE ZIP File (10MB):**

http://www.a-neuvideo.com/shop/download/E-P132/Demo_Source_Code.zip

IP SEARCH UTILITY ZIP File (412KB):

http://www.a-neuvideo.com/shop/download/E-P132/IP-Search_Utility.zip

SERIAL-TO-ETHERNET QUICK START GUIDE PDF (260KB):

http://www.a-neuvideo.com/shop/download/E-P132/Serial-to-Ethernet_QS_guide.pdf

TECHNICAL MANUALS ZIP FILE (1.12MB):

http://www.a-neuvideo.com/shop/download/E-P132/Technical_Manuals.zip

COM PORT API COMMAND PDF (65KB):

<http://www.a-neuvideo.com/shop/download/E-P132/D.%20Com%20Port%20API%20Command/Console%20Command.pdf>

IRTUAL COM ZIP FILE (1.65MB):

<http://www.a-neuvideo.com/shop/download/E-P132/Virtual-Com.zip>

Or visit the product page on our website to download directly. www.a-neuvideo.com

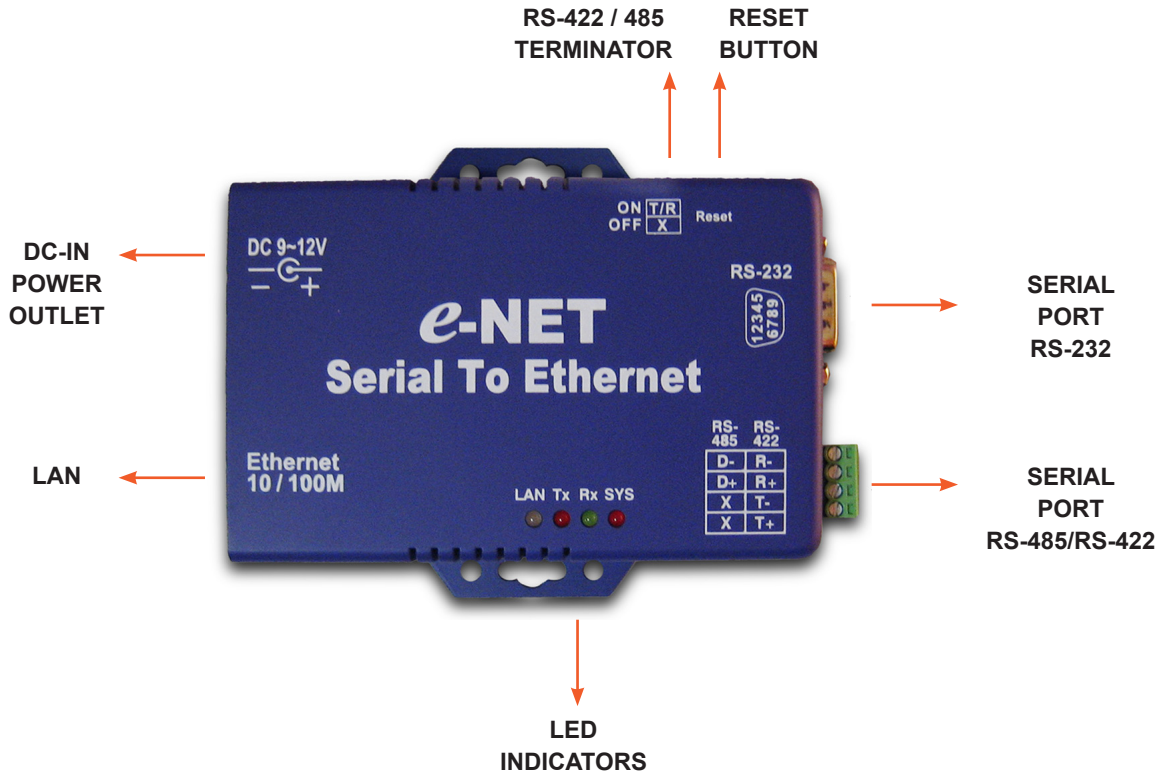
FEATURES

- Data Conversion between RS-232/422/485 and Ethernet: Convert serial device (RS-232, RS-422, RS-485) data/signal into TCP/IP packet data/signal and send them out with Ethernet data stream or convert the TCP/IP packet data/signal into serial device data/signal.
- Dynamic IP Configuration: Support DHCP client mode, simplifying network address configuration and management.
- Dual LAN Speed: Support 10/100 Mbps Ethernet, auto-detected.
- Server/Client Dual Modes: EP-132 Series can be configured as network server or network client. In client mode, it can be installed in network which protected by NAT router or firewall, without the need of a real IP address.
- Web-based Setup: Parameters setup based on HTTP protocol by using standard browsers (IE and Netscape). No special software would be required.
- Built-in Security Control: Protected setup the password to prevent intruders.
- Firmware Remote Update: Firmware can be updated directly via Ethernet network to keep up with latest network standards.

SPECIFICATIONS

- **CPU:** 32-bits EP-132 CPU, 25 MHz
- **RAM:** 2MB SDRAM (1M x16Bits)
- **ROM:** 128KB Flash ROM
- **Ethernet:**
 - **Port Type:** RJ-45 Connector
 - **Speed:** 10/100Mbps (Auto Detecting)
 - **Protocol:** ARP, IP, ICMP, UDP, TCP, HTTP, DHCP
 - **Mode:** TCP Server ,TCP Client , UDP
 - **Setup:** HTTP Browser Setup (IE & Netscape), RS-232 Console
 - **Security:** Setup Password
 - **Protection:** Built-in 1.5KV Magnetic Isolation
- **Serial Port**
 - **No. of Ports:** 1x RS-232 / 1x RS-422/RS-485
 - **Speed:** 300 bps~230.4 Kbps
 - **Parity:** None, Odd, Even, Mark, Space
 - **Data Bit:** 5, 6, 7, 8
 - **Stop Bit:** 1, 2
 - **RS-232 Signals:** Rx, Tx, GND, RTS, CTS, DTR, DSR, DCD
 - **RS-422 Signals:** Rx+, Rx-, Tx+, Tx- (Surge Protection)
 - **RS-485 Signals:** Data+, Data- (Surge Protection)
 - Built-in RS-422/RS-485 Terminal Resistor
 - 15KV ESD for all signal
 - Watch Dog Function
- **Power:** DC9~12V, 500mA
- **LED Lamp:** SYS (PWR), LAN, Rx, Tx
- **Environment: Operating Temperature:** 32°F~122°F (0°C~50°C) / **Storage Temperature:** 14°F~158°F (-10°C~70°C)
- **Dimensions (WxDxH):** 4.3 x 3.5 x 1.2 in (110x90x30mm)
- **Weight:** 5 oz (146 grams)

PRODUCT PANEL VIEW



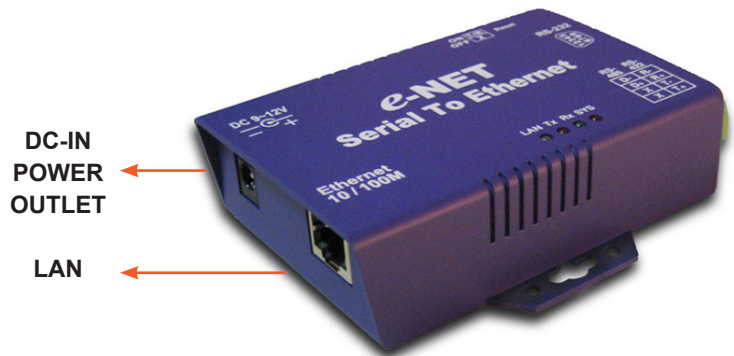
LEFT SIDE

POWER SUPPLY

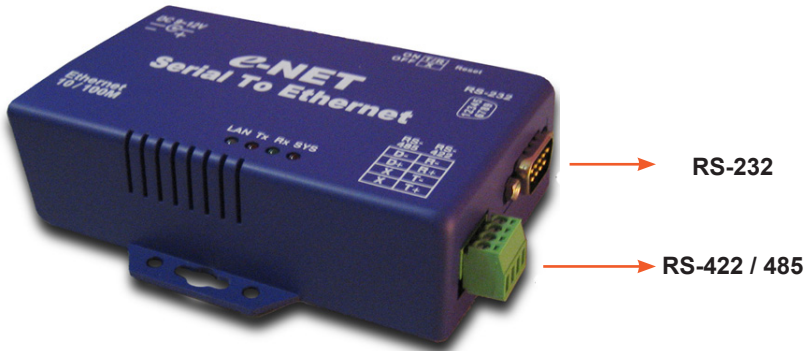
The EP-132 TCP/IP converter is powered by a single 9~12V DC (inner positive/outer negative) power supply and 500mA of current. A suitable power supply adapter part of the packaging. Connect power line to power outlet at left side of EP-132 TCP/IP converter and put adapter into socket. If power is properly supplied, the "SYS" red color LED will be blinks each time in one second.

LAN PORT

The connector is for network usual RJ45. Simply connect to your network switch or Hub. When connection made, the LAN LED indicator will light. When data traffic occurs on the network, red Tx & Rx LED indicator will blink during data transferring and receiving.

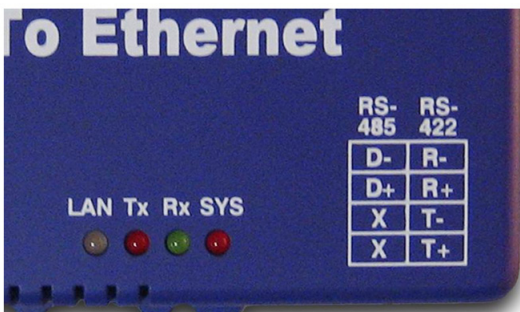


RIGHT SIDE



SERIAL PORT OF RS-232/RS-422/RS-485
 Connect serial data cable between the converter and serial device. Follow the setup procedure to configure the parameters of the converter. (See the following chapters)

LED INDICATORS



SYS "Red LED": Power indicated (When power on, LED will flash each time in one second.)

Rx "Green LED": Network signal receiving indicated (When receive any signal form network LED will flash.)

Tx "Red LED": Network signal transforming indicated (When transmit any signal to network LED will flash.)

LAN "LED": On-line indicated (When converter link to LAN then the LED will keep on.) 100M- Green LED/10M- Red LED

TERMINATOR & RESET BUTTON

RESET BUTTON

Press the button then turn on the power and wait for 3 seconds. Converter will reset to factory default.

TERMINATOR

There terminator resistor is built-in. If switch 1 & 2 are set in "ON" position, 120 Ohm resistor will be connected between the signals.

TERMINATOR
 RESET BUTTON



RS-232 WIRING ARCHITECTURE

RS-232 WIRING

<u>Serial Device</u>	<u>Converter</u>
RX	TX
TX	RX
GND	GND



----- HUB -----



RS-232 (RTS/CTS) WIRING

<u>Serial Device</u>	<u>Converter</u>
RX	TX
TX	RX
GND ----- GND	
RTS	CTS
CTS	RTS



----- HUB -----



RS-232 (RTS/CTS, DSR / DTR) WIRING

<u>Serial Device</u>	<u>Converter</u>
RX	TX
TX	RX
GND	GND
RTS ----- CTS	
CTS	RTS
DTR	DSR
DSR	DTR



----- HUB -----



RS-422 / RS485 WIRING ARCHITECTURE

RS-422 WIRING

<u>Serial Device</u>	<u>Converter</u>
T +	R +
T -	R -
R +	T +
R -	T -



----- HUB -----



RS-485 WIRING

<u>Serial Device</u>	<u>Converter</u>
D +	D +
D -	D -



----- HUB -----



When you finish the steps mentioned above and LED indicators as shown, the converter installed correctly. You can use the Setup Tool "ETM.exe" to setup IP Address.

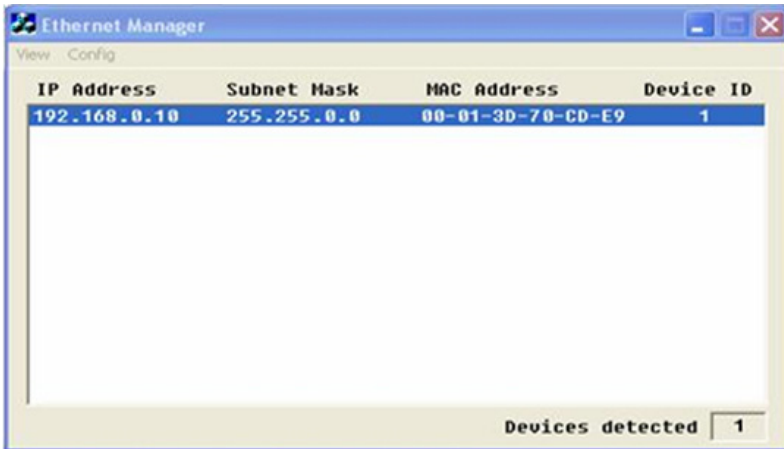
For setup proceed the advanced parameters, please use web browser (IE or Netscape) to continue the detailed settings.

INITIAL IP CONFIGURATION

When setting up your converter for first time, the first thing you should do configure the IP address. This chapter introduces of method to configure the device server IP address. For more details about network settings, see “Web Console Configuration” in next sub section.

For quick setup of converter, we suggest you reference the **“Quick Installation Guide.”**

DEVICE MANAGEMENT UTILITY OF ETM



(Figure 3.1)

On PC we provide Device Management Utility named ETM.exe which an executable program in Windows 32 bit environments. ETM Setup Tool used to detect and setup the installed converters. It uses UDP broadcast packets to query and configure converters on the network.

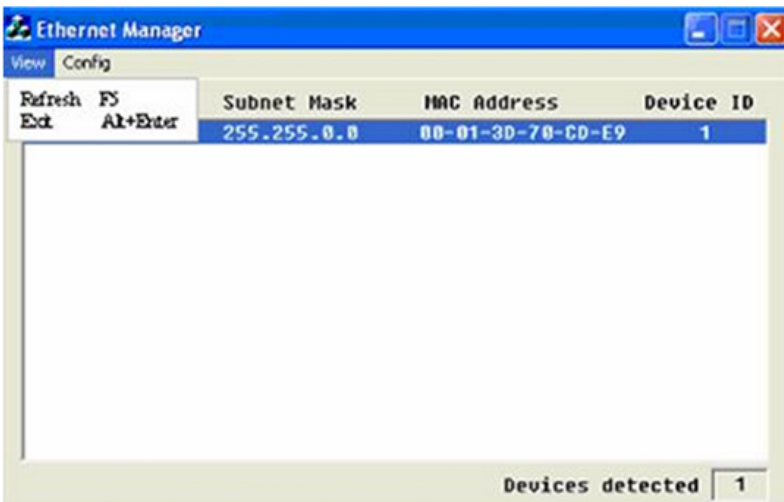
When you activate the tool, it will detect the existence of installed converters and depict the converters status such as IP address, Subnet Mask, MAC Address and Device ID (see Figure 3.1).

If your computer OS is Windows XP version which means “WINDOWS Firewall” function in OS activated. However ETM.exe wouldn’t detect the converter IP address, therefore, you have to temperately disable “WINDOWS Firewall” function. After finishing the parameters settings, you can restart “WINDOWS Firewall” function.

Due to nature of broadcast UDP packets, ETM has following characteristics:

- Broadcast packets aren’t limited by subnet. If even IP address of converters and computer running ETM do not belong to same subnet, it still works fine.
- Broadcast packets can not pass routers. ETM can only be used to monitor devices with computer running ETM in same segment of local area network.

MENU "VIEW"



(Figure 3.2)

- **View -> Refresh F5:** Refresh the status. ETM will send another query to get updated information. (See the Figure 3.2.)

Note: Always run the “View-> Refresh” after any data change.

- **View -> Exit Alt+F4:** Exit from the program (see Figure 3.2).

MENU "CONFIG"



(Figure 3.3)

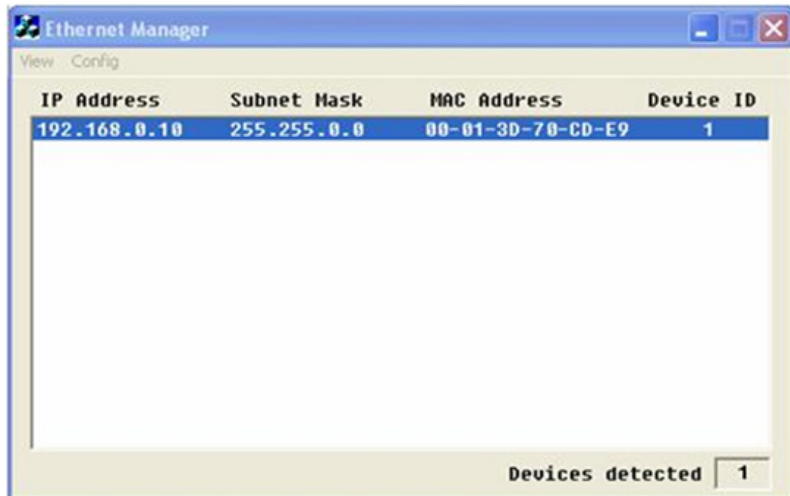
- Config -> IP Address: (see Figure 3.3)



(Figure 3.4)

- Press ENTER or select [IP Address] in the [Config] menu, a dialog will be shown (see Figure 3.4).

Note: Because ETM uses broadcast UDP packets for sake of security, it allows configuration only when setup the device password is empty.



(Figure 3.5)

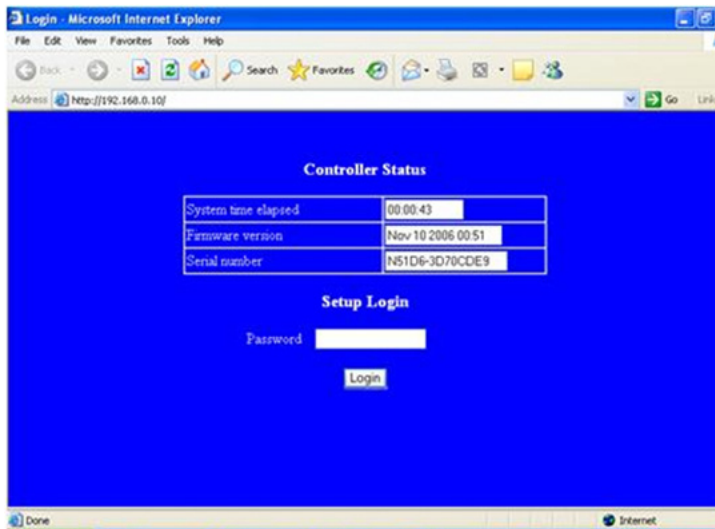
Assign IP Address with same Subnet Mask of your computer, avoiding any IP conflict with other network devices.

- When you press [Ok] button, IP address will be refreshed in 2~3 seconds. (See the Figure 3.5.)

WEB CONSOLE CONFIGURATION

In addition of basic IP address and subnet mask, specific device settings can be set through HTTP protocol with popular browsers, e.g. Internet Explorer, Netscape, etc. Setup converter as easy as surfing on WWW, no special software will be required. **Press [Alt] + [Enter] or select [Device Settings] in the [Config] menu will open a new window in browser to login the device.** Alternatively, if IP address of converter already known, you can connect to converter directly by providing IP address in URL field of browser.

CONTROLLER STATUS



(Figure 3.6)

THE LOGIN PAGE

For Setup of EP132 TCP/IP converter as easy as surfing on WWW, no special software will be required. Popular Browsers such as IE or Netscape can easily do the setup process. In the browser URL field, set IP address of device directly, to enter “Controller Status” page, please follow the steps below.

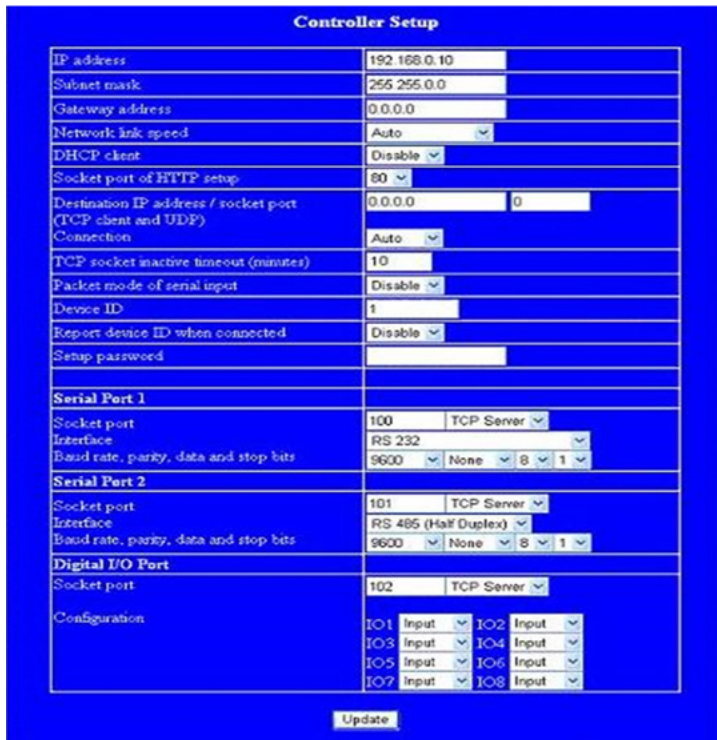
- Open your browser. This chapter will use IE as example.
- In browser URL field, type IP address of converter directly and press ENTER. (The IP address what you set using Device Management Utility.)
- The “Controller Status” page will be shown (see Figure 3.6).

FIELD DESCRIPTION

- **System time elapsed:** The time elapsed since start in this device [Day Hour: Minute: Second] format. This information can be useful identifying reliability of system.
- **Firmware version:** Converter firmware identified by date code. This information will be required looking for technical support.
- **Serial number:** Converter consisted “Type Number (5 digits) and unique MAC (Media Access Control) address used by Ethernet in hex format, 8 digits.
- **Password (Setup Login):** This field is administration password for authentication. Factory is default “empty”. However, it is not recommended to leave empty in field operation. If you could not login, it means you have to key the password. If you do not know the password you can turn off the power and then use any point tip to press “Reset” button and hold it to turn on the power. The password will be reset to the factory default as “empty”.

EP-132 TCP/IP converter uses the same password protection mechanism commonly used Windows NT or UNIX. If there are more than “3 consecutive failures” in password check during login, the login function will be disabled for “15 minutes”. During this 15 minutes period, if you supply a correct password, login will not proceed. This prevents intruder from finding the password by computer generated program.

CONTROLLER SETUP



(Figure 3.7)

THE SETUP PAGE

Type the correct password in “Password” field and click the [Login] button in “Controller Status” page, then “Controller Setup” page will appear (see the Figure 3.7).

Note: If you forget the password or can’t login successfully, please contact the manufacturer directly.

FIELD DESCRIPTION

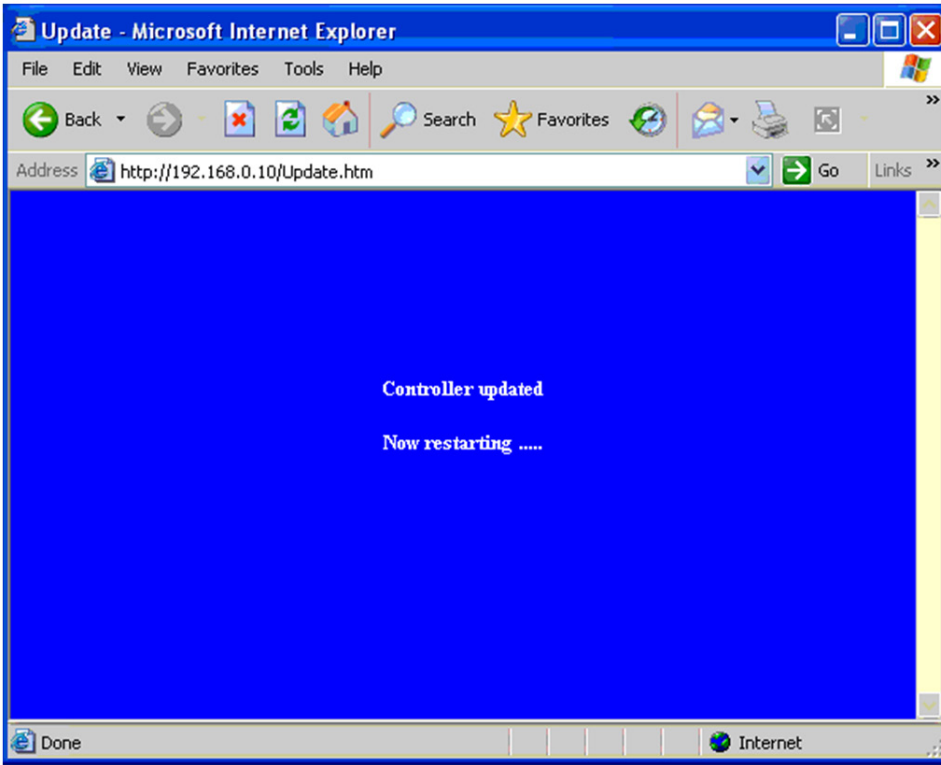
- **IP Address:** The IP address of EP-132 TCP/IP converter by separated (4) digits, don’t let conflict with other devices on network. If DHCP client mode enabled and there is DHCP server on the network, this field will be assigned by DHCP server automatically.
- **Subnet mask:** Subnet mask of network EP-132 TCP/IP converter connected to “255.255.255.0” usually used for the small network, “255.255.0.0” for larger network by separated 4 digits.
If your IP address provide by ISP or internal network administrator, please inquire information and type correctly. If DHCP client mode enabled and there is DHCP server on the network, this field will be assigned by DHCP server automatically.
- **Gateway address:** Gateway or Router IP address. ‘Gateway’ is device which connects local network to external network. If you need communicate with other networks or your device owns real IP address on internet, please inquire information and type correctly. If there is no gateway on network, just leave as “0.0.0.0”.
If DHCP client mode enabled and there is DHCP server on the network, this field will be assigned by DHCP server automatically.
- **Network link speed:** The Physical Ethernet of speed link. “Auto” means the speed automatically selected by the converter. You can also specify “10Mbps” or “100Mbps” to match speed of HUB.
- **DHCP client:** DHCP client mode could be enabled/disabled statuses. If DHCP enabled, there should be DHCP server on the network. If DHCP disabled [IP address], [Subnet mask] and [Gateway address] should be manually assigned.
- **Socket port of HTTP setup:** The socket port used conduct to setup browser. Normally, HTTP protocol use TCP port “80” for communication. If the field changed to “81”, the port “80” will be reserved for user own Web.
To enter setup browser page, “http://x.x.x.x:81” should be typed for socket port “81” and “http://x.x.x.x” for socket port “80”, where “x.x.x.x” the converter IP address.
- **Destination IP address:** The server IP address and socket port would be connected in TCP Client and UDP mode for a certain server IP address.
- **Destination socket port:** The server socket port would be connected in TCP Client and UDP mode for certain socket port.
- **Connection:** The connection can be selected in 2 modes.
“Auto function for connect Automatic of converter”
“Manual function for program control of converter”

- **TCP socket inactive timeout input:** We add mechanism - “inactive timeout” to identify whether the socket active or dead. If there is no any data transferred (send / receive) within defined timeout period (1 to 99 minutes), then it probably a dead socket and the socket will be closed automatically, thus a new connection can be accepted again. The timeout period can be set by users to fit different kinds of application.
- **Packet mode of serial input:** Packet mode could be in enabled/disabled mode. If packet mode enabled, data input from UART will be deferred until input buffer full or converter detects 10-character packet gap and no more character arrived. The block waiting time extended to avoid the splitting of complete packet.
- **Device ID:** User assigned ID number for converter. Available ID is “0 ~ 65535”.
- **Report device ID when connected:** In TCP mode, if this parameter enabled every time when the socket connected, EP-132 TCP/IP converter will immediately report device ID in the following formats:

Serial #1	nnnnnA[LF][CR]	The total 8 bytes length, where “nnnnn” assigned 5-digit device ID by the user; [LF] is decimal 10; [CR] is decimal 13.
Serial #2	nnnnnB[LF][CR]	
Digital I/O	nnnnnC[LF][CR]	

- **Setup password:** Administration password used to login “Controller Setup” page. It may be empty or up to 15 long characters.
- **Serial Port 1:** The first serial port of ANI-EP132-Xseries is RS-232.
- **Socket port**
- **Port number:** A socket port assigned for serial port. It’s 16-bit numbers, ranging from 1 to 65535. Because the numbers below 1000 are used for specific purposes (e.g. 80 for HTTP protocol), we suggest you use the numbers larger than 1000. Generally the port number 4660 is used for the serial communication. However you should specify different port number for each serial port.
- **Socket type:**
 - **TCP Server:** TCP protocol, open passive to be connected from TCP clients.
 - **TCP Client:** TCP protocol, open active to connect TCP server.
 - **UDP Client:** UDP protocol, connectionless.
- **Interface:**
 - **RS-232:** TxD, RxD for data stream, no flow control.
 - **RS-232 (RTS/CTS):** TxD, RxD for data stream, RTS/CTS for flow control.
 - **RS-232 (RTS/CTS, DTR/DSR):** TxD, RxD for data stream, RTS/CTS for flow control. DTR for socket status, DSR for control socket open/close.
- **Baud rate, parity, data bits, stop bits**
 - **Baud Rate:** 300 ~ 230400 bps
 - **Parity:** None, Even, Odd
 - **Data Bits:** 5, 6, 7, 8
 - **Stop Bit:** 1 or 2
- **Serial Port 2:** The second serial port is RS-422/485.
- **Socket port**
- **Port number:** A socket port assigned for serial port. It is 16-bit numbers, ranging from 1 to 65535. Because numbers below 1000 are used for specific purposes (e.g. 80 is for HTTP protocol), we suggest you use the numbers larger than 1000. Generally port number 4660 is used for serial communication. However you should specify different port number for each serial port.
- **Socket type:**
 - **TCP Server:** TCP protocol, open passive to be connected from TCP clients.
 - **TCP Client:** TCP protocol, open active to connect TCP server.
 - **UDP Client:** UDP protocol, connectionless.
- **Interface:**
 - **RS485 (Half duplex):** Half duplex RS-485 interface, RTS for driver enable/disable.
 - **RS422 (Full duplex):** Full duplex RS-422 interface.
- **Baud rate, parity, data bits, stop bits**
 - **Baud Rate:** 300 ~ 230400 bps
 - **Parity:** None, Even, Odd
 - **Data Bits:** 5, 6, 7, 8
 - **Stop Bit:** 1 or 2

CONTROLLER UPDATED



(Figure 3.8)

Press “Update” Button After you finish the detailed parameter setting. The converter will save all parameters into internal non-volatile memory and then reboot (see Figure 3.8). It takes about 5 seconds to complete the whole process and new login page will be presented (see Figure 3.1).

You can re-login and check if all parameters have been correctly saved. If everything ok, you can close the browser now.

Note : If domain of converter is different from the computer running of browser, the login page won't appear unless the converter's “Gateway Address” has been correctly set.

FACTORY DEFAULT SETTING

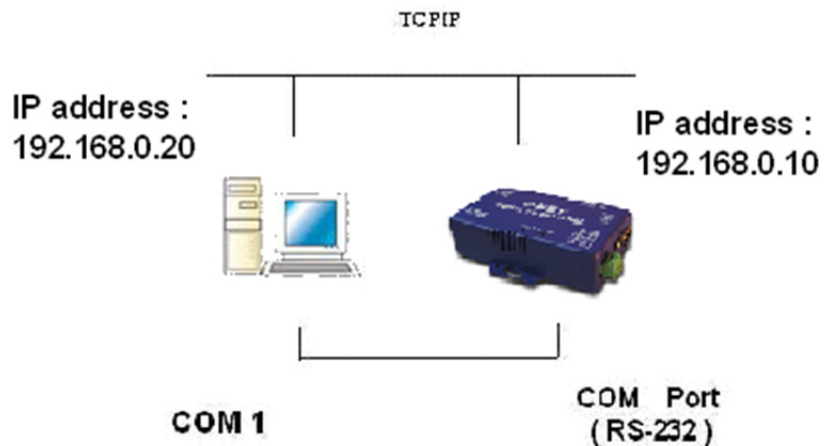
By the chance, if you forget to setup password or have incorrect settings making the converter inoperable, there are two ways to reset setting and following procedures can be used to reset all settings to factory default:

A:

1. Turn off the power of converter.
2. Press the reset button of converter.
3. Turn on the power of converter and wait for 3 seconds.
4. The password will reset to the factory default (empty).

B:

1. Log in the web page.
2. Press the reset button of converter.
3. Select the update button.
4. After Tx & Rx light flashing then unclasp the reset button.
5. The password will reset to the factory default (empty).

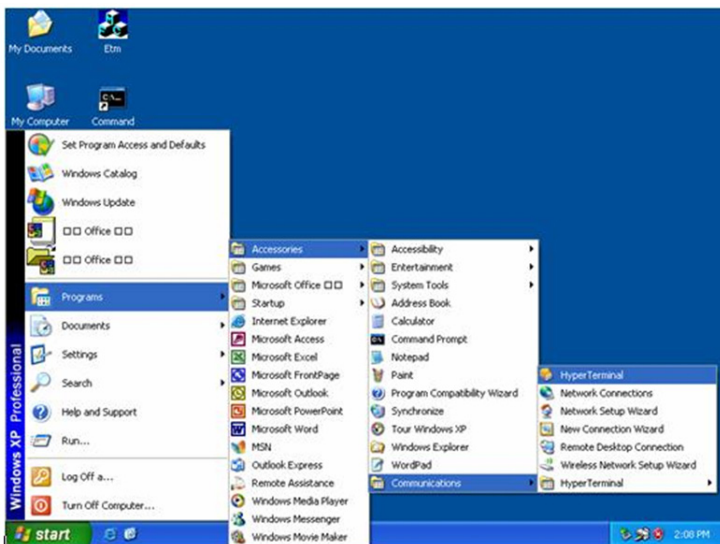


After completing the wiring and parameter setting, we should verify if setting correct or not. This chapter will introduce how to use a single computer to test if converter behaves well.

The operating system can be Windows 95, 98, ME, XP, 2000. The “Hyper Terminal” utility should be installed on your PC (see Figure 4.1). It can be found in your Windows installation CD.

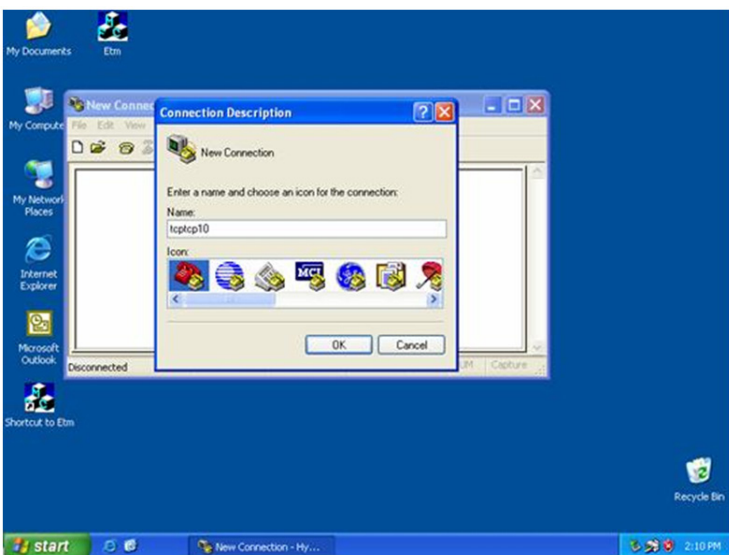
The wiring architecture similar to “RS-232 Wiring” in chapter 2 and “Serial Device” replaced by PC’s COM 1. The same PC also plays roll of Remote Host.

HYPER TERMINAL FOR TCP/IP WINSOCK



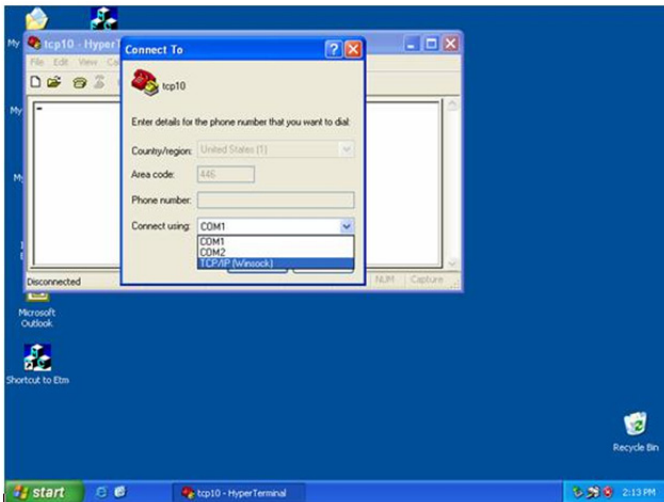
(Figure 4.1)

Initiate Hyper Terminal from Start Menu in Windows (see Figure 4.1), give terminal name, choose an icon and press “OK” button (see Figure 4.2).



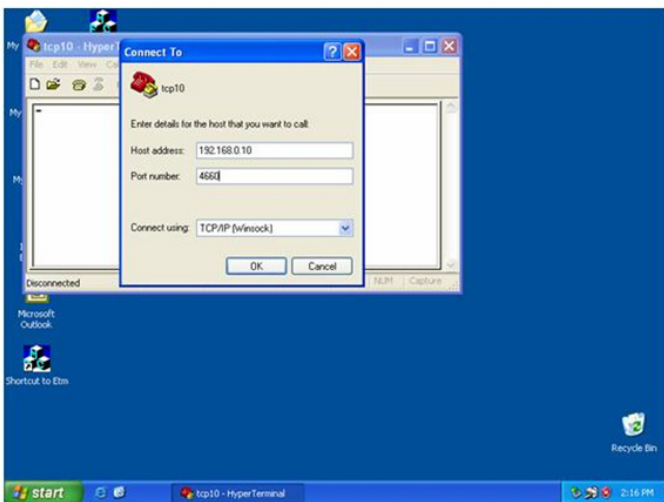
(Figure 4.2)

HYPER TERMINAL FOR TCP/IP WINSOCK



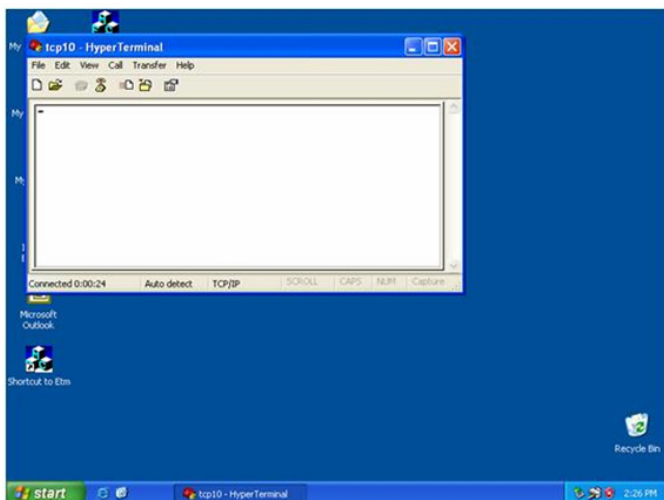
(Figure 4.3)

Select “TCP/IP (Winsock)” option at the “Connect using:” field (see Figure 4.3).



(Figure 4.4)

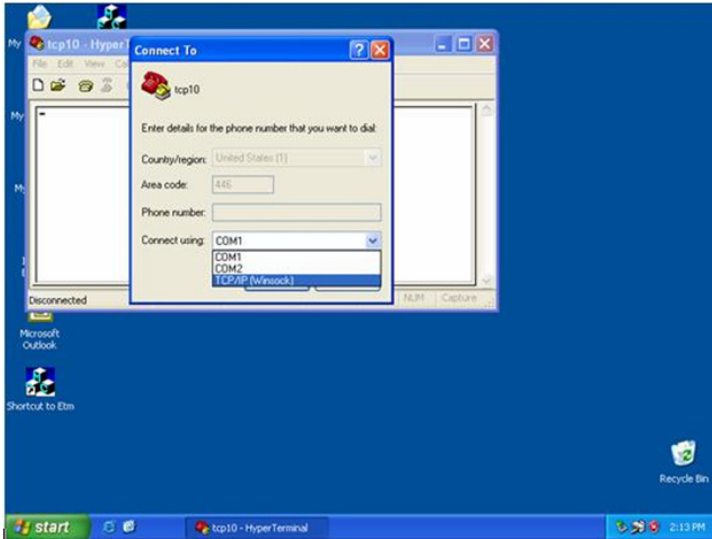
After pressed “OK” button, Figure 4.4 appears. Enter converter IP address (e.g. 192.168.0.10) at the “Host address:” field and set Socket port number for Serial Port 1 at “Port number” field (e.g. 4660). (The Socket type of the Serial Port 1 should be “TCP Server”.)



(Figure 4.5)

After pressed “OK” button, Figure 4.5 appears. If Hyper Terminal connects with converter successfully, the time clock at “left lower” corner “to connected the hh:mm:ss” will start counting.

HYPER TERMINAL FOR COM PORT



Initiate another Hyper Terminal as COM Port Terminal (in Figure 4.3, select COM 1 or other COM port instead of “TCP/IP (Winsock)”). To set COM port Properties same as Serial Port of converter (9600.N.8.1).

DATA TRANSMISSION

When all steps described above are finished, type any characters on COM Port Terminal and check if the typed characters are also displayed on TCP/IP Winsock Terminal. Alternatively, check if characters typed on TCP/IP Winsock Terminal also displayed on COM Port Terminal. If yes, then all settings are correct and converter can operate properly.

PIN OUTS AND CABLE WIRING

- DC Power outlet:

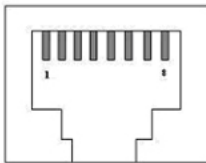


- RJ-45 Pin Assignment

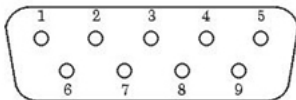
RJ45 Port

Pin	Signal
-----	--------

1	Tx+
2	Tx-
3	Rx+
6	Rx-

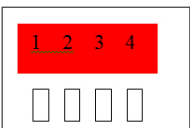


- RS-232 Pin Assignment: The pin assignment scheme for 9-pin male connector on DTE is given below.



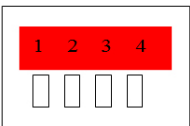
PIN 1 : DCD PIN 2 : RXD PIN 3 : TXD PIN 4 : DTR
 PIN 5 : GND PIN 6 : DSR PIN 7 : RTS PIN 8 : CTS
 PIN 9 : X

- RS-422 Pin Assignment: The pin assignment scheme for given 4-pin of RS-422 below.



PIN 1 : T+ PIN 2 : T- PIN 3 : R+ PIN 4 : R-

- RS-485 Pin Assignment: The pin assignment scheme for given 4-pin of RS-485 below.



PIN 1 : X PIN 2 : X PIN 3 : D+ PIN 4 : D-

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