# **RS-232 Over Ethernet**

# **User's Manual**

STE-232



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## Introduction

The unit is an Ethernet to RS-232 Serial Bridge. It can be used to connect any standard serial communication devices such as a PC, an audio/video distribution system etc., to an Ethernet network. It allows bi-directional communication between the two ends. It operates as both a network server and a client that means it is able to both initiate and accept network connections. Once a network connection is made, the remote networked device or computer is virtually connected to the serial device on the other side of the Bridge. Both the network device and the serial device can send and receive messages to and from each other. Up to twelve network devices can be connected simultaneously. Data sent from any one of them is bridged to the serial port. Data received on the serial side is transmitted to all connected network devices. The bridge can send and receive both UDP and TCP packets.

#### Features

- Supports TCP / IP / UDP / DHCP and HTTP protocols
- Allows up to twelve (12) simultaneous TCP / IP network connections
- Data transfer rate up to 230k bps
- Supports software handshaking (XON / XOFF) and hardware handshaking (RTS / CTS)
- Multiple Bridges can be used on the same network
- Integrated 802.3 compliant 10 / 100 Mbps network interface
- RS232, DB-9 male 9pin serial port connection
- Supports Windows 98SE / 2000 / XP / Vista / 7 / 8 / 8.1 / 10 / 11; Windows server 2003 / 2008 / 2008R2 / 2012 / 2012R2 or higher

| Model No      |           | DB-9M Pin Assignment                               |         | n Assignment |
|---------------|-----------|--|---------|--------------|
| woder no.     |           | 51E-232  | Pin No. | Definition   |
| Baud Rate     |           | 230 kbps   | 1       | DCD          |
| Connector     | Ethernet  | RJ-45 Female                                       | 2       | RXD          |
| Connector     | RS-232    | DB-9 Male  | 3       | TXD          |
| Ethernet      |           | 10 / 100 Mbps, Auto-select 10BaseT or<br>100BaseTX | 4       | DTR          |
| Configuration | I         | SLAN Utility, Serial Console                       | 5       | GND          |
| Flow Control  | (RTS/CTS) | Hardware / Software*                               | 6       | DSR          |
| Power Supply  | /         | 5VDC 1A  | 7       | RTS          |
| Housing       |           | Plastic  | 8       | CTS          |
| Dimension ( L | _xWxH)    | 66 x 39 x 20mm                                     | 9       | RI           |

#### **Specifications**

Remarks:

For the software flow control, you may select "none" on the part of Hardware Flow Control of UART setting. (see page 19)

## Installing VCOM setup programmer

Click 'VCOM\_SETUP\_V3.6.5.exe' from enclosed CD.



#### There will show 'Preparing to Install' on your screen shot.

| InstallShield Wizard | Press A.L.J.   |
|----------------------|--|
|                      | Preparing to Install   |
| <u>×</u>             | VCOM Setup is preparing the InstallShield Wizard, which<br>will guide you through the program setup process. Please<br>wait. |
|                      | Checking Operating System Version  |
|                      | Cancel   |

#### Click 'Next'



VCOM is configuring your new software installation.

| VCOM - InstallShield Wizard                         |
|---|
| Setup Status  |
| VCOM is configuring your new software installation. |
|   |
| InstallShield                                       |

When setup has finished installing VCOM on your computer, you may click 'Finish'.



#### Then the wizard will go on 'WinPcap 4.1.3 Setup', you may click 'Next'.

| 💮 WinPcap 4.1.3 Setup | And in case of the local division of the loc |                  |   |
|-----------------------|--|------------------|---|
|                       | Welcome<br>Setup W<br>This Wizard wi<br>installation.<br>For more infor<br>home page.<br>http://www.w  | e to the WinPcap | <b>9 4.1.3</b><br>tire WinPcap<br>risit the WinPcap |
|                       |  | Next >           | Cancel  |

#### Click 'I Agree' and go next.

| 🕞 WinPcap 4.1.3 Setup   |
|---|
| License Agreement<br>Please review the license terms before installing WinPcap 4.1.3.   |
| Press Page Down to see the rest of the agreement.   |
| Copyright (c) 1999 - 2005 NetGroup, Politecnico di Torino (Italy).<br>Copyright (c) 2005 - 2010 CACE Technologies, Davis (California).<br>Copyright (c) 2010 - 2013 Riverbed Technology, San Francisco (California).<br>All rights reserved.          |
| Redistribution and use in source and binary forms, with or without modification, are<br>permitted provided that the following conditions are met:   |
| <ol> <li>Redistributions of source code must retain the above copyright notice, this list of<br/>conditions and the following disclaimer.</li> <li>Redistributions in binary form must reproduce the above copyright notice, this list of </li> </ol> |
| If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install WinPcap 4.1.3.  |
| Nullsoft Install System v2,46   |
| < <u>B</u> ack I Agree Cancel   |

## Click 'Install' and go next.

| ĺ | 🕞 WinPcap 4.1.3 Setup           |  | ſ |
|---|---------------------------------|--|---|
|   | WinPcap                         | Installation options<br>Please review the following options before installing WinPcap<br>4.1.3 |   |
|   |                                 |  |   |
|   | Automatically start th          | e WinPcap driver at boot time  |   |
|   |                                 |  |   |
|   |                                 |  |   |
|   | Nullsoft Install System v2,46 - |  |   |
|   |                                 | < <u>B</u> ack Install Cancel  |   |

## The 'WinPcap' wizard will go installing accordingly.

| 🕞 WinPcap 4.1.3 Setup        |  |
|------------------------------|--|
| WinPca                       | Installation Aborted<br>Setup was not completed successfully.      |
| Installation aborted. The    | old version of WinPcap has not been removed. Click Cancel to Exit. |
|                              |  |
|                              |  |
|                              |  |
|                              |  |
|                              |  |
|                              |  |
| Nullsoft Install System v2,4 | 6  |
|                              | < <u>B</u> ack <u>N</u> ext > Cancel                               |

#### Click 'Finish' when Setup wizard is installed on your computer.

| 🕞 WinPcap 4.1.3 Setup |  |
|-----------------------|--|
|                       | Completing the WinPcap 4.1.3<br>Setup Wizard<br>WinPcap 4.1.3 has been installed on your computer. |
|                       | Click Finish to close this wizard.   |
|                       |  |
|                       | < <u>B</u> ack <b>Einish</b> Cancel  |

## **Connecting the RS-232 over Ethernet**

- Connect the RS-232 over Ethernet to your computer using a standard cross over cable (EIA/TIA T568B) LAN cable.
- Connect the RS-232 over Ethernet to the power supply and turn on the power.

### Assigning a static IP

The default IP address of the RS-232 over Ethernet is 192.168.2.1. For your computer to be able to find the RS-232 over Ethernet, you need to assign a static IP address between 192.168.2.2 and 192.168.2.254 that is in same range to the network connection with the RS-232 over Ethernet.

- 1. Click Start and go to 'Control Panel\All Control Panel Items\Network' and Sharing Center.
- Click on 'Local Area Connection' (this is the connection where the RS-232 over Ethernet is connected). If you have not connected the RS-232 over Ethernet to your computer; or if the cable is incorrectly connected, you might not be able to see this 'Local Area Connection', so make sure the RS-232 over Ethernet is properly connected to your computer.



#### 3. Click on 'Properties'

| General            |                |                                 |
|--------------------|----------------|---------------------------------|
| Connection         |                | 104                             |
| IPv4 Connectiv     | ity:           | No network access               |
| IPv6 Connectiv     | vity:          | No network access               |
| Media State:       |                | Enabled                         |
| Duration:          |                | 01:32:11                        |
| Speed:             |                | 100.0 Mbps                      |
| 4                  | 2              |                                 |
| Activity —         | y              |                                 |
| Activity —         | Sent —         | Received                        |
| Activity           | Sent — 1       |                                 |
| Activity<br>Bytes: | Sent — 253,565 | Received<br>299,727<br>Diagnose |

It shows a new COM port (Internet Protocol Version 4(TCP/IPv4)) has been established.

| Connect using:   |   |  |
|------------------|---|--|
| Intel(R) 82      | 2577LM Gigabit Network Con  | nection  |
|                  |   | Configure  |
| This connection  | uses the following items:   |  |
| COMOI            | DO Internet Security Firewall I<br>acket Scheduler<br>d Printer Sharing for Microsoft<br>t Protocol Version 6 (TCP/IPv<br>t Protocol Version 4 (TCP/IPv<br>nyer Topology Discovery Map<br>nyer Topology Discovery Resp<br>TIT | Driver A<br>Networks<br>(6)<br>(4)<br>per I/O Driver<br>ponder T   |
|                  |   | 1 Tobernea   |
| l <u>n</u> stall |   | New York Control of the Control of Control o |

#### 4. Highlight the "Internet Protocol" and click "Properties"

| ieneral   |   |
|---|---|
| You can get IP settings assigne<br>this capability. Otherwise, you<br>for the appropriate IP settings | ed automatically if your network supports<br>need to ask your network administrator . |
| 💿 Obtain an IP address aut  | omatically  |
| • Use the following IP addr   | ess:  |
| IP address:   | 192.168.2.2   |
| S <u>u</u> bnet mask:   | 255 . 255 . 255 . 0   |
| Default gateway:  | 14•1 x •1   |
| Obtain DNS server addres  | ss automatically  |
| • Ouse the following DNS ser  | ver addresses:  |
| Breferred DNS server:   |   |
| <u>A</u> lternate DNS server:   | • •   |
| Validate settings upon ex   | xit Advanced  |

5. Enter a static IP address between 192.168.2.2 and 192.168.2.254, and the Subnet mask 255.255.255.0, and click OK. Click OK at the 'Local Area Connection Properties' and close to finish. You have now assigned a static IP address to the network connection with the RS-232 over Ethernet.

## Creating a COM port with VCOM

1. Double-click the VCOM shortcut to launch the application. (You may receive a firewall notification at this point of the install, please allow access to this application)

| Windows Secur               | ity Alert                         | II has blocked some features of this program                                      |
|-----------------------------|-----------------------------------|---|
| Vindows Firewall h          | as blocked som                    | e features of VCOM on all public and private networks.                            |
|                             | <u>N</u> ame:                     | VCOM  |
| S. A.                       | Publisher:                        | Unknown   |
|                             | Pat <u>h</u> :                    | C:\users\desktop\xs1000\1_vcom\vcom.exe   |
| llow VCOM to com            | municate on th                    | ese networks:   |
| 📝 Private netw              | orks, such as r                   | ny home or work network   |
| Public netwo<br>because the | rks, such as th<br>se networks of | ose in airports and coffee shops (not recommended ten have little or no security) |
| /hat are the risks          | of allowing a pr                  | rogram through a firewall?  |
|                             |                                   | Allow access Cancel   |
|                             |                                   |   |

- 2. The RS-232 over Ethernet successfully connected to your computer with a static IP address between 192.168.2.2 and 192.168.2.254 and makes sure plug the power supply; click the 'Search' button.
- Click the Search button in the VCOM software window to locate the device. Once VCOM found the connected RS-232 over Ethernet, it will show on line one in the Device Info window.

| 🔅 VCOM3.6.5                     |                          |           |             |              |                   |  |
|---------------------------------|--------------------------|-----------|-------------|--------------|-------------------|--|
| Main                            |                          |           |             |              |                   |  |
| Exit Search by IP               | kigure Web               |           |             |              |                   |  |
| Utilities                       | Device Info- 1 Device(s) |           |             |              |                   |  |
|                                 | No                       | Device ID | Device Name | Project Name | MAC Address       |  |
| Device Info                     | 1                        | 0001      | NetUART     | NetUART      | 00-50-C2-14-03-17 |  |
| COM Mapping                     |                          |           |             |              |                   |  |
|                                 |                          |           |             |              |                   |  |
|                                 |                          |           |             |              |                   |  |
|                                 |                          |           |             |              |                   |  |
|                                 |                          |           |             |              |                   |  |
|                                 |                          |           |             |              |                   |  |
|                                 |                          |           |             |              |                   |  |
|                                 |                          |           |             |              |                   |  |
|                                 |                          |           |             |              | ,                 |  |
| Message Log- Device Info Messag | e Log- VCC               | OM Info   |             |              |                   |  |
|                                 |                          |           |             |              |                   |  |
| 下午 02:05:34 1 de                | evice(s) se              | arched.   |             |              |                   |  |
|                                 |                          |           |             |              |                   |  |
| Now: 2014/3/18 下午 02:05:58      |                          |           |             |              |                   |  |

To create a COM port click 'COM Mapping' under the 'Utilities' panel and click the 'Add' button.

| 🖗 VCOM3.6.5                     |                     |          |                  |               |
|---------------------------------|---------------------|----------|------------------|---------------|
| Main<br>Exit Add Remove         |                     |          |                  |               |
| Utilities                       |                     | COM Maj  | oping - 0 COM(s) |               |
| COM Mapping                     | No                  | COM Port | TCP/UDP          | Server/Client |
| Message Log- Device Info Messag | ge Log- VCOM Info   |          |                  |               |
| 下午 02:05:34 1 d                 | levice(s) searched. |          |                  |               |
| Now: 2014/3/18 下午 02:08:07      |                     |          |                  |               |

3. A new window opens which lists the connected RS-232 over Ethernet(s). Click on the server listed, this will bring up the information of the server in the text fields, and click 'OK'.

| СОМ  |  |  |                      |
|--|--|--|----------------------|
|  |  |  | Rescan               |
| No<br>1  | Device Name<br>NetUART   | MAC Address<br>00-50-C2-14-03-17           | Search I<br>192.168. |
|  |  |  |                      |
|  |  |  | r                    |
|  |  |  |                      |
| TCP/UDP  | ⊙ TCP C  | UDP  |                      |
| TCP/UDP<br>Server/Client   | ে TCP C<br>C Server ে  | UDP<br>Client                              |                      |
| TCP/UDP<br>Server/Client<br>IP Address                                       | TCP     C     Server   | UDP<br>Client<br>Local Port                |                      |
| TCP/UDP<br>Server/Client<br>IP Address<br>COM (                              | TCP     C     Server     192.168.2.1  COM 4                                    | UDP<br>Client<br>Local Port<br>Remote Port | 23                   |
| TCP/UDP<br>Server/Client<br>IP Address<br>COM (                              | TCP     Server     Server     192.168.2.1 COM 4                                | UDP<br>Client<br>Local Port<br>Remote Port | 23                   |
| TCP/UDP<br>Server/Client<br>IP Address<br>COM (<br>COM (<br>Enable Cont<br>1 | TCP     Server     Server     Server     Server     Second(s) for reconnection | UDP<br>Client<br>Local Port<br>Remote Port | 23                   |

| 4. | The COM | port will now | be listed | under the | 'COM M | lapping' | window. |
|----|---------|---------------|-----------|-----------|--------|----------|---------|
|    |         |               | 00 110100 |           | 00000  | i apping |         |

| 💸 VCOM3.6.5   |                                |                        |         |               |             |             | ×          |
|---|--------------------------------|------------------------|---------|---------------|-------------|-------------|------------|
| Main  |                                |                        |         |               |             |             |            |
| Exit Add Remove                                       |                                |                        |         |               |             |             |            |
| Utilities   |                                | COM Mapping - 1 COM(s) |         |               |             |             |            |
| E-2 VCOM  | No                             | COM Port               | TCP/UDP | Server/Client | IP Address  | Remote Port | Local Port |
| COM Mapping   | 1                              | 4                      | TCP     | Client        | 192.168.2.1 | 23          | N/A        |
|   |                                |                        |         |               |             |             |            |
|   |                                |                        |         |               |             |             |            |
|   |                                |                        |         |               |             |             |            |
| Message Log- Device Info Message                      | ge Log- VCO                    | M Info                 |         |               |             |             |            |
| 下午 03:09:12 0 c<br>下午 03:09:20 1 c<br>下午 03:09:20 1 c | levice(s) sea<br>levice(s) sea | arched.<br>arched.     |         |               |             |             | •<br>•     |
| Now: 2014/3/18 下午 03:16:20                            |                                |                        |         |               |             |             |            |

5. To further check if the COM port was successfully installed go to Windows Device Manager where the COM port should be listed under 'Ports (COM & LPT).

| B Device Manager                       | - • × |
|--|-------|
|  |       |
|  |       |
| a 📇 dml-THINK                          |       |
| Batteries                              |       |
| Biometric Devices                      |       |
| ⊳ - 🖳 Computer                         |       |
| Disk drives                            |       |
| Display adapters                       |       |
| 👂 🕼 Human Interface Devices            |       |
| D IDE ATA/ATAPI controllers            |       |
| IEEE 1394 Bus host controllers         |       |
| Imaging devices                        |       |
| Keyboards                              |       |
| Mice and other pointing devices        |       |
| D- Modems                              |       |
| Monitors                               |       |
| Network adapters                       |       |
| Ports (COM & LPT)                      |       |
| ELTIMA Virtual Serial Port (COM4)      |       |
| Processors                             |       |
| > I SD host adapters                   |       |
| Security Devices                       |       |
| SM Driver                              |       |
| Sound, video and game controllers      |       |
| p                                      |       |
| D - W Universal Serial Bus controllers |       |
|  |       |
|  |       |

You have now successfully created a serial RS232 COM port!

## Configuring the parameters

1. To configure the parameters of the RS-232 over Ethernet you can click on the 'Configure' button. A prompt pop-up will open. You may enter the Device account and Password information. Default Device account is 'admin' and password is 'system'.

| np | out Attributes        |
|----|-----------------------|
|    | Please Give Account:  |
|    | admin                 |
|    | Please Give Password: |
|    | ****                  |
|    | OK Canad              |
|    |                       |

#### 2. You may now configure your desired parameters.

| Administrator |                |  |
|---------------|----------------|--|
| IP Address    |                |  |
|               | 192.168.2.1    |  |
| Subnet Mask   |                |  |
|               | 255.255.255.0  |  |
| Gateway       |                |  |
|               | 192. 168. 2. 1 |  |
| DNS           |                |  |
|               | 192.168.2.1    |  |
|               | P              |  |
| IP Configure  |                |  |

3. Enter the IP address you have set for the RS-232 over Ethernet device into your web browser address bar (default IP: 192.168.2.1) and you will prompt to login with your user ID and password.

- Default ID : admin
- Default Password: system

| Attp://192.168.2.1/ - Windows Internet Explorer |   | me une drakt une               |                  |
|---|---|--------------------------------|------------------|
|   |   | <ul> <li>         ←</li></ul>  | + م              |
| <u>Eile Edit View Favorites Iools H</u> elp     |   |                                |                  |
| ☆ Favorites                                     |   | 🚡 🔹 🖾 🔹 📑 🖶 🔹 Page 🔹 Safety 🕻  | T <u>o</u> ols ▼ |
|   | Site:       192.168.2.1         ID:       admin         Password:       ••••••         OK | in , m , en un ten ten t       |                  |
|   |   | 1                              |                  |
| Done  |   | Internet   Protected Mode: Uff | • • 100% •       |

After a successful login, you will see Administrator, TCP Mode, UDP Mode, UART, and Reset Device selections in left frame of the web console – the following sections will describe their function.

Note: Press F5 to reload



## **Function Introduction**

#### 1. Administrator Setting

Under the 'Administrator' heading, you will be able to set/change the device password, configure the networking parameters, display the current firmware version, load the factory defaults, and perform any future firmware upgrades.

| Kernel Version                 | V1.43 2010/01/21  |
|--------------------------------|-------------------|
| MAC Address                    | 00:11:22:33:44:00 |
| Nickname                       | NetUART           |
| IP Setting                     |                   |
| IP Address                     | 192. 168.2.1      |
| Subnet Mask                    | 255 255 0         |
| Gateway                        | 192 168 2 1       |
| IP Configure                   | ⊙ Static ○ DHCP   |
| Password Setting               |                   |
| Username                       | admin max:15      |
| Password                       | •••••• max:15     |
| Confirm                        | •••••             |
|                                | Update            |
| Load Default Setting to EEPROM | Load              |

In this page, you can change login ID and Password. The RS-232 over Ethernet device supports a maximum of 15 characters for password, only alphanumeric characters are allowed ("0-9","a-z","A-Z").

Press "Update" to store the data. Reset the device to take effect.

#### 2. Version info

- Kernel Version: The installed version of the kernel.
- MAC Address: At present the device MAC Address
- Nickname: the product model name, changeable, max 15 characters

#### 3. IP Setting

To set IP protocol info; IP Configure means using Static IP or gotten by DHCP, reset the product to take effect

Note: Reset to take new setting effect is to reload the device from the computer, not to press the "Reset" button at the device

System Setting Saved!! RESET to take effect

ΟK

#### 4. Password Setting

Max 15 alphabet or number characters reset the product to take effect.

Note: Reset to take new setting effect is to reload the device from the computer, not to press the "Reset" button at the device



#### 5. Load default setting

On this page, you can load and store the factory default settings into EEPROM. Network settings and MAC address will not be changed. Press "Load" to load default settings. Reset the device to take effect.

## Load Default Setting to EEPROM



#### 6. Reset the device to take effect.

Reset to take new setting effect is to reload the device from the computer, not to press the "Reset" button at the device



ΟK

#### 7. TCP Control

#### Telnet Setting

- 7.1. Telnet Server/Client: Currently used to determine the device is to the Telnet Server or Client.
- 7.2. Port Number: This assigns the TCP server port number that the server will listen on for connecting clients. (Only for TCP Server Mode)
  - When the device is Server to telnet, it is the port waiting connecting; when the device is Client, it is the port connecting externally.
- 7.3. Remote Server IP Address: when being Client, it is the IP address connecting server of the other side.
- 7.4. Client mode inactive timeout: the timeout setting for Server when TCP is operating Client mode
- 7.5. Sever mode protect timeout: the timeout setting for Client when TCP is operating Sever mode.

#### TCP Control

| Item                         | Value                                       |
|------------------------------|---|
| Telnet Server/Client         | ⊙ Server ○ Client ○ Disable                 |
| Port Number                  | 23  |
| Remote Server IP Address     | 210 200 181 102                             |
| Client mode inactive timeout | 20 minute (1~99,0=Disable)                  |
| Server mode protect timeout  | 60 minute (1~98,0=Disable,99=Can't replace) |

Note: When TCP Control is set to Server or Client mode, the UDP mode will be disabled automatically. When UDP mode is enabled, the TCP mode will be disabled automatically.

Once you have completed making changes, press "Update" to store the data. Reset the device to take effect.

#### 8. UDP

#### Status:

On TCP mode, UDP mode will be disabled automatically; On UDP mode, TCP mode will be disabled automatically.

#### Local Port:

In UDP mode, the Local Port will be assigned to this device. You can list the remote connection IP and Port for up to 10 remote devices. Once you have completed making changes, press "Update" to store the data. Reset the device to take effect.

#### Remote Address:

The remote address table allows users to set several remote site IP addresses and ports. When sending data, the device will send UDP data to the IP addresses in the table.

UDP

| ltem           | Value<br>© Enable @ Disable |    |  |  |  |
|----------------|-----------------------------|----|--|--|--|
| Status         |                             |    |  |  |  |
| Local Port     | 21                          |    |  |  |  |
|                | IP                          | Po |  |  |  |
| Remote Address | 0,0,00                      | 0  |  |  |  |
|                | 0,0,0,0                     | 0  |  |  |  |
|                | 0,0,0,0                     | 0  |  |  |  |
|                | 0,0,0                       | 0  |  |  |  |
|                | 0,0,0,0                     | 0  |  |  |  |
|                | 0,0,0,0                     | 0  |  |  |  |
|                | 0,0,0,0                     | 0  |  |  |  |
|                | 0.0.0.0                     | 0  |  |  |  |
|                | 0,0,0,0                     | 0  |  |  |  |
|                | 0,0,0                       | 0  |  |  |  |

#### 9. UART

UART or Universal Asynchronous Receiver Transmitter refers to the 'RS-232 serial port' of the RS-232 over Ethernet device. All of the port settings are modified from this page.

Once you have completed making changes, press "Update" to store the data. Reset the device to take effect.

Baud Rate:

Set the baud rate of UART interface. The RS-232 over Ethernet supports 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 and 230400bps baud rates.

Character 1 & 2

User can choose Character 1 or 2 to be delimiter. Once delimiter is on, the device will monitor all the data that UART has received which will be saved on the internal buffer of the device, and then if delimiter function is detected, the data will be sent directly to Ethernet; if not being detected, the data will be saved on the buffer of the device and overwritten when the space of the buffer is run out.

Drop Character:

To choose activating delimiter or not, if it is activated, then the delimiter received from UART will not be sent to Ethernet. Drops the delimiter character of the serial port when sending to TCP, (the receiver doesn't display the character).

Silent time:

By setting Silent time, the device will not send any data to Ethernet until the set Silent time is up

## UART Control

| Item                  | Setting                           |  |  |  |  |
|-----------------------|-----------------------------------|--|--|--|--|
| Mode                  | R \$232                           |  |  |  |  |
| Baudrate              | 57600 🗸                           |  |  |  |  |
| Character Bits        | 8 🗸                               |  |  |  |  |
| Parity Type           | none 🗸                            |  |  |  |  |
| Stop Bit              | 1 ~                               |  |  |  |  |
| Hardware Flow Control | hardware                          |  |  |  |  |
| Delimiter             | Character 1: 00 , Character 2: FF |  |  |  |  |
|                       | Drop Character                    |  |  |  |  |
| Update                |                                   |  |  |  |  |

#### 10. Search Device

By using VCOM, you may find the RS-232 over Ethernet device from LAN to know the IP Address and MAC Address. Since the Search function goes by MAC address but not IP address, all RS-232 over Ethernet units connected to the LAN will be located, regardless of whether or not they are part of the same subnet as the best

| 1031.  |                          |             |              |                   |                   |               |  |  |
|--|--------------------------|-------------|--------------|-------------------|-------------------|---------------|--|--|
| XCOM3.6.5                                      | (Table )                 |             |              |                   |                   |               |  |  |
| Main<br>Ext Search Contigue                    | e Web                    |             |              |                   |                   |               |  |  |
| Utilides                                       | Device Info- 1 Device(s) |             |              |                   |                   |               |  |  |
| E-2 VCOM                                       | Device ID                | Device Name | Project Name | MAC Address       | Search IP Address | Device IP Add |  |  |
| Oevice Info     OOM Mapping                    | 0001                     | NetUART     | NetUART      | 00-50-C2-14-03-17 | 192.168.0.103     | 192.168.0.103 |  |  |
|  |                          |             |              |                   |                   |               |  |  |
|  |                          |             |              |                   |                   |               |  |  |
|  |                          |             |              |                   |                   |               |  |  |
|  |                          |             |              |                   |                   |               |  |  |
|  |                          |             |              |                   |                   |               |  |  |
| <u> </u>                                       |                          |             |              |                   |                   | ,             |  |  |
| Message Log- Device Info Message Log           | g- VCOM Info             |             |              |                   |                   |               |  |  |
|  |                          |             |              |                   |                   | A             |  |  |
| 下午 03:09:12 0 device                           | e(s) searched.           |             |              |                   |                   |               |  |  |
| 下午 03:09:20 1 device<br>  下午 03:09:29 1 device | e(s) searched.           |             |              |                   |                   | -             |  |  |
| Now: 2014/3/18 下午 03:54:18                     |                          |             |              |                   |                   |               |  |  |

#### NOTE:

Beware that it is not allowable to use the RS-232 over Ethernet by two computers at a time/simultaneously in same range (ex.192.168.x.1) to the network connection.

And it is compulsory to use a static IP address with the RS-232 over Ethernet instead of crossing over different ranges in network connection. (ex. 192.168.2.1 is configured as static IP address; you may not communicate data thru 192.168.3.1)

## **Regulatory Compliance**

#### Disclaimer

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#### CE Certification

This equipment complies with the requirements relating to electromagnetic compatibility. It has been manufactured under the scope of RoHS compliance.

#### FCC Compliance Statement

This equipment generates and uses radio frequency and may cause interference to radio and television reception if not installed and used properly. This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

You are cautioned that changes or modification not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation



## WEEE (Waste of Electrical and Electronic Equipment),

#### Recycling of Electronic Products

In 2006 the European Union introduced regulations (WEEE) for the collection and recycling of all waste electrical and electronic equipment. It is no longer allowable to simply throw away electrical and electronic equipment. Instead, these products must enter the recycling process.

Each individual EU member state has implemented the WEEE regulations into national law in slightly different ways. Please follow your national law when you want to dispose or any electrical or electronic products. More details can be obtained from your national WEEE recycling agency.