# TRP-C37 User's Manual

# Ethernet to RS232/422/485 Converter



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# 1. Introduction

TRP-C37 is suitable industrial environment Ethernet serial server, wide range power input and serial communicate protection, Built-in surge, over current ,over voltage ensure RS422/485 serial communication quality ; Increase watchdog function will auto reset when Ethernet serial server or power fail, if careless lost password or wrong setting value that can fast back to factory by external switch.

TRP-C37 support 3 operates mode, "Direct IP Mode", "Virtual COM Mode", and "Paired Mode", RS232 interface has one D-SUB 9pin connector and screw terminal block for RS422/485. The Ethernet port support Auto-MDIX and Auto-select 10/100MB.

TRP-C37 offers maximum connection 16 host clients to link the one serial server, it is easy to operate in Modscan32 and Modbus Poll many application uses Virtual-COM mode and Pair Mode.

TRP-C37 provides a watchdog timer function, The Watchdog timer allows the system to automatically recover from a system crash. When the TRP-C37 MCU stop working correctly, the watchdog timer waits for a preset period of time, and performs a hardware reset. When TRP-C37 working at unstable voltage industrial environment, the power detection circuit can prevent the power fail cause of the boot fail then auto re-boot.

# 1-1 Features

- Wide input range DC power supply.
- External watchdog function prevents system or power fail.
- Support Auto-MDIX twisted pair crossover detection and Auto-Correction.
- Maximum Connection 16 Client PC at Server Mode.
- Auto fast Bi-direction RS485 hardware.
- Surge protection and over current and over voltage on RS-422/485 data lines.
- Support baud rate from1200~921600Kbps.
- Auto switching RS-232/422/485 signal interface
- Virtual COM drivers for Windows 98/WIN2000/WIN XP/Vista/WIN2003/WIN 7.
- Virtual Com Support Server, Client, UDP mode.
- Fully compatible with Ethernet and TCP/IP protocol.
- Supports 10/100 Mbps Ethernet.
- Power/Link/RX/TX mode LED indicator.
- Heart Beat function ensures a reliable communicating connection.
- Auto Pair-mode when power or Ethernet fails.
- Back to factory by external switch.
- Support configuration by serial console.
- Update the firmware from Ethernet.
- Dual power input select from screw terminal or DC-jack.

# 1-2 Specification.

- Power Input Voltage: DC +10V to +30V.
- LAN: Auto-MDIX, 10/100 Mbps Auto-detecting.
- RS-232: TX, RX, RTS, CTS, DTR, DSR, DCD, GND.
- RS485 signal: differential 2 half-duplex wires (DATA+, DATA-).
- RS422 signal: differential 4 full-duplex wires.(TX+,RX+,TX-,RX-)
- Data Rate: 1200,2400,4800,9600,19200,38400,57600,115200,921600 K bps .
- Parity: none, even, odd.
- Data Bits: 5, 6, 7 or 8.
- Stop Bits: 1, 1.5 or 2.
- Protocol: TCP, IP, ARP, DHCP, Telnet, HTTP, UDP, ICMP
- External switch: OFF OFF :TCP and VSP mode.
  - ON OFF : Option .
  - OFF ON :Option.
  - ON ON :Back to Factory.
- Virtual-Com mode support RS232 TXD,RXD,GND.

RS422 TX+,TX-,RX+,RX-. RS485 DATA+,DATA-.

- Power supply: Screw terminal or DC jack.
- Serial interface: +/-15 KV ESD.
- RS422/485 interface: Surge, over current, over voltage protection.
- Power consumption: 12V/140mA.
- Operating Temperature:-10 to 65 °C.
- Humidity: 0~90% Non-Condensing.
- Dimensions: 151(L)\*75(W)\*26(H) mm.
- Weight: 395g with packing.

# 2. Hardware Description

2-1. Panel layout



**Notice:** User can only choose either external DC-Jack or Screw terminal DC input. Do not use external DC-Jack and screw terminal DC input simultaneously.

# 2-2. LED indicator

**PWR LED**: System is ready.(Blinking)

LINK LED: Ethernet cable connection and data active.

TX/RX LED: UART Transiting/Receiving Indicator.

DC Jack: Power Input DC +10V to +30V. (Pleas use the 5.5\*2.1mm DC JACK).

# 2-3. Reset Button

Push the reset button will Re-Boot.

# 2-4. DIP Switches

A double DIP switch allows the TRP-C37 to be placed into TCP/Option/Factory Mode.

OFF OFF: Normal mode. ON OFF: Option. OFF ON: Option. ON ON: Back to factory.

# 2-5.Factory Setting

Factory Setting: \*Adjust the external switch to ON ON will back to factory.

Device Setup		X
Network Setting Serial Port Setting		,
Device NameTRP-C37MAC Address00-0E-C6-00-01-B7DHCPEnableImage: Server Listening IP192.168.1.23	Netmask Gateway DNS Transmit Timer	255.255.255.0       192.168.1.3       168.95.1.1       10
Data listening port 4000 Client Destination IP 192.168.1.2 Destination Port 4000 Data Packet Type UDP Auto connect after reboot TCP Management Packet Type Broadcast Multicast	Heart Beat Maximun Connection TCP Keep Alive New Password Firmware Version	Disable
	Submit Save	Load

Network Setting Se	erial Port Setting
Baud rate	9600
Data bits	8
Parity	None
Stop bits	1
Flow Control	None

2-6. D-sub 9 Pin male Configuration



# 3. Install TRP-C37 Hardware

STEP1: Connect power source with TRP-C37, the PWR LED will blinking.

STEP2: Connect TRP-C37 with LAN port by RJ45 cable.

If the cable is properly connected the "LINK" LED will light up.

\*The TRP-C37 Support Auto-MDIX, A straight-through or crossover RJ45 cable can be used to make a connection directly to the HUB/Router/PC LAN port.

**STEP3:** Connect TRP-C37 to RS232 device by Null-Modem cable (Maximum 15M). Connect TRP-C37 to RS422/485 by AWG #12~30 wires (Maximum 1.2KM).

# 3-1. RS485 Wiring

The RS-485 mode supports the Transmit and Receive channels using 2-wire half-duplex operation.



# 3-2. RS422 Wiring

The RS-422 mode supports 4 channels with full duplex operation.



# 3-3. RS232 Wiring

Refer to the Pin out table for connections.



# 4. How to configure TRP-C37

There are 3 ways to access the TRP-C37.

a. TRP-C3X DSM Software.

M Setting	Device Statu	us List						
Setting	NO.	Device Name	MAC Address	DHCP	IP 102.169.1.12	Port 4000	Mode	Status
M Function —		TRF-057	00-0E-C8-00-01-AC	Enable	192.108.1.13	4000	Derver	Tute
Courds	Networ	tk Setting   Serial Po	rt Setting					<u></u>
Destort	Davi	ing Norma	10 0 0 0 0 0			255 255 259	5.0	_
IP Search	Devi	Cérvaine [	0.07.05.00.01.40	Netmask	:	102 169 1 2		_
	MAC	- Address	0-0E-C0-00-01-AC	Gateway	ſ	160.05.1.1		_
evice Setup	DHC	CP E	inable 💌	DNS		108.95.1.1		_
		erver ∕istening IP 1	92.168.1.13	Transmi	t Timer	10		_
eb Browser	Г	Data listening port 4	.000	UART 1	ransmit	0		
	00	lient		Heart Be	eat	Disable 💌	[	
Kestore	L	Destination IP 1	92.168.1.2	Maximu	n Connection	1 💌	[	
Referent	E E	Destination Port 4	000	New Pas	sword	***		
Repoor	Dat	ta Packet Type —— UDP		Firmurer		1026		
Upgrade		Auto connect		1-1111W 61	6			
-1.0		TCP						
		no on mont Doolsot Tur						
Console	- Mau	nagement racket i yj	20 I					

#### b. WEB Server

	http://www.trycom.com.tw
TRP-C37 WDT-Inside	Ethernet to RS232/422/485 Serial Server
Serial Settings	
Data Baud Rate	9600 💌
Data Bits	8
Data Paritiy	None
Stop Bits Elem Centrel	l v
Network Settings	
	✓ Enable DHCP
Static IP Address	192.168.1.1
Static Subnet Mask	255.255.255.0
Static Default Gateway	192.168.1.3
Static DNS Server	168.95.1.1
Connection Type	TCP
Transmit Timer	10
Server/Client	Server
Server:	
Server Listening Port	4000
Client:	100.1 (0.1.0
Destination IP	192.168.1.2
Destination Port	4000
New Password	••••
	🗖 Enable Reboot
	Apply Reset

# c. Serial Console .

	Trycom Technolog TRP-C3X Console	y Co.,Ltd Ver 2.0		
	Firmware Verson	: 1126		
Device Name	: TRP-C37	Netmask	: 255.255.255.	0
MAC Address	: 00-0E-C6-00-01-B7	Gatway	: 192.168.1.3	
DHCP	: Enable	DNS	: 168.95.1.1	
Server	: Enable	Transmit Timer	: 10	
Listening IP	: 192.168.1.1	Heart Beat	: Disable	
Listening Port	: 4000	Maximun Connecti	on: 1	
Client	: Disable	TCP Keep Alive	: 1	
Destination IP	: 192.168.1.2	New Password	: XXXX	
Destination Port	: 4000	Serial Port S	etting	
UDP	: Disable	Baud Rate	: 9600	
Auto Connect	: Disable	Data Bits	: 8	
ТСР	: Enable	Parity	: NONE	
Broadcast	: Enable	Stop Bits	: 1	
Muticast	: Disable	Flow Control	: NONE	
Muticast :e :	: Disable	Flow Control	: NONE	

### 4-1. Using TRP-C3X DSM Utility.

The "TRP-C3X DSM utility" software performs several functions:

- A: Searching for TRP-C37 connected to the network.
- B: Displaying and changing the configuration of TRP-C37.
- C: Upgrading the TRP-C37 firmware.

\*Refer the Firmware upgrade help file.

D: Saving and Loading Configuration from external log File or EEPROM.

#### 4-2. Searching LAN for TRP-C37

Once TRP-C37 is connected to the LAN the **TRP-C3X DSM** software will search it and display it in a window by name, IP address, Mac....Information.

			Taura a sa	Technolog					
	IPC		rrycom	rechnolog	У				
SM Setting	Dev	rice Stat	us List						
Setting		NO.	Device Name	MAC Address	DHCP	IP	Port	Mode	Status
		1	TRP-C37	00-0E-C6-00-01-AC	Enable	192.168.1.13	4000	Server	Idle
3M Function —									
Search									
IP Search									
Device Setup									
Web Browser									
Restore									
Pahaat									
Rebut									
Upgrade					DSM Status:	Idle			
					D	· · · · · · · · · · · · · · · · · · ·			

# **4-3.Configuring Server Properties**

Select the "NO." item and Double click to open the Server configuration, after setting then click "Submit" will save the configuration to EEPROM.

Device Setup           Network Setting         Serial	Port Setting			×
Device Name MAC Address DHCP • Server Listening IP	TRP-C37         00-0E-C6-00-01-B7         Enable         192.168.1.23	Netmask Gateway DNS Transmit Timer	255.255.255.0         192.168.1.3         168.95.1.1         10	
Data listening port Client Destination IP Destination Port Data Packet Type UDP Auto connect after reboot	4000 192.168.1.2 4000	Heart Beat Maximun Connection TCP Keep Alive New Password Firmware Version	Disable   1  1  *****  1126	
Management Packet 7	Гуре	Submit Save	Load	

#### **Device Name**

Device server name, Maximum 10 chars.

#### **MAC Address**

The Device server MAC address.

#### DHCP

If DHCP is disabled, it allows user setting the IP address, Subnet mask, Gateway.

If DHCP is enabled ,the IP address, Subnet mask, Gateway address will be dynamically configuration by DHCP server such router.

When "DHCP" is enabled ,but the DHCP server is not available on the network, the TRP-C37 will timeout then back to factory setting IP=192.168.1.1.

#### Server Listening IP

The TRP-C37 IP address.

#### Server Data listening port

RS232/422/485 port address.

#### **Client Destination IP**

When user using the paired mode, the client setting need to input Server IP and PORT which one need to connect.

#### **Client Destination port**

RS232/422/485 port address.

Port: 16 bit number. (1 ~ 65535)

# Netmask

The default LAN Netmask is configured for a Class C address. This maybe reconfigured by the user.

# Gateway

Input the gateway IP address that can be allows users to access the serial server from internet. **DNS** 

Short for Domain Name System, an Internet service that translates domain names into IP addresses. Because domain names are alphabetic, they're easier to remember. The Internet however, is really based on IP addresses. Every time you use a domain name, therefore, a DNS service must translate the name into the corresponding IP address.

### Transmit timer:0~64 mS/Unit

Time interval to send out serial data char staring packet.

# UART Transmit:0~15 uS/Unit

Time interval to send out serial data char packet.

### Hear Beat: Disable /Enable

When Hear Beat enable, User can open a 5300 port, 5 sec interval to send out data char packet that provides a easy way to ensure the communications between Host PC Client and server devices.

### Maximum Connection: 1~16

The function allows the user to configure the TRP-C37 Serial Server to have up to 16 TCP client connections.

# TCP Keep Alive: 1~7 /Minute

When TRP-C37 in Server mode, the TRP-C37 without data over the 1~7 Min setting value, The TRP-C37 will be disconnect TCP.

When TRP-C37 in Client mode, the TRP-C37 without data over the 1~7 Min setting value, The TRP-C37 will be reconnecting TCP.

#### New Password: 1234

It only accept value from 1000~9999 integer, if input the wrong password over 5 times, the WEB-Page will lock until the TRP-C37 re-boot.

#### **Firmware Version**

Firmware Version.

# **Serial Port setting**

Baud Rate: UART Speed from 1200,2400,4800,9600,19200,38400,57600,115200,921600 k bps Data Bit: 5,6,7,8

Parity: Odd, Even, None

Stop Bits: 1, 1.5,2.

Flow Control: Xon/Xoff, Hardware, None

# Submit

Save the setting value to EEPROM.

# Save

Save the setting value to external log file.

# Load

Load the setting value to external log file.

## Upgrade

Upgrade the TRP-C37 firmware

\*Wrong way the upgrade firmware will cause the TRP-C37 system fail.

#### 4-4 using the WEB Server mode

The Web Server can be used to configure the TRP-C37 Serial Server from any web browser software (such as I.E).

In Internet Explorer type the IP Address of the Serial Server into the address field and press the **Enter** key. The following window will appear:

Example:

If TRP-C37 IP is 192.168.3.24 Please Input the 192.168.3.24 then enter at web address, the web-page will appear..... See diagram below.



# 4-5 Using the serial console mode

The serial console can be used to configure the TRP-C37 Serial Server from DB-9 connector link the HOST PC by null modem cable.



Insert the TRP-Serial CD then find the CONSOLE.exe, The CONSOLE file support all windows O.S include MS-DOS, Run the CONSOLE file and **Re-boot** the TRP-C37 then select correct

host COM port number and data format.

		Trycom Technology TRP-C3X Console	y Co.,Ltd Ver 2.0		
		Firmware Verson	: 1126		
Device Name	:	TRP-C37	Netmask		255.255.255.0
MAC Address		00-0E-C6-00-01-B7	Gatway		192.168.1.3
DHCP		Enable	DNS		168.95.1.1
Server		Enable	Transmit Timer		10
Listening IP		192.168.1.1	Heart Beat		Disable
Listening Port		4000	Maximun Connecti	on:	1
Client		Disable	TCP Keep Alive		1
Destination IP		192.168.1.2	New Password		XXXX
Destination Por	t:	4000	Serial Port S	ett	ing
UDP		Disable	Baud Rate		9600
Auto Connect		Disable	Data Bits		8
TCP		Enable	Parity		NONE
Broadcast		Enable	Stop Bits		1
Muticast		Disable	Flow Control		NONE

# 5. Install the Virtual-COM

The Virtual-COM utility support TCP/IP、UDP data mapping to the HOST PC virtual-com, it can creative Maximum 512~1024 virtual-com port, Support Server、Client、UDP mode, Support all Windows O.S include Win98/Win2000/WinXP/Vista/Win2003/WIN7,Support Multi-virtual com at different PC to one serial server; Support Ethernet and Internet , If TRP-C37 off line or power fail, The Virtual-Com utility will try to Reconnection.

Step 1. Adjust the switch to "OFF, OFF"... The switch position at Normal-mode.

Step 2. Insert the TRP-Serial CD and find the TRP-C37 folder.

Step 3.Click "Vcomm.exe" icon then install Virtual-COM utility.

\*The Virtual COM utility support multi-language, please select which language do you need.



Step4. Click "OK" button and select "VSP run as Client support Server Device".



Step5. Select "Create virtual serial by device scanner", then press "OK"

📣 Vir	tual Serial	
	How to Create virtual serial	
$\langle$	Create virtual serial by device scaner	
	C Create Default virtual serial	
	СОК	
	ар VCOMM	

Step6. Run VCOMM.exe then click right button select "New Virtual COM"

🦚 Virtual Se	rialVSPM run as Client,suppor	rt Server Devic	e Ver3.16		
Manager C	onfig Minimize VSPM About	t Exit			
Virtual COM	Remote Server IP and PORT	State	0	OM->Network(Byte)	NetWork->COM(Byte)
			Scan and App New Virtual CO Edit Virtual CO Delete Virtual ( Minimize VSPM Manager Devi	end Device M M COM I Ce	► andard Mode
			Config	F5	
			Exit		

Step7. Select "Select Serial Port" and input TRP-C37 IP and port then press "OK".

/irtual COM	Remote Server IP and PORT State	COM->Network(Byte)	NetWork->COM(By
	Virtual Serial Info		×
	TCP/IP virtual serial param		
1	Serial COM5		
	Remote Server IP: 192.168.1.1		
	Remote Server PORT: 4000	<b>•</b>	
	Map mode: Client		
	Note:		

Step8. If Virtual-Com setting success, the display will appear bellow.

Step9. Run TRPCOM utility then select virtual-com port make a TRP-C37 loop test.

)M5	192.168.1.1:4000	Open, 3600, N. 8, 1	1048	986
	TRPCOM Test Utility	ASC	II /Modbus RTU Suppo	rt
	Setting Termial	Scan C51H	TCP/IP Help	
	Send Command 123456789ABCDEFG Response 123456789ABCDE	FG		tion Send Nuto 80 mS Clear Sum
	- Description		Comi	mand + Checksum

\*If in VCOMM's configuration select "Boot with windows", the virtual-com will Auto-connection when windows start.

Setup	×
Baseconfig Networkconfig Workconfig	
Boot with windows	
Init VSP when Start	
Clear VSP when Start	
Ignore used VSP when exit	
Eanbled Device Scaner	
Process priority: Normal	
Thread priority: Normal	
GUI default mode: Normal	
Data refresh interval: 2	
Cancel	

# 6. Application

# 6-1 Direct IP Mode

\*Keep DIP switch to the OFF, OFF Position.



## Example:

Step1: Connect PC-----Ethernet-----TRP-C37-----RS485---TRP-C28 (RS485 ID=01) Step2.Run TRPCOM utility and input IP/Port, click "Link" button, then Send Command, The Response will appear TRP-C28 I/O Status.

TRPCOM Test Utility	2010 Pro Version 📃 🗆 🗙
Setting Termial Scan TCP/IP	Help
TRP-C3X Ethernet Serial Server Setting	Network Status
Port 4000 Link	Response
Send the ASCII command	<b></b>
Send Command Clear	Loop Adjust
Release IP Loop Test	Fast Slow
Description The function allow TRP-C3X to connect with test . or send command to TRP-DIO and AIC N,8,1 please check TRP-C3X ethernet serve	network, and RS232/422 wire connection for loop D to get the response . Notic:TRP-AIO,DIO using er's setting as same as that.

Step3.Send Command "#010003", The Response will enable TRP-C28 Relay1 and Relay2 enable.

TRPCOM Test Utility	2010 Pro Version	<u>_     ×</u>
Setting Termial Scan TCP/IP	Help	
TRP-C3X Ethernet Serial Server Setting	Network Status Network On line!	
Port 4000 Link	Response	
Send the ASCII command		
#010003		-
Send Command Clear	Loop Adjust	
Release IP Loop Test	Fast	▶ Slow
Description		
The function allow TRP-C3X to connect with test . or send command to TRP-DIO and AIC N,8,1 please check TRP-C3X ethernet serve	network, and RS232/422 wire connectior D to get the response . Notic:TRP-AIO,D er's setting as same as that.	n for loop IO using

#### 6-2 Virtual COM Mode

\*Keep DIP switch to the OFF, OFF Position.



# Example:

Step1. Connect PC-----Ethernet-----TRP-C37-----RS485---TRP-C28 (RS485 ID=01).

Step2. Run Virtual-COM utility and make a virtual-COM port, Run TRPCOM utility and input com port number, press "OK".

/irtual COM Remote Server IP and PORT State	COM->Network(Byte) NetWork->COM(Byte)	Last State	Note
Setting Termial Scan TCP/IP Help	2010 Pro Version		
Communication Configuration	OK		
Communication Protocal		andard Mode	
ASCII     Modbus RTU	Default		
ASCII Checksum Enable	Exit		
Description	Madhue protocol , com part pumber and		
baud-rate from the drop down menus and selecting	your "Checksum Selects " Enable or		

Step3.Select "Terminal" and send command, the response will appear TRP-C28 channel 2 counter value.

🖉 TRPCOM	Test Utility				2010 Pro Version	
Setting	Termial	Scan	ТСР/ІР	Help		
Termina Send ( #012 Respo	al Command Command 2 Inse 00000	i Input			Auto 80 mS Clear Checksum Command + Checksum	
Descrip Send t config status	tion the module' uation settir	s commanc ng is enable	l and get rea , the comma	al time resp and checks	oonse. If your module's checksum sum will show you the send comma	nd

#### 6-3 Paired Mode

\*Keep DIP switch to the OFF, OFF Position.



## Example:

Step1. Connect PC---RS232---TRP-C37----Ethernet-----TRP-C37----RS422 (loop back  $TX+\rightarrow RX+,TX-\rightarrow RX-$ ).

Step2.Run DSM set up TRP-C37 Client, Input destination IP and Port.

Device Name       TRF-C31SA       Netmask       255.255.255.0         MAC Address       00-0E-C6-00-01-90       Gateway       192.168.1.3         DHCP       Disable       DNS       168.95.1.1         Server       Listening IP       192.168.1.1       UAR T Transmit         Data listening port       4000       Heart Beat       Disable         • Client       Heart Beat       Disable       Image: Connection 8         Destination IP       192.168.1.2       Maximum Connection 8       Image: Connect after reboot         • UDP       Auto connect after reboot       Firmware       9019         Management Packet Type       Firmware       9019	Network Setting   Serial F	Port Setting		X
	Device Name MAC Address DHCP Server Listening IP Data listening port Client Destination IP Destination Port Data Fácket Tope UDP Auto connect after reboot V TCP Management Packet T V Broadcast Multicast	TRP-C31SA 00-0E-C6-00-01-90 Disable 192.168.1.1 4000 192.168.1.2 4000	Netmask Gateway DNS Transmit Timer UART Transmit Heart Beat Maximum Connection New Password Firmware	255.255.255.0 192.168.1.3 168.95.1.1 10 5 Disable • 8 ***** 9019

Step3.Run DSM set up TRP-C37 Server and be sure the IP and port as same as client setting.

Device Name MAC Address DHCP • Server Listening IP Data listening por Client Destination IP Destination Port -Data Packet Type UDP Client Commec after reboot	TRP-C31SA           00-0E-C6-00-01-90           Dissable           192.168.1.2           4000           192.168.1.12           4000	Netmask Gateway DNS Transmit Timer UART Transmit Heart Beat Maximun Connection New Password Firmware	255.255.255.0 192.168.1.3 168.95.1.1 10 5 Disable • 8 • ***** 9019
Management Packet	Туре	Submit Save	Load

Step4. Run the windows utility "hyper Terminal" and select com port number, and press "OK".

Step5. Key-in some chars the hyper terminal will show loop back.

#### \*Try to disconnect power or RJ45 cable, the TRP-C37 will Auto Re-connection.



# 6-4 Multi-Client to 1 TRP-C37 Server \*Keep DIP switch to the OFF, OFF Position.



# Maximum Client Connection : 16 Host PC

#### Example:

#### \*Running at Multi-Direct IP Mode

Step1.Connect Multi-PC --- Ethernet---- TRP-C37 Server---- TRP-C28 (RS485 ID=1)

Step2.Run DSM Set up TRP-C37 Maximum connection=8.

Step3.All host PC run TRPCOM and input IP, Port, click "Link" button, then Send Command, The Response will appear TRP-C28 I/O Status.

🔗 TRPCOM Test Utility	2010 Pro Version
Setting Termial Scan TCP/IP	Help
TRP-C3X Ethernet Serial Server Setting	Network Status
Port 4000 Link Send the ASCII command \$016	Response 101000F
Send Command     Clear       Release IP     Loop Test	Loop Adjust
Description The function allow TRP-C3X to connect with test . or send command to TRP-DIO and AIC N,8,1 please check TRP-C3X ethernet serve	network, and RS232/422 wire connection for loop D to get the response . Notic:TRP-AIO,DIO using r's setting as same as that.

# \*Running at Multi-Virtual COM Mode

Step1. All PC run Virtual com utility and make a self virtual-COM port, Run TRPCOM utility and select com port number, and press "OK".

COM8	192.168.1.1:4000 Open,9600,N,8,1	0 0	M[Byte] Last State TCP/IP Connected	Not
×	TRPCOM Test Utility Setting Termial Scan TCP/IP He	2010 Pro Version		
	Communication Configuration			
	Initial Setting	ОК		
	Communication Protocal		andard Mode	
	ASCII     Modbus RTU	Default		
	ASCII Checksum Enable			
		Exit		Ser.
	Description In the settings menu, be sure to select the ASC	Cll/Modbus protocal , com port numb	per and	
	<ul> <li>baud-rate from the drop down menus and select</li> <li>Disable before continuing.</li> </ul>	ting your "Checksum Selects " Enal	ble or	

Step3.Select "Terminal" and send command, the response will appear TRP-C28 channel 2 counter value.

TRPCOM Test Utility	2010 Pro Version
Setting Termial Scan TCP/IP Help	
Terminal Command Input Send Command #012	Instruction
Response	Send
10100000	Auto 80 mS
	Clear
	Checksum
	Command + Checksum
Description	
Send the module's command and get real time respo configuation setting is enable, the command checksu status.	nse. If your module's checksum m will show you the send command

#### 6-5 Heart Beat

The heart Beat function help customer detection the TRP-C37 LAN on–line or off-line, User can open one 5300 port, if TRP-C37 on line, the 5300 port will send a char package period of 5 sec.

Step1: Run TRP-C3X DSM.exe to set up the heart beat enable.

	Network Setting Serial	Port Setting		
	Device Name	TRP-C31SA	Netmask	255.255.255.0
•	DHCP	Enable	Gateway DNS	168.95.1.1
	<ul> <li>Server Listening IP</li> </ul>	192.168.1.18	Transmit Timer	10
1	Data listening port	4000	OAKT Hananat	
	🔿 Client		Heart Beat	Enable -
•	Destination IP	192.168.1.2	Maximun Connection	8 💌
	Destination Port	4000	New Password	****
•	– Data Packet Type —			

# Step2: RUN TRPCOM then click "Link" button Wait until the Response screen appear the message

TRPCOM Test Utility	2010 Pro Version 💶 🗙
Setting Termial Scan TCP/IP	Help
TRP-C3X Ethernet Serial Server Setting	Network Status
Port 5300 Link	Response
Send the ASCII command	TechnologyTrycom Technology
Send Command Clear	Loop Adjust
Release IP Loop Test	Fast Slow
Description The function allow TRP-C3X to connect with test . or send command to TRP-DIO and AIC N,8,1 please check TRP-C3X ethernet serve	network, and RS232/422 wire connection for loop O to get the response . Notic:TRP-AIO,DIO using er's setting as same as that.

# 7. Using TRPCOM Utility test TRP-C37.

**TRP-Serial Test Utility** is demo utility which may help to test direct IP Mode .User may find the utility in the TRP-C37 support CD. Double click "TRPCOM Utility", the installShield Wizard will guide you complete installation.

User can directly link TRP-C37 to TRP-Serial Remote IO Modules by RS485, The basic wiring connect.

#### RS485 Test

```
DATA+ to DATA+, DATA- to DATA-
```



# Run TRPCOM and send command "\$01M" and get response.

TRPCOM Test Utility ASCII					Modbus RTU Support		
Setting	Termial	Scan	C51H	TCP/IP	Help		
-TRP-C3	3X Ethernet Se 192.168.1.	rial Server Se .1	tting		etwork Status - Network On	line!	
Port Send th	4000 ne ASCII comm	iand	_ink	R	esponse IO1TRPC28	<u> </u>	
	VI					<b>_</b>	
	uto 100	Ms	Clear		oop Adjust –		
Se	nd Comman	ıd	Loop Test	F	ast 🔳	▶ Slow	
Description The function allow TRP-C3X to connect with network, and RS232/422 wire connection for loop test . or send command to TRP-DIO and AIO to get the response . Notic:TRP-AIO,DIO using N,8,1 please check TRP-C3X ethernet server's setting as same as that.							

### RS422 Loop Test

Hardware wiring connection for RS422 loop test.

TX+ to RX+, TX- to RX-



# **RS232 Loop Back Test**

Hardware wiring connection for RS232 Loop Test.

TXD to RXD, RTS to CTS.



RUN TRPCOM test utility then connect correct IP and Port then click the "Loop Test" button"

TRPCOM Test Utility	2010 Pro Version 💶 🗖 🗙						
Setting Termial Scan TCP/IP	Help						
TRP-C3X Ethernet Serial Server Setting	Network Status Network On line!						
Port 4000 Link							
ABCDEFGHIJKLMNOPQRSTUVWXYZ							
Send Command Clear	Loop Adjust						
Release IP Stop Loop	Fast Slow						
Description							
The function allow TRP-C3X to connect with r test . or send command to TRP-DIO and AIO N,8,1 please check TRP-C3X ethernet serve	network, and RS232/422 wire connection for loop ) to get the response . Notic:TRP-AIO,DIO using r's setting as same as that.						