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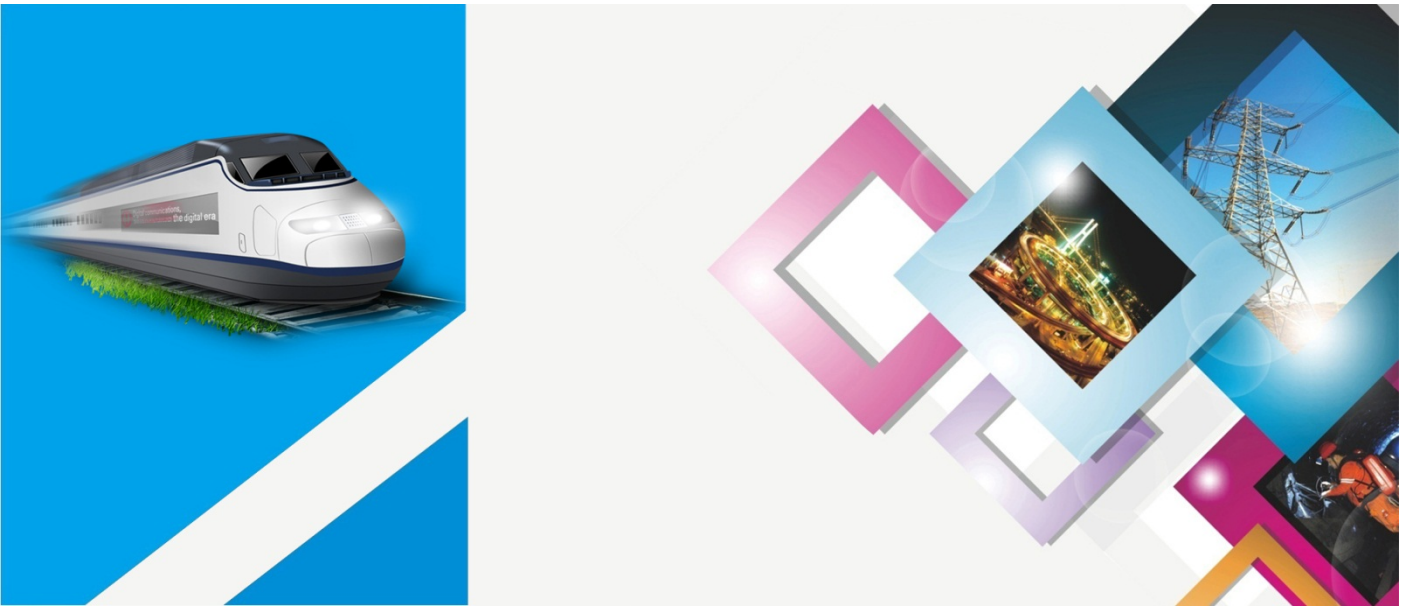

NP Series

Serial Device Server

User Manual

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Preface

NP series serial device server user manual has introduced:

- Product features
- Network management method
- Network management relative principle overview

Note

The description of this manual is from the NP318T-8DI (3IN1). Other types of products in addition to the support of the serial port type (RS-232, RS-422, RS-485), the number of serial ports and the number of network ports are different, the interface functions and operations are the same.

Audience

This manual applies to the following engineers:

- Network administrators
- Technical support engineers
- Hardware engineers

Conventions

Format	Description
“ ”	Words with the symbol “” mean that those are interface words. Fox example “Port number”.
>	Multiple paths are separated by the symbol ‘>’.
Light blue Font	Click light blue font to hyperlink The font color is as follows: ‘Light Blue’.
About This Chapter	The section ‘about this chapter’ provide links to various sections of this chapter, as well as links to the Principles Operations Section of this chapter.

Symbols

Format	Description

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Format	Description
 Notice	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results. NOTICE is used to address practices not related to personal injury.
 Warning	Ndicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 Note	Calls attention to important information, best practices and tips. NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.
 Key	The tips of configuration and operation.
 Tips	Pay attention to the operation or information to ensure success device configuration or normal working.

Revision History

Version No.	Date	Revision note
01	2017-05-25	Layout Adjustment
02	2017-10-10	Add Password Verification Funciton

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Contents

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Part One: Operation

1 Login the WEB Interface

1.1 System Requirements

Using the serial device server, the system should meet the following conditions.

Hardware and software	System requirements
CPU	Pentium 586 or above
Memory	128MB or more
Resolution	1024x768 or above
Color	256 color or above
Browser	Internet Explorer 8.0 or above
Operating system	• Windows XP • Windows 7

1.2 Set the IP address of the Computer

The default management of the serial device server is as follows:

IP Settings	Default Values
IP address	192.168.1.254
Subnet mask	255.255.255.0

When configuring a serial server through the Web:

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- Before making remote configuration, make sure that the route between the computer and the switch is reachable.
- Before making a local configuration, make sure that the IP address of the computer and the serial server are on the same subnet.

Note:
When the serial server is first configured. If it is configured locally, make sure the current computer network segment is 1.

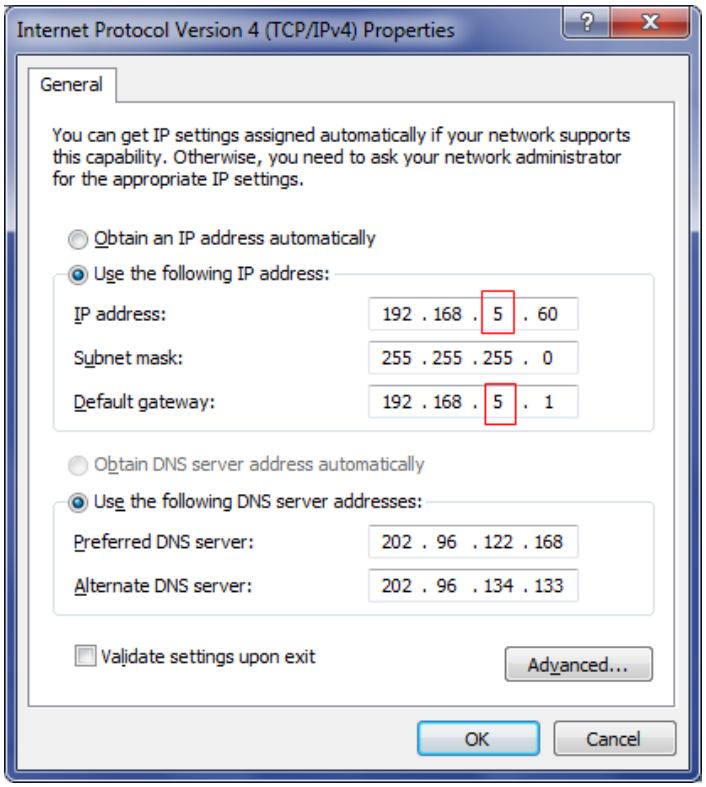
For example, suppose that the IP address of the computer is 192.168.5.60, need to change the IP address of the network segment "5" to "1"

Operation steps

The steps are as follows:

Step 1 Open “Control panel > Network connection > Local area connection > Properties > Internet protocol version (TCP/IPv4) Properties”.

Step 2 Change the "5" selected by the red frame in the figure to "1".



Step 3 Click "OK".

Step 4 End.

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1.3 Login the WEB Configuration Interface

Operation steps

Log in to the WEB configuration interface as follows:

Step 1 Run the computer browser.

Step 2 Enter the address of the serial server "http://192.168.1.254" in the address bar of the browser.

Step 3 Click the Enter key.

Step 4 Pop-up dialog box as shown below, enter the user name and password in the login window.

Note:

- The default username and password for the serial server are "admin", which is strictly case-sensitive when typing.
- The default user password is with administrator privileges.
- WebServer will provide three opportunities to enter the user name and password. If you enter the error 3 times in succession, the browser will display "Access denied" to deny access to the information. Please refresh the page and try again.

Step 5 Click “OK”.

Step 6 End.

After successful login, you can configure the relevant parameters and information of the WEB interface as needed.

Note:

After logging in to the device, you can modify the IP address of the serial server for ease of use.

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1.4 WEB Timeout Processing

When the user does not operate for more than 300 seconds in the Web interface, the system will do the timeout processing:

- Keep the configuration of this login;
- Logout this login

Note:
After the system times out, if you need to continue operate in the WEB interface, please re-login.

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2 Device Information

Function Description

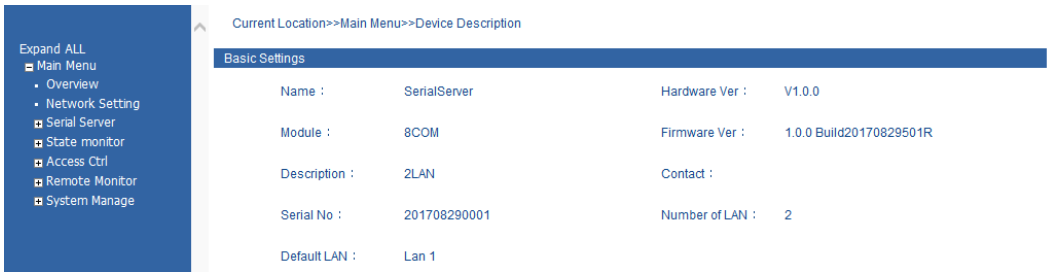
On the “Device Information” page, you can view information such as device name, device model, device description, device number, hardware version, and software version.

Operation Path

Device information> basic information

Interface description

Basic information interface screenshot



The main element configuration instructions in the basic information interface

Interface Elements	Description
Name	Display device name.
Module	Display device module.
Description	Displays the number of network ports
Serial NO.	Display device serial number.
Default LAN	Display the default network port.
Hardware Ver.	Display device hardware version.

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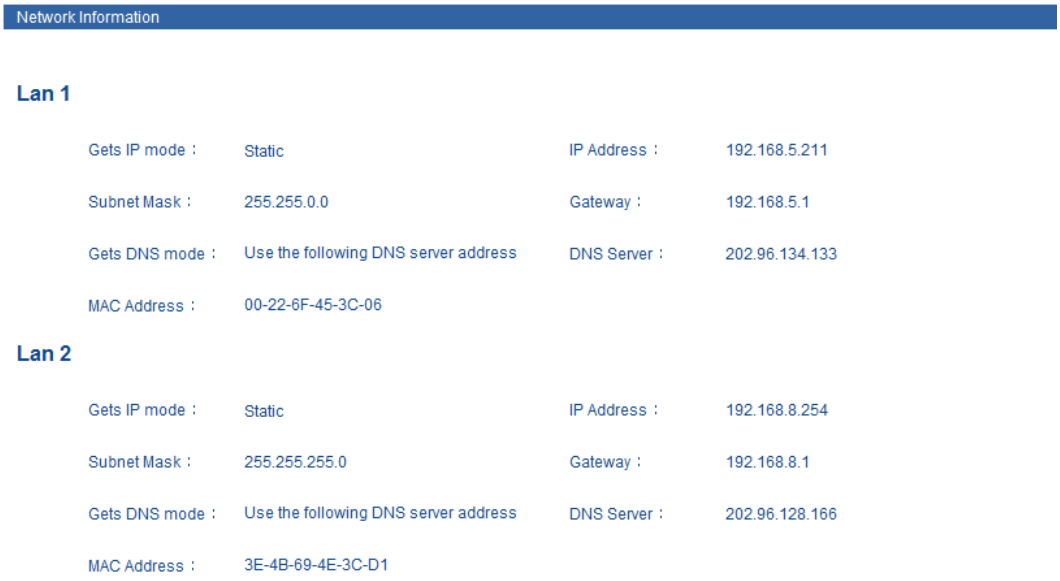
Network information interface screenshot



The main element configuration instructions in the network information interface

Interface Elements	Description
Gets IP mode	Shows how the device gets the IP address.
Subnet mask	Display device subnet mask.
Gets DNS mode	Display device gets the way for DNS.
MAC address	Display device MAC address.
IP address	Display deivce IP address information.
Gateway	Display device gateway address.
DNS server	Display device DNS server address.

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3 Setting Network

Function Description

On the "Network Settings" page, you can configure the way to obtain the IP address or DNS server address, manually configure the device IP address, network mask, gateway address and DNS server address and other information.

Operation Path

Open “Network Settings> Network Settings” in sequence.

Interface description

Network settings interface screenshot

Note

The dual-port device displays the "Lan1" and "Lan2" columns. The single-port device displays only the "Lan1" column.

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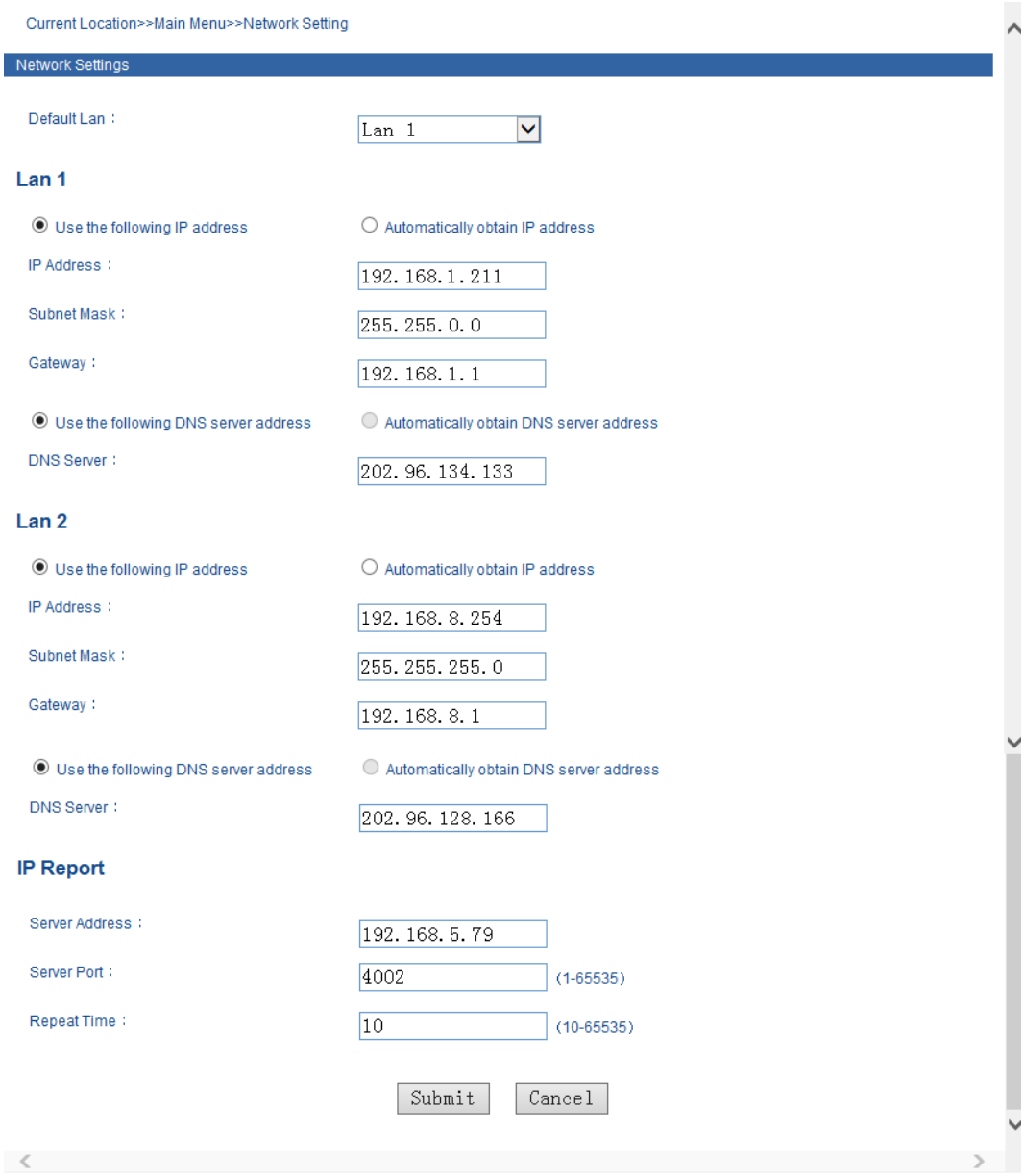

Network settings interface main element configuration instructions

Interface Elements	Description
Default LAN	Enable the data from the different network segment of the device to transmit from the default network port. Note: Single-port devices do not support this function。
Lan1	Network port 1 network configuration column. Note: The default IP for Lan1 is 192.168.1.254.
The way to get the	• Use the following IP addresses: Manually configure the

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Interface Elements	Description
IP address	IP address, subnet mask, and default gateway address. • Obtain an IP address automatically: Obtain an IP address, subnet mask, and default gateway address automatically.
IP address	Configure the IP address manually in the “IP Address” text box.
Subnet mask	Configure the subnet mask manually in the “Subnet mask” text box.
Gateway	Configure the gateway address manually in the “Gateway Address” text box.
The way to get the DNS server address	• Use the following DNS server address: Manually configure the DNS server address information. • Automatically obtain DNS server address: Automatically obtain DNS server address information.
Lan2	Network port 2 network configuration column. Note： • The default IP for Lan1 is 192.168.8.254. • Refer to the corresponding section of Lan1 in this table for the description of interface elements.
IP Report	**IP Report** configuration column. Note： When the serial server adopts the "automatic IP address", it reports the IP address of the user by intermittently, so that the user knows the new IP address of the serial server in time.
Sever Address	The server that receives the IP address report.
Sever Port	The port that sends the IP address report.
Repeat Time	The sending frequency of IP report.

Note

When the DHCP server assigns a new IP address to the serial server, the host needs to detect the new IP address of the serial server when the serial server is in a network environment that dynamically assigns an IP address. When the dynamic IP address changes, the serial server reports its own IP address to the user by intermittently, so that the user knows the new IP address of the serial server in time.

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4 Serial Server

About This Chapter

Content	Hyperlink
This chapter	4.1 COM Settings 4.2 Checking COM Information 4.3 COM Mode Settings 4.4 COM Mode Information 4.5 Reboot Port

4.1 COM Settings

Function Description

On the “COM settings” page, you can configure basic parameters such as baud rate, data bit, stop bit and parity bit corresponding to the serial port number. You can also configure whether the corresponding serial number is enabled for FIFO function, RTS control, DTR control and Packing length and other advanced parameter information.

Operation Path

Open “serial server > COM settings” in sequence.

Interface Description

COM settings interface screenshot

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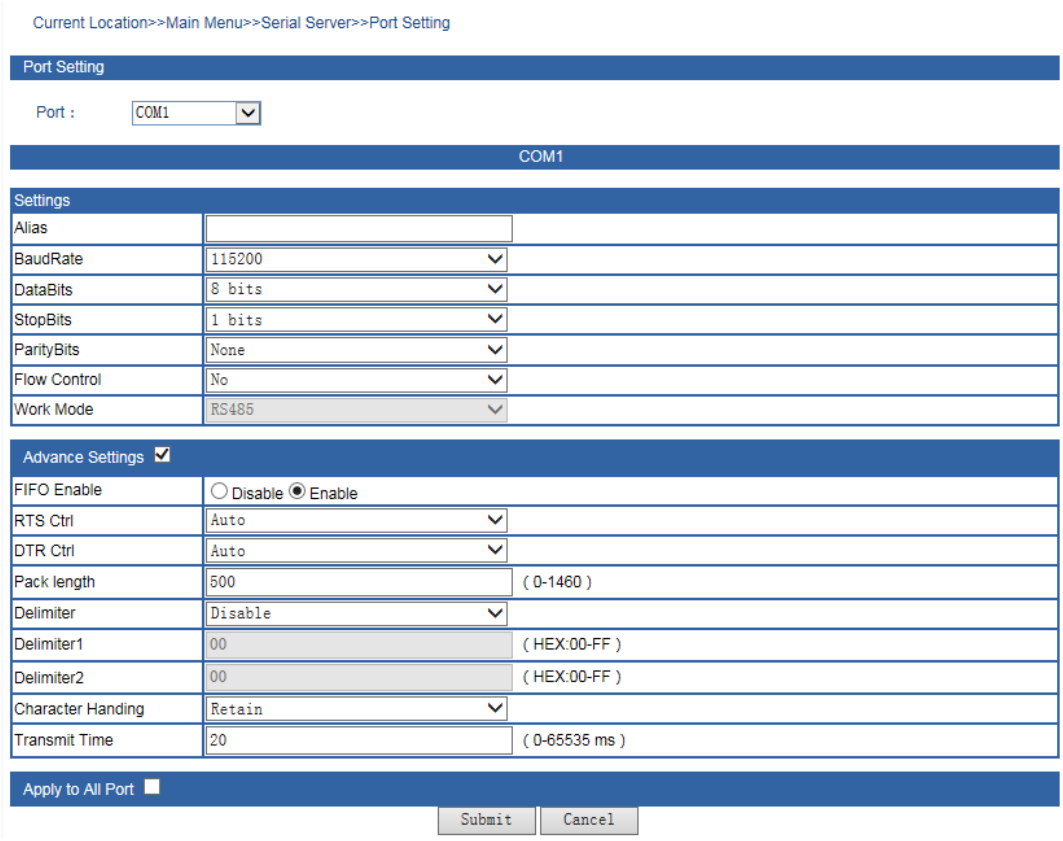

The main elements configuration instructions in COM settings

Interface Elements	Description
Port	Select the serial number of the device.
Alias	Enter the alias for the corresponding serial number in the “Alias” text box.
BaudRate	Select the baud rate for the corresponding serial number. The options are: 300/600/1200/2400/4800/9600/19200/38400/57600/115200
DataBits	Select the data bit for the corresponding serial number. The options are: • 5 bits • 6 bits • 7 bits • 8 bits
StopBits	Select the stop bit for the corresponding serial number. The options are: • 1 bits • 2 bits

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Interface Elements	Description
ParityBits	Select the parity bit for the corresponding serial number. The options are: • None • Odd • Even • Mark • Space
Flow Control	Flow control is used in two data transmission speed of different devices in the control of data flow technology to ensure that two devices communicate with each other to avoid data loss. Click the "flow control" drop-down list box, select the flow control parameters, the options are: • No • RTS/CTS • XON/XOFF • DTR/DSR
Work mode	It's jointly determined by software and hardware, 3IN1 products RS232 and RS485/RS422 optional, RS485/RS422 and RS232 can be automatically identified by the hardware.
FIFOEnable	Enable or disable the FIFO function, if the serial device does not support data transceiver cache FIFO, FIFO function can be disabled to avoid data transmission errors.
RTSCtrl	RTS pin can be controlled, the options are: • AUTO • Force ON • Force OFF
DTRCtrl	DTR pin can be controlled, the options are: • AUTO • Force ON • Force OFF
Pack Length	Serial data to Ethernet data frame length, in the set time range, the data is greater than or equal to set the frame length will be forwarded, the value range of 0 ~ 1460. When the frame length is 0, it indicates that the data transmission length is not limited. Note: Actual pack length exists a small amount of deviation to the

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Interface Elements	Description
	setting value.
Delimiter	If the packet length or forced transmission time is 0 and the number of delimited characters is greater than 0, the system will receive the serial data and perform delimiter detection. Whenever a matching delimited character (or combination of characters) is received, the system immediately sends all the cached data to the serial port over the network.
Character Handing	Select the character handling method. The options are: • Retain: The system sends the received delimited characters along with other data over the network. • Delete: The matching delimited character (or character combination) will be deleted and the system will only transfer data other than delimiters.
Transmit time	If the forced transmission time is greater than 0, the system sends the serial data received within the specified time through a packet, in the range of 0 to 65535 ms. When the transfer time is 0, it means that the data transmission interval is not restricted.
Apply to all Port	Check the “Apply to all port” check box to apply the current settings to all serial ports.

Notice

- "Work mode" and model corresponds to RS232, RS485 and RS422 option.
- If there is no matching characters, the data will be sent when the serial data cache is full of 1460 bytes.

4.2 Checking COM Information

Function Description

On the "COM Information" page, you can view parameter information such as serial number, alias, baud rate, data bit, stop bit, parity bit and flow control.

Operation Path

Open "Serial server> COM Information" in sequence.

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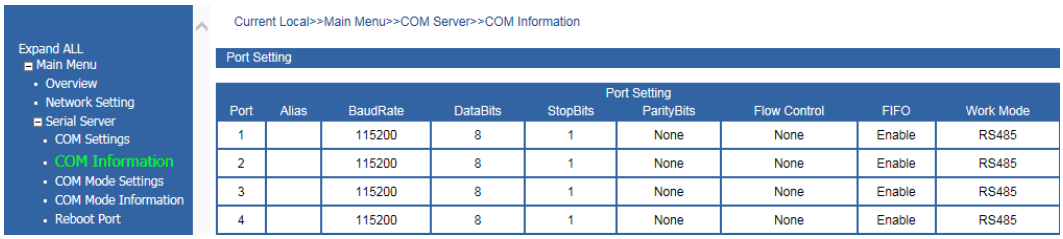
Interface Description

COM information interface screenshot



COM information interface, the main elements of the configuration instructions

Interface Elements	Description
Port	Display device serial port number.
Alias	Display serial port alias.
BaudRate	Display serial port baud rate.
DataBits	Display serial port data bit.
StopBits	Display serial port stop bit.
ParityBits	Display serial port parity bit.
Flow Control	Display whether the serial port flow control function is enabled.
FIFO	Display whether the serial port FIFO function is enabled.
Work Mode	Display serial port work mode.

4.3 COM Mode Settings

Function Description

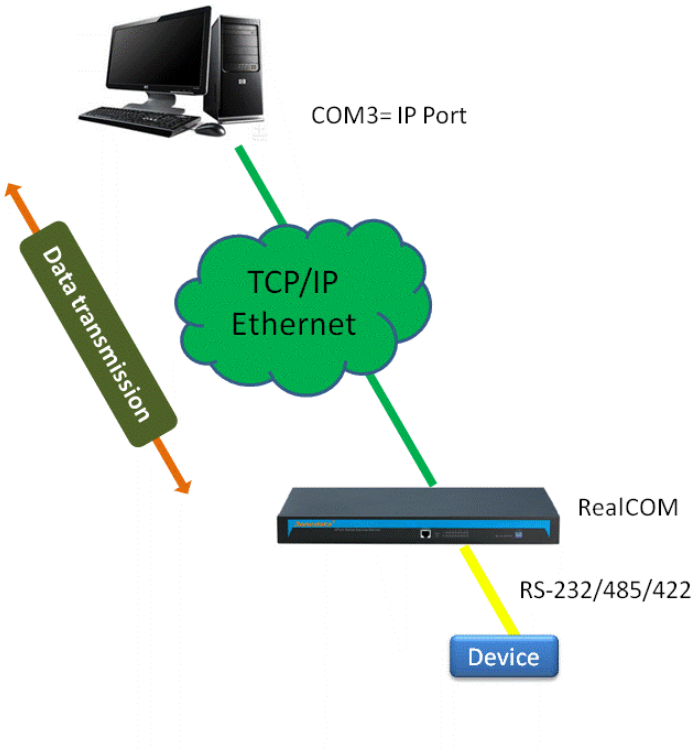
On the “COM Mode Settings” page, you can configure the operating mode of the device's serial port number.

The serial server support the working modes such as: RealCom mode, TCP server mode, TCP client mode, UDP server mode, UDP client mode, Pair mode, UDP rang mode, and UDP multicast mode.

Operation Path

Open in sequence: "Serial Server>COM Mode Settings".

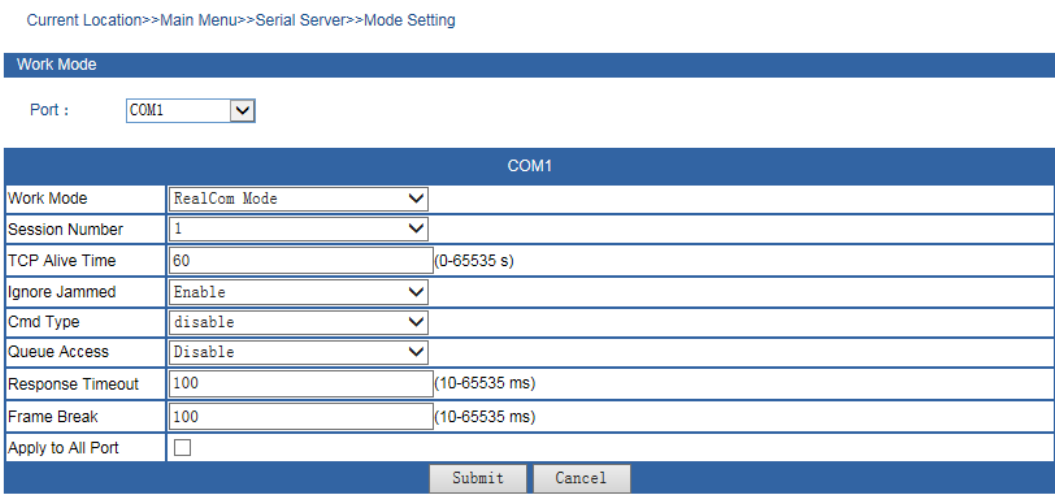
4.3.1 RealCom Mode



In RealCom mode, the serial port server and Windows / Linux operating system with the RealCOM drive work cooperatively. RealCom COM / TTY driver establishes a transparent network transmission connection between the host and the serial device in the operating system. Map the serial port of the serial port server to the local COM/TTY device of the host according to the user configured serial server IP address and serial port number and other parameters. The original serial device software or communication module without modification can be used directly without modification. The RealCom driver gets the data be sented to the local COM / TTY device of the host, then sends it over Ethernet in the form of TCP / IP packet. At the other end of the transparent transmission, the serial server will receive the TCP / IP packet and analyse the packet, and after unpacking send the original data to the serial device through the corresponding serial port, and vice versa.

Interface Description

RealCom Mode interface screenshot



Main element configuration instructions in RealCom Mode interface

Interface Elements	Description
Session number	The number of hosts that a serial port is connected at the same time. • Each host according to the "first in first out" in the order and serial port communication. • The system supports up to 4 connections.
TCP alive time	If there isn't any TCP activity within schedule time, the system will automatically send connection detection message and check whether the TCP connection is valid. If the reply packet of opposite side hasn't been received after sending probe packet for 3 times, system will regard the opposite side as down and forwardly close the communication connection.
Ignore jammed	Enables or disables ignore jammed connections. The options are: • Enabled: The system ignores blocked network connections and continues to send data to other normal network connections. • Disabled: If the network connection is blocked or the response is lost, the system will wait until the data is successfully sent to all network connections before sending the next data.
Cmd type	Compatible with other companies of the virtual serial port software. The options are: • Disable: means to use our company's virtual serial port

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Interface Elements	Description
	software VSP Management to access the serial server. • MCP: means to use MOXA's virtual serial port software to access the serial server. • CCP: means to use Kang Hai's virtual serial port software to access the serial server.
Queue access	Enable or disable queue access mode. The options are: • Enabled: Multiple hosts can send or receive data from the serial port at the same time. The serial server processes the communication data in the order of FIFO (first in, first out), prioritizes requests from the first host, and returns the response to the first host. • Disabled: Means that queue access mode is not enabled.
Response timeout	How long to allow the serial server to respond to each host's request, the specified time after the arrival of the serial server and the host that the communication is complete, continue to deal with the next host request.
Frame break	If the idle wait time after the serial and host communication is completed is longer than the frame break setting time, the serial port will consider the communication to be completed and continue processing the command from the next host. This approach is very effective in reducing latency and improving product performance.
Apply to all port	Check the “Apply to all port” check box to apply the current settings to all serial ports.

Notice

- When the maximum number of connections is greater than 1, set the parameters to be consistent when multiple hosts are connected to the same serial port, otherwise it will cause communication error.
- The communication parameters of the real serial port will automatically change according to the communication parameters of the virtual serial port. You can view the real-time communication parameters of the serial port through "COM parameter" option under "state monitor".
- The queue access mode is a question-and-answer communication mode to ensure that the communication is normal.

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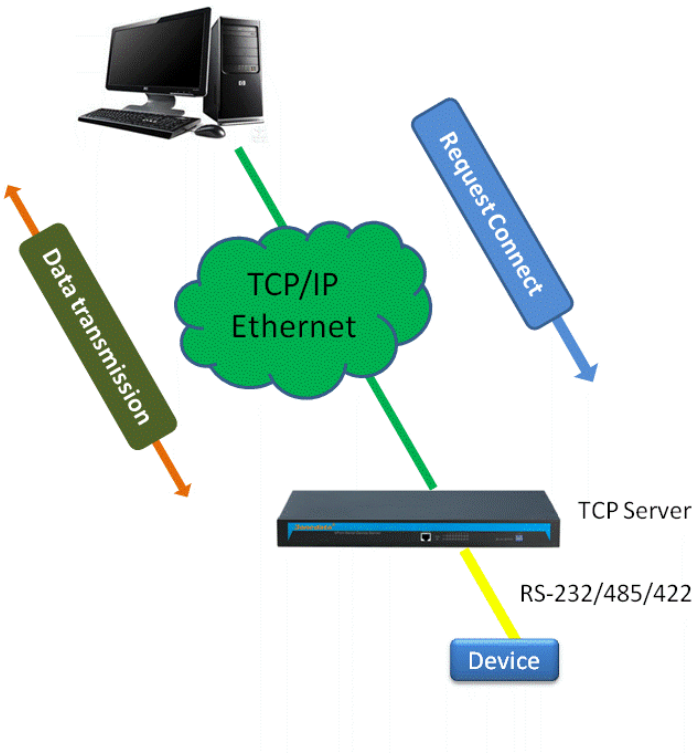
4.3.2 TCP Server Mode



In the TCP server mode, the serial deivce server is assigned an IP port number, passive waiting for the host connection. When the host initiates a connection request and establishes a connection with the serial device server, the host can realize bidirectional transparent data transmission through the network connection and the serial port. The TCP server mode supports up to four session connections simultaneously, allowing multiple hosts to simultaneously read or send Ethernet data to a serial device.

Interface Description

TCP server mode interface screenshot

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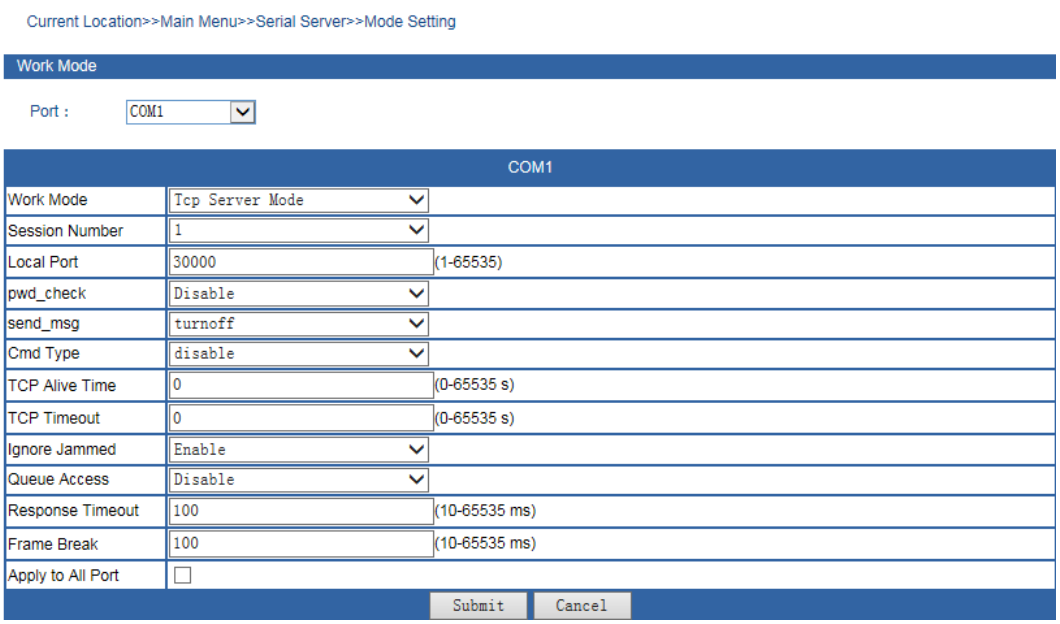

TCP server mode interface main element configuration instructions

Interface Elements	Description
Session number	The number of hosts that a serial port is connected at the same time. • Each host according to the "first in first out" in the order and serial port communication. • The system supports up to 4 connections.
Local port	TCP client destination port.
pwd_check	After the device is connected with the remote client, the peer client needs to send the authentication password to the device. After the password is verified, the client can communicate with the device. The options are: • Enable: Enable password verification function. • Disable: Disable password verification function. Note: When password verification is enabled, only users with "admin" account privileges can send / receive messages using this device. • The first data sent by the peer client to the device defaults to the check password. • Verification password is "admin" account password. • If the password is entered incorrectly, re-establish the connection and then re-enter the password.
Send_msg	The information sent after the device is connected to the peer client. The options are: • Ipaddr: After the connection is successful, send the IP

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Interface Elements	Description
	address of the device to the remote client. • Devicename: After the connection is successful, send the devicename of the device to the remote client. • turnoff: After the connection is successful, no information is sent to the peer client.
Cmd type	Compatible with other companies of the virtual serial port software. The options are: • Disable: means to use our company's virtual serial port software VSP Management to access the serial server. • MCP: means to use MOXA's virtual serial port software to access the serial server. • CCP: means to use Kang Hai's virtual serial port software to access the serial server.
TCP alive time	If set TCP Alive Time to "0", the function will be disable. If there isn't any TCP activity within schedule time, the system will automatically send connection detection message and check whether the TCP connection is valid. If the reply packet of opposite side hasn't been received after sending probe packet for 3 times, system will regard the opposite side as down and forwardly close the communication connection.
TCP timeout	Set the TCP timeout for the serial server's current data communication link. • TCP Timeout > 0: If there is no data communication between the server and client, the server and client will break connection. • TCP Timeout = 0: When there is no data communication between the server and client, the server and client will keep in connection status.
Ignore jammed	Enables or disables ignore jammed connections. The options are: • Enabled: The system ignores blocked network connections and continues to send data to other normal network connections. • Disabled: If the network connection is blocked or the response is lost, the system will wait until the data is successfully sent to all network connections before

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Interface Elements	Description
	sending the next data.
Queue access	Enable or disable queue access mode. The options are: • Enabled: Multiple hosts can send or receive data from the serial port at the same time. The serial server processes the communication data in the order of FIFO (first in, first out), prioritizes requests from the first host, and returns the response to the first host. • Disabled: Means that queue access mode is not enabled.
Response timeout	How long to allow the serial server to respond to each host's request, the specified time after the arrival of the serial server and the host that the communication is complete, continue to deal with the next host request.
Frame break	If the idle wait time after the serial and host communication is completed is longer than the frame break setting time, the serial port will consider the communication to be completed and continue processing the command from the next host. This approach is very effective in reducing latency and improving product performance.
Apply to all port	Check the “Apply to all port” check box to apply the current settings to all serial ports.

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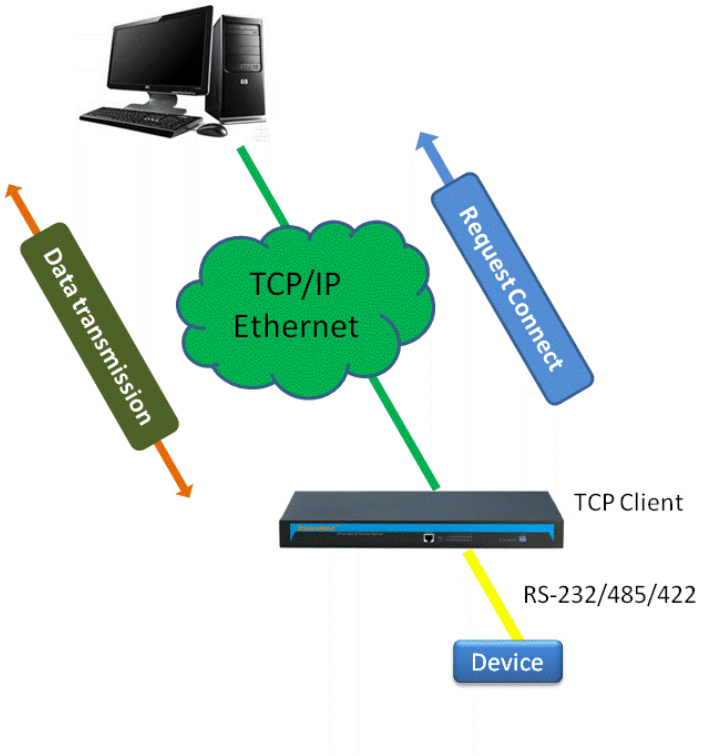
4.3.3 TCP Client Mode



In the TCP client mode, the serial deivce server can automatically establish a network connection with the host specified by the user when the serial data arrives. When the data transmission is completed, the serial server will automatically shut down the network connection according to the parameters such as TCP alive time and TCP idle timeout time. Similarly, TCP client mode can support up to four session connections at the same time, so that multiple hosts can simultaneously read or send Ethernet data to a serial device.

Interface Description

TCP Client mode interface screenshot

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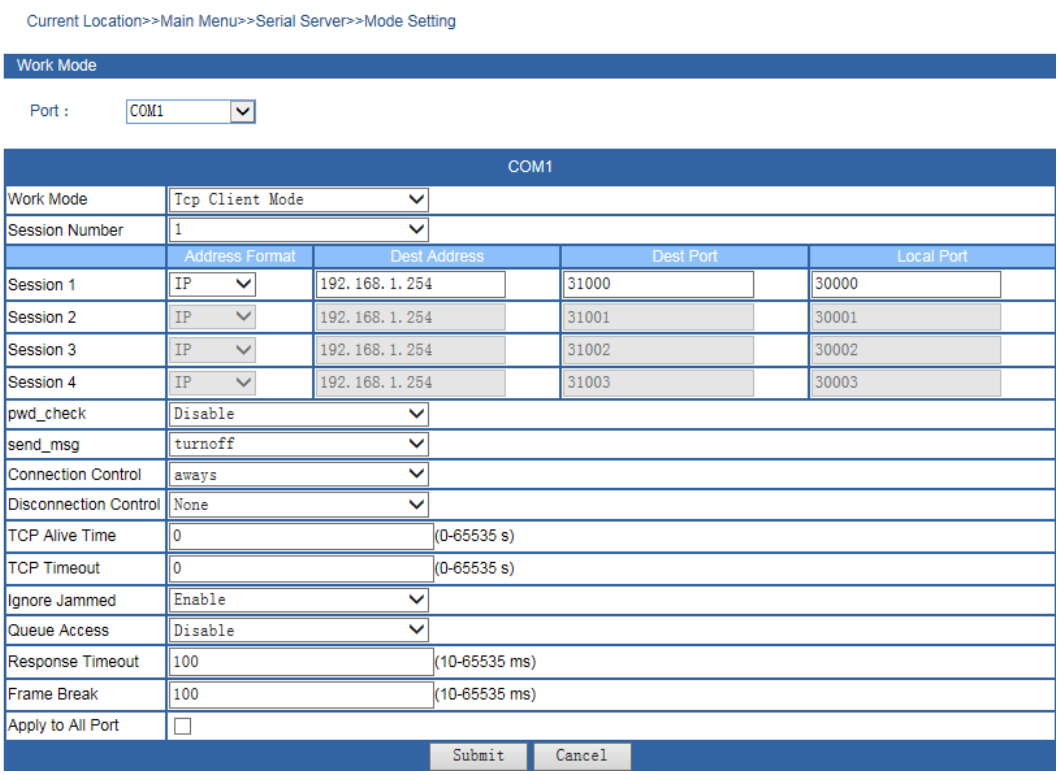

TCP client mode interface main element configuration instructions

Interface Elements	Description
Session number	The number of hosts that a serial port is connected at the same time. • Each host according to the "first in first out" in the order and serial port communication. • The system supports up to 4 connections.
Dest Address	Enter the IP address of the server to be connected by the serial device server.
Dest Port	Enter the TCP port unmber of the server to be connected by the serial device server.
Local Port	The serial server provides a local service or connection port number for the TCP connection that is used to connect and communicate with the server.
pwd_check	After the device is connected with the remote server, the peer server needs to send the authentication password to the device. After the password is verified, the server can communicate with the device . The options are: • Enable: Enable password verification function. • Disable: Disable password verification function.

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Interface Elements	Description
	Note: When password verification is enabled, only users with "admin" account privileges can send / receive messages using this device. • The first data sent by the peer server to the device defaults to the check password. • Verification password is "admin" account password. • If the password is entered incorrectly, re-establish the connection and then re-enter the password.
Send_msg	The information sent after the device is connected to the peer server. The options are: • Ipaddr: After the connection is successful, send the IP address of the device to the remote server. • Devicename: After the connection is successful, send the devicename of the device to the remote server. • turnoff: After the connection is successful, no information is sent to the peer server.
Connection control	Select how the serial server initiates a connection request. The options are: • Always: Immediately after the system is started, it tries to establish a connection with the target host and automatically reconnects the target host after the connection is disconnected. • Char: Automatically connects to the target host when receiving data from the serial port. • DSROn: Automatically connects to the target host when the DSR signal is detected. • DCDOn: Automatically connects to the target host when the DCD signal is detected.
Disconnection control	Select how the serial server is disconnected. The options are: • None: Never shut down the network connection automatically. • DSROff: Automatically shuts down the network connection when the DSR signal is detected invalid. • DCDOff: Automatically shuts down the network connection when the DCD signal is detected invalid. • Idle: If the idle timeout time is greater than 0, the system will automatically shut down TCP connections that do not have any data send and receive activity for a

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Interface Elements	Description
	specified period of time.
TCP alive time	If there isn't any TCP activity within schedule time, the system will automatically send connection detection message and check whether the TCP connection is valid. If the reply packet of opposite side hasn't been received after sending probe packet for 3 times, system will regard the opposite side as down and forwardly close the communication connection. If it is set to "0", it means that this function is not enabled.
TCP timeout	Set the TCP timeout for the serial server's current data communication link. • TCP Timeout > 0: If there is no data communication between the server and client, the server and client will break connection. • TCP Timeout = 0: When there is no data communication between the server and client, the server and client will keep in connection status.
Ignore jammed	Enables or disables ignore jammed connections. The options are: • Enabled: The system ignores blocked network connections and continues to send data to other normal network connections. • Disabled: If the network connection is blocked or the response is lost, the system will wait until the data is successfully sent to all network connections before sending the next data.
Queue access	Enable or disable queue access mode. The options are: • Enabled: Multiple hosts can send or receive data from the serial port at the same time. The serial server processes the communication data in the order of FIFO (first in, first out), prioritizes requests from the first host, and returns the response to the first host. • Disabled: Means that queue access mode is not enabled.
Response timeout	How long to allow the serial server to respond to each host's request, the specified time after the arrival of the serial server and the host that the communication is complete,

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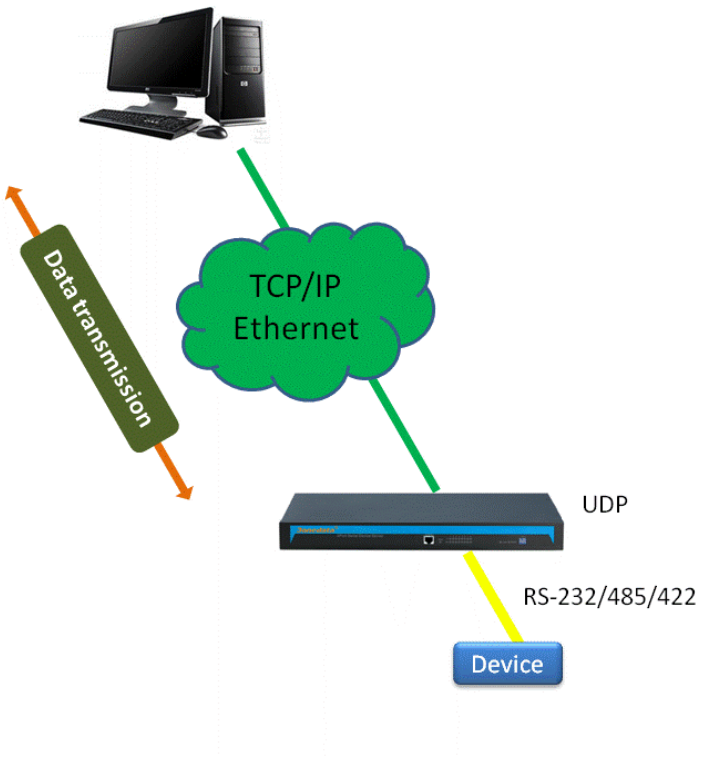
Interface Elements	Description
	continue to deal with the next host request.
Frame break	If the idle wait time after the serial and host communication is completed is longer than the frame break setting time, the serial port will consider the communication to be completed and continue processing the command from the next host. This approach is very effective in reducing latency and improving product performance.
Apply to all port	Check the “Apply to all port” check box to apply the current settings to all serial ports.

Notice

The TCP timeout takes effect only when "Disconnect control" is set to "idle".

4.3.4 UDP Server Mode



In UDP server mode, the serial server through the UDP protocol and user-specified host for serial data transmission. UDP mode serial device server can transfer data

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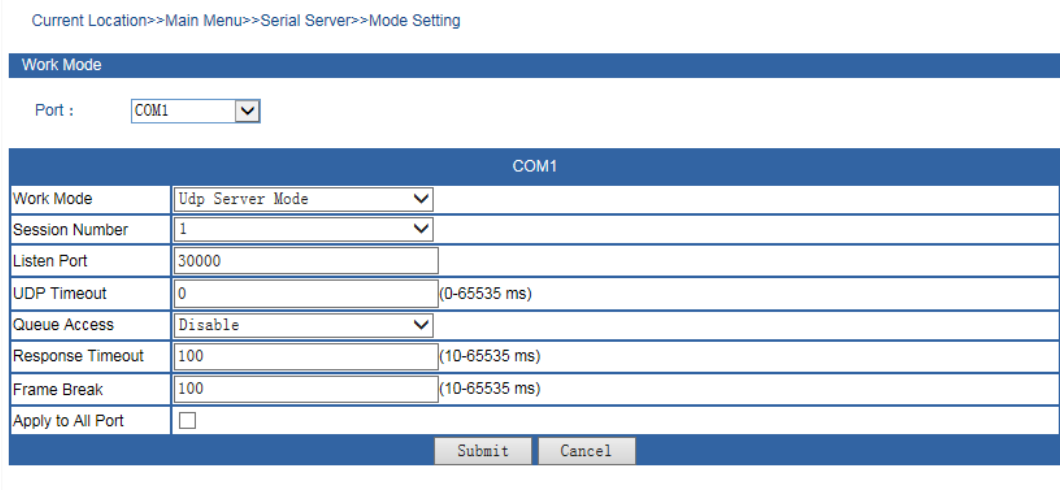
from the serial device to one or more hosts, and the serial device server can also receive data from one or more hosts. Compared with TCP mode, UDP protocol is faster and more efficient.

Interface Description

UDP server mode interface screenshot



UDP server mode interface main element configuration instructions

Interface Elements	Description
Session number	The number of hosts that a serial port is connected at the same time. • Each host according to the "first in first out" in the order and serial port communication. • The system supports up to 4 connections.
Listen port	The network receives the listening port of UDP data. The user must assign a unique listening port to each serial port so that the system can normally receive UDP data.
UDP timeout	Normal communication does not allow other hosts and serial servers to communicate data. Once the TCP timeout is met, the current IP address and port are released, allowing other hosts and serial servers to communicate.

Interface Elements	Description
Queue access	Enable or disable queue access mode. The options are: • Enabled: Multiple hosts can send or receive data from the serial port at the same time. The serial server processes the communication data in the order of FIFO (first in, first out), prioritizes requests from the first host, and returns the response to the first host. • Disabled: Means that queue access mode is not enabled.
Response timeout	How long to allow the serial server to respond to each host's request, the specified time after the arrival of the serial server and the host that the communication is complete, continue to deal with the next host request.
Frame break	If the idle wait time after the serial and host communication is completed is longer than the frame break setting time, the serial port will consider the communication to be completed and continue processing the command from the next host. This approach is very effective in reducing latency and improving product performance.
Apply to all port	Check the “Apply to all port” check box to apply the current settings to all serial ports.

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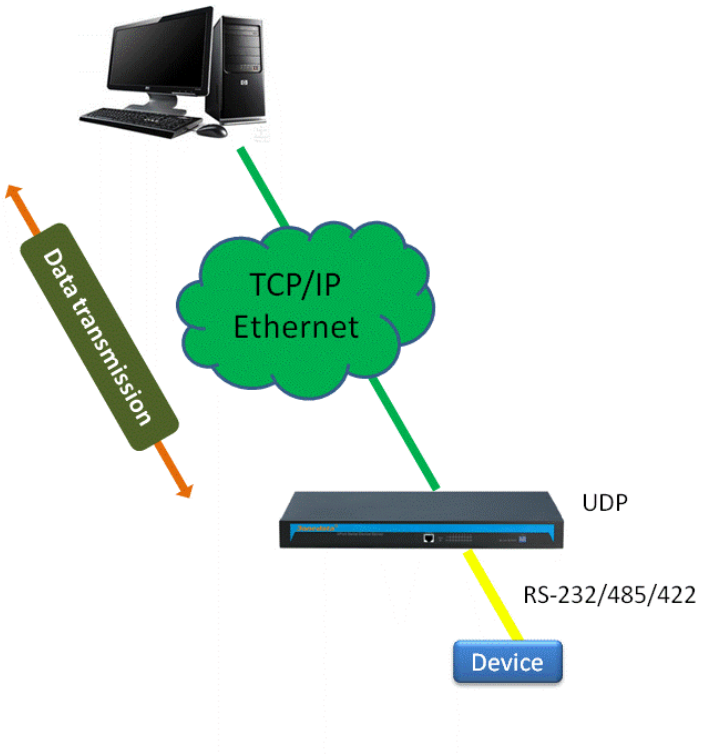
4.3.5 UDP Client Mode

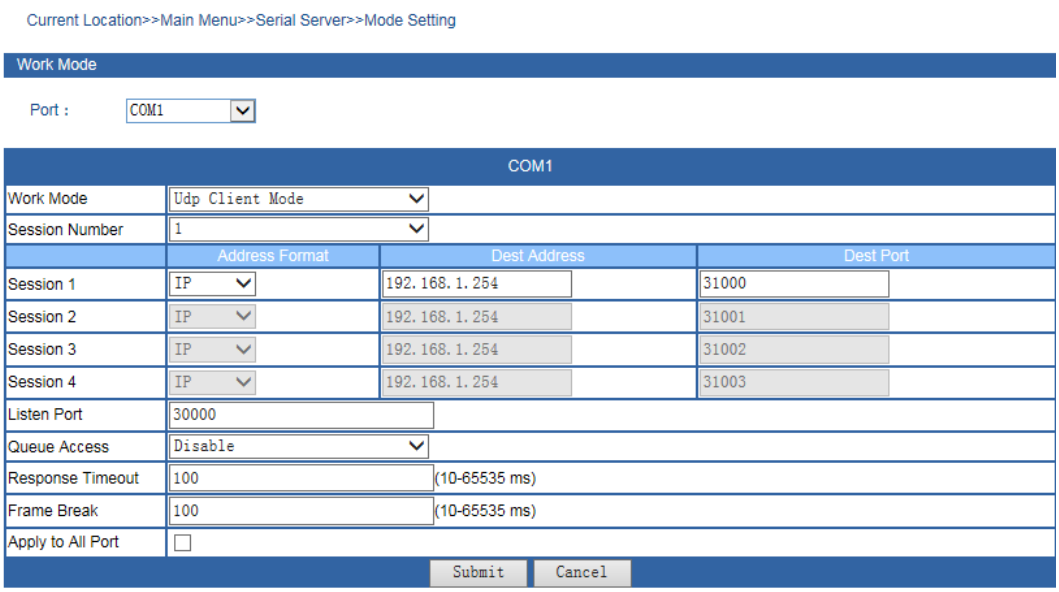


In UDP Client mode, the serial server through the UDP protocol and user-specified host for serial data transmission. UDP mode serial device server can transfer data from the serial device to one or more hosts, and the serial device server can also receive data from one or more hosts. Compared with TCP mode, UDP protocol is faster and more efficient.

Interface Description

UDP Client mode interface screenshot

Copyright © 3onedata Co., Ltd.



UDP client mode interface main element configuration instructions

Interface Elements	Description
Session number	The number of hosts that a serial port is connected at the same time. • Each host according to the "first in first out" in the order and serial port communication. • The system supports up to 4 connections.
Dest address	Enter the IP address of the host that will be connected by serial device server.
Dest port	Enter the port number of the host that will be connected by serial device server.
Listen port	The network receives the listening port of UDP data. The user must assign a unique listening port to each serial port so that the system can normally receive UDP data.
Queue access	Enable or disable queue access mode. The options are: • Enabled: Multiple hosts can send or receive data from the serial port at the same time. The serial server processes the communication data in the order of FIFO (first in, first out), prioritizes requests from the first host, and returns the response to the first host. • Disabled: Means that queue access mode is not enabled.
Response timeout	Time interval that allows the serial server to respond to each host's request, the communication between serial server

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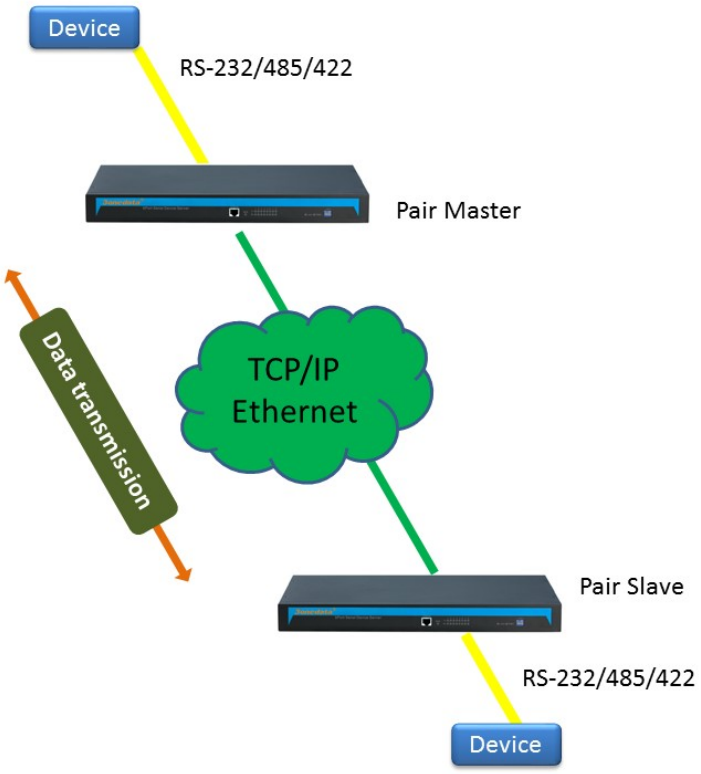
Interface Elements	Description
	and host is deemed to be completed after schedule time, serial server continues to deal with the next host request.
Frame break	If the idle wait time after the serial and host communication is completed is longer than the frame break setting time, the serial port will consider the communication to be completed and continue processing the command from the next host. This approach is very effective in reducing latency and improving product performance.
Apply to all port	Check the “Apply to all port” check box to apply the current settings to all serial ports.

4.3.6 Pair Slave & Master Mode



Pair mode requires two serial server devices to work together to break the serial data transmission distance limit. The two serial servers in this mode establish a network connection with each other via Ethernet and transparently transmit data from the respective serial port to each other.

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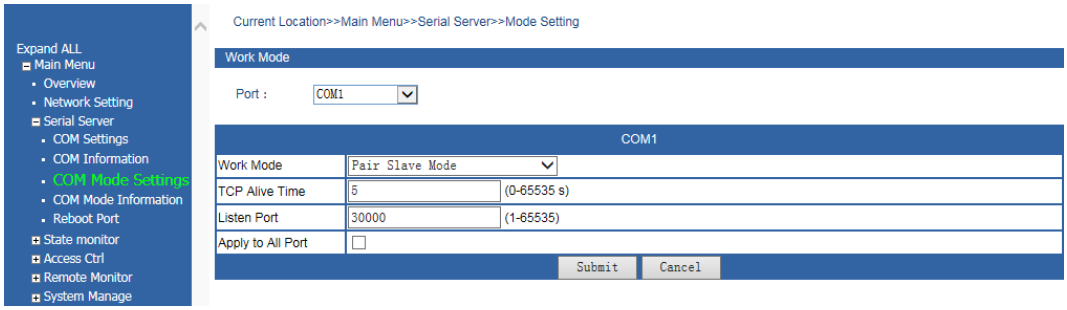
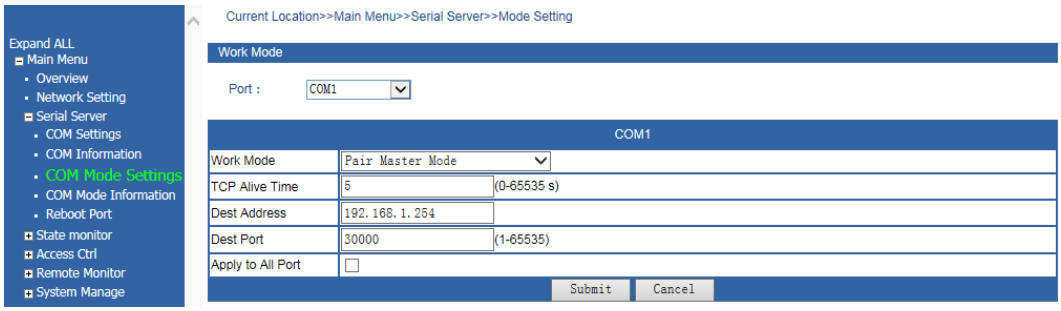
In the pair mode, two serial servers need to be used in pairs. One of the serial server for the slave mode, for the passive connection, listen to a designated port, passively waiting for the connection. Another serial server is the master mode, and the destination address is the IP address of the slave mode serial server, the destination port is the listening port of the slave mode serial server.

Interface Description

Pair mode interface screenshot





Pair mode interface main element configuration instructions

Interface Elements	Description
TCP alive time	The device sends a heartbeat packet by setting the time interval. If the device sends a heartbeat packet three times without receiving a response, the existing connection is disconnected. If the time interval is set to "0", this function does not turn on.
Listen Port	Applied to the pair salve mode, that is, the destination port of the pair master mode device.
Dest Address	Applied to the pair master mode, that is, the IP address of the pair slave mode device.

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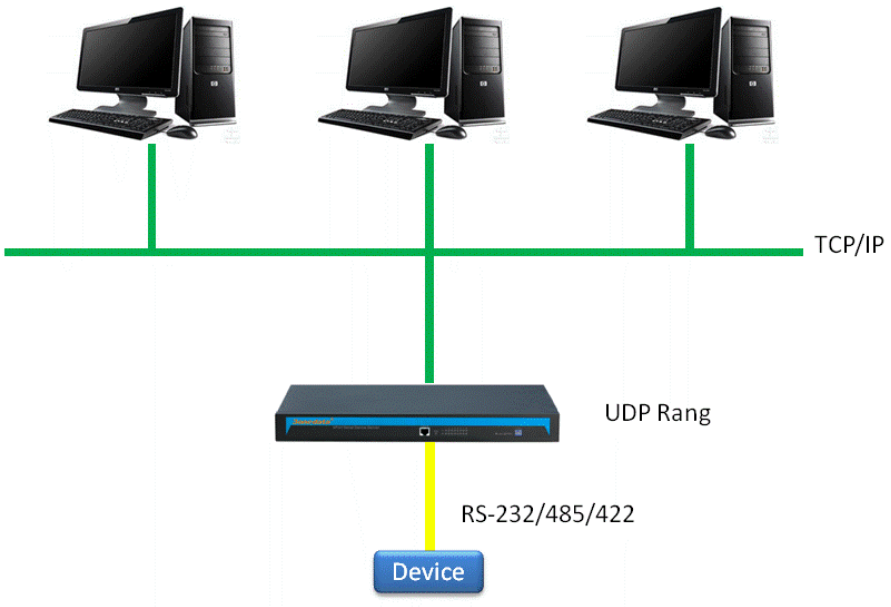
Interface Elements	Description
Dest Port	Applied to the pair master mode, that is, the listen port of the pair slave mode device.
Apply to all port	Check the “Apply to all port” check box to apply the current settings to all serial ports.

Notice

- The pair slave mode device is automatically changed the communication parameters according to the pair master mode device. The normal communication needs to be configured with the same parameters.
- Pair mode requires two serial devices. The IP address of the pair slave device as the destination address of the pair master mode device. The listening port of the pair slave mode device serves as the destination port for the pair master mode device.

4.3.7 UDP Rang Mode



When the routers and switches and other devices do not support multicast, but also need to achieve the multicast function, you can make the serial server in UDP rang mode. In this mode, the serial server through the UDP protocol with the user specified the same network segment of the host advance serial data transmission, to achieve point to multipoint data communication. UDP port mode serial device can also receive data from one or more hosts.

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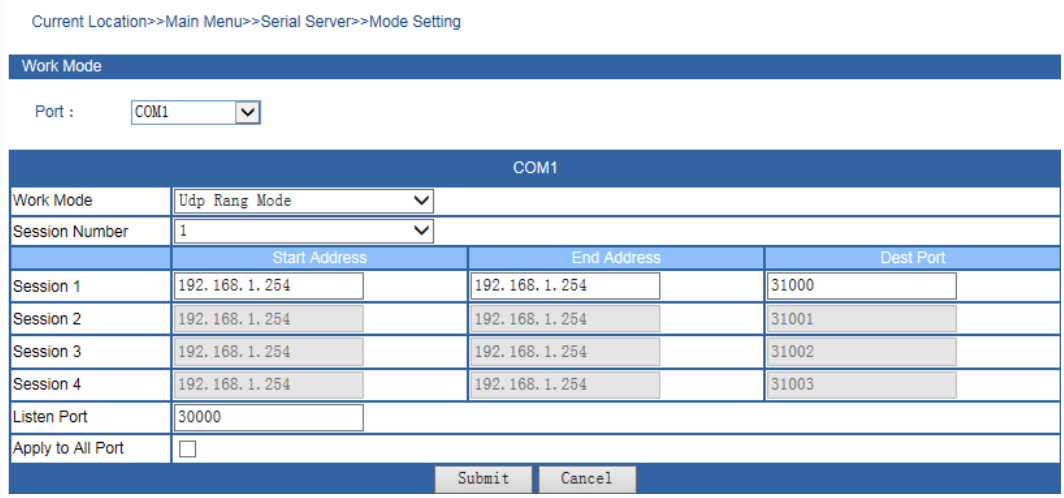
Interface Description

UDP rang mode interface screenshot



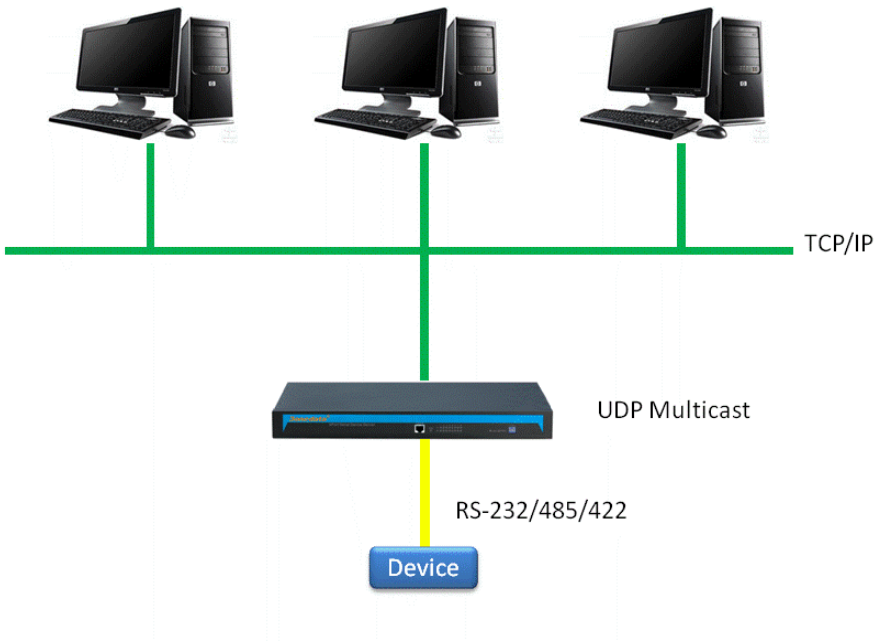
UDP rang mode interface main element configuration instructions

Interface Elements	Description
Session number	The number of hosts that a serial port is connected at the same time. • Each host according to the "first in first out" in the order and serial port communication. • The system supports up to 4 connections.
Start address	Enter the start IP address of the UDP rang destination address.
End address	Enter the end IP address of the UDP rang destination address.
Dest port	Enter the port number of the host needs to be connected by the serial server.
Listen port	The network receives the listening port of UDP data. The user must assign a unique listening port to each serial port so that the system can normally receive UDP data.
Apply to all port	Check the “Apply to all port” check box to apply the current settings to all serial ports.

Notice

- Address range only supports the IP addresses of Class B and Class C. The value of start address and the end address must be on the same network rang.
- Address range start value must be less than or equal to the value of the end address.
- If you want to ensure the normal communication, because each IP consumption of 20ms, address range to be as small as possible, the length of the package must not be 0, send the data packet length and packet assemble length consistent, packet transmission frequency can not be too fast.

4.3.8 UDP Multicast Mode



In UDP multicast mode, the serial server can send unicast or multicast data of the serial device to one or more hosts specified by the user through the UDP protocol, and can also receive unicast or multicast data from one or more devices, enabling multipoint-to-multipoint communication.

Interface Description

UDP multicast mode interface screenshot

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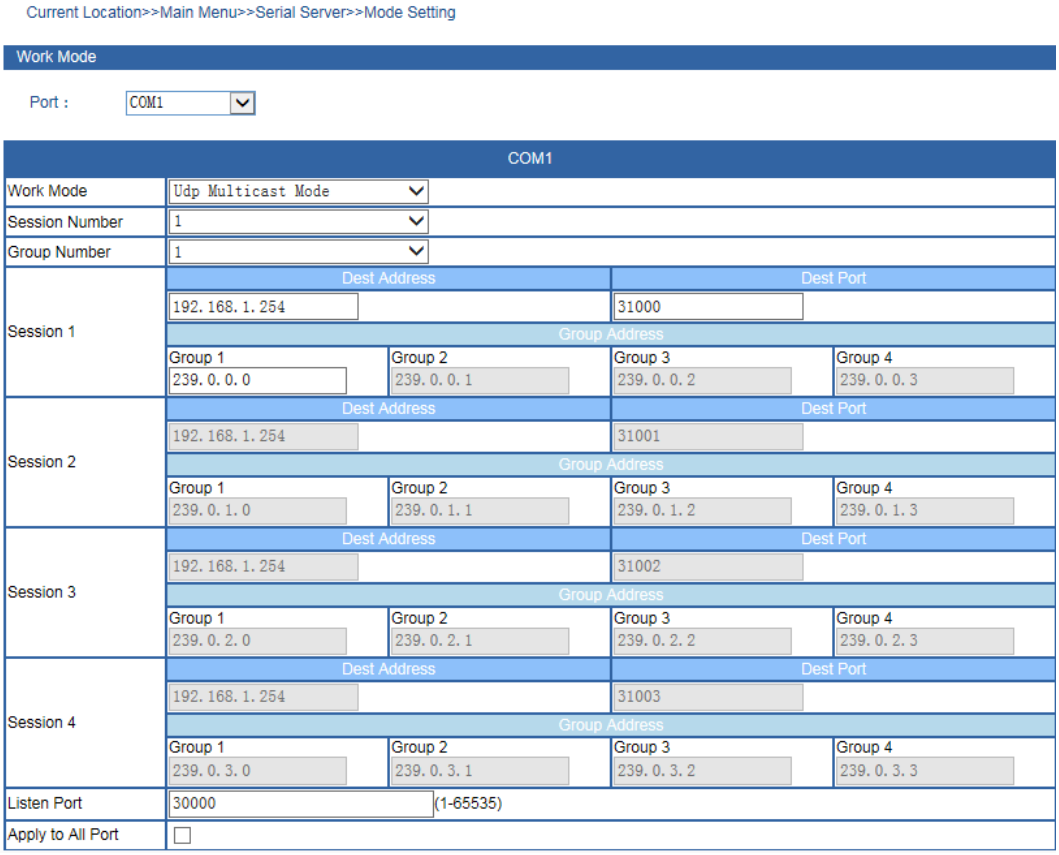

UDP multicast mode interface main element configuration instructions

Interface Elements	Description
Session number	The number of hosts that a serial port is connected at the same time. • Each host according to the "first in first out" in the order and serial port communication. • The system supports up to 4 connections.
Group number	Select the number of multicast groups and support up to four multicast groups.
Dest address	Enter the IP address of the host to be connected by the serial device server.
Dest port	Enter the port number of the host to be connected by the serial device server.
Group address	The multicast address is used to identify an IP multicast group. The multicast address ranges from 224.0.0.0 to 239.255.255.255. The device can send or receive multicast data to multiple hosts.
Listen port	The network receives the listening port of UDP data. The

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Interface Elements	Description
	user must assign a unique listening port to each serial port so that the system can normally receive UDP data.
Apply to all port	Check the “Apply to all port” check box to apply the current settings to all serial ports.

4.4 COM Mode Information

Function Description

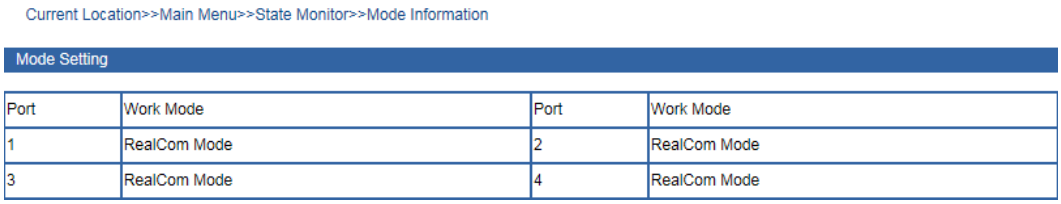
On the "COM Mode Information" page, you can view the operating modes for each serial port number.

Operation Path

Open in sequence: "Serial Server> COM Mode Information".

Interface Description

COM mode information interface screenshot



COM Mode information interface main element configuration instructions

Interface Elements	Description
Port	Display device serial port
Work Mode	Display work mode of device serial port

4.5 Reboot Port

Function Description

On the “Reboot Port” page, you can reboot the corresponding serial port of the device as needed.

Operation Path

Open in sequence: "Serial server> Reboot port".

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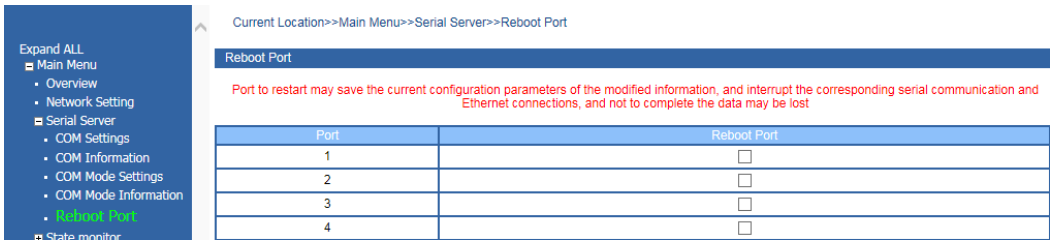
Interface Description

Reboot port interface screenshot



Reboot port interface main element configuration instructions

Interface Elements	Description
Port	Display the serial port number of the device.
Reboot Port	Check the "Reboot port" check box, which restart the device corresponding serial port.

Notice

The port restart will disconnect the corresponding serial port and Ethernet connection, serial communication will also be interrupted, the transmission of communication data may be lost.

5 Monitoring State

About This Chapter

Content	Hyperlink
This Chapter	5.1 Connect State 5.2 COM State 5.3 COM Parameter

5.1 Connect State

Function Description

On the “Connect State” page, you can view the working mode and connect state of the device's serial port number.

Operation Path

Open in sequence: “State Monitor> Connect State”

Interface Description

Connect state interface screenshot

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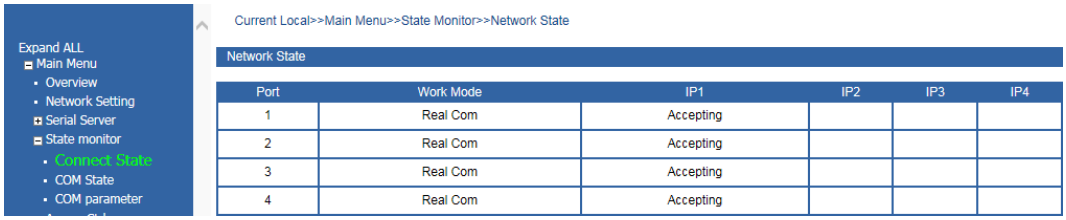


Connect state interface main element configuration instructions

Interface Elements	Description
Port	Display serial port number of the device
Work Mode	Display work mode of the device's serial port
IP1-IP4	Displays the session connection information corresponding to the device serial number, such as the connection status and the number of connections.

5.2 COM State

Function Description

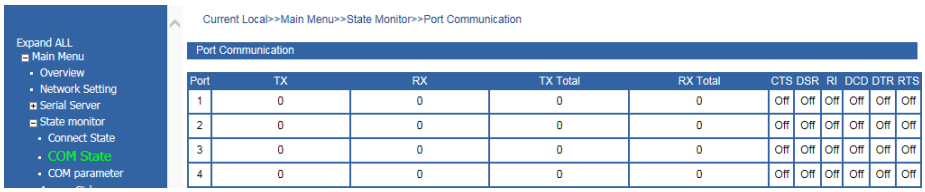
On the "COM State" page, you can view the data transceiver state and pin state of the corresponding serial port of the device.

Operation Path

Open in sequence: “State Monitor> COM State”.

Interface Description

COM state interface screenshot



Serial status interface main element configuration instructions

Interface Elements	Description
Port	Display the serial number of the device.
TX，RX，TX Total，RX Total	Display the data transceiver status of the corresponding serial port.

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Interface Elements	Description
CTS，DSR，RI，DCD，DTR，RTS	Displays the pin status of corresponding the serial port.

5.3 COM Parameter

Function Description

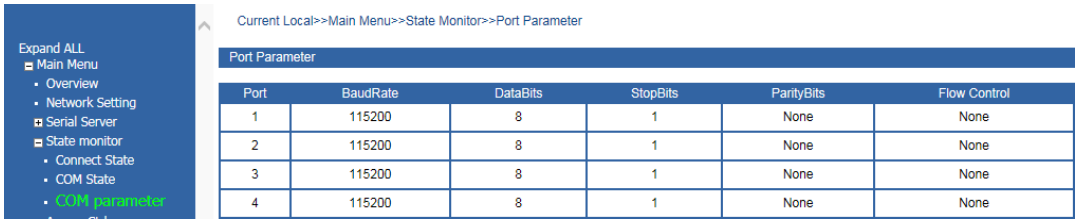
On the “COM Parameter” page, you can view information about the port number, baud rate, data bits, stop bits, parity bits, and flow control parameters for the device.

Operation Path

Open in sequence: “State Monitor> COM Parameter”.

Interface Description

COM parameter interface screenshot



COM parameter interface main element configuration instructions

Interface Elements	Description
Port	Displays device serial port
BaudRate	Displays the baud rate of the serial port corresponding to the device.
DataBits	Displays the data bits of the serial port corresponding to the device.
StopBits	Displays the stop bits of the serial port corresponding to the device.
PairtyBits	Displays the parity bits of the serial port corresponding to the device.
Flow Control	Display whether or not flow control is enabled on the serial port of the device.

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6 Controling Access

About This Chapter

Connect	Hyperlink
This Chapter	6.1 Device Security 6.2 IP Filter 6.3 MAC Filter 6.4 User Manage

6.1 Device Security

Function Description

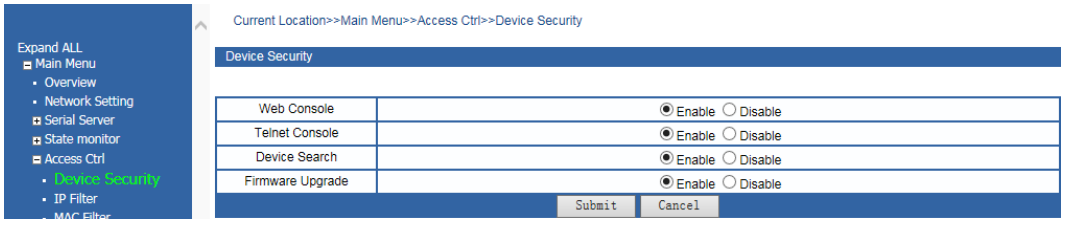
On the “Device Security” page, you can enable or disable Web console, Telnet console, device search and firmware upgrade functions.

Operation Path

Open in sequence: “Access Ctrl> Device Security”.

Interface Description

Device security interface screenshot



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Device security interface main element configuration instructions

Interface Elements	Description
WEB Console	Enables or disables the Web console function. The options are: • Enabled: The user can log in to the Web interface through the management software or browser to configure the device. • Disable: Disable Web console function.
Telnet Console	Enable or disable the Telnet console function. The options are: • Enabled: The user can remotely access the system configuration interface through the Telnet terminal. • Disable: Disable Telnet console function.
Device Search	Enables or disables the software search device function. The options are: • Enabled: The user can search the serial server device through the management software. • Disable: Disable management software search device function.
Firmware Upgrade	Enables or disables the firmware upgrade function. The options are: • Enabled: The user can upgrade the device's firmware through the Web interface or command line. • Disable: Disable firmware upgrade function.

6.2 IP Filter

Function Description

On the "IP Filter" page, you can restrict access to host IP addresses and subnet masks to be accessed or connected by setting access rules.

Operation Path

Open in sequence: "Access Ctrl> IP Filter".

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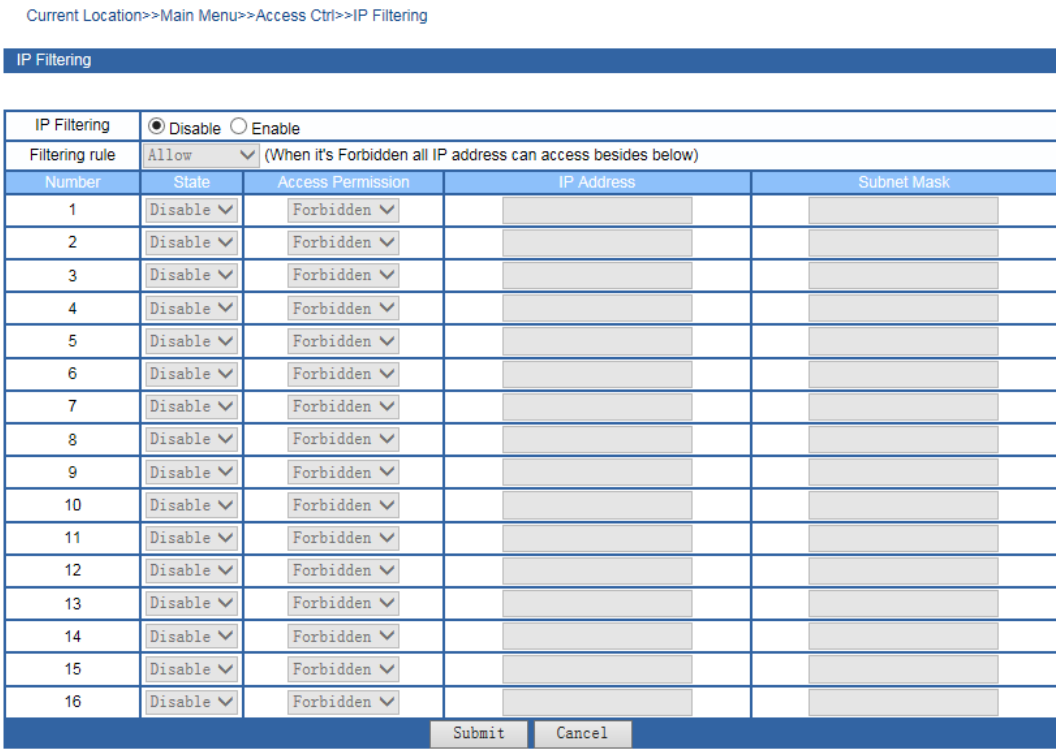
Interface Description

IP filter interface screenshot



IP filter interface main element configuration instructions

Interface Elements	Description
IP Filtering	Enable or disable IP address filtering rules.
Filtering rule	Set the access rights of the system beyond the IP address of the filtering rule number 1~16.
Number	Display IP address of the filterin g rule
State	Enable or disable the filtering rule
Access Permission	Set the access permission, the options are: • Allow: Allow access to your set IP address and subnet mask. • Forbidden: Disable access to your set IP address and subnet mask.
IP Address	Set IP address within filtering rule, for example “192.168.1.61”.
Subnet Mask	Set subnet mask within filtering rule, for example “255.255.255.0”.

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6.3 MAC Filter

Function Description

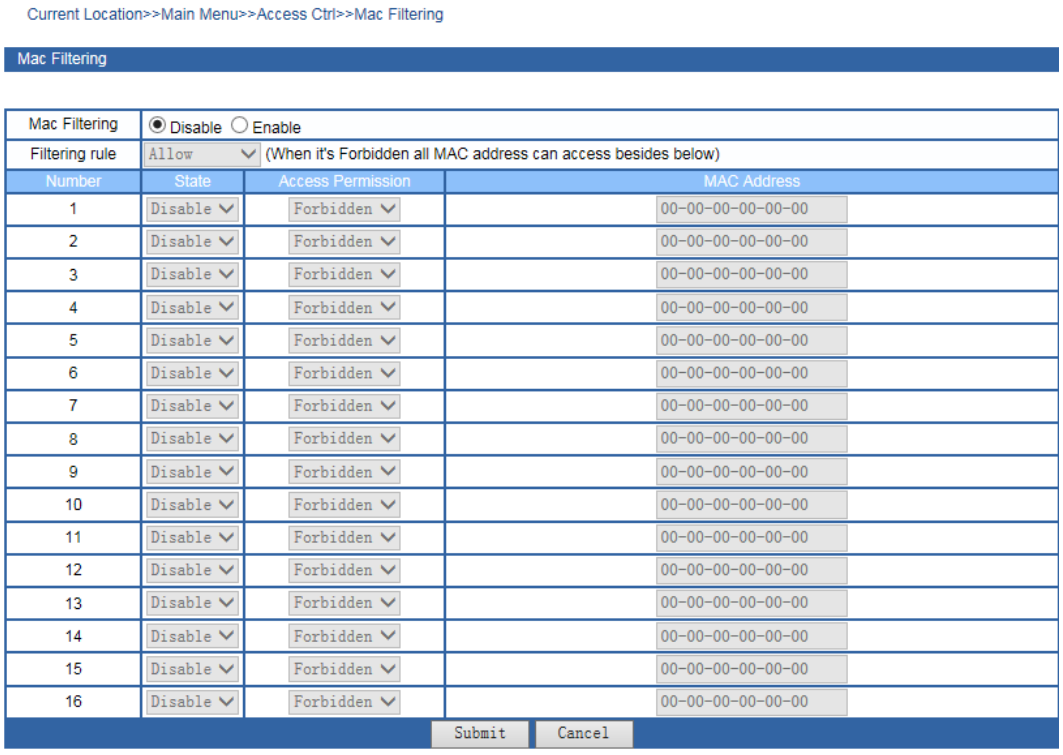
On the “MAC Filter” page, you can restrict the host MAC address to be accessed or connected by setting an access rule.

Operation Path

Open in sequence: "Access Ctrl> MAC Filter".

Interface Description

MAC filter interface Screenshot



MAC filter interface main element configuration instructions

Interface Elements	Description
MAC Filtering	Enables or disables MAC address filtering rules
Filtering Rule	Set the access rights of the system beyond the MAC address of the filtering rule number 1~16.
Number	Display MAC address of the filterin g rule

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Interface Elements	Description
State	Enable or Disable Filtering rule.
Access Permission	Set the access permission, the options are: • Allow: Allow access to your set MAC address. • Forbidden: Disable access to your set MAC address.
MAC Address	Set MAC address within filtering rule, for example “00-22-6F-03-BD-52”.

6.4 User Manage

Function Description

On the "User Manage" page, you can configure the login information such as the user name and password of the login WEB configuration interface.

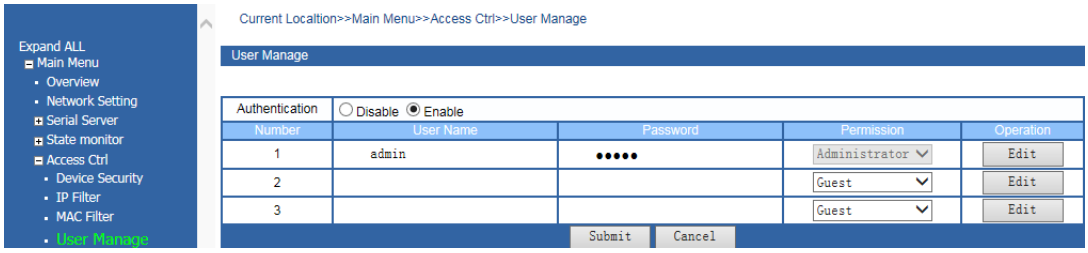
The serial server provides hierarchical management: Observer permissions and administrator privileges. Observers only have the rights to view the status of the serial server, and only the system administrator can configure the parameters of the serial server.

Operation Path

Open in sequence: “Access > User Manage”.

Interface Description

User manage interface screenshot



User manage interface Main element configuration instructions

Interface Elements	Description
Authentication	Enable or disable authentication function
Number	Displays the user number.
User Name	Displays the user name of the login WEB configuration

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Interface Elements	Description
	interface.
Password	The hidden text displays the user password for logging in to the WEB configuration interface.
Permission	Click the "permission" drop-down list box, select the login WEB configuration interface user permissions.
Operation	Click "Edit" to modify the user name and password of the login WEB configuration interface.

Notice

Please remember the revised user name and password, if accidentally forgotten, please restore the factory settings through the WEB interface, the default login WEB configuration interface user name and password are "admin".

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7 Remote Monitor

About This Chapter

Content	Hyperlink
This Chapter	7.1 SNMP Settings

7.1 SNMP Settings

7.1.1 Introduction of SNMP

SNMP (Simple Network Management Protocol) is an internet-standard protocol for managing devices on IP networks. It is used mostly in network management systems to monitor network-attached devices for conditions that warrant administrative attention. SNMP has the following characteristics:

- Support the intelligent management of network equipment. With the SNMP-based network management platform, network administrators can query the operating status and parameters of network devices, set parameter values, troubleshoot, complete fault diagnosis, perform capacity planning, and generate reports.
- Support the management of devices with different physical characteristics. SNMP only provides the most basic set of functions, making the management tasks and management equipment, physical characteristics and network technology is relatively independent, so as to achieve the management of different manufacturers of equipment.

7.1.2 Work Mechanism of SNMP

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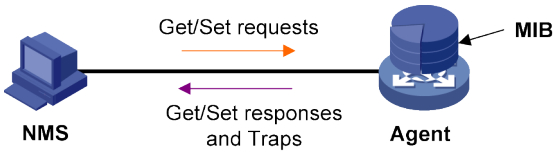
SNMP includes 2 parts: NMS and Agent:

- NMS (Network Management System) is the manager of the SNMP network, can provide a very friendly human-computer interaction interface, to facilitate the network administrator to complete the vast majority of network management.
- Agent is a managed object of the SNMP network. It is responsible for receiving and processing request packets from the NMS. In some emergency situations, if the interface status changes, Agent will automatically send alarm information to the NMS.

NMS management equipment, usually pay attention to some parameters, such as interface status, CPU utilization, etc. The collection of these parameters called MIB (Management Information Base). These parameters are called nodes in the MIB. The MIB defines the hierarchical relationships between the nodes and the attributes of the object, such as the name of the object, the access rights, and the data type. Each Agent has its own MIB. The managed devices have their own MIB files, and the MIB files are compiled on the NMS to generate the MIB of the device. The NMS performs read / write operations on the MIB nodes according to the access rights to implement the management of the Agent. The relationship between NMS, Agent and MIB is shown in the following figure.



SNMP supports 3 kinds of basic operating in total:

- **Get:** Manager can use this to get some variable value of Agent.
- **Set:** Manager can use this to set up some variable value of Agent.
- **Trap:** Agent uses this to send an alarm to manager. The Agent does not require the NMS to send a response packet. The NMS does not respond to the Trap message. SNMP V1 and SNMP V2 support Trap operation.

7.1.3 SNMP Version

Currently, Agent supports SNMP V1 and SNMP V2.

- SNMP V1 uses the Community Name authentication mechanism. The community name is similar to the password used to limit the communication between the NMS and the agent. If the community name set by the NMS is different from the community name set on the managed device, the NMS and the agent can not establish an SNMP connection, causing the NMS to fail to access the agent. The

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alarm information sent by the agent is discarded by the NMS.

- SNMP V2 also uses the community name authentication mechanism. SNMP V2 extends the functionality of SNMP V1: provides more types of operations; supports more data types; provides richer error code to more easily differentiate errors.

Function Description

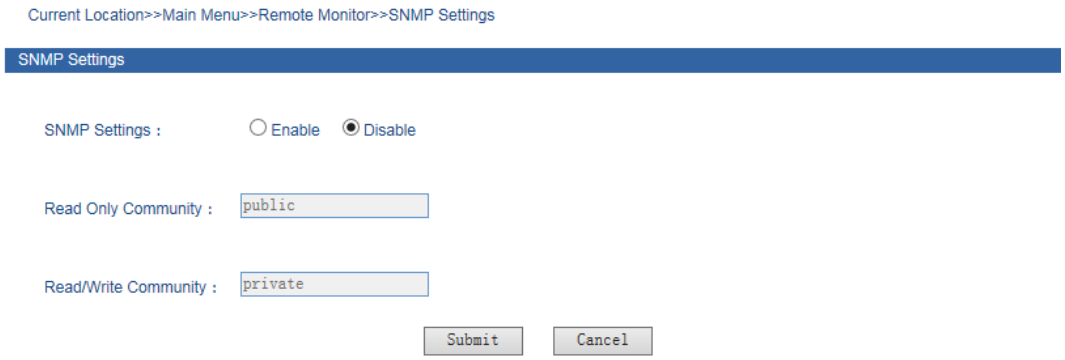
On the SNMP Settings page, you can enable or disable the SNMP setup function, set the SNMP V1 / V2 read-only community name, and read/write community name parameter information.

Operation Path

Open “Remote Monitor> SNMP Settings” in sequence.

Interface Description

SNMP settings interface screenshot



SNMP settings interface main element configuration instructions

Interface Elements	Description
SNMP settings	Enable or disable SNMP settings function
Read only community	Configure read-only SNMP community names with Get permission only.
Read/write community	Configure read and write SNMP community names with Get and Set operations.

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8 System Manage

About This Chapter

Connect	Hyperlink
This chapter	8.1 System Information 8.2 System File 8.3 Logout & Reboot

8.1 IP Map

Function Description

On the IP MAP page, you can control the data from different network segments to transfer from the specified network port.

The data transmission rules of the device are: according to whether the destination address of the data and the IP address of the network port are in the same network segment:

- If they are in the same network segment, then directly from the network port transmission;
- Otherwise, check the IP mapping table, if the IP mapping table does not specify the network port, the data will transfer from the default network port.

Note

- The IP address of the network port does not need to be added to the mapping table.
- IP mapping table does not limit incoming data; the forwarding data port is the corresponding LAN port in the mapping table from the network segment to which the destination address belongs

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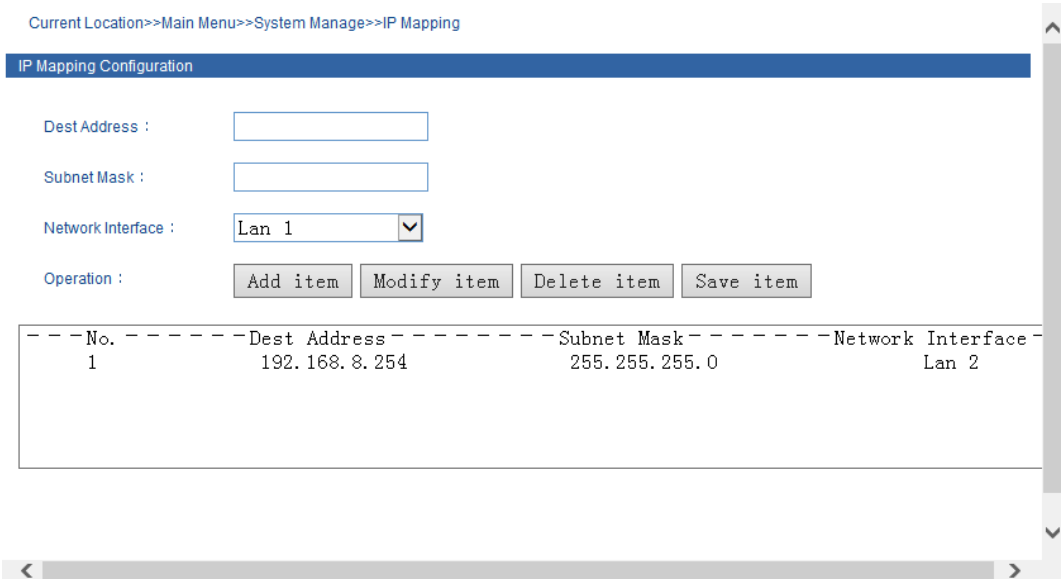
Operation Path

Open in sequence: "System Manage > IP Map".

Interface Description

IP Map interface screenshot



IP Map interface main element configuration instructions

Interface elements	Description
Dest Address	Configure the destination IP address of the mapping table rule.
Subnet Mask	Configure the subnet mask for the mapping table rules.
Network Interface	Click the “Network Interface” drop-down list box to select the destination IP address on which network interface connection.
Operation	Add, modify, delete, or save IP mapping rules.

8.2 System Information

Function Description

On the “System Info” page, you can configure the device module, name, description, serial number, and contact information.

Operation Path

Open in sequence: "System Manage> System Info".

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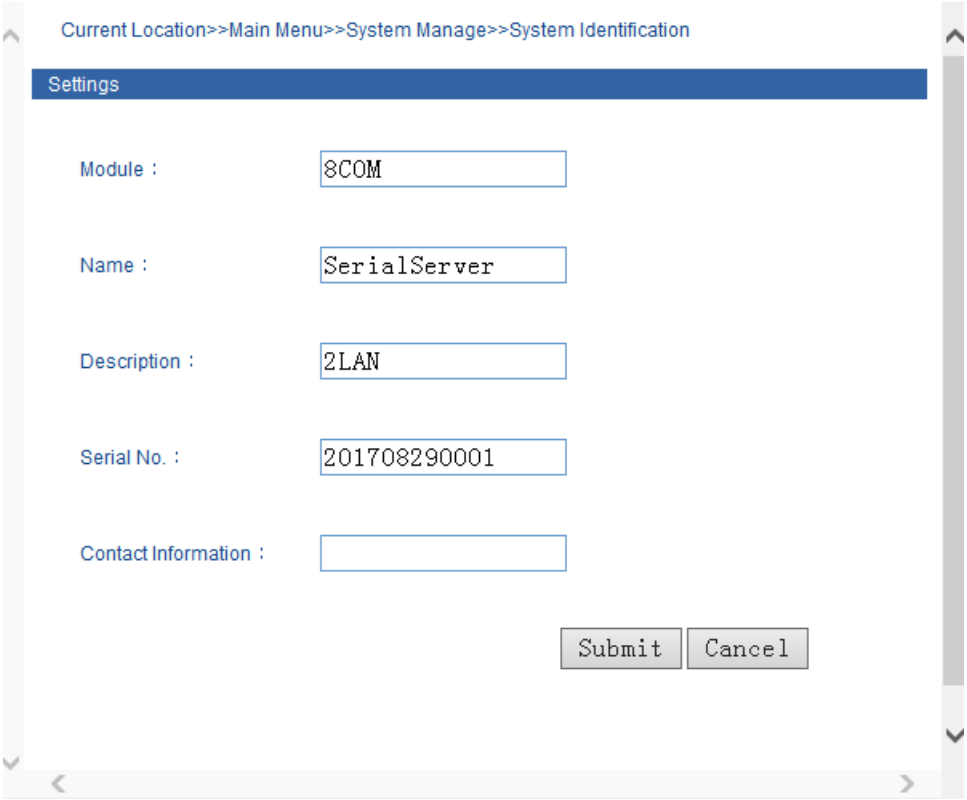
Interface Description

System information interface screenshot



System information interface main element configuration instructions

Interface Elements	Description
Module	Enter the device module in the "Module" text box.
Name	Enter the device name in the “Name” text box. To mark each device in the network, give the device a different name, no more than 16 bytes.
Description	Enter the device description in the “Description” text box. A summary of the device, no more than 16 bytes.
Serial NO.	Enter the device number in the “Serial NO.” text box. Describe the location of the device installation, no more than 30 bytes.
Contact information	Enter the contact information of the equipment maintenance personnel in the "Contact information" text box.

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8.3 System File

Function Description

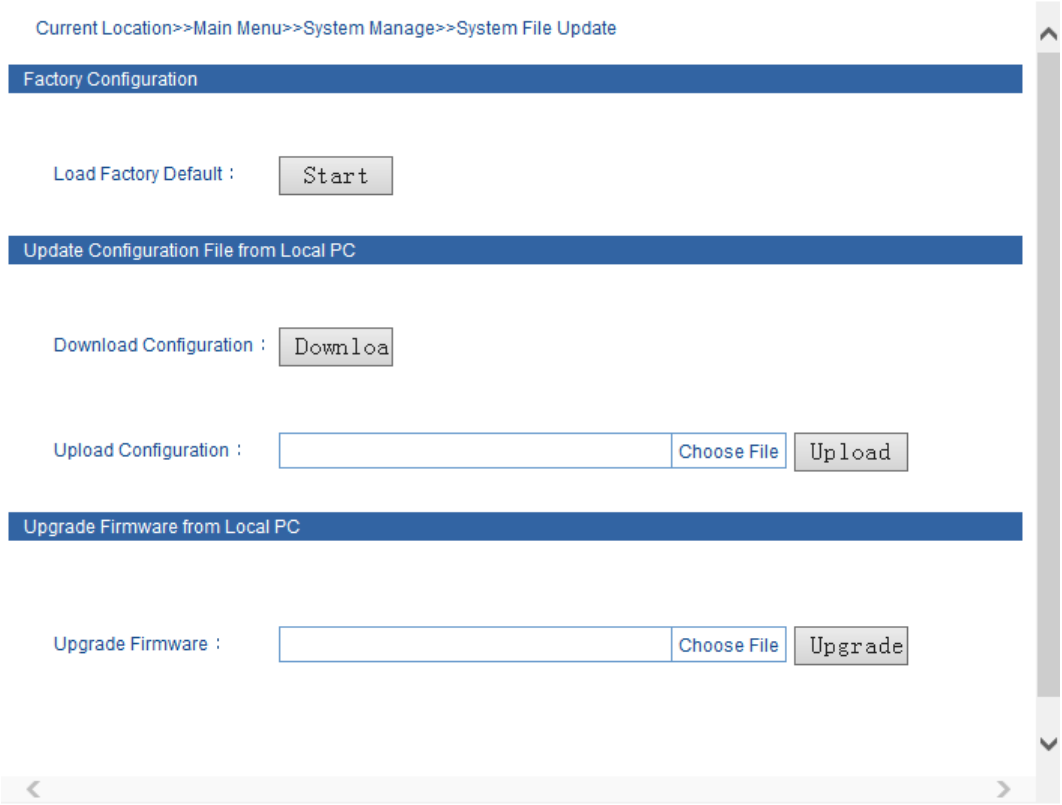
On the “System File” page, you can restore the factory settings, upload and download the configuration file, and make a firmware upgrade.

Operation Path

Open in sequence: "System Manage> System File".

Interface Description

System file interface screenshot



System file interface Main element configuration instructions

Interface Elements	Description
Load Factory Default	Click "Start" to restore the serial server to the factory configuration.
Download Configration	Click "Download" to download the current configuration file for the serial server.
Upload	Click "Choose File", select the profile you are ready, click

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Interface Elements	Description
Configuration	"Upload", you can upload the existing configuration to the serial server.
Upgrade Firmware	Click "Choose File", select your prepared software upgrade file, click "Upgrade", you can achieve serial server software online upgrade.

Warning

- Configuration file upload or software upgrade process, please do not click or configure the serial server other WEB pages, not to restart the serial port server; otherwise it will lead to the configuration file upload or software upgrade failed, causing the serial server system crash and so on.
- Restoring the factory settings will cause all states of the device to be in the factory state. The default IP address is "192.168.1.254".

8.4 Logout & Reboot

Function Description

On the “Logout & Reboot” page, you can log off and reboot the serial server system.

Operation Path

Open in sequence: "System Manage > Logout & Reboot".

Interface Description

Logout & Reboot interface screenshot

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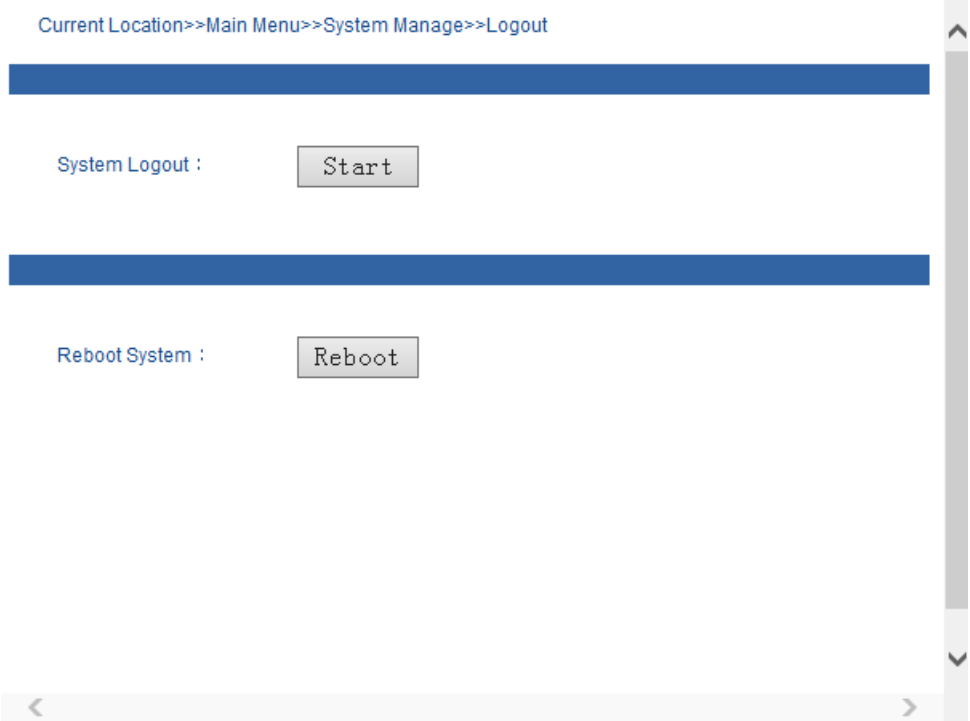

Logout & Reboot Interface main Element Configuration Instructions

Interface Elements	Description
System Logout	Click "Start" and the system will log out and jump to the initial login screen.
Reboot System	Click "reboot" in the pop-up dialog box, click "OK" to complete the system reboot.

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9 Working Mode Configuration Example

About This Chapter

Connect	Hyperlink
This Chapter	9.1 RealCom Mode 9.2 TCP Server Mode 9.3 TCP Client Mode 9.4 UDP Server Mode 9.5 UDP Client Mode 9.6 Pair Slave & Master Mode 9.7 UDP Rang Mode 9.8 UDP Multicast Mode

9.1 RealCom Mode

Background brief

Assume that the IP address of the serial server is: 192.168.1.250; COM1 is a real serial port, need to establish a connection with the virtual serial port COM2 in the management software VSP Manager.

The serial port information is as follows:

- BaudRate: 115200
- PairtyBits: None
- DataBits: 8
- StopBits: 1

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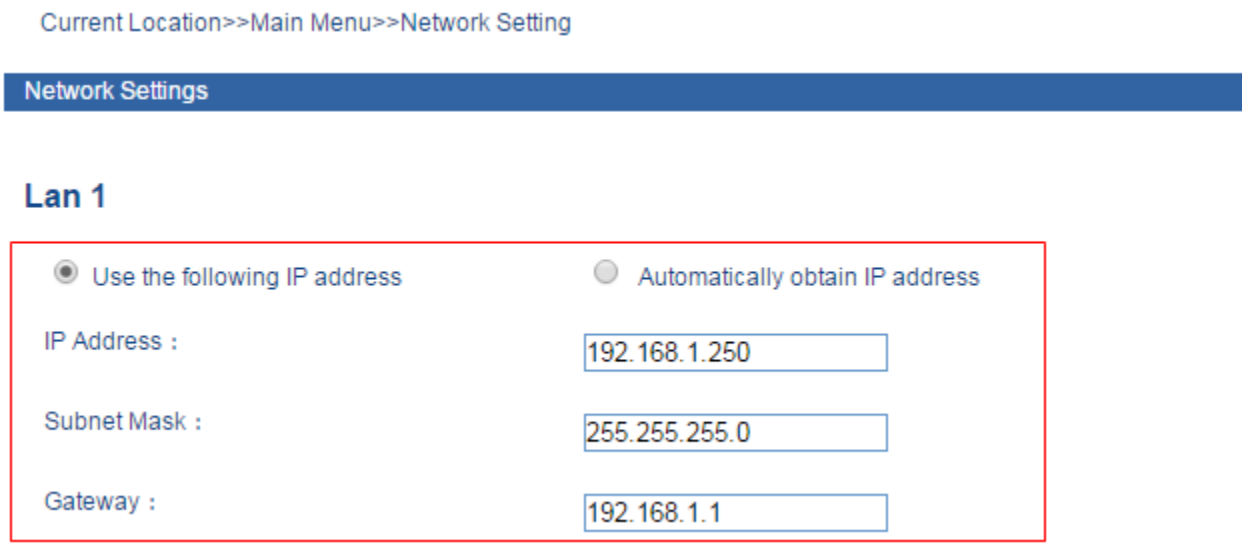
Operation steps

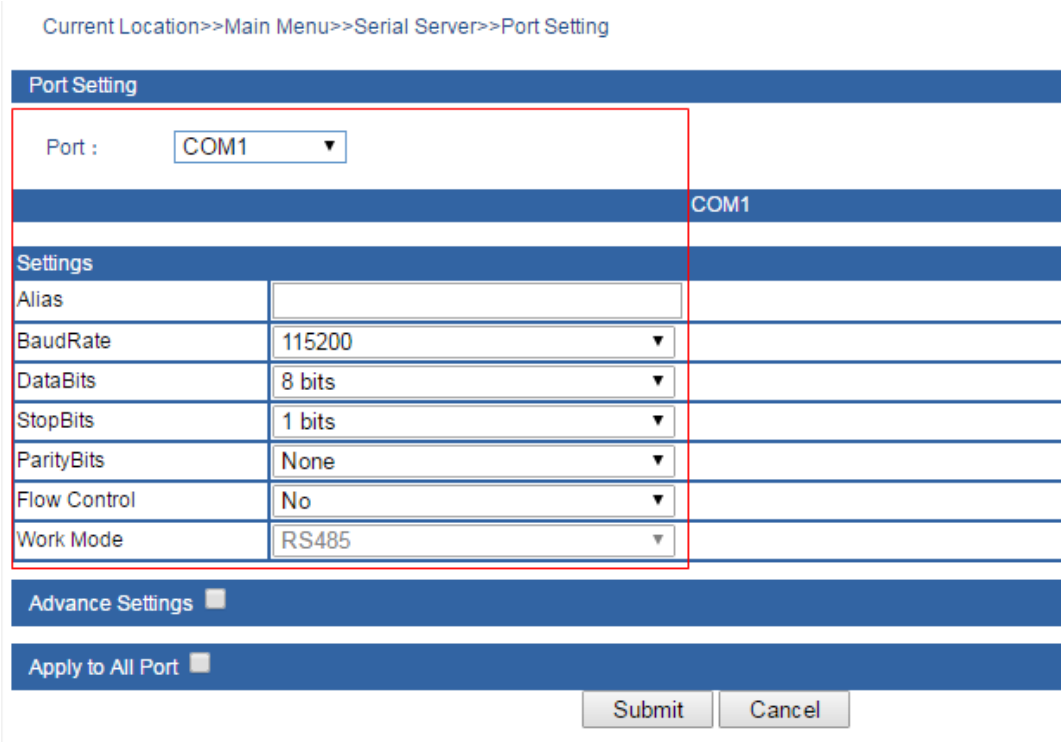
Setp 1 Configure the IP address of the serial server.

1. Log in to the Web configuration interface and select "Network Setting".
2. In the "Use the following IP address" option box, enter the "IP address", "Subnet Mask" and "Gateway address" corresponding to the serial server.
3. Other parameters remain the default, click "submit".



Setp 2 Configure the serial port parameter information.

1. Log in to the Web configuration interface and select "Serial Server> COM Settings".



2. Select "COM1" in the "Port" drop-down list.
3. Other parameters remain the default, click "Submit".
4. Set the "BaudRate", "DataBits", "StopBits" and "ParityBits" in the "Settings" option box.
5. Other parameters remain the default, click "Submit".

Setp 3 Configure the working mode of the serial server.

1. Log in to the Web configuration interface and select "Serial Server> COM Mode Settings".

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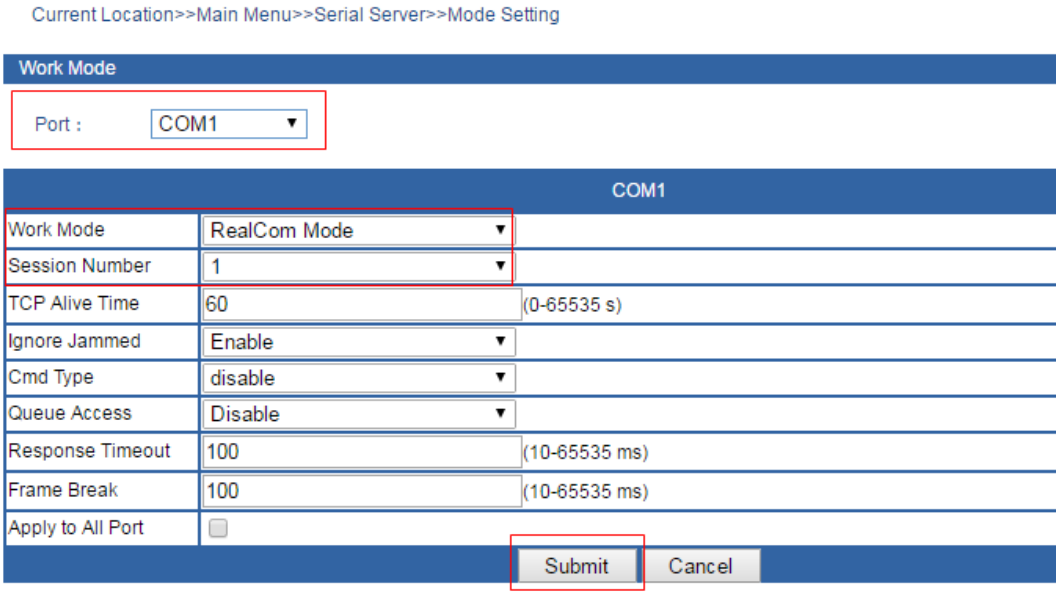
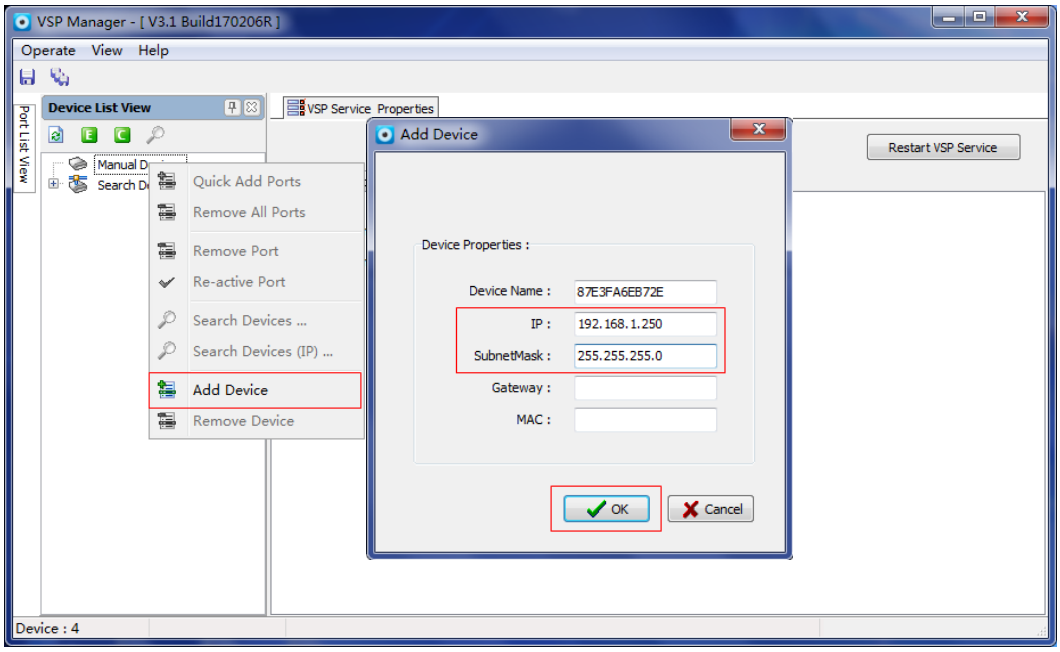


2. Select "COM1" in the "Port" drop-down list.
3. Click the "Work Mode" drop-down list box and select "RealCom Mode".
4. Click the "Session Number" drop-down list box and select "1".
5. Other parameters remain the default, click "Submit".

Step 4 Run "VSP Manager" software, configure the virtual serial port COM2.

1. Run the "VSP Manager" software, click "Add Device" in the left navigation bar, and then click "Add Device". Enter the IP address and subnet mask of the serial server and click “OK”.



2. Right click "192.168.1.250" and select "Quick Add Ports". After creating the virtual serial port COM2, click “OK”.

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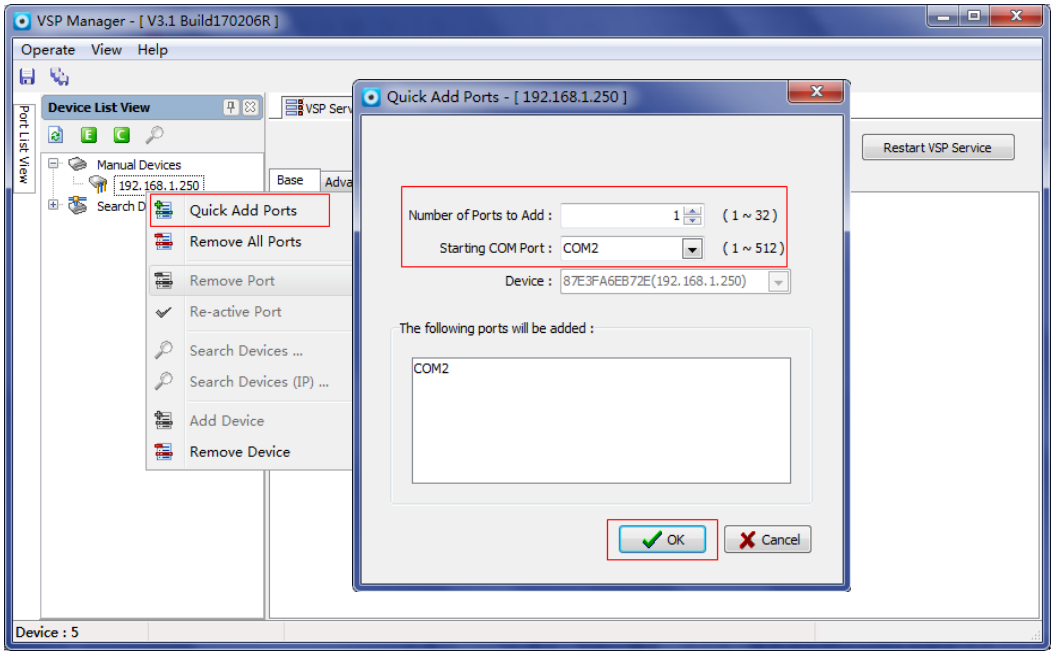
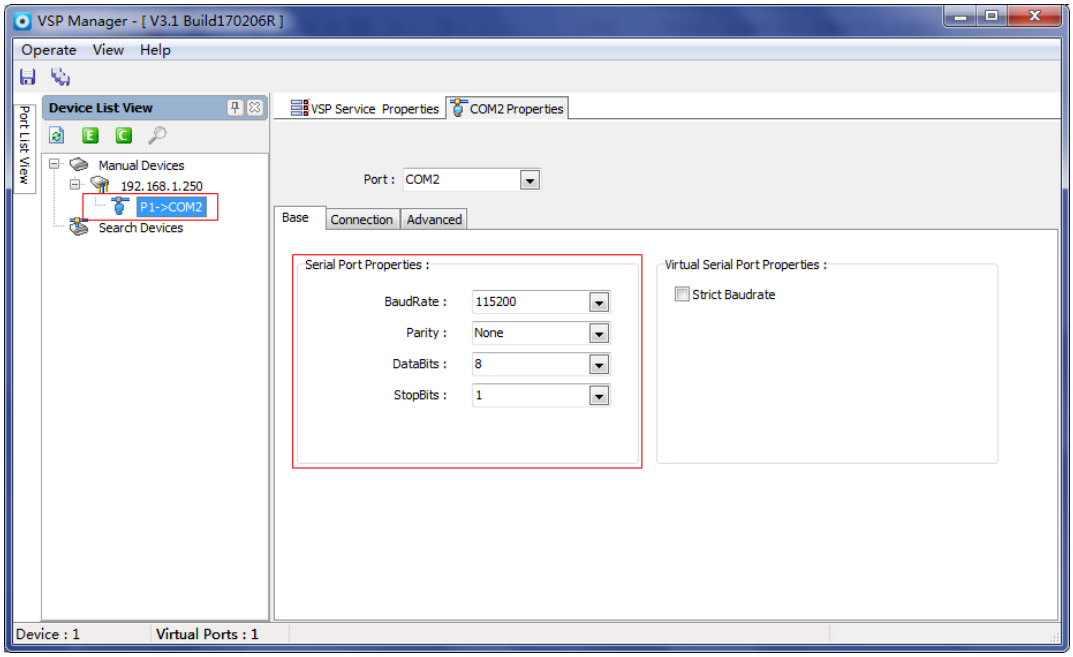


3. Click "Base" in the “COM2 Properties” option box, configure the virtual serial port COM2 parameter information and real COM1 match the same.



After the completion of the above configuration, between the real serial port COM1 and virtual COM2 connection can be successfully established to send data to each other.

Step 5 Run the "ComTest3One" software, test the real serial port COM1 and virtual COM2 communicate with each other.

1. Install and run the “ComTest3One” software, click "Begin" menu "New Windows".
2. Add the real serial "COM1" and virtual serial "COM2" two windows, the "COM1"

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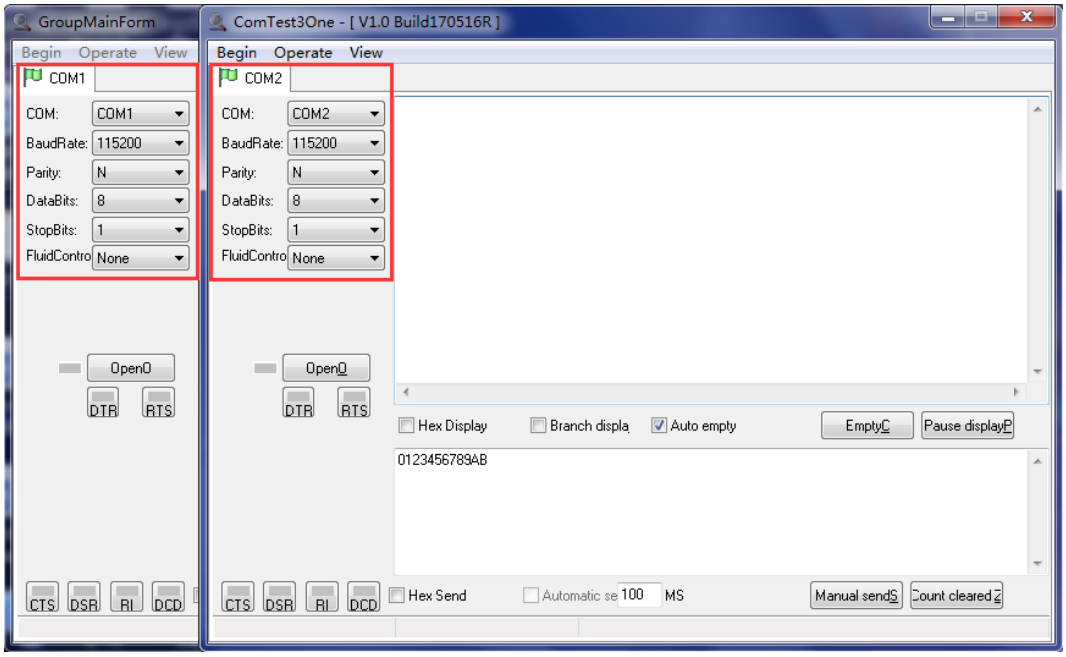
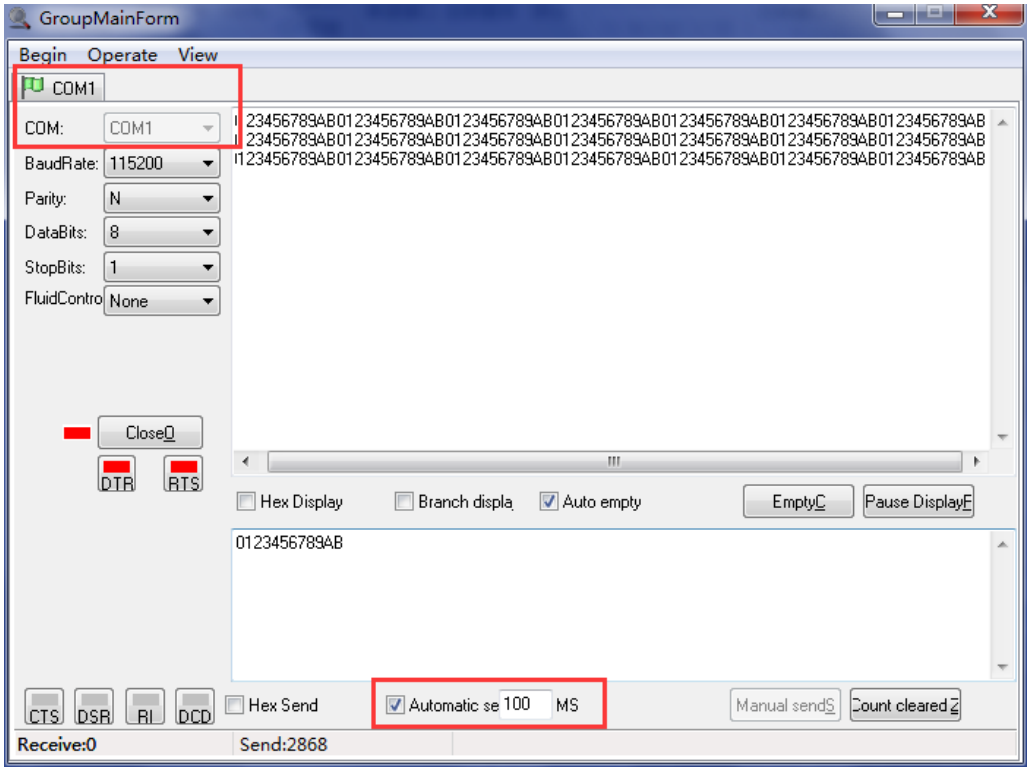
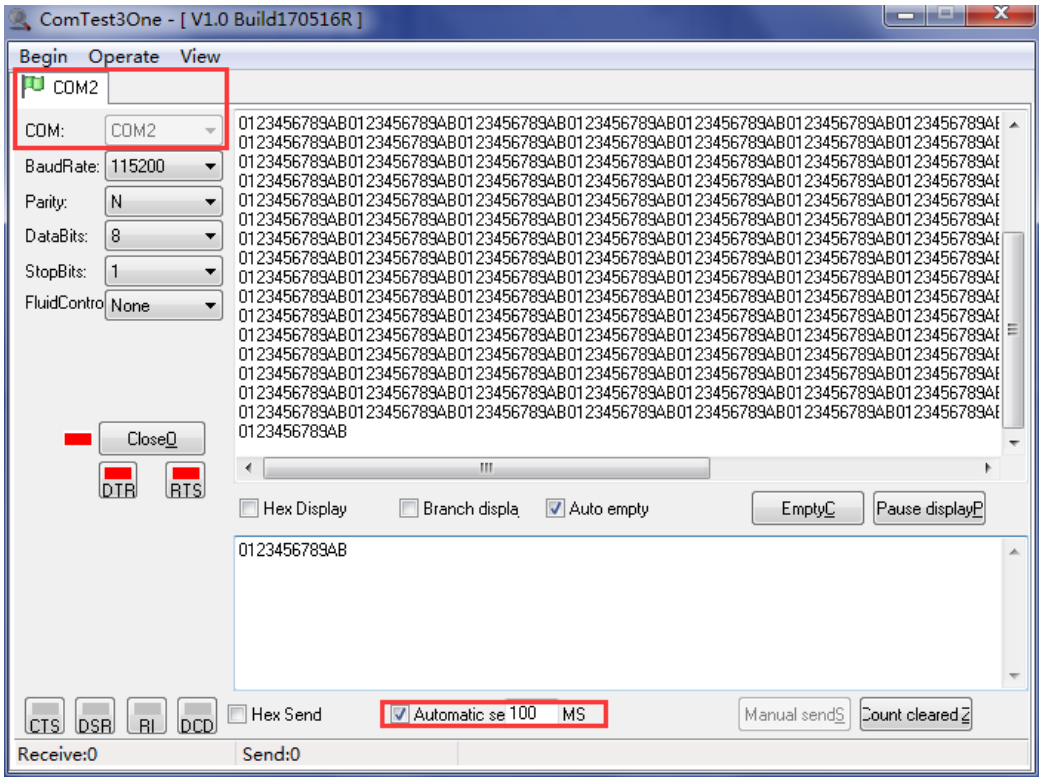
and "COM2" serial port parameter information match.



3. Respectively, open the "COM1" and "COM2" serial port signal, check the "automatic send" check box, test and see the real serial port COM1 and virtual COM2 between the data transceiver status.





9.2 TCP Server Mode

Background brief

Assuming that the serial port "COM1" of the serial server is operating in the "TCP server mode", passively waiting for one host PC to connect, and the host can read or send Ethernet data to a serial device.

The parameters of the serial server (TCP server) are as follows:

- IP Address: 192.168.1.250
- Local Port: 30000
- BaudRate: 115200
- PairtyBits: None
- DataBits: 8
- StopBits: 1

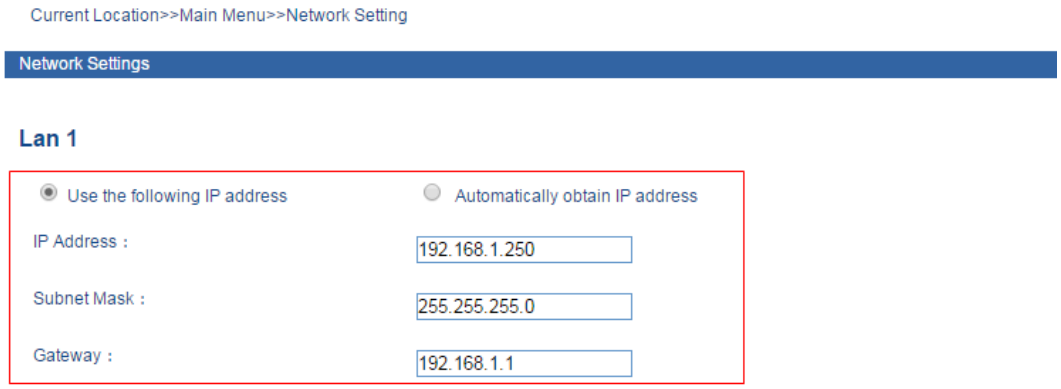
The parameters of the host PC (TCP client) are as follows:

- IP Address: 192.168.1.61

Operation steps

Setp 1 Configure the IP address of the serial server.

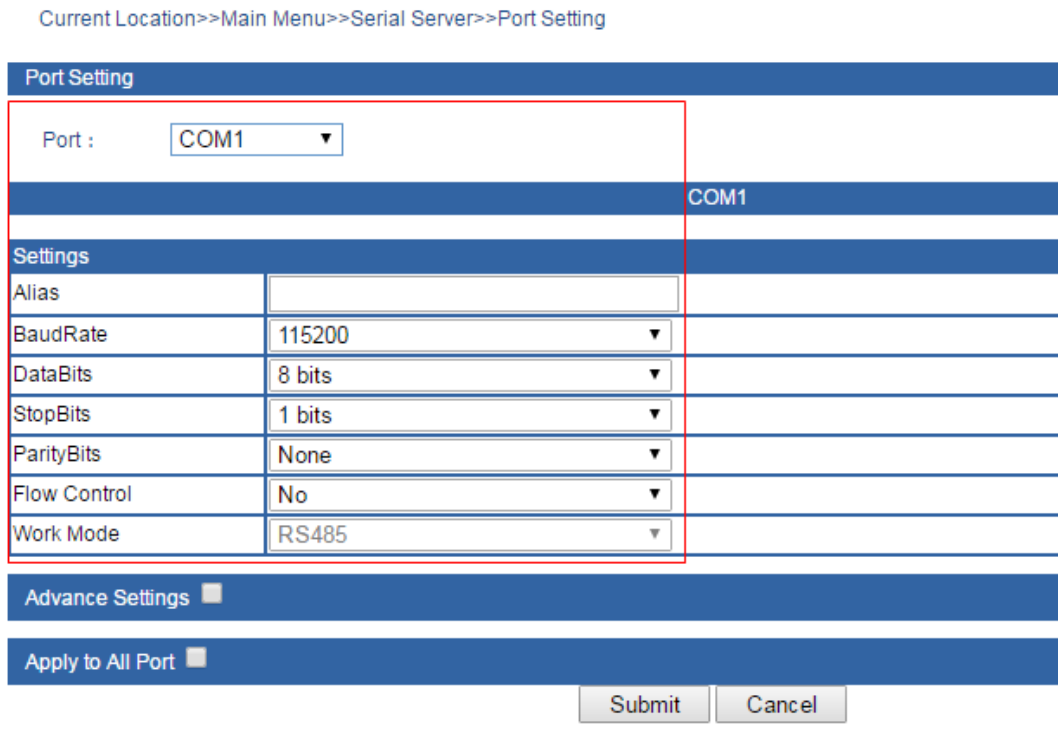
1. Log in to the Web configuration interface and select "Network Setting".



2. In the "Use the following IP address" option box, enter the "IP address", "Subnet Mask" and "Gateway address" corresponding to the serial server.
3. Other parameters remain the default, click "submit".

Step 2 Configure the serial port parameter information.

1. Log in to the Web configuration interface and select "Serial Server> COM Settings".



2. Select "COM1" in the "Port" drop-down list.
3. Set the "BaudRate", "DataBits", "StopBits" and "ParityBits" in the "Settings" option box.
4. Other parameters remain the default, click "submit".

Step 3 Configure the working mode of the serial server.

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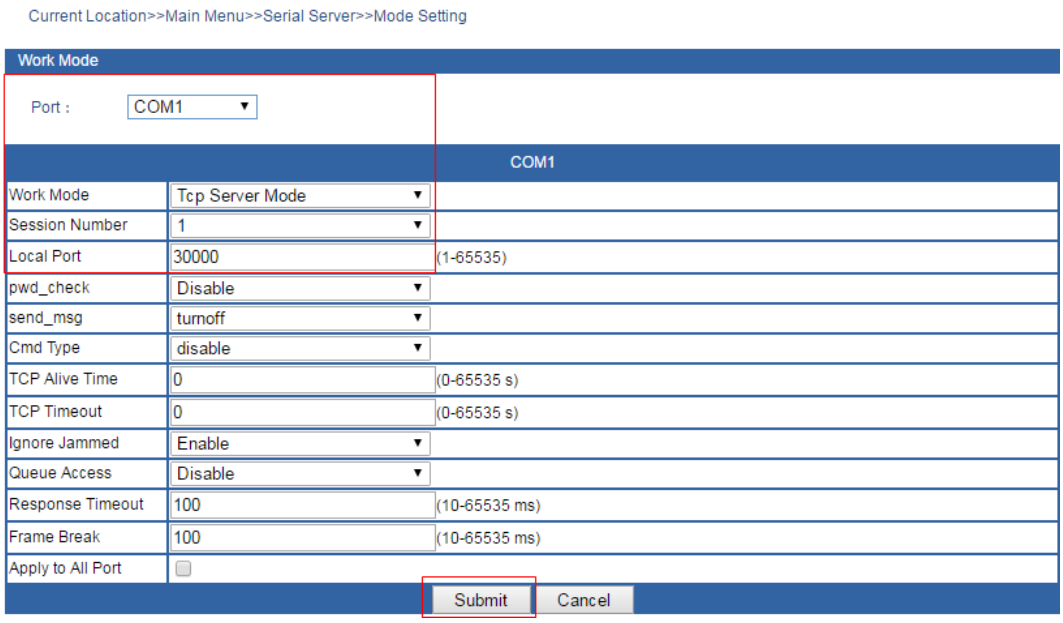
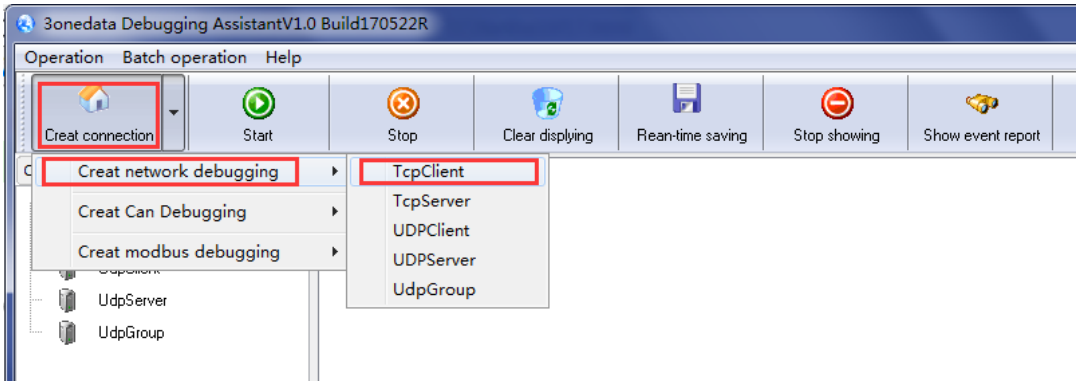
1. Log in to the Web configuration interface and select “Serial Server> COM Mode Settings”.



2. Select “COM1” in the “Port” drop-down list.
3. Click the "Work Mode" drop-down list box and select "TCP Server Mode".
4. Click the "Session Number" drop-down list box and select "1".
5. Enter "30000" in the "Local Port" text box.
6. Other parameters remain the default, click “submit”.

Step 4 Run the "DebugTool” software, for the host to create TCP client.

1. To install and run "DebugTool” Software, click “Create Connection” drop-down list box and choose “Create Network Debugging> TcpClient”.



2. In the "Local IP" drop-down list box, select the IP address "192.168.1.61" of the host PC (that is, the TCP client).
3. In the "Device IP" text box, enter the IP address "192.168.1.250" of the serial server

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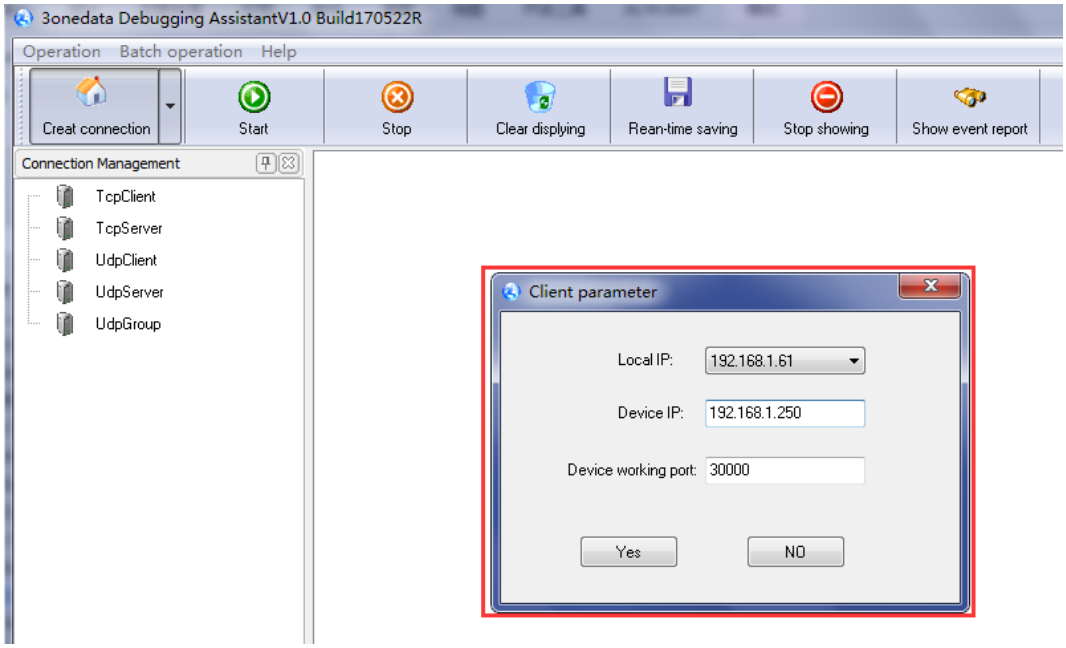
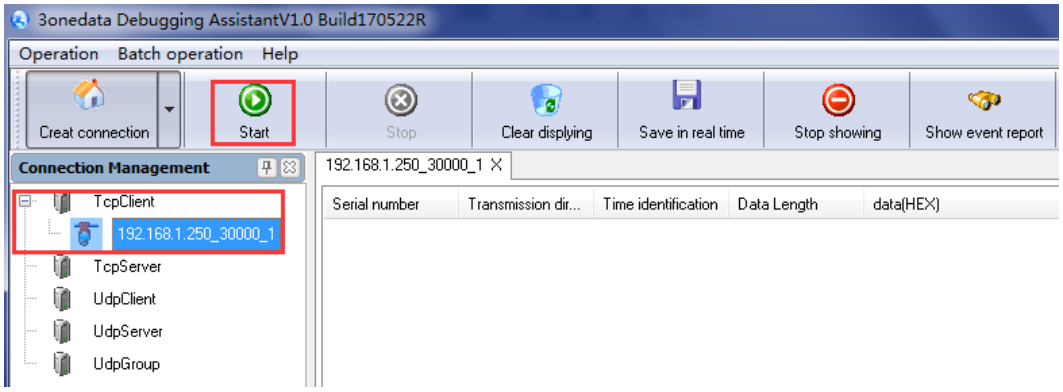
(that is, the TCP server).

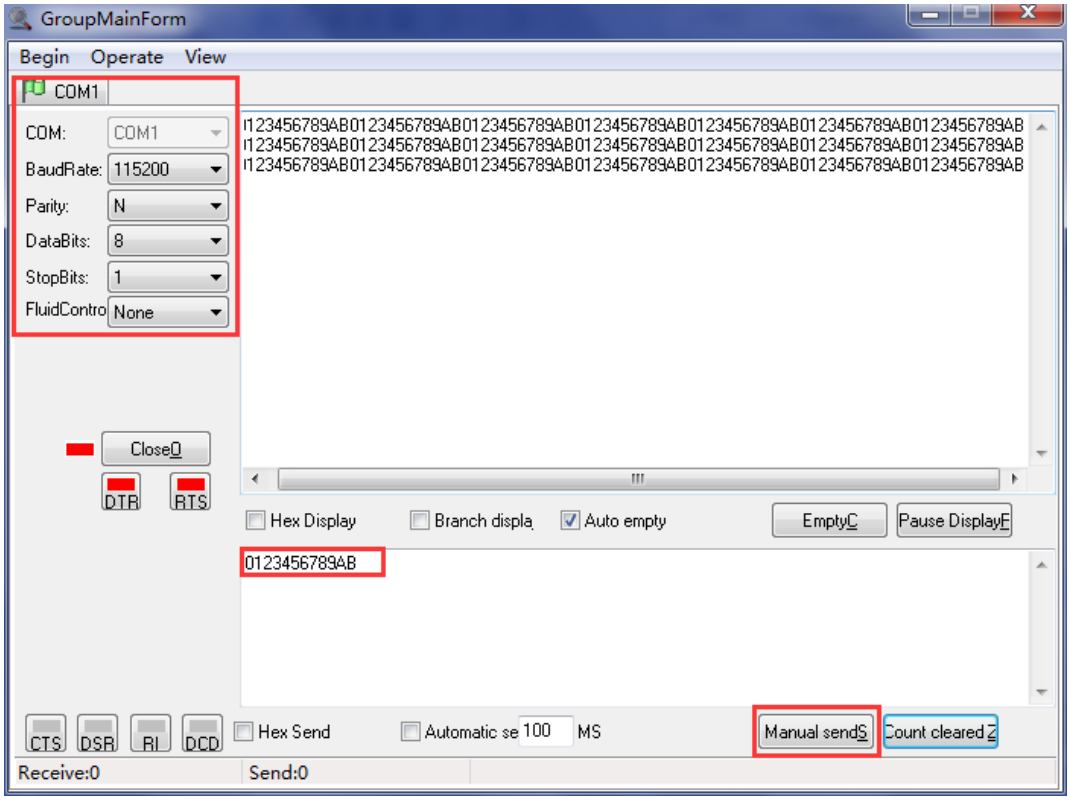
4. In the “Device Working Port” text box, enter the local port "30000" of the serial server (that is, the TCP server), and click “OK”.



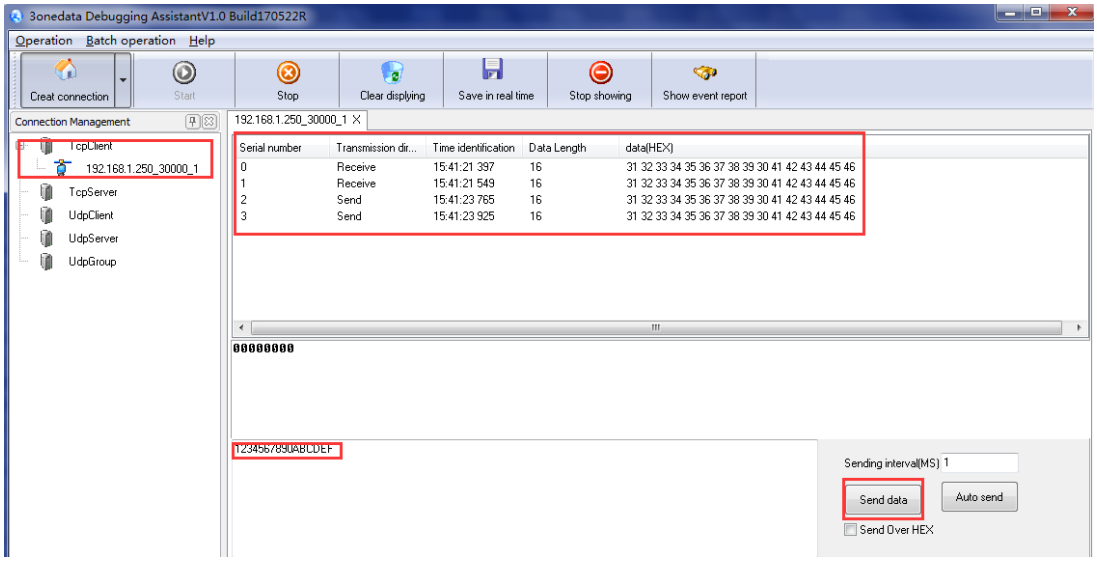
5. Select the TcpClient connection you created and click “Start”.



Step 5 Synchronize the operation of the "ComTest3One" and "DebugTool" software, test the serial server (TCP server) and the host PC (TCP client) to communicate with each other.



1. Install and run the “ComTest3One” software, click “Begin” menu “New Windows”.
2. Add serial port "COM1" window, configure the COM, BaudRate, parity, DataBits and other parameters and WEB interface "COM settings" consistent.
3. Open the "COM1" serial port signal, for example, enter the serial information "0123456789AB", and click “Manual Send”.
4. Run the "DebugTool" software, in the TcpClient option box to view the host PC to receive the serial information. Similarly, the host PC can also send information to the serial device.



9.3 TCP Client Mode

Background brief

Assuming that the serial port "COM1" of the serial server is working in "TCP client mode", it initiates a connection with a host PC, and the host can read or send Ethernet data to a serial device.

When the data transfer is completed, the serial server will automatically shut down the network connection after 30 seconds.

The parameters of the serial server (TCP client) are as follows:

- IP Address: 192.168.1.250
- Local Port: 30000
- BaudRate: 115200
- PairtyBits: None
- DataBits: 8
- StopBits: 1

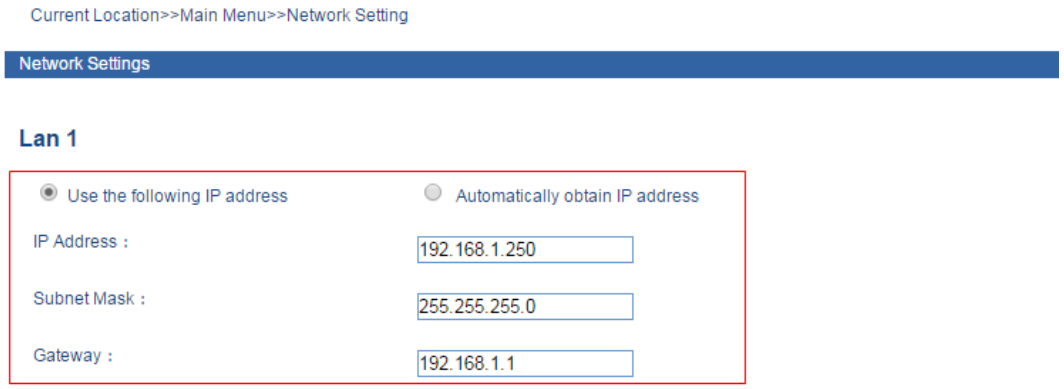
The parameters of the host PC (TCP server) are as follows:

- IP Address: 192.168.1.61
- Local Port: 31000

Operation steps

Setp 1 Configure the IP address of the serial server.

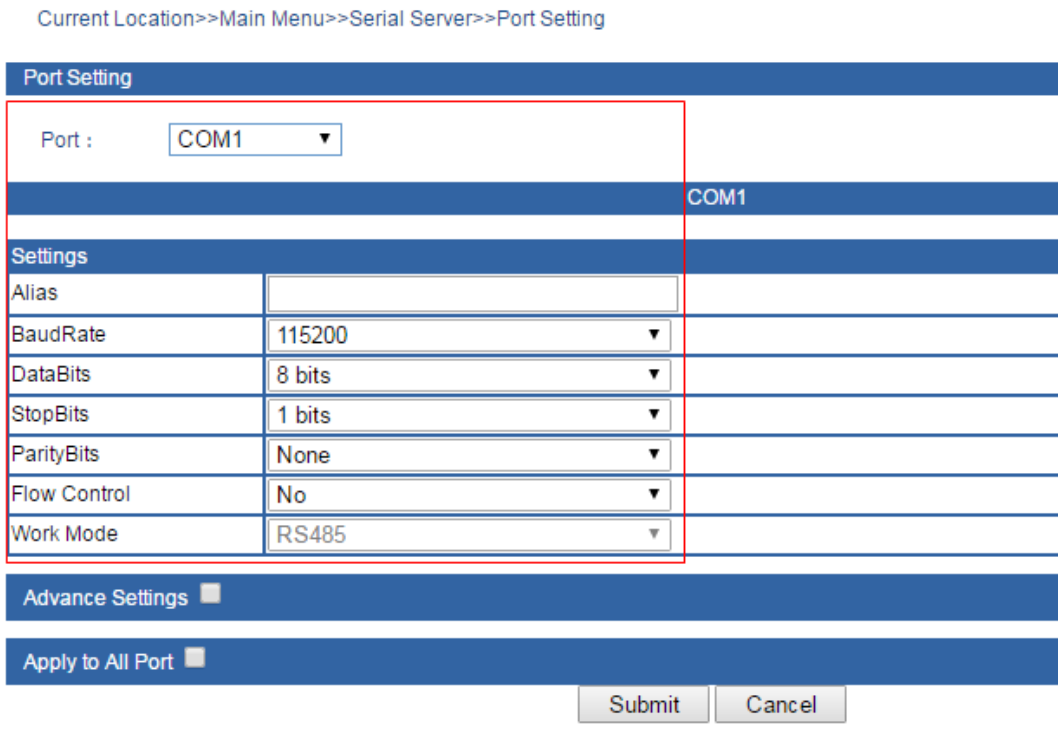
1. Log in to the Web configuration interface and select “Network Setting”.



2. In the "Use the following IP address" option box, enter the "IP address", "Subnet Mask" and "Gateway address" corresponding to the serial server.
3. Other parameters remain the default, click “submit”.

Step 2 Configure the serial port parameter information.

1. Log in to the Web configuration interface and select “Serial Server> COM Settings”.



2. Log in to the Web configuration interface and select “Serial Server> COM Settings”.
3. Select “COM1” in the “Port” drop-down list.
4. Set the "BaudRate", "DataBits", "StopBits" and "ParityBits" in the "Settings" option box.
5. Other parameters remain the default, click “submit”.

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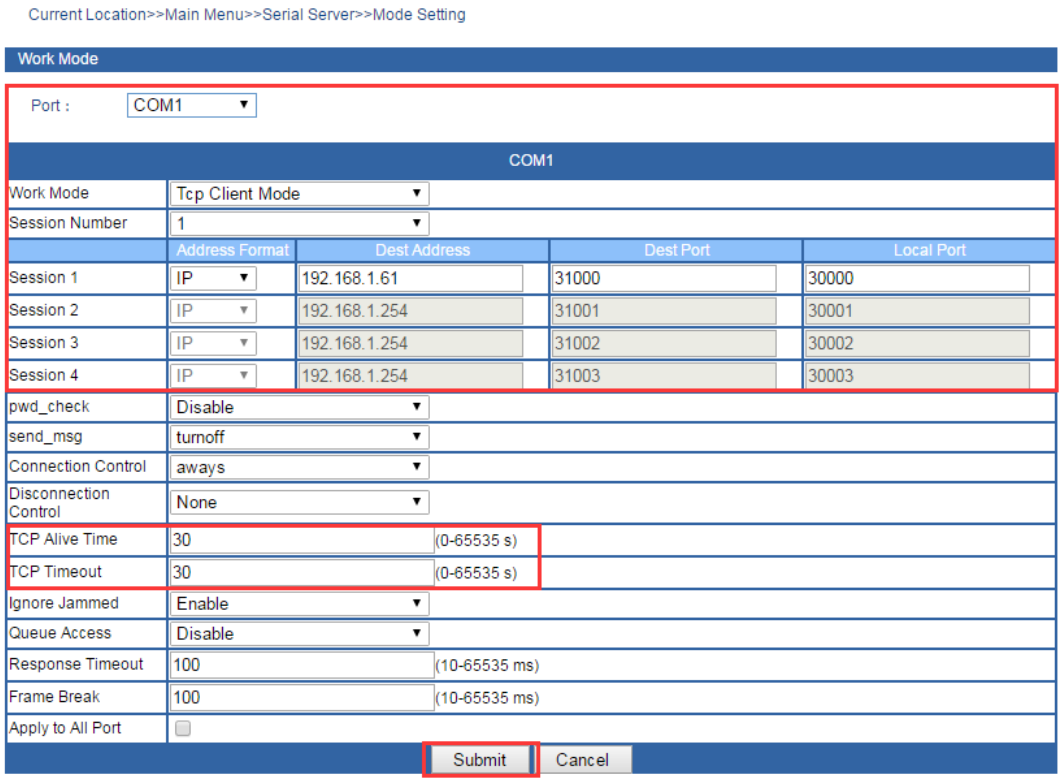
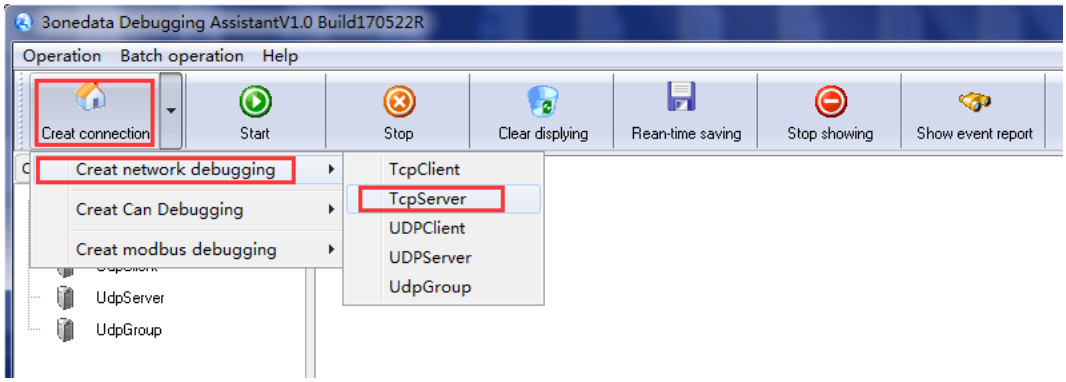
Step 3 Configure the working mode of the serial server.

1. Select “COM1” in the “Port” drop-down list.
2. Click the "Work Mode" drop-down list box and select "TCP Client Mode".
3. Click the "Session Number" drop-down list box and select "1".
4. Enter the IP address "192.168.1.61" of the host PC in the "Dest address" text box.
5. Enter the local port number "31000" of the host PC in the "Dest port" text box.
6. Enter the local port number "30000" of the serial server in the "Local port" text box.
7. Enter "30" in the "TCP Alive Time" and "TCP Timeout" text boxes.
8. Other parameters remain the default, click “submit”.

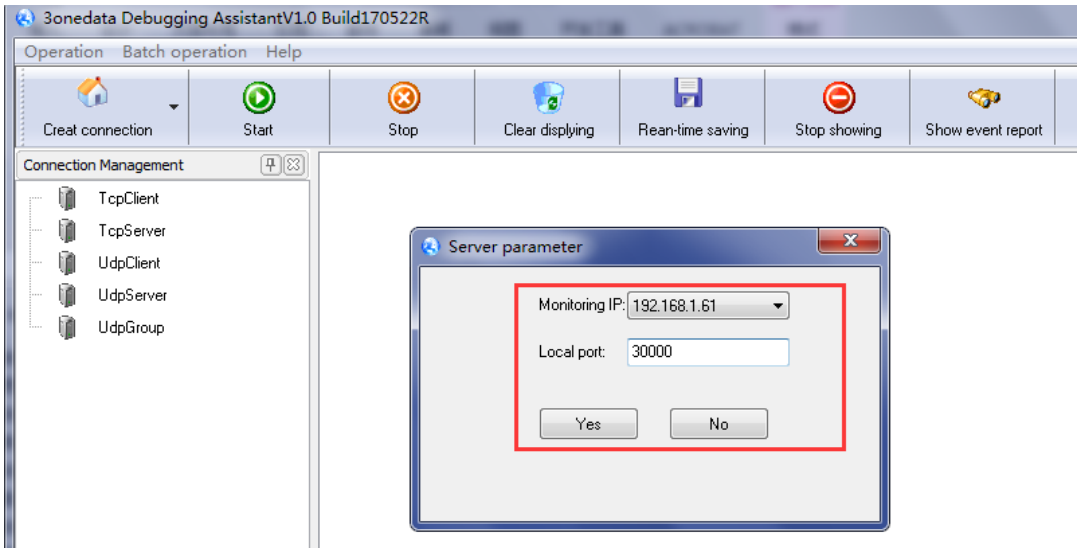


Step 4 Run the "DebugTool" software, for the host to create TCP server.

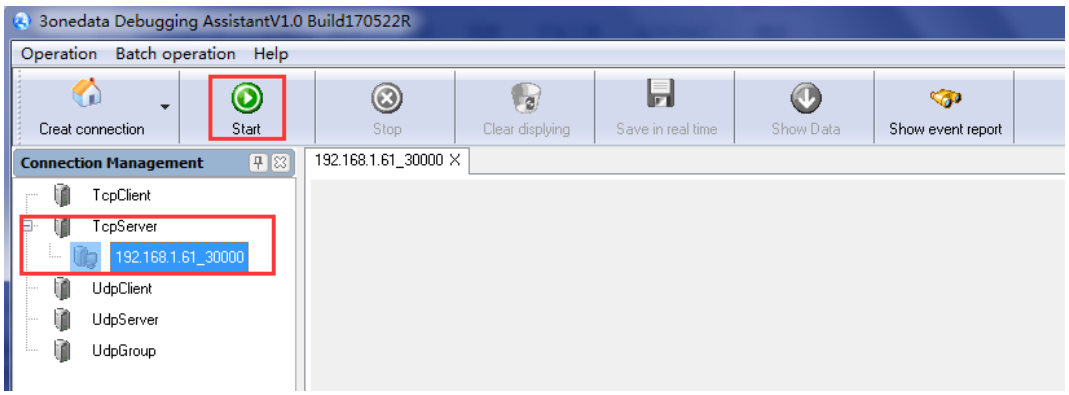
1. To install and run "DebugTool" Software, click “Create Connection” drop-down list box and choose “Create Network Debugging> TcpServer”.



2. In the “Monitoring IP” drop-down list box, select the IP address "192.168.1.61" of the host PC (that is, the TCP server).
3. In the "Local Port" text box, enter the local port "31000" of the host PC (that is, the TCP server) and click "OK".



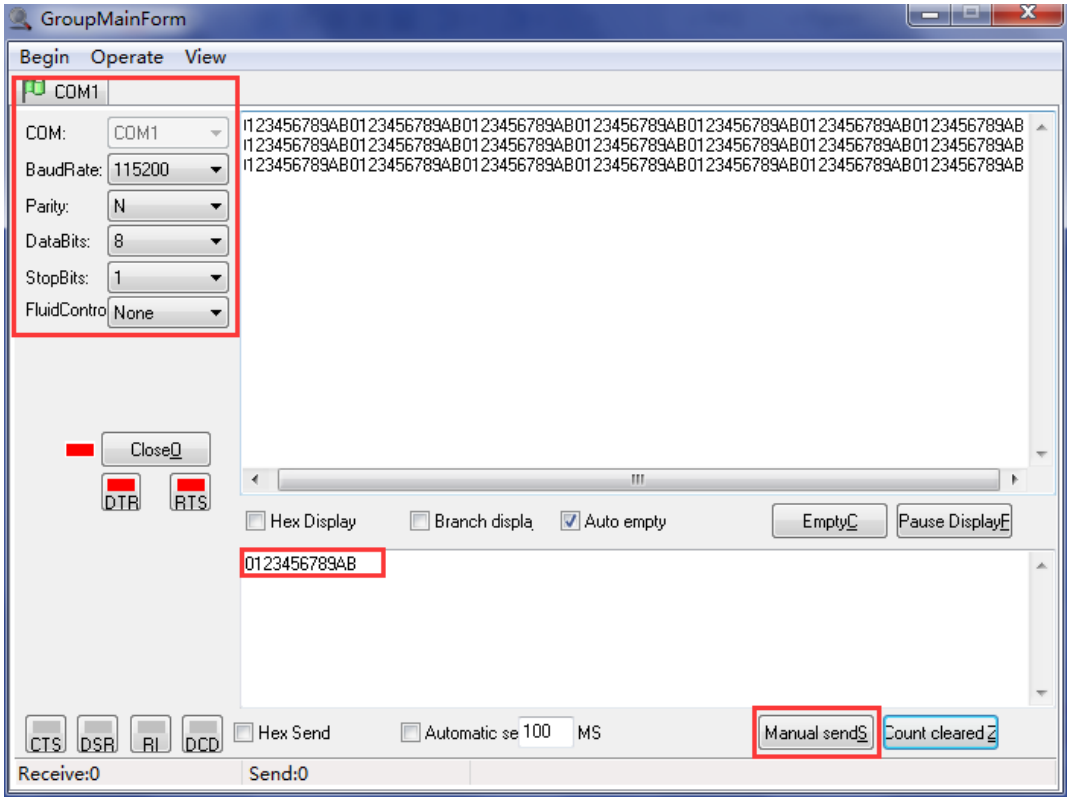
4. Select the TcpServer connection you created and click “Start”.



Step 5 Simultaneous operation of the "DebugTool" and "ComTest3One" software, test the

serial server (TCP client) and the host PC (TCP server) to communicate with each other.

1. Install and run the “ComTest3One” software, click “Begin” menu “New Windows”.



2. Add serial port “COM1” window, configure the COM, BaudRate, parity, DataBits and other parameters and WEB interface “COM settings” consistent.
3. Open the “COM1” serial port signal, for example, enter the serial information “0123456789AB”, and click “Manual Send”.
4. Run the "DebugTool" software, in the TcpServer option box to see the host PC to receive the serial information. Similarly, the host PC can also send information to the serial device.

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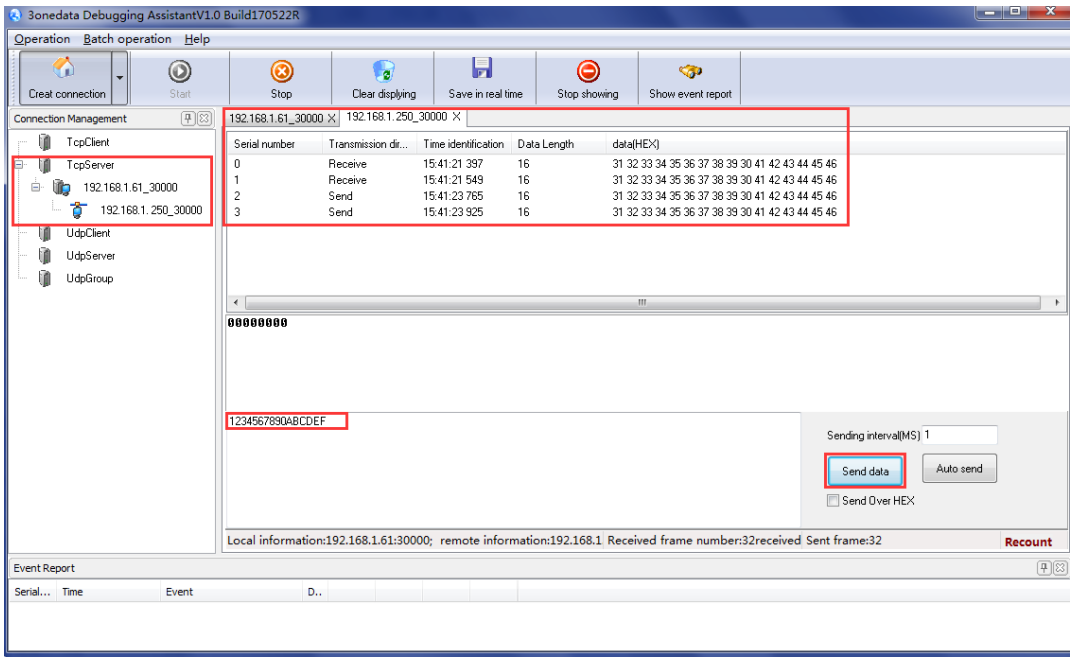


9.4 UDP Server Mode

Background brief

Assuming that the serial port "COM1" of the serial server is operating under "UDP server mode", passively waiting for one host PC to connect, and the host can read or send Ethernet data to a serial device. Compared with TCP mode, UDP protocol is faster and more efficient.

The parameters of the serial server (UDP server) are as follows:

- IP Address: 192.168.1.250
- Local Port: 30000
- BaudRate: 115200
- PairtyBits: None
- DataBits: 8
- StopBits: 1

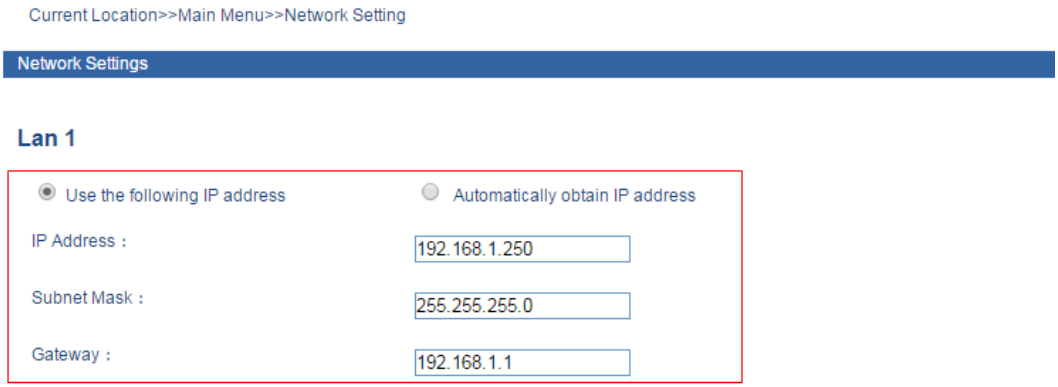
The parameters of the host PC (UDP client) are as follows:

- IP Address: 192.168.1.61
- Local Port: 31000

Operation steps

Setp 1 Configure the IP address of the serial server.

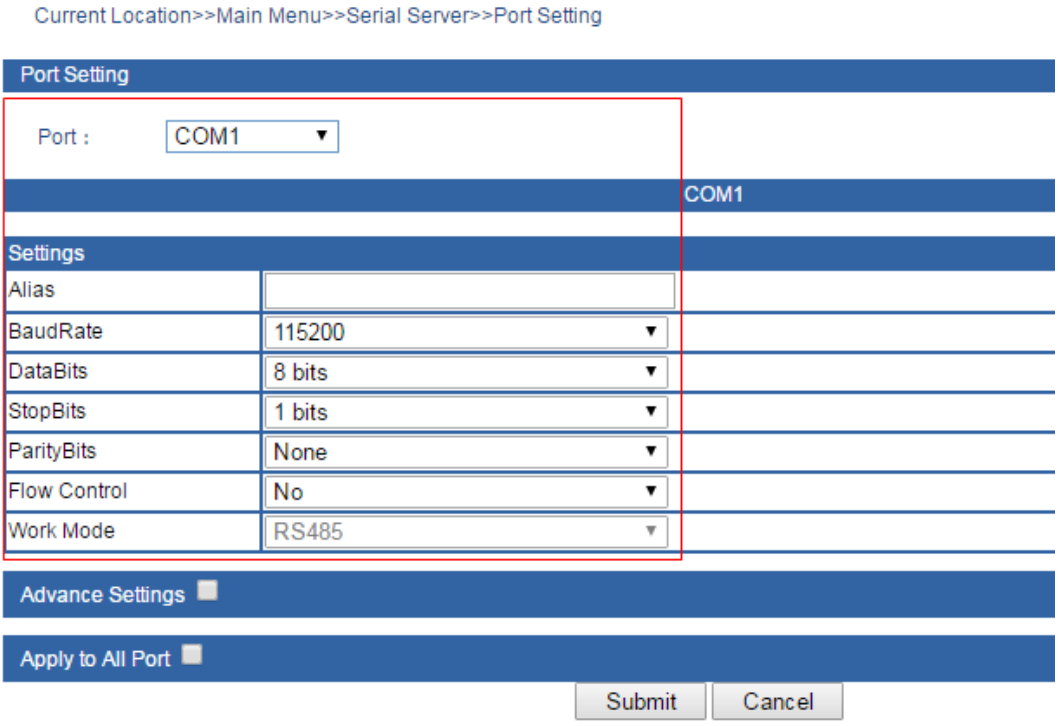
1. Log in to the Web configuration interface and select “Network Setting”.



2. In the "Use the following IP address" option box, enter the "IP address", "Subnet Mask" and "Gateway address" corresponding to the serial server.
3. Other parameters remain the default, click “submit”.

Setp 2 Configure the serial port parameter information.

1. Log in to the Web configuration interface and select “Serial Server> COM Settings”.



2. Select “COM1” in the “Port” drop-down list.
3. Set the “BaudRate”, “DataBits”, “StopBits” and “ParityBits” in the “Settings” option box.
4. Other parameters remain the default, click “Submit”.

Setp 3 Configure the working mode of the serial server.

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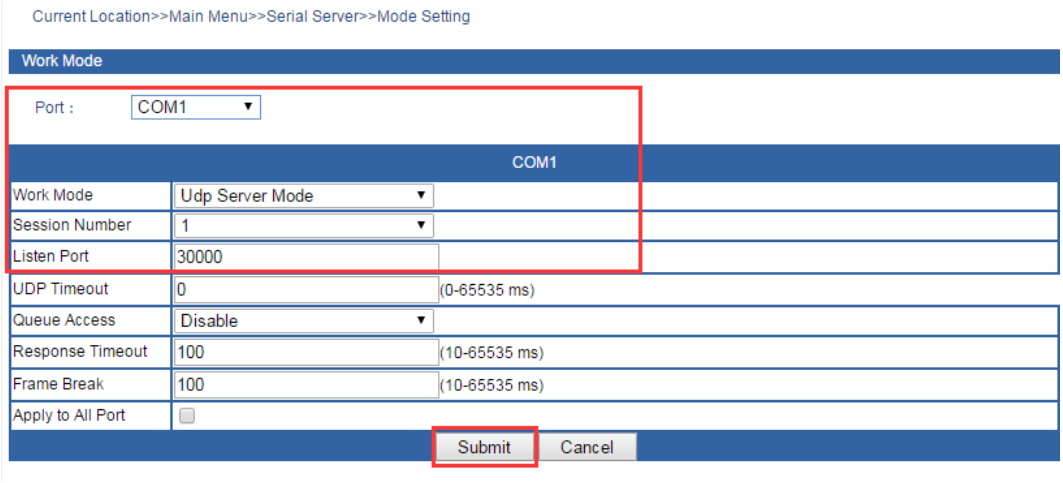
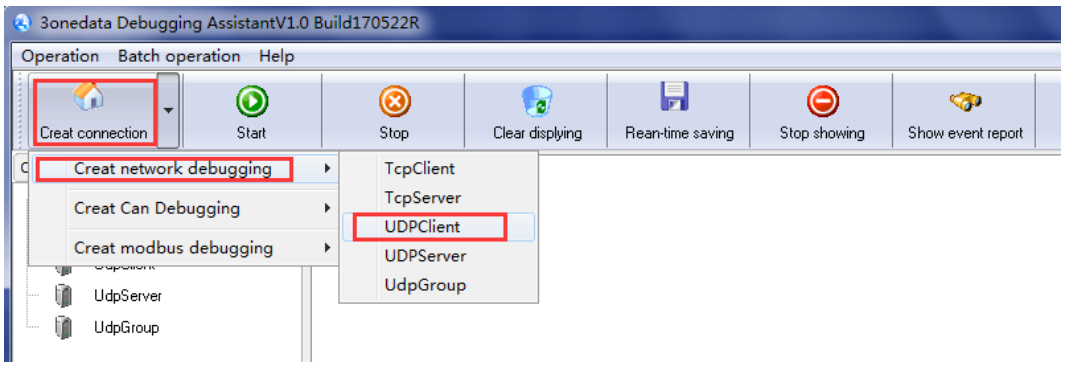
1. Log in to the Web configuration interface and select “Serial Server> COM Mode Settings”.
2. Select “COM1” in the “Port” drop-down list.
3. Click the “Work Mode” drop-down list box and select “Udp Server Mode”.
4. Click the “Session Number” drop-down list box and select “1”.
5. Enter "30000" in the "Listen port" text box.
6. Other parameters remain the default, click “submit”.

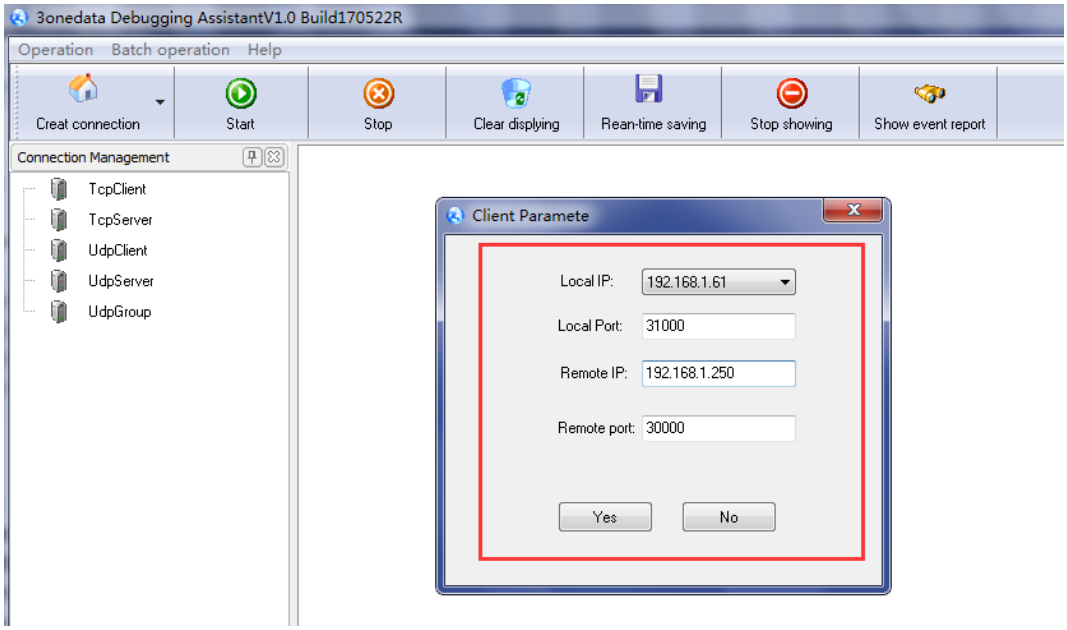


Step 4 Run the "DebugTool" software, for the host to create UDP client.

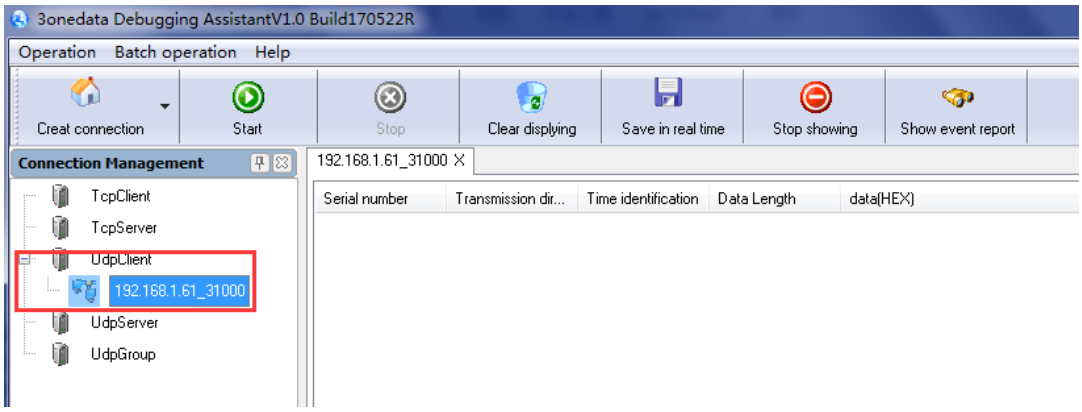
1. To install and run "DebugTool" Software, click “Create Connection” drop-down list box and choose “Create Network Debugging>UDPClient”.



2. In the "Local IP" drop-down list box, select the IP address "192.168.1.61" of the host PC (that is, the Udp client).
3. Enter the port number "31000" for the host PC (that is, the Udp client) in the "Local Port" text box.



4. Enter the IP address "192.168.1.250" of the serial server (that is, the Udp server) in the "Remote IP" text box.
5. In the “Remote Port” text box, enter the port number “30000” for the serial server (that is, the Udp server), and click “OK”.



Notice

UDP (User Datagram Protocol), is a connectionless protocol. So after the successful creation of UdpClient connection, you do not need to click "Start".

Step 5 Simultaneous operation of the "DebugTool" and "ComTest3One" software, test the serial server (UDP server) and the host PC (UDP client) to communicate with each other.

1. Install and run the “ComTest3One” software, click “Begin” menu “New Windows”.

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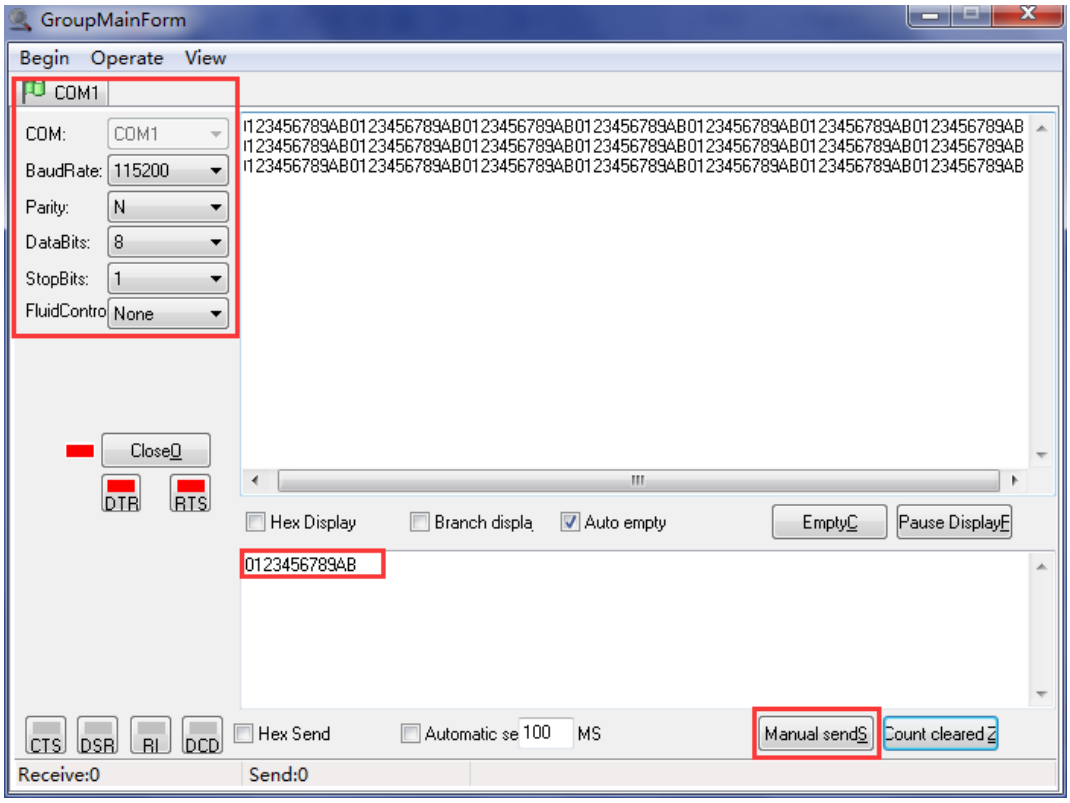
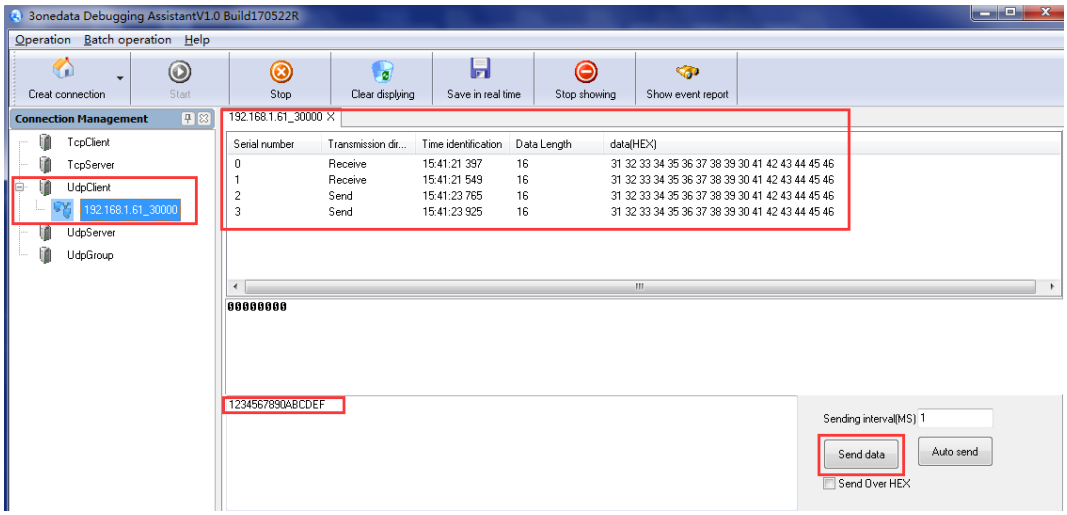
2. Add serial port “COM1” window, configure the COM, BaudRate, parity, DataBits and other parameters and WEB interface “COM settings” consistent.
3. Open the “COM1” serial port signal, for example, enter the serial information “0123456789AB”, and click “Manual Send”.



4. Run the "DebugTool" software, in the Udpclient option box to see the host PC to receive the serial information. Similarly, the host PC can also send information to the serial device.



9.5 UDP Client Mode

Background brief

Assuming that the serial port "COM1" of the serial server works in the "UDP client mode", it initiates a connection with a host PC, and the host can read or send Ethernet data to a serial device. Compared with TCP mode, UDP protocol is faster and more efficient.

The parameters of the serial server (UDP client) are as follows:

- IP Address: 192.168.1.250
- Local Port: 30000
- BaudRate: 115200
- PairtyBits: None
- DataBits: 8
- StopBits: 1

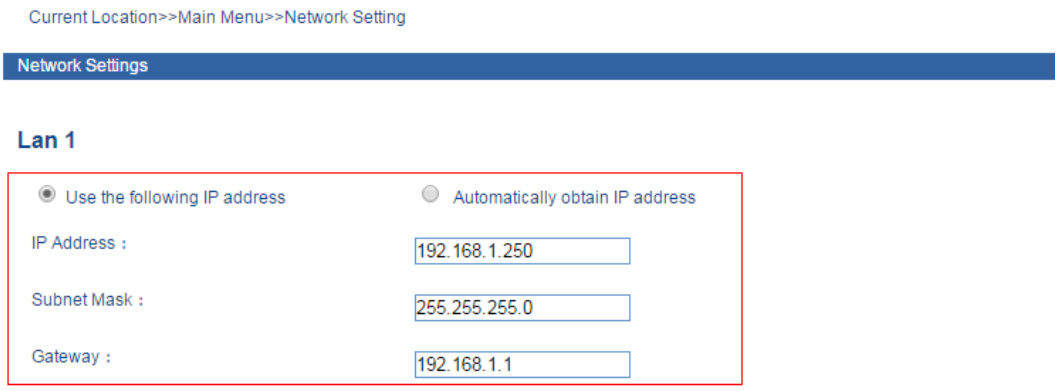
The parameters of the host PC (UDP server) are as follows:

- IP Address: 192.168.1.61
- Local Port: 31000

Operation steps

Setp 1 Configure the IP address of the serial server.

1. Log in to the Web configuration interface and select “Network Setting”.



2. In the "Use the following IP address" option box, enter the "IP address", "Subnet Mask" and "Gateway address" corresponding to the serial server.
3. Other parameters remain the default, click “submit”.

Setp 2 Configure the serial port parameter information.

1. Log in to the Web configuration interface and select “Serial Server> COM Settings”.

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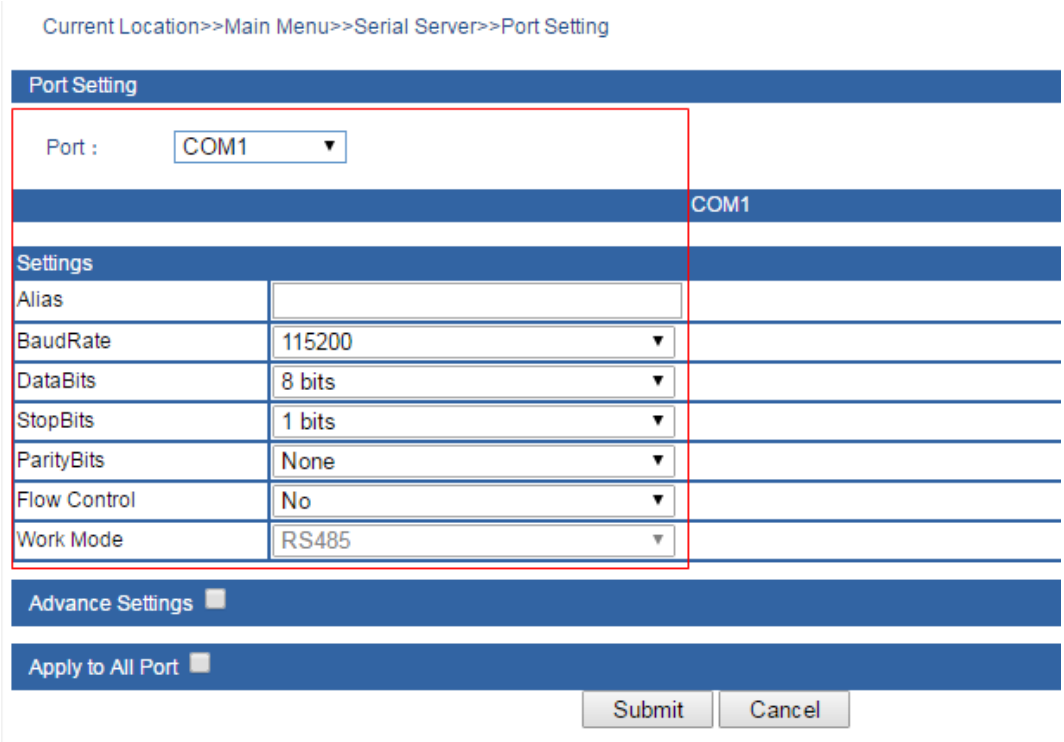

2. Select “COM1” in the “Port” drop-down list.
3. Set the “BaudRate”, “DataBits”, “StopBits” and “ParityBits” in the “Settings” option box.
4. Other parameters remain the default, click “Submit”.

Setp 3 Configure the working mode of the serial server.

1. Log in to the Web configuration interface and select “Serial Server> COM Mode Settings”.
2. Select “COM1” in the “Port” drop-down list.
3. Click the “Work Mode” drop-down list box and select “Udp Client Mode”.
4. Click the “Session Number” drop-down list box and select “1”.
5. Enter the IP address "192.168.1.61" of the host PC in the "Dest address" text box.
6. Enter the local port number "31000" of the host PC in the "Dest port" text box.
7. Enter the local port number "30000" of the serial server in the "Listen port" text box.
8. Other parameters remain the default, click “submit”.

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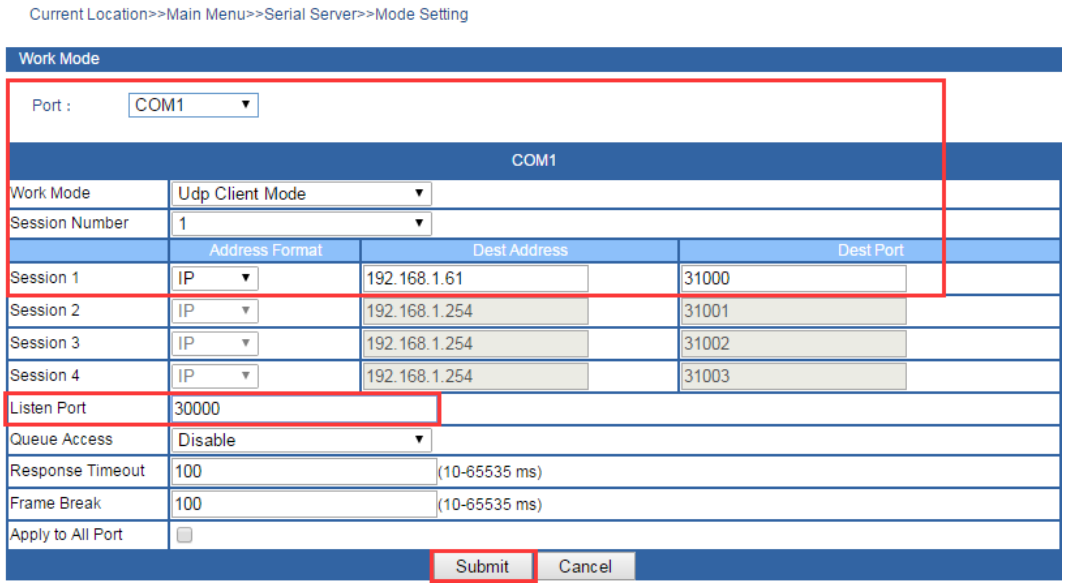
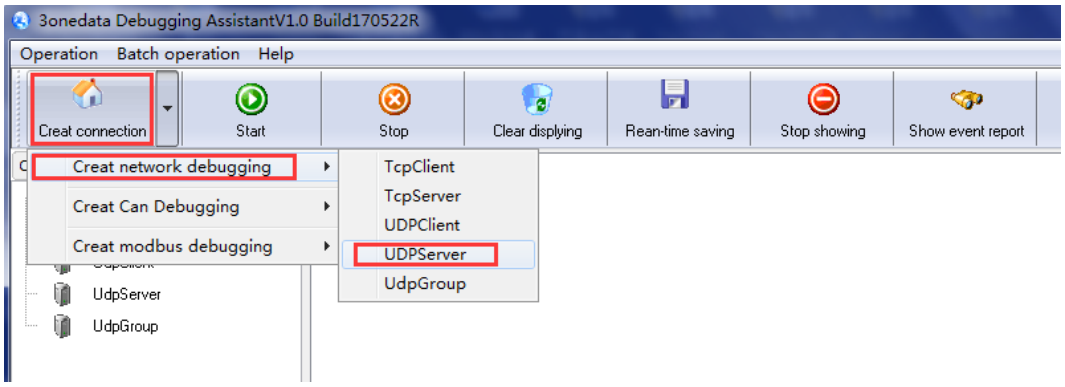
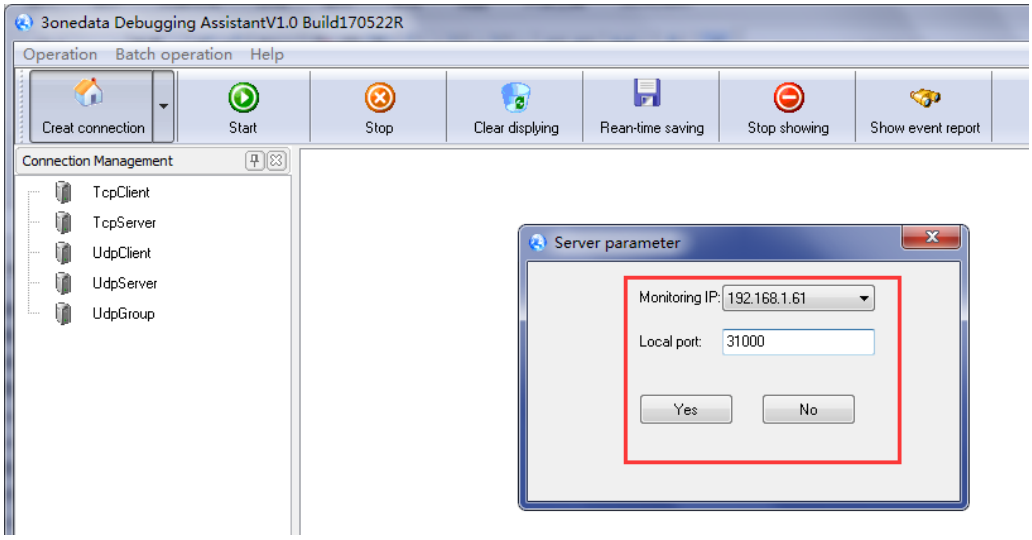


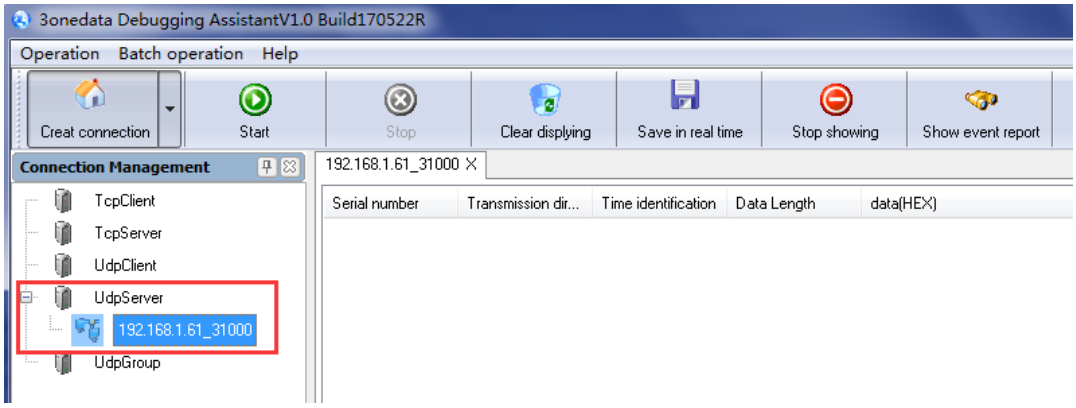
Setp 4 Run the "DebugTool" software, for the host to create UDP server.

1. To install and run "DebugTool" Software, click “Create Connection” drop-down list box and choose “Create Network Debugging> UdpServer”.



2. In the “Monitoring IP” drop-down list box, select the IP address "192.168.1.61" of the host PC (that is, the UDP server).
3. In the “Local Port” text box, enter the local port "31000" for the host PC (that is, the UDP server) and click “OK”.



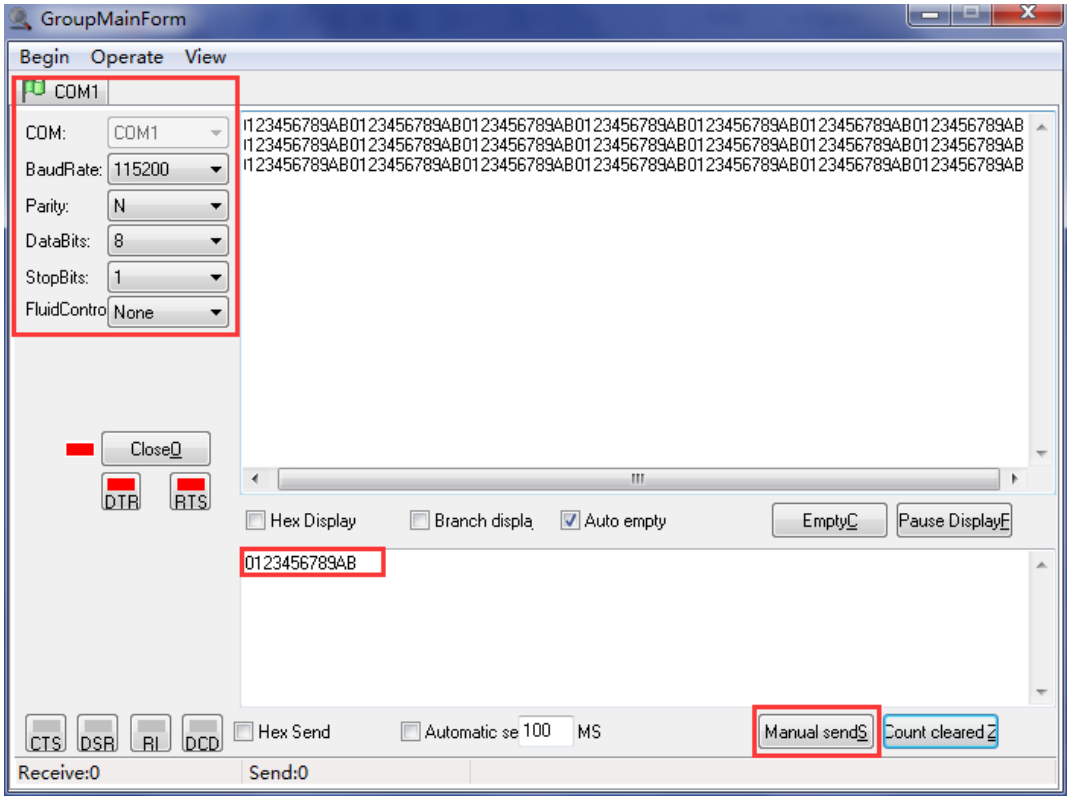


Notice

UDP (User Datagram Protocol), is a connectionless protocol. So after the successful creation of UdpClient connection, you do not need to click "Start".

Setp 5 Simultaneous operation of the "DebugTool" and "ComTest3One" software, test the serial server (UDP Client) and the host PC (UDP server) to communicate with each other.

1. Install and run the “ComTest3One” software, click “Begin” menu “New Windows”.
2. Add serial port “COM1” window, configure the COM, BaudRate, parity, DataBits and other parameters and WEB interface “COM settings” consistent.
3. Open the “COM1” serial port signal, for example, enter the serial information “0123456789AB”, and click “Manual Send”.



4. Run the "DebugTool" software, in the UdpServer option box to see the host PC to receive the serial information. Similarly, the host PC can also send information to the serial device.

9.6 Pair Slave & Master Mode

Background brief

Pair mode requires two serial devices server to work together to break the serial data transmission distance limit. The two serial servers in this mode establish a network connection with each other via Ethernet and transparently transmit data from the respective serial port to each other.

Assume that serial device server A uses pair slave mode to passively wait for a connection.

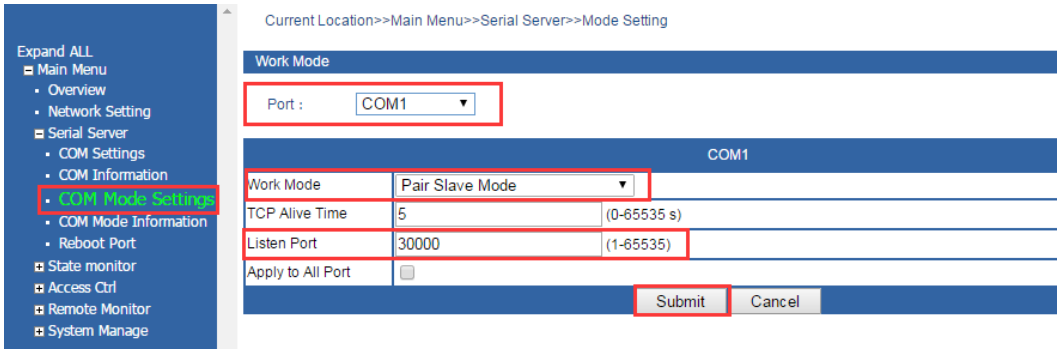
The serial device server B uses the pair master mode to actively connect the serial device server A.

Serial device server A and serial device server B with their own computer connected to the serial port are "COM1".

The "dest address" of the serial server B is the IP address "192.168.1.254" of the serial server A. The “dest port” of the serial server B is the listening port "30000" of the serial server A.

Serial device server A configuration steps

Setp 1 Serial device server A configuration steps



Setp 2 Log in to the Web configuration interface and select “Serial Server> COM Mode Settings”.

Setp 3 Select “COM1” in the “Port” drop-down list.

Step 4 Enter the "30000" in the "Listen Port" text box.

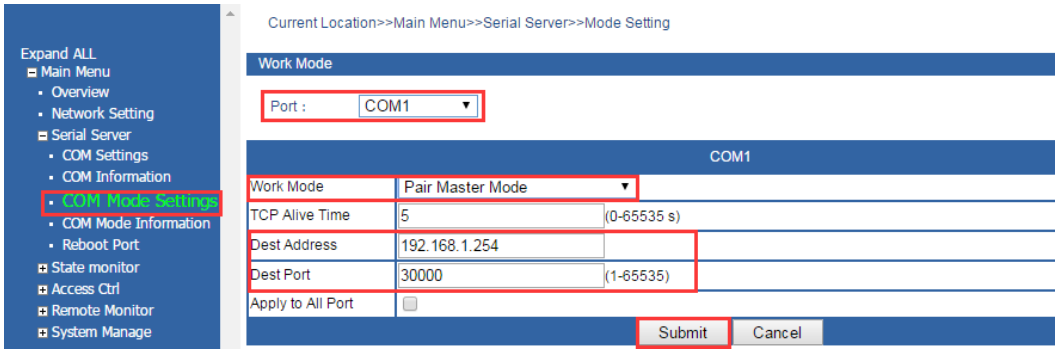
Step 5 Other parameters remain the default, click “Submit”.

Serial device server B configuration steps

Setp 1 Log in to the Web configuration interface and select “Serial Server> COM Mode Settings”.

Setp 2 Select “COM1” in the “Port” drop-down list.

Setp 3 Click the “Work Mode” drop-down list box and select “Pair Master Mode”.



Setp 4 Enter the IP address "192.168.1.254" of the serial device server A in the "Dest Address" text box.

Setp 5 Enter the listen port "30000" of the serial device server A in the "Dest Port" text box.

Step 6 After completing the above configuration, the serial device server A and the serial device server B successfully establish the connection, each device serial port can send and receive serial data.

9.7 UDP Rang Mode

Background brief

When the router, switch and other devices do not support multicast function, the serial decice server can work in the UDP Rang mode to achieve multicast function.

Assuming that the serial port COM1 of the serial devcie server is connected to the host computer, it needs to transmit the serial data to two hosts that specify the same network segment "192.168.1.61" to "192.168.1.62" through the UDP protocol at the same time.

The parameters of the serial server (UDP server) are as follows:

- IP Address: 192.168.1.250
- Local Port: 30000
- BaudRate: 115200
- PairtyBits: None
- DataBits: 8
- StopBits: 1

The parameters of the host PC A (UDP client A) are as follows:

- IP Address: 192.168.1.61
- Local Port: 31000

The parameters of the host PC B (UDP client B) are as follows:

- IP Address: 192.168.1.62
- Local Port: 31000

Operation steps

Setp 1 Configure the IP address of the serial server.

1. Log in to the Web configuration interface and select “Network Setting”.

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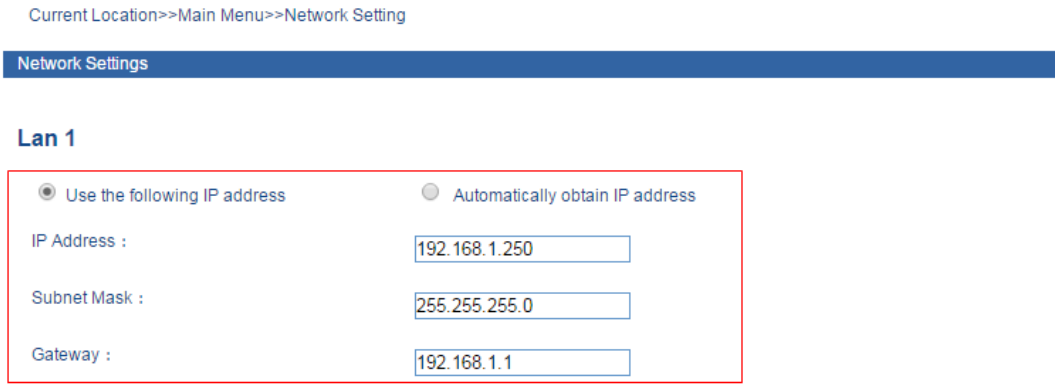
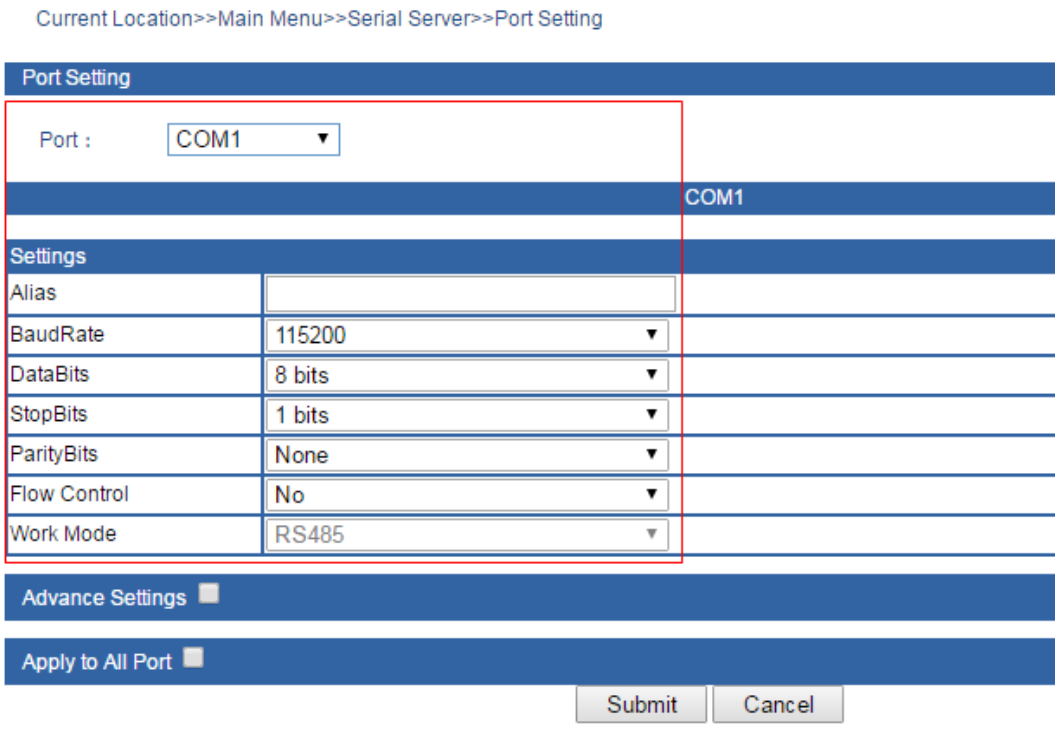


2. In the "Use the following IP address" option box, enter the "IP address", "Subnet Mask" and "Gateway address" corresponding to the serial server.
3. Other parameters remain the default, click “submit”.

Setp 2 Configure the serial port parameter information.

1. Log in to the Web configuration interface and select “Serial Server> COM Settings”.



2. Select “COM1” in the “Port” drop-down list.
3. Set the “BaudRate”, “DataBits”, “StopBits” and “ParityBits” in the “Settings” option box.
4. Other parameters remain the default, click “Submit”.

Setp 3 Configure the working mode of the serial server.

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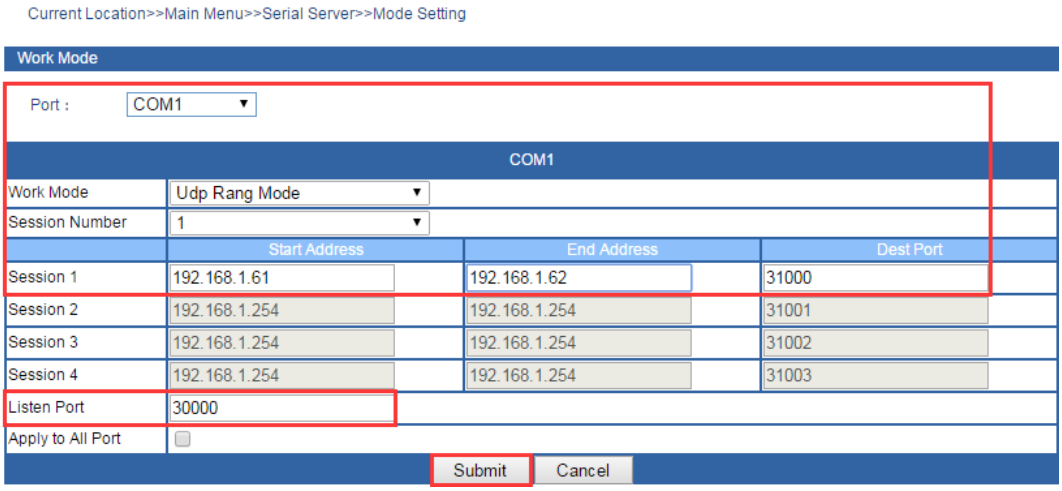
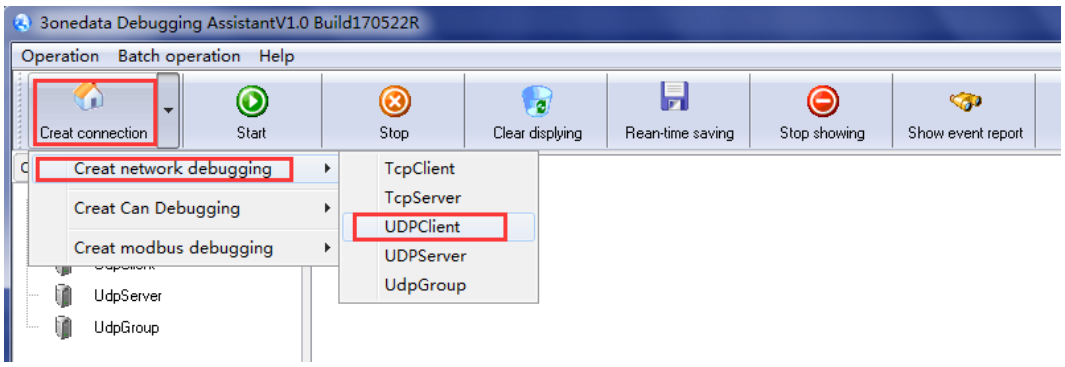
1. Log in to the Web configuration interface and select “Serial Server> COM Mode Settings”.
2. Select “COM1” in the “Port” drop-down list.



3. Click the “Work Mode” drop-down list box and select “UDP Rang Mode”.
4. Click the “Session Number” drop-down list box and select “1”.
5. In the "Start Address" and "End Address" text boxes, enter the IP address "192.168.1.61" of Host A and the IP address "192.168.1.62" of Host B, respectively.
6. Enter the port number "31000" of the host in the "Dest Port" text box.
7. Enter the port number "30000" of the serial device server in the "Listen Port" text box.
8. Other parameters remain the default, click “submit”.

Setp 4 Run the "DebugTool" software the host A to create UDP client A.

1. To install and run "DebugTool" Software, click “Create Connection” drop-down list box and choose “Create Network Debugging> UdpClient”.



2. In the “Monitoring IP” drop-down list box, select the IP address "192.168.1.61" of

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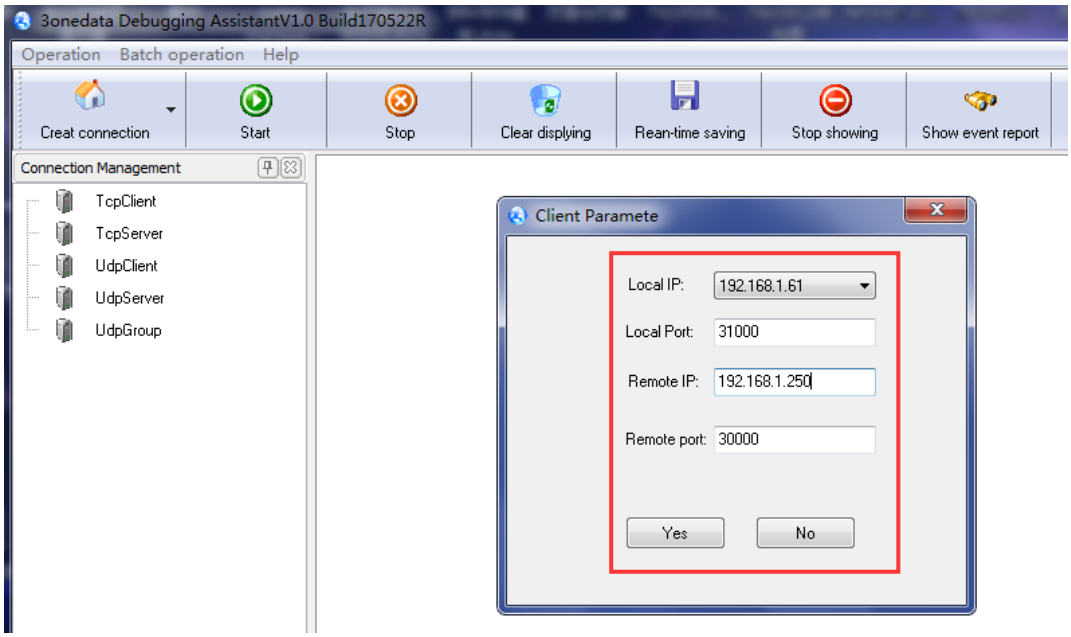
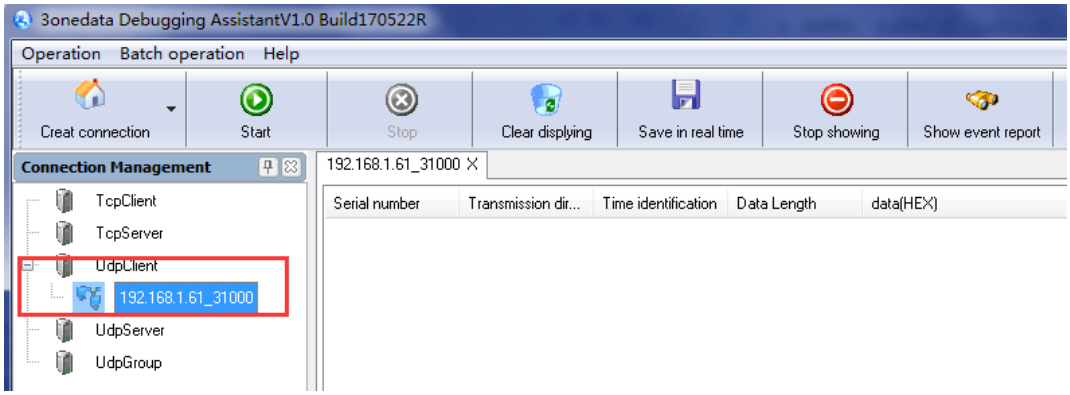
the host A (that is, the UDP client A).

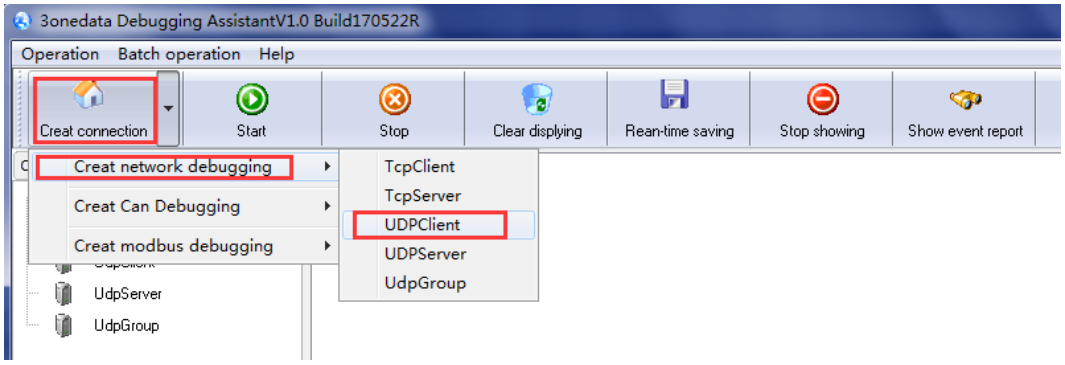
3. In the “Local Port” text box, enter the local port "31000" for the host A (that is, the UDP client A).
4. Enter the IP address "192.168.1.250" of the serial server (that is, the Udp server) in the "Remote IP" text box.
5. In the “Remote Port” text box, enter the port number “30000” for the serial server (that is, the Udp server), and click “OK”.



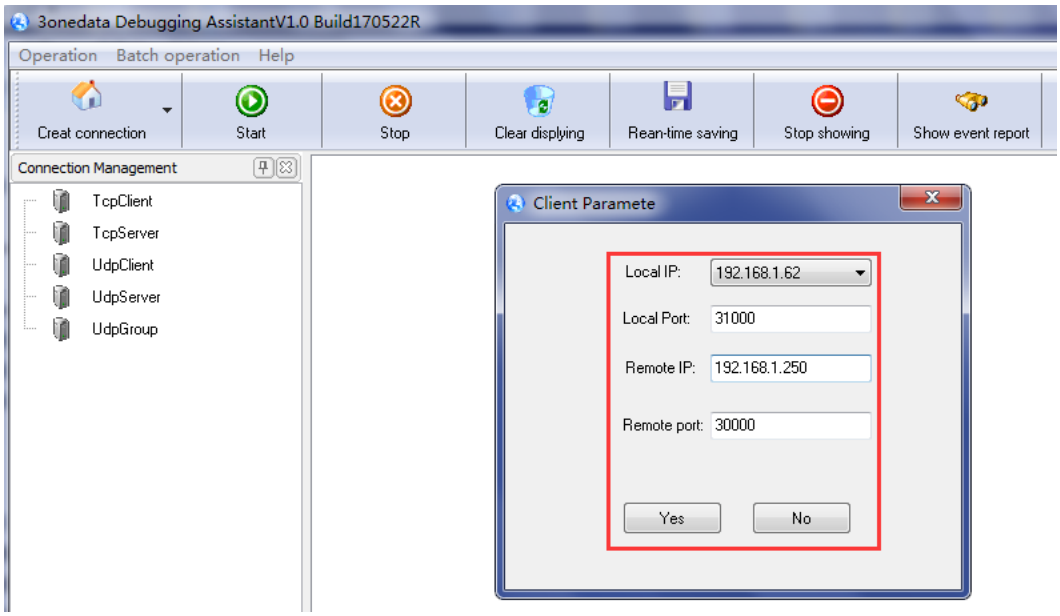


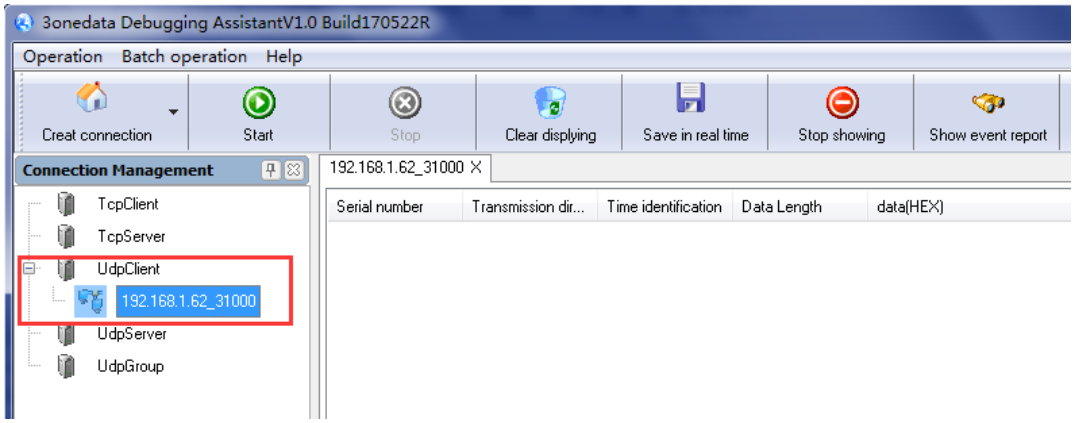
Setp 5 Run the "DebugTool" software in the host B to create UDP client B.

1. To install and run "DebugTool" Software, click “Create Connection” drop-down list box and choose “Create Network Debugging> UdpClient”.



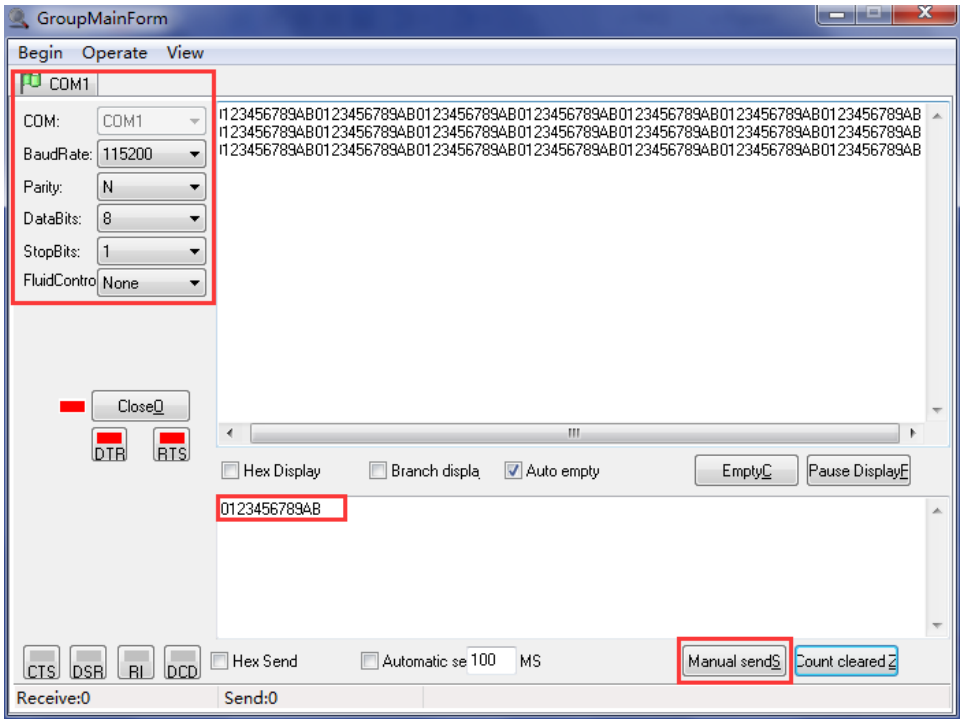
2. In the “Monitoring IP” drop-down list box, select the IP address "192.168.1.61" of the host B (that is, the UDP client B).
3. In the “Local Port” text box, enter the local port "31000" for the host A (that is, the UDP client A).
4. Enter the IP address "192.168.1.250" of the serial server (that is, the Udp server) in the "Remote IP" text box.
5. In the “Remote Port” text box, enter the port number “30000” for the serial server (that is, the Udp server), and click “OK”.





Setp 6 Simultaneous operation of the "DebugTool" and "ComTest3One" software, test the serial server, host A and host A to communicate with each other.

1. Install and run the “ComTest3One” software, click “Begin” menu “New Windows”.
2. Add serial port “COM1” window, configure the COM, BaudRate, parity, DataBits and other parameters and WEB interface “COM settings” consistent.
3. Open the “COM1” serial port signal, for example, enter the serial information “0123456789AB”, and click “Manual Send”.
4. Run the "DebugTool" software, in the UdpClient option box to view the host A and host B received the serial information. Similarly, host A and host B can also send information to the serial device.



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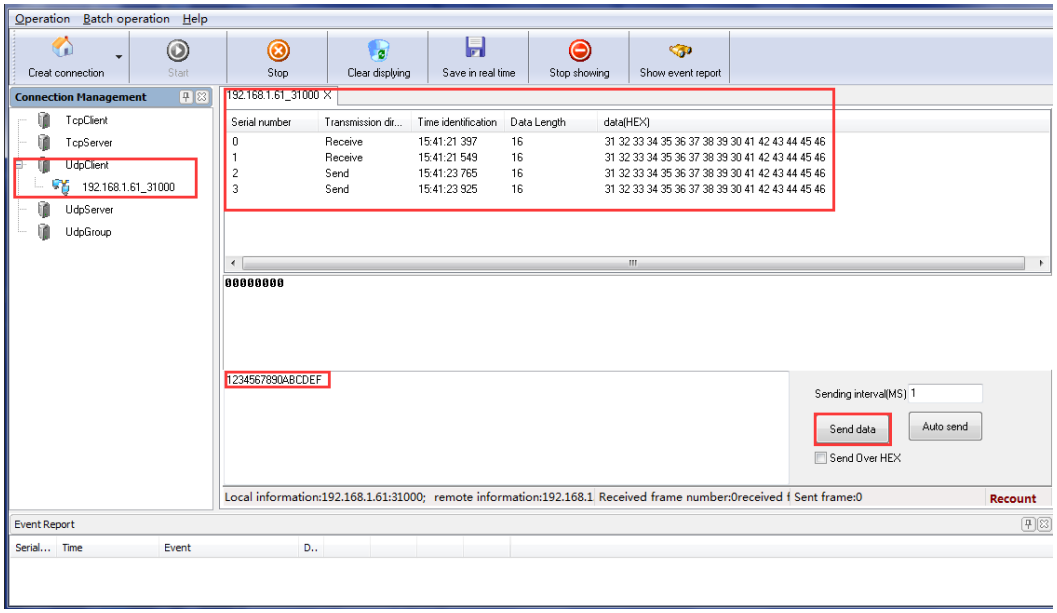
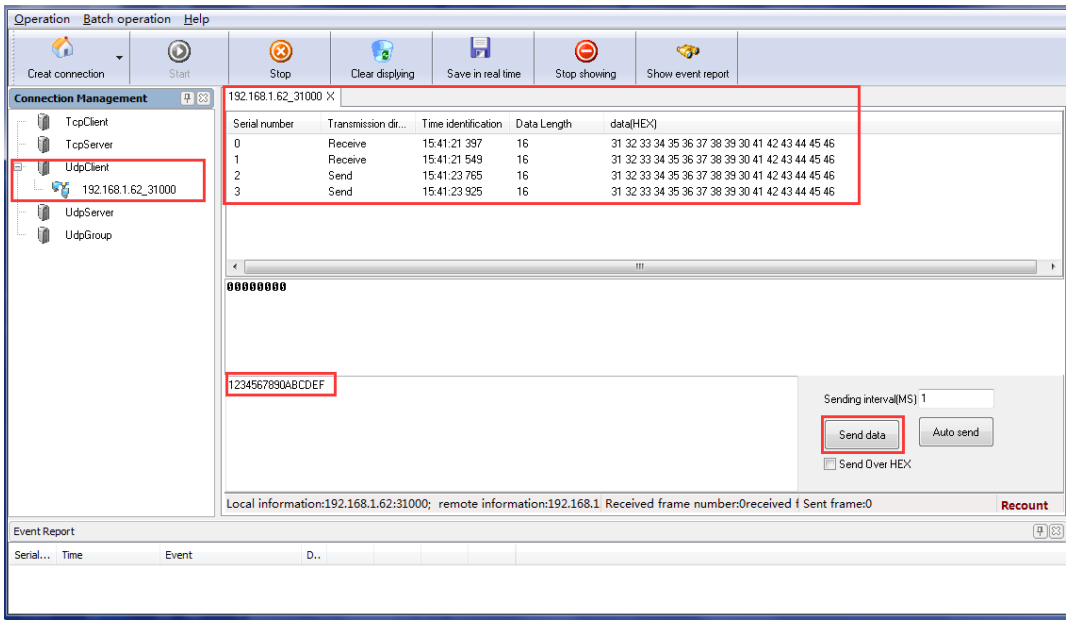




9.8 UDP Multicast Mode

Background brief

Assume that the IP address of the serial server is "192.168.1.250" and the serial server is added to the multicast address "239.0.0.0". So that the serial server through the UDP protocol can make the serial device data through unicast or multicast sent to one or more hosts, but also can receive from one or more host unicast or multicast data, complete multipoint-to-multipoint communication.

The parameters of the serial server are as follows:

- IP Address: 192.168.1.250
- Group Address: 239.0.0.0
- Port: COM1
- Local Port: 30000
- BaudRate: 115200
- PairtyBits: None
- DataBits: 8
- StopBits: 1

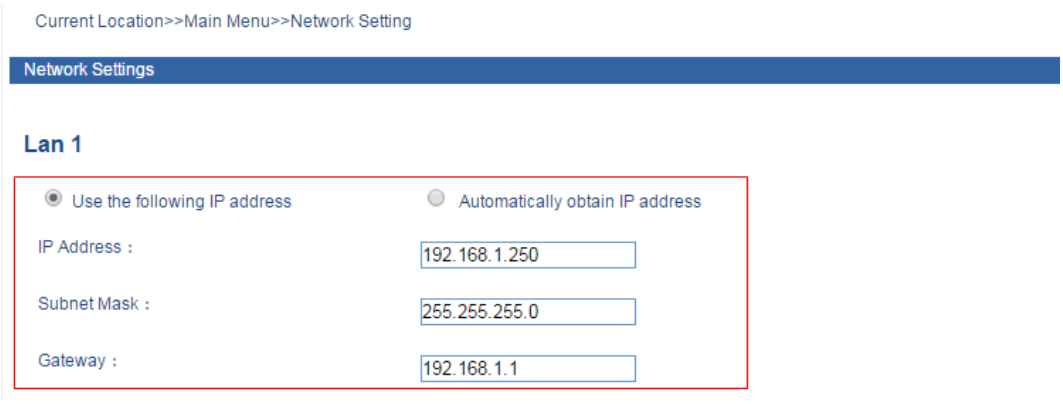
The parameters of the host PC B are as follows:

- IP Address: 192.168.1.61
- Group Address: 224.0.0.0
- Local Port: 31000

Operation steps

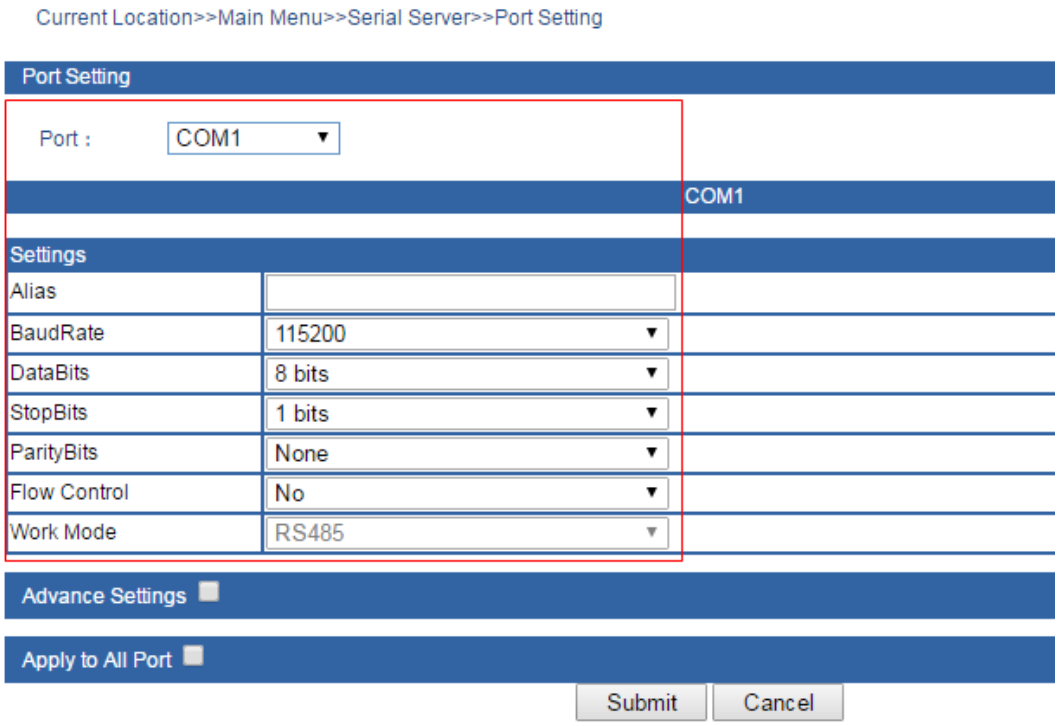
Setp 1 Configure the IP address of the serial server.

1. Log in to the Web configuration interface and select “Network Setting”.
2. In the "Use the following IP address" option box, enter the "IP address", "Subnet Mask" and "Gateway address" corresponding to the serial server.
3. Other parameters remain the default, click “submit”.



Setp 2 Configure the serial port parameter information.

1. Log in to the Web configuration interface and select “Serial Server> COM Settings”.



2. Select “COM1” in the “Port” drop-down list.
3. Set the “BaudRate”, “DataBits”, “StopBits” and “ParityBits” in the “Settings” option box.
4. Other parameters remain the default, click “Submit”.

Setp 3 Configure the working mode of the serial server.

1. Log in to the Web configuration interface and select “Serial Server> COM Mode Settings”.
2. Select “COM1” in the “Port” drop-down list.
3. Click the “Work Mode” drop-down list box and select “UDP Multicast Mode”.
4. Click the “Session Number” drop-down list box and select “1”.
5. Click the “Group Number” drop-down list box and select “1”.
6. Enter the group address "224.0.0.0" of the host PC in the "Dest Address" text box.
7. Enter the local port number "31000" of the host PC in the "Dest Port" text box.
8. Enter the group address "239.0.0.0" of the host PC in the "Group Address/ Group 1" text box.
9. Enter the local port unmber "30000" of the serial server in the "Listen port" text box.
10. Other parameters remain the default, click “submit”.

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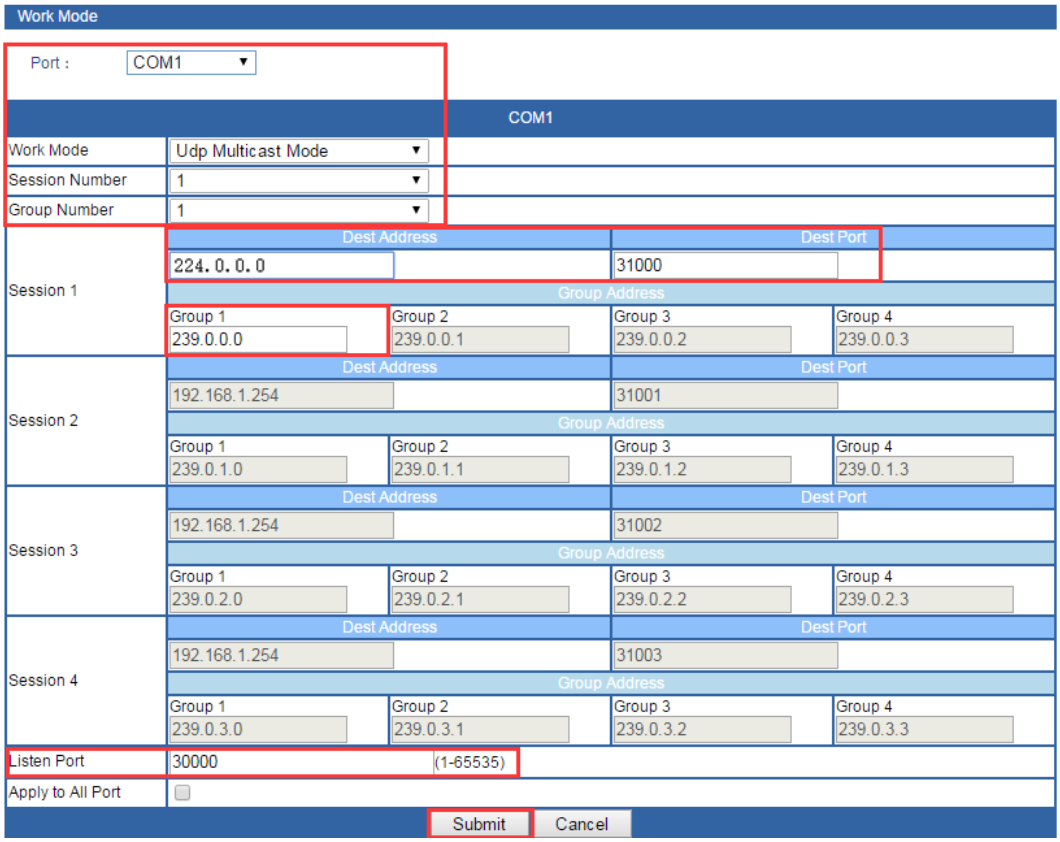
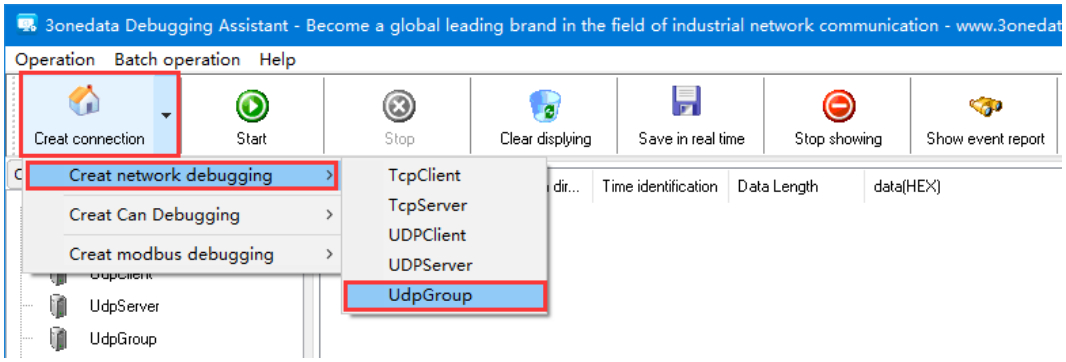


Step 4 Run the "DebugTool" software the host to create UDP multicast.

1. To install and run "DebugTool" Software, click “Create Connection” drop-down list box and choose “Create Network Debugging> UdpGroup”.



2. In the "Local IP" drop-down list box, select the IP address "192.168.1.61" of the host.
3. In the “Local Port” text box, enter the local port "31000" for the host.
4. In the “Remote IP” text box, enter the IP address "239.0.0.0" for the serial device server.
5. In the “Remote Port” text box, enter the local port number "30000" for the serial

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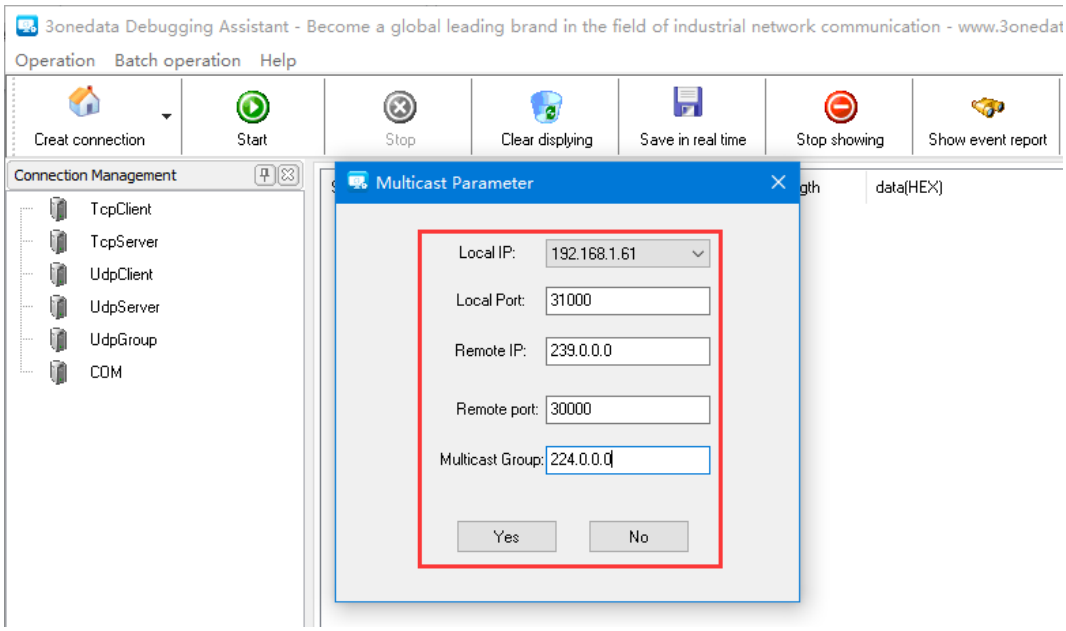
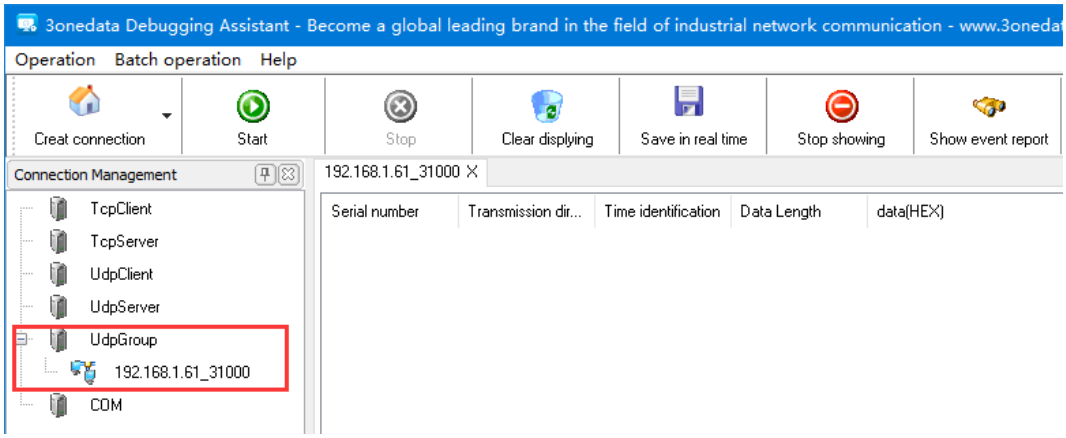
device server.

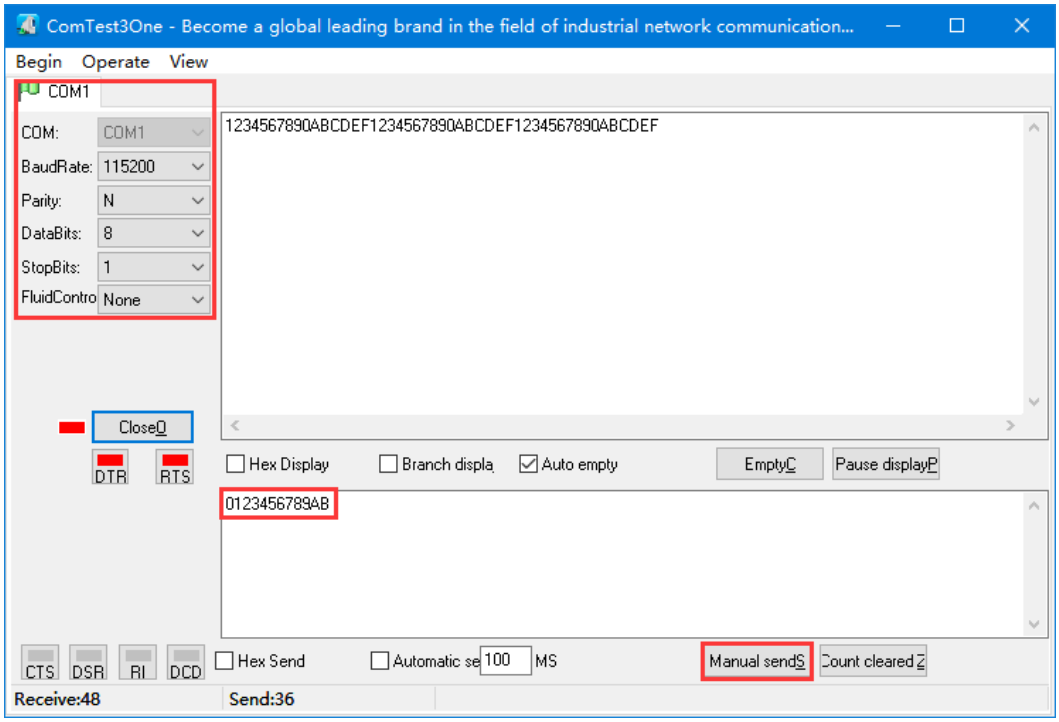
6. In the “Multicast” text box, enter the multicast group address "224.0.0.0".

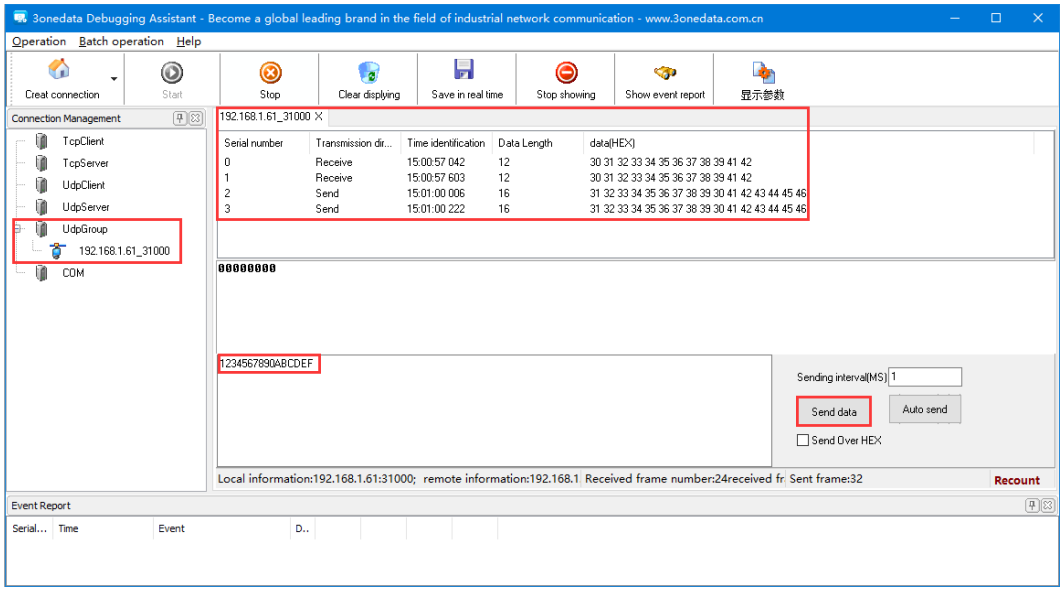




Setp 4 Simultaneous operation of the "DebugTool" and "ComTest3One" software, test the serial serverand the host PC to communicate with each other.

1. Install and run the “ComTest3One” software, click “Begin” menu “New Windows”.
2. Add serial port “COM1” window, configure the COM, BaudRate, parity, DataBits and other parameters and WEB interface “COM settings” consistent.
3. Open the “COM1” serial port signal, for example, enter the serial information “0123456789AB”, and click “Manual Send”.
4. Run the "DebugTool" software, in the UdpGroup option box to view the host received the serial information. Similarly, host can also send information to the serial device.


ComTest3One - Become a global leading brand in the field of industrial network communication...
Begin
Operate
View
COM1
COM:
COM1
BaudRate:
115200
Parity:
N
DataBits:
8
StopBits:
1
FluidContro
None
1234567890ABCDEF1234567890ABCDEF1234567890ABCDEF
CloseO
DTR
RTS
Hex Display
Branch displa
Auto empty
EmptyC
Pause displayP
0123456789AB
CTS
DSR
RI
DCD
Hex Send
Automatic se
100
MS
Manual sendS
Count cleared Z
Receive:48
Send:36


3onedata Debugging Assistant - Become a global leading brand in the field of industrial network communication - www.3onedata.com.cn
Operation
Batch operation
Help
Creat connection
Start
Stop
Clear displying
Save in real time
Stop showing
Show event report
显示参数
Connection Management
TcpClient
TcpServer
UdpClient
UdpServer
UdpGroup
192.168.1.61_31000
COM
192.168.1.61_31000
Serial number
Transmission dir...
Time identification
Data Length
data(HEX)
0 Receive 15:00:57.042 12 30 31 32 33 34 35 36 37 38 39 41 42
1 Receive 15:00:57.603 12 30 31 32 33 34 35 36 37 38 39 41 42
2 Send 15:01:00.006 16 31 32 33 34 35 36 37 38 39 30 41 42 43 44 45 46
3 Send 15:01:00.222 16 31 32 33 34 35 36 37 38 39 30 41 42 43 44 45 46
00000000
1234567890ABCDEF
Sending interval(MS)
1
Send data
Auto send
Send Over HEX
Local information:192.168.1.61:31000; remote information:192.168.1
Received frame number:24received fr
Sent frame:32
Recount
Event Report
Serial...
Time
Event
D..

Part Two: Frequently Asked Questions

10 FAQ

About This Chapter

Connect	Hyperlink
This Chapter	10.1 Login Problem 10.2 Configuration Problem

10.1 Login Problem

1. **Why is the web browser page displayed abnormally?**
   Before accessing WEB, please clear IE browser cache and cookies. Otherwise it may cause the page to display abnormally.
2. **What should I do if I forget my login password?**
   When you forget to log in to the user and password, you can restore the factory settings via the management software or the DIP switch to get the initial user name and password. The initial user name and password are "admin".
3. **Is it equivalent to configure the device through between the web browser and the management software?**
   Both configurations are the same and do not conflict.

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10.2 Configuration Problem

1. **Using TCP Socket communication mode make serial server connects to the door access machine, found that can not communicate properly?**

   Fault detection:

   - The IP address and port number may not be configured correctly.
   - The serial port parameters may not be configured correctly.
   - RS-485 wiring may be abnormal.

   Problem solving: found that the parity bit error, none parity modified to mark parity, communication is normal.

2. **Serial server can not communicate properly, found a command issued, but through the serial server out of the data is wrong?**

   Fault detection:

   Older version of VSP Manager's Realcom function to receive code algorithm exception, resulting in the serial server to open the WEB function and VSP Manager open Realcom function, the serial port to send and receive data are wrong.

   Problem Solving: After upgrading the VSP management software, the communication is normal.

3. **PC with straight-through cable directly connected to the serial server, Ping test packet loss?**

   Check whether the Ethernet port of the serial server is damaged, if it has been damaged, it will cause Ping test packet loss.

4. **Serial server and computer with network cable connection, the local connection will appear "!" Exclamation mark (that is, local connection is limited)?**

   Fault detection:

   - MAC address aging.
   - The computer and the serial server are not on the same network segment.

   Problem Solving: After a period of time to see whether the local connection "!" Exclamation mark or the computer and serial server can be changed to the same network segment.

5. **Serial server link LED does not light?**

   Fault detection:

   - The serial server is not powered on.

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- Network cable or fiber optic cable is not connected or poor contact, network cable damage.
- Network port damage, network cable line error and did not do according to the standard line.
- Optical port damage, fiber type, fiber wavelength, transmission distance, transmission medium and data format does not match.
- The serial port server Link indicator is damaged.

Problem Solving:

- Confirm the communication environment, whether the device is powered on, check the network cable contact problem.
- Use the Ping command to the IP address of the serial server. If the Ping succeeds, the serial port link is corrupted. If the Ping fails, proceed to the following steps.
- For electrical, replace the network cable, computer or serial port to test the electrical port.
- For optical ports, check whether the fiber type, fiber wavelength, transmission distance, transmission medium, and data format match. If it matches, replace the fiber or optical port for testing.

6. **Why is the serial server power supply not powered?**

   Check whether the power supply is damaged or whether the positive and negative terminals are connected; whether the power indicator light is on and the power supply is stable.

7. **VSP Manager can be used to search for the device, and the establishment of a virtual serial port, but look at the virtual serial port, unable to Link?**

   Problem Detection: Probably not open session.

   Problem Solving:

   - Confirm the communication environment, if you can search the device, Link indicator light is also bright, that PC to the serial server can communicate.
   - Check whether the PC and the serial server can Ping successfully. If the Ping fails, change the PC and serial server to the same network segment.
   - Enter the configuration interface of the serial server to check whether the working mode is configured correctly; whether the IP address and port number of the remote virtual serial device and the serial server are consistent.

8. **Test the serial server with test software found garbled?**

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Fault detection: serial port parameters do not match, for no reason to open Realcom function.

Problem Solving:

- Confirm the communication environment (whether there is a strong magnetic field around), check whether the communication line is in good contact, and whether the quality of the communication line is OK.
- Verify that the serial parameters of the test software, serial server, and serial device are matched.
- When creating a virtual serial port, select "RealCom Mode" for the working mode in the WEB configuration interface of the serial server.

9. **Why is the serial server disconnected after a period of connection?**
   - Equipment supply voltage instability. Troubleshooting: Check the power supply wiring and supply voltage.
   - Network status is unstable. Troubleshooting: Ping the IP address of the serial server to view the network.
   - TCP connection channel is occupied. Troubleshooting: Modify the serial server's IP address and local port number.
   - VSP driver software is modified. Troubleshooting: Install the high version of the VSP driver software.
   - The firewall caused the device to fail to connect. Troubleshooting: Turn off the firewall and anti-virus software.
   - Hardware problems. Troubleshooting: Replace the computer, network cable, serial server.
   - Upper software caused. Troubleshooting: restart the upper software, re-establish the connection.
10. **Modify the MAC address of the serial server to affect the communication?**
    If the MAC address is not a broadcast or multicast address, it will not affect the communication. In the WEB configuration interface of the serial server, MAC address modification is not supported. It is recommended that you do not modify the MAC address.
11. **Can a serial server support multiple computer communications?**
    Can support up to four computer communications, as long as the open multi-session connection can be.
12. **When the two computers correspond to a virtual serial port, will the communication be intermittent?**

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Open two sessions, the establishment of two virtual serial port to communicate.

13. **Can the serial server communicate after crossing the network segment?**

    Yes, set the default gateway address, the serial server can cross-network communication.

14. **In the use of the process found that the serial server LEDs all bright, can not communicate properly?**

    - LAN storm. Troubleshooting: Host directly connected to the serial server.
    - Network IP address conflicts. Troubleshooting: the host directly connected with the serial server, modify the IP address of the serial server.
    - The baud rate is set too high. Troubleshooting: Modify the baud rate of the serial server.
    - Indicator is abnormal. Troubleshooting: Replace the other serial server for testing.

15. **Serial server work in TCP client mode, can support virtual serial communication?**

    - Serial server work in TCP Server mode, support virtual serial communication, RealCom function is turned on.
    - Serial server work in TCP Client mode, does not support virtual serial communication, RealCom function is turned off.
    - Serial server work in UDP mode, does not support virtual serial communication, RealCom function is turned off.

16. **Communication environment: computer + wireless router + serial server, can use this way?**

    The computer is connected via WiFi, but the VSP software on the computer must search for the device (the wireless router and the serial server must be on the same network segment).

17. **What is the wiring situation when the serial server uses RS-485 communication?**

    RS-485 terminals are T + / D + and T- / D-.

18. **How many RS-485 terminal nodes can the RS-485 port of the serial server support?**

    The conventional serial server supports 32 devices and can also customize 64,128 nodes.

19. **After configuring the serial server parameters, found that these parameters can not be saved?**

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- The browser displays the problem. Troubleshooting: Replace the browser to view or replace the host.
- System software problems. Troubleshooting: Restore factory settings.
- Product chip problems. Troubleshooting: Depot Repair.

20. **Can the serial server be used in pairs?**

    Yes, a device operating mode for the TCP Server, another device working mode for the TCP Client, the middle connected with the network cable. Or a device operating mode for the Pair slave, another device working mode for the Pair master, the middle connected with the network cable.

21. **Serial server RS-485 interface connecting attendance machines and vending machines, only one IP address will have an impact on the data?**

    The data will not be affected, because the RS485 device address code and machine number are not the same.

22. **When the serial server is creating a virtual serial port, causing the computer blue screen crash?**

    Usually the driver causes the computer blue screen crash, troubleshooting method:

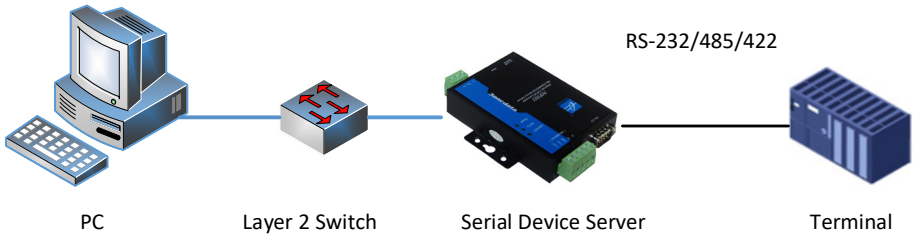
    - Replace to the higher version of the driver.
    - Turn off the firewall, exit antivirus software.

23. **Can the baud rate of the serial server support 921.6k?**

    No; serial port server support baud rate: 300 ~ 115200bps, but can be achieved through customization.

24. **Just bought the serial to Ethernet converter (serial server), how should I debug the deivce used?**

    The live environment is as follows: Do not cross the gateway (the device is under the same gateway as the monitoring host).



- Will be connected to the same serial port with the host LAN (with the network segment, with the Vlan, with the broadcast domain), use the management software to search the device, view the device IP address.

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- In the management software, modify the device IP and host IP to the same network segment. Refer to the CD-ROM documentation and configure the parameters at both ends of the communication (virtual serial port / serial port server).
- Access terminal serial equipment (attendance, access control, etc.), the use of data acquisition and management software to test whether the normal communication connection.

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Make network communication more reliable

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