RS-232 Serial Server
(FE2210/FE2220)

User's Manual

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Safety Instructions

Always read the safety instructions carefully

- Keep this User’s Manual for future reference
- Keep this equipment away from humidity
- If any of the following situation arises, get the equipment checked by a service technician:
  - The equipment has been exposed to moisture.
  - The equipment has been dropped and damaged.
  - The equipment has obvious sign of breakage.
  - The equipment has not been working well or you cannot get it work according to User’s Manual.

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1. Introduction

The Ethernet Serial Server connects remote RS-232 devices via Ethernet as an operation center between RS-232 serial devices and the Internet. Once your computer connects to the Ethernet Serial Server via Ethernet, the virtual ports can provide communication to devices without altering any applications on your computer. It not only provides fine remote communication but remove the restriction for distance. This server is quite suitable for applying remote data accessing, security monitoring, and manufacture automation.

Features

- Real COM device driver for Windows
- Standard TCP/IP interface and versatile operation mode
- Convenient Windows utility for configuring multiple device server
- 15KVDC ESD immunity to serial interface
- Configure by web browser or Windows utility
- Wall mount support

Package Content

Before installing the serial server, please check the package contains the following items:

- Serial Device Server x1
- AC Power Adapter x1
- CD (Driver and User's Manual) x1

System Requirement

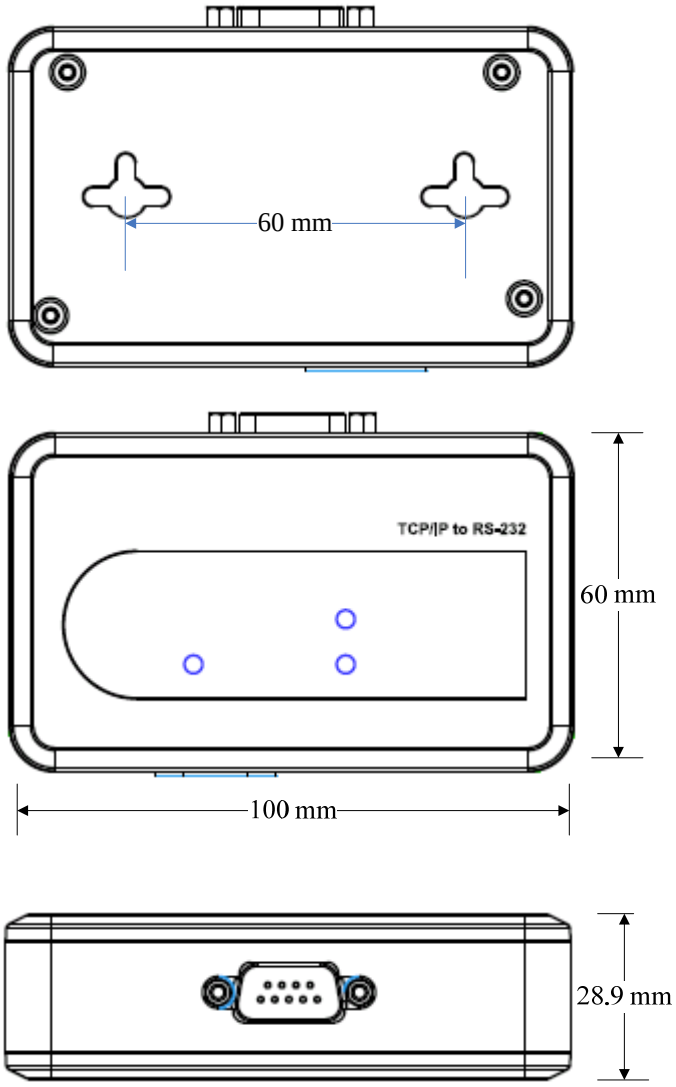
- IBM Compatible computer or Mac
- Windows® 2000, Windows® XP, Windows Vista® 32/64 bit, Windows® 7, Mac OS® X v10.x
- Built-in USB port computer
- 64 MB RAM or higher
- Pentium® 233 MHz or higher

2. Specification

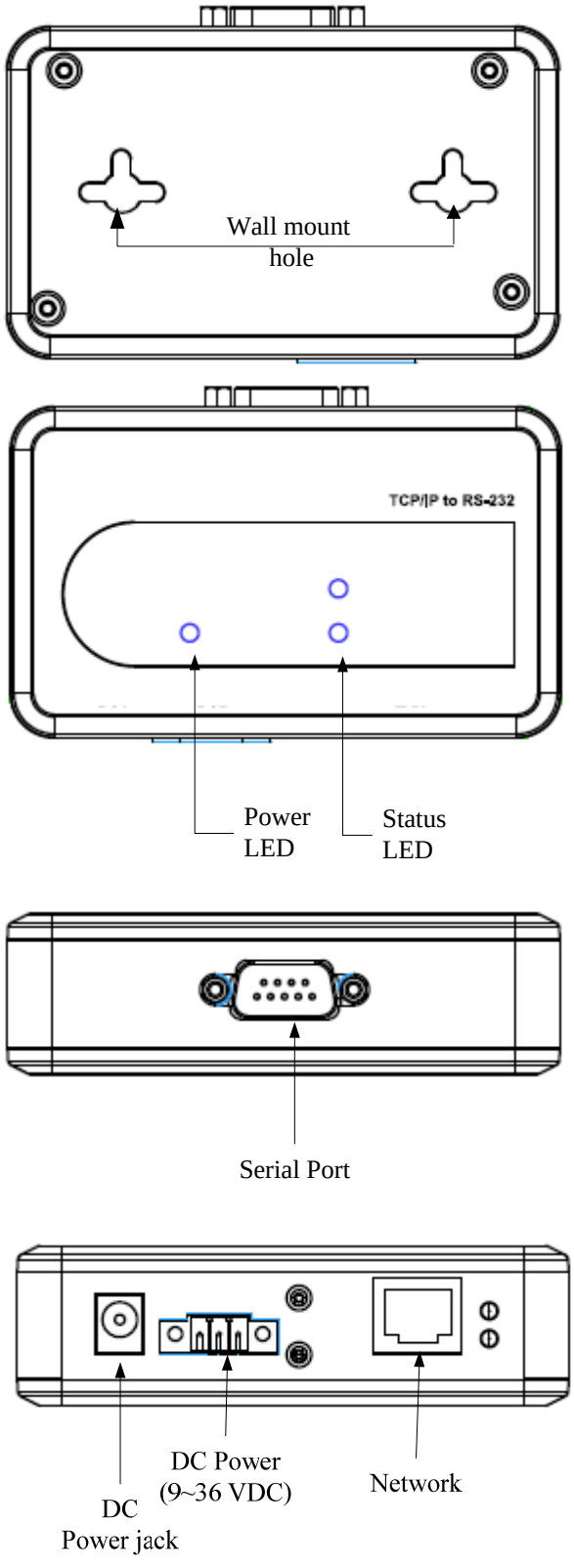
Ports	1x RS-232 (FE2210)
	2x RS-232 (FE2220)
Connector	Male DB9
FIFO	16 bytes
ESD Protection	15 KV ESD
Serial Communication Speed	1.2K~921.6KBps
Interface	10/100 BaseT Ethernet
Interface Connector	RJ-45
Operating Temperature	0℃ to 55℃
Operating Humidity	5 to 95% RH
Dimensions(LxWxH)	100x60x29 mm
Regulatory Approvals	FCC/CE

1-Port RS232 Serial Server

■ Hardware Dimension

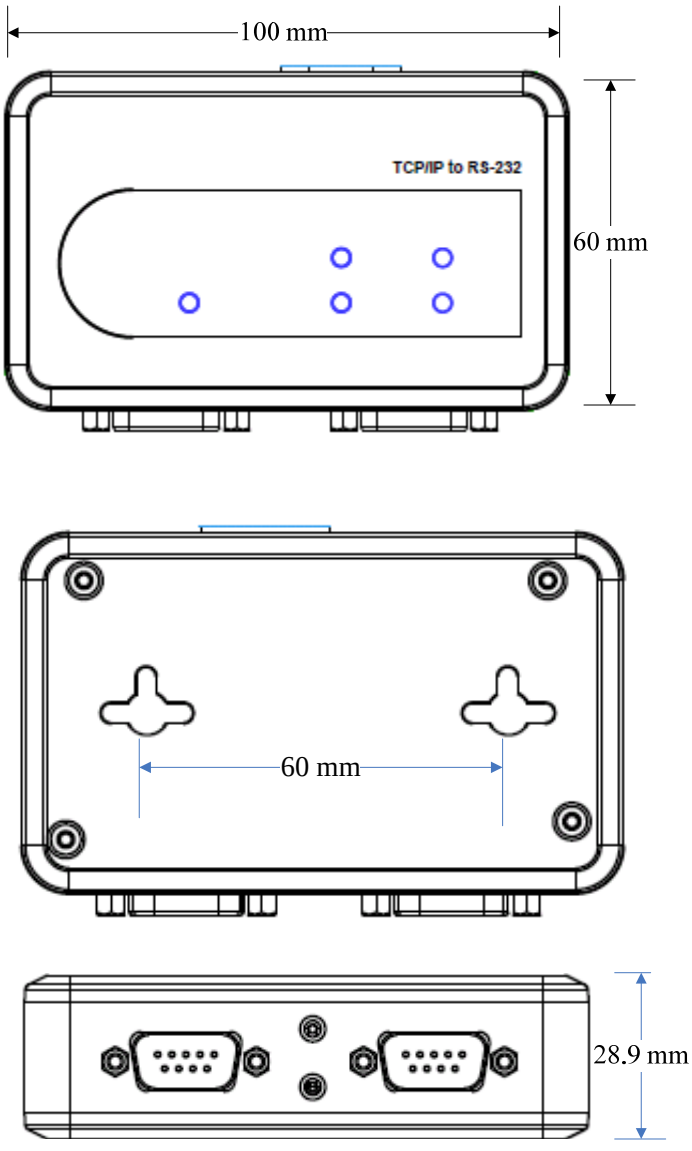


■ Hardware Introduction

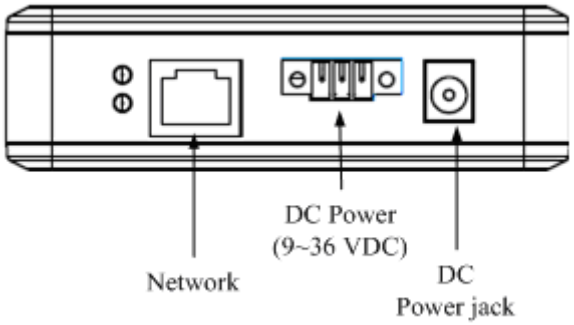


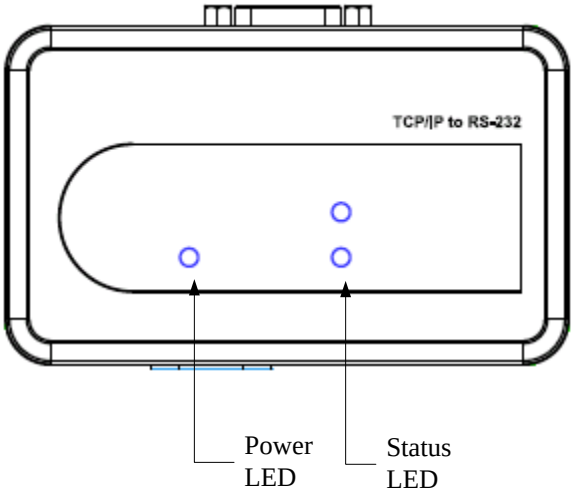
2 -Port RS232 Serial Server

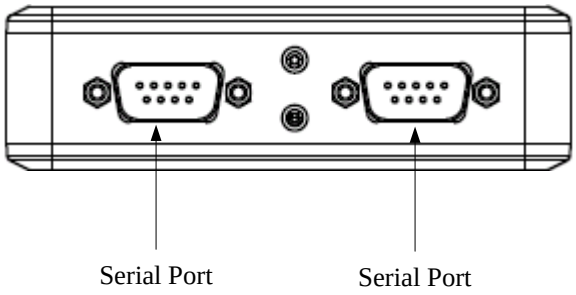
■ Hardware Dimension

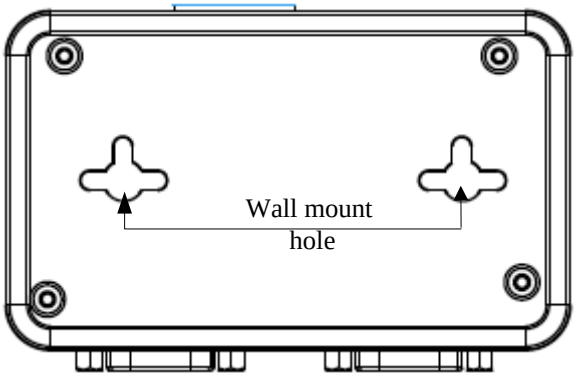


■ Hardware Introduction









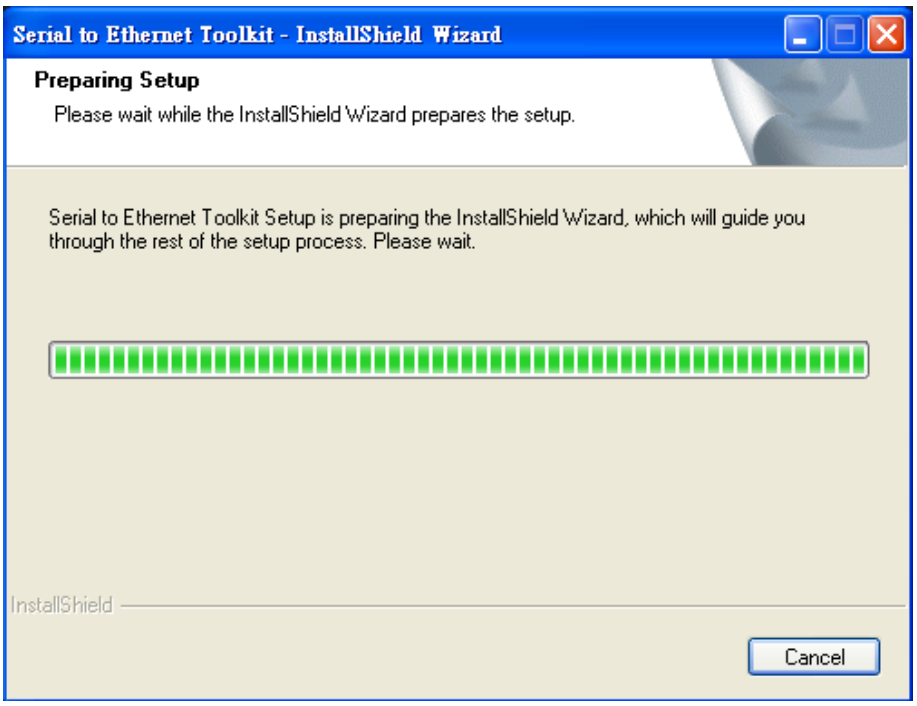
3. Installation

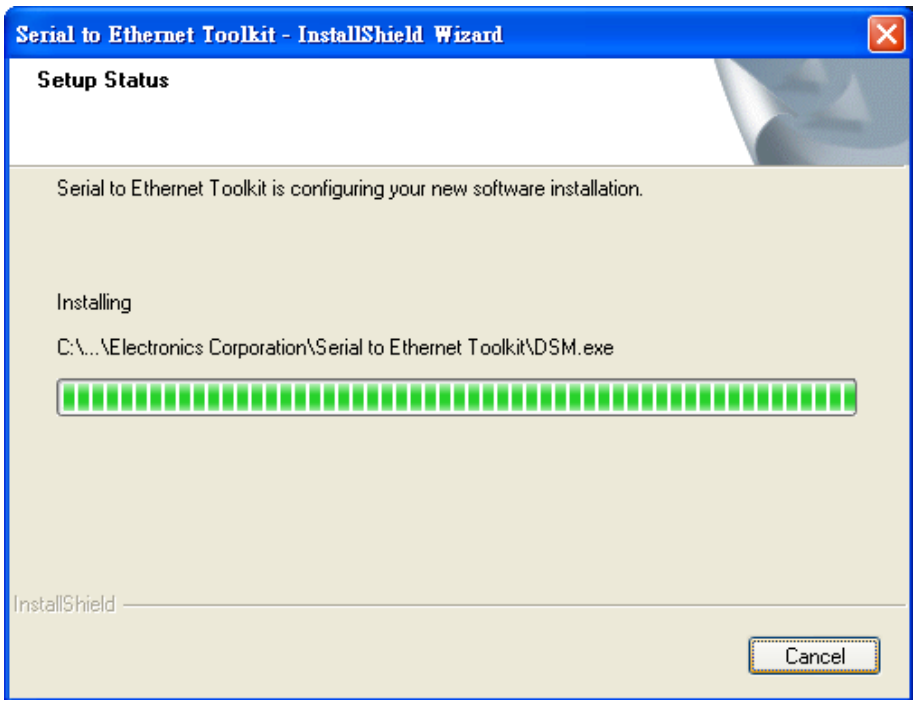
Note: Do not connect your devices to computer before driver installation.

Window Driver Installation

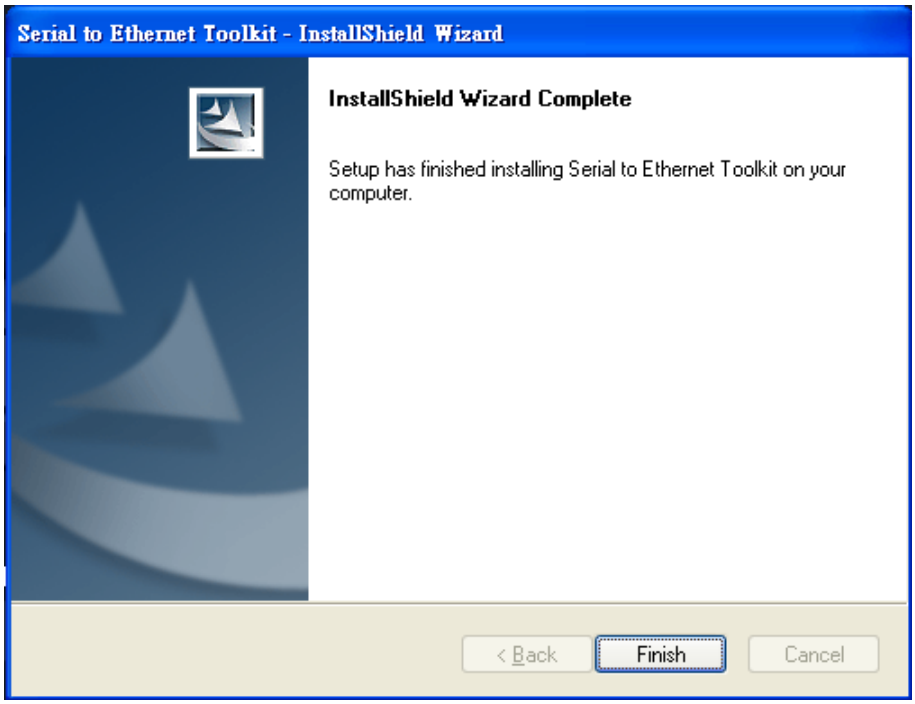
Please insert the provided CD into CD-ROM.

1. Please choose the Setup File of Serial to Ethernet Toolkit and click “Install” button, and the following Windows will appear.



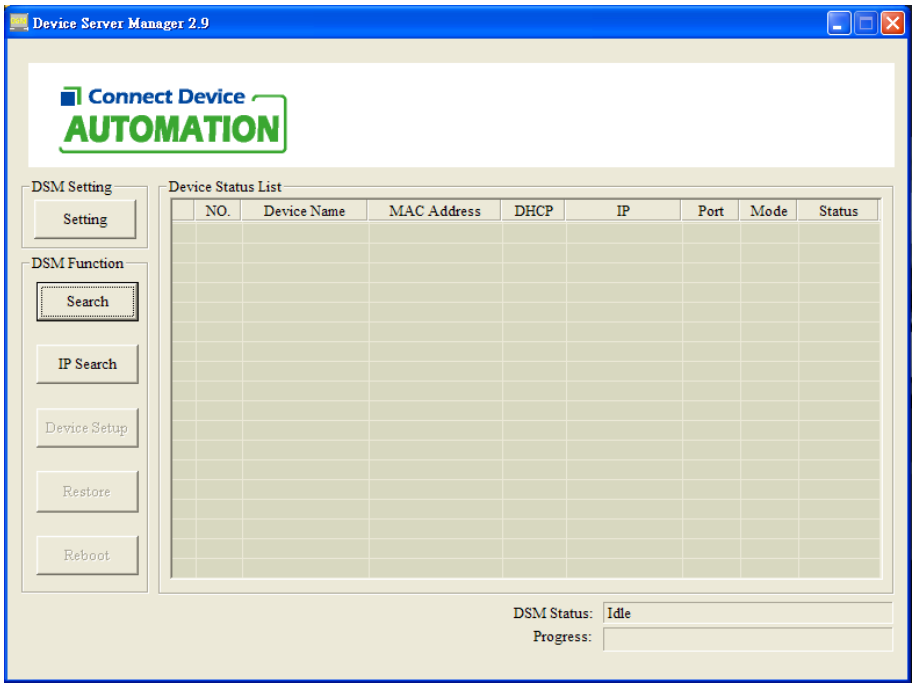


2. Please click “Finish” to complete installation.



Device Server Manager Installation

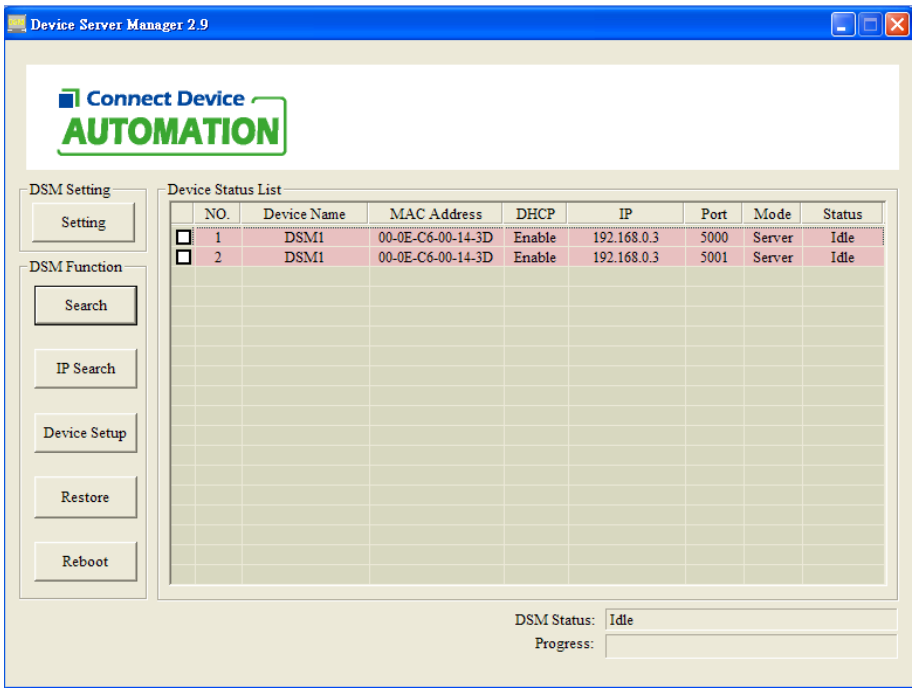
1. Please click Device Server Manager (will use DSM throughout this manual) program, and the DSM Main Menu will appear as below.



The DSM Main Menu will provide eight functions as below.

A. DSM setting: To set up Search, Restore, and Reboot period.
B. Search: To search a server by name.
C. IP Search: To search a server by assigned IP.
D. Setup: To manipulate parameters of a selected server
E. Web Browser: To open the setup page for the selected server parameters.
F. Restore: To restore default setting.
G. Reboot: To reboot server.
H. Upgrade: Upgrade firmware for a selected server.

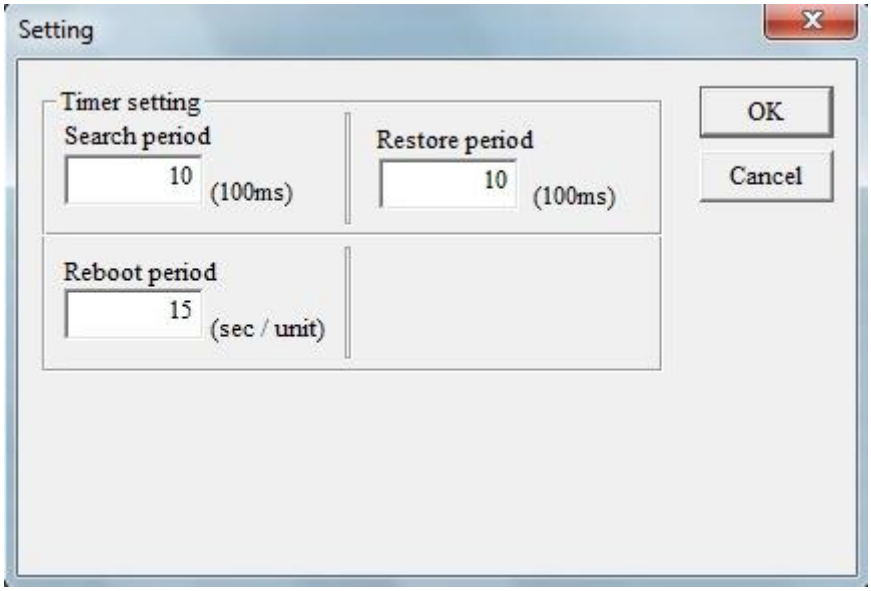
2. Clicking the “Search” bottom of this page will perform the search function and list the matched servers in a list as you can find in the following picture



The Device Status List will describe as below:

Item	Description
No.	Serial Server Number
Device Name	Serial Device Server name(16 byte Maximum string)
MAC Address	MAC address of Serial Device Server
DHCP	Enable or Disable
IP	If enable DHCP function, you will get a dynamic IP from DHCP server; otherwise, a static ID will be assigned.
Port	-Server Mode: Data packet Port -Client Mode: Destination Port
Mode	Client or Server Mode
Status	-Idle: TCP or UDP do not connect on server. -Connect: TCP or UDP do connect on server.

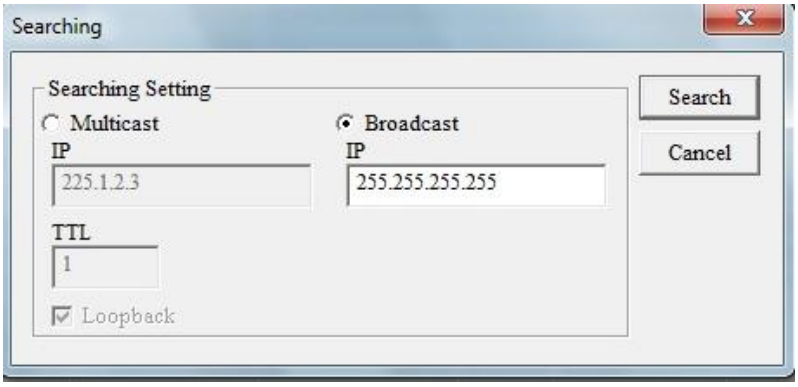
3. If the status of the server is in “Connected” which means data is still transmitting, DSM will disable setup, reset, reboot and firmware update functions from user end to avoid interrupting date transfer.
   Please click DSM setting and the following dialog box will appear.



Parameters description:

Item	Description
Search period	To setup the search timeout period.
Reset period	To setup the reset timeout period.
Reboot period	To setup the reboot timeout period.

4. Please click “Search” item on DSM Function column and the searching dialog box will appear.



There are two functions at Searching dialog box.

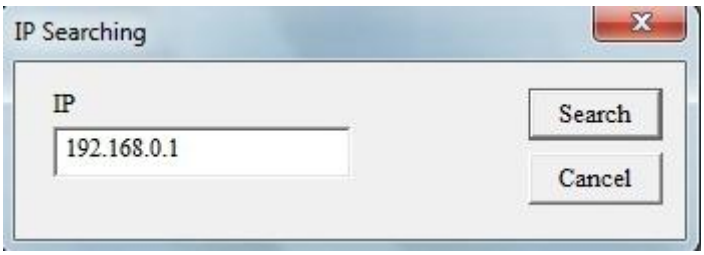
A. Search: Start to search.

B. Cancel: Cancel to search.

Item	Description
Multicast	To start to search through UDP multicast packet.
IP	Multicast IP address
TTL	Time to live
Loopback	Enable/Disable loopback of outgoing multicast packet
Broadcast	To search through UDP broadcast packet
IP	Broadcast IP address

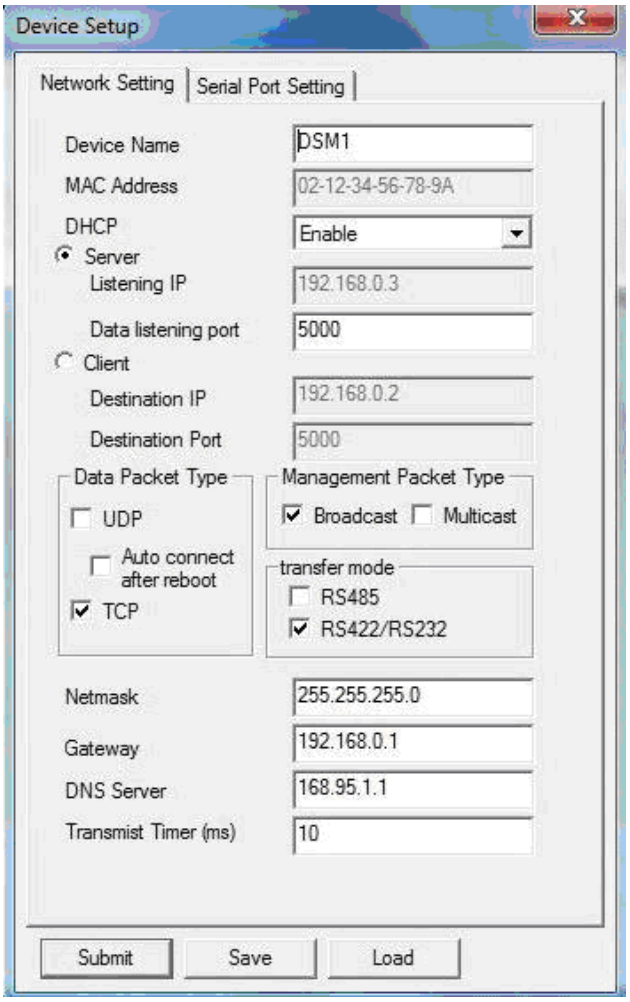
5. Please click IP Search button and the following dialog box will appear. You can search the assigned IP server address through the IP Search function.

Assigned IP Server：



Please key-in the IP address in the IP column and click Search button to start to search.

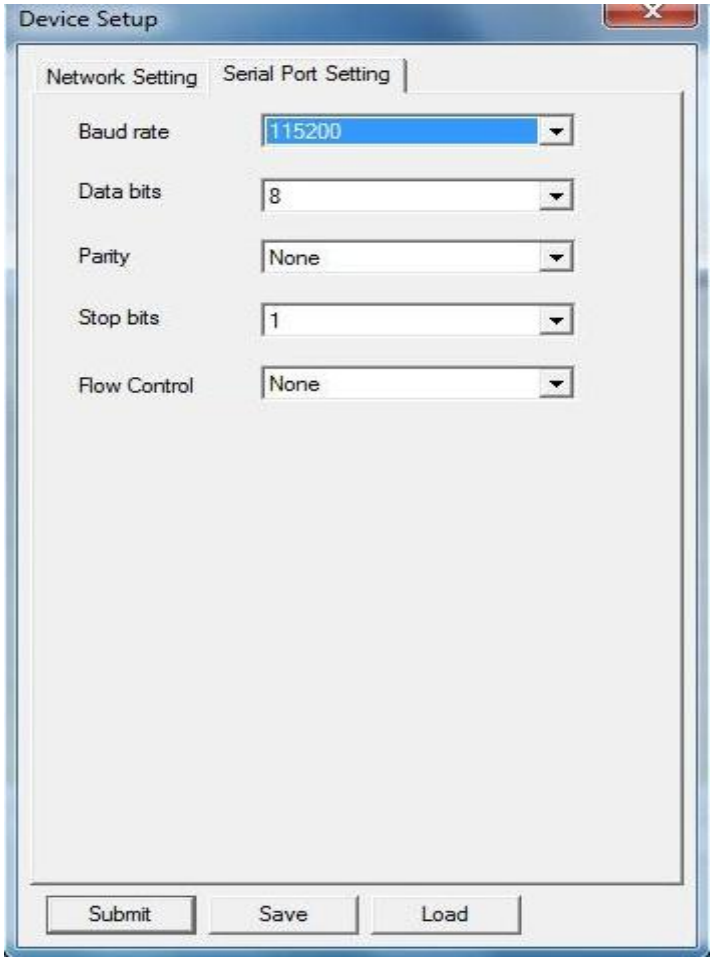
6. Click “Device Setup” button on DSM Function column and the dialog box will appear.



Item	Description
Device Name	Device Name
MAC address	Multicast IP address
DHCP	Enable/ Disable DHCP client function
Server	Enable Server Mode
Listening IP	To perform search through UDP broadcast packet
Data Listening Port	Data Listening Port on Server
Client	Enable Client Mode
Destination IP	Remote host IP address
Destination Port	Remote host port
TCP	To transfer serial data packet through TCP
UDP	To transfer serial data packet through UDP

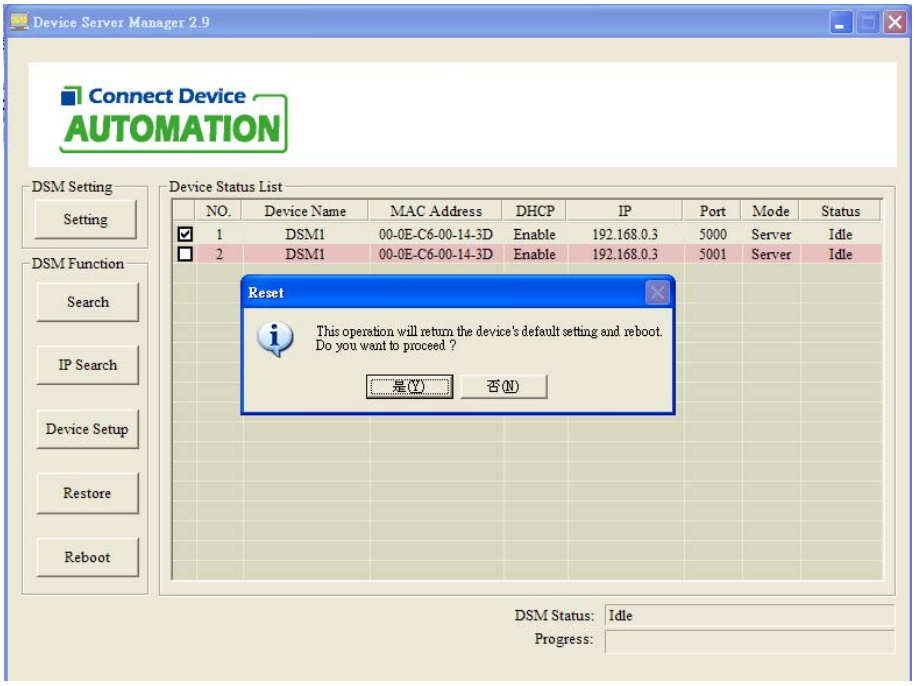
Multicast	To transfer serial data packet through multicast
Broadcast	To transfer serial data packet through broadcast
RS485	RS-485 mode
RS422/RS232	RS-422 mode
Netmask	Subnet mask
Gateway	Gateway IP address
DNS Server	DNS Server IP address
Transmit Timer	Transmit serial data packet period

7. When you click Serial Port Setting, the following dialog box will appear.

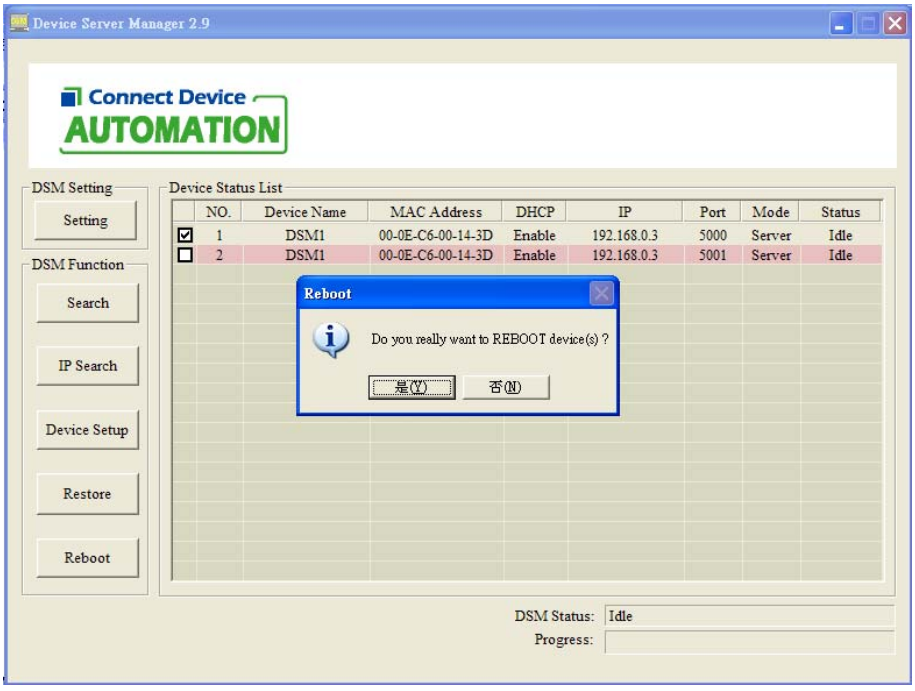


Item	Description
Baud rate	Data transfer rate per second
Data bits	Data bits
Parity	Parity check
Stop bits	Stop bits
Flow control	Flow control

8. Please click “Restore” button on DSM Function column and the following windows will appear.
   Please click “Yes” or “No” to return the device’s default setting and reboot.

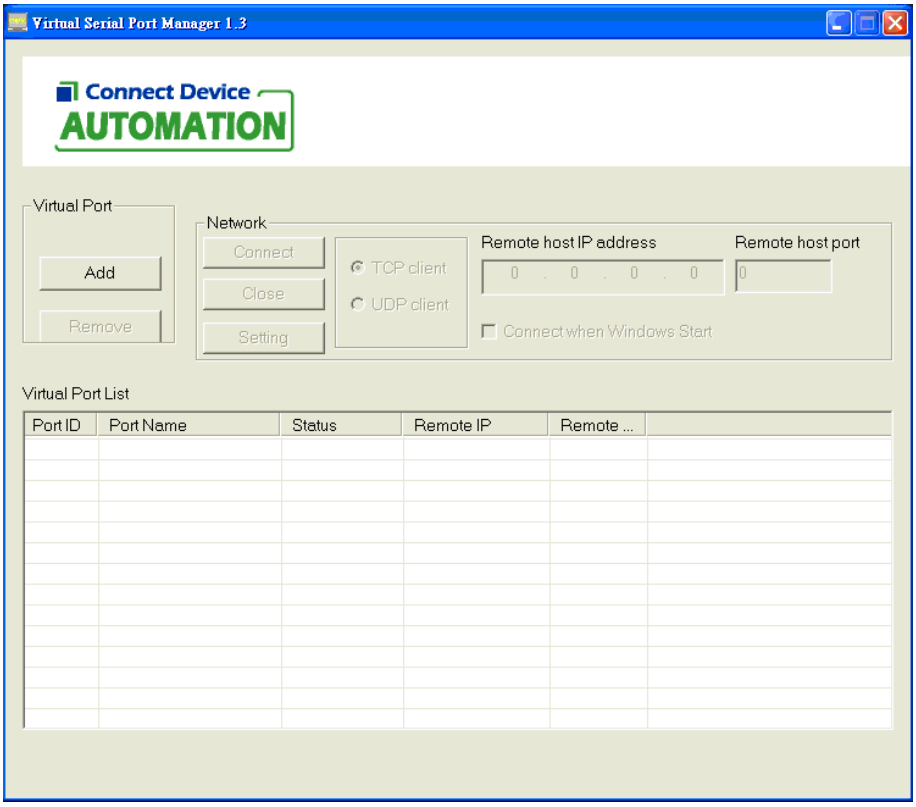


9. Please click “Reboot” button on DSM Function column and the following windows will appear.
   Please click “Yes” or “No” to reboot devices.



Virtual Serial Port Manager Installation

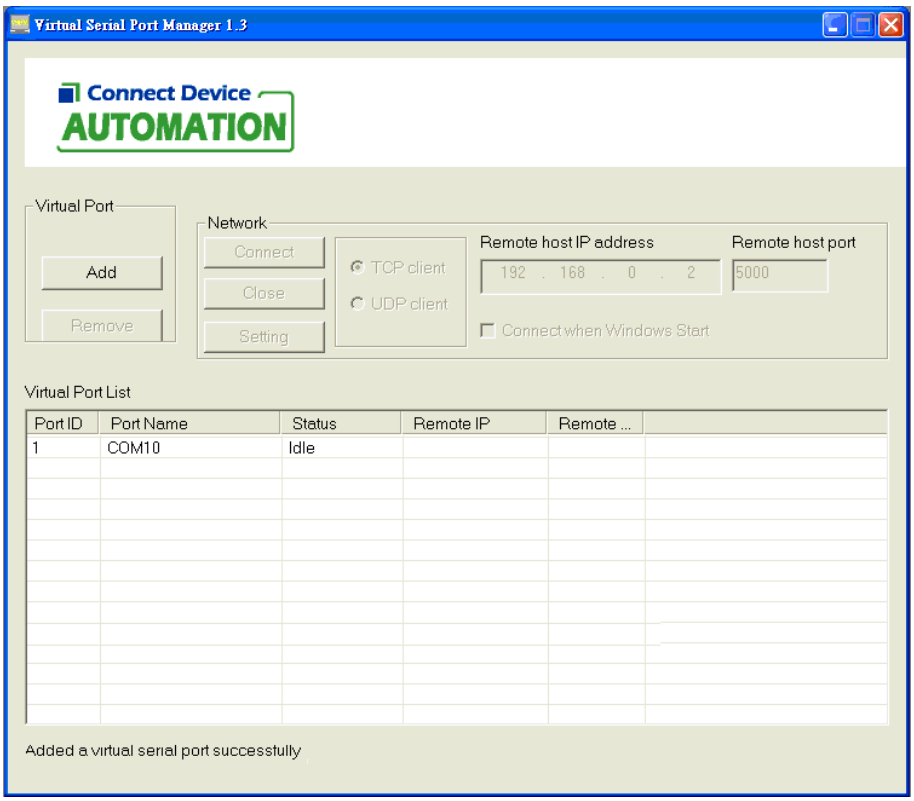
1. Please choose and click Virtual Serial Port Manager program, the following Dialog Box will appear.



The Main Menu will provide four functions as below.

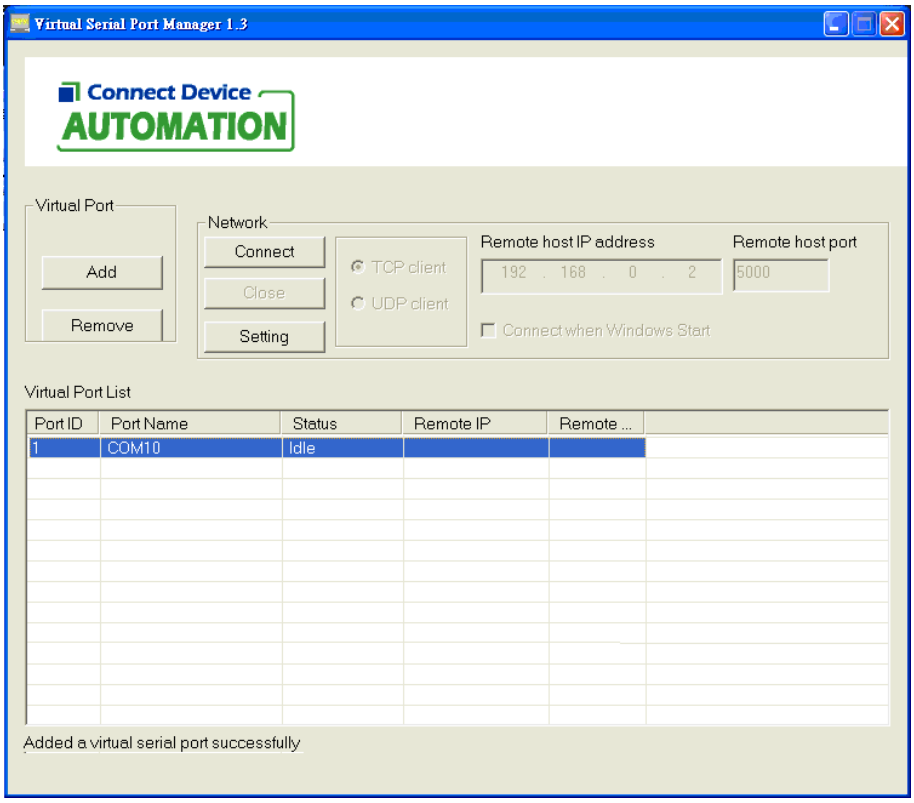
1. Add: To add a virtual port
2. Remove: To remove a virtual port.
3. Connect: To connect TCP or UDP with server.
4. Close: To close connection.

2. Please click “Add” button to add a virtual port.

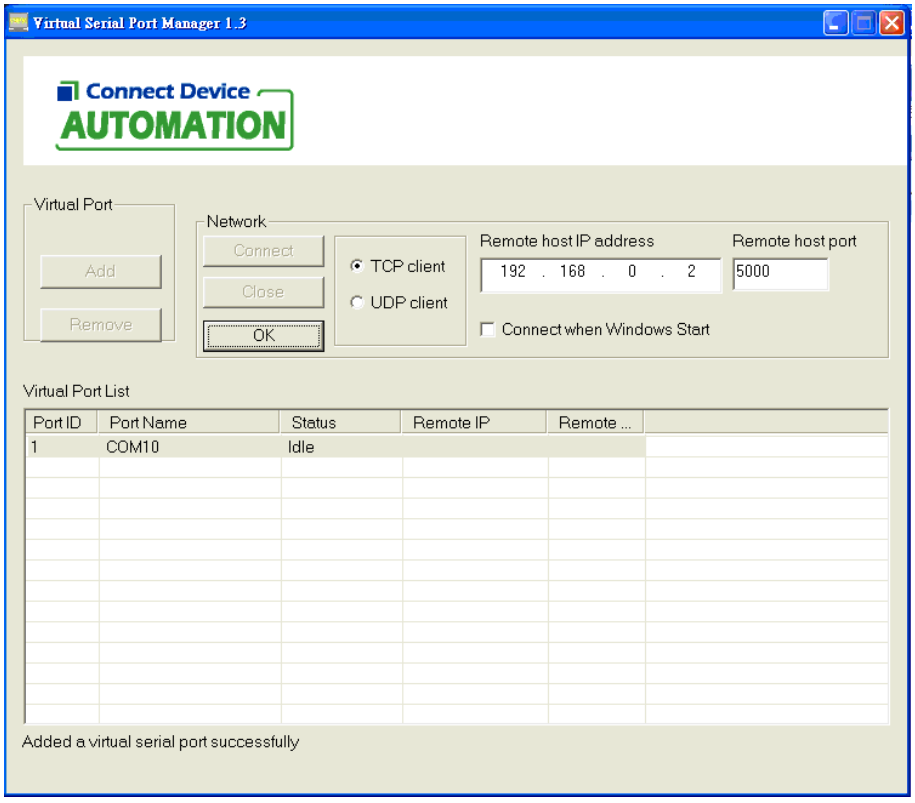


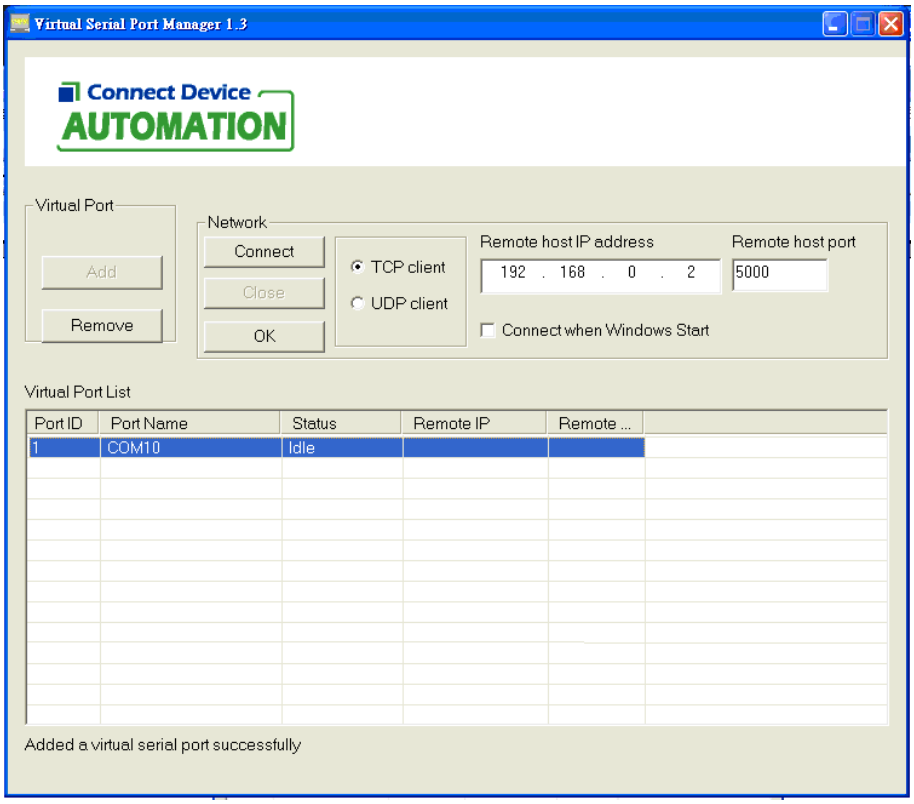
Item	Description
Port ID	COM port
Port Name	Device Server name, 16 bytes maximum string
Status	Server Status
Remote IP	Server IP address
Remote host Port	Server Data Packet Port

3. Please set the IP address of the virtual serial port the same as the DSM server.

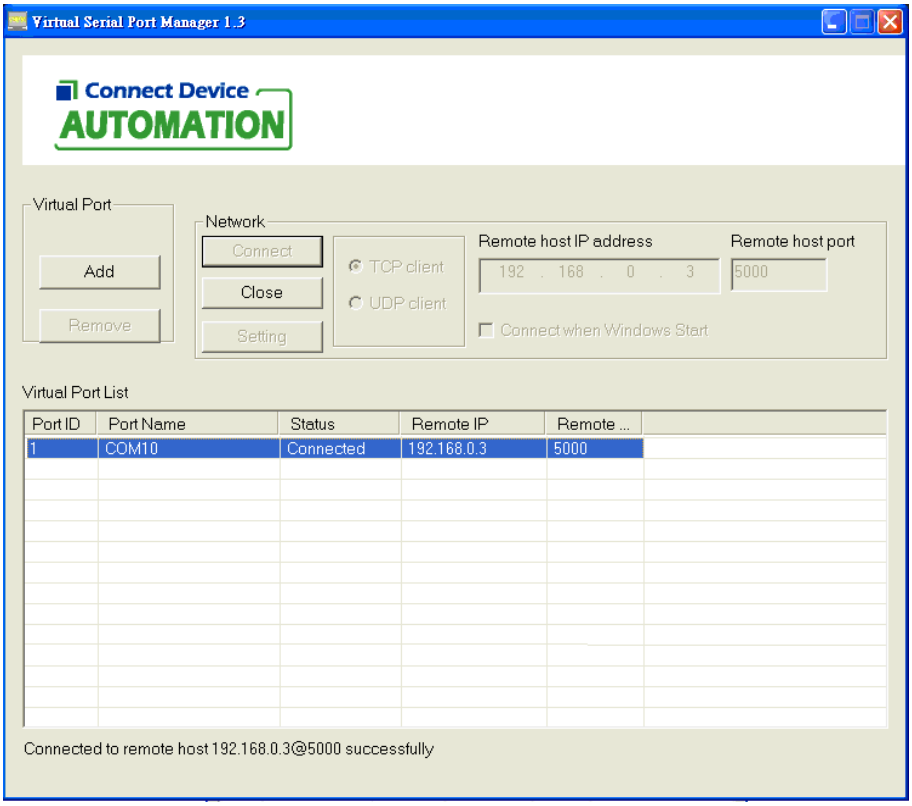


4. Please click “OK” button when setup complete.





5. When the status of serial port switches from Idle to Connected, it means that you has been connected the virtual serial port successfully

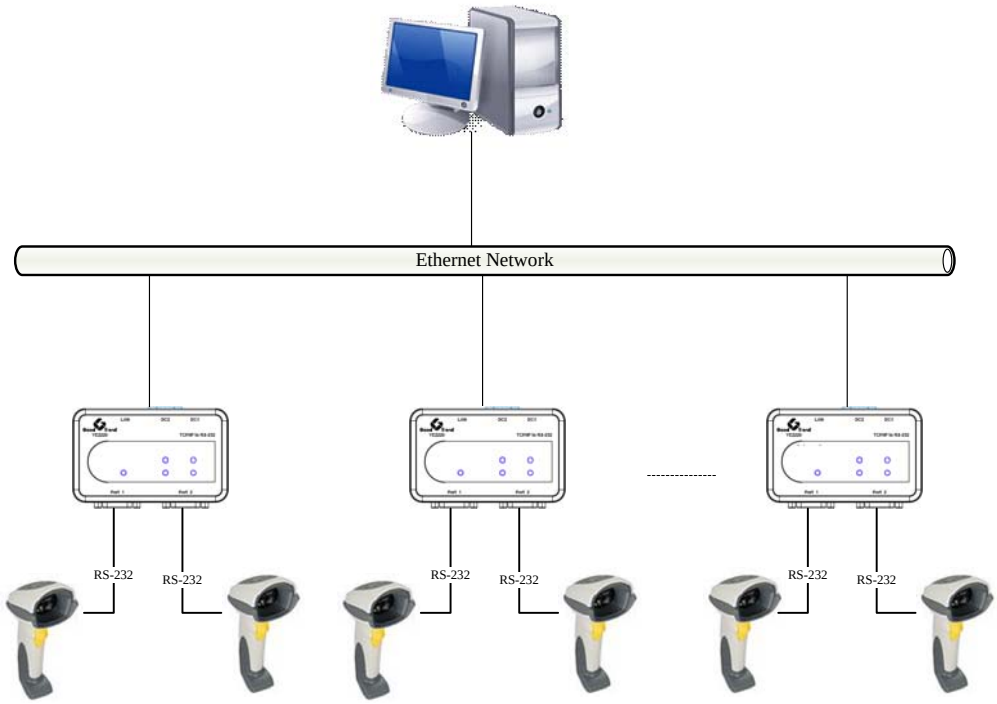

Virtual Serial Port Manager 1.3
Connect Device
AUTOMATION
Virtual Port
Add
Remove
Network
Connect
Close
Setting
TCP client
UDP client
Remote host IP address
192 . 168 . 0 . 3
Remote host port
5000
Connect when Windows Start
Virtual Port List
Port ID
Port Name
Status
Remote IP
Remote ...
1
COM10
Connected
192.168.0.3
5000
Connected to remote host 192.168.0.3@5000 successfully

Installation Verification

To verify your installation, please launch Device Manager as following:
Under Windows® 2000/ Windows® XP Operation System: Right-Click **My Computer** and select **Properties** > **System** > (**Hardware**) > **Device Manager**.
Under Windows Vista®/ Windows® 7 Operation System: Right-Click **My Computer** and select **Properties** > **Device Manager**
The **High-Speed USB Serial Port** should be displayed under the **Ports (COM & LPT)** group.

4. Connected Serial Device Server

Now you can connect your remote RS-232 device through Ethernet Network.



5. Regulatory Compliance

FCC Conditions

This equipment has been tested and found to comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference
(2) This device must accept any interference received including interference that may cause undesired operation.

CE

This equipment is in compliance with the requirements of the following regulations: EN 55 022: CLASS B