TestView

TCP/UDP/COM Test Program
User Manual

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Chapter 1. Overview

TestView is a serial / socket communication test application running on Windows. It allows exact and smooth test environment for serial Multiports, embedded modules, and device servers manufactured and distributed by SystemBase Co., Ltd.

1.1 Features

This application can be used to test ports for almost all Multiport and device server products manufactured and distributed by SystemBase Co., Ltd.

Performance test provides numeric measures.
Received data can be displayed in the window.
Various protocols are supported.(COM, UDP, TCP)
File transfer test through COM ports.

1.2 Software

It is a Windows application, composed of a single installer file
TestView-setup.exe

1.3 Hardware

TCP/UDP Port
Portbase 3010+/ 3020+/ 3040/ 3080/ 3160/ 3161
Eddy Modules

COM Port
Redirector Com
Multi-2,4,8,16,32 PCI Multiport
Multi-1,2,4,8 USB Multiport

1.4 Environment

As the number of test ports increases, more CPU power and higher memory is required.

CPU	: Pentium 1Ghz or better
Memory	: 512Mb or higher
O/S	: Windows 2000/XP/2003/Vista/2008
CD-ROM	: 4X or faster
Network	: 10M Ethernet or faster

1.5 Protocols

COM Serial
TCP Server/Client
UDP Server/Client

Chapter 2. Installation

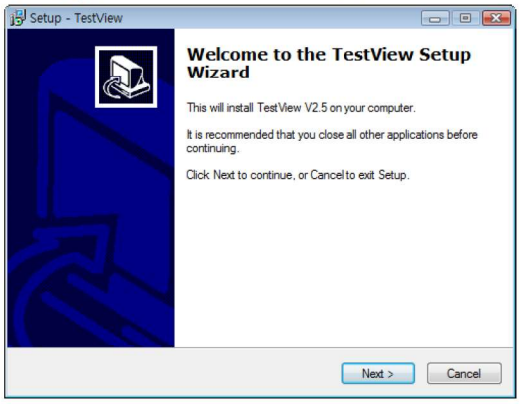
Installation process is simple and intuitive. Follow install steps provided below.

2.1 How to Install

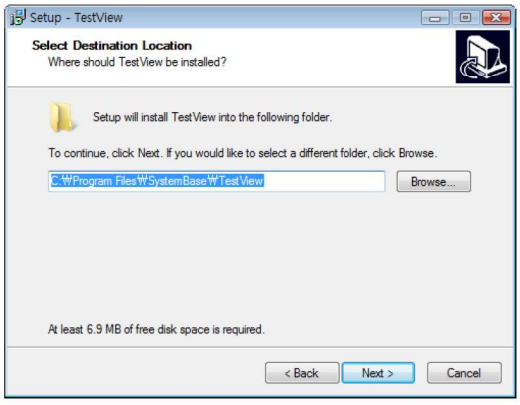
1. You can install TestView with the installation CD or the executable file.

2. Insert the installation CD into the CD-ROM drive to see an auto-run menu screen. Select TestView from the menu to start installation. When running with the executable file, simply run TestView_Setup.exe.

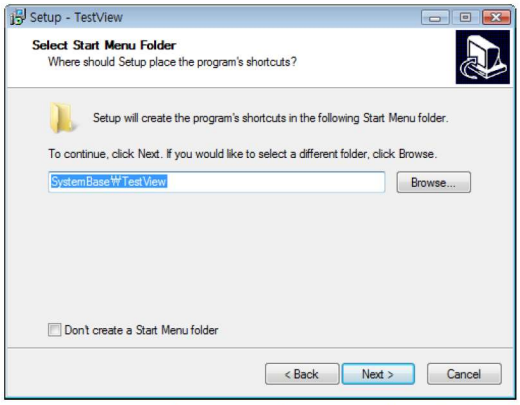
3. If successful, you will see the bottom-left window. Click “Next”.



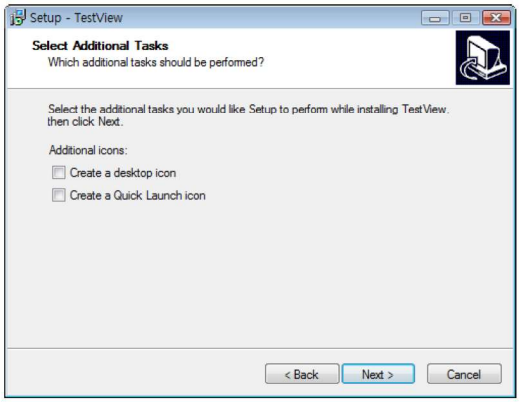
4. You can change the destination installation directory by clicking “Browse…” button. It is recommended, however, that you keep the default location. from the bottom-right corner. Click “Next” after choosing the target directory.



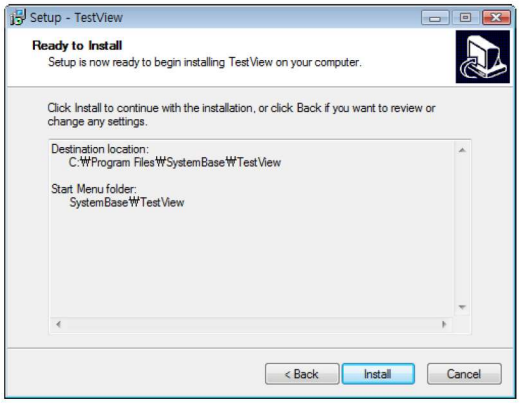
5. Select start menu folder. You can choose not to create start menu folder.



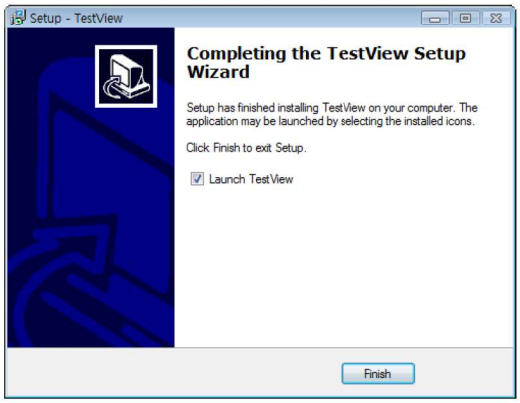
6. Choose to create a desktop icon and a Quick Launch icon. Click “Next”.



7. Click ”Install”.



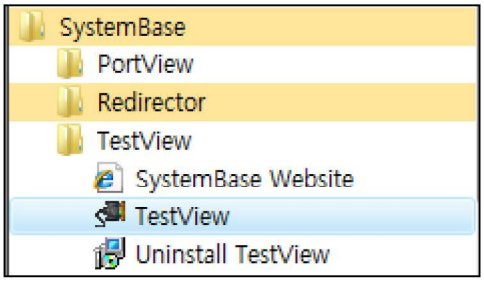
8. Click “Finish” to complete TestView installation.



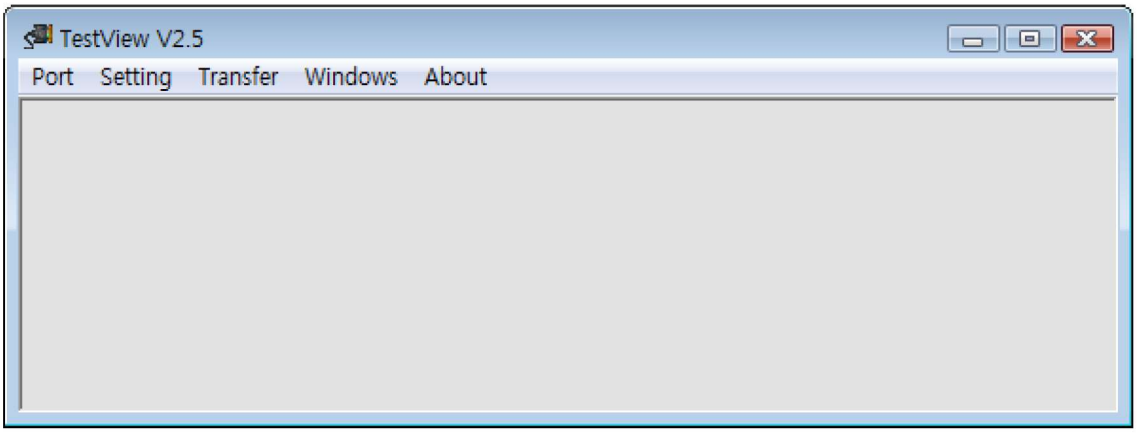
2.2 Running

1. If you have a desktop icon for TestView, double-click the icon to run the application.

2. Otherwise, Select “Start -> All Programs -> SystemBase -> TestView -> TestView”.



3. If successful, you will see the main window of TestView similar to the one shown below..



Chapter 3. Menu

Since TestView has complex menu system, detailed menu description will be provided in the following chapters. This chapter is a brief outline for menu system.

3.1 Menu Description

Main Menu	Sub Menu	Description
Port	Com Port	Open and test serial ports.
	TCP/UDP Port	Open and test TCP/UDP ports.
	Open	Read information stored in files.
	Save	Save information as files.
	Exit	Exit the program.
Settings	Macro	Assign macro data to transfer. (F1~F12)
	Font for Terminal	Change fonts.
	Serial Thread Priority	Sets serial operation thread priority
	TCP/UDP Thread Priority	Sets TCP/UDP operation thread priority
Transfer	File Send	Send file through COM port.
	File Receive	Receive file through COM port.
Windows	Tile	Open windows in tile style.
	Cascade	Open windows in cascade style.
	Close Terminal	Close all terminal windows
	Close All	Close all child windows
About	Help	Open help.
	About	Open program information.

Chapter 4. Port Menu

This chapter describes port menu in the main menu.

4.1 Com Port

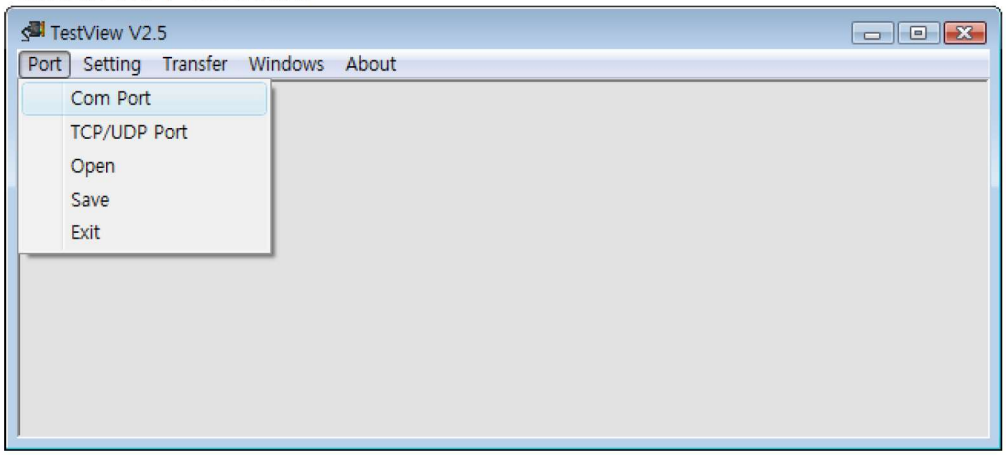
Open and test Com Ports. TCP/UCP ports are described in the following section.

4.1.1 Features

New windows are available to monitor incoming data to Com Ports.
Throughput is displayed.
Test data can be transferred via COM ports.

4.1.2 Opening Com Ports

Select Port -> Com Port.



4.1.3 Open Com Port Configurations

Select a beginning port number and assign quantity. Also available are baud rate, data bits, parity bits, and stop bits. (When you assign 64 ports, the system automatically detects COM ports and opens them.) Click "OK" when finished with the configuration.

"Open Com Port" Menu Description

Com Region: 4 ranges can be defined. Each range can support up to 64 ports; 256 ports can be assigned in total.

Com Options: Communication options.

Baudrate: Transmission speed

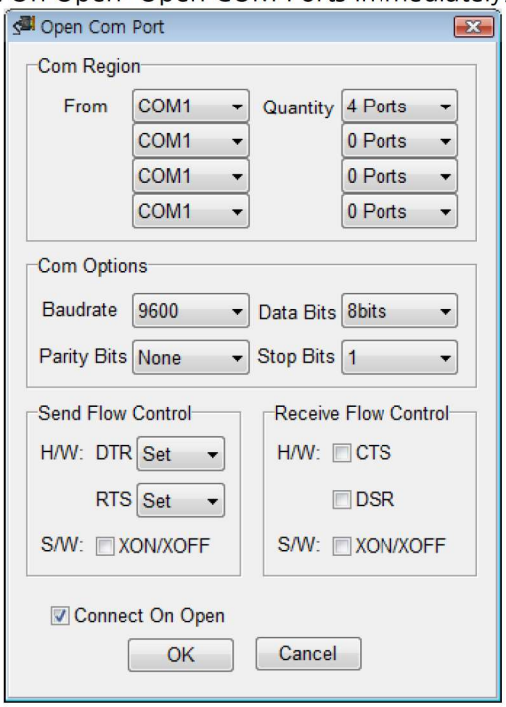
Data Bits: Data Bits

Parity Bits: Parity Bit

Send Flow Control: Select send flow control method.

Receive Flow Control: Select receive flow control method.

Connect On Open: Open COM Ports immediately.



4.1.4 Com Ports Window Main Menu

"COM Ports" menu is presented when you open ports. The following example shows that 8 ports are opened from COM7 to COM14. Buttons affect all ports shown in this window.

Menu description

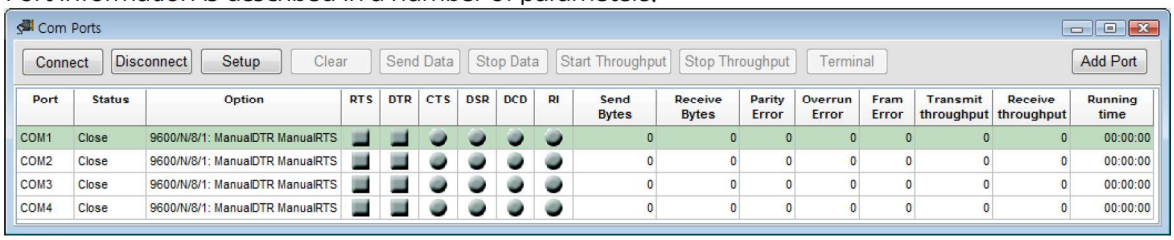
Connect : Open all or selected ports.
Disconnect : Close all or selected ports.
Setup : Change default communication options for individual ports.
Clear : Initialize all counts for all or selected ports.
Send Data : Send character data (A~Z) to all or selected ports.
Start Throughput : Start calculating throughput for all or selected ports.
Stop Throughput : Stop calculating throughput for all or selected ports.
Terminal : Run port emulator for all or selected ports
Add Port : Add Additional Ports

Tip

When you drag your mouse for more than 1 ports and right-click, pull-down menu is displayed. You can control port operations with this menu.

4.1.5 Com Ports Window Description

Port information is described in a number of parameters.



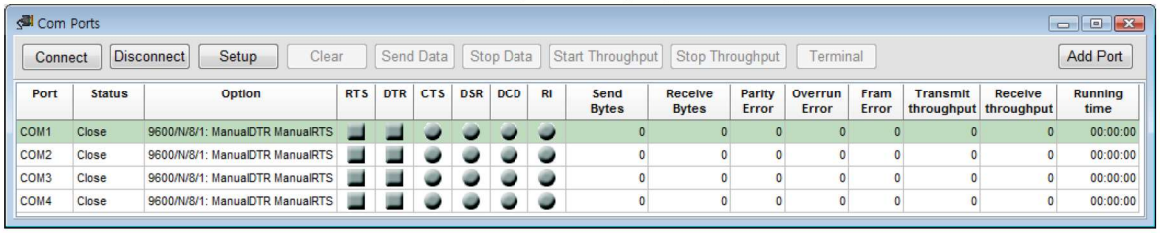
Columns

Port: Com Port number
Status: connection status. (Connect: connected, Close: disconnected.)
Option: Baud rate/parity/data bit/stop bit/Flow control type displayed.
Signals: RTS/DTR/CTS/DSR/DCD/RI signal displayed.
Send Bytes: Tx Byte count
Receive Bytes: Rx Byte count
Parity: Parity bit error count
Overrun Error: Overrun Error count
Transmit throughput/Receive throughput: Tx/Rx data per second
Running: Time elapsed from the opening of the port. Cleared when 'Clear' is selected.

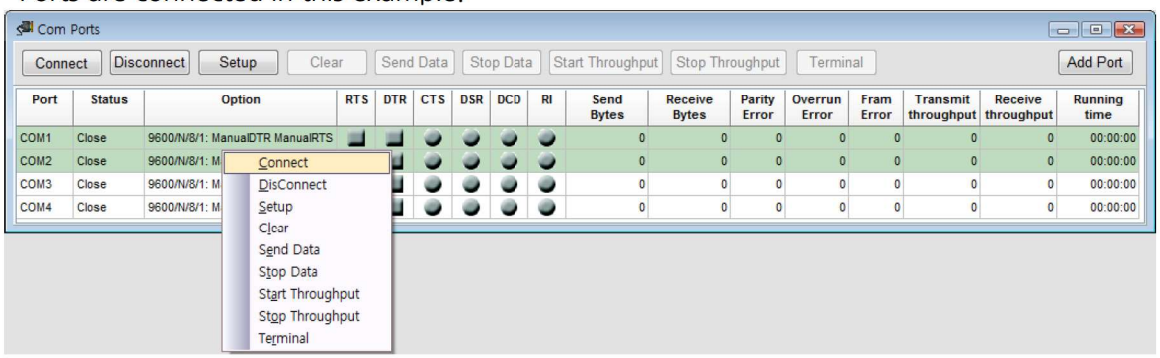
4.1.6 Connect / Disconnect Button

Connect option opens selected ports. All menu options are activated after the port is opened.

Use buttons to connect or disconnect all ports displayed in the window.



When you want to connect or disconnect only selected ports, refer to the screenshot below. Ports are connected in this example.

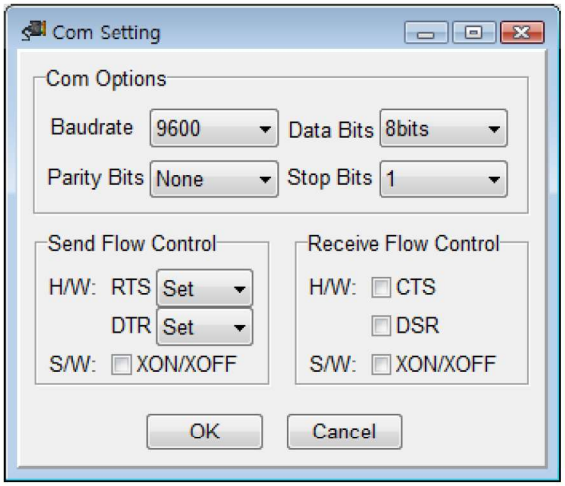


4.1.7 Setup Button

The options are identical to what is available in “Open COM Port” menu. This option is handy when you need to change speed or other options when testing ports.

When you press “Setup” button, “COM Setting” window is displayed.

Baud rate/Data Bits/Parity bit/Stop Bits/Flow Control options can be changed. It is recommended, however, that you use default settings except the baud rate.



Option description in “Com Setting” window

Com Options: Communication options.

Baudrate: Transmission speed

Data Bits: Data Bits setting

Parity Bits: Parity Bit setting

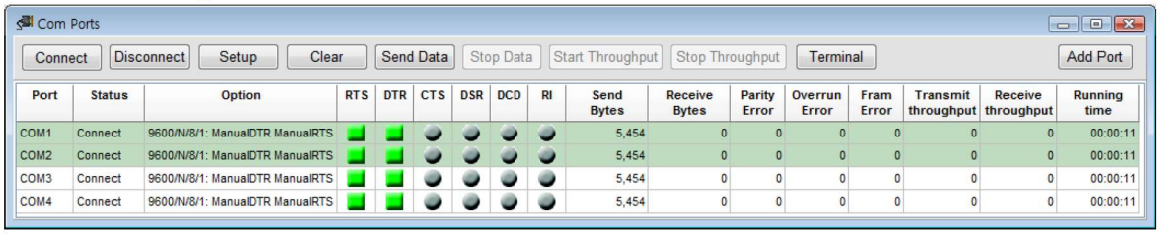
Stop Bits: Stop bit setting

Flow Control: Select flow control method.

4.1.8 Clear Button

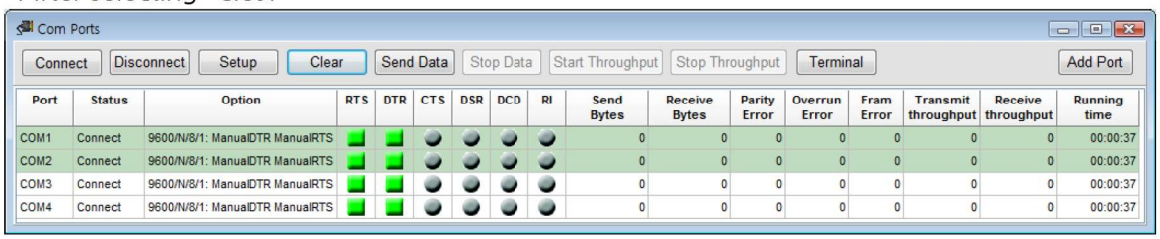
“Clear” button clears all information recorded so far.

Before selecting “Clear”



Port	Status	Option	RTS	DTR	CTS	DSR	DCD	RI	Send Bytes	Receive Bytes	Parity Error	Overrun Error	Fram Error	Transmit throughput	Receive throughput	Running time
COM1	Connect	9600/N/8/1: ManualDTR ManualRTS							5,454	0	0	0	0	0	0	00:00:11
COM2	Connect	9600/N/8/1: ManualDTR ManualRTS							5,454	0	0	0	0	0	0	00:00:11
COM3	Connect	9600/N/8/1: ManualDTR ManualRTS							5,454	0	0	0	0	0	0	00:00:11
COM4	Connect	9600/N/8/1: ManualDTR ManualRTS							5,454	0	0	0	0	0	0	00:00:11

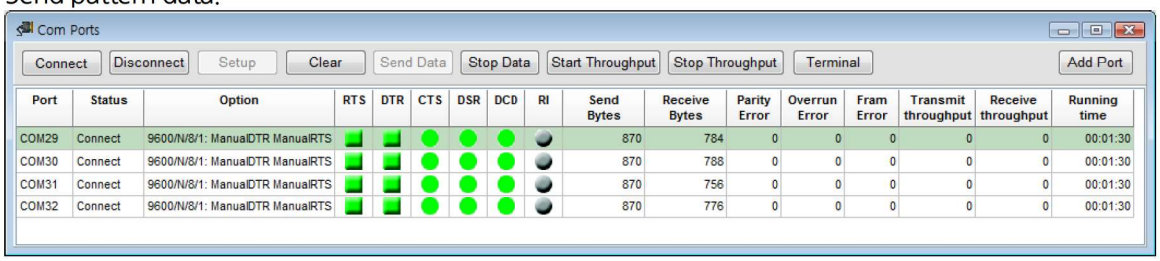
After selecting “Clear”



Port	Status	Option	RTS	DTR	CTS	DSR	DCD	RI	Send Bytes	Receive Bytes	Parity Error	Overrun Error	Fram Error	Transmit throughput	Receive throughput	Running time
COM1	Connect	9600/N/8/1: ManualDTR ManualRTS							0	0	0	0	0	0	0	00:00:37
COM2	Connect	9600/N/8/1: ManualDTR ManualRTS							0	0	0	0	0	0	0	00:00:37
COM3	Connect	9600/N/8/1: ManualDTR ManualRTS							0	0	0	0	0	0	0	00:00:37
COM4	Connect	9600/N/8/1: ManualDTR ManualRTS							0	0	0	0	0	0	0	00:00:37

4.1.9 Send Data/Stop Data

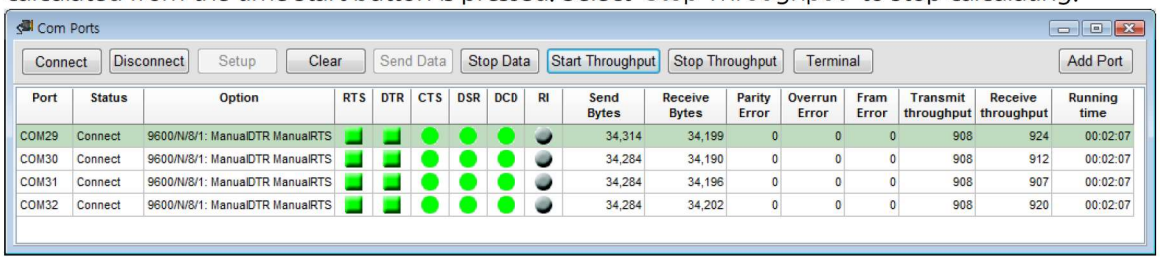
Send pattern data.



Port	Status	Option	RTS	DTR	CTS	DSR	DCD	RI	Send Bytes	Receive Bytes	Parity Error	Overrun Error	Fram Error	Transmit throughput	Receive throughput	Running time
COM29	Connect	9600/N/8/1: ManualDTR ManualRTS							870	784	0	0	0	0	0	00:01:30
COM30	Connect	9600/N/8/1: ManualDTR ManualRTS							870	788	0	0	0	0	0	00:01:30
COM31	Connect	9600/N/8/1: ManualDTR ManualRTS							870	756	0	0	0	0	0	00:01:30
COM32	Connect	9600/N/8/1: ManualDTR ManualRTS							870	776	0	0	0	0	0	00:01:30

4.1.10 Start Throughput/Stop Throughput

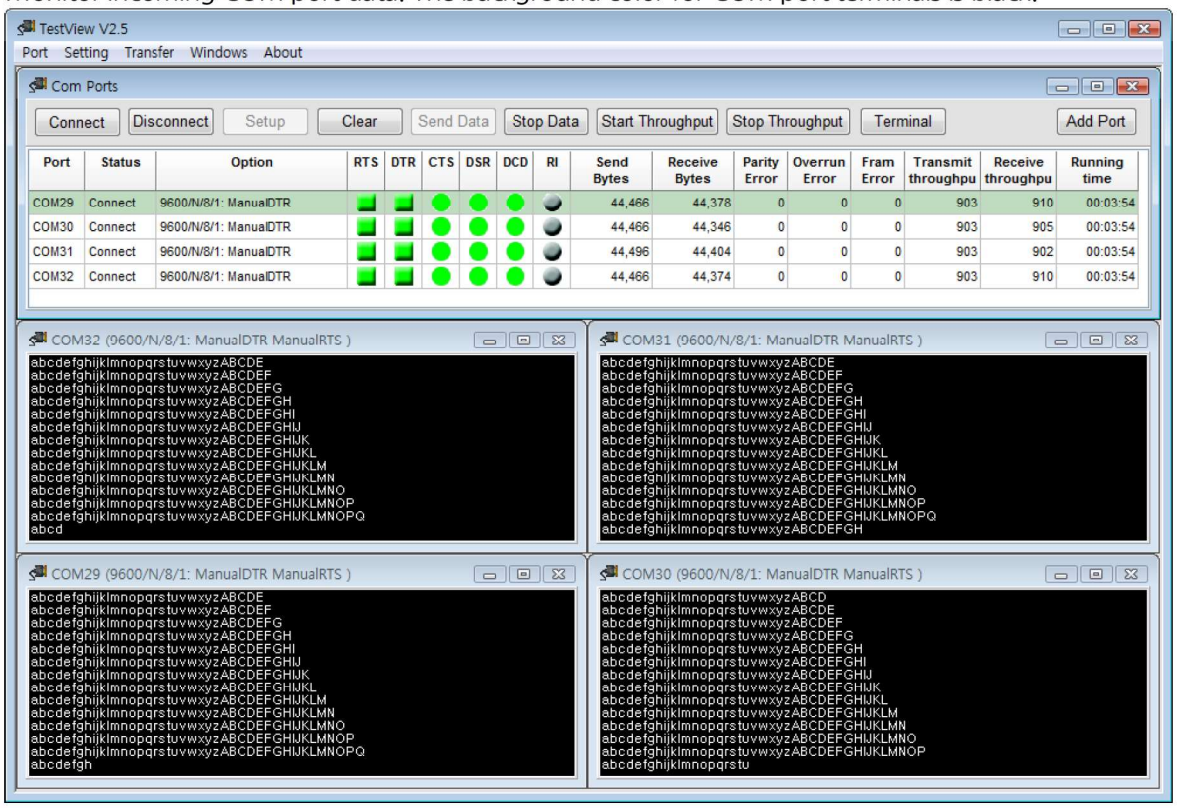
Select “Start Throughput” to see Transmit/Receive throughput. Average data per second is calculated from the time start button is pressed. Select “Stop Throughput” to stop calculating.



Port	Status	Option	RTS	DTR	CTS	DSR	DCD	RI	Send Bytes	Receive Bytes	Parity Error	Overrun Error	Fram Error	Transmit throughput	Receive throughput	Running time
COM29	Connect	9600/N/8/1: ManualDTR ManualRTS							34,314	34,199	0	0	0	908	924	00:02:07
COM30	Connect	9600/N/8/1: ManualDTR ManualRTS							34,284	34,190	0	0	0	908	912	00:02:07
COM31	Connect	9600/N/8/1: ManualDTR ManualRTS							34,284	34,196	0	0	0	908	907	00:02:07
COM32	Connect	9600/N/8/1: ManualDTR ManualRTS							34,284	34,202	0	0	0	908	920	00:02:07

4.1.11 Terminal

Monitor incoming COM port data. The background color for COM port terminals is black.



Port	Status	Option	RTS	DTR	CTS	DSR	DCD	RI	Send Bytes	Receive Bytes	Parity Error	Overrun Error	Fram Error	Transmit throughpu	Receive throughpu	Running time
COM29	Connect	9600/N/8/1: ManualDTR							44,466	44,378	0	0	0	903	910	00:03:54
COM30	Connect	9600/N/8/1: ManualDTR							44,466	44,346	0	0	0	903	905	00:03:54
COM31	Connect	9600/N/8/1: ManualDTR							44,496	44,404	0	0	0	903	902	00:03:54
COM32	Connect	9600/N/8/1: ManualDTR							44,466	44,374	0	0	0	903	910	00:03:54

4.1.12 Add Port

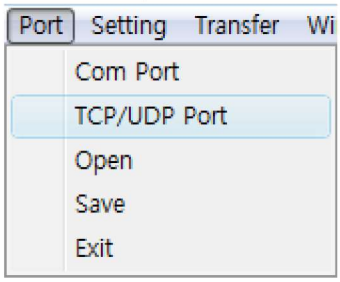
Add additional ports. Refer to 4.1.3 Open Com Port Configuration for more details.

4.2 TCP/UDP Port

This option allows testing TCP Server/Client and UDP protocols.

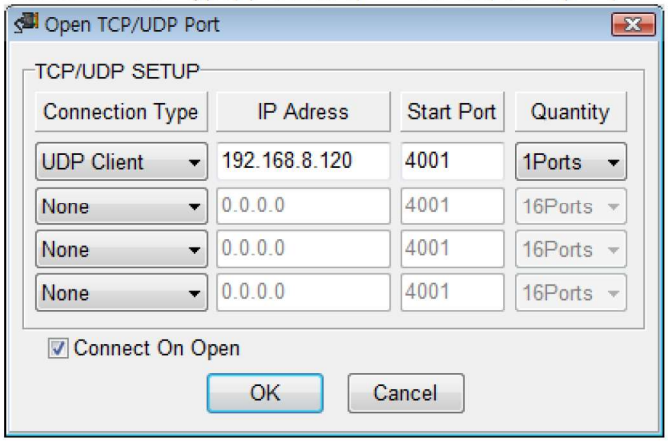
4.2.1 Opening Ports

Select Port -> TCP/UDP Port from the menu.



4.2.2 Open TCP/UDP Port Configuration

Set connection type, protocols, IP Address, Start port, and Quantity.



"Open TCP/UDP Port" Options

There are four Connection Type options available.

TCP Client : Connect to the remote TCP server. Set server's IP address and the port.

TCP Server : Run the TCP server with the PC. PC's IP address is used by the server.

UDP Client : Connect to the remote UDP server. Set server's IP address and the port.

UDP Server : Run the UDP server with the PC. PC's IP address is used by the server.

IP Address: IP Address

Start Port: The beginning port number.

Quantity: The number of ports to test.

Note

UDP Server/Client test details are identical to TCP Server/Client settings.

All other options are identical to COM Ports except the "Setup" menu, so refer to "Com

Ports“for more information.

4.2.3 TCP Client Configuration

Test tips

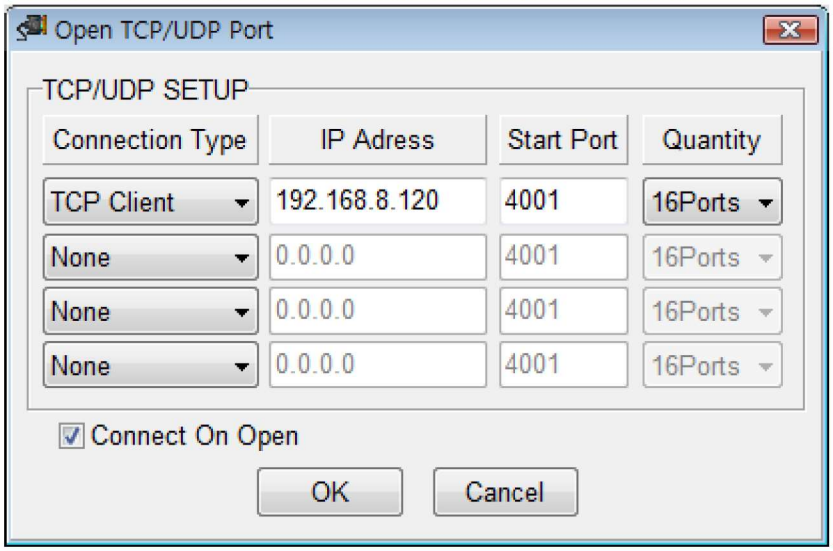
From the TCP client, “Connect” and “Send Data” to the server to send pattern data. Select “Start Throughput” to calculate average throughput.

Click “Terminal” to monitor incoming data.

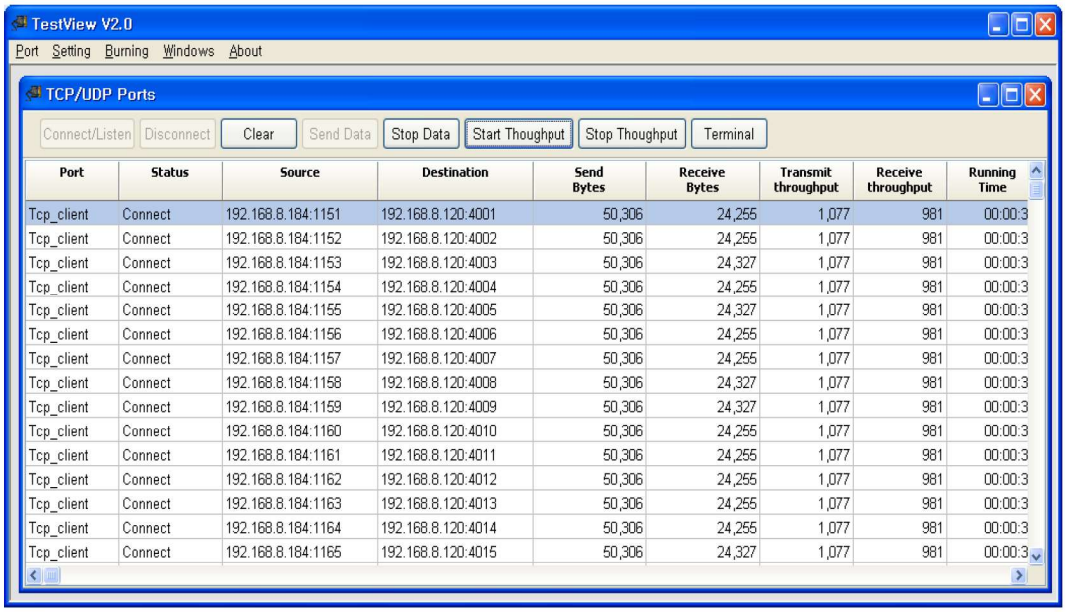
Click “Clear” when you want to reset all information recorded so far.

Select “Data Stop” and “Disconnect” if you want to quit the connection.

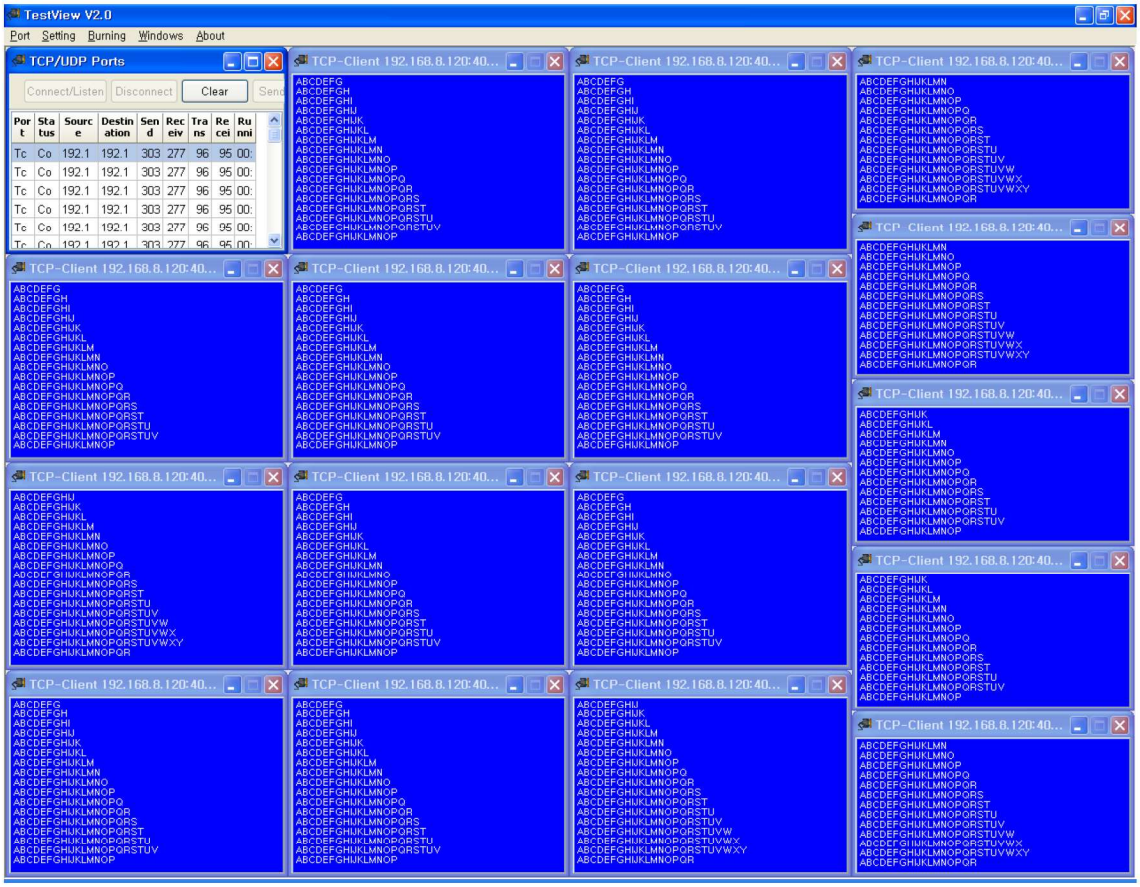
Set the remote server IP address and the port number.



Transmit test pattern data after making the connection to the remote server.

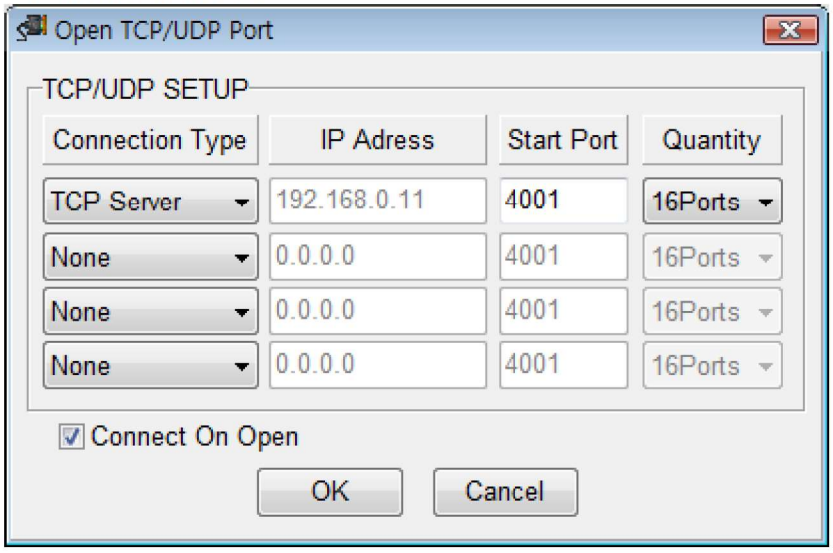


Click “Terminal” button to monitor test pattern data displayed in the window.

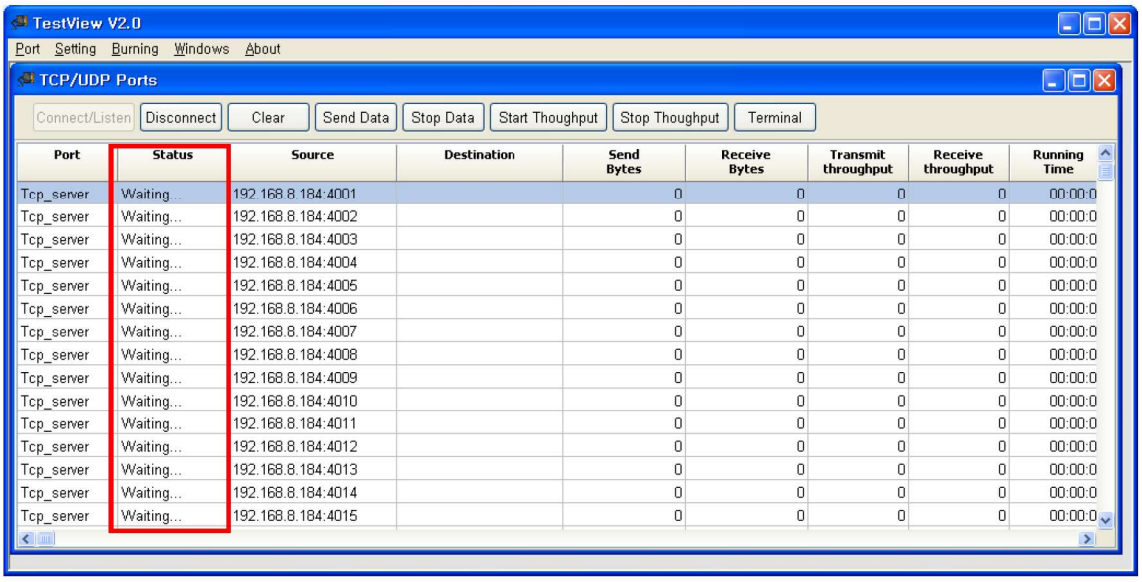


4.2.4 TCP Server Configuration

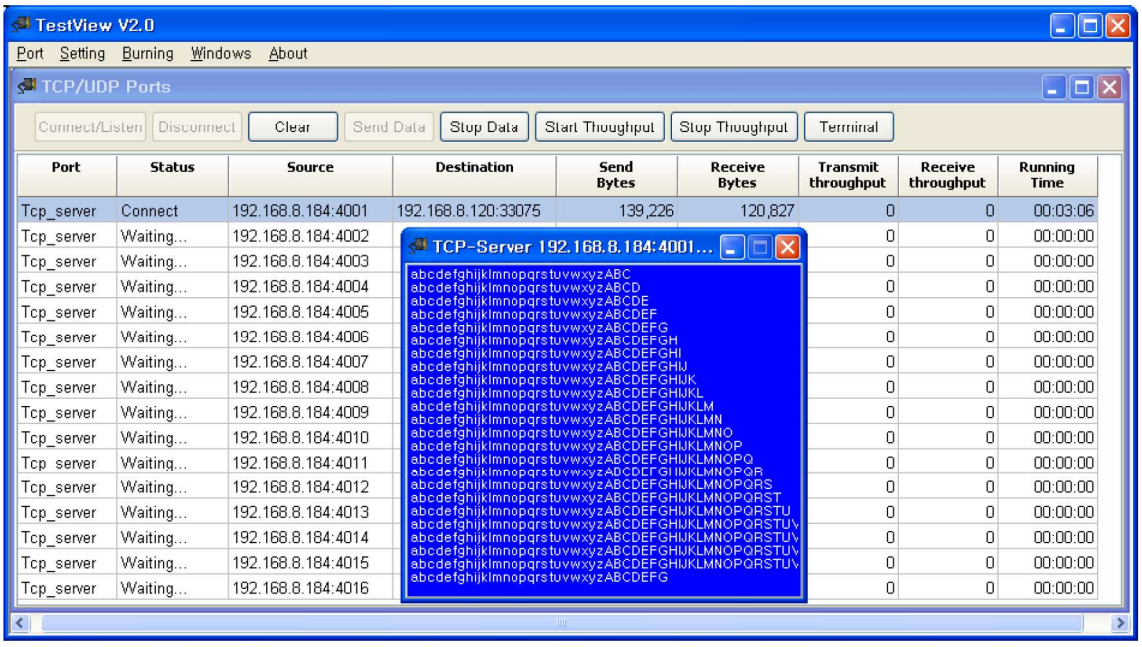
When you select TCP Server, the current IP address of the PC is automatically assigned. Enter the beginning port number in the ‘Start Port’ field. Up to 64 ports can be assigned to maximum 4 servers.



When you select 'Connect' in the TCP Server mode, the status changes to 'Waiting..'.



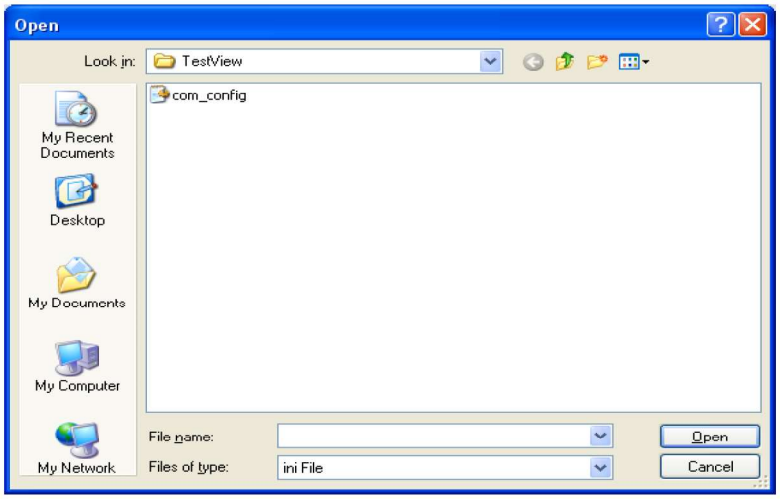
When you connect to the server from remote sites, destination IP address and data are displayed in the terminal window. Click 'Send Data' to send pattern data. Incoming data is displayed in the terminal window, just as in COM port mode. The difference is in background color of the terminal; it is blue in TCP mode.



4.3 Open

This option is used when restoring previous configurations to another setting. When you need to configure same settings to multiple devices, this option can be handy.

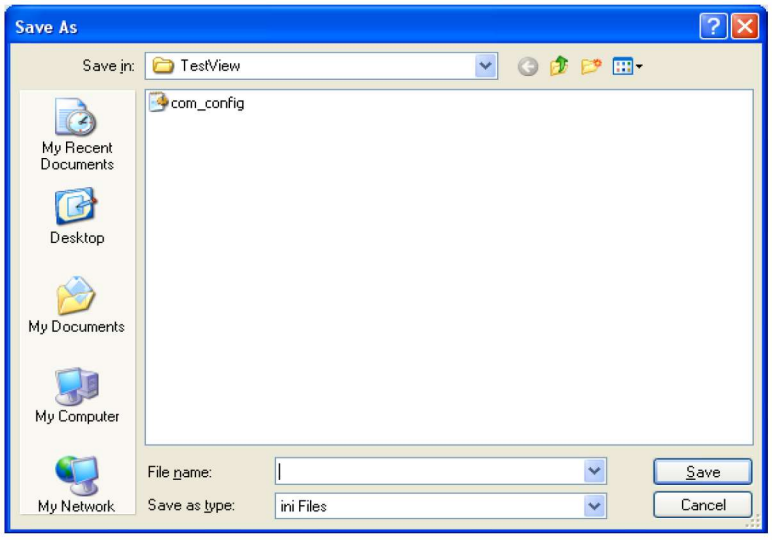
This menu opens INI configuration files.



4.4 Save

This option is used when saving current configurations to a file. When you need to configure same settings to multiple devices, this option can be handy.

This menu saves settings in INI configuration file format.

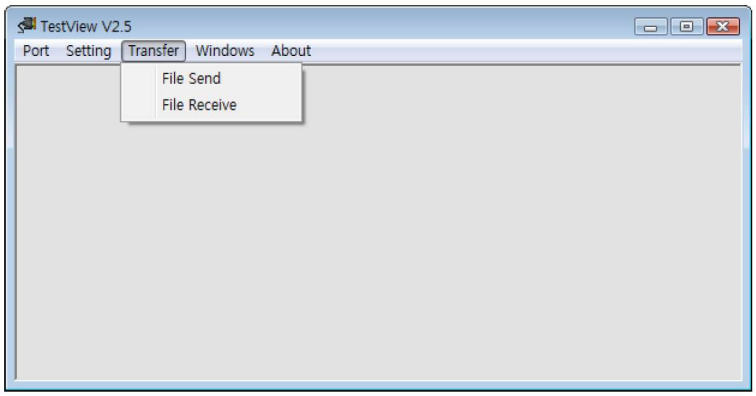


4.5 Exit

Terminates the program.

Chapter 5. File Transfer Menu

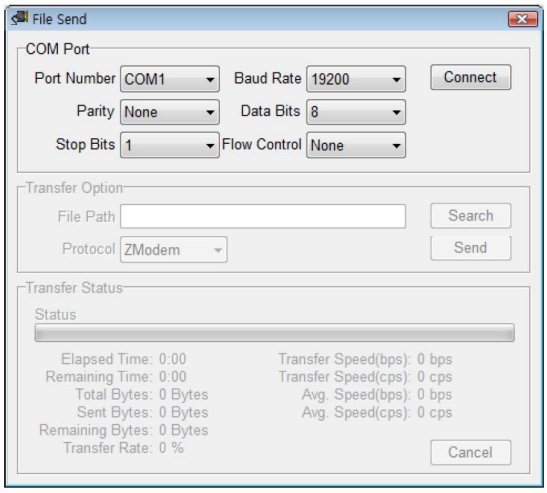
5.1 Summary



You can transfer file through serial COM Ports in File Transfer Menu. Go to Menu -> Transfer -> File Send to open File Send window or File Receive to open File Receive window.

5.2 Menu

File Transfer window looks as follows. It is divided into three categories, COM Port, Transfer Option and Transfer Status. Notice that only COM Port category is activated. The other two categories will be activated once you connect the COM Port.

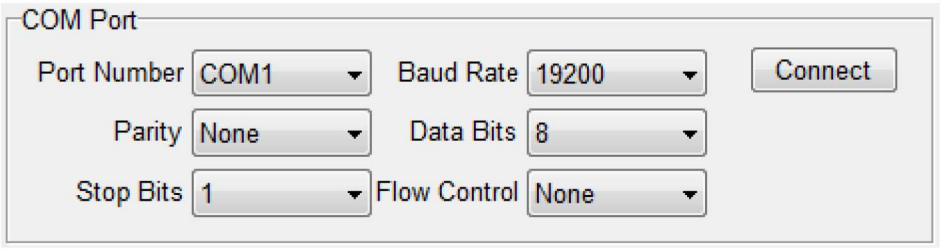


COM Port: Select COM Port settings
Transfer Option: Select transfer options

Transfer Status: Displays transfer status

5.2.1 COM Port

You can configure COM Port settings in COM Port category.



Port Number: Select port number
Baud Rate: Select baud rate
Parity: Select parity bits
Data Bits: Select Data bits.
Stop Bits: Select stop bits
Flow Control: Select flow control option.

5.2.2 Transfer Option

You can configure transfer options in Transfer Option category. Options are different between File Send and File Receive.

File Send

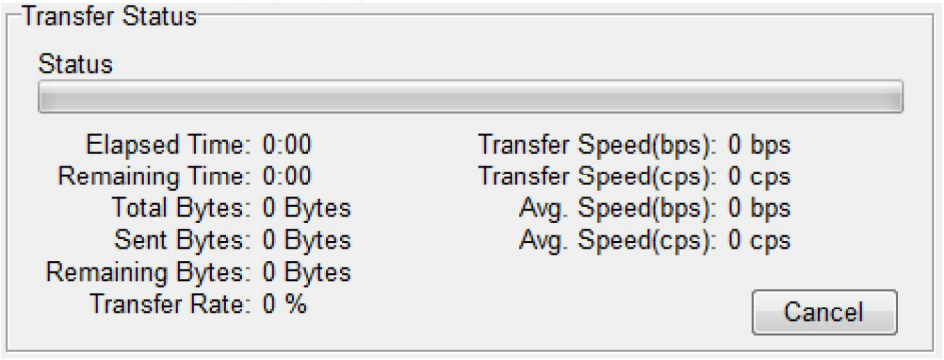
File Path: Select the path of the file that will be transferred
Protocol: Select file transfer protocol

File Receive

Destination: Select the destination where the transferred file will be saved
Protocol: Select file transfer protocol

5.2.3 Transfer Status

Transfer Status Category displays file transfer status.



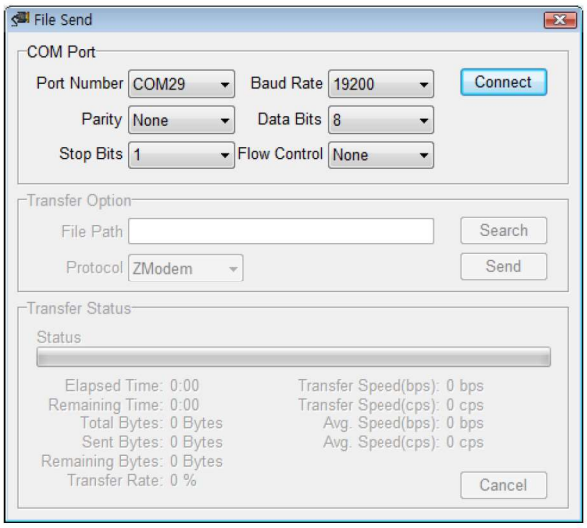
Status: Shows file transfer status.
Elapsed Time: Shows elapsed time.
Remaining Time: Shows estimated remaining time.
Total Bytes: Shows total size of the file being transferred.
Sent (Received) Bytes: Shows total sent (received) bytes.
Remaining Bytes: Shows total bytes left to be transferred.
Transfer Rate: Shows the transferred bytes rate in percentage.
Transfer Speed (bps): Shows instantaneous transfer speed in bps.
Transfer Speed (cps): Shows instantaneous transfer speed in cps.
Avg. Speed (bps): Shows average transfer speed in bps.
Avg. Speed (cps): Shows average transfer speed in cps.

5.3 Transferring Files

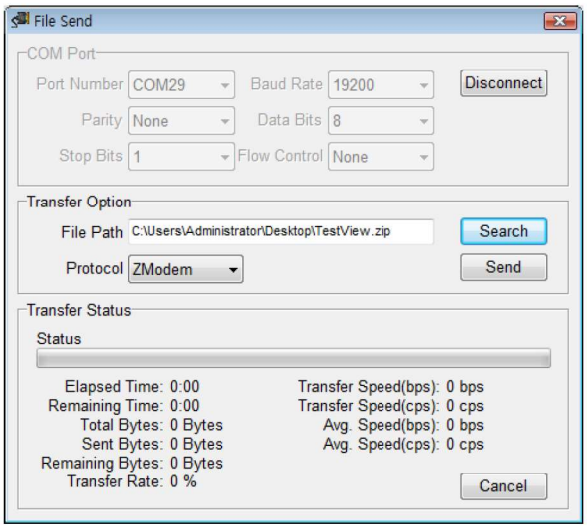
In order to transfer file through file transfer menu, you need two COM ports, one for file send and the other for file receive. Keep in mind that COM port settings and file transfer protocol should be the same for both COM ports.

5.3.1 Sending File

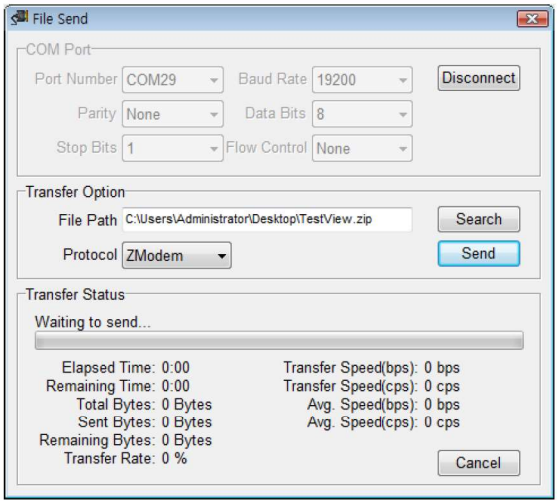
1. Go to Menu -> Transfer -> File Send and open File Send window. Configure COM Port settings and click “Connect”.



2. Specify the transfer protocol and the file to be sent. You can either type in manually or click “Search” to find the file to be sent.

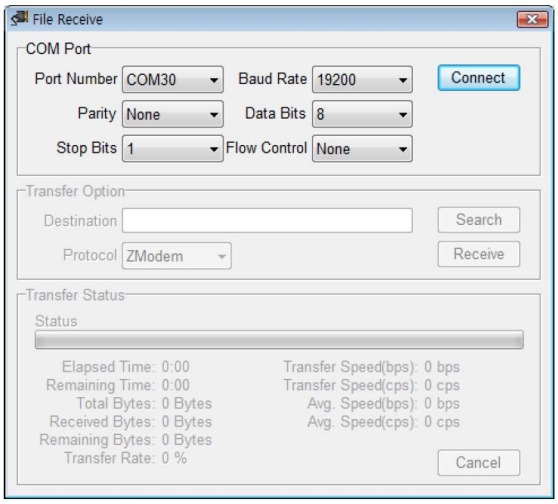


3. Click “Send” and the file sending will start. You can see that “Status” has changed to “Waiting to send…”

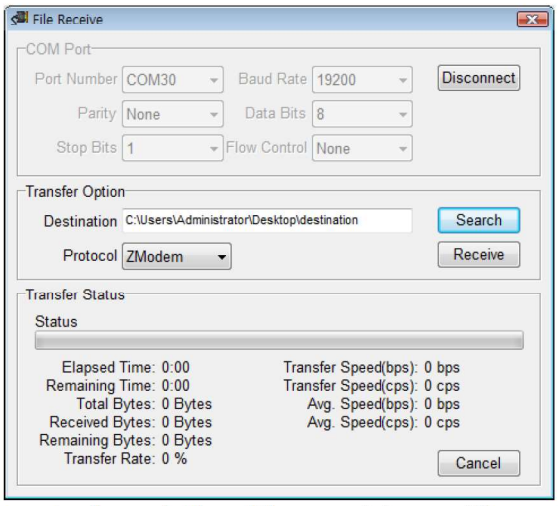


5.3.2 Receiving File

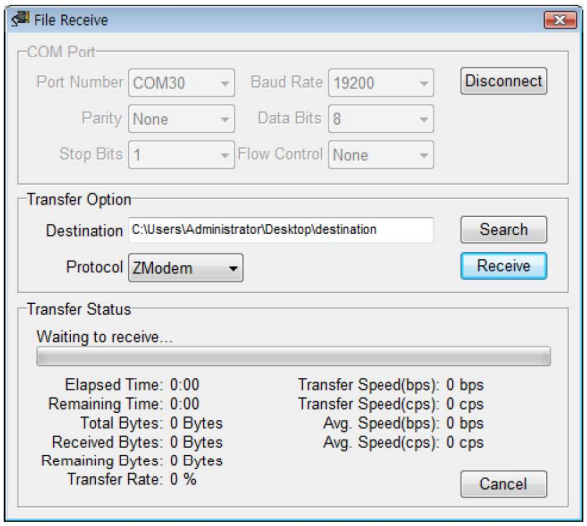
1. Go to Menu -> Transfer -> File Receive and open File Receive window. Configure COM Port settings and click “Connect”



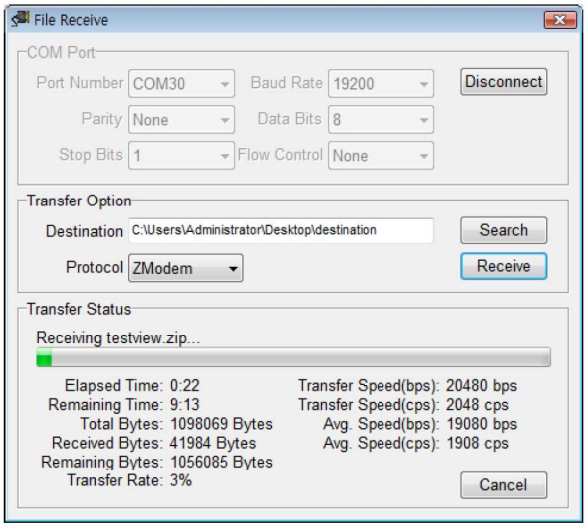
2. Specify the transfer protocol and the directory where the received file will be saved. You can either type manually or use “Search” button to specify the destination directory.



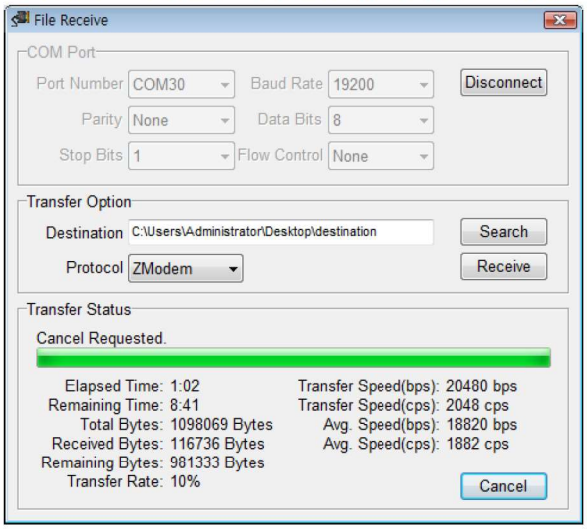
3. Click “Receive” and the file receiving will start. You can see that “Status” has changed to “Waiting to receive…”



4. Once file sending and receiving is done correctly, file transfer will begin.



5. You can use the “Cancel” button on Transfer Status to cancel transfer.



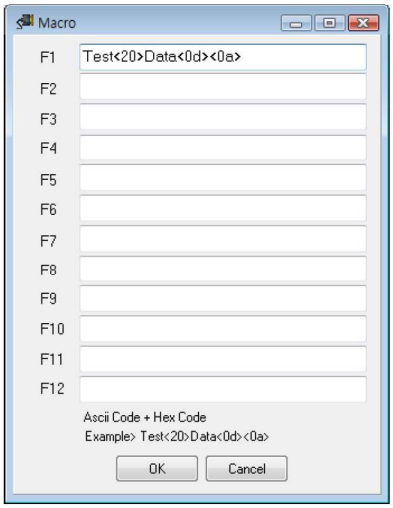
Chapter 6. Settings Menu

6.1 Overview

General options used in TestView can be set up with this menu. Macro is used to simply transmit predefined pattern data with a simple function key. Font can be changed with the Font menu.

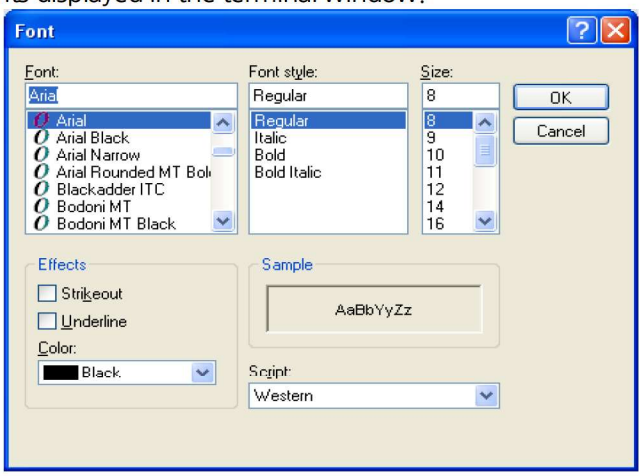
6.2 Macro

Assign pattern data to be transmitted when you press F1 to F12 keys.



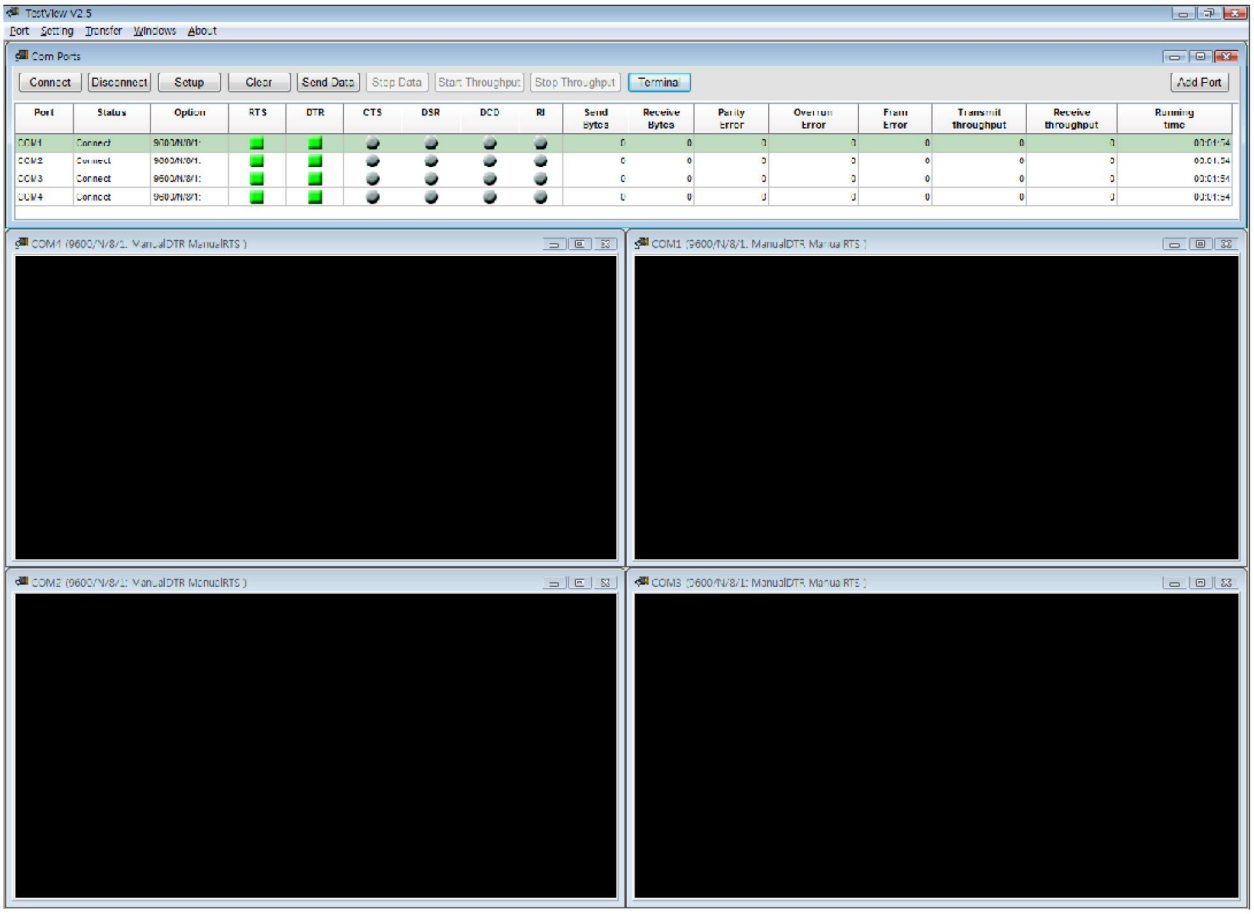
6.3 Font

Change fonts displayed in the terminal window.

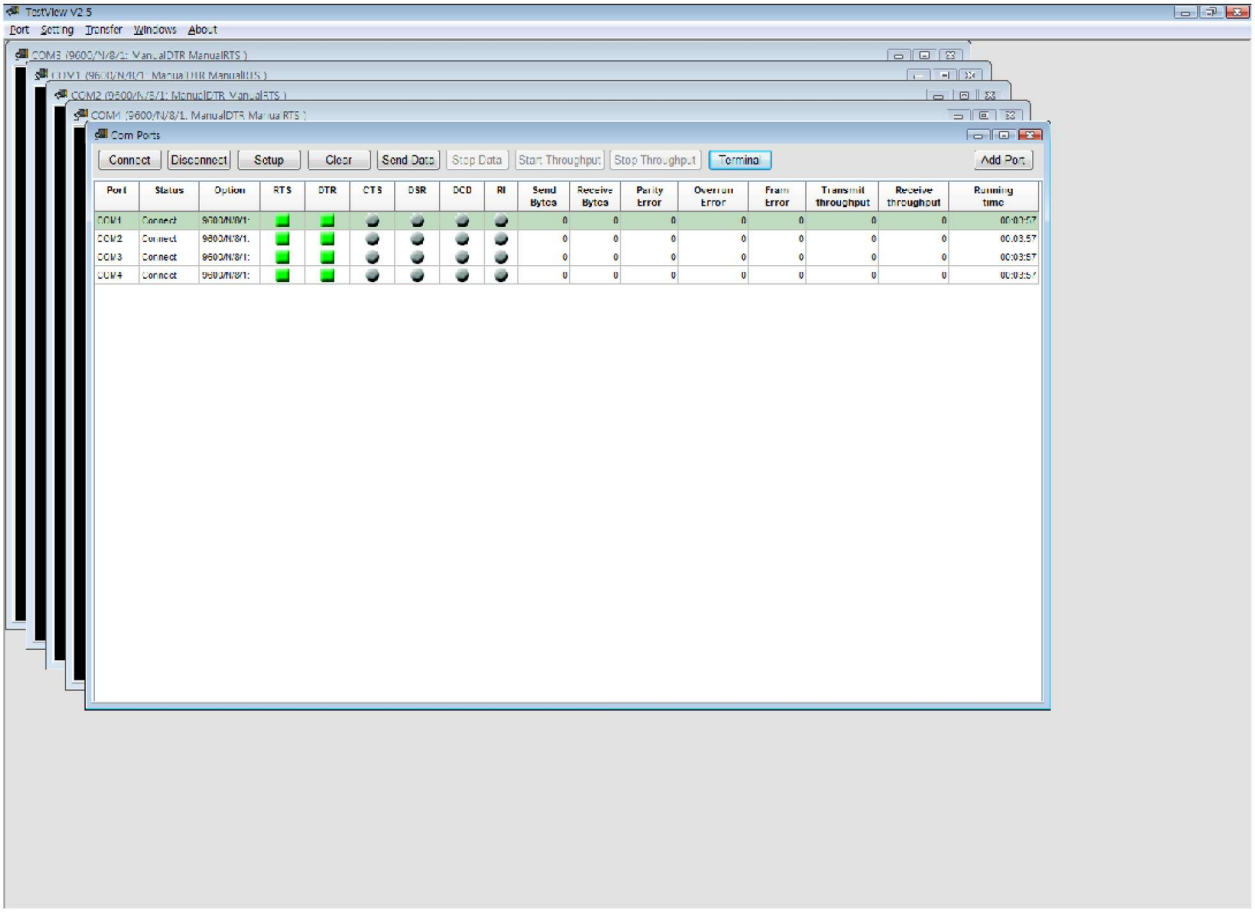


Chapter 7. Windows Menu

7.1 Tile



7.2 Cascade

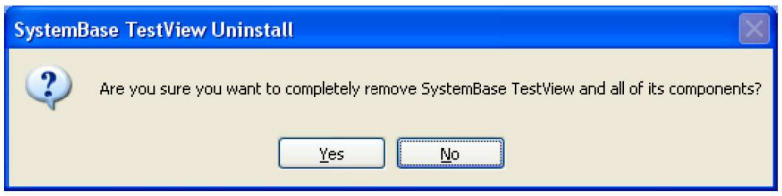

TestView V2.5
Port Setting Transfer Windows About
Com Ports
Connect
Disconnect
Setup
Clear
Send Data
Stop Data
Start Throughput
Stop Throughput
Termina
Add Port
Port
Status
Option
RTS
DTR
CTS
DSR
DCD
RI
Send Bytes
Receive Bytes
Parity error
Overrun Error
Fram error
Transmit throughput
Receive throughput
Running time
COM1
COM2
COM3
COM4
Connect

Chapter 8. Uninstalling TestView

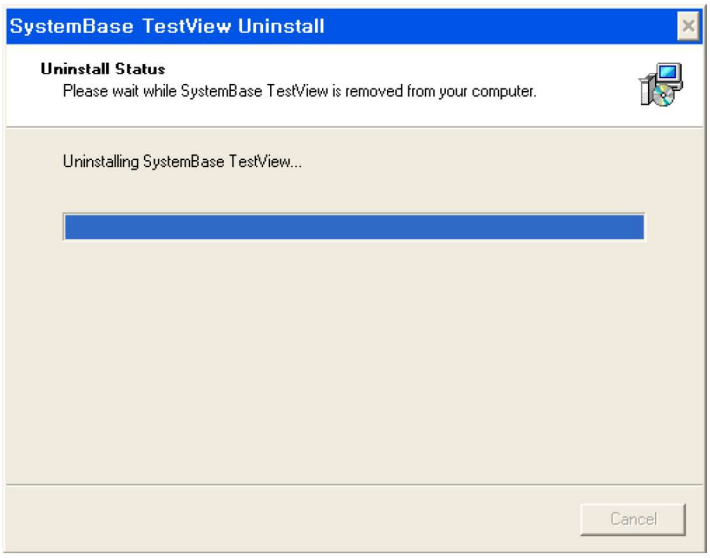
8.1 How to uninstall

Start -> All Programs -> SystemBase -> TestView -> Uninstall TestView

Select 'Yes' from the confirmation dialog box.



Uninstall Status is shown in the progress bar.



After uninstallation is successfully complete, following message is displayed.