2401 Stanwell Drive
Concord, CA, 94520
www.relabsoft.com

RLTCPCOM Server

RLTCPCOM Configuration Console Manual

Revision 1.1
October 18, 2006
ReLab Software LLC.

INTRODUCTION TO RLTCPCOM

RLTCPCOM Server is a robust solution for managing RS232 devices such as IED's, PLC's or any other electronic devices over TCP/IP network. RLTCPCOM Server allows user to connect directly to a remote serial port over TCP/IP connection. It's also possible to connect to RLTCPCOM Server over a telnet session and send commands to remote serial equipment directly. RLTCPCOM has virtually no limitation on number of serial devices or number of TCP/IP socket connections.

RLTCPCOM CONFIGURATION CONSOLE

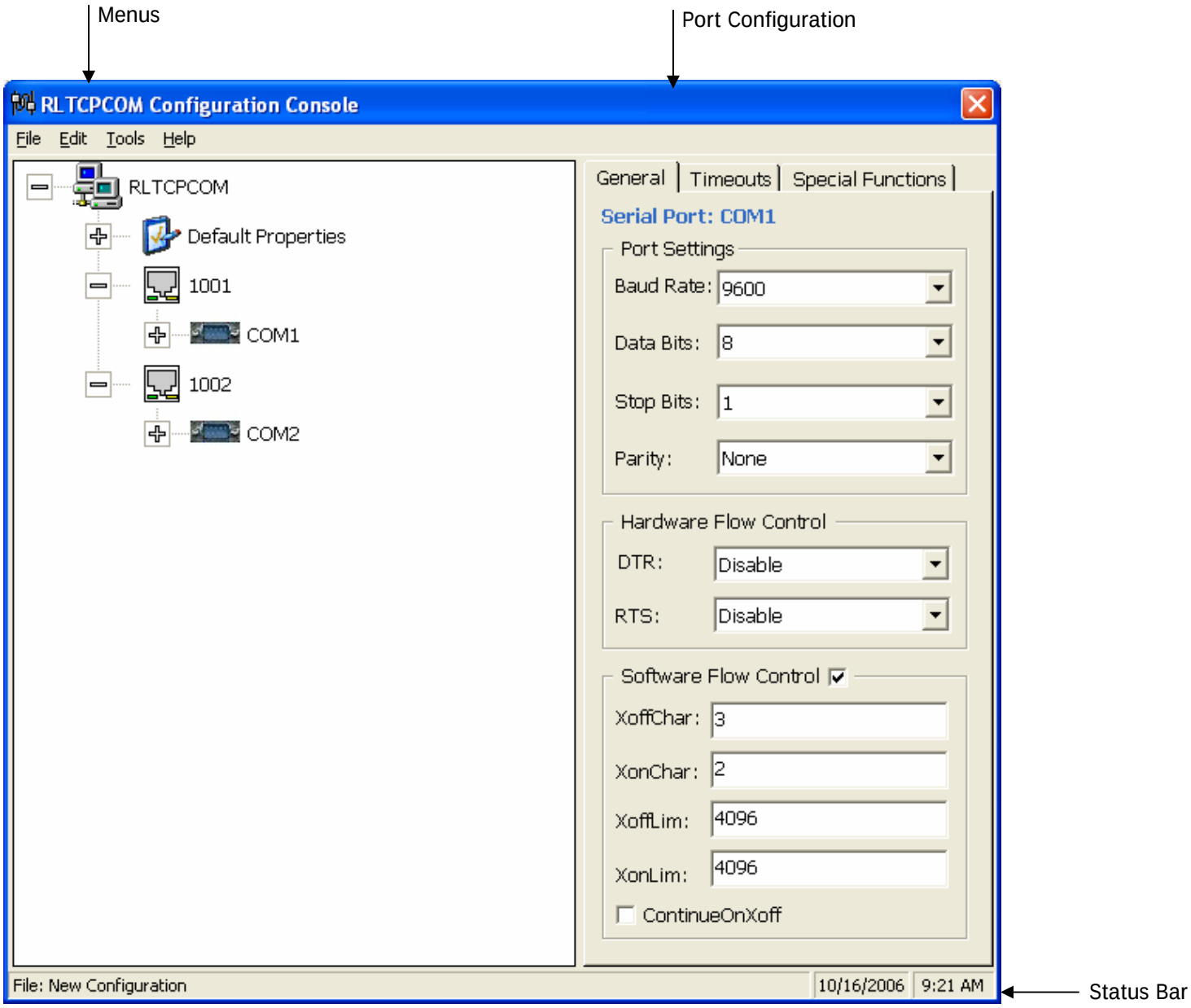

Fig-1

MENUS & STATUS BAR

APPLICATION MENU

File

New Configuration	Opens new configuration (Ctrl + N)
Open Configuration	Opens existing configuration (Ctrl + O)
Save	Saves configuration (Ctrl + S)
Save As...	Save configuration to specified location (Ctrl+F11)
Deploy Configuration	Deploys configuration to specified location (Ctrl + F9)
Exit	Exits application (Ctrl + Q)

Edit

Add Port	Add TCP/IP & Serial port to configuration (Ctrl + P)
Delete Port	Deletes TCP/IP & Serial port from configuration (Ctrl + D)

Tools

RLTCPCOM Options	Opens RLTCPCOM option dialog form (Ctrl + R)
RLTCPCOM NT Service	Opens RLTCPCOM NT service dialog form (F12)

Help

RLTCPCOM Help	Opens RLTCPCOM help manual (F1)
About RLTCPCOM Console	Opens RLTCPCOM About dialog (Ctrl + A)

CONTEXT MENU

Right click on RLTCPCOM icon will give an option to add TCP/IP and serial ports.
Right click on TCP/IP port icon will give an option to delete TCP/IP and serial ports.

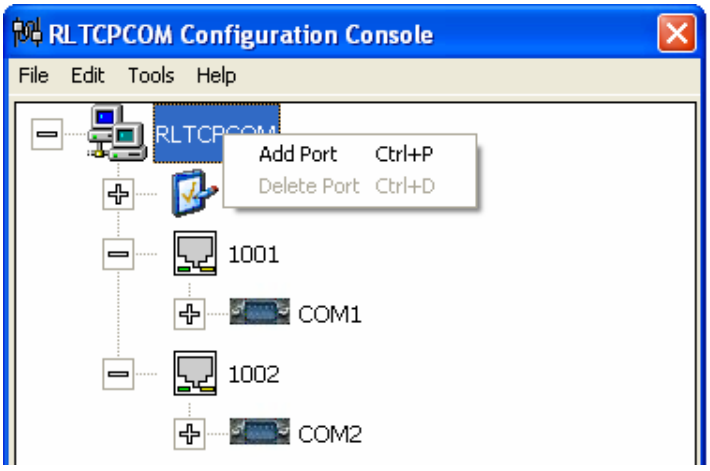

Fig-2

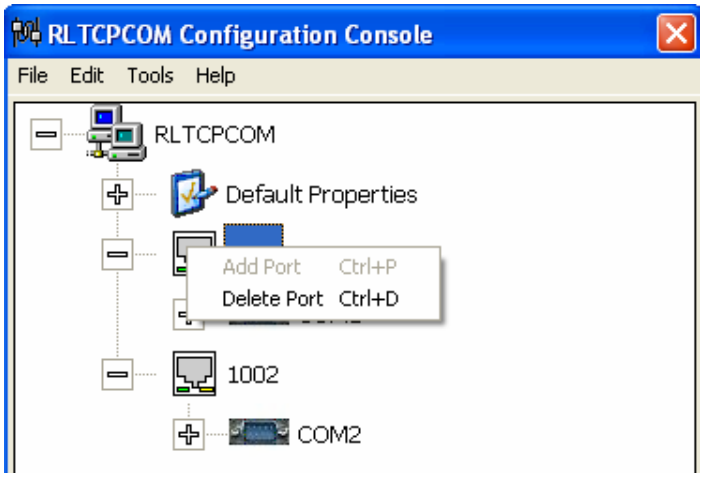

Fig-3

STATUS BAR

The status bar specifies configuration file name currently opened and displays current date and time.

RLTCPCOM CONFIGURATION

TCP/IP AND SERIAL PORTS

To change the TCP/IP and Serial port names click on select port.

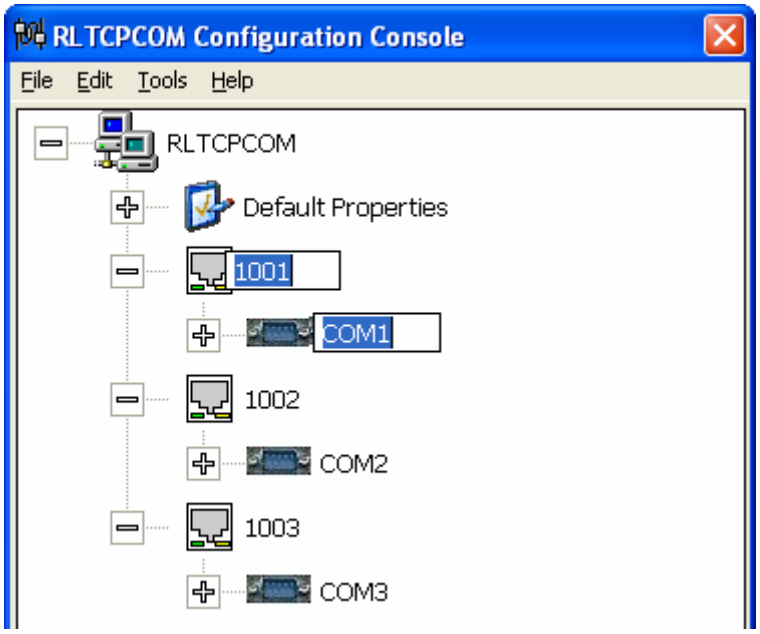

Fig-4

RLTCPCOM CONFIGURATION – TCP/IP & SERIAL PORTS

GENERAL

Parameter	Description
Baud Rate	Bits per second (300 to 256000)
Data Bits	Data Bits (4,5,6,7,8)
Stop Bits	Stop Bits (1, 1.5, 2)
Parity	Parity (No Parity, Even, Odd)
DTR	DTR (Disable, Enable, Handshake)
RTS	RTS (Disable, Enable, Handshake
Software Flow Control	Enables/Disables Software Flow Control
XoffChar	The XoffChar member of the DCB dictates the XOFF character for both input and output flow control.
XonChar	The XonChar member of the DCB similarly dictates the XON character.
XoffLim	For input flow control, the XoffLim member of the DCB specifies the minimum amount of free space allowed in the input buffer before the XOFF character is sent. If the amount of free space in the input buffer drops below this amount, then the XOFF character is sent. For input flow control, the XonLim member of the DCB specifies the minimum number of bytes allowed in the input buffer before the XON character is sent.
XonLim	If the amount of data in the input buffer drops below this value, then the XON character is sent.
ContinuesOnXoff	If software flow control is enabled for input control, then the ContinueOnXoff member of the DCB takes effect. The ContinueOnXoff member controls whether transmission is suspended after the XOFF character is automatically sent by the system. If ContinueOnXoff is TRUE, then transmission continues after the XOFF is sent when the receive buffer is full. If ContinueOnXoff is FALSE, then transmission is suspended until the system automatically sends the XON character. DCE devices using software flow control will suspend their sending after the XOFF character is received. Some equipment will resume sending when the XON character is sent by the DTE.

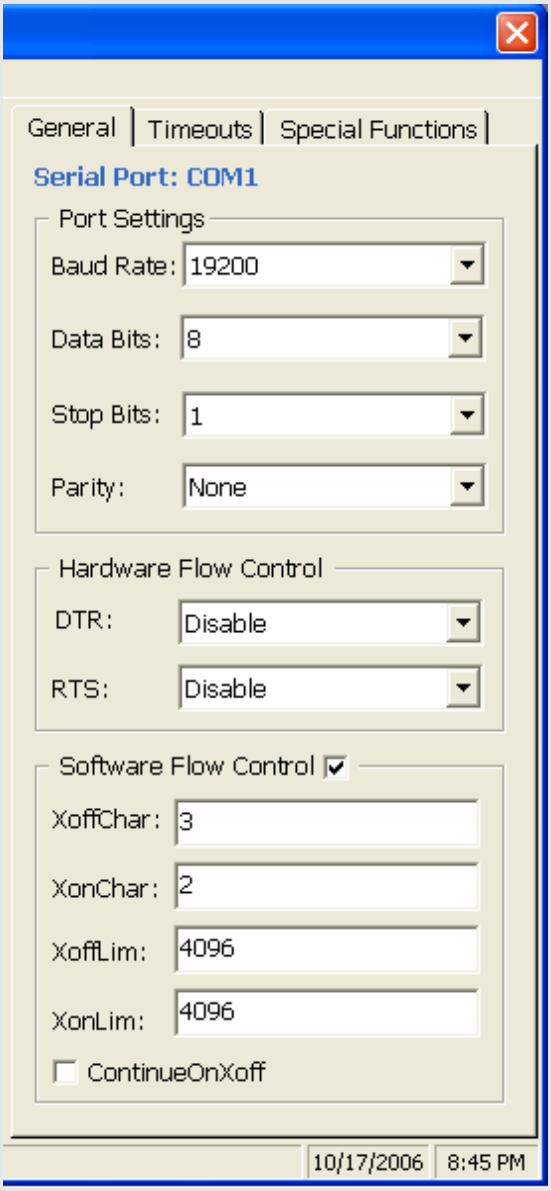

Fig-5

RLTCPCOM CONFIGURATION – TCP/IP & SERIAL PORTS

TIMEOUTS

Parameter	Description
Read Interval	**ReadIntervalTimeout** Specifies the maximum time, in milliseconds, allowed to elapse between the arrival of two characters on the communications line. During a ReadFile() operation, the time period begins when the first character is received. If the interval between the arrival of any two characters exceeds this amount, the ReadFile operation is completed and any buffered data is returned. A value of zero indicates that interval time-outs are not used. A value of MAXDWORD, combined with zero values for both the ReadTotalTimeout constant and ReadTotalTimeoutMultiplier members, specifies that the read operation is to return immediately with the characters that have already been received, even if no characters have been received.
Read Timeout	**ReadTotalTimeoutConstant** Specifies the constant, in milliseconds, used to calculate the total time-out period for read operations. For each read operation, this value is added to the product of the ReadTotalTimeoutMultiplier member and the requested number of bytes. A value of zero for both the ReadTotalTimeoutMultiplier and ReadTotalTimeoutConstant members indicates that total time-outs are not used for read operations.
Max Read Time	**ReadTotalTimeoutMultiplier** Specifies the multiplier, in milliseconds, used to calculate the total time-out period for read operations. For each read operation, this value is multiplied by the requested number of bytes to be read.
Write Timeout	**WriteTotalTimeoutConstant** Specifies the constant, in milliseconds, used to calculate the total time-out period for write operations. For each write operation, this value is added to the product of the WriteTotalTimeoutMultiplier member and the number of bytes to be written.
Max Write Time	**WriteTotalTimeoutMultiplier** Specifies the multiplier, in milliseconds, used to calculate the total time-out period for write operations. For each write operation, this value is multiplied by the number of bytes to be written.
Inter Char Delay	Delay between ASCII characters.
Connection Timeout	Species idle delay (host computer)

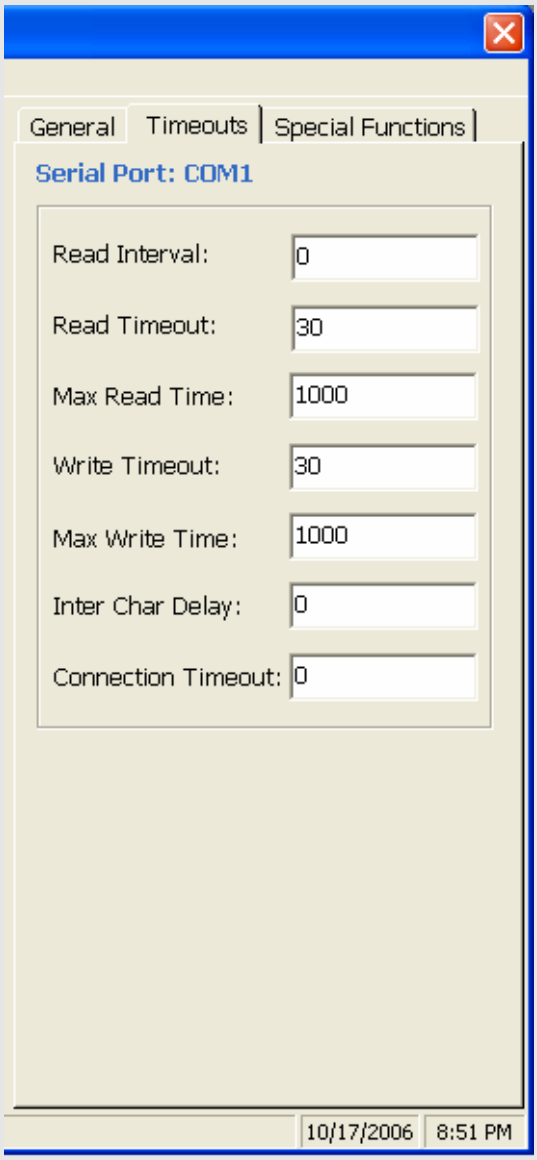

Fig-6

RLTCPCOM CONFIGURATION – TCP/IP & SERIAL PORTS

SPECIAL FUNCTIONS

Parameter	Description
Enable Tenet Mode	Enables/Disables Telnet session
RLTCPCOM Invite Message	Enables/Disables RLTCPCOM welcome message

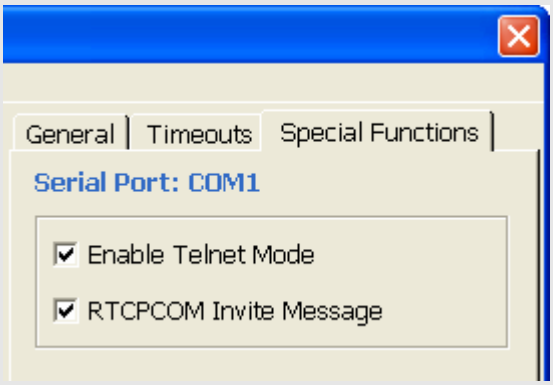

Fig-7

RLTCPCOM PORTS DEFAULT SETTINGS

Port default settings will apply to all configured ports. The user has ability to change settings for a specified port.

RLTCPCOM CONFIGURATION FILES

Configuration is stored in RLTCPCOM.config file in INI format (see example below).

```
[!Cfg]
Port = 2000
LogPath = F:\Log Files
LogVerbosity = 1
LogFiles = 10
LogSize = 1000000
[!Mapping]
2001 = COM1
[!DefaultSettings]
BaudRate = 19200
StopBits = 1
DataBits = 8
Parity = None
DTR = Enable
RTS = Enable
RIT = 0
RTTM = 30
RTTC = 1000
WTTM = 30
WTTC = 1000
WICT = 0
SoftX = Disable
XoffChar = 3
XonChar = 2
XoffLim = 4096
XonLim = 4096
ContinueOnXoff = Disable
```

TOOLS

RLTCPCOM SERVER OPTIONS

Parameter	Description
RLTCPCOM Server Port	Specifies RLTCPCOM Server configuration port
Enable Logging	Enables/Disables RLTCPCOM server logging
Path to log file(s)	Specifies log file location (path)
Max Number of Files	Specifies the maximum file size before a new file is created
Log Verbosity	Specifies level of information (0-9) to be logged

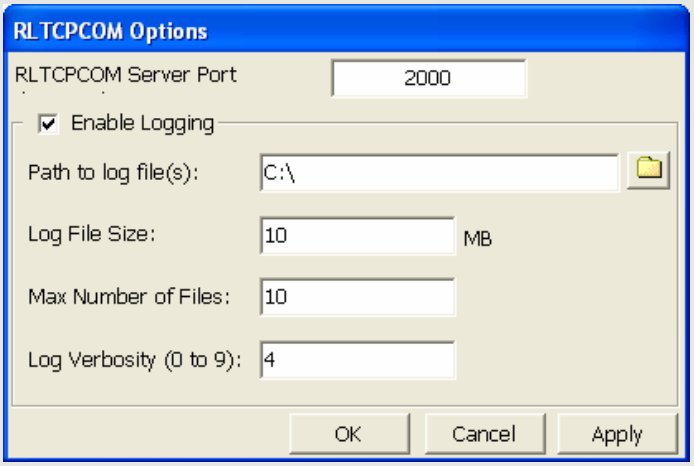

Fig-8

RLTCPCOM NT SERVICE

Button/Dropdown	Description
Register	Registers RLTCPCOM as NT Service
Remove	Removes RLTCPCOM Service
Start	Starts RLTCPCOM Service
Stop	Stops RLTCPCOM Service
Dropdown	Selects service start up type (manual, automatic or disable)
Exit	Closes the dialog

Fig-9

RLTCPCOM SERVER PORT

CONNECTING TO RLTCPCOM SERVER PORT

Using Windows Hyper terminal you can monitor the status of the RLTCPCOM Server (see Fig 8).

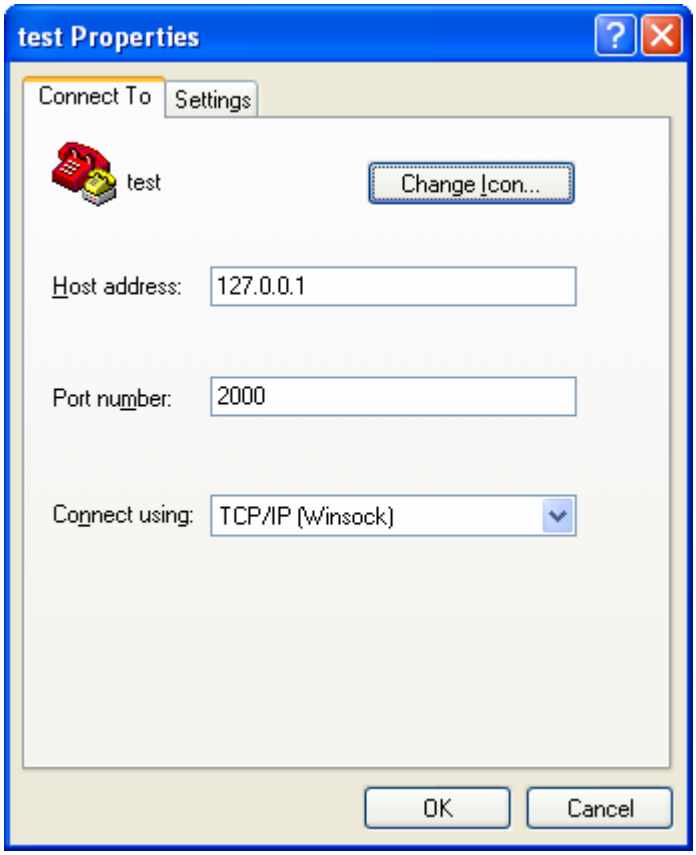

Fig-10

MONITORING RLTCPCOM SERVER PORT

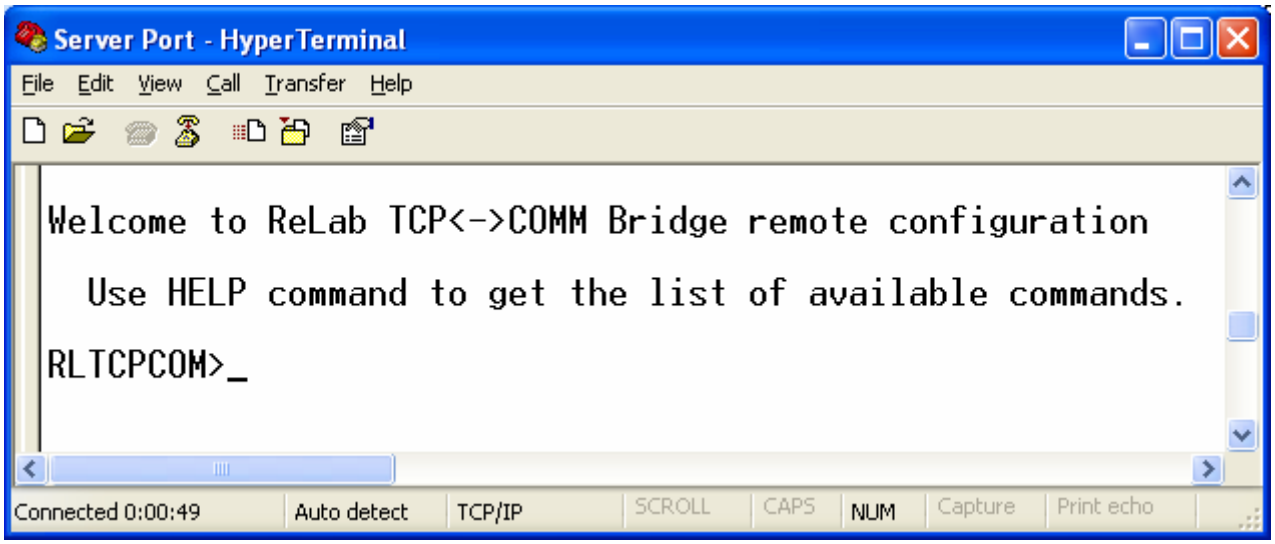

Fig-11

RLTCPCOM SERVER PORT

RLTCPCOM SERVER PORT – HELP COMMAND

Lists available commands

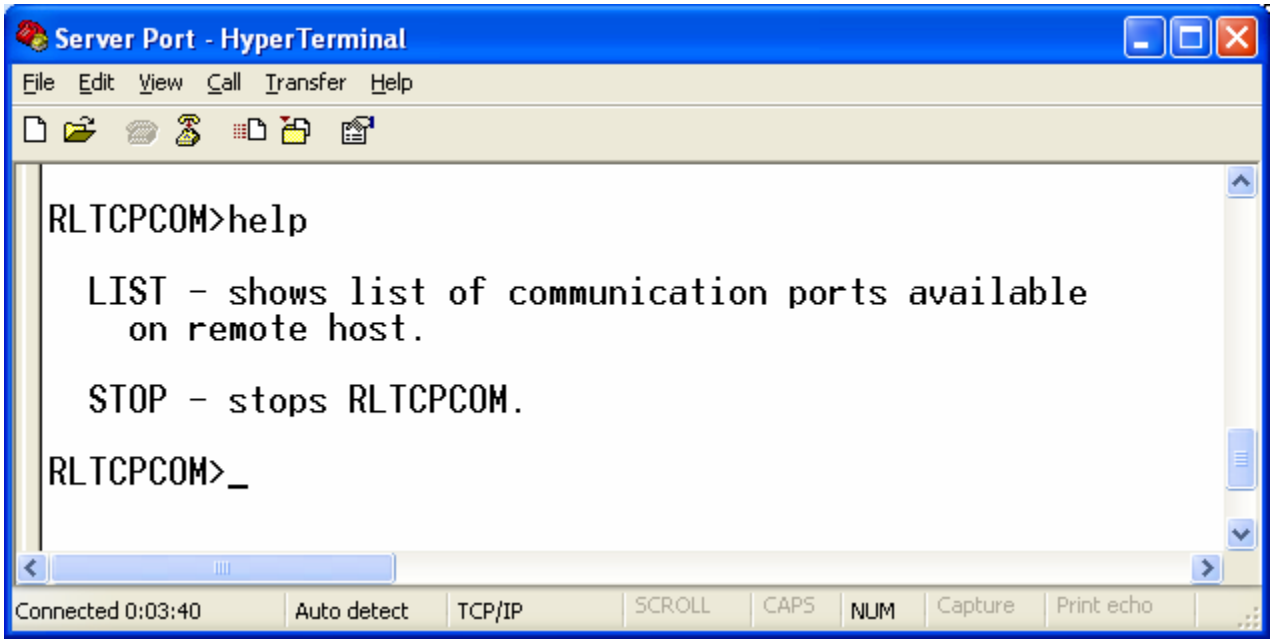

Fig-12

RLTCPCOM SERVER PORT – LIST COMMAND

Displays status of configured ports

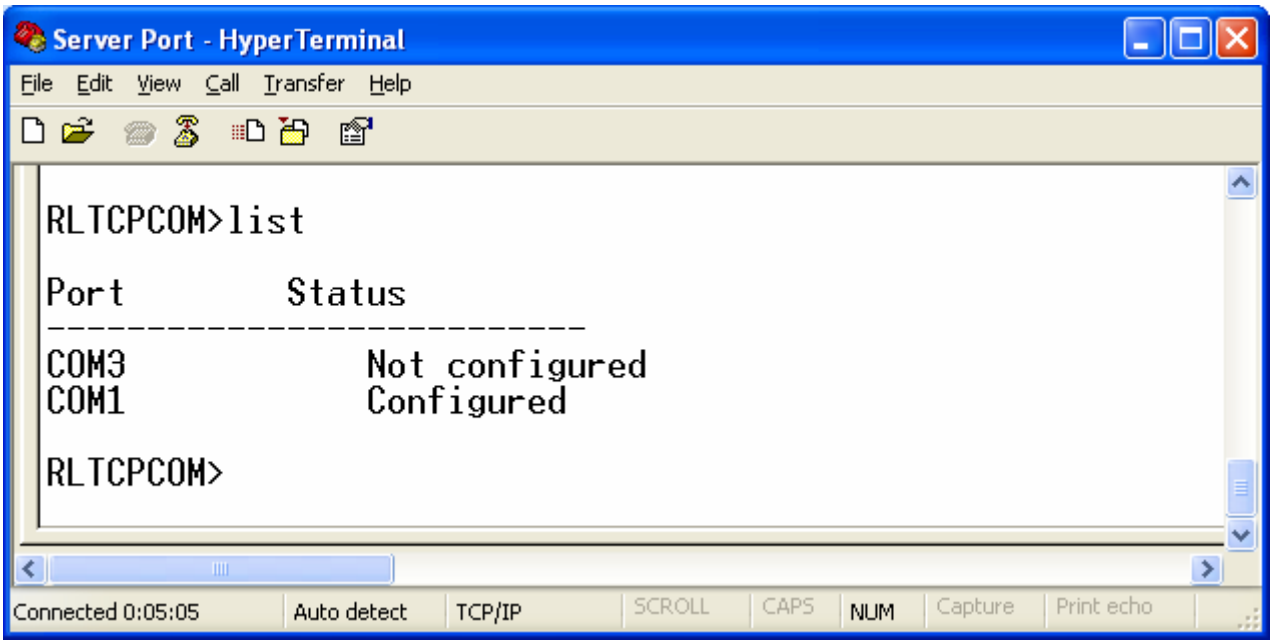

Fig-13

RLTCPCOM SERVER PORT

RLTCPCOM SERVER PORT – STOP COMMAND

Disconnects and stops RLTCPCOM service

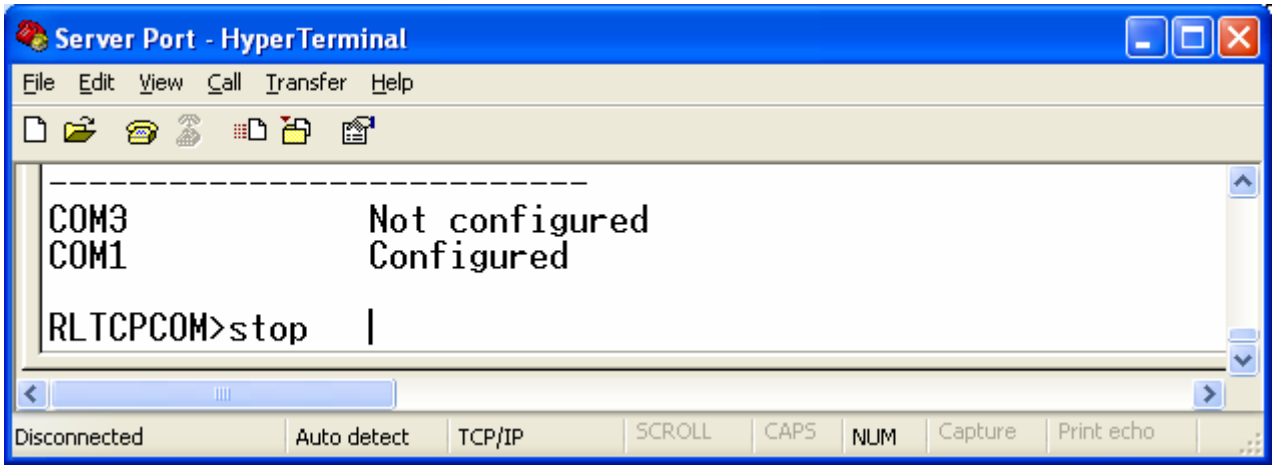

Fig-14