# SC5404D Series 4-Port DIN-Rail Serial Device Server

**User's Manual** 



Version 0.1 August 2011





#### IMPORTANT ANNOUNCEMENT

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# Published by

# Atop Technologies, Inc.

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Thank you for purchasing SE5404D Serial Device Server product. This document intends to provide customers with brief descriptions about the product and to assist customers to get started. For detail information and operations of the product, please refer to the product user's manual in the product CD or diskette.

# FCC WARNING

# Class A for Serial Device Server (Model SE5404D series)

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and radiates radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expenses.

A shielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord can be used.

Use only shielded cables to connect other devices to this equipment by RS-232 or RS-485 ports.

Be cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.



# Contents

1. INTRODUCTION	7
1.1 Packaging	7
1.2 Application Connectivity	8
2. HARDWARE SETUP	12
2.1 LED INDICATORS	13
2.2 Installation Procedures	14
3. SOFTWARE SETUP	15
3.1 Configuration by SerialManager Utility	16
3.1.1.Static IP	16
3.1.2 DHCP client (Dynamic IP)	16
3.2 Telnet Configuration	17
3.2.1 GENERAL INFORMATION	18
3.2.2 Networking Configuration	19
3.2.3 LAN Settings	
3.2.4 DNS Settings	20
3.2.5 SNMP Settings	21
3.2.6 COM Port Configuration	23
3.2.7 TCP Server for Link Mode	27
3.2.8 TCP Client for Link Mode	27
3.2.9 UDP Link Mode	28
3.2.10 Serial Settings	29
3.2.12 Alert Settings	29
3.2.13 Configuring E-mail	
3.2.14 Configuring Alert Event	31
3.2.15 System Configuration	32
3.2.16 Link State	
3.2.17 Time Settings	
3.2.18 Security Settings	34
3.2.19 Restoring Factory Default	34

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3.2.20 Restart System	35
3.3 Web Configuration	35
3.3.1 LOGIN TO SYSTEM	
3.3.2 GENERAL INFORMATION	
3.3.3 Network Configuration	
3.3.4 LAN 1 Settings	
3.3.5 LAN 2 Settings	
3.3.6 DNS Settings	41
3.3.7 SNMP Settings	41
3.4 COM Port Configuration	46
3.4.1 TCP Server for Link Mode	52
3.4.2 TCP Client for Link Mode	54
3.4.3 UDP for Link Mode	55
3.4.5 Serial Settings	
3.4.6 Advanced Settings	57
3.4.7 Alert Settings	
3.4.8 Configuring E-mail	60
3.4.9 Configuring Alert Event	61
3.5 System Configuration	62
3.5.1 Link State information	63
3.5.2 Log Settings	63
3.5.3 System Log	65
3.5.4 COM Log	66
3.5.5 Time Settings	66
3.5.6 Security Configuration	67
3.5.7 Import/Export	
3.5.8 Restore Factory Default	
3.5.9 Restart System	71
4. USING VIRTUAL COM	
4.1 Setup of a virtual COM driver	73



4.1.1 Pre-installation requirements	73
4.1.2 Cautions on Use	73
4.1.3 Limitation	73
4.1.4 Installation	74
4.1.5 Uninstalling	74
4.2 VIRTUAL COM COMMUNICATION	74
4.2.1 Enable Virtual COM on SE5404D	74
4.2.2 Run Serial/IP on PC	75
4.3 Configuring Virtual COM Ports	75
5. SNMP SETUP	77
5.1 SNMP NETWORK MANAGEMENT PLATFORM	77
5.2 Using NetworkView As An Example	77
6. START WRITING ONES OWN APPLICATIONS	79
6.1 Preparing The System	79
6.2 Running The Sample Program	79
6.2.1 TCPTEST in Visual Basic	79
6.2.2 TCPTEST2 in Visual C	80
7. DIAGNOSTICS	
7.1 Use Standard TCP/IP Utility <i>ping</i> Command	81
7.2 Use Serial Manager Configuration Utility Program	81
7.3 Use TCPTEST.EXE or TCPTEST2.EXE SAMPLE PROGRAM	82
APPENDIX A: SPECIFICATIONS	
A.3 Panel Layout and Connector Pin Assignments	84
A.3.1. PANEL LAYOUT	84
A.3.2.1 DB9 Pin Assignments	89
A.3.2.2 Terminal Block Pin Assignments	89
A.3.3.1 Ethernet Port (RJ-45)	89
A.3.4.1 Console Port (RJ-45)	90
A.4 Buzzer/LED Message	91

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A.4.1 I	Buzzer	91
APPENDIX	B: UPGRADE SYSTEM FIRMWARE	
B.2 CRITIC	CAL ISSUES OF UPGRADING	92
B.3 Erro	R Messages	93
APPENDIX	C: USING SERIALMANAGER UTILITY	
C.2. IN	TERFACE	94
<b>C.3</b> . Fu	INCTIONS	94
С.З.1.	Device Search	94
С.З.2.	Firmware	97
С.З.З.	Configuration	
С.З.4.	Security	
С.З.5.	Virtual COM	
С.З.б.	About	



# 1. Introduction

Many industrial and Commercial devices equipped with slow serial communication ports—RS-232, RS-485, and RS-422—are limited in their transmission distance of 15 m. Examples of these devices are PLC controllers, card readers, display signs, security controls, CNC controller, etc. ATOP Technologies has overcome the limit with a family of SE5404D Series Serial Device Servers. The SE5404D sever family is designed to transmit data between one-or-more serial device and one-or-more TCP/IP device through Ethernet, and hence enhance the accessibility of the serial device through the ubiquitous TCP/IP based Ethernet.

Of the SE series, the SE5404D is for RS-232/RS-422/RS-485 9 pin D-Sub without isolation protection built-in and SE5404D-TB is for RS-422/RS-485 5 pin Terminal Block without isolation protection built-in, while SE5404D-Sis is for RS-422/RS-485 with built-in isolation protection.

# 1.1 Packaging

Please check your package contains the following items:

- O SE5404D/ SE5404D-TB / SE5404D-Sis Serial Device Server
- O Quick Start Guide with Warranty Card
- O Product CD
- O 7-pin Terminal Block (2ESDV-07P) x1
- © Four 5-pin Terminal Block for COMs (SE5404D-TB / SE5404D-Sis only)

Optional Accessories			
Name	Part Number	Description	
WMK-459-Black	202EH731000003G	Metal Wall Mount Kit, Black	
CDK-459-Silver	201EH731000005G	Conductive metal DIN-Rail Kit, Silver	
CBL-RJ45(8P)-DB9(F)-90-C	50891971G	90cm RJ-45 to DB9 female console cable	
GDC-120	59906861G	120mm copper woven grounding cable	
US315-12(US) Power Adapter	50500151120009G	Y-Type (5.08 mm) power adaptor, 100-240VAC input, 1.25A @ 12VDC output, US plug	
US315-12(EU) Power adapter	50500151120019G	Y-Type (5.08 mm) power adaptor, 100-240VAC input, 1.25A @ 12VDC output, EU plug	



# **1.2 Application Connectivity**

**TCP Server Mode** : SE5404D can be configured as a TCP server on TCP/IP Network to wait for other applications (clients) in host computer to establish a connection with the serial device. After the connection is established between serial device and host computer, data can be transmitted in both directions Figure 1.1.

# **TCP Server Mode**



Figure 1.1 TCP Server Mode



**TCP Client Mode**: SE5404D can be configured as a TCP client on TCP/IP Network to actively establish a connection with other applications(server) in host computer. After the connection is established, data can be transmitted between serial device and host computer in both directions (Figure 1.2).



Figure 1.2 TCP Client Mode



**UDP Mode**: UDP is a faster but non-guaranteed datagram delivery protocol.SE5404D can be configured as a UDP mode on TCP/IP Network to establish a connection using unicast data from the serial device to one or multiple host computers (Figure 1.3) Vice versa is also true.



Figure 1.3 UDP Mode

**Tunneling Mode:** You can manually pair up two Atop serial servers using TCP Server and TCP Client modes and our server would transparently bridge between your serial devices.



# **Tunnelling Mode**



Figure 1.4 Tunneling Mode

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# 2. Hardware Setup

#### NOTE:

- 1. SE5404D (RS-232/422/485 DB9 without isolation ),
- 2. SE5404D-TB (RS422/485 TB5 with isolation)
- 3. SE5404D-Sis (RS422/485 TB5 with isolation)
- 4. You can press the **Default** button of SE5404D to reset the settings to the default value

Figure 2.1 Show the names of SE5404D components.



Figure 2.1 Front Panel Interfaces



# 119.90mm



7-pin lockable Terminal block

Figure 2.2 7-Pin Terminal Block DC Power on Top Plate



#### Attention

This product is intended to be grounded properly. Please do so via the Frame Ground.

# **2.1 LED Indicators**

Name	Color	Status	Description
Power	Off		Power is not connected
	On	Power is connected	
	Groop	Off	Ethernet Disconnected
LAN	Green	Blinking	Data is transmitting on Ethernet for 100Mbps
Orange		Blinking	Data is transmitting on Ethernet for 10Mbps
COM	Green	Off	No data is transmitting on COM port
COM	GIEGH	Blinking	Data is transmitting on COM port
RUN	Green	Off	System is not ready or halt

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	I	Blinking	AP firmware is running normally
--	---	----------	---------------------------------

# **2.2 Installation Procedures**

Step 1: Connect SE5404D to power source

**Step 2**: Connect SE5404D to the Ethernet network. Use a standard straight-through or cross-over Ethernet cable Always make sure the PC is on the same network subnet as SE5404D.

Step 3: Connect SE5404D's serial port to a serial device.

Step 4: Mount SE5404D to a Din Rail.



### Attention

Disconnect the device from power source completely before installing and wiring the server.

Do not exceed the maximum allowable current of the power cord and common wire. Applying the wire over its specification would cause the wire to overheat and cause serious damage to the connected and neighboring equipment.

The casing could become too hot to touch when operating in harsh environments. Please handle with care.

RESTRICTED ACCESS AREA: The equipment should only be installed in a Restricted Access Area.



# 3. Software Setup

SE5404D Serial Device Server is shipped with default settings shown in the following table:

Property Default Value		Default Value	
	IP Address	10.0.50.100	
LAN1 Gateway 10.0.254 Subnet Mask 255.255.0.0		10.0.254	
		255.255.0.0	
	IP Address	192.168.1.1	
LAN2	Gateway	192.168.1.254	
Subnet Mask		255.255.255.0	
User	Name	admin	
Pase	sword	null (leave it blank)	
COM (1/2/3/4)		9600,None, 8, 1, No Flow Control, Serial packet delimiter enabled	
COM (1/2/3/4	I)Link Mode	Type: TCP Server, Listen port 4660, Filter=0.0.0.0, Virtual COM disabled	
SysName of SNMP		name	
SysLocation	of SNMP	location	
SysContact c	of SNMP	contact	



# 3.1 Configuration by SerialManager Utility

### 3.1.1.Static IP

Seria	lManager ¥4.7				
<u>S</u> earch 9	<u>C</u> onfiguration S <u>e</u> curit	y <u>A</u> dvance Virtu	ual COM A <u>b</u> out		
			<u>~ (</u> 2)	<b>\$</b>	
N C.	Model	IP Address	MAC Address	Host Name	Kernel
1	SW5002	192.168.4	12:23:43:AE:22:12	122343-AE2212	V1.24
2	SW5002	10.0.42.122	00:24:1D:9E:91:9F	122343-AE2212	V1.24
3	SE7816	10.0.154.95	00:60:E9:05:A6:A0		V1.10 🚽
4	SE5516-IDE	10.0.77.17	00:60:E9:EE:34:34		V2.15
5	SE5416	10.0.172.54	00:60:E9:01:7F:BC	0060E9-017FBC	V3.20
6	SE5404	10.0.189.46	00:E0:40:24:45:58	00E040-244558	V3.18
7	SE5302-1	10.0.53.2	00:60:E9:56:66:66		V1.21
8	SE5302	10.0.51.31	00:60:E9:02:6F:34		V1.15
9	SE5002-R	10.0.161.1	00:60:E9:02:61:E7	name	V2.55
10	SE5002	10.0.50.2	00:60:E9:01:EB:D9	0060E9-01EBD9	V2.54 🗸
<					>
Ready, To	tal 34 devices				

Figure 3.1 Configure by SerialManager Utility

Network Setting		
Please set the appropriate IP settings for this device (SE5404D, 10.0.50.10).		
🔲 DHCP (Obtain an li	<sup>o</sup> automatically)	
IP address:	10 . 0 . 50 . 10	
Subnet mask:	255 . 255 . 0 . 0	
Gateway:	10 . 0 . 0 . 254	
Host name:	0060E9-026F70	
<u>O</u> K	Cancel	

Figure 3.2 Static IP setup dialog window

# 3.1.2 DHCP client (Dynamic IP)

A DHCP server can automatically assign the IP address and network settings. SE5404D supports the DHCPclient function. By default, the DHCP client function on SE5404D is disabled; one can client use SerialManager Utility software to search network information automatically by putting a check on **Auto IP** on Dialog window. (ref Figure 3.1)SE5404D (Figure 3.2) (ref Figure 3.3)SE5404D



Network Setting		
Please set the appropriate IP settings for this device (SE5404D, 10.0.50.10).		
🔽 DHCP (Obtain an I	P automatically)	
IP address:	10 . 0 . 50 . 10	
Subnet mask:	255.255.0.0	
Gateway:	10 . 0 . 0 . 254	
Host name:	0060E9-026F70	
<u>o</u> k	Cancel	

Figure 3.3 SerialManager Utility Auto IP

# **3.2 Telnet Configuration**

One may also use Telnet utility to change configuration settings.

- Open MS-DOS command prompt window or other telnet tools
- Enter the "Telnet IP\_address" (For example, Telnet 10.0.50.100). The system will prompts for a user and password, the default User is "admin" and password is Null (*Leave it blank*).



Figure 3.4 System Login by Telnet

Then the following main menu shall appear.

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C:\WINNT\System32\cmd.exe - telnet 10.0.68.	105 _ 🗆 🗙
Linux 2.4.18-SE5404 (atop) (ttyp0)	·
Username:admin Password:	
Main Menu	
[0]EXIT [1]Overview [2]Networking [3]COM Port Settings [4]Alert Settings [5]System [6]Set to Default [7]Restart =_	

Figure 3.5 Main menu of Telnet

\* Note: If the Serial Server does not receive any command within 3 minutes, Telnet will be terminated automatically.

### 3.2.1 General Information

#### Operation: Main→[1]Overview

This system overview window gives the general information on Ethernet, MAC address, kernel and AP version, ERPS, spanning tree.

Overview	
Model Name Bridge IP Addr Bridge MAC ERPS Ring State ERPS West Port State(Port ERPS East Port State(Port Kernel Version AP Version Spanning Tree Status	: SC5404D : 192.168.001.110 : 00.60.E9.07.AB.A2 : Protection 1): Forwarding 2): Blocking(Signal Fail) : 3.23 : 3.33 : Disabled
[0]EXIT	

#### Figure 3.6 Overview Information by Telnet

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#### **3.2.2 Networking Configuration**

#### Operation: Main→[2]Networking

This section allows for changes in **IP address, subnet mask, gateway IP address and SNMP** information. Please note that setting changes will not take effect until the device is restarted.



#### Figure 3.7 Network Settings by Telnet

#### \* Note: Press "ESC" key to return to the previous menu

#### 3.2.3 LAN Settings

#### Operation: Main→[2]Networking→[1]LAN 1 Settings

Enter "*LAN 1 settings*", and there is all information at this section about IP address, gateway, subnet mask and IP mode (static/DHCP) of LAN 1.

C:\WINNT\Syste	m32\cmd.exe - telnet 10.0.68	.105	
[2]Networking [3]COM Port So [4]Alert Sett: [5]System [6]Set to Defa [7]Restart :2	ettings ings ault		
N	etworking	_	
[Ø]EXIT [1]LAN 1 Sett: [2]LAN 2 Sett: [3]DNS Setting [4]SNMP Settin :1	ings ings gs ngs		
LAN	1 Settings	-	
[Ø]EXIT [1]DHCP [2]IP [3]Netmask [4]Gateway :	:Disable(Static) :010.000.068.105 :255.255.000.000 :010.000.000.254		<b>-</b>

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#### Figure 3.8 LAN 1 Settings by Telnet

#### Operation: Main→[2]Networking→[2]LAN 2 Settings

Enter "LAN 2 settings", and there is all information at this section about IP address, gateway, subnet mask and IP mode (static/DHCP) of LAN 2.

C:\WINNT\Syste	m32\cmd.exe - telnet 10.0.68.	105	
[Ø]EXIT [1]DHCP [2]IP [3]Netmask [4]Gateway :0	:Disable(Static) :010.000.068.105 :255.255.000.000 :010.000.000.254		
Ne	etworking		
[0]EXIT [1]LAN 1 Sett: [2]LAN 2 Sett: [3]DNS Setting [4]SNMP Settin :2	ings ings ys ygs		
LAN	2 Settings		
[Ø]EXIT [1]DHCP [2]IP [3]Netmask [4]Gateway :	:Disable(Static) :192.168.001.001 :255.255.255.000 :192.168.001.254		•

Figure 3.9 LAN 2 Settings by Telnet

#### 3.2.4 DNS Settings

#### Operation: Main $\rightarrow$ [2]Networking $\rightarrow$ [3]DNS Settings

Serial Server is able to configure the DNS1 or DNS2 Server IP Address manually. Alternatively, you can set the Serial Server to receive DNS server IP address from DHCP server automatically by enabling the DHCP of "*LAN 1 Settings*".

C:\WINNT\Syste	m32\cmd.exe - telnet 10.0.68.	.105	:
EØJEXIT E1 IDHCP E2 II P E3 JNetmask E4 JGateway :0	:Disable(Static) :192.168.001.001 :255.255.255.000 :192.168.001.254		]
Ne	etworking		
[Ø]EXIT [1]LAN 1 Sett: [2]LAN 2 Sett: [3]DNS Setting [4]SNMP Settin :3	ings ings gs ngs		
DNS	S Settings		
EØ JEX I T E1 JDNS1 E2 JDNS2 :_	:255.255.255.255 :255.255.255.255	•	·

#### Figure 3.10 DNS Settings by Telnet

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### 3.2.5 DDNS Settings

#### Operation: Main→[2]Networking→[4]DDNS Settings

Serial Server allows the user to configure DDNS related parameters including DDNS status(Enable/Disable), user name, password and host name.

P 192.168.1.225 - PuTTY	
[4]DDNS Settings	×
[5]SNMP Settings	
[6]Bridge Settings	
[7]ERPS Settings	
[8]RSTP Settings	
[9]NAT Settings	
:4	
DDNS	
[0]EXIT	
[1]DDNS status:Disable	
[2]DDNS user:	=
[3]DDNS password:*****	
[4]DDNS hostname:	
	+

Figure 3.11 DDNS Settings by Telnet

#### 3.2.6 SNMP Settings

#### Operation: Main→[2]Networking→[4]SNMP Settings

Serial Server allows the user to Enable or Disable the SNMP function by choose the "[4] SNMP: Disable" and select "Enable" to enable the SNMP operation. The changes will effective immediately.

Serial Server supports basic SNMP function about system MIB (Management Information Base). It is able to definite the SNMP Trap server, Read/Write Community, SysName (System Name), SysLocation (System Location) and SysContact (System Contact) via Telnet console.

C:\WINNT\System32\cmd.e	же - telnet 10.0.68.105	
[Ø]EXIT [1]DNS1 :255.255 [2]DNS2 :255.255 :Ø	.255.255 .255.255	
Networking	1	
[0]EXIT [1]LAN 1 Settings [2]LAN 2 Settings [3]DNS Settings [4]SNMP Settings :4		
SNMP Settin	gs	
[0]EXIT [1]SNMP [2]Read Community [3]Write Community [4]SysName [5]SysLocation [6]SysContact [7]SNMP Trap Server :	: Disable : public : private : 0060E9-026F70 : location : contact : 000.000.000	-

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#### Figure 3.12 SNMP Settings by Telnet

### 3.2.7 Bridge Settings

#### Operation: Main→[2]Networking→[6]Bridge Settings

Bridge settings are used to configure the bridge function in the device. The bridge function integrates more one Ethernet interfaces as one bridge intenerate and forward traffic from one Ethernet traffic to other Ethernet interface. Enter "Bridge Settings", and there is all information at this section about IP address, gateway, subnet mask and IP mode (static/DHCP) of Bridge.

	Bridge Settings
[0]EXIT [1]Bridge	mode:Enable
[2]DHCP [3]IP	:Disable(Static) :192.168.001.110
[4]Netmask [5]Gateway	:255.255.255.000 :192.168.001.254

Figure 3.11 Bridge Settings by Telnet

### 3.2.8 ERPS Settings

#### Operation: Main→[2]Networking→[7]ERPS Settings

Serial Server supports ERPS function. It is able to definite ERPS status, RAPS VLAN, RPL owner, RPL port, WTR timer, holdoff timer, guard timer , MEL.

ERPS Settings	
[0]EXIT [1]ERPS Status [2]RAPS VLAN [3]RPL Owner [4]RPL Port [5]WTR Timer(0~12 min) [6]Holdoff Timer(0~10000 ms) [7]Guard Timer(10~2000 ms) [8]MEL(0~7)	:Enable :4090 :Enable :West Port(Port 1) :5 :0 :500 :1

Figure 3.11 ERPS Settings by Telnet



### 3.2.9 STP Settings

#### Operation: Main→[2]Networking→[8]STP Settings

Serial Server supports STP function. It is able to definite spanning tree status, force version, priority, maximum age, hello time, forward delay, port1 path cost, port1 priority, port1 P2P, port1 Edge, port2 path cost, port2 priority, port2 P2P, port2 edge.

#### 3.2.10 NAT Settings

#### Operation: Main→[2]Networking ->[9]NAT Settings

Serial Server supports NAT function. It is able to definite NAT status, virtual server port, virtual server destination IP, virtual server destination port.

NAT Setti	ngs
[0]EXIT [1]NAT Status [2]Virtual Server 1 [3]Virtual Server 2 [4]Virtual Server 3 [5]Virtual Server 4 [6]Virtual Server 5 [7]Virtual Server 7 [9]Virtual Server 8 :	:Disable :0,0.0.0.0,0 :0,0.0.0.0,0 :0,0.0.0.0,0 :0,0.0.0.0,0 :0,0.0.0.0,0 :0,0.0.0.0,0 :0,0.0.0.0,0 :0,0.0.0.0,0
Figure 3.11 NAT Set	tings by Telnet
Set Virtual Server 1 [0]EXIT [1]Server Port [2]Destination IP [3]Destination Port :	: :0 :0.0.0.0 :0

Figure 3.11 Virtual Server Settings by Telnet

# 3.2.7 GSM Module Configuration

#### Operation: Main→[3]GSM Module

Serial Server supports connecting Internet with GSM module. This section allows for changes in **GSM module** status, Dial when reboot, COM port Settings, Phone number Settings and PIN Settings. Please note that setting changes will not take effect until the device is restarted.

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🕼 192.168.1.225 - PuTTY	<u> </u>
Main Menu	^
[0]EXIT [1]Overview [2]Networking	
[3]GSM Module [4]COM Port Settings [5]Alert Settings [6]System	
[7]Set to Default [8]Restart :3	
GSM Module	
<pre>[0]EXIT [1]GSM module status:Enable [2]Dial when reboot:Disable [3]COM port Settings [4]Phone number Settings:0933112344 [5]PIN Settings:*****</pre>	4 III

Figure 3.12 GSM Module Settings by Telnet

# 3.2.8 PPPOE Configuration

#### Operation: Main→[4]PPPOE

Serial Server supports connecting Internet with PPPOE. This section allows for changes in **Dial when reboot**, **PPPOE user**, **PPPOE password and PPPOE interface**. Please note that setting changes will not take effect until the device is restarted.





Figure 3.13 PPPOE Settings by Telnet

# 3.2.9 VPN Configuration

#### Operation: Main→[5]VPN

Serial Server supports VPN. This section allows for changes in VPN state, VPN user, VPN password, VPN PSK, Local IP, Assign IP start, Assign IP end, VPN interface and Protect serial port server. Please note that setting changes will not take effect until the device is restarted.



學 192.168.1.225 - PuTTY	
[2]Networking	
[3]GSM Module	
[5]VPN	
[6]COM Port Settings	
[7]Alert Settings	
[8]System	
[9]Set to Default	
[a]Restart	
:5	
VPN	
[0]EXIT	
[2]VDN user wontest	
[3]VPN password:*****	
[4] VPN PSK:*****	
[5]Local IP: 010.010.010.001	
[6]Assign IP Start: 010.010.010.002	=
[7]Assign IP End: 010.010.010.005	
[8]VPN interface:GSM/PPPOE	
[9]Protect Serial Port Server:Enable	
	Ŧ

Figure 3.14 VPN Settings by Telnet

# 3.2.10 COM Port Configuration

SE5404D series allow one to configure the parameters of COM port including COM working mode, port parameters, enabling or disabling serial buffer's data and packet delimiter setting.

C:\WINNT\5ystem32\cmd.exe - telnet 10.0.68.105	
Networking	▲
LØJEXIT L1 JLAN 1 Settings L2 JLAN 2 Settings L3 JDNS Settings L4 JSNMP Settings :0	
Main Menu	
[Ø]EXIT [1]Overview [2]Networking [3]COM Port Settings [4]Alert Settings [5]System [6]Set to Default [7]Restart :3	
COM Port Settings	
COM port number(Port Number:1~4, 0:exit)	<b>–</b>

Figure 3.14 Select COM Port from Serial Settings by Telnet

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# 3.2.10 TCP Server for Link Mode

#### Operation: Main→ [3]COM Port Setting→[1-16]Select Port→[1]Link Mode→[1]TCP Server

TCP Server mode is default setting for Link mode of serial settings, and it can be configured in a TCP server mode on an Ethernet Network to waiting for the host computers to establish a connection with the serial device (the client). After the connection is established, data can flow in both directions and can wait for connect request from remote PC with installed "serial-to IP" tool or counter-pair Serial server in tunneling mode. It needs to configure listening port to establish connection, Default Port number of Serial Server is 4660 and it is associated with the serial port COM1. After the application program being connected to the TCP port 4660 on the Serial Server, data of your application program are transparent to both COM1 and Serial Server.

IP filtering function is a simple ACL (Access Control List). Set FILTER\_IP to "0.0.0.0" for disabling the "*IP filtering function*".

One may configure one or group IPs for source IP. If IP filter is enabled, only source IP assigned is connected to Serial Server.

C:\WINNT\System32\cmd.exe - telnet 10.0.68.	105
:1	
COM1 Port Settings	
[Ø]EXIT [1]Link Mode : TCP Server [2]Com Setting : 9600,n,8,1 :1	
Link Mode	
[Ø]EXIT [1]TCP Server [2]TCP Client [3]UDP :1	
TCP Server (COM1)	
[Ø]EXIT[1]Uirtual COM[2]Max Connections[3]IP Filter[4]Local Port:_	. <b>.</b>



\* Note: Enable Virtual COM mode if the remote site PC's "Serial to IP" tool installed.

# 3.2.11 TCP Client for Link Mode

#### Operation: Main→ [3]COM Port Setting→[1-16]Select Port→[1]Link Mode→[2]TCP Client

On destination IP & port enter desired destination IP and port as a TCP client (For example, another serial server, or PC for data-collection). The Serial Server can support two destination host computers simultaneously.



🚾 C:\WINNT\System32\cmd.exe - tel	net 10.0.68.105	J×
TCP Server (COM1)		
[Ø]EXIT [1]Virtual COM : D [2]Max Connections : 1 [3]IP Filter : D [4]Local Port : 4 :0	 isable 660 	
Link Mode [Ø]EXIT [1]TCP Server [2]TCP Client [3]UDP :2		
TCP Client (COM1)		
[0]EXIT [1]Destination IP 1 : 0 [2]Destination Port 1 : 4 [3]Destination 2 : D :	00.000.000.000 660 isable	•

Figure 3.16 TCP Client for Link mode

#### 3.2.12 UDP Link Mode

#### Operation: Main→ [3]COM Port Setting→[1-16]Select Port→[1]Link Mode→[3]UDP

Serial Server can be configured in a UDP mode to establish connection using uni-cast or broadcast the data from the serial device to one or multiple host computers. Vice versa is also true. For example, The original RS-422/RS485 bus is transferred and extended connecting distance by serial servers, The destination IP is assigned by single IP or group IPs, The configuration is limited by the Local Listening Port (For example, on the COM1 of Serial Server listening port is 4660 which receive data sending from the host computer)

Serial Server can support up to 8-group IPs for UDP connection, if users needed.

C:\WINNT\System32\cmd.ex	- telnet 10.0.68.105	
[3]Destination 2 :0	: Disable	<b>_</b>
Link Mode		
[0]EXIT [1]TCP Server [2]TCP Client [3]UDP :3		
UDP (COM1)		
[0]EXIT [1]Local Port [2]Destination IP 1 [3]Destination Port 1 [4]Destination 3 [5]Destination 3 [6]Destination 4 [7]Destination 5 [8]Destination 6 [9]Destination 7 [a]Destination 8	: 4660 : 000.000.000.000 ~ 000 : 4660 : Disable : Disable : Disable : Disable : Disable : Disable : Disable : Disable	

#### Figure 3.17 UDP for Link mode

\* Note: UDP mode doesn't support Virtual COM mode yet.



# 3.2.13 Serial Settings

Operation: Main→ [3]COM Port Setting→[1-16]Select Port→[2]Com Settings

\* Here one may configure baud rate, parity, data bit, stop bit, flow control, and UART mode as defined by the user.

COM Port	Settings
COM port number(P :1	ort Number:1~16, 0:exit)
COM1 Port	Settings
[0]EXIT	
[1]Link Mode :	TCP Server
[2]Com Setting :	RS232,9600,n,8,1
:2	
COM1 S	etting
[0]EXIT	
[1]Uart mode :	R\$232
[2]Baud rate :	9600 bps
[3]Parity :	None
[4]Data bits :	8 bits
[5]Stop bits :	1 bit
[6]Flow control :	None
:_	

Figure 3.18 Serial Setting by Telnet

# 3.2.14 Alert Settings

There are two subsystem settings include E-mail and Alert Event.



C:\WINNT\System32\cmd.exe - telnet 10.0.68.105	
:0	
COM Port Settings	
COM port number(Port Number:1~4, 0:exit) :0	
Main Menu	
[Ø]EXIT [1]Overview [2]Networking [3]COM Port Settings [4]Alert Settings [5]System [6]Set to Default [7]Restart :4	
Alert Settings	
[Ø]EXIT [1]E-mail Settings [2]Alert Event :	

Figure 3.19 Alert Settings by Telnet

# 3.2.15 Configuring E-mail

#### Operation: Main→ [4]Alert Settings→[1]E-mail Settings

One may configure the "**Sender's E-mail address**" that it should have on the SMTP server (Mail Server) where allowed to sent out the email by sender's E-mail address. The SE5404D allow to definite the receiver up to 5. Also the E-mail notification will be sent to the e-mail account their obtained in "Receiver's E-mail address 1", "Receiver's E-mail address 2", "Receiver's E-mail address 3", "Receiver's E-mail address 4" and "Receiver's E-mail address 5".

Figure 3.20 Configuring E-mail by Telnet

One may configure Mail Server and checking on "*My mail server requests authentication*" field to obtain User name and Password.



C:\WINNT\System32\cmd.exe - telnet 10	.0.68.105	
[2]Receiver's Email Address 1 [3]Receiver's Email Address 2 [4]Receiver's Email Address 3 [5]Receiver's Email Address 4 [6]Receiver's Email Address 5 [7]Mail Server [8]Require Authentication :6 New Email Address 5 :0	: : : : : : No	
E-mail Setting		
[Ø]EXIT [1]Sender's Email Address [2]Receiver's Email Address 1 [3]Receiver's Email Address 2 [4]Receiver's Email Address 3 [5]Receiver's Email Address 4 [6]Receiver's Email Address 5 [7]Mail Server [8]Require Authentication :7 New Mail Server :	-> Ø No	•

Figure 3.21 Configuring Mail Server by Telnet

# 3.2.16 Configuring Alert Event

#### Operation: Main→ [4]Alert Settings→[2]Alert Event

Choose the Alert event to configure SE5404D Series to send the alert notification by E-Mail, SNMP Trap or SMS(See Fig. 3.27).

🚱 192.168.1.225 - PuTTY		X
Alert Settings		*
[0]EXIT		
[1]E-mail Settings		
[2]Alert Event		
[3]SMS alert messages		
:2		
Alert Event		
[0]EXIT		
[1]Cold Start	Email OFF, Trap OFF,SMS OFF	
[2]Warm Start	Email OFF, Trap OFF,SMS OFF	
[3]Authentication Failure	Email OFF, Trap OFF, SMS OFF	
<pre>[4]IP Address Changed</pre>	Email OFF, SMS OFF	
[5]Password Changed	Email OFF, SMS OFF	=
[6]GSM Modem Is Assigned A New IP	Email OFF, SMS OFF	-
8		~

Figure 3.22 Configuring Alert Event by Telnet



#### 3.2.17 SMS Alert Messages

#### Operation: Main→ [4]Alert Settings→[3]SMS alert messages

Choose the SMS alert messages to configure what text you want to send in different alert event (See Fig. 3.28).

🔐 192.168.1.225 - PuTTY	×
Alert Settings	^
<pre>[0]EXIT [1]E-mail Settings [2]Alert Event [3]SMS alert messages :3</pre>	
SMS alert message Setting  [0]EXIT [1]Cold start:[SC5404 Cold Restart!]	
<pre>[2]Warm start:[SC5404 Warm Restart!] [3]Authentication fail:[SC5404 Authentication Fail!] [4]IP address changed:[SC5404 IP Address Changed!] [5]Password changed:[SC5404 Password Changed!]</pre>	Ш
[6]GSM Modem is Assigned A New IP:[SC5404 GSM Modem Is Assigned A New IP!] :	+

Figure 3.23 Configuring SMS Alert Messages by Telnet

#### 3.2.18 System Configuration

#### Operation: Main→ [5]System







#### 3.2.19 Link State

#### Operation: Main→ [5]System→[1]Link State

Link State is display information by Link mode (TCP Server, TCP Client and UPD) and status of each connection for all serial port.

🚾 C:\WINNT\System32\cmd.exe - telnet 10.0.68.105								_	
Remark: L-Listen, C-Connecting, D-Connected, R-Ready									<b></b>
Port Type	I P1	IP2	IP3	IP4	IP5	IP6	IP7	I P8	
01 TCP Server 02 TCP Server 03 TCP Server 04 TCP Server Press 'O' to c	L L L ancel	· · _							

Figure 3.25 Display Link State by Telnet

### 3.2.20 Time Settings

#### Operation: Main→ [5]System→[2]Time

One may configure time to Manual Settings or NTP services. The changed will take effect immediately when saved successful.

🖾 C:\WIN	NT\System:	32\cmd.exe	- telnet 1	0.0.68.105					<u> </u>
Port T	уре	IP1	IP2	I P 3	I P4	I P5	I P6	I P7	IP8
Ø1 TCP Ø2 TCP Ø3 TCP Ø4 TCP Press '	Server Server Server Server Ø' to car	L L L L ncel							
	Syster	n Setting	ls						
[0]EXIT [1]Link [2]Time [3]Secu :2	. State rity	: Manua]	L						
	Time	Settings	:						
[0]EXIT [1]Manu [2]NTP :	al	: 2000-0 : Disabl	1-01 09 Le	5:29:18					•

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#### Figure 3.26 Time settings by Telnet

#### 3.2.21 Security Settings

#### Operation: Main→[5]System→[3]Security

SE5404D serials allow one to change the access methods to protect it against intrusion.

C:\WINNT\System32\cmd.exe - telnet 10.0.68.105	
Time Settings	<b>^</b>
[0]EXIT [1]Manual : 2000-01-01 05:29:18 [2]NTP : Disable :0	
System Settings	
[Ø]EXIT [1]Link State [2]Time : Manual [3]Security :3	
Security	
[Ø]EXIT [1]Change Password [2]Web Console : Enable [3]Telnet Console : Enable [4]LCM Password Protect : Disable [5]Reset Button Protect : Disable :	<b>•</b>

Figure 3.27 Security Settings by Telnet

### 3.2.22 Restoring Factory Default

#### Operation: Main→ [6]Set to Default

Choose this menu to restore Serial Server's settings to Factory Default Settings.

🚾 С:\WINNT\System32\cmd.exe - telnet 10.0.68.105	
[6]Set to Default [7]Restart :5	
System Settings	
[Ø]EXIT [1]Link State [2]Time : Manual [3]Security :0	
Main Menu	
[Ø]EXIT [1 lOverview [2 ]Networking [3 ]COM Port Settings [4]Alert Settings [5 ]System [6 ]Set to Default [7]Restart :6 Set to Default? (y/N) :	

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#### Figure 3.28 Restore Factory Default by Telnet

#### 3.2.23 Restart System

#### Operation: Main→ [7]Restart

Choose this menu to restart the SE5404D series.



Figure 3.29 Restart System by Telnet

# 3.3 Web Configuration

- 1. Make sure your PC is located on the same network sub-net as SE5404D
- 2. Open a web browser, then Enter in the IP address of SE5404D to be configured. Default user name is admin and default password is null (leave it blank).
- 3. SE5404D's network, link mode and COM ports settings can be configured in different web pages.
- 4. Click "Save Configuration" to save settings.
- 5. Click "Restart" button in "System" link to make the change effective if necessary.

It is also possible to modify various settings through the web server interface. To do so, please follow the steps below.

# 3.3.1 Login to System

While on the web browser, ex. Microsoft IE, Firefox or any other web browser, enter the IP address of Serial Server on the URL bar. **Example:** <u>http://10.0.50.100</u>

The following authentication screen shall appear. Enter the **user name** and **password** then click on "**OK**". The default user name is **admin** and password is Null (*Leave it blank*).


Authentication Reg	laired	x
The server 10.0.187 server says: NeedPa:	.184:80 requires a username and password sword.	. The
User Name:		
Password:		
	Log In Can	cel

Figure 3.19 Authorization Request for System Security

# **3.3.2 General Information**

This system overview window gives the general information on Device and Network information (See Fig 3.20)

	SE5404D			
<ul> <li>Overview</li> <li>Network</li> <li>Serial</li> </ul>	<b>Overview</b> The general device information of Serial Server.			
<ul><li>Alert</li><li>System</li></ul>	Device InformationKernel Version3.20AP Version3.30			
	Network Information			
	LAN 1	MAC Address	00:60:E9:02:6F:70 10.0.50.10	
	LAN 2	MAC Address	00:60:E9:02:6F:71 192.168.1.1 (Link down)	

Figure 3.20 Overview by Web page

#### **Device Information**

SE5404D Serial Server's displays system information Kernel version and AP version. The information are read only

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#### and attributed from another setting page or system status (See Fig. 3.21)

Device Information		
Kernel Version	3.20	
AP Version	3.30	

#### Figure 3.21 Device Information by Web page

#### **Networking information**

Networking information fields are displayed both 'LAN 1 and LAN 2' s information on overview page. The information provided with networking settings (See Fig. 3.22).

Network Information		
LAN 1	MAC Address	00:60:E9:02:6F:70
IP Addr	IP Address	10.0.50.10
LAND	MAC Address	00:60:E9:02:6F:71
LAN 2	IP Address	192.168.1.1 (Link down)

#### Figure 3.22 Network Information by Web page

#### **Bridge information**

Bridge information fields are displayed bridge information on overview page.

Network Information		
Bridge	MAC Address	00:60:E9:07:AB:A2
Bridge	IP Address	192.168.1.110

#### Figure 3.22 Bridge of Network Information by Web page

#### **ERPS** information

ERPS information fields are displayed ERPS information on overview page.



ERPS Information		
Ring State Protection		
West Port State(Port 1)	Forwarding	
East Port State(Port 2)	Blocking(Signal Fail)	

Figure 3.22 ERPS of Network Information by Web page

#### **Spanning Tree Information**

Spanning Tree information fields are displayed spanning tree information on overview page.

Spanning 1	Tree Information
Spanning Tree Status	Disabled
Force Version	RSTP
Priority	32768
Maximum Age	20
Hello Time	2
Forward Delay	15
Root MAC Address	0:60:e9:7:ab:a2
Root Priority	32768
Root Path Cost	0
Root Port	Port1
Root Maximum Age	20
Root Hello Time	2
Root Forward Delay	15
Topology Changes	0
Last Topology Change	0

Figure 3.22 Spanning Tree of Network Information by Web page



# 3.3.3 Network Configuration

There are four items allowed to change on Network page in which include LAN 1, LAN 2, DNS and SNMP Information.



Network

Serial

Alert

System

# SE5404D

# Network

# TCP/IP

To configure network settings of Serial Server. After saving configuration you have to restart the device to make the settings effective.

LAN 1 Settings		
DHCP	Dobtain an IP automatically	
IP Address	10 . 0 . 50 . 10	
Subnet Mask	255 . 255 . 0 . 0	
Default Gateway	10 . 0 . 0 . 254	

LAN 2 Settings			
DHCP	Dobtain an IP automatically		
IP Address	192 . 168 . 1 . 1		
Subnet Mask	255 . 255 . 255 . 0		
Default Gateway	192 . 168 . 1 . 254		

# Figure 3.23 Network Configuration by Web page

# 3.3.5 Bridge Settings

Click on the **"Network"** link. If the bridge function is enabled, the following screen shall appear. Fill in Bridge information on bridge settings fields. Alternatively, one may activate DHCP client function by checking on "**Obtain an IP automatically**" field to obtain IP address, gateway and subnet mask from DHCP server automatically.

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Bridge Settings		
Bridge Status	Status Configure the device as the bridge device	
Bridge IP Settings		
DHCP	Obtain an IP automatically	
IP Address	192 . 168 . 1 . 110	
Subnet Mask	255 . 255 . 255 . 0	
Default Gateway	192 . 168 . 1 . 254	

Figure 3.23 Bridge Configuration by Web page

# 3.3.4 LAN 1 Settings

Click on the "*Network*" link and the following screen shall appear. Fill in LAN 1 IP information on LAN 1 TCP/IP field. Alternatively, one may activate DHCP client function by checking on "*Obtain an IP automatically*".

LAN 1 Settings		
DHCP	Obtain an IP automatically	
IP Address	10 . 0 . 50 . 10	
Subnet Mask	255 . 255 . 0 . 0	
Default Gateway	10 . 0 . 0 . 254	

Figure 3.24 LAN 1	Setting b	oy Web	page
-------------------	-----------	--------	------

# 3.3.5 LAN 2 Settings

Click on the "**Network**" link and the following screen shall appear. Fill in LAN 2 IP information on LAN 2 settings fields. Alternatively, one may activate DHCP client function by checking on "**Obtain an IP automatically**" field to obtain IP address, gateway and subnet mask from DHCP server automatically.



LAN 2 Settings	
DHCP	Dobtain an IP automatically
IP Address	192 . 168 . 1 . 1
Subnet Mask	255 . 255 . 255 . 0
Default Gateway	192 . 168 . 1 . 254

Figure 3.25 LAN 2 Setting by Web page

#### 3.3.6 DNS Settings

Click on the **"Network"** link and the following screen shall appear. Fill in DNS information. Alternatively, you can set the Serial Server to receive DNS server IP address from DHCP server automatically by enabling the DHCP of **"LAN 1** Settings".

DNS	
DN	IS Settings
DNS1	255 . 255 . 255 . 255
DNS2	255 . 255 . 255 . 255

Figure 3.26 DNS Setting by Web page

# 3.3.7 DDNS Settings

Click on the "**Network**" link and the following screen shall appear. The DDNS configurations including user name, password and host name. These configurations must match to the ones you register to DDNS provider. Besides, you can choose to enable or disable DDNS function.

DD	NS	
	D	DNS Settings
	DDNS State	Enable DDNS
	User Name	
	Password	
	Host Name	



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#### 3.3.7 SNMP Settings

Click on the **"Network"** link and the following screen shall appear. Fill in SNMP information on third field. Alternatively, to settings SysName, SysLocation, SysContact fields and one may configure by Checking on "**Enable SNMP**" field. Fill in Read Community, Write Community, SNMP Trap Server information on SNMP Settings fields. The changes of SNMP Settings will take effect immediately when saved successful.

SNMP Settings		
SysName	0060E9-026F70	
SysLocation	location	
SysContact	contact	
SNMP	Enable SNMP	
Read Community	public	
Write Community	private	
SNMP Trap Server	0.0.0.0	

Figure 3.28 SNMP Setting by Web page

# 3.3.8 ERPS Settings

Click on the "*Network*" link and the following screen shall appear. Fill in ERPS information.

Ethernet Ring Protection Switching (ERPS) is a protocol for Ethernet layer network rings, and it specifies protection mechanism. The ring topology provides multipoint connectivity economically, but it has the traffic looping issue. ERPS provides highly reliable and stable protection in the ring topology, and it never forms loops, which can affect network operation. Each Ethernet Ring Node is connected to adjacent Ethernet Ring Nodes participating in the same Ethernet Ring using two independent links (i.e. two ways). In the Ethernet ring, loops can be avoided by guaranteeing that traffic may flow on all but one of the ring links at any time. This particular link is called Ring Protection Link (RPL). A control message called R-APS coordinates the activities of switching on/off the RPL. Under normal conditions, this link is blocked by the Owner Node. Thus loops can be avoided by this mechanism. In case an Ethernet ring failure occurs, the RPL Owner node will be responsible to unblock its end of the RPL to allow RPL to be used for traffic. The RPL is as the backup link when one link failure occurs.

The following table describes the setting items.

Label	Description
ERPS	Choose whether to enable ERPS or not.
RAPS VLAN	The ring is specified the R-APS VLAN ID of the ring. VLAN ID ranges from 1 to 4094.

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RPL Owner	Choose to enable Owner Function.
RPL Port	Select the Owner Port.
WTP Timor	Set the wait-to-restore (WTR) time of the ring in minutes.
	Range from 0 to 12 minutes.
Holdoff Timer	Set the holdoff time of the ring.
Holdoff Timer	Range from 0 to 10000 milliseconds.
Guard Timor	Set the guard time of the ring.
	Range from 0 to 2000 milliseconds.
MEI	Set the maintenance entity group level (MEL) of the ring.
	Range from 0 to 7.

ERPS

By enabling ERPS, you can connect devices as the ring network topology

ERPS Settings	
ERPS State	Enable ERPS
RAPS VLAN	4090
West Port	Port 1
East Port	Port 2
RPL Owner	Enable RPL Owner
RPL Port	West Port(port 1)
WTR Timer	5 (0~12 min)
Holdoff Timer	0 (0~10000 ms)
Guard Timer	500 (10~2000 ms)
MEL	1 (0~7)

Figure 3.23 ERPS Configuration by Web page

# 3.3.8 Spanning Tree Settings

Click on the "Network" link and the following screen shall appear. Fill in Spanning Tree information.

IEEE Standard Spanning tree functionality is provided. The Spanning Tree Protocol (STP) provides function to prevent switching loops and ensuring broadcast radiation. A switching loop occurs in network when there are multiple



connections between two network switches or two ports. The loop creates broadcast radiation, the accumulation of broadcast and multicast traffic on a computer network. As broadcasts and multicasts are forwarded by bridges/switches to every port, the bridges/switches will repeatedly rebroadcast the broadcast messages, and this can floods the network. STP creates a spanning tree and disables those links of the network that are part of the spanning tree, which leaves only a single active path between two nodes. This function avoids flooding and increases network efficiency.

**RSTP** (Rapid Spanning Tree Protocol) are also supported. It is an evolution of the STP. It has a slightly changed topology, which helps to provide a much faster spanning tree convergence.

The following table shows how to configure the Spanning Tree and indicates the parameters' status.

Label	Description		
Spanning Tree	Choose to enable or disable Spanning Tree.		
Force Version	Select STP or RSTP.		
Priority	Configures the bridge priority in the range of 0 ~ 61440. The switch with lower bridge priority has more chance to become a root bridge. If a device is not the root and it doesn't receive hello message in "Max. Age", it will reconfigure itself as a root.		
Maximum Age	See note below for "hello message".		
	Range from 6 to 40 seconds.		
	Amount of time the root waits between sending hello messages. See note below.		
Helio Time	Range from 1 to 10 seconds.		
	Configures the amount of time to wait before checking to see if the device should change from the learning state to the forwarding state.		
Forward Delay	Less delay time means changing state quickly.		
	Range from 4 to 30 seconds.		
	Configures the port path cost in the range 1~200000000.		
Port1 Path Cost	This value will affect the combination path cost. The lowest combination path cost will be the l path to the Root Bridge		
Port1 Priority	Configures the port priority in the range 0~240.		
lotti i nonty	The port has the best route to the root bridge with the lowest priority value.		
	Selects P2P Point to point connection type:		
Port1 P2P	Force No: Force port P2P link to false.		
	Force Yes: Force port P2P link to true.		
	Auto: Select port P2P link to auto detection.		
Port1 Edge	Choose whether it is an edge connection.		
	Configures the port path cost in the range 1~200000000.		
Port2 Path Cost	This value will affect the combination path cost. The lowest combination path cost will be the $\vdash$ path to the Root Bridge		
Port2 Priority	Configures the port priority in the range 0~240.		
i onz i nonty	The port has the best route to the root bridge with the lowest priority value.		

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Port2 P2P



Selects P2P Point to point connection type: Force No: Force port P2P link to false. Force Yes: Force port P2P link to true. Auto: Select port P2P link to auto detection.

Port2 Edge Choose whether it is an edge connection.

Spanning Tree		
Spanning Tree Settings		
Spanning Tree State	Enabled	
Force Version	RSTP	
Priority	32768 (0~61440)	
Maximum Age	20 (6~40)	
Hello Time	2 (1~10)	
Forward Delay	15 (4~30)	
Port1 Path Cost	200000 (1~20000000)	
Port1 Priority	128 (0~240)	
Port1 P2P	Auto	
Port1 Edge	Disabled	
Port2 Path Cost	200000 (1~20000000)	
Port2 Priority	128 (0~240)	
Port2 P2P	Auto	
Port2 Edge	Disabled	

Figure 3.23 Spanning Tree Configuration by Web page

# 3.3.8 PPPOE Settings

Operation: Netwark→PPPOE

Click on the "PPPOE" link and the following screen shall appear



This configuration page including two section, one is PPPOE status and the other is PPPOE setting.

#### **PPPOE Status**

This section shows the PPPOE connection status and the IP address while connect to PPPOE.

In this section, you can also connect to PPPOE manually by the "Connect PPPOE" button.

	Status	
Connection Status	Off Line	
IP address	not connected	

Figure 3.29 PPPOE status

#### **PPPOE Setting**

	PPPOE Settings	
Dial when boot up	Enable	
User	74252730@hinet.net	
Password		
Interface	LAN2 -	

Figure 3.30 PPPOE Setting page

- Dial when boot up: enable dial on the PPPOE network when system boot up
- User: The User name used to connect PPPOE
- **Password:** The password used to connect PPPOE
- Interface: The Ethernet interface used to connect PPPOE. You can choose LAN1 or LAN2

# 3.3.9 GSM Modem Settings

Operation: Netwark→GSM Modem

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Click on the "GSM Modem" link and the following screen shall appear

This configuration page including two section, one is GSM status and the other is GSM module setting.

#### **GSM Status**

This section shows the GPRS connection status, PIN (personal identification number) status, the IP address while connect to GPRS and total traffic statistic.

There are two actions you can do in this section. One is connect to GPRS manually and the other is clear the traffic statistic.

GSM Module Connection	
GSM Status	
Status	
Connection Status	Off Line
PIN status	PIN is required, PIN is ready
IP address	not connected
Total Rx Bytes	2769 Bytes
Total Tx Bytes	1619457 Bytes
Clear Statistic Connect GPRS	

Figure 3.29 GSM module status

#### **GSM Module Setting**



GSM Module Settings		
GSM Module	✓ Enable	
Dial when boot up	Enable	
PIN Code	••••	
UART Mode		
Send SMS to Phone	0933112344	
Com Port	COM 1 👻	
Baud Rate	115200 <b>•</b> bps	
Parity	None ○ Odd ○ Even ○ Mark ○ Space	
Data bits	⊙ 5 bits ⊙ 6 bits ⊙ 7 bits	
Stop bits	● 1 bit ○ 2 bits	
Flow Control	None      Xon/Xoff      RTS/CTS	
Disable COM's FIFO	<ul> <li>No</li> <li>○ Yes (For baud rates higher than 115200bps might result in data loss.)</li> </ul>	

Figure 3.30 GSM module Setting page

- GSM Module: choose to enable GSM module or not
- Dial when boot up: enable dial on the GPRS network when system boot up
- PIN code: PIN code that is required by SIM card inserting in the GSM module
- Configuring UART Mode: only RS-232
- Send SMS to phone: the phone number that user want their alert SMS to send
- COM port: which COM port use to connect GSM module
- Baud rate: 300 / 600 / 1200 / 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200 / 230400 / 460800 / 500000 / 576000 / 921600
- Parity: None or Odd or Even or Mark or Space
- Data bits: 7 or 8
- Stop bits: 1 or 2
- Flow control: None or Xon/Xoff or Hardware (RTS/CTS)
- Disable FIFO: No/Yes. For serial devices that are very sensitive to the amount of data that they receive, FIFO should be disabled. For regular applications, we recommend to enable FIFO (default) to achieve optimal performance.



# 3.3.8 NAT Settings

Click on the "Network" link and click on the "NAT" link the following screen shall appear. Fill in NAT information.

NAT (network address translation) is the process of modifying IP address information in IP packet headers while in transit across a traffic routing device. NAT function changes IP address information of the traffic of the network devices connecting the Ethernet interface and forwards the traffic through GSM Modem to the internet. Virtual server function changes the IP and the port of the income traffic from GSM Modem and forwarded the traffic to the Ethernet interface.

The following table shows how to configure the NAT.

Label	Description
NAT Status	Enable/Disable NAT function
Virtual Server	Display virtual server configuration and to set the virtual server. The display format is "server port", "destination IP", "destination port"

The following table shows how to configure the particular virtual server.

Label	Description
Server Port	Specify the port of the income traffic from the GSM modem is forwarded.
Destination IP	Specify the destination IP that is the income traffic forwarded to.
Destination Port	Specify the destination port that is the income traffic forwarded to.



# NAT Configuration

NAT Status

# NAT Setting

Status	Enable
Interface	GSM Modem

To configure virtual server parameters.

Virtual Server Settings				
ld	Server Port	Destination IP	Destination Port	
1	0		0	
2	0		0	
3	0		0	
4	0		0	
5	0		0	
6	0		0	
7	0	0.0.0.0	0	
8	0	0.0.0.0	0	

Figure 3.23 Nat Configuration by Web page

# 3.3.11 VPN Settings

#### Operation: Netwark→VPN

Click on the "VPN' link and the following screen shall appear

This configuration page including two section, one is VPN status and the other is VPN setting.

#### **VPN Status**

This section shows the VPN running status, VPN connection status, local IP address and assigned IP address.



# **VPN** Connection

Status		
Running Status	VPN is not running	
Connection Status	Not Connetected	
Local IP address	None	
Assigned IP address	None	

Figure 3.29 VPN status

#### **VPN Setting**

To comigure vi	VPN Settings
VPN Function	I Enable
User	vpntest
Password	•••••
Pre-Share Key	
Local IP	10 . 10 . 10 . 1
IP Range	From 10 . 10 . 10 . 2 To 10 . 10 . 10 . 5
Interface	GSM/PPPOE ▼
Protect Serial Port Server	Enable
	Save Configuration

Figure 3.30 VPN Setting page

- VPN Function: choose to enable VPN function or not
- User: The user name that VPN client used to connect VPN network
- **Password:** The password that VPN client used to connect VPN network
- **Pre-Share Key:** The pre-share key that VPN client used to connect VPN network

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- **Local IP:** The IP address for this device in the VPN network
- IP Range: The IP range that used to assign to VPN client
- Interface: The interface co-operate with VPN. You can choose LAN1, LAN2 and GSM/PPPOE
- Protect Serial Port Server: choose to enable serial server protection function. By enabling this, serial server is only available through VPN connection

# **3.4 COM Port Configuration**

сом	OM 1				
<b>.ink Mod</b> o choose sp	e becific working mode for	COM 1 port.			
	© TCP Server	TCP Server			
	Virtual COM	🗆 Enable			
	Max. Connections	4 💌			
		<ul> <li>○ Request &amp; Response Mode</li> <li>● Reply to requester only</li> <li>○ Reply to all</li> <li>● Transparent Mode</li> </ul>			
	IP Filter	Enable			
	Source IP	0.0.0.0			
	Local Port	4660			
	Apply to all serial p	ports (Local Port will be enumerated automatically.)			

Figure 3.31 COM Port Configuration by Web page

# 3.4.1 TCP Server for Link Mode

TCP Server mode is the default Link mode of serial settings, and it can wait for connecting requirement from remote host PC which "serial-to IP" tool installed or counter-pair SE5404D Serial servers in tunneling mode. One shall configure listening port to allow establishing connection; Default port numbers of Serial Server are 4660 – 4667/4675.

If you wish to setup two SE5404Ds in tunneling mode, one SE5404D should run as a TCP Server and the other should run as a TCP Client. Server's Local Port should match Client's Destination Port. Client's Destination IP should match Server's IP. Detailed steps are described below.

1. Prepare two SE5404Ds (A and B). Note that you can treat each COM port as an independent device.

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- 2. SE5404D A= 10.10.50.100. SE5404D B = 10.10.50.101 (You can use different IPs, but both SE5404Ds need to be in the same subnet).
- 3. When connecting SE5404D to the instrument or to the PC over RS-232, please use a cross-over cable.
- 4. Enable "Virtual COM" on the WebUI for both SE5404Ds (First option in COM settings).
- 5. Set SE5404D A COM1 to TCP Server mode. Set SE5404D B COM1 to TCP Client mode IP and port equal to SE5404D A COM1's settings (Default Destination IP=10.10.50.100, Default Destination Port = 4660).
- 6. (optional) Repeat for remaining COMs: Set SE5404D A COM2 to TCP Server mode. Set SE5404D B COM2 to TCP Client mode IP and port equal to SE5404D A COM2's settings (Default Destination IP=10.10.50.100, Default Destination Port = 4661).

#### Max Connections (default=1):

This option is used if you need to receive data from different hosts simultaneously. When set to 1, only a single host may open the TCP connection to the serial port. When set to 2 or greater, up to the specified number of hosts may open this port at the same time.



# Attention

When **Max. Connections** is greater than 1, the Serial server will apply multi connection application (i.e., 4 hosts are allowed access to the port at the same time). When using a multi connection application, all hosts connected to the port must use identical serial settings. If one of the hosts opens the COM port with different serial settings, data will not be transmitted properly

#### **Request and response Mode**

This option determines how the port will proceed if multiple hosts are connected and one or more of the hosts stop responding when the port is transmitting data. If you select **Reply to requester only**, the port will keep other hosts' request data in the buffer and continue data transmission to the request host only. If you select **Reply to all**, the port will transmit reply data to all connected hosts.

#### **Transparent Mode**

The port will allow the other hosts and continue data transmission to all hosts. This mode does not take "Response Interval Timeout" into consideration.

IP filtering function is a simple ACL (Access Control List) disabled by setting FILTER\_IP to "0.0.0.0".

One may configure one or group IP for source IP. If IP filter is enabled, only source IP assigned is connected to Serial Server.

If you check "Apply to all serial ports", it will configure all of the serial ports.



• TCP Server	OTCP Client OUDP
	TCP Server
Virtual COM	🗆 Enable
Max. Connections	4 💌
	<ul> <li>Request &amp; Response Mode</li> <li>Reply to requester only</li> <li>Reply to all</li> <li>Transparent Mode</li> </ul>
IP Filter	🗆 Enable
Source IP	0.0.0.0
Local Port	4660
Apply to all serial	' ports (Local Port will be enumerated automatically

#### Figure 3.32 TCP Server in Link mode

#### \* Note: Enable Virtual COM mode if the remote site PC's "Serial to IP" tool installed

#### 3.4.2 TCP Client for Link Mode

One may enter destination IP & port (default: 4660) to establish connection of counter-pair (remote) host (For example, another serial server, or PC for data-collection). Serial Server can support two destination hosts simultaneously.

If you check "Apply to all serial ports", it will configure all of the serial ports.



# COM 1



Figure 3.33 TCP Client in Link mode

# 3.4.3 UDP for Link Mode

UDP is a fast but non-guaranteed datagram delivery protocol. Serial Server can be configured in a UDP mode on a TCP/IP Network to establish a connection, using uni-cast or broadcast data to and from a serial device to one or multiple host computer,.

Serial Server can be configured in a UDP mode to establish connection using uni-cast or broadcast data from the serial device to one or multiple host computers. Vice versa is also true. For example, The original RS-422/ RS485 bus is transferred and extended connecting distance by Serial Servers, The destination IP is assigned by single IP or group IPs, The configuration is limited by the Local Listening Port (For example, on Serial Server listening port is 4660 which receive data sending from the host computers) Serial Server can support up to 8-group IP for UDP connection, if users needed.

If you check "Apply to all serial ports", it will configure all of the serial ports.



# COM 1

Link Mode To choose specific working mode for COM 1 port.					© UDP	
	J JOINGI	o rer e	iiciii		001	
		U	<b>DP</b>			
La	ocal Port	4660				
Destination IP Address 1	💌 Enable	0.0	. 0	. 0	~ 0	Port 4660
Destination IP Address 2	🗖 Enable	0.0	. 0	. 0	~ 🖸	Port 4660
Destination IP Address 3	🗖 Enable	0.0	. 0	. 0	~ 0	Port 4660
Destination IP Address 4	🗖 Enable	0.0	. 0	. 0	~ 0	Port 4660
Destination IP Address 5	🗖 Enable	0.0	. 0	. 0	~ 0	Port 4660
Destination IP Address 6	🗖 Enable	0.0	. 0	. 0	~ 0	Port 4660
Destination IP Address 7	🗖 Enable	0.0	. 0	. 0	~ 0	Port 4660
Destination IP Address 8	🗖 Enable	0.0	. 0	. 0	~ 0	Port 4660
Apply to all serial ports (Local Port will be enumerated automatically.)						

#### Figure 3.34 UDP in Link mode

#### \* Note: UDP mode doesn't support Virtual COM mode yet

# 3.4.5 Serial Settings

This filed can configure serial parameters for Serial Server. Here one may configure Serial parameters, include UART Mode, baud rate, parity, data bit and type of flow control you wanted

- Configuring UART Mode: RS-232 or RS-485 or RS-422
- Baud rate: 300 / 600 / 1200 / 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200 / 230400 / 460800 / 500000 / 576000 / 921600
- Parity: None or Odd or Even or Mark or Space
- Data bits: 7 or 8
- Stop bits: 1 or 2
- Flow control: None or Xon/Xoff or Hardware (RTS/CTS)
- Disable FIFO: No/Yes. For serial devices that are very sensitive to the amount of data that they receive, FIFO should be disabled. For regular applications, we recommend to enable FIFO (default) to achieve optimal performance.

#### \* If you check "Apply to all serial ports", it will configure all of the serial ports.



Serial Settings		
UART Mode	⊙RS422 ○RS485	
Baud Rate	9600 💌 bps	
Parity	⊙None OOdd OEven OMark OSpace	
Data bits	O5 bits O6 bits O7 bits ⊙8 bits	
Stop bits	⊙1 bit O2 bits	
Flow Control	⊙None OXon/Xoff ORTS/CTS	
Diable COM's FIFO	⊙ No ⊖ Yes	
Apply to all serial ports		

#### Figure 3.35-1 Serial Settings by Web page

# 3.4.6 Advanced Settings

ADVANCED SETTINGS				
Time out for receiving TCP data	✓ Enable 3600 (0~65535) seconds			
Serial to Network Packet Delimiter	✓ Interval timeout       2       (1~30000) ms         ● Auto(caculate by baudrate)       ○ Manual setting         □ Max. Bytes       ○       (within one packet:1~1452 bytes)         □ Character       ○       ("0x"+ASCII Code, Ex. 0x0d or 0x0d0a)			
Network to Serial Packet Delimiter	<ul> <li>☐ Interval timeout 0</li> <li>(1~30000) ms</li> <li>☐ Max. Bytes 1452</li> <li>(within one packet:1~1452 bytes)</li> <li>☐ Character 0x0d0a</li> <li>("0x"+ASCII Code, Ex. 0x0d or 0x0d0a)</li> </ul>			
Response interval timeout	Enable 0 (0~60000) ms (Work with Multi-connection,Request & Response Mode only)			
Keep Serial buffer data before TCP connection is Established	O Disable			
Apply to all serial ports				

#### Figure 3.35-1 Advanced Settings by Web page

**Time out for receiving TCP data (Default: Disabled):** This field specifies how long the serial device server will wait for a response to "keep alive" packets before closing the TCP connection. The serial device server checks

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connection status by sending periodic "keep alive" packets. If the remote host does not respond to the packet within the time specified in this field, the serial device server will force the existing TCP connection to close. If this setting is set to 0, the TCP connection will remain open even if there is no response to the "keep alive" packets.

#### Serial to Network Packet Delimiter

Packet delimiter is a way of packing data in the serial communication. It is designed to keep packets in track. Serial device server provides three patterns in parameter setting: (1) **packet delimiter by** (1) **Interval timeout,** (2) **Max Byte** and (3) **Character pattern**.

- 1. **By Time** The device will transmit the serial data in its buffer when the specified time interval has reached and no more serial data comes in.
- 2. **By Max Bytes** The device will transmit the serial data when the data in the buffer has reached the specified length.
- 3. By Character The device will transmit the serial data in its buffer when it sees the specified character.

If one or more of the delimiters are selected, data would be transmitted if any of the conditions are met.



# Attention

#### Packet delimiter by Interval timeout

This parameter defines how large a gap in serial communication the serial device server will allow before packing the serial data in its internal buffer for network transmission.

The optional "Internal timeout" transmit time depends on your application, but it must be at least larger than one character interval within the specified baud rate. For example, assume that the serial port is set to 1200 bps, 8 data bits, 1 stop bit, and no parity. In this case, the total number of bits needed to send a character is 10 bits, and the time required to transfer one character is  $(10 \text{ (bits)} / 1200 \text{ (bits/s)}) \times 1000 \text{ (ms/s)} = 8.3 \text{ ms.}$ 

Therefore, you should set the "Interval timeout" to be larger than 8.3 ms, so in this case, it must be greater than or equal to 10 ms. If it is necessary to send a series of characters in the same packet, the serial device will need to send that series of characters within the specified transmit time, and the total length of data must be less than or equal to the serial device server internal UART buffer size (4K per port).

#### **Network to Serial Packet Delimiter**

Network to Serial Packet Delimiter is used less often compared to Serial to Network Delimiter because Ethernet has better speeds. Packet delimiter is a way of packing data in a serial communication. It is designed to keep packets in track. Serial device server provides three patterns in parameter setting: (1) **packet delimiter by** (1) **Interval timeout,** (2) **Max Byte** and (3) **Character pattern**.

- 1. **By Time** The device will transmit the network data in its buffer when the specified time interval has reached and no more network packet comes in.
- 2. **By Max Bytes** The device will transmit the network data when the data in the buffer has reached the specified length.
- 3. **By Character** The device will transmit the network data in its buffer when it sees the specified character.

If one or more of the delimiters are selected, data would be transmitted if any of the conditions are met.



#### Response interval timeout (Default: 1000ms):

This option only work in Request & Response Mode. When TCP data is received (request) and passed to Serial side, the device will wait for the set time before transferring another TCP data if the Serial side did not receive any data (response).

#### Keep serial buffer data before TCP connection is Established (Default: Disable):

If "Enable" is selected, the device will store received data in buffer and sent them out when connection is establish. Otherwise, data will be discarded when "Disable" is selected.

#### 3.4.7 Alert Settings

There are two subsystem settings include E-mail and Alert Event.





# 3.4.8 Configuring E-mail

#### Operation: Alert→E-mail

Click on the "E-mail' link and the following screen shall appear

One may configure the "**Sender's E-mail address**" that it should have on the SMTP server (Mail Server) where allowed to sent out the email by sender's E-mail address. The SE5404D allow to definite the receiver up to 5. Also the E-mail notification will be sent to the e-mail account their obtained in "Receiver's E-mail address 1", "Receiver's E-mail address 2", "Receiver's E-mail address 3", "Receiver's E-mail address 4" and "Receiver's E-mail address 5".



E-m	ail Setting
Sender's E-mail address	
Receiver's E-mail address 1	
Receiver's E-mail address 2	
Receiver's E-mail address 3	
Receiver's E-mail address 4	
Receiver's E-mail address 5	

Figure 3.37 Configuring E-mail by Web page

One may configure Mail Server and checking on "*My mail server requests authentication*" field to obtain User name and Password.

	Mail Server
Mail Server	
🔲 Mail server auth	entication required.
User name	
Password	

Figure 3.38 Configuring Mail Server by Web page

# 3.4.9 Configuring Alert Event

#### Operation: Alert→Alert Event

Click on the "Alert Event" link and the following screen shall appear

Choose the Alert event to configure SE5404D Series to send the alert notification by E-Mail, SNMP Trap or SMS(See Fig 3.36).



	SC5404				
Overview			Aleı	rt Even	t
• Network		To cor	nfigure the SE seri	es to send alert by	/ E-mail or trap.
<ul> <li>Serial</li> </ul>			Ale	rt Event	
• Alert • E-mail	Cold Start	E-mail	🗆 Trap	SMS	SMS Message SC5404 Cold Restart!
• System	Warm Start	E-mail	🗖 Trap	SMS	SMS Message SC5404 Warm Restart!
	Authentication Failure	E-mail	🗖 Trap	SMS	SMS Message SC5404 Authentication Fail!
	IP address Changed	E-mail		SMS	SMS Message SC5404 IP Address Changed!
	Password Changed	E-mail		SMS	SMS Message SC5404 Password Changed!
	GSM Modem Is Assigned New IP	E-mail		SMS	SMS Message SC5404 GSM Modem Is Assigned A New IP!
			Sav	e Configuration	

Figure 3.39 Configuring Alert Event by Web page

# 3.5 System Configuration

There are six subsystem settings for system configuration including Link State, Time, Security, Set to Default and Restart.

L



# 

# SE5404D

- Overview
- Network
- Serial

# Alert

- System
   Link State
  - Log Setting
  - System log
  - COM log
  - Time
  - Security
  - Import/Éxport
  - Set to Default
  - ▶ Restart

.i	nk	S	tate		

To display the link mode and the status of each connection.

					Lin	ik S	tate						
Com	Link Mode	ТХ	RX	TX Total	RX Total	IP1	IP2	IP3	IP4	IP5	IP6	IP7	IP8
1	TCP Server	0	0	0	0								
2	TCP Server	0	0	0	0								
3	TCP Server	0	0	0	0								
4	TCP Server	0	0	0	0								

# Figure 3.40 System Configuration by Web page

# 3.5.1 Link State information

# Operation: System→Link State

Link State is display information by Link mode (TCP Server, TCP Client and UPD) and status of each connection for all serial port.

					Lin	ik S	tate	;					
Com	Link Mode	ТХ	RX	TX Total	RX Total	IP1	IP2	IP3	IP4	IP5	IP6	IP7	IP8
1	TCP Server	0	0	0	0								
2	TCP Server	0	0	0	0								
3	TCP Server	0	0	0	0								
4	TCP Server	0	0	0	0								

# Figure 3.41 Link State Information by Web page

# 3.5.2 Log Settings

Operation: System→Log Setting

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#### **Matop** SC5404 Overview Log setting Network Serial System Log Setting Alert System Enable Log Event to Flash Link State 3: (LOG ERR) 🚽 Log Level Log Setting System log Enable Syslog Server **V** COM log Time 192 168 1 221 Syslog Server IP Security Import/Export 514 Syslog Server Service Port (1~65535, default=514) Set to Default Restart Log forwarding setting Enable Log Forwarding V Log Forwarding Service Port 4680 (1~65535, default=4680) Save

# Figure 3.42 System Log Setting WebUI

Enable Log Event to Flash: This would write log events to the local flash.

Log Level: 3 (Currently we only allow this level)

Enable Syslog Server: Enabling this option would allow you to send Syslog events to a remote Syslog server.

Syslog Server IP: Please specify the remote Syslog Serve IP.

Syslog Server Service Port: Please specify the remote Syslog Serve Port.

Enable Log Forwarding: To enable log forwarding server.

Log Forwarding Service Port: Please specify the log forwarding service port.



	COM Lo	og Settin	gs	
Log Data Contents	Types 🥌	HEX CASCII		
Com Ports	Com1	Com2	Com3	Com4
Enable Syslog Server				
Syslog Server IP	0.0.	0.0		
Syslog Server Service Port	514 (1~6553	35, default=514)		
Enable Log Mail				
Collection Time Of The Log Mail	60 (1~600 s	econds, default=	=60)	

#### Figure 3.43 COM Log Setting WebUI

Log Data Contents: If enabled, the COM logging function will log data content. If disabled, COM logging function will only log data length to reduce system load. Note that the local flash storage has a very limited space. If the reserved space is full new logs will replace the old logs. We strongly recommend sending COM logs to a remote Syslog server.

Data Log Types: Hex or ASCII

COM 1~4 : Choose which port to log.

Enable Syslog Server: Enabling this option would allow you to send COM logs to a remote Syslog server. You can send COM logs to the same Syslog server used previously.

Syslog Server IP: Please specify the remote Syslog Serve IP.

Syslog Server Service Port: Please specify the remote Syslog Serve Port.

Enable Log Mail: Enable/Disable to mail COM LOG.

Collection Time Of The Log Mail: Specify collection time. The com log mail will be collected and sent together when the collection time is expired.

# 3.5.3 System Log

#### Operation: System→System Log

			Syste	m Lo	g
Index	Date	Time	Startup Time	Level	Event
1/1	2000.01.01	00:06:15	00d00h00m17s	alert	: Alert: Warm Start, SysName: 0060E9- 030B00, SysLocation: location

#### Figure 3.44 COM Log Setting WebUI

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# 3.5.4 COM Log

#### Operation: System→COM Log

			СОМ	1 💌	Log
Index	Date	Time	Startup Time		Event
1/5	2000.01.01	00:57:38	00d00h51m39s	3	: [COM1]T:(7)
2/5	2000.01.01	00:57:37	00d00h51m39s	4	: [COM1]T:(7)
3/5	2000.01.01	00:57:37	00d00h51m39s	info	: [COM1]T:(7)
4/5	2000.01.01	00:57:23	00d00h51m24s	info	: [COM1]T:(7) 48 65 6C 6C 6F 0D 0A
5/5	2000.01.01	00:57:22	00d00h51m24s	info	: [COM1]T:(7) 48 65 6C 6C 6F 0D 0A

#### Figure 3.45 COM Log Setting WebUI

You can select which COM to be displayed. The first three logs were set to log data length and the last two logs were set to log data content. COM logs can be retrieved from the device via FTP. FTP login is the same as the WebUI. They are located in /var/log/logcomxx (xx is the port number).

# 3.5.5 Time Settings

#### Operation: System→Time

One may configure "*NTP Server*" to obtain Network time automatically or Set it manually by fill in "*Set Date and Time manually*" field. You can enable and specify the Daylight Saving Time if you are located in a DST region. All the settings on the page require a restart.



	Current System Time
	2006/1/1 Sun 18:49:55 Refresh
	System Time Setting
Time Zone	(GMT) Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London 🛛 💌
Time Setting	ONTP O Manual
	NTP Setting
NTP Server	
	Manual Setting
Date	Year: 2006 💌 / Month: Jan 💌 / Day: 1 💌
Time	Hour: (0~23) : 18 💌 Minute: (0~59) : 49 💌 Second: (0~59): 55 💌
	Daylight Saving Setting
Enable Daylight S	Saving Time
Start Date	Month: Jan 💌 / Week: 1st 💌 / Day: Sun 💌 / Hour: 1 💌
End Date	Month: Jan 💌 / Week: 1st 💌 / Day: Sun 💌 / Hour: 1 💌
Offset	1 v hour(s)

Figure 3.46 Time Settings by web page

# 3.5.6 Security Configuration

# Operation: System→Security

Click on the "Security" link and the following screen shall appear



# 

# Overview

- Network
- Serial
- Alert

# System

- Link State
- Log Setting
- System log.
- COM log
- Time
- Security
- Import/Export
- Set to Default
- Restart

# SE5404D

# **Change Password**

The default password is null, you can change the password by filling in the new password to New Password and Verified Password fields, be aware that password is case sensitive.

Chan	ge Password
Old Password	
New Password	
Verified Password	
	Save Password

# Security

SE series allow one to change the access methods to protect it against intrusion. All password protect function will use same password of above 'Change Password' setting data.

becunity
⊙ Enable ○ Disable

Figure 3.47 Security Configuration by Web page.

Enter the old password on "*Old Password*" field; enter the new password on "*New Password*" and the "*Verified Password*" fields, and then click on "*Save Configuration*" to update the password.



Change Password	
Old Password	
New Password	
Verified Password	

Figure 3.48 Change password by Web page

#### \* Note: One may press the reset key on product to reset password to the default value

SE5404D serials allow one to change the access methods to protect it against intrusion.

Security		
Web Console	⊙Enable ○Disable	
Telnet Console	⊙Enable ○Disable	
Reset Button Protect	⊙No OYes	

#### Figure 3.49 Security Configuration by Web page.

# 3.5.7 Import/Export

#### Operation: System→Import/Export

Please select a setting file to be imported or a file path for the settings to be exported on the WebUI.



	SE5404D
<ul> <li>Overview</li> </ul>	Import
Network	Import a configuration file to the device.
<ul> <li>Serial</li> <li>Alert</li> </ul>	Configuration File: Browse
<ul> <li>System</li> <li>Link State</li> <li>Log Setting</li> <li>System log</li> <li>COM log</li> <li>Time</li> <li>Security</li> <li>Import/Export</li> <li>Set to Default</li> <li>Restart</li> </ul>	Import Configuration <b>Export</b> Export a configuration data from device and save to file.
	Export Configuration

# 3.5.8 Restore Factory Default

# Operation: System→ Set to Default

One may click on "set to default and restart" button to restore Serial Server's settings to Factory Default Settings.





Figure 3.51 Restore Factory Default by Web page

# 3.5.9 Restart System

#### Operation: System → Restart

One may press "Restart" button to restart the SE5404D series. The web page will be refreshing after it reboot.




Figure 3.52 Restart System by Web page



## 4. Using Virtual COM

Virtual COM driver mode for windows converts COM data to LAN data to control the COM port on a SE5404D via the LAN. By creating virtual COM ports on the PC, the Virtual COM driver redirects the communications from the virtual COM ports to an IP address and port number on a SE5404D that connects the serial line device to the network. The following figure is Virtual COM connection diagram. (ref Figure 4.1)



Figure 4.1 Virtual Com connection diagram

## 4.1 Setup of a virtual COM driver

## 4.1.1 Pre-installation requirements

Please check the operation system on your PC complied with the following requirements:

- Processor: Intel-compatible, Pentium class
- Operation system: Windows Server 2003, Windows XP, Windows 2000, Windows NT 4.0 SP5 or later, Windows Me, Windows 98, Windows 95, Microsoft NT/2000 Terminal Server, Citrix MetaFrame

## 4.1.2 Cautions on Use

The Virtual COM driver supports firmware AP v3.0 and later of SE5404D Serial Device Server-Ethernet Servers.

## 4.1.3 Limitation

The Virtual COM driver provides user to select up to 256 **COM ports** as Virtual COM ports in a SerialManager Utility PC. User can select them from a list of COM ports, which is from COM1 up to COM256.



## 4.1.4 Installation

Make sure you have turned off all anti-virus software before beginning the installation. Run the Virtual COM setup file included in the CD to install Virtual COM driver for your operating system.

In the end of the installation, please select one or two COM ports to become the Virtual COM ports.

## 4.1.5 Uninstalling

- 1. From Windows Start menu select Setting, Control Panel, Add/Remove Programs.
- 2. Select **Serial IP** in the list of installed software.
- 3. Click the **Add/Remove** button to remove the program, or From Windows Start menu select Programs, Serial IP for ATOP, **Uninstall Serial IP** to remove the program.

## **4.2 Virtual COM communication**

## 4.2.1 Enable Virtual COM on SE5404D

From web browser access to SE5404D by typing its IP address,

- → click on "COM1" link to access COM1 page,
- → on the top half of the page click on "*TCP Server*"

COM 1

- → C Virtual COM to Enable COM driversenable Virtual COM by putting a check in front of the "Enable" button, then t
- → Enter in the local port number in the "Local Port" field as indicated in the following figure: (ref Figure 4.2)

TCP Server
□ Enable 4 ▼ ○ Request & Response Mode
4 ▼ O Request & Response Mode
O Request & Response Mode
⊖ Reply to all ⊙Transparent Mode
] Enable
. 0 . 0 . 0
660

#### Figure 4.2 Enable Virtual Com Or you can

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## 4.2.2 Run Serial/IP on PC

In the Window Start Menu, go to "Programs", select "Serial/IP" and select "Control Panel". When "Select Port" windows pop-up, please select the serial port you want to configure. Then the configuration window will appear. (ref Figure 4.4)

🛓 Serial/IP Control I	Panel 4.3.9		×
COM4 COM5	Configuration of COM4	IP Address: 10.0.50.100	Port Number: 4660 46603
Select Ports			
Port Monitor			
Licensing			
Advanced	Clam	Uolp	(bent 1
	C10%	nerb	About

Figure 4.4 Serial/IP configuration

At the right side of Figure 4.4 is a sample Virtual COM Control Panel window. At the left side is the list of the COM ports that you have selected (in the **Select Ports** window) for use by the Virtual COM Redirector. If you wish to change which ports appear in this list, use the **Select Ports** button.

Each COM port has its own settings. When you click on a COM port, the Control Panel display changes to reflect the settings for that COM port.

**NOTE:** When you change settings for a COM port, the changes are effective immediately. There is no separate confirmation dialog to confirm or cancel your changes.

## 4.3 Configuring Virtual COM Ports

You configure each Serial/IP COM port as follows: (ref Figure 30)

- 1. Select a COM port in the list.
- 2. For IP Address of Server, enter a numeric IP address for the serial server.
- 3. For **Port Number**, enter the TCP port number that the serial server uses to provide its serial ports to the network.
- 4. For **Server Credentials**, the default is **No Login Required**. If your serial server does require a login by the Virtual COM Redirector, the Virtual COM Redirector needs to provide a username and/or password every time an application tries to use the serial server.
- 5. Click the **Configuration Wizard** button and then click the **Start** button that appears in the wizard window. This important step verifies that the Virtual COM Redirector can communicate with the serial server using



the settings you have provided. If the **Log** display does not show errors, click the **Use Settings** button in the wizard, which makes the recommended settings effective and returns you to the Control Panel to continue with the following steps.(ref Figure 4.5)

Configuration Wizard - COM4	×
IP Address of Server: 10.0.50.1	Port Number: 4660
Username:	Password:
Test for presence of a <u>m</u> odem connected to the	server
Status:	
<ul> <li>✓ COM Port Control Support Detected</li> <li>✓ Telnet Protocol Detected</li> <li>✓ Session Completed</li> <li>Log:</li> </ul>	
 Recommendations:	
Protocol: Telaet COM Port Opton: DTR disabled COM Port Opton: DSR disabled COM Port Opton: DCD disabled 	
Start 🖉 Stap	Cancel

Figure 4.5 Configuration Wizard

- 6. For **Connection Protocol**, the setting must match the TCP/IP protocol that the serial server supports. The Configuration Wizard is usually able to determine the correct setting.
- 7. For **COM Port Options**, the settings must match the COM port behavior expected by the PC application that will use this COM port. The Configuration Wizard will recommend a combination of settings.



## 5. SNMP Setup

## **5.1 SNMP Network Management Platform**

SE5404D is an SNMP device that allows many popular SNMP Network management platforms such as HP OpenView and SunNet Manager to conduct on the SerialManager Utility.

Depending on the network management tools you are using, device (SE5404D) information can be collected from running the management tools including **IP address**, **DNS name**, **system descriptions and NIC** information etc.

## 5.2 Using NetworkView As An Example

The NetworkView is a compact network management tool from NetworkView Software, Inc. (<u>www.networkview.com</u>). It discovers all TCP/IP nodes in a network using DNS, SNMP and ports information and documents with printed maps and reports for future use. You may visit their web sites and get a free download.

To use NetworkView, you will need to download and install the tool on ones PC (**Windows NT and Windows 9x only**). Please refer to the installation instructions that come with the tool.

After you have done the NetworkView installation, start NetworkView.

1. Click on the button to open a new file. The following screen appears, in the Addresses field, Enter in the IP address range to search(Figure 5.1).

Discover		×
Map Information Title Description Author		
Discovery type C Single address C Bange C Sub <u>n</u> et	Addresses Start 10 . 0 . 50 . 1 ≥ End 10 . 0 . 50 . 101 ≥	
	<u>S</u> ettings <u>O</u> k <u>C</u> ancel <u>B</u> lank	

Figure 5.1 NetworkView-IP discovery parameters setup

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Click on "OK" and the following dialog box appears. It displays the searching progress (Figure 5.2).

Discovering network	×
10.0.50.56 : pinging address (1)	
54%	
Cancel	

Figure 5.2 Discovering network

2. When the search is completedd, NetworkView will display the devices found in the main window, as shown in the following diagramFigure 5.3.

N <sup>Y</sup> File Edit View Lists Logs Window Help	
14 The Ear Teu Tree East Three Teb	
☞ ☞ 묘   Q ⊜    ̄ -   № ↓   ?   ♀ ≪   + - ₩   ₽ ♥ ≪   로   = -    ⊨ 0 № ₩ 므 \$	22 奈 🔳
10.0.50.9 10.0.50.71	
ATUP Technologie name	
ATOP Technologies, Inc. ATOP Technologies, Inc.	

Figure 5.3 NetworkView- main window

3. Double-click on the device icon to display information about the device, including IP Address, Company, SysLocation (Max 15 characters), SysName (Max 9 characters) and types etc(Figure 5.4).

Properties		×		
General NetBIOS	Snmp Tcp Ports Wmi Note Monitoring	_		
Description	Value			
SysDescr Linux atop 2.4.18-SE5404 #59 Mon Nov 13 10:33:54 CST 2006 mips				
Company	ATOP Technologies, Inc.			
SysContact	"ATOP"			
SysLocation	"ATOP"			
SysUpTime	0 days 2 h. 39 m. 18 s.			
SysObjectID	.1.3.6.1.4.1.3755.3.2.10			
SysName	"SE5016"			
MAC Address	00-60-E9-02-0E-74   00-60-E9-02-0E-75			
NetBIUS Domain				
Community (read)	public			
	F			
Addresses and Ro	utes Add to <u>O</u> ID database Edit <u>R</u> outes Labels <u>Export</u>			
		1		
	OK Cancel Apply Help			

Figure 5.4 NetworkView-Node details

## NOTE:

- 1. The NetworkView tool is limited to information extracting and viewing only.
- 2. To modify the configurations please use the web server, Telnet or SerialManager configuration utilities.



## 6. Start Writing Ones Own Applications

Before you start writing ones host applications or programs to interact with SE5404D, please make sure one have done the following.

## 6.1 Preparing The System

- 1. Properly connect SE5404D hardware including power, Ethernet and serial cable
- 2. Properly configure the parameters of SE5404D including connection type, IP address, gateway IP address, and network mask accordingly (see chapter 3 Hardware Installation section).
- 3. Configure SE5404D as TCP Server using default TCP port number 4660.
- 4. The host (PC) application program must be configured as a TCP client and connects to SE5404D with designated TCP port number 4660 for COM1.
- 5. Make sure SE5404D is running by checking theSE5404D running status through **SerialManager** configuration utility.

## 6.2 Running The Sample Program

Sample programs written in VB and VC++ included in package are provided for your reference, source codes are also included. Test program can be found in the product CD or diskette under the directory of **\sample\vb\_ap\** and **\sample\vc\_ap** respectively.

There are two test programs, TCPTEST written in Visual Basic and TCPTEST2 written in Visual C++.

## 6.2.1 TCPTEST in Visual Basic

This sample program (Figure 6.1) is written in Visual Basic 5.0 with Winsock Controls. It shows you how to send and receive data between host (PC) and SE5404D via Ethernet in two socket ports.

Run Visual Basic and open sample program tcptest.vbp, after the program is started successfully, you can start testing functions. For more information, please press **Help** in the program to get detail explanation.

**NOTE**: Please be sure the Microsoft visual studio family or its equivalent software is installed on the computer. Otherwise the sample program will not run.



TCP/IP Convertor Sample Program	×
Remote IP Address, Port     2       1     10.0.50.9	
3 This is a test string Send Help	
Receive 10:06:29 TCP connect ok 10:06:29 15, FF FB 00 FF FD 00 FF FD 2C FF FD 2C FF FB 27 10:09:25 TCP C number	
11:06:35 TCP Send ok Status	
10:06:29 15, yu <nl>yy/NL&gt;yu,yy,yu'</nl>	
Connected ok Status	

Figure 6.1 TCP test sample program in Visual B

## 6.2.2 TCPTEST2 in Visual C

Enter in the following command in the command line prompt(Figure 6.2):

TCPTEST2 IP\_Address Port\_Number

🔤 E:\WINNT\System32\cmd.exe - tcptest2 10.0.50.100 4660	<u> </u>
	<b></b>
C:\>tcptest2 10.0.50.100 4660	
TCP Test Program 2	
Connecting to 10.0.50.100, Port=4660	
(6432000a)	
Wait to Connect	
Connect OK	

Figure 6.2 TCP test sample program in Visual C

The command *tcptest2 10.0.50.100 4660* brings you to connect to a TCP server of IP address *10.0.50.100* and port number *4660*, the received data is displayed on the screen and the data typed in is sent to the TCP server of the designated port number. You can also send binary data in hex format with a leading character "\". For example, "\00" and "\FF" represent ASCII code 0 and 255 respectively.

You can also use modem to connect to the serial server. Command "*AT\Od*" sends standard AT command to the modem which in return responds with "*OK\OD\OA*" message to the host application.

Always use '=' then **Enter** key to exit the program.

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## 7. Diagnostics

There are several ways you can check on the status and availability of SE5404D.

## 7.1 Use Standard TCP/IP Utility ping Command

From Windows Start menu, select Run and Enter in "ping <TCP Server IP address>"(Figure 7.1).

If the connection is established, the Reply messages are displayed, otherwise it will indicate Request timed out.

```
🕰 C:\WINNT\system32\cmd.exe
                                                                             C:\>ping 10.0.50.100
                                                                                  *
Pinging 10.0.50.100 with 32 bytes of data:
Reply from 10.0.50.100: bytes=32 time=10ms TTL=64
Reply from 10.0.50.100: bytes=32 time<10ms TTL=64
Reply from 10.0.50.100: bytes=32 time<10ms TTL=64
Reply from 10.0.50.100: bytes=32 time=10ms TTL=64
Ping statistics for 10.0.50.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
   Minimum = Oms, Maximum = 10ms, Average = 5ms
C:∖>ping 10.0.50.100
Pinging 10.0.50.100 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 10.0.50.100:
   Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Figure 7.1 Standard TCP/IP utility ping command

## 7.2 Use SerialManager Configuration Utility Program

Use SerialManager Utility configuration program that comes with the product CD or diskette to check on the status of SE5404D. The status and version can be read from the tool.



Seri	alManager ¥4.7						×
<u>S</u> earch	<u>C</u> onfiguration Se	curity <u>A</u> dvance V <u>i</u> rt	ual COM A <u>b</u> out				
		🥭 🎦 🕷	<u>rs</u> 29	b 🕸 😰			
N (	C. Model	IP Address	MAC Address	Host Name	Kernel	AP Information	^
17	MG512	10.0.172.133	00:60:E9:06:07:FC		V1.0	PowerMeter V0.99	
18	SE5302	10.0.189.55	00:60:E9:01:EF:98	<u> </u>	V1.1	SE5302 Ver 2.0.7	
19	SE5302	192.168.1.1	00:60:E9:01:EF:99	<u> </u>	V1.1	SE5302 Ver 2.0.7	
20	SE5404	10.0.189.46	00:E0:40:24:45:58	00E040-244558	V3.18	Serial Server V3.28	
21	SE5404D	10.0.50.10	00:60:E9:02:6F:70	0060E9-026F70	V3.20	Serial Server V3.30	
22	SE5416	10.0.154.90	00:60:E9:03:6E:46	0060E9-036E46	V3.11	Serial Server V3.17	
23	SE7404	10.100.100.20	SE5404D 10.0.50.10		V1.18	SDK V1.23	
24	WP1	10.0.171.7	P Collide: No		V1.10	WP1 V1.10	
25	WP1	192.168.2.99	Login: No		V1.10	WP1 V1.10	
26	io	10.100.100.60	00:60:E9:67:68:70		V1.26	io V1.09	
							~
<						>	
Ready, T	otal 26 devices						- /

Figure SerialManager configuration utility

## 7.3 Use TCPTEST.EXE or TCPTEST2.EXE Sample Program

Use sample programs TCPTEST.EXE and TCPTEST2.EXE that comes with the product CD or diskette to check on the status of SE5404D. Please refer to chapter 6.2 to run the sample programs.



## Appendix A: Specifications

Specifications				
Ethernet				
	Compliance	IEEE802.3		
	Network Interface	10/100 Mbps Fast Ethernet		
	Port	2		
	Transmission Rate	10/100 Mbps Auto-detection		
	Connector	RJ-45		
	Auto MDI/MDI-X	Yes		
Link Mode				
	TCP Server	Up to 8 connections or Virtual COM / Reverse Telnet modes		
	TCP Client	Up to 2 destination or Virtual COM mode		
	UDP	Up to 8 Ranges of IPs		
Serial	<u> </u>			
	Interface	RS-232/422/485 (SE5404D) RS-422/485 (SE5404D-TB/SE5404D-Sis) software selectable		
	Ports	4 Ports		
	Baud Rate	300bps~921.6kbps(SE5404D/SE5404D-TB) 300bps~230kbps (SE5404D-Sis)		
	Parity	None, Odd, Even, Mark, Space		
	Data bits	5, 6, 7, 8		
	Stop Bit	1,2		
	Flow Control	None, Software: Xon/Xoff, Hardware: RTS/CTS		
	Protection	15KV ESD 2KV Magnetic Isolation (SE5404D-Sis only)		
	Connector	9-Pin lockable D-Sub 5-Pin 5.08mm lockable Terminal Block		
Power				
	Input	9-48DCV, 0.65A max		
	consumption	Max. 5.85W		
	Connector	7-pin 5.08mm connector for redundant power input		
LED				

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	Indicator	COM, LAN, RUN
Approval	<u>-</u>	
	EMC	CE Class A, FCC Class A
	Protection	IP50 Rated IEC/EN60529
	Vibration	IEC60068-2-64
	Shock	IEC60068-2-27
	Free-fall	IEC60068-2-32(ISTA Test Procedure 2A)
Environment		
	Operating	-40°C ~85°C (-40°F ~176°F)
	Storage	-40℃~85℃(-40°F ~185°F)
	Humidity	5%~95% Non-condensing
Dimension		
	(WxHxD)	53.4mm x 145.7mm x 119.9mm
Physical		
	Weight	900g
	Installation	DIN-Rail mounting or Wall mount (optional)
	Warranty	5 years
MTBF		
	Preceding	TBD
Software		
	Configuration	Web Page / Telnet / Serial console / Windows Utility
	Virtual COM	Windows & Linux port redirection software
	Support Protocol	ICMP, TCP/IP, UDP, DHCP Client, NTP, DNS, SNMP, HTTP, Telnet, SMTP

## A.3 Panel Layout and Connector Pin Assignments A.3.1. Panel Layout



## A.3.1.1 SE5404D Front Panel



A.3.1.2 SE5404D Side View



©	Ø	
		145,70
0	Ø	



## A.3.1.3 SE5404D Top View







## A.3.1.4 SE5404D Rear and Mounting View





## A.3.2.1 DB9 Pin Assignments

The pin assignments of DB9 connector on SE5404D is shown in the following table:

Pin#	RS-232 Full Duplex	RS-422/4-Wire RS-485 Full Duplex	2-Wire RS-485 Half Duplex
	for SE5404D	for SE5404D	for SE5404D
1	DCD	N/A	N/A
2	RXD	TXD+	N/A (reserved)
3	TXD	RXD+	DATA+
4	DTR	N/A	N/A
5	SG (Signal Ground)	SG (Signal Ground)	SG (Signal Ground)
6	DSR	N/A	N/A
7	RTS	RXD-	DATA-
8	CTS	TXD-	N/A (reserved)
9	RI	N/A	N/A

## A.3.2.2 Terminal Block Pin Assignments

The pin assignments of Terminal Block connector on SE5404D-TB / SE5404D-Sis is shown in the following table:

Pin#	RS-422/4-Wire RS-485 Full Duplex for SE5404D-TB / SE5404D-Sis	2-Wire RS-485 Half Duplex For SE5404D-TB / SE5404D-Sis
1	T+	NC
2	Т-	NC
3	R+	Data+
4	R-	Data-
5	SG (Signal Ground)	SG (Signal Ground)

## A.3.3.1 Ethernet Port (RJ-45)

1. Category 5 UTP cable, 8 core wires.







- 2. RJ45 Connector.
- 3. RJ45 Pin Assignment

Pin Assignment	568A Definition	568B Definition
Pin1	Green-White	Orange-White
Pin2	Green	Orange
Pin3	Orange-White	Green-White
Pin4	Blue	Blue
Pin5	Blue-White	Blue-White
Pin6	Orange	Green
Pin7	Brown-White	Brown-White
Pin8	Brown	Brown

You can choose either 568A or 568B definition. If you want to make a crossover cable, you should use 568A and 568B definition respectively in each terminal of a UTP cable.

#### A.3.4.1 Console Port (RJ-45)

RJ4	5		Cross Female	over DB9
°.			j	
RTS	Pin 1	⇔	Pin 8	CTS
DTR	Pin 2	€	Pin 6	DSR
TXD	Pin 3	¢	Pin 2	RXD
SG	Pin 4	¢	Pin 5	
SG	Pin 5	¢	1 11 3	OND
RXD	Pin 6	¢	Pin 3	TXD
DSR	Pin 7	$\Leftrightarrow$	Pin 4	DTR
CTS	Pin 8	⇔	Pin 7	RTS

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## A.4 Buzzer/LED Message

#### A.4.1 Buzzer

- " ^ ": Beep twice
- " = ": Beep off

Message	Description
^^	
(5sec.)	Startup OK and AP firmware is enabled

Table 1. Buzzer Message



## Appendix B: Upgrade System Firmware

After the new version of firmware is released, customers can download from <u>www.Atop.com.tw</u>. After you download the firmware, please follow these instructions listed below.

## **B.1 Upgrade Procedure**

Please follow Appendix C if you want to use **SerialManager** to upgrade firmware. Follow the upgrading procedures below to upgrade to the latest firmware using a batch file:

- Make sure the PC and the SE5404D series on the same network. Use command ping or SerialManager Utility program to verify their availability.
- Edit "dll.bat " to fit the system requirements, Be sure to save ones modification
- Run linux\_dl ,the following screen shall appear .

For example : linux\_dl\_v2 zlmage.bin 10.0.50.100

• Note: "linux\_dl\_v2" is the upgrade executable and zlmage.bin is the firmware file name; xxx.xxx.xxx is the IP address of SE5404D seriess

SE5404D will automatically restart each time the firmware is successfully download completed. When you get a new software version, please follow the procedure below to upgrade your SE5404D.



## **B.2 Critical Issues of Upgrading**

If the upgrade is successful, SE5404D shall program the flash memory and the buzzer will beep 1 time before

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restarting. It takes around 30 seconds to complete the programming process. If an error occurs during the programming process, SE5404D will clear the corresponding memory and the system remains the same before the process.

## **B.3 Error Messages**

Firmware upgrade may not be successful if errors occur during the process.

Error Cause	Message	Comments
Illegal Hex file format	Hex File Text Error	
	Hex File Check-Sum Error	
	Hex File Format Error	
	Hex File End of Record Error	
SE5404D handshaking problem	SE5404D ACK Start Address Error	
	SE5404D ACK Length Error	
	SE5404D Response Command Error	
Configuration file	Remote IP not found	
	Open configuration file failure	



## Appendix C: Using SerialManager Utility

#### C.1. SerialManager utility Introduction

**SerialManager** utility, developed by ATOP, is a special tool for device management and configuration. It can realize the daily management on various ATOP network devices for address search, device positioning, parameter configuring, and firmware downloading. Note that EW5302 is used to demonstrate the functionality of SerialManager instead of SE5404D.

## C.2. Interface

The operating interface of the SerialManager utility is shown below:

Se Se	SerialManager ¥4.7							
Search	h <u>C</u> onfiguration S <u>e</u>	curity <u>A</u> dvance V <u>i</u> rt	tual COM A <u>b</u> out					
	1 🖧 🏷	🥭 🌆 🕷	<u>&gt; S.</u> 29	b 🏝 😰				
N	C., Model	IP Address	MAC Address	Host Name	Kernel	AP Information	^	
17	MG512	10.0.172.133	00:60:E9:06:07:FC		V1.0	PowerMeter V0.99		
18	SE5302	10.0.189.55	00:60:E9:01:EF:98	<u> </u>	V1.1	SE5302 Ver 2.0.7		
19	SE5302	192.168.1.1	00:60:E9:01:EF:99	<u> </u>	V1.1	SE5302 Ver 2.0.7		
20	SE5404	10.0.189.46	00:E0:40:24:45:58	00E040-244558	V3.18	Serial Server V3.28		
21	SE5404D	10.0.50.10	00:60:E9:02:6F:70	0060E9-026F70	V3.20	Serial Server V3.30		
22	SE5416	10.0.154.90	00:60:E9:03:6E:46	0060E9-036E46	V3.11	Serial Server V3.17		
23	SE7404	10.100.100.20	SE5404D 10.0.50.10		V1.18	SDK V1.23		
24	WP1	10.0.171.7	IP Collide: No		V1.10	WP1 V1.10		
25	WP1	192.168.2.99	Login: No		V1.10	WP1 V1.10		
26	io	10.100.100.60	00:60:E9:67:68:70		V1.26	io V1.09		
							~	
<						>	•	
Ready	, Total 26 devices							

Caution Field	Description
!	IP conflict. There are two devices with the same IP address in the network.
@	The device is using DHCP.
<	The device is being located.
+	You have logged into the device.
?	MAC conflict. There are two devices with the same MAC address in the network.

## C.3. Functions

#### C.3.1. Device Search

This function is applied to search devices in the network. There are four methods to search devices, Search by Broadcast, Search by IP addresses, Search by MAC addresses and Rescanning devices by using the



current search method. To select the search methods, users click the "Search" on the main menu which is shown below.

📥 Serie	SerialManager ¥4.7							
<u>S</u> earch	Search Configuration Security Advance Virtual COM About							
✓ <u>B</u> road Searc.	<ul> <li>Broadcast Search Ctrl+B</li> <li>Search by IP Address Ctrl+I</li> <li>When the search is the search i</li></ul>							
Searc.	h by <u>M</u> AC Address	Ctrl+M	55	MAC Address	Host Name	Kernel	AP Information	^
Add a	a Device	Ctrl+A	.78	00:60:E9:07:93:	EH7510	V1.17	Application: V1.15	
Trait			.111	00:60:E9:07:98:96	EH7510	V1.17	Application: V1.15	
EXI			<u>_1</u>	00:60:E9:00:52:		V1.2	TerminalSrv2.34 CS	
13	GW21L	10.0.163	3.1	00:60:E9:00:5E:A8		V1.82	NewCAPS576 V1.54	
14	GW21R	10.0.72.	8	00:60:E9:02:63:	name	V2.36	NewCAPS576 V1.53	
15	GW21S-256	10.0.72.	9	00:60:E9:00:B4:		V1.45	NewCAPS576 V1.53	
16	GW21S-M	10.0.163	3.2	00:60:E9:06:3E:	0060E9-063E7B	V2.45	NewCAPS576 v1.704	
17	GW26A-104	10.0.9.1		00:60:E9:05:E7:	大門門禁-勿動	V2.22	ATOP Proxi.A SOYAL	
18	MG512	10.0.172	2.133	00:60:E9:06:07:FC		V1.0	PowerMeter V0.99	
19	SE5302	10.0.189	9.55	00:60:E9:01:EF:98	······	V1.1	SE5302 Ver 2.0.7	
20	SE5302	192.168	.1.1	00:60:E9:01:EF:99	·····	V1.1	SE5302 Ver 2.0.7	~
<							>	

Alternatively, users can select by clicking the Rescan button on the toolbar as below.

Seri	alManager ¥4.	7				
<u>S</u> earch	<u>C</u> onfiguration	S <u>e</u> curity <u>A</u> dvance	Virtual COM A <u>b</u> out			
	Ø 🖓	🥭 🛃	<b>* 6</b> 77	\$; \$; 😰		
N. C.	. Model	IP Address	MAC Address	Host Name	Ker	AP Information
15	MG512	10.0.172.133	00:60:E9:06:07:FC		V1.0	PowerMeter V0.99
16	SE5002	10.0.187.110	00:60:E9:02:DE:FA	name	V2.45	TerminalSrv ver3.16X
17	SE5002-R	10.0.161.112	00:60:E9:02:61:E7	name	V2.55	TerminalSrv v3.44U
18	SE5016	10.0.50.106	00:60:E9:33:22:24	SE5016	V3.11	Serial Server V3.17
19	SE5302	10.0.189.55	00:60:E9:01:EF:98	<u> </u>	V1.1	SE5302 Ver 2.0.7
20	SE5302	192.168.1.1	00:60:E9:01:EF:99	<u> </u>	V1.1	SE5302 Ver 2.0.7
21	SE5404	10.0.189.46	00:E0:40:24:45:58	00E040-244558	V3.18	Serial Server V3.28
22	SE5404D	10.0.50.10	00:60:E9:02:6F:70	0060E9-026F70	V3.20	Serial Server V3.30
23	SE5416	10.0.154.90	00:60:E9:03:6E:46	0060E9-036E46	¥3.11	Serial Server V3.17
<						>
Ready, T	otal 23 devices					

#### **Broadcast Search**

Once "Broadcast Search" is selected, a box will pop up as below. The user may type in or select different broadcast address based on the requirement.



Broadcast Search	
Input one to broadcast:	Add
Select one to broadcast:	Delete
	<u>Ok</u>
	Cancel

#### Search by IP address

Once "Search by IP Address" is selected, an interface will pop up as below. Here user may have two options: Select an IP address to search or Search device in the range of IP address.

Search Devi	ces by I	IP Ad	dress	es				×
Select an I	P addres	is to si	earch					
10.0.50.1	20					<u>N</u> e	ew lete	]
E Search o	levices ir	n the r	ange (	of IP a	ddres	\$		
From:	0		0		0		0	-
To:	0		0		0		0	
				<u>о</u> к			<u>C</u> ancel	

## Search by MAC Address

If "Search by MAC Address" is selected, another box will pop up as below. Here the user may search in two ways: "Search a MAC address to search" or "Search devices in the range of MAC address"

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Search Devices by MAC Addresses
Select a MAC address to search
New
Delete
Search devices in the range of MAC address
MAC address range
From: 00 : 60 : E9 : 00 : 00 : 00
To: 00 : 60 : E9 : FF : FF : FF
<u>Q</u> K <u>C</u> ancel

#### Rescan

Once the user click the "Rescan" button on the toolbar, the SerialManager utility shall re-search devices by using the current search way.

#### C.3.2. Firmware

This function is applied to downloading a firmware into the selected device. The user can enter the window for downloading by firstly clicking a designated network device, and then selecting the submenu option "Firmware Download" in the main menu option "Firmware", or directly clicking the button **Upgrade from disk**.



Se Se	rialManager V4	.7							×
Search	h <u>C</u> onfiguration	S <u>e</u> curity	<u>A</u> dvance	Virtual COM A	l <u>b</u> out				
	( 🖧 🖉	e	Downlo Erase <u>F</u>	)ad <u>P</u> arameter lash		\$ \$ @			
N	C Model	IP Add			T2'	Developed CalleD	Ker	AP Information	^
15	MG512	10.0.1	<u>P</u> mwa	Ite	Firmwan	e <u>D</u> ownload Cui+D	V1.0	PowerMeter V0.99	
16	SE5002	10.0.1	87.110	00:60:E9:0	2:DE:FA	name	V2.45	TerminalSrv ver3.16X	
17	SE5002-R	10.0.1	61.112	00:60:E9:0	2:61:E7	name	V2.55	TerminalSrv v3.44U	
18	SE5016	10.0.5	i0.106	00:60:E9:3	3:22:24	SE5016	V3.11	Serial Server V3.17	
19	SE5302	10.0.1	89.55	00:60:E9:0	1:EF:98	<u> </u>	V1.1	SE5302 Ver 2.0.7	
20	SE5302	192.1	68.1.1	00:60:E9:0	1:EF:99	<b><i>YYYYYYYYYYYYYY</i>YY</b>	V1.1	SE5302 Ver 2.0.7	
21	SE5404	10.0.1	89.46	00:E0:40:2	4:45:58	00E040-244558	V3.18	Serial Server V3.28	
22	SE5404D	10.0.5	50.10	00:60:E9:0	2:6F:70	0060E9-026F70	V3.20	Serial Server V3.30	
23	SE5416	10.0.1	54.90	00:60:E9:0	3:6E:46	0060E9-036E46	V3.11	Serial Server V3.17	
<								>	<u> </u>
Upgrad	ie kernel or AP from	n local disk	ι (						1
<mark></mark> .	erialManager V	4.7							<
<u>S</u> ear	ch <u>C</u> onfiguration	S <u>e</u> curity	<u>A</u> dvance	Virtual COM 8	4 <u>b</u> out				

Search	<u>C</u> onfiguration	S <u>e</u> curity <u>A</u> dvance	Virtual COM About				
	Ø 🖓	🗲 🤇	<b>S</b> (5	\$ \$ @			
N., C.	. Model	IP Address	MAC Address	Host Name	Ker	AP Information	^
17	MG512	10.0.172.133	00:60:E9:06:07:FC		V1.0	PowerMeter V0.99	
18	SE5002	10.0.187.110	00:60:E9:02:DE:FA	name	V2.45	TerminalSrv ver3.16X	:
19	SE5002-R	10.0.161.112	00:60:E9:02:61:E7	name	V2.55	TerminalSrv v3.44U	
20	SE5016	10.0.50.106	00:60:E9:33:22:24	SE5016	V3.11	Serial Server V3.17	
21	SE5302	10.0.189.55	00:60:E9:01:EF:98	<u> </u>	V1.1	SE5302 Ver 2.0.7	
22	SE5302	192.168.1.1	00:60:E9:01:EF:99	<b><i><i>YYYYYYYYYYYYY</i>YY</i></b> YYYY	V1.1	SE5302 Ver 2.0.7	
23	SE5404	10.0.189.46	00:E0:40:24:45:58	00E040-244558	V3.18	Serial Server V3.28	=
24	SE5404D	10.0.50.10	00:60:E9:02:6F:70	0060E9-026F70	V3.20	Serial Server V3.30	
25	SE5416	10.0.154.90	00:60:E9:03:6E:46	0060E9-036E46	V3.11	Serial Server V3.17	-
5						>	
Ready, T	otal 25 devices						1.

And then the user can select and download the required firmware from the disk, as shown in the figure below. The user can also select several same devices at one time, and realize the firmware updating for them by selecting **Apply for all selected devices have same model**.



Download Firmware from Disk					
Please select a kernel firmware or AP firmware from the disk, and then download it to the device SE5404D (10.0.50.10).					
Current versions:					
Kernel: V3.20					
AP: Serial Server V3.30					
C Download kernel firmware					
Ownload AP firmware					
C:\TFTP-Root\SE5404K320A330.dld					
Apply for all selected devices have same model Pop up report dialog					
🦳 Pop up Authorize dialog					
Upgrade <u>Cancel</u>					

#### C.3.3. Configuration

This function is for device configuration to set up parameters, to import and to export the parameters, and to set up some options. Here is the list of configurations: "Network", "SNMP", "COM Port", "Locate", "Reset", "Import Setting", "Export Setting", "Virtual COM", "Config by browser" and "Options." Users can carry out a configuration operating through menu or by clicking the corresponded button on the toolbar, shown as the figure below:



- Seri	alManager ¥4.7						X
<u>S</u> earch	Configuration Security Adv	vance V <u>i</u> rtual COM .	A <u>b</u> out				
	<u>N</u> etwork Ctrl+N SNMP Ctrl+S	<b>B^</b> &	1 <b>E</b> & &	2			
No.	COM <u>Port</u> Ctri+P	Address	MAC Address	Host Name	Kernel	AP Information	^
1	<u>L</u> ocate	1.0.9.0	00:60:E9:00:05:4B		V1.7	ATOP Proxi. Access V2.2	
2	<u>R</u> eboot	1.0.9.2	00:60:E9:00:13:52		V1.6	ATOP Proxi. Access V2.6.5	
3	Terrer and Classifiers	0.0.78.33	00:60:E9:06:E5:D0		V2.18	ATW300 V2.25	
4	Import Setting	1.0.78.34	00:60:E9:11:11:11		V2.18	ATW300 V2.26	
5	<u>E</u> xport Setting	0.78.36	00:60:E9:06:E5:D2		V2.18	ATW300 V2.25	
6	Config by browser	1.0.167.12	00:60:E9:00:11:15		V2.17	ATW300 V2.23	
7	Config by Telnet	0.195.96	00:60:E9:06:6F:E2	0060E9-066FE2	V1.0	26	
8		.0.195.97	00:24:1D:F0:9A:28	0060E9-04C8C8	V1.0	26	
9	Options	1.0.195.98	00:24:1D:F0:9A:27	0060E9-04C8C7	V1.0	26	
10	AW5300C	10.0.50.200	00:60:E9:11:22:33	0060E9-112233	V1.0	35	
11	! C1001T	10.100.100.160	00:60:E9:06:93:D4	0060E9-0693D4	V2.54	TerminalSrv v3.363X SS	ļ
12	C1502	10.0.154.55	00:60:E9:99:88:77		V2.0	SDK V2.0	
13	! C1502	10.100.100.160	00:60:E9:07:9C:A0		V1.11	SDK V1.11	
14	EH7510	10.0.0.111	00:60:E9:07:98:96	EH7510	V1.17	Application: V1.15	
15	EH7510	10.0.151.197	00:60:E9:06:EF:2E	EH7510	V1.15	Application: V1.12	
16	GW21L	10.0.163.1	00:60:E9:00:5E:A8		V1.82	NewCAPS576 V1.54	
17	GW21R	10.0.72.8	00:60:E9:02:63:BC	name	V2.36	NewCAPS576 V1.53	
10	010010.000	10 0 70 0	00.00.00.00.04.40		OH AP	N 0400576.04 53	
							2
							11

#### Network

The user can modify the IP address of any selected device, shown as the figure below. You can statically assign IP address, Subnet mask, and Gateway. Optionally, you can set up the device with a host name. You can select DHCP option to obtain an IP address automatically.

Network Setting					
Please set the appropriate IP settings for this device (SE5404D, 10.0.50.10).					
DHCP (Obtain an IP automatically)					
IP address:	10 . 0 . 50 . 10				
Subnet mask:	255.255.0.0				
Gateway:	10 . 0 . 0 . 254				
Host name:	0060E9-026F70				
<u></u> K	Cancel				

#### SNMP

The user can modify SNMP settings of any selected device, shown as the figure below. The support SNMP fields are Name, Location, and Contact.

#### \* Note: This function will be enabled after a successful login.



SNMP Setting					
Please set the appropriate SNMP settings for this device (SE5404D, 10.0.50.10).					
Name: 0060E9-026F70					
Location: location					
Contact: contact					
Apply for all selected devices					
OK <u>C</u> ancel					

#### **COM Port**

ATOP has developed various Serial server products, and some of the ATOP devices are specially applied to some serial-port servers, while this function is applied to the configuration of COM port parameters only. The COM Port setting dialog is shown below.

## \* Note: This function will be enabled after a successful login.



COM Ports Setting (SE5404D, 10.0.50.10)	E E
COM1 COM2 COM3 COM4	
Link mode: • [TCP server mode] C TCP client mode C UDP mode	
Local port:       4660       Connection limit:       1         IP Filter:       Image: Connection limit:       <	•
COM property: Apply to all serial ports Refress Port type: C RS232 © RS422 © RS485	h
Baud rate:       Data bits:         300       9600       230400         600       19200       460800         1200       38400       921600         2400       57600         4800       115200	Parity: C None C Odd C Even C Mark C Space
Packet delimiter (Network to Serial):  Packet delimiter (Serial to Network):  Timer  (10-30000msec)  Characters  ("0x"+ASCII Code)  Packet delimiter (Serial to Network):  Enable  (10-30000msec)  Characters  ("0x"+ASCII Code)	Flow control: None Xon/Xoff RTS/CTS
Advanced Delimiter Settings *** Note: If a parameter or an option is missing, please configure it by web browser.	
F Apply for all selected devices with the same model 確定	取消

The user can also select several devices at once, and carry out the configuration for them at the same time by selecting "Apply for all selected devices with the same model"

\* Note: COM tabs: Generated automatically according to the COM port number of the device. If a device has 4 COM ports, there will be, for example, 4 tabs, COM1, COM2, COM3, and COM4.

Link mode: this is to set up a TCP or UDP connection between the Serial port and the other network devices. Each COM port corresponds to a link mode, TCP or UDP, which is used to transfer data. The user can set each link mode and the working parameters according to requirements.

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COM property: this is to represent the working parameter of the Serial port including: Serial port type, baud rate, data bit, stop bit, parity bit, data packet delimiter and flow control, etc.

#### Locate

The user can apply this function to locate a device when its IP address is known, but its position is unknown. If you locate the device, it will beep. Users can locate the device by selecting the Configuration submenu **Locate** or clicking the **Locate** button on the toolbar.

#### Reset

The device should be restarted after a successful modification of parameter configuration. Users can also carry out a restart through the submenu option **Reset**.

#### **Import Setting**

If a network has a large number of devices which are used for a same purpose, it would be very complicated to carry out the parameter configuration for each device in the network one by one. Users can import the parameter configuration from a parameter file directly into all the devices in the network through the submenu option **Import setting** or by clicking the **Import setting** button on the toolbar. The dialog of import parameter settings is shown below.



Import a file to SE5404	D				<
Open a file: C:\SE54	04D_0060e902	:6f70.ad	m		
Model: SE5404D					
IP setting:			SNMP setting	ı:	
IP address: 10	. 0 . 50 . 1	0	Name:	0060E9-026F7	
Subnet mask: 255	.255.0.0		Location:	location	
Default gateway: 10	. 0 . 0 . 25	54	Contact:	contact	
COM ports setting:					
Selected COM Port:	COM1	•	[		
Туре:	RS422	Alias n	ame:		
Baud rate:	9600	Data bi	ts:	7 bits	
Stop bits:	1 bit	Parity:		Even	
Flow control:	None				
Packet delimiter(Networ	k to Serial):	AU	то		
Packet delimiter(Serial to	) Network):				
Link mode:	TCP server mo	ode / Vir	tual COM: Ena	abled	
	Local port: 0				
	Max connectio				
	Max connectio	5/15. U			
Apply for all selected	devices with th	e same i	model		
Popup this dialog while	e importing setti	ngs to th	ne next devic	e 1 (	
		(	<u>0</u> K	Cancel	

The user can also select several devices at once, and upload the configuration file into all the selected devices by selecting "Apply for all selected devices have same model."

#### **Export Setting**

Users can save the parameter information to a standard device into a parameter file through the submenu option **Export setting** or clicking the **Export setting** button on the toolbar for backup purpose or to be imported to other device. The dialog of Export Setting is shown in the figure below.



Export SE5404D Settin	gs		E	×
IP setting: IP address: 10 Subnet mask: 255 Default gateway: 10	. 0 . 50 . .255 . 0 .	SNM           10         Nan           0         Loc           254         Con	/IP setting: ne: 0060E9-026F70 ation: location ntact: contact	
COM ports setting:				]
Selected COM Port:	COM1	-	<u>R</u> efresh	
Туре:	RS422	Alias name:	:	
Baud rate:	9600	Data bits:	7 bits	
Stop bits:	1 bit	Parity:	Even	
Flow control:	None			
Packet delimiter(Networ	'k to Serial):	AUTO		
Packet delimiter(Serial to	o Network):			
Link mode:	TCP server n	node / Virtual (	COM: Enabled	
	Local port: 0			
	Max connect	ions: 0		
Save to a file: C:\S	E5404D_0060e	e9026f70.adm		
C Popup this dialog	I devices: while exporting erate the next	g settings from file name	n next device	
			<u>O</u> K <u>Cancel</u>	

The user can also select several devices at one time, and save the parameter information of these selected devices into a designated parameter file by selecting "Save all the selected devices".

#### Configure by Browser

If the device has a Web server build-in, it will provide additional device-specific parameters that SerialManager does not supply. Users can carry out any parameter setting directly through the submenu option "Config by Browser", and a Web browser is shown in the figure below.



# 

- Overview
- Network
- Serial
- Alert
- System

# SE5404D

# **Overview**

The general device information of Serial Server.

Device Information				
Kernel Version	3.20			
AP Version	3.30			

Network Information							
LAN 1	MAC Address	00:60:E9:02:6F:70					
	IP Address	10.0.50.10					
LAN 2	MAC Address	00:60:E9:02:6F:71					
	IP Address	192.168.1.1 (Link down)					

## Configure by Telnet

Most device supports Telnet login, it will provide additional device-specific parameters that SerialManager does not supply. Users can carry out any parameter setting directly through the submenu option "Config by Browser", and a Web browser is shown in the figure below.

## Option

In this dialogue, you can

- 1. Set the SerialManager's scan interval
- 2. If device tip option is turned on, SerialManager will show additional information when your mouse cursor stays on the device.
- 3. You can select which Network Interface Card that SerialManager uses. If this option is set to DEFAULT, SerialManger will uses the default NIC that the operating system assigns.



Options		×
Search devices	every 10	seconds (must >= 5)
NIC Selection	DEFAULT	•
	Ōĸ	Cancel

#### C.3.4. Security

This function is applied to the security protection for the network devices, so as to supply some necessary protection to a device for configuration modifying, configuration leading-in and leading-out, and some other important functions. Here three functions are mainly supplied, including: **Login**, **Logout** and **Change Password**, shown in the figure below.

<mark>S</mark>	erialManager V4	.7						]
Searc	h <u>C</u> onfiguration	S <u>e</u> curity <u>A</u> dvance	Virtual	COM A <u>b</u> out				
	1 🎝 🏷	Login Lo <u>go</u> ut	4	· 🗞 🔞	N 🗞 🥸 🧧			
N	C. Model	Change <u>P</u> assword		Address	Host Name	Ker	AP Information	J
18	MG512	10.0.172.133	00:60	:E9:06:07:FC		V1.0	PowerMeter V0.99	
19	RM3000	10.0.161.100	00:60	:E9:F1:61:01	0060	V1.15	Data Terminal v1.251,	
20	SE5002	10.0.187.110	00:60	:E9:02:DE:FA	name	V2.45	TerminalSrv ver3.16X	
21	SE5302	10.0.189.55	00:60	:E9:01:EF:98	<u> </u>	V1.1	SE5302 Ver 2.0.7	
22	SE5302	192.168.1.1	00:60	:E9:01:EF:99	<u> </u>	V1.1	SE5302 Ver 2.0.7	
23	SE5302	10.0.53.2	00:60	:E9:56:66:66		V1.21	SDK V1.18	
24	SE5404	10.0.189.46	DO:EO	:40:24:45:58	00E040-244558	V3.18	Serial Server V3.28	
25	SE5404	10.0.74.54	00:60	:E9:03:0A:6A		V2.15	SDK V2.35	
26	+ SE5404D	10.0.50.10	DO:60	:E9:03:0B:00	0060E9-030B00	V3.20	Serial Server V3.30	J
27	SE5416	10.0.154.90	00:60	:E9:03:6E:46	0060E9-036E46	V3.20	Serial Server V3.31	
28	SE5416	10.0.172.54	00:60	:E9:01:7F:BC	0060E9-017FBC	V3.20	Serial Server V3.31 🛛 🚩	J
<							>	
								1.

#### Login

This function is applied to login to any network device, as some sensitive functions can only be operated after a successful login, shown in the figure below. The user can also select several devices at one time, and log into them at the same time by selecting "Apply for all selected devices."

Note: Double clicking on the device would also login/log out from the device.


Login							
Enter a user device. Note: This fui Serial Server	name and password to login to this nction is only available for the standard						
Device:	SE5404D IP:10.0.50.10						
User Name:	admin						
Password:							
$\square$ Apply for all selected devices							
	Login Cancel						

## Logout

This function is applied to the logout from any network device, as the user should always carry out a logout after he/she has finished the operating action to any important device, shown in the figure below. The user can also select several devices at one time, and log out them at the same time by selecting "Apply for all selected devices."

Logout 🔀
Do you really want to logout from this device (SE5404D, IP:10.0.50.10)?
Apply for all selected devices
Logout <u>C</u> ancel

## **Change Password**

This function is applied to modifying the password for logging in any network device, but can only be realized after a successful log-in, shown in the figure below. The user can also select several devices at one time, and modify their pins at the same time by selecting "Apply for all selected devices."



Change Passwor	i 🔀
To change your d please provide th	evice (SE5404D, IP:10.0.50.10) password, e following information and then click OK.
Old Password:	****
New Password:	
Verified Password:	
	Apply for all selected devices
	OK <u>C</u> ancel

## C.3.5. Virtual COM

Some devices are supplied with the function of virtual serial port, and the user can carry out any related setting through the option "Virtual COM". We have integrated Virtual COM settings in the Serial Manager. You can still select "Serial/IP Tools" to call original Virtual COM configuration utilities. You can either use this integrated Virtual COM working area or the original Serial/IP Tools to configure Virtual COM.

Ser Ser	ialManager ¥4	.7											×
Search	<u>C</u> onfiguration	Security	<u>A</u> dvance	Virtual COM	A <u>b</u> out								
	<b>1</b>	E		Configurati	on <u>S</u> how	ł	3 🗞 🚺	0					
N C	. Model	IP Add	ress	Add device	(Manually)	IS	t Name	K	er	AP In	nformation		^
17	RM3000	10.0.1	61.100	Remove dev	vices	6	0	V	1.15	Data	Terminal v1	.251,	
18	SE5002	10.0.1	87.110	Port Enable		— h	e	V	2.45	Term	inalSrv ver3	3.16X	
19	SE5302	10.0.1	89.55	FOILEIIADIE		ÿ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	V	1.1	SE53	302 Ver 2.0.7	7	
20	SE5302	192.10	58.1.1	Port Disable		ÿ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	V	1.1	SE53	302 Ver 2.0.7	r	
21	SE5302	10.0.5	3.2	Apply				- V	1.21	SDK	V1.18		
22	SE5404	10.0.1	89.46			— E	040-244558	B V	3.18	Seria	al Server V3.	28	
23	SE5404	10.0.7	4.54	Serial/IP To	ols			V	2.15	SDK	V2.35		
24 +	SE5404D	10.0.5	0.10	00:60:E9:0	3:0B:00	006	0E9-030B0	0 V	3.20	Seria	al Server V3.	30	=
25	SE5416	10.0.1	54.90	00:60:E9:0	3:6E:46	006	0E9-036E40	6 V	3.20	Seria	al Server V3.	31	
26	SE5416	10.0.1	72.54	00:60:E9:0	1:7F:BC	006	0E9-017FB	C V	3.20	Seria	al Server V3.	31	
													~
<						)						>	
													1

After you select Configuration Show, a new Virtual COM working area would appear.



Seria	alManager V4	.7							×
<u>S</u> earch	<u>C</u> onfiguration	S <u>e</u> curity <u>A</u> dvance	Virtual COM	A <u>b</u> out					
	Ø 🖧	🥭 🛃	B &		N 🗞 🗞 🚺	<u>)</u>			
N C.	Model	IP Address	MAC Addres	s	Host Name	Ker	AP Informatio	n	^
16	RM3000	10.0.161.100	00:60:E9:F1	:61:01	0060	V1.15	Data Termina	l v1.251,	
17	SE5002	10.0.187.110	00:60:E9:02	:DE:FA	name	V2.45	TerminalSrvv	ver3.16X	
18	SE5302	10.0.189.55	00:60:E9:01	:EF:98	<b><i><i>YYYYYYYYY</i>YY</i></b> YY.	V1.1	SE5302 Ver 2	.0.7	
19	SE5302	192.168.1.1	00:60:E9:01	:EF:99	<b><i><i>YYYYYYYYY</i>YY</i></b> YY.	V1.1	SE5302 Ver 2	.0.7	
20	SE5302	10.0.53.2	00:60:E9:56	:66:66		V1.21	SDK V1.18		
21	SE5404	10.0.189.46	00:E0:40:24	:45:58	00E040-244558	V3.18	Serial Server	V3.28	
22 +	SE5404D	10.0.50.10	00:60:E9:03	:0B:00	0060E9-030B00	) V3.20	Serial Server	V3.30	
23	SE5416	10.0.154.90	00:60:E9:03	:6E:46	0060E9-036E46	V3.20	Serial Server	V3.31	
24	SE5416	10.0.172.54	00:60:E9:01	:7F:BC	0060E9-017FB0	V3.20	Serial Server	V3.31	$\overline{\mathbf{v}}$
<								>	
Mode		IP Addres	<b>S</b>	Host N	ame	Port	Mapping	Remark	
<									>
Ready, T	otal 27 devices								1.

Select the device you want to establish a Virtual COM connection with, you can select multiple devices. After the device is selected, right click in the blank working area and select "Add devices".



S	erialManager ¥4	.7						
<u>S</u> earc	h <u>C</u> onfiguration	S <u>e</u> curity <u>A</u> dvance	Virtual COM	A <u>b</u> out				
		<b>e</b>	<b>B</b>					
N	C. Model	IP Address	MAC Address	S	Host Name	Ker	AP Informa	tion 🔼
17	SE5002	10.0.187.110	00:60:E9:02:	DE:FA	name	V2.45	TerminalSr	v ver3.16X
18	SE5302	10.0.189.55	00:60:E9:01:	EF:98	<u> </u>	V1.1	SE5302 Ve	r 2.0.7
19	SE5302	192.168.1.1	00:60:E9:01:	EF:99	<u> </u>	V1.1	SE5302 Ve	r 2.0.7
20	SE5302	10.0.53.2	00:60:E9:56:	66:66		V1.21	SDK V1.18	
21	SE5404	10.0.189.46	00:E0:40:24:	45:58	00E040-24455	8 V3.18	Serial Serv	/er V3.28
22	+ SE5404D	10.0.50.10	00:60:E9:03	:0B:00	0060E9-030B0	0 V3.20	Serial Serv	/er V3.30 👘 💼
23	SE5416	10.0.154.90	00:60:E9:03:	6E:46	0060E9-036E4	6 V3.20	Serial Serv	/er V3.31
24	SE5416	10.0.172.54	00:60:E9:01:	7F:BC	0060E9-017FB	C V3.20	Serial Serv	/er V3.31
25	VDM-300	10.0.72.4	00:1D:19:F0:	:F4:A5	990127	V0.4	Pick_Buffa	lo 🥛
<								>
Mo	del	IP Addres	s	Host N	lame	Port	Mapping	Remark
						Add devices		
						Remove dev	ices	
						Port Mappin	g	
						Port Enable		
						Port Disable		
<	Tabl OT Juden					Apply		>

The device would be added. Right click on any port and a menu with show. You can remove the device from the Virtual COM working area by selecting "Remove devices." You can disable Virtual COM for a specific port by selecting "Port Disable". Remember to click **Apply** to apply any changes.



25	Seria	alManager V4	.7						
<u>S</u> ea	rch	<u>C</u> onfiguration	S <u>e</u> curity <u>A</u> dvance	Virtual COM	A <u>b</u> out				
			<b>e</b>	<b>B</b>					
N	C.	Model	IP Address	MAC Addres	s	Host Name	Ker	AP Information	า 🔼
17		MG512	10.0.172.133	00:60:E9:06:	07:FC		V1.0	PowerMeter V	0.99
18		RM3000	10.0.161.100	00:60:E9:F1:	61:01	0060	V1.15	Data Termina	v1.251,
19		SE5002	10.0.187.110	00:60:E9:02:	DE:FA	name	V2.45	TerminalSrv v	er3.16X
20		SE5302	10.0.189.55	00:60:E9:01:	EF:98	<u> </u>	V1.1	SE5302 Ver 2.	0.7
21		SE5302	192.168.1.1	00:60:E9:01:	EF:99	<b><i><i>YYYYYYYYY</i>YY</i></b> YYY	V1.1	SE5302 Ver 2.	.0.7 📃
22		SE5302	10.0.53.2	00:60:E9:56:	66:66		V1.21	SDK V1.18	
23		SE5404	10.0.189.46	00:E0:40:24:	45:58	00E040-24455	8 V3.18	Serial Server	V3.28 📃
24	+	SE5404D	10.0.50.10	00:60:E9:03	:0B:00	0060E9-030B0	0 V3.20	Serial Server	V3.30 <mark>-</mark>
25		SE5416	10.0.154.90	00:60:E9:03:	6E:46	0060E9-036E4	6 V3.20	Serial Server	V3.31 🛛 🥃
20		000410	10 0 179 54	00.00.001	75.00	000000 01700	0 V2 20	0	VO 01 💆
	_								
M	odel		IP Addres	S	Host N	lame	Port	Mapping	Remark
SE	540	14D	10.0.50.1	0	0060E	9-030B00	1	Add devices	
SE	540	14D	10.0.50.1	0	0060E	9-030B00	2	Remove devices	
SE	540	14D	10.0.50.1	0	0060E	9-030B00	3		-
SE	540	14D	10.0.50.1	0	0060E	9-030800	4	Port Mapping	
								Port Enable	
								Port Disable	
< Rea	dy, Ti	otal 27 devices						<u>A</u> pply	

If you select Port Mapping..., a new window would show. You can setup the Virtual COM accordingly.

Virtual COM Settings	×
Please select the COM port which you would like to redirect to Serial/IP.	
сомэ	·
TCP port: 4660	
Mode: Server mode Client mode	
Restore Failed Connection	
OK Cancel	

## C.3.6. About

This function is mainly applied to displaying information of the **SerialManager** utility, shown in the figure below.

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