ABLELink[®] SE5008/5016 Multi-port Serial Server User Manual



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IMPORTANT ANNOUNCEMENT

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FCC WARNING

Class A for Ethernet Serial Server (Model SE5008/SE5016)

This equipment has been tested and found to comply with the limits for 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 under commercial environment. This equipment generates, uses and radiates radio frequency energy and, while 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 owned expenses. A shielded-type power cord is required in order to meet the FCC emission limitation 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/RS-422/RS-485 ports. Be cautious that any changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.



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1. Introduction

Many industrial(computer integration manufacturing or industrial automation area) 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 SE5008/5016 Multi-port Serial Server. The SE series family is designed to transmit data between one-or-more serial device and one-or-more TCP/UDP device through Ethernet via a single or multiple application programs, and hence enhance the accessibility of the serial device through the ubiquitous TCP/IP based Ethernet. It is possible to communicate with many remote devices in Intranet or even in Internet and thus, increases the communication distance dramatically.

Of the SE series, the SE5008/5016 is for RS 232/RS 422/RS 485 with isolation protection built-in, while the SE 5008 is 8-port serial server and SE5016 is 16-port serial server.

Flexible configuration options enable SE series to be setup remotely over Ethernet by Telnet, Web browser, or Window utility. SE series Multi-port Serial Server is an ideal choice for industrial and manufacturing automation.

Packaging

- SE series Multi-port Serial Server
- AC Power cord x 1 (US Plug or EU Plug)
- Ethernet Cross-over Cable x 1
- RJ-45 to DB9 Male cable x 1
- Quick Start Guide x 1
- Product CD x 1
- RS-232/RS-422 cross over cable x 1
- RS-485 Loop back cable x 1
- Rack mounting L type ears x 2 (include screws x 4)
- Product Warranty

Optional Accessories

RJ-45 to DB9 Male cable (90cm)



2. TCP & UDP Protocols

SE series can be operated in various Internet Protocol Transport services-including two most common TCP and UDP modes and Tunneling modeetc

Transmission Control Protocol (TCP)

TCP is a complicated, yet providing a connection and byte oriented stream which is almost error free, with some parameters such as flow control, multiple ports, and same order delivery. By using TCP, programs on networked computers can create *connections* to one another, After the connection is established, data can transmit in both directions. The protocol guarantees that data sent by one endpoint will be received in the same order by the other, and without any pieces missing. It also distinguishes data for different applications (such as a Web server and an email server) on the same computer.

For a redundant or dual-network connectivity purpose, SE series offers two *TCP* operation Modes for users to easily configure their needs by proper applications. TCP operation Modes are divided into **TCP Server Mode** and **TCP Client Mode**.

User Datagram Protocol (UDP)

UDP is a faster but non-guaranteed datagram delivery protocol .One can configure in a UDP mode on TCP/IP network to establish a connection, using unicast or broadcast data to and from a serial device to one or multiple host computers. UDP does not provide the reliability and ordering guarantees that <u>TCP</u> does; datagrams may arrive out of order or go missing without notice. However, as a result, UDP is faster and more efficient for many lightweight or time-sensitive purposes.

3. Application Connectivity

SE Series Ethernet Serial Server is also provided Tunneling and Virtual COM operation mode. The SE series 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. 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 SE series Ethernet Serial Servers (Fig 1).



Multi-port Serial Server

Fig 1. Topology of SE5008/5016 Multi-application Connectivity



Virtual COM Mode

Virtual Com software can emulate real serial ports for equipment that use serial dataflow in reliable Internet or LAN connection instead of regular serial port. Virtual COM driver mode for windows converts COM data to Ethernet LAN data for control of the COM port on SE series via Ethernet 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 SE series that connects the serial line device to the network. Figure as shown below illustrates a Virtual COM connection diagram, for more detail (Fig 2)

TCP Server of Virtual COM Mode



Fig 2. TCP Server of Virtual COM Mode's Connectivity

Configuration SE series as TCP server

Using one of the four configuration methods to configure SE series as TCP Server (Fig 3) Note :

1. IP filter is disabled by default.

TCP Server mode

- 2. Default port number of SE series is 4660
- 3. If IP filter is enabled, only the source IP assigned can be connected to SE series.

Destination IP; 10.0.50.100 Destination Port; 4660 Ethernet TCP Server IP: 10.0.50.100 Listen port; 4060 RS232/RS485 PLC

Fig 3. TCP Server of Virtual COM Operation Mode



TCP Client of Virtual COM Mode

SE5008/5016 can be configured in a TCP client mode on a TCP Network to actively establish a TCP connection with an applications server-the pre-defined host computer. SE series is actively connected to the host computer, and after the connection is successful, multiple hosts of SE series can transmit data to several devices/ equipments in both directions at the same time (Fig 4).



Fig 4. TCP Client of Virtual COM Mode's Connectivity

Configuration SE series as TCP client

Using one of the four configuration methods to configure SE series as TCP Client, for example the destination IP is 10.0.0.100 and the destination port is 1000(Fig 5).

Note: IP filter is disabled by default.

TCP Client mode





Tunneling Mode

The tunneling mode is used for multiple serial devices to "talk" to each other through SE5008/5016's and their Ethernet connections. This mode is particularly useful when two or more serial devices are far away, because their communication distance is limited to 15 m (RS-232 connections).



SE series can also be configured in a TCP server mode on an Ethernet Network to wait for the host computer to establish a connection with the serial device (the client). After the connection is established, data can flow in both directions, for more detail see section.4.2SE series provides a unique operation mode for users to connect two or more serial connections with their own SE5008/5016's to send data over Ethernet network to communicate with each other

TCP-Server & Client

For example, One may establish a TCP connection between TCP Server and TCP client for Master /Slave PLCs (Fig 6)



Fig 6. UDP mode for Tunneling Mode

Configuration SE series as Tunneling Mode

Using one of the four configuration methods to configure SE series as TCP Server mode by listening 4660 port (or any available port number assigned by users), and the other serial servers configure as TCP Client (Fig 7)

Note : TCP server shall assign the destination IP and the destination port which depend on TCP client's listening port (ex. TCP 4660 port).

Work mode via TCP Tunnelling mode



Fig 7. Work mode by TCP Connections



UDP

In UDP mode, one may use unicast or broadcast data from SE series to one or multiple SE series or other ATOP's Serial servers, Vice versa is also true. For example, it can apply to multiple PLCs' network with RS485 connections(Fig 8).



Fig 8. UDP mode for Tunneling mode

Configuration SE series as UDP Mode

Using one of the four configuration methods to configure SE series or other ATOP's serial server as UDP mode.(Fig 9)

Note : Broadcast IP address is limited by the Class of IP address and subnet mask. As an example, for a network of Class C subnet 192.168.1.X and a subnet mask is of 255.255.255.0, one may configure the broadcast IP address to be 192.168.1.255

UDP mode



Fig 9. Work mode by UDP Connections



4. Hardware Description

Interface

SE5016's Front & Rear Panel





SE5008's Front & Rear Panel





LED Indicator

Name	Color	Description	
Power	Green	Steady on->Power On	
Deedu	ady Green	Steady on-> SE series is booting up.	
neauy		Blinking-> SE series is activated	
	Green	TX blinking-> Serial port is transmitting data	
TX/RX (1-16)		RX blinking->Serial port is receiving data	
()	Off	No data is being transmitting or receiving	
	Orange	Steady on->100Mbps Ethernet connection	
LAN1/2	Off	10Mbps Ethernet connection or Ethernet cable is disconnected	
	Green	Blinking->Ethernet port is transmitting or receiving data	



5. Hardware Installation

- Prepare necessary Ethernet UTP or STP cables, Switch/ Hub, power cord.
- Plug in the AC power cord's cable ring to the serial server by connecting the cable to the L, N, E pins.

Note : Make sure both side of letter L,N,E matching properly.

- After power on 1 minute later, the buzzer should beep, and the LCM should display "SE5016" on the front panel.
- Connect SE series' LAN1 to the Ethernet Network. via Hub/Switch by a straight-through or to a PC directly through a cross over cable

Note : Default LAN1 IP address is 10.0.50.100 and Default LAN2 IP address is 192.168.1.1

- Connect a serial device to any serial port of SE series.
- Note : Make sure the cable which one selected is properly meeting the connection of RS-232 or RS-485

Using **monitor.exe** configuration utility in product CD to configure SE5008/5016. If it started up successfully, one shall find the IP and MAC addresses of SE series. One also may change the network parameters of Serial to connect to Local Area Network by changing IP address, gateway IP address and subnet mask.

Default Settings

The SE series' default setting are shown in the following table:

Default settings of SE5008/5016

Property	Default Value	
LAN 1, IP Address 1	10.0.50.100	
LAN 2, IP Address 2	192.168.1.1	
Gateway	10.0.254	
Subnet Mask	255.255.0.0	
User Name	admin	
Password	0000 (Four digits of ZERO value without space)	
COM 1 – COM16	9600,None, 8, 1, No flow control, buffer disabled, packet delimit timer 1ms	
	(SE5008 is limited to COM1 – COM8)	
LINK 1 – LINK 16	Type: TCP Server, Listening port 4660, Filter=0.0.0.0, Virtual CC disabled	
	(SE5008 is limited to LINK1 – LINK8)	
SysName of SNMP	Name	
SysLocation of SNMP	Location	
SysContact of SNMP	Contact	

Note: One may press the reset button to restore all the system settings list in the table .

Using a pointed object such as a needle or a straightened paper clip to press the reset button. Holding the reset button for 5 seconds, SE series shall beep and reboot the system automatically.



Auto IP for DHCP Server

A DHCP server can automatically assign the IP address and all the network settings. SE5008/5016 supports DHCP client function. One may use **Monitor.exe** to activate the DHCP client function by check "**Auto IP**" in Dialog window.

Dialog		×
MAC addr.	00:60:E9:00:8F:51	\frown
IP address	10.0.50.100	Auto IP
GateWay	10.0.0.254	\smile
Mask	255.255.0.0	Config Now
User ID	admin	
Password		
Host Name	name	

Monitor.exe's IP Settings by Auto-IP

TCP/IP Port Number

Default Com port number 1 of SE series is 4660 and it is associated with serial port. After the application program being connected to the TCP port 4660 of SE series, data of ones application program are transparent to both COM and SE series. Vice versa is also true.



6. Methods of Configuration

Configuration by Monitor.exe Utility

Install and open **monitor.exe** utility that comes with the product CD to configure the SE5008/SE5016 network parameters.

One may change the default settings of IP address, gateway address, subnet mask, user ID and password of SE series. For more detail refer to 0 **Configuration Utility.**

Dialog		×
MAC addr.	00:60:E9:00:8D:F5	
IP address	10.0.50.100	🗆 Auto IP
GateWay	10.0.0.201	
Mask	255.255.0.0	Config Now
User ID	admin	
Password		Cancel
Host Name	0060E9-008DF5	

Monitor.exe's IP Settings by Addresses

Configuration by Telnet Console

One may use Telnet program to change the configuration settings of SE5008/5016 by following the steps below:



Log in to SE5016's Telnet console

Log in

- On Window Start Menu, select Run.
- Enter in the command "Telnet IP_address".



The system then prompts for a password, the default password is 0000
 Note :

- For the first time log in by default setting, -Enter in : Telnet 10.0.50.100
- One may press the reset button to reset the password

Then the following main menu shall appear

👼 Telnet 10.0.50.100	- 🗆 ×
Linux 2.4.18-SE5016 (atop) (ttyp0)	<u>*</u>
Username:admin	10
Password:0000	
Main Menu	
E E E E E E E E E E E E E E E E E E E	
[1]Overview	
[2]Networking	
[3]COM Port Settings	
[4]Security	
:	

Main Menu of Telnet Console

Note:

- If SE series does not receive any command within 1 minute, Telnet will be terminated automatically.
- The changes of networking parameters will take effect ONLY after the SE series is exited and restarted

Overview

Operation: [1] Overview

Overview The system overview window gives the general information on IP address, MAC address, Kernel version, and Application version,.

^C Input "1" from "Main Menu" to Enter "Overview"

📑 Telnet 10.0.50.100		
Password:0000		
Main	Menu	
[0]EXIT		
[1]Overview		
[2]Networking		
[3]COM Port Setti	ngs	
[4]Security		
-1		
Queru	iew	
Model Name	: SE5016	
Lan 1 IP Address		
Lan 1 MAC	- 172.100.001.001 - 00 60 F9 51 00 02	
Lan 2 MAC	: 00.60.E9.51.00.03	
Kernal Version	: 1.12	
AP Version	: 1.13	
LØJEXII		

Overview information from Telnet



Networking

Operation: [2] Networking

SE series allow one to change the networking settings including IP addresses within LAN settings, DNS Settings, SNMP Settings, SMTP Settings and the connection status of the SE5008/5016 serial server.

The imput "2" from "Main Menu" to Enter "Networking"(0), then press "Enter" key.

📑 Telnet 10.0.50.100	- 0
Linux 2.4.18-SE5016 (atop) (ttyp1)	-
	-
username - admin Password : 0000	
Main Menu	
[0]EXIT	
[1]Overview	
[2]Networking	
[3]COM Port Settings	
[4]Security	
:2	
Networking	
LØ JEX I T	
[1]LAN 1 Settings	
[2]LAN 2 Settings	
[3]DNS Settings	
[4]SNMP Settings	
[5]SMTP Settings	
* _	

Networking settings by Telnet

Note: Press reset button for 5 seconds to the default settings.

LAN1 / LAN2 Setting

Input "1" or "2"from "Networking" to Enter

" [1] LAN ([2] LAN) Settings" then press "Enter" key

The following items allow users to changes

- [1] IP address
- [2] Netmask
- [3] Gateway
- [4] IP Mode



LAN Setting by Telnet

Note : The change of settings will take effect only after the SE series is restarted.

COM Port Setting Operation: [3]COM Port Setting

SE 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.

Those "Input "3" from "Main Menu" to Enter "[3]COM Port Settings"(0) and press "Enter" key.



📑 Telnet 10.0.50.100	- 🗆 🗙
Main Menu	
[1]Overview	
[2]Networking	
[3]COM Port Settings	
[4]Security	
:3	
COM Port Settings	
[1]COM port select	
:1	

COM Port Setting of Telnet Console

COM Port Setting

Input "1" from "COM Port Settings" to
Enter "[1]COM port select" then press
"Enter" key.

☞Input '1' (users may select from COM1 to COM16) from" COM Port Settings" to Enter "COM port number<1~16>"

(SE5008 only has 8-port)

For example, Input "1" to select the

COM1 port of SE series, then press "Enter" key.



COM Port Settings by Telnet

One may configure COM1~COM16 parameters following the step below :

Note: One shall configure the Baud rate, Parity value, Data bits and Stop bits to match the equipments and devices that SE series is going to connect with.



COM1 Setting

☞Input "1" from "COM1 Setting" to Enter "[1]Working Mode" then press "Enter" key

Note : One shall choose a proper Working Mode first. (Refer to Chapter 1. 2 Application Connectivity for more detail)



COM1 Settings by Telnet



For example input " 4660', and press "Enter" key

TCP Server Mode by Telnet

Note :

1. The default port number of SE5016 is from 4660 to 4676.

2. The default port number of SE5008 is from 4660 to 4668.

[2]Baud rate

Input "2" from "COM1 Settings" to Enter "Baud rate", and press "Enter" key

Configure Baud rate to 9600

Input "4" from "COM1 Settings" to Enter "baud rate" for COM1 to 9600, then press "Enter" key.



Baud rate by Telnet



[3]Parity

Input "3" from "COM1 Settings" to Enter "Parity", and press "Enter" key

☞ Select one of **Parity** value to match the equipments and devices that SE series connected with, then press "**Enter**" key.

🚮 Telnet 10.0.50.100		_ 🗆 ×
	ananananan anananan ananan ana:	1
COM1 Sett	ings	
LØJEXIT		
[1]Working mode Virtual COM enable Local Port:4660	:TCP Server	
[2]Baud rate	:9600 bps	
[3]Parity	:None	
[4]Data bits	:8 bits	
[5]Stop bits	:1 bit	
[6]Flow control	:Hardware	
[7]Uart mode	:rs232	
[8]Uart delimiter	:Disable	
[9]Network delimiter	:Disable	
:3		
set parity for COM1		
LØJEXIT L1]None [2]Od	t L3JEven L4JMark [5]Space	
•		

Parity setting by Telnet

[4]Data bits

Input "4" from "COM1 Settings" to Enter "Data bits", then press "Enter" key

☞ Select one of **Data bits** to match the equipments and devices that SE series is connected with, then press "**Enter**" key.

📑 Telnet 10.0.50.100		- 🗆 ×
COM1 Settings		-
LØJEXIT		
[1]Working mode Virtual COM enable Local Port:4660	:TCP Server	
[2]Baud rate	:9600 bps	
[3]Parity	:None	
[4]Data bits	:8 bits	
[5]Stop bits	:1 bit	
[6]Flow control	:Hardware	
[7]Uart mode	:rs232	
[8]Uart delimiter	:Disable	
[9]Network delimiter	:Disable	
:4		
Set data bits for COM	L Contraction of the second	
[0]EXIT [1]7 bits [2]	8 bits	
:2		

Data bits setting by Telnet

[5]Stop bits

^{CP}Input "5" from "COM1 Settings" to Enter "Stop bits", then press "Enter" key

Select one of **Stop bits** to match the equipments and devices that SE series is connected with, then press "**Enter**" key.

r	COM1 Sett	ings	2
	CØ JEXIT		
	[1]Working mode Virtual COM enable Local Port:4660	:TCP Server	
ç	[2]Baud rate	:9600 bps	
	[3]Parity	:None	
S	[4]Data bits	:8 bits	
	[5]Stop bits	:1 bit	
	[6]Flow control	:Hardware	
	[7]Uart mode	:rs232	
	[8]Uart delimiter	:Disable	
	[9]Network delimiter	:Disable	
	:5		
	Set stop bits for COM	1	
	[0]EXIT [1]1 bits [2]	2 bits	
	:1		

Stop bit setting by Telnet

[6]Flow Control	🚽 Telnet 10.0.50.100		- 🗆 ×
^{Control} ^{Control} ^{Control} , then press "Enter" key ^{Control} , then press "Enter" key	COM1 Sett: COM1 Sett: [0]EXII [1]Working mode Uirtual COM enable Local Port:4660 [2]Baud rate [3]Parity	ings :TCP Server :9600 bps :None	
equipments and devices that SE series is connect with, then press "Enter" key.	(4)Data bits (5)Stop bits (6)Flow control (7)Uart mode (8)Uart delimiter (9)Network delimiter :6 Set flow control for ((0)EXIT (1)None (2)Xor :1	:8 bits :1 bit :re232 :Disable :Disable :Disable :Disable :Disable	

Flow Control setting by Telnet



[7]UART Mode

"Input "6" to see UART Mode of SE series' connection, and press "Enter" key

🛃 Telnet 10.0.50.100		- 🗆
COM1 Sett	ings	
ØJEXIT		
[1]Working mode	:TCP Client	
Destination IP 1:0	10.000.050.123	
Destination Port 1	:4660	
Destination IP 2:0	10.000.050.124	
Destination Port 2	:4661	
[2]Baud rate	:115200 bps	
[3]Parity	None	
[4]Data bits	:8 bits	
[5]Stop bits	:1 bit	
[6]Flow control	:Hardware	
[7]Uart mode	:rs232	
[8]Uart delimiter	:Disable	
[9]Network delimiter	:Timer(Ons)	
:7		
Set uart mode for COM	1	
LØJEXIT		
[1]rs232		
:		

UART Mode setting by Telnet

[8]UART delimiter- Timer

^CInput "8" from "COM1 Settings" to Enter

the number of packets within a serial [19 INetwork delimiter : limer(Ons) communication. It can is designed to keep set Uart Deliniter [DDDisable [1] Timer [2] Characters packets from being cut thus keep the packets complete intack. SE series provides Set Timer(8"30000 msec) two ways of in parameter setting as :

Packet delimiter timer and

2. Character pattern terminator.

By default packet delimiter timer is 1 ms, one can change the range of packet delimiter timer is 0 to 30,000 mSec, as shown in Figure.

[8]UART delimiter- Character

^{CP}Input "8" from "COM1 settings" to Enter [1] Working node "Uart delimiter", then press "Enter" key

^CInput "2" to Enable delimiter Characters pattern, or "0" to disable the function, then press "Enter" key.

^CIf "character pattern is selected, for a [19] Network deliniter data stream ended with "0x0a04", then the uata stream ended with "UXUAU4", then the set uart Deliniter entire data buffer of the serial device is $^{(6D)rable (1)Timer (2)Characters}_{22}$ transmitted.



UART delimiter (Timer) setting by Telnet



UART delimiter (Character) setting by Telnet



[9]Network delimiter- Timer

^{CP}Input "9" from "COM1 Settings" to Enter "Network delimiter", then press "Enter" key

^{CP}Input "1" to Enable UART Delimiter Timer, or "0" to disable the function, then press "Enter" key.

Packet delimiter is a way of controlling the number of packets within a serial communication. It can is designed to keep packets from being cut thus keep the packets complete intack. SE series provides two ways of in parameter setting as :1. Packet delimiter timer and 2. Character pattern terminator. By default packet delimiter timer is 1 ms, one can change the range of packet delimiter timer is 0 to 30,000 mSec, as shown in Figure.

🚽 Telnet 10.0.50.100		- 🗆
COM1 Sett:	ings	
CØJEXIT		
[1]Working mode	:TCP Client	
Destination IP 1:0:	0.000.050.123	
Destination Port 1	4660	
Destination IP 2:0	0.000.050.124	
Destination Port 2	4661	
[2]Baud rate	:115200 bps	
[3]Parity	None	
[4]Data bits	:8 bits	
[5]Stop bits	:1 bit	
[6]Flow control	:Hardware	
[7]Uart mode	:rs232	
[8]Uart delimiter	:Timer(Oms)	
[9]Network delimiter	:Disable	
:9		
Set Network Delimiter		
[0]Disable [1]Timer [1Characters	
:1		
Set Timer<0~30000 msed	:>	
_		

Network delimiter (Timer)setting by Telnet

[9]Network delimiter- Character	🚚 Telnet 10.0.50.100
^{The setting} "From "COM1 Settings" to Enter	COML Settings
"Network delimiter", then press "Enter" key	10]EXIT 11.Working mode :ICP Client Destination IP 1:010.000.050.123
Plnput "2" Enable Delimiter Character	Destination Port 1:4660 Destination IP 2:010.000.050.124 Destination Port 2:4661
pattern, or "0" to disable he function, then press "Enter" key	12 JBaud rate :115200 bps (3 JParity :None (4 JData bits :8 bits
Picco - ito;	ISIStop bits :1 bit [GIFlow control :Hardware [7]Hart mode ::rs232
stream ended with "0x0a04", then the entire	18 Wart delimiter :Timer(0ms) 19 Network delimiter :Timer(0ms) :9
data buffer of the serial device is transmitted.	Set Network Delimiter [0]Disable [1]Timer [2]Characters
	:2 Set Characters(0x+0SCII Code_Ex,0x0d or 0x0d0a)
	:_

Network delimiter (Character) setting by Telnet

Note: The changes of networking parameters will take effect ONLY after SE series is exited and restarted.



Security

Operation: [4] Security

SE series allows one to change the password.

Select "4" from "Main Menu" to Enter "Security", then press Enter key

🚅 Telnet 10.0.50.100	- 🗆 >
Linux 2.4.18-SE5016 (atop) (ttyp0)	-
Username:admin	
Password:0000	
Main Menu	-
 ГØ 1 FX I T	-
[1]Overview	
[2]Networking	
[3]COM Port Settings	
[4]Security	
:4	
Security	-
 [0]EXIT	
[1]Change Username	
[2]Change Password	
·_	

Security settings by Telnet

Security

Input "1" from "Security" to Enter "Username"

Input a new Username, then press
"Enter" key.

🚚 Telnet 10.0.50.100	- 🗆 ×
Main Menu	<u>*</u>
CØJEXIT	
[1]Overview	
[2]Networking	
[3]COM Port Settings	
[4]Security	
:4	1
Security	
LØJEXIT	
[1]Change Username	
[2]Change Password	
:1	
new username:atoptest	
Successed	

Chang Username by Telnet

Security -Password

Input "2" from "Security " to Enter Password

 $\ensuremath{\ensuremath{^{\circ}}}$ Input a new Password, then press "Enter" key.

🚚 Telnet 10.0.50.100	- 🗆 ×
Security	1
(ØJEXIT	
[1]Change Username	
121Change Password	
:2	
new password:abcd	
Successed	

Chang Password by Telnet

Note:

- The changes of networking parameters will take effect ONLY after is exited and restarted.
- One may press the reset button on SE series to reset password



Configuration by Hyper Terminal Console utility

- Turn off SE5008/5016's power.
- Connect ones PC to the SE series in console mode with RS-232 cross over cable.
- Confirm ones LAN connection setting is properly
- Turn on the SE series power.
- Open Hyper Terminal program.

Note:

On Windows Start menu, go to Programs\Accessories \Communication\ Hyper Terminal, then set COM parameters in suitable port number (ex. COM1) as shown below.

Baud rate	9600 bps
Data bit	8 bits
Parity	None
Stop bit	1bit
Flow control	None

Note: SE series console port baud rate is fixed at 9600, 8, n, 1, without flow control, Always make sure your computer is on the same RS232C parameters as the SE series.

After Hyper Terminal is connected, enter in username and password. The following Hyper Terminal screen shall appear,



Configurations via Console mode with Hyper terminal

Configuration by Web Browser is the same as configuration by Telnet.



Configuration by Web Browser

Please Make sure the PC is on the same network as SE series

Log in the system

Open a web browser, then input the same IP address as SE5008/5016 in the URL, and press Enter. For example : <u>http://10.050.100</u>

Then the following authentication screen shall appear. Enter in desired **User Name** and **Password** then click on **OK**

Note:

Default Port number of SE series is 10.0.50.100

Default user name is admin and password is 0000.

Enter Net	work Passwo	rd	? ×
? >	Please type yo	our user name and password.	
9	Site:	10.0.50.100	
	Realm	NeedPassword	
	<u>U</u> ser Name	admin	
	Password		
	□ <u>S</u> ave this p	password in your password list	
		OK Can	cel

Popup windows for Authorization

Overview

Then the following Overview screen shall appear



Overview Information from web page



Security

 Overview

 Networking

 Security

 COM4

 COM5

 COM6

 COM7

 COM8

 COM9

 COM10

 COM11

 COM12

 COM13

 COM14

 COM5

 COM5

 COM6

 COM7

 COM8

 COM10

 COM11

 COM12

 COM13

 COM14

 COM15

 COM16

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

Security Settings from web page

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

Note: The default username is **admin** and password is **0000**. One may press the reset button on SE series to reset to the default value

Networking

Click on "Networking" link and the following screen shall appear. Fill in IP information on TCP/IP field. Alternatively, check on DHCP to obtain auto IP address, gateway and subnet mask.

Enable SNMP by checking "Enable", fill in network identification information on "**SNMP**" and click on the "**Save Configuration**" button to save the changes, The changes will not become effective until SE5008/5016 is restarted.

Matop	ABLELink Ethernet-Serial Server
Overview Networking Security COM1 COM2	TCP/IP To configure network settings of Ethernet-Serial Server. After saving configuration you have to restart the device to make the settings effective.
COM4	LAN 1
COM5	DHCP Obtain an IP automatically
COM6	IP Address 10 . 0 . 50 . 100
COMB	Default Gateway 10 . 0 . 0 . 254
COM9 COM10	Subnet Mask 255 . 255 . 0 . 0
COM11	
COM12	LAN 2
COM14 COM15	DHCP Dbtain an IP automatically
COM16	IP Address 192 . 168 . 1 . 1
	Default Gateway 192 . 168 . 1 . 254
	Subnet Mask 255 , 255 , 255 , 0

LAN 1 and LAN 2 setting

There are LAN1 and LAN2 on "**TCP/IP**". Fill in the IP information in both of the LAN information. Alternatively, Check on DHCP to obtain auto IP address, Gateway and Subnet Mask information.



DNS1 and DNS 2 Setting

One may activate SNMP for SNMP management utility to collect SE series system information. One may also change SE series' network identity, system name, system location and system contact .

•aton		
Technologies	DNS 1	168 . 95 . 1 . 1
	DNS 2	210 . 62 . 128 . 1
	<u>, </u>	
	ONIMO	
	DINIVIE Ry apphling SNIMD	you allow the management utility to collect the
COM5	information of Ether	met-Serial Server. You can change the device
	network identity as	well by changing the system name, location and
	contact.	
	SNMP	Enable
	SNMP SysName	Enable
COM9 COM10 COM11 COM12 COM13	SNMP SysName SysLocation	Enable
COM9 COM10 COM11 COM12 COM12 COM13 COM14	SNMP SysName SysLocation SysContact	Enable
	SNMP SysName SysLocation SysContact	Enable
	SNMP SysName SysLocation SysContact	Enable
	SNMP SysName SysLocation SysContact	Enable

DNS Settings from Web Page

NTP Settings

NTP settings allow SE series to obtain internal time from NTP server after assigned proper NTP server's IP address. In addition, one can assign a time zone to match where ones location is

N atop	
Overview Networking Security COM1 COM2 COM3 COM4 COM5	NTP By enabling NTP you allow to adjust and set the device internal time, relative to Greenwich Mean Time. **Note : please either turn on the ntp enable check box and click save and restart button below or set time manually and click save button on the right side
COM6 COM7 COM8	Current System Time Wed Jan 19 14:43:48 2000 Refresh
COM9	NTP 🗹 Enable
COM10	NTP Server 140.112.2.189
COM12	Time Zone Asia/Taipei 🗸
COM13 COM14	Set Time 2005 V Jan V 1 V 0 V : 0 V : 0 V Save
COM15 COM16	

NTP Settings from Web Page



SMTP Settings

SE series Administrator can obtain SE series' system warning message by e-mail after Enable SMTP function and input proper e-mailing addresses.

Overview Networking Security	SMTP By enabling SM to five.	TP you allow to set the Email address, maximum
COM2	SMTP	Enable
COM3 COM4	Email Address 1	atop@atop.com.tw
COM5 COM6	Email Address 2	tonytan@atop.com
COM7 COM8	Email Address 3	
COM9 COM10	Email Address 4	
COM11 COM12	Email Address 5	
COM13 COM14 COM15 COM16		Save and Restart

SMTP Settings from Web Page

Note: The changes of settings will take effect only after click "Save and Restart" button and restart

COM Setup

Choose one of the COM ports one desired to configure, the following screen shall appear. Fill in the COM port parameters then click "Save Configuration" button to save the changes

Overview Networking Security COM1 COM2 COM3	To configure COM port parameters.
COM4	Baud Rate 9600 J bps
COM5	Parity None Odd OEven OMark OSpace
COM7	Data Bits © 7 bits © 8 bits
COM8	Stop Bits C 1 bit C 2 bits
COM9	Flow Control C None C Xon/Xoff C Hardware
<u>COM10</u> <u>COM11</u> <u>COM12</u> <u>COM12</u>	UART Delimiter C Timer (0~30000 msec) C Characters 0x000a ("0x"+ASCII Code,Ex.0x0d or 0x0d0a)
<u>COM14</u> <u>COM15</u> COM16	Enable © Timer 0 (0~30000 msec) © Characters 0x04 (""0x"+ASCII Code,Ex.0x0d or 0x0d0a)
	UART Mode © RS232 © RS422 © RS485
	Save Configuration

COM Port Settings from Web Page



LINK Setup

Click on the "COM1" link and the following screen shall appear. One may configure SE series as transparent mode by default.

• Configuring SE series as TCP Server - Using Web browser

Configure SE series as TCP server and set the local port to 4660

Note :

- IP filter function is disabling by default.
- IP filter is enabled; only source IP assigned is connected to SE series.

atop	ABLELink Ethernet-Serial Server COM 1		
Overview Networking	To choose specific working mode for COM port.		
Security COM1	○ TCP Server	OTCP Client OUDP	
COM2	Virtual COM	🗹 Enable	
COM3	IP Filter	Enable	
COM4 COM5	Source IP	256 266 255 256	
COM6	Local Port	1000	
COM7	Local Port	4000	
COM8			
COM9			
COM10			
COM11			
COM12			
COM13			
COM14			
COM15			
COM16			

TCP Server Settings from Web Page

Configuring SE series as UDP Mode - Using Web browser

SE series can be configured in a UDP mode to establish connection using uni-cast data from the serial device to one or multiple host computer. Vice versa is also true. For example, set local port to 4660, Input host PC's destination IP address and destination port at 4660.

	ABLELink Ethernet-Serial Server COM 1
	To choose specific working mode for COM port.
Security COM1	C TCP Server C TCP Client C UDP
<u>COM2</u> <u>COM3</u>	
<u>COM4</u> <u>COM5</u>	
<u>COM6</u>	Local Port 4660
<u>COM7</u>	
<u>COM8</u>	Destination IP 1 10 0 , 50 119
<u>COM9</u>	Destination Port 1 660
<u>COM10</u>	Destination 2 E Enable
<u>COM11</u>	
<u>COM12</u>	Destination IP 2 192 168 11 119
COM13 COM14	Destination Port 2 660

UDP Mode Settings from Web Page



Click "Save Configuration" to save the changes.

Note : One may enable both Destination IP1 and Destination IP 2 on different subnet at the same time after input the Destination IP2 & Port2

If the update is successful, the following screen shall appear

SAVE SUCCESSFULLY BACK

Pop-up windows after save successfully



Appendix A. Using Virtual COM Mode

Virtual COM driver mode for windows converts COM data to Ethernet data of the COM port on a SE series via Ethernet. By creating Virtual COM ports on the PC, Atop Virtual COM redirects the communications from the Virtual COM ports to an IP address and port number on a SE series that connects the serial line device to the network. The following figure illustrates a Virtual COM connection diagram





Setup of a Virtual COM driver

PC 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, Microsoft NT/2000 Terminal Server, Citrix Meta Frame
- Windows Installer 2.0
- Network: Microsoft TCP/IP networking software

Cautions on Use: Virtual COM supports firmware AP v3.4 or later for the SE series Serial Servers.

Limitation: Virtual COM driver provides users up to **256 Virtual COM ports**. Users may select from COM1 to COM256.

Virtual COM communication

Enabling Virtual COM on SE5008/5016

From web browser, access SE5008/5016 by typing its IP address, click on "*COM1*" link to access COM1 window, click on "*TCP Server*" and check "enable" Virtual COM button, then Enter in the local port number on "*Local Port*" field as indicated in the following screen



	ABLELink Ethernet-Serial Server COM 1			
		To choose a	pocific working mode for Cf	Minort
Networking		10 010058 5	specific working mode for CC	JWI POIL.
COM1	۰	TCP Server	○ TCP Client	OUDP
COM2		Virtual COM	Enable	
COM3		IP Filter		
OM4				
COM5		Source IP	255 255 255	255
COM6		Local Port	4660	
OM7		Loodin on		



One may also enable Virtual COM through telnet by setting Serial as a TCP server, and enter the local port number for Serial, then enable virtual COM as shown in the following steps:

- 1. Login SE5008/E5016 via Telnet
- 2. COM Setting: Input "1" from COM Settings to Enter [1] Working Mode then press "Enter" key.
- 3. Enable **TCP Server Mode:** Input "1" from COM Settings to Enter [1] TCP Server, then press "Enter" key.
- 4. Enable Virtual COM Mode: Input "1" from COM Settings to Enable Virtual COM, then press "Enter" key.

_ا Telnet 10.0.50.100		_ 🗆 🗙
COM1 Sett	ings	
[Ø]EXIT		
[1]Working mode Virtual COM enable Local Port:4660	:TCP Server	
[2]Baud rate	:115200 bps	
[3]Parity	:None	
[4]Data bits	:8 bits	
[5]Stop bits	:1 bit	
[6]Flow control	:Hardware	
[7]Uart mode	:rs232	
[8]Uart delimiter	:Disable	
[9]Network delimiter :1	:Disable	
Set working mode for	COM1	
[0]EXIT [1]TCP Server	[2]TCP Client [3]UDP	
:1		
Set Virtual COM use		
[0]Disable [1]Enable		
:1		

Enable Virtual COM Mode via Telnet



Running Serial/IP on monitoring PC

On Window Start Menu, go to\program\Serial/IP for ATOP\Control panel\ select port \then select the serial port. Then the "Serial/IP for ATOP Control Panel" window appear.

📥 Serial/IP for A TO	P Control Panel 4.2		×
TACTIC	AL		
soft	ware	SCI. I. K.	
COM4	Settings for COM4	D	
COM5	IF Address of Server:	Fort Number:	- 11
	10.0.30.100	14000	
	Configuration	Wizard	
	-Credentials		-
	No Login Required		
	C Use Windows Credents	als	
	C Prompt on COM Port (Open	
	C Prompt at Login		
	P	compt Now	
	C Use Credentials Below		
	Usemame:		
	Password:		
		J	
	COM Port Options		1
Select Ports	Restore Failed Connec	tions	
	-		
Port Monitor			
Licensing			
Advanced			
	Close Help.	. About	

On the right of the panel is a sample for COM 4 settings. On the left is the list of the COM ports that have been selected (on **Select Ports** window) for use by the Virtual COM Redirector. Change the list by clicking the **Select Ports** button.

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

Configuring Virtual COM Ports

Serial/IP COM port can be changed as follows:

- Select a COM port on the list.
- On IP Address of Server, enter serial server IP address.
- On **Port Number**, enter the TCP port number of the serial server.
- On Server Credentials, the default is No Login Required. If the serial server does require login by the Virtual COM Redirector, the Virtual COM Redirector must provide a username and/or password every time an application tries to access the serial server.
- Click the Configuration Wizard button and then click the Start button that shall appear on the wizard window. This step verifies that the Virtual COM Redirector communicates with the serial server. If Log display does not show errors, click Use Settings, return to the Control Panel
- Settings on the Connection Protocol must match the TCP/IP protocol supported by the serial server. The Configuration Wizard is capable of determining the correct settings.



On COM Port Options, the settings must match the COM port behavior expected by the PC application. The Configuration Wizard will recommend such settings

🛓 Configuration Wizard - COM4	×
IP Address of Server: 10.0.50.1 Username:	Port Number: 4660 Pessword:
Test for presence of a <u>m</u> odem connected to the Status:	e server
Connected to Server COM Port Control Support Detected Telnet Protocol Detected Session Completed	
Log:	
Recommendations:	
Protocol: Telaet COM Port Option: DTR disabled COM Port Option: DSR disabled COM Port Option: DCD disabled	
💡 Start 🖉 Stop	Cancel

Appendix B. SNMP Setup

SNMP Network Management Platform

Atop SE5008/5016 is an SNMP device that allows many popular SNMP network management platforms such as HP OpenView and SunNet Manager to conduct monitoring on the device.

Depending on the network management tools you are using, device (SE5008/SE5016) information can be collected from running the management tools including IP address, DNS name, system descriptions and NIC information etc

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. One may visit their web sites and get a free download.

To use NetworkView, you will need to download and install the tool on your 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.

Click on the button to open a new file. The following screen appears, in the Addresses field, type in the IP address range to search.



Network discovery parameters		×
Addresses Advanced Ports		1
Discovery type Single address Bange Subnet Printout info Title Description Author	Addresses Start 10 0 50 1 > End 10 0 50 101 >	
	OK Cancel Help	

Click "OK" and the following dialog box appears. It displays the searching progress.]

Discovering network	×
10.0.50.86 : pinging address (1)	
84%	
[Cencel]	

After the search is completed, NetworkView will display the devices found in the main window, as shown below.

NetworkView - [Ne File Edit View V	tworkView3] Vindow Help	
r 📽 🖬 🔍 👙 🛔	? 1 < + - 🗖	III 🛈 😹 🕾 😫 🏔 🔳
무		
10.0.50.71	10.0.50.9	
	ALLIP Lechnologues Inc.	

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.

Note:

- NetworkView is limited to information extracting and viewing only.
- To modify the configurations use the web server, Telnet or monitor.exe configuration utilities.



Appendix C. Specifications

Hardware Specifications

	Specifications				
CPU	IDT 79R32438 –266, MIP32 Core				
	266MHz				
Flash Memory	8M Bytes				
SDRAM	32M Bytes				
EEPROM	8K Bytes				
Network Interface	Dual 10/100Mbps Fast Ethernet auto-detection				
Networking Protection	Built-in 2.0KV magnetic isolation				
Network Protocol	TCP/IP, UDP, SNMP, HTTP, Telnet, BOOTP, DHCP, WEP, SMTP, NTP				
Reset	Built-in default key to restore factory default settings				
Watch Dog Timer	0.7 second hardware auto reset				
	Power failure threshold: 2.96V				
Serial Interface	RS232/422/485 software selectable. The default setting is RS232				
Serial Protection	Gas Discharge Tube protection				
Serial Connector	RJ-45 (8 pin)				
	SE501616 serial ports/ connectors				
	SE5008 8 serial ports/ connectors				
Serial Port	Baud-rate: 1200 bps ~ 921600 bps				
Communication	Parity: None, Even, Odd, Mark, Space				
	Data bits: 7 or 8				
	Stop bits: 1 or 2				
	Packet Delimiter: by inter-character timeout, by characters pattern delimiter				
	Flow Control: None, Hardware CTS/RTS, Software Xon/Xoff				
LED indication	Power x 1				
	Ready x 1				
	COM port Tx x 16 (SE5016), x 8 (SE5008)				
	COM port Rx x 16 (SE5016), x 8 (SE5008)				
Power Requirement	90~240V AC, 1700mA@5V				
Temperature	Operation: 0° C to 60° C				
	Storage: -20 $^{\circ}$ C to 85 $^{\circ}$ C				
Humidity	20%~70% non-condensing				
Housing	436mm(W) x 42.6mm(H) x 200mm(D)				



Pin Assignments

RJ45 Phone Jack

		Ethernet	RS-232	RS-422	RS-485
	Pin 1	Tx+	RTS	-	-
1 8	Pin 2	Tx-	DTR	TX-	-
	Pin 3	Rx+	TXD	TX+	-
	Pin 4		SG	SG	SG
	Pin 5		SG	SG	SG
	Pin 6	Rx-	RXD	RX+	Data+
	Pin 7		DSR	RX-	Data-
	Pin 8		CTS	-	-

		RS-232	RS-485	RS-422
	Pin 1			
	Pin 2	RXD	Data+	RX+
54224	Pin 3	TXD		TX+
	Pin 4	DTR		TX-
	Pin 5	SG	SG	SG
	Pin 6	DSR	Data-	RX-
5070	Pin 7	RTS		
	Pin 8	CTS		
	Pin 9			

RJ-45 to-DB9 Male Cable

RJ45			DB9 N	lale
	••••••••••••••••••••••••••••••••••••••	=1 =		
RTS	Pin 1	\leftrightarrow	Pin 7	RTS
DTR	Pin 2	\leftrightarrow	Pin 4	DTR
TXD	Pin 3	\leftrightarrow	Pin 3	TXD
SG	Pin 4	\leftrightarrow	Pin 5	GND
SG	Pin 5	\leftrightarrow	r III Ş	GIND
RXD	Pin 6	\leftrightarrow	Pin 2	RXD
DSR	Pin 7	\leftrightarrow	Pin 6	DSR
CTS	Pin 8	\leftrightarrow	Pin 8	CTS

RS232/RS422 Cross Cable by RJ45

	RJ45 A			RJ45 B		
RS422	RS232				RS232	RS422
	RTS	Pin 1	\leftrightarrow	Pin 8	CTS	
TX-	DTR	Pin 2	\leftrightarrow	Pin 7	DSR	RX-
TX+	TXD	Pin 3	\leftrightarrow	Pin 6	RXD	RX+
	SG	Pin 4	\leftrightarrow	Pin 5	SG	
	SG	Pin 5	\leftrightarrow	Pin 4	SG	
RX+	RXD	Pin 6	\leftrightarrow	Pin 3	TXD	TX+
RX-	DSR	Pin 7	\leftrightarrow	Pin 2	DTR	TX-
	CTS	Pin 8	\leftrightarrow	Pin 1	RTS	



RJ45		RJ45 B		
RS485				RS485
	Pin 1	\leftrightarrow	Pin 1	
	Pin 2	\leftrightarrow	Pin 2	
	Pin 3	\leftrightarrow	Pin 3	
	Pin 4	\leftrightarrow	Pin 4	
	Pin 5	\leftrightarrow	Pin 5	
Data+	Pin 6	\leftrightarrow	Pin 6	Data+
Data-	Pin 7	\leftrightarrow	Pin 7	Data-
	Pin 8	\leftrightarrow	Pin 8	

RS485 Loop back Cable by RJ45

Appendix D. Diagnostics

There are several ways to check the status and availability of SE5008/5016.

Using Standard TCP/IP Utility ping Command

From Windows Start menu, select Run then type "ping < TCP Server IP address>".

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

```
C:\WINNT\system32\cmd.exe
                                                                              <u>- 0 ×</u>
C:\>ping 10.0.50.100
                                                                                   ٠
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),
```



Using Monitor.exe Configuration Utility

Use monitor25.exe configuration program on the product CD to check the status of SE5008/5016. The status can be read from "*AP version*" column of the tool.

Status	Descriptions
S	The system is configured as a TCP Server and Listening.
С	The system is configured as a TCP Client and trying to connect.
U	The system is configured as an UDP.
Α	The TCP Server is connected.
В	The TCP Client is connected.

Upgrading System Software

New version of firmware can be downloaded from www.atop.com.tw

System Upgrading Procedures

Follow the upgrading procedures below to upgrade the latest new version of firmware:

Make sure the PC and the SE5008/5016 on the same network. Use command **ping** or **monitor.exe** 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 zlmage.bin 10.0.50.100

Note: **"linux_dl"** is the upgraded executing file and **zImage.bin** is the firmware file name; xxx.xxx.xxx is the IP address of SE5008/5016



SE series shall automatically perform the download and restart after downloading, if the upgrade is successful.



C:\WINDOWS\system32\cmd.exe	
C:\Documents and Settings\FengWu\桌面\5016>linux_dl zImage.bin 10.0.50.100 Erase flash, please wait	
Filesize = 3022848	
Transmitting start	
	_

Critical Issues in Upgrading Process

If the upgrade is successful, SE series shall program the flash memory and the buzzer will beep 1 time before restarting. It takes around 5 seconds to complete the programming process. If an error occurs during the programming process, SE series will clear the corresponding memory and the system remains the same before the process.

Running Configuration Utility

The configuration utility **monitor.exe** is the main utility program used to display and to configure SE series' settings.



Running Monitor.exe Utility

Double click to start the program under Windows 98/NT/2000 environment and the following window shall appear.

Solution wer2.4						
Broadcast IP						
255.255.255.255	📕 Wishe	:s 0 _	Locate			
210.243.245.181						
202.39.254.255	Reply	31				
1/11/.39./54./53		I	wite Beset (onfig Evit		
255.255.255.255	Retry					
IP Address	MAC Address	Gateway	Subnet Mask	Model	Kernel	AP version
10. 0. 9. 0	00:60:E9:00:05:4B	202. 39.254.249	255.255. 0. 0	1	1.7	ATOP Proxi. Access V2.2
— 10. 0. 9. 2	00:60:E9:00:13:52	202. 39.254.249	255.255. 0. 0		1.6	ATOP Proxi. Access V2.6.5
10. 0. 21.100	00:60:E9:02:50:09	10. 0. 0.254	255.255. 0. 0	GW21S-MINI	1.14	TerminalSrv ver1.14 S
10. 0. 22. 1	00:60:E9:00:16:F0	10. 0. 0.201	255.255. 0. 0	GW231A	2.18	207DVS231A TCP(M=X ,SM=
🚥 10. 0. 23. 44	00:60:E9:00:5E:15	10. 0. 0.254	255.255. 0. 0	GW21L	92.0	TerminalSrv ver3.03a SS
🚥 10. 0.24. 7	00:60:E9:00:00:01	10. 0. 0.254	255.255. 0. 0	GW21L	1.85	TerminalSrv ver3.03 SS
10. 0. 25. 27	00:60:E9:00:18:51	10. 0. 0.202	255.255. 0. 0	GW27A	2.18	206DVS27A TCP(M=X,SM=T
10. 0. 25.100	00:60:E9:02:50:06	10. 0. 0.254	255.255. 0. 0	GW21S-MINI	1.14	TerminalSrv ver1.15 S
— 10. 0. 50.100	00:60:E9:00:8B:DA	10. 0. 0.254	255.255. 0. 0	GW21W-MAXI	1.53	TerminalSrv ver3.03 S
🚥 10. 0. 51. 20	00:60:B3:66:AA:9A	10. 0. 0.254	255.255. 0. 0	GW21W	1.47	TerminalSrv ver3.03 SS
10. 0. 53. 1	00:60:E9:00:30:26	10. 0.53.100	255.255. 0. 0	GW21L/E	1.7	NewCAPS576 V1.54
— 10. 0.71. 2	00:60:E9:00:11:93	202. 39.254.250	255.255. 0. 0		2.3	NewCAPS576 V1.5
10. 0. 71. 6	00:60:E9:00:24:E5	10. 0. 0.254	255.255. 0. 0		2.3	TerminalSrv2.2 SS
10. 0. 71. 7	00:60:E9:00:A2:1B	10. 0. 0.254	255.255. 0. 0	GW21S-256	1.45	NewCAPS576 V1.53
10. 0. 71. 10	00:60:E9:00:3B:56	10. 0. 0.254	255.255. 0. 0	GW21S-256	1.45	NewCAPS576 V1.53
10. 0. 71. 66	00:60:E9:00:5F:22	10. 0. 0.254	255.255. 0. 0	GW21L	1.85	TerminalSrv ver3.03 SS
10. 0. 71. 99	00:60:E9:00:1A:52	10. 0. 0.254	255.255. 0. 0		2.3	NewCAPS576 V1.5
10. 0. 72. 10	00:60:E9:00:1A:9D	192.168. 10. 10	255.255. 0. 0		2.3	NewCAPS576 V1.5
10. 0.154.55	00:60:E9:00:00:03	10. 0. 0.254	255.255. 0. 0	GW21S-256-5A	1.45	TerminalSrv ver3.03 A
10. 0.168.23	00:60:E9:00:17:E1	10. 0. 0.202	255.255. 0. 0	GW234A	2.18	207DVS234A TCP(M=X ,SM=
10. 0.168. 24	00:60:E9:00:18:CB	10. 0. 0.204	255.255. 0. 0	GW27A	2.18	207DVS27A TCP(M=X ,SM=T 💌
•						

Detecting Operational Devices

Follow steps below to detect all devices available on the network.

- 1. Start monitor.exe utility program.
- 2. Select an item from the Broadcast IP list.
- 3. Specify a number in the **Wishes** box.

Click on the **Invite** button. This will display all the devices requested.

Configuring Device Setting

Use monitor.exe to configure the settings of devices on the network.

1. Repeat the steps in C.2 to bring up devices information.

Select the device to be configured from **IP Address**. Click on the **Config** button, a configuration dialog box shall popup as shown below.

🐁 monitor ver2.4						
Broadcast IP 255.255.255.255 210.243.245.181 202.39.254.255 202.39.254.253 255.255.255.255		Wishes 0 Reply 31 Retry 0	Locate	Config Exit		
IP Address	MAC Address	Gateway	Subnet Mask	Model	Kernel	AP version
🚥 10. 0. 9. 0	00:60:E9:00:05	:4B 202. 39.254.249	255.255. 0. 0		1.7	ATOP Proxi. Access V2.2
🚥 10. 0. 9. 2	00:60:E9:00:13	:52 202. 39.254.249	255.255. 0. 0		1.6	ATOP Proxi. Access V2.6.5
🚥 10. 0.21.100	00:60:E9:02:50	:09 10. 0. 0.254	255.255. 0. 0	GW21S-MINI	1.14	TerminalSrv ver1.14 S
🚥 10. 0.22. 1	00:60:E9:00:16	:F0 10. 0. 0.201	255.255. 0. 0	GW231A	2.18	207DVS231A TCP[M=X ,SM=
🚥 10. 0. 23. 44	00:60:E9:00:5E	:15 10. 0. 0.254	255.255. 0. 0	GW21L	92.0	TerminalSrv ver3.03a SS
🚥 10. 0.24. 7	00:60:E9:00:00	:01 10. 0. 0.254	255.255. 0. 0	GW21L	1.85	TerminalSrv ver3.03 SS
🚥 10. 0. 25. 27	00:60:E9:00:18	:51 10. 0. 0.202	255.255. 0. 0	GW27A	2.18	206DVS27A TCP(M=X ,SM=T
— 10. 0. 25.100	00:60:E9:02:50	:06 10. 0. 0.254	255.255. 0. 0	GW21S-MINI	1.14	TerminalSrv ver1.15 S
 10. 0. 50.100	00:60:E9:00:8B	DA 10. 0. 0.254	255.255. 0. 0	GW21W-MAXI	1.53	TerminalSrv ver3.03 S
🚥 10. 0. 51. 20	00:60:B3:66:AA	:9A 10. 0. 0.254	255.255. 0. 0	GW21W	1.47	TerminalSrv ver3.03 SS

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One may change all the information to proper settings.

Dialog		×
MAC addr.	00:60:E9:00:98:42	
IP address	10.0.50.100	🗆 Auto IP
GateWay	10.0.0.254	
Mask	255.255.0.0	Config Now
User ID	admin	
Password		Cancel
Host Name	0060E9-009842	

After clicking on the "**Config Now**" button, the target device Returns an "ACK" message, indicating the modification is successful as shown as follows.





The following table lists the functional descriptions of the fields names.

Field Name	Field Descriptions				
Broadcast IP	Except for the default IP 255.255.255.255, other items (IPs) are read from the file "seg.cfg". This field specifies a detecting IP range. It may be a designated IP or a broadcast IP.				
Wishes	Specifies minimum number of the devices you wish to get reply from after sending an Invite request. If there is not as many as devices responding to your invitation, the system repeatedly sends invitation until your request is fulfilled.				
Reply	Indicates the actual number of devices this utility program detected.				
Retry	Specify the number of times that an Invite request is re-sent.				
Locate	Locate the specified device.				
Reset	Reset the selected device.				
Config	Configure the selected device.				
Exit	Exit this utility.				
IP Address	Indicate the IP address of the device that replied to ones request.				
	Leading tag "!" stands for IP address collision, possibly caused by duplicated IP addresses on the network.				
	Leading tag "?" stands for Mac address collision, possibly caused by duplicated Mac addresses on the network.				
MAC Address	Indicates the MAC address of responding device.				
Gateway	Indicates the IP address of the gateway.				
Subnet Mask	Indicates the TCP/IP network mask.				
OS	Indicates the OS version of the responding device.				
AP Version	Indicates the AP version of the responding device.				
Model	Indicates the model number of the responding device. This field is only available for monitor.exe version 2.0 and above.				

Configuration by LCM Display

One may use LCM and 4 push button on SE series nameplate to easily configure SE series without any PC and cable.

Those 4 buttons located on the right side of LCM display, the LCM functions follow the table below:

Buttons	Button Description		
(Menu)	To activate the Main Menu, or to return to the previous selected Menu		
<pre>Contract Contract Contrac</pre>	To scroll up through a list of Menu shown on the LCM Display Panel		
⊘ _{<down></down>}	To scroll down through a list of Menu shown on the LCM Display Panel		
(SEL)<	To select the options shown on the LCM Display Panel		

Function list of LCM Buttons



- Software Configurations
 Example : Change IP Address (Use LCM Controller)
- Push < Menu> button to enter Main Menu
- Push <Down> button to scroll down to <u>2. Network Set</u>
- Push <SEL> to enter Network setting and then push <Up>/<Down> to scroll up or down to <u>1</u>. <u>LAN1</u> or <u>2</u>. LAN2
- Push <SEL> to enter LAN1 and then push <Down> to scroll down to 2. IP Config
- Push <SEL> to enter LAN1 <u>IP Config</u> and then push <Down> to scroll down to <u>1. Static</u>, and push <SEL> to save the selection.
- Push <SEL><Down> to enter <u>3. IP Address</u>, Use <Up>/<Down> to increase or decrease the Digital of IP Address and then push <Menu> to return one level if setting completed
- To enter: <u>4. Netmask</u>: Use <Up>/<Down> to increase or decrease the Digital of subnet mask and then push <Menu> to return one level if setting completed
- To enter: <u>5. Gateway.</u> Use **<Up>/<Down>** to increase the Digital of default gateway and Use **<Menu>** to return one level if setting completed
- Push <Menu> to return to upper level and SE series should displaySystem message <u>Save &</u> <u>Restart</u> message, push <SEL> to <u>2. Yes</u>, and push <SEL> again if the Setting completed ,SE series should restart and change the setting.after system being restarted

1 st layer	2 nd layer	3 rd Layer	Descriptions
[1]Server state	[1] Model name		Display or Change Model Name
[2]Network set	[1]Lan 1	[1] Mac	Display MAC address of LAN1
		[2] IP config	Display or Change IP to static or dynamic mode for LAN1
		[3] IP address	Display or Change IP address of LAN1
		[4] Net mask	Display or Change Net Mask of LAN1
		[5] Gateway	Display or Change Gateway of LAN1
	[2]Lan 2	[1] Mac	Display MAC address of LAN2
		[2] IP config	Display or Change IP to static or dynamic mode of LAN2
		[3] IP address	Display or Change IP address of LAN2
		[4] Net mask	Display or Change Net Mask of LAN2
		[5] Gateway	Display or Change Gateway of LAN2
	[3]DNS server1		Display & Select 1 st DNS IP address
	[4]DNS server2		Display & Select 2 nd DNS IP address
[1]Serial set	[1]Select port		Select COM Port: SE5016: [1]~[16] / SE5008: [1]~[8]
	[2]Baud Rate	[1] 1200	Display & Select baud rate
		[2] 2400	
		[3] 4800	
		[4] 9600	
		[5] 19200	
		[6] 38400	

One may also refer to following tree map and Use the 4 push buttons to enter proper settings.



		[7] 57600	
		[8] 115200	
		[9] 230400	
		[10] 460800	
		[11] 500000	
		[12] 576000	
		[13] 921600	
	[2]Parity	[1] None	Display or Change Parity mode
		[2] Odd	
		[3] Even	
		[4] Mark	
		[5] Space	
	[3]Data bits	[1] 7 bits	Display or Change Data length
		[2] 8 bits	
	[4]Stop bits	[1] 1 bits	Display or Change Stop Length
		[2] 2 bits	
	[5]Flow control	[1]None	Display or Change Flow Control mode
		[2]Xon/Xoff	
		[3]Hardware	
	[6]UART mode	[1] 232	Display or Change UART mode among RS232/422/485
		[2] 422	
		[3] 485	
	[7]OpMode set	[1]TCP server	Display or Change Operation Mode among TCP
		[2]TCP client	Server/Client or UDP
		[3]UDP	
	[8]TCP server	[1]Virtual COM	Enable/Disable Virtual COM Mode
		[2]Local port	Display or Change Local Port for Listening port
	[8]TCP client	[1] Dest IP	Display or Change Destination IP for Counter-pair
		[2] Dest Port	Display or Change Destination IP for Counter-pair
	[8]UDP	[1] Dest IP	Display or Change Destination IP for Counter-pair
		[2] Dest Port	Display or Change Destination IP for Counter-pair
		[3] Local port	Display or Change Local Port for Listening port
	[9]Restart	[1] No	Cancel Restart command
		[2] Yes	Enable Restart procedure