Models SHSP 8-port Ethernet Switch

PC CONFIGURATOR SOFTWARE

Model: SHSPCFG

Users Manual

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CONTENTS

1. INTRODUCTION

1.1 GENERAL DESCRIPTION

The SHSPCFG is used to setup network parameters for model SHSP 8-port Ethernet Switch (referred hereunder as 'device'). The following major functions are available:

- Set and modify parameters such as network speed
- Download parameters to the device, upload parameters from the device
- Save parameters as files, read parameters from files

1.2 PC REQUIREMENTS

The following PC performance is required for adequate operation of the software program.

OS : Windows 7 (32-bit, 64-bit), Windows 10 (32-bit, 64-bit)
COM Port : At least one COM port (COM1 through COM6) is required.

1.3 INSTALLING & UNINSTALLING THE PROGRAM

INSTALL

Copy 'SHSPCFG_E.exe' to a folder.

UNINSTALL

Delete 'SHSPCFG_E.exe.' There is no information registered in Windows registry.

2. SUPPORTED FUNCTIONS

*1. Yes – The function is available for this particular password security level.
No – The function is NOT available for this particular password security level.

■ MENU BAR

MENU	SUBMENU	PASSWORD*1		REFERENCE
		USER	MAINTENANCE	
File	Open	Yes	Yes	4.1.1
	Save	Yes	Yes	4.1.2
	Close	Yes	Yes	4.1.3
View	Refresh	Yes	Yes	4.2.1
Setting	Port	Yes	Yes	4.3.1
	Default Setting	Yes	Yes	4.3.2
	User Password	Yes	Yes	4.3.3
	Reset	Yes	Yes	4.3.4
COM Port	Connect	Yes	Yes	4.4.1
	Disconnect	Yes	Yes	4.4.1
	Setting	Yes	Yes	4.4.2
Maintenance	Enable Get Error / Disable Get Error	No	Yes	4.5.1
Help	SHSPCFG Version	Yes	Yes	4.6.1

■ ICON BAR

ICON	PASSWORD*1		REFERENCE
	USER	MAINTENANCE	
Connect COM Port	Yes	Yes	4.4.1
Disconnect COM Port	Yes	Yes	4.4.1
COM Port Setting	Yes	Yes	4.4.2
Refresh Window Information	Yes	Yes	4.2.1
Reset to Default	Yes	Yes	4.3.4

■ MAIN WINDOW

MENU	SUBMENU	PASSWORD*1		REFERENCE
		USER	MAINTENANCE	
Ethernet Switch Information	Switch Version	Yes	Yes	6.1
	Discharge Element	Yes	Yes	6.1
	Switch Status	Yes	Yes	6.1
	Relay Status	Yes	Yes	6.1
Port	Port	Yes	Yes	6.2
	Speed	Yes	Yes	6.2
	Duplex	Yes	Yes	6.2

3. GETTING STARTED

3.1 STARTING UP

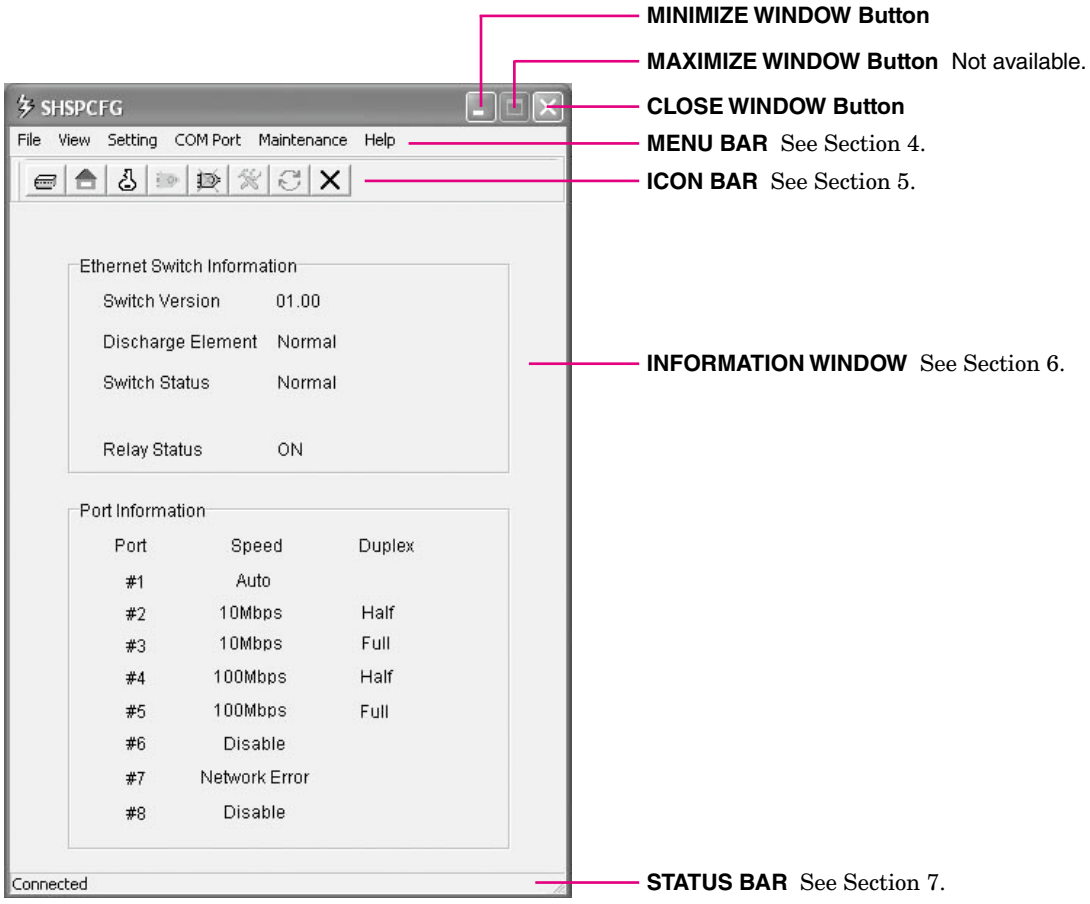
Before starting up the program, connect the SHSP to the PC's COM Port and turn on the power supply to the SHSP.
Double-click 'SHSPCFG_E.exe' icon on the hard disk to start. The SHSPCFG starts communicating with the SHSP as soon as the software program has started.
If the COM Port connection is not established at the startup, connect manually either by clicking 'Connect COM Port' icon on the icon bar, or by choosing 'Connect' under 'COM Port' menu. See Section 4.4 for more information about the COM Port setting.

3.2 ENTERING PASSWORD

If User password has been already set, the SHSPCFG will show 'Enter Password' dialog box at the startup. Enter User password and click OK.
If an incorrect password is entered, the retry dialog box will appear. Retry is possible for three times. Once the third retry is rejected, the SHSPCFG automatically exits the program.
If you have forgotten User password, start up the program using Maintenance password and then set a new User password.

3.3 MAIN WINDOW COMPONENTS

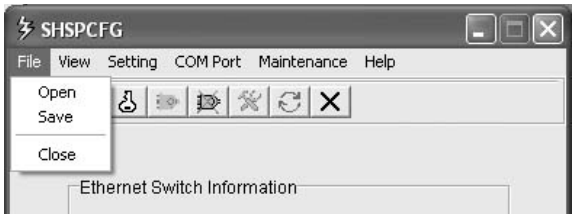
When the SHSPCFG successfully started up, the main window as shown below appears on the screen.



4. MENU BAR

4.1 FILE

'File' menu supports the following submenu.



4.1.1 OPENING PORT SETTING FILE

Port configuration (speed and duplex) for each of 8 ports saved as a text file can be called up on the screen and applied to the SHSP.

1. Choose 'Open' under 'File' menu. Standard Windows 'Open' dialog box appears on the screen.
2. Locate the Port Setting file. Only a text file (.txt) can be specified.
3. Click [Open]. Port configuration in the file is read in, set to the SHSP and displayed on the screen.

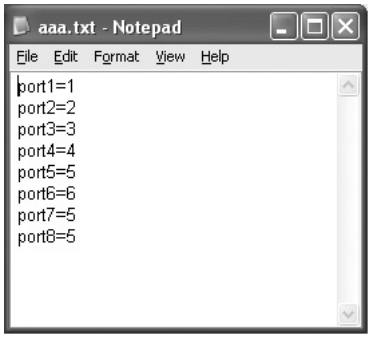
   If the file data is inconsistent or if applying the new setting to the SHSP is unsuccessful, an error message appears on the screen together with the current setting status.

4.1.2 SAVE PORT SETTING FILE

Port configuration (speed and duplex) for each of 8 ports can be saved as a text file.

1. Choose 'Save' under 'File' menu. Standard Windows 'Save as' dialog box appears on the screen.
2. Enter a file name (.txt) and specify the file location.
3. Click [OK].

File Example



FILE DESCRIPTION	LINK SPEED	DUPLEX	OTHER INFO
PORTx=1	10 Mbps	Half duplex	----
PORTx=2	10 Mbps	Full duplex	----
PORTx=3	100 Mbps	Half duplex	----
PORTx=4	100 Mbps	Full duplex	----
PORTx=5	----	----	Auto Negotiation mode
PORTx=6	----	----	Port disabled

4.1.3 CLOSING THE SHSPCFG

Choose 'Close' under 'File' to exit the SHSPCFG.

4.2 VIEW

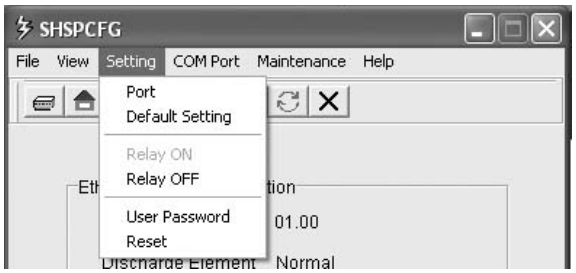
'View' menu supports the following submenu.

4.2.1 REFRESH THE MAIN WINDOW INFORMATION

Choose 'Refresh' under 'View' menu to access the SHSP and show the most updated information on the screen. When 'Get Error' function is enabled, current error information is also added to the error log file (log.txt).

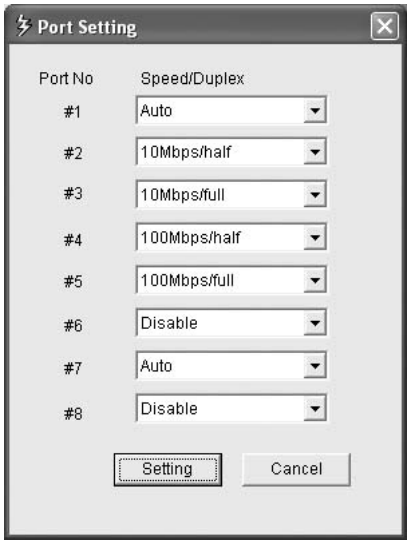
4.3 SETTING

'Setting' menu supports the following submenu.



4.3.1 LAN PORT SETTING

Choose 'Port' under 'Setting' menu to open 'Port Setting' window as shown below.

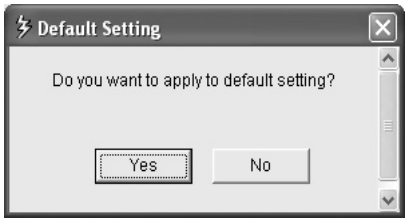


Current setting is initially listed. Click the triangle arrow at the right of each Port No. description and choose among the options below.

SELECTION	SETTING DETAIL
Auto (Factory default)	Auto Negotiation mode
10Mbps/half	Link speed 10 Mbps, Half duplex
10Mbps/full	Link speed 10 Mbps, Full duplex
100Mbps/half	Link speed 100 Mbps, Half duplex
100Mbps/full	Link speed 100 Mbps, Full duplex
Disable	Port disabled

Click [Setting] button to apply new setting and close the dialog box. If an error occurs during the setting process, an error message (right) appears on the screen.
For more information about error codes/messages, see Section 8.

4.3.2 RESETTING TO FACTORY DEFAULT



Choose 'Default Setting' under 'Setting' menu to reset the current SHSP setting (Link speed / duplex for each port) to the factory default one (auto detection).
In 'Default Setting' dialog box (left), click [Yes].

If an error occurs during the setting process an error message (right) appears on the screen. Confirm the connecting between the PC and the SHSP and the power supply to the SHSP before retrying.
For more information about error codes/messages, see Section 8.

4.3.3 SETTING / CHANGING USER PASSWORD

The SHSPCFG supports two password security levels:

User Password

Menu functions other than 'Maintenance' menu are accessible. User password is selectable by the user on the SHSPCFG program menu.

Maintenance Password

All menu functions including 'Maintenance' are accessible. Maintenance password is fixed at 'password.'
Supported functions are listed in Section 2.

Choose 'User Password' under 'Setting' menu to set or modify User Password.

1. Enter a new password (max. 8 characters), and confirm the same password in the field under the first one.
2. Click [Change].

Caution !

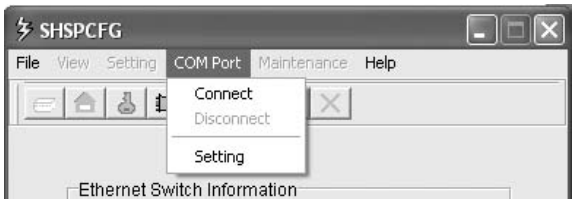
Maintenance Password ("password") is not selectable as User Password. Entering "password" will be rejected with an error message (right).

4.3.4 RESETTING THE SHSP

If the SHSP does not recover to normal operation by 'disabling' and then 'enabling' the LAN port (See 4.3.4) after an operating error (e.g. network error) has occurred, resetting the whole LAN chip may be effective.
Choose 'Reset' under 'Setting' menu to reset the LAN chip.
When this command is executed, the alarm output contact relay of the SHSP will temporarily be turned on.

4.4 COM PORT

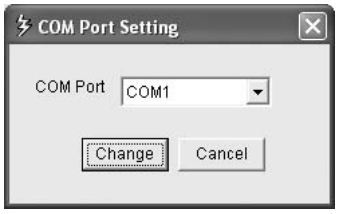
'COM Port' menu supports the following submenu.



4.4.1 CONNECTING / DISCONNECTING COM PORT

Choose 'Connect' under 'COM Port' to manually connect the SHSP to the PC.
Choose 'Disconnect' under 'COM Port' to manually disconnect the SHSP to the PC.
If you have entered a wrong user password at the startup, Enter Password dialog box will apear on the screen. Enter either User password or Maintenance password.

4.4.2 COM PORT SETTING



Choose 'Setting' under 'COM Port' to choose the PC's COM Port.
COM Port is selectable from COM1 through COM6 (default: COM1).
Click the right arrow to show the available COM Port list, choose one and click [Change].
The SHSPCFG applies the following parameters for the selected COM Port.

Speed: 38400 bps
Data bit: 8
Parity: None
Stop bit: 1
Flow control: None

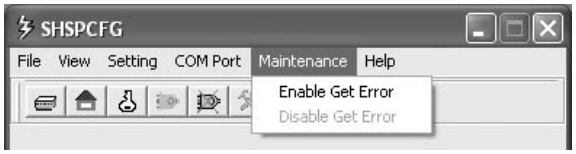
Once the COM Port is selected, the SHSPCFG will start with this setting as default when the program is started up next time.

Caution !

The COM Port information is saved as a file named 'switch.ini' in the same folder where 'SHSPCFG_E.exe' is located. DO NOT edit this file other than by using this menu option.

4.5 MAINTENANCE

'Maintenance' menu is accessible only when the user has logged in the program with Maintenance Password. If the SHSPCFG has been started without using Maintenance Password, choosing one of the submenu items under 'Maintenance' menu will call up a dialog box to ask you to enter Maintenance Password.
'Maintenance' menu supports the following submenu.



4.5.1 ENABLING / DISABLING ERROR LOG FUNCTION

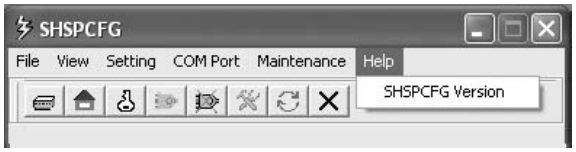
Choose 'Enable Get Error' under 'Maintenance' menu to maintain an error log. While this function is enabled, 'Enable Get Error' option is greyed out, and only 'Disable Get Error' option is selectable.
When this function is disabled, only 'Enabled Get Error' option becomes selectable.
The SHSPCFG creates an error log file named 'log.txt' in the same folder where 'SHSPCFG_E.exe' is located. The file is not deleted by the SHSPCFG, but is continuously updated with new error events. In order to view the error log, exit the SHSPCFG and open the log file using Note Pad or other text reading applications.
Error events include: time stamp, error code and error message. The time stamp indicates the moment when an error occurred on the SHSPCFG program or when it reads an error information from the SHSP.

Error Code (X0YYYYYY)

X = 0 : The lower three (3) digits of YYYYYY indicate Firmware Error Code.
X = 1 : The lower three (3) digits of YYYYYY indicate SHSPCFG Error Code.
For detailed information about these error codes, see Section 8.

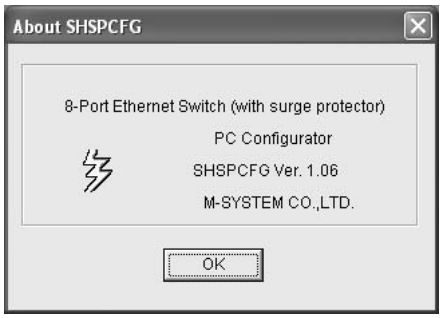
4.6 HELP

'Help' menu supports the following submenu.



4.6.1 INDICATING VERSION INFORMATION

Choose 'SHSPCFG Version' under 'Help' to show the version number of the program.



5. ICON BAR

The following icons are available on the SHSPCFG icon bar to facilitate access to most common menu options.

(1) (2) (3) (4) (5) (6) (7) (8)

(1) LAN Port Setting
This icon is greyed out when the COM Port is not connected. See 4.3.1.
(2) Reset to Default
This icon is greyed out when the COM Port is not connected. See 4.3.2.
(3) User Password
This icon is greyed out when the COM Port is not connected. See 4.3.3.
(4) Connect COM Port
This icon is greyed out when the COM Port is connected. See 4.4.1.
(5) Disconnect COM Port
This icon is greyed out when the COM Port is not connected. See 4.4.1.
(6) COM Port Setting
See 4.4.2.
(7) Refresh Window Information
See 4.2.1.
(8) Port Setting
See 4.3.4.

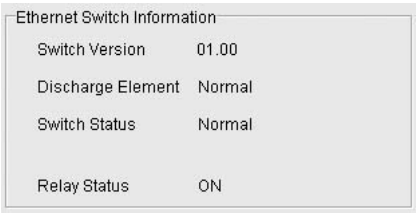
When you drag the mouse cursor over an icon, its function will be indicated on the screen.

6. MAIN INFORMATION WINDOW

The SHSPCFG automatically reads out the SHSP information when it is started up. Once the program is in running state, latest information can be read out only when it is refreshed manually.

6.1 ETHERNET SWITCH INFORMATION

An example of Ethernet Switch Information is shown to the right.



Switch Version

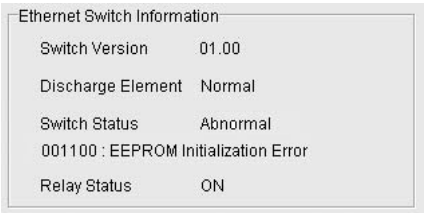
The SHSP firmware version number is indicated. If the SHSPCFG is unable to get the information, '----' will be indicated.

Discharge Element

Surge protector health is indicated based on the surge counter value stored in the firmware.

Normal: Surge count ≤ 383
Close to end-of-life: 384 ≤ Surge count ≤ 399
End-of-life: Surge count ≥ 400

If the SHSPCFG is unable to get the information, '----' will be indicated.



Switch Status

The SHSP status is indicated.

Normal: Operating in normal conditions.
Abnormal: Firmware error has occurred.

An error message is also indicated together with 'Abnormal' indication as shown in the example to the right.
For detailed information about these error codes, see Section 8.

Relay Status

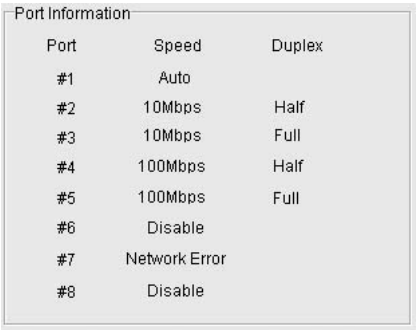
The relay contact status at the alarm output terminal of the SHSP is indicated.

ON: Contact is closed.
OFF: Contact is open.

If the SHSPCFG is unable to get the information, '----' will be indicated.

6.2 PORT INFORMATION

An example of Port Information is shown to the right.



Speed

Current link speed or error messages are indicated.

Disable:	The port is disabled.
AutoNego:	Auto Negotiation mode. Actual link speed can be identified by the LED on the device.
10Mbps:	Fixed at 10 Mbps.
100Mbps:	Fixed at 100 Mbps.
Network Error:	Port is enabled but the link is severed.
Communication Error:	COM Port communication error.
Hardware Error:	The SHSPCFG has detected an error during its startup, or is unable to get the port information.
PHYID Error:	An error has been detected during PHYID Check.

Duplex

Full (full duplex) or Half (half duplex) is indicated.

7. STATUS BAR

Status bar indicates the program's operating status.
Connected: The COM Port connection is complete.
Connecting failure: The COM Port connection failed.

8. ERROR CODE

Firmware error codes and SHSPCFG error codes are listed below.

8.1 FIRMWARE ERROR CODE

The following are error codes related to the SHSP firmware, occurring during the startup or operation of the SHSP, regardless of the SHSPCFG operation.
The information is indicated under 'LAN Switch Information' in the information window at the startup of the SHSPCFG and upon 'Refresh' command.
When 'Get Error' function is enabled, these events are logged in the error log file together with time stamps.

ERROR CODE	ERROR MESSAGE	DETAILS
Initialization Errors		
001100	EEPROM Initialization Error	
001400	LAN Chip Reg Error (Initialization)	
Task Errors		
002100	LAN Chip Reg Error (Task)	
Other Errors		
009000	WDT Timeout	

8.2 SHSPCFG ERROR CODE

The following are error codes related to the SHSPCFG, triggered by a SHSPCFG operation.
These error messages are linked with those on the error dialogs.
When 'Get Error' function is enabled, these events are logged in the error log file together with time stamps.

ERROR CODE	ERROR MESSAGE	DETAILS
Errors caused by SHSP		
00xxxx	Hardware Error	Unable to set the port configuration due to a hardware error.
Errors caused by SHSPCFG		
11xxxx	Data Error	Unable to set the port configuration due to inadequate data in the file.
Errors occurred during serial communication		
23xxxx	Communication Error	The SHSPCFG detected a serial communication error. Unable to set the LAN port configuration.

8.3 ERROR CODE DETAILS

ERROR CODE	ERROR MESSAGE
Errors caused by SHSP (Code 0000xxxx or 1000xxxx)	
00001100	EEPROM Initialization Error
00001400	LAN Chip Reg Error (Initialization)
00002100	LAN Chip Reg Error (Task)
00009000	WDT Time Out
10000120	Failed to obtain the port configuration.
10000106	Failed to obtain the discharge element information.
Errors caused by SHSPCFG (Code 1011xxxx)	
1011090x	Failed to enter the maintenance password.
10110130	Configuration file is incorrect.
10110128	Failed to open the Configuration file.
10110129	Configuration file is incorrect.
10110130	Configuration file is incorrect.
10110131	Configuration file is incorrect.
10110133	Failed to save the configuration file.