

## SCS-101 Network Interface Card

### Description

The SCS-101 Network Interface Card provides a single line of network communication to the SCS-1R Receiver and includes an Encrypted Network Alarm Router. The SCS-101 provides the receiver with the ability to receive encrypted, non-encrypted, UDP, and TCP signals from DMP panels through a network, such as the Internet.

An optional PC software application, SCS-CTM Check-in Table Manager, is available to backup the SCS-101 records of all supervised network accounts for up to 32 different SCS-101 line cards. The SCS-CTM program is compatible with SCS-101 Version 201 or higher. For complete operation information, refer to the SCS-CTM User's Guide (LT-0940). Contact DMP Customer Service to purchase a copy of the SCS-CTM Check-in Table Manager software.

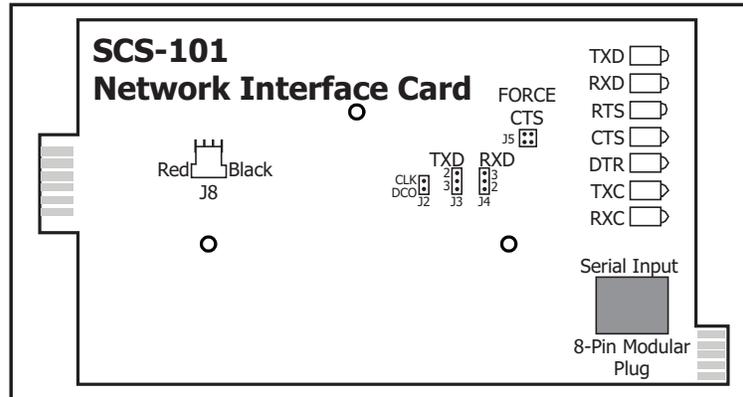


Figure 1: SCS-101 Board

### SCS-101 LED Indicators

The SCS-101 provides seven bi-color LEDs on the leading edge of the card. The LEDs annunciate serial data flow between the network router and the receiver and aids in system monitoring and equipment maintenance. The table below describes the LED operation.

LED Action	Identifier
Transmit Data	TXD
Receive Data	RXD
Request To Send	RTS
Clear To Send	CTS
Data Terminal Ready	DTR
Transmit Clock	*TXC
Receive Clock	*RXC
*If the clock signal is present, both the LED red and green segments are lit.	

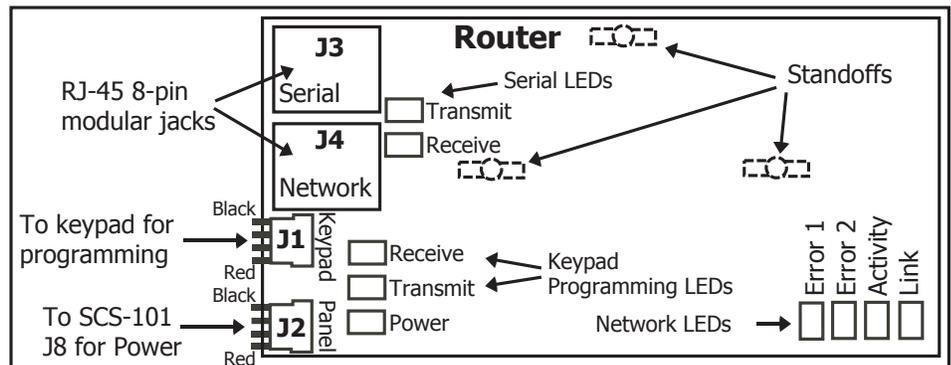


Figure 2: Router Board

### Communication

The SCS-101 automatically communicates UDP or TCP with DMP panels, iCOM-E™ Encrypted Network Alarm Routers, iCOM™ Network Alarm Routers, and iCOM<sub>SL</sub> Network Alarm Communicators.

### IMPORTANT COMPATIBILITY INFORMATION

The SCS-101 Level E hardware and Version 200 or higher software can ONLY be used with SCS-1R Receivers using SCS-1062 Processor with firmware Version 903 or higher or the SCS-150 Processor and is NOT compatible with the SCS-1 Receiver.

The SCS-101 line card Level D hardware and Version 103 or lower software can ONLY be used with the SCS-1R Version 902 or lower or SCS-1 Receivers.

## Installing the SCS-101 into the Receiver

Slide the SCS-101 with the Router attached into the desired modem rack line card slot with the card puller in the up position. Connect the 10-position flat cable from the SCS-150 processor card. The light brown wire and the arrow on the ribbon cable connector (Pin 1) must face up on the SCS-101 card and face to the right on the SCS-150. Refer to Figure 3 for the correct orientation before installing the cable.

Note: If using the SCS-1062 Processor, connect the supplied 6-inch, gray 10-position flat cable between the line card and the SCS-1062 processor card.

The Router comes pre-mounted and connected to the SCS-101 using the standard 3-hole configuration. Figure 4 shows the Router and SCS-101 Board layout and wire connections.

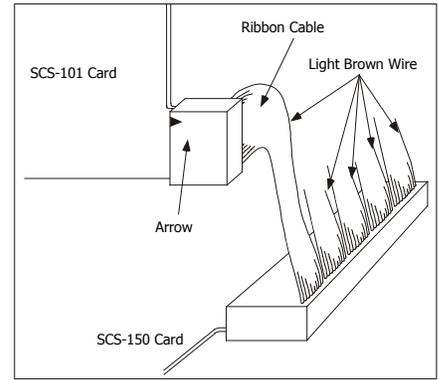


Figure 3: Ribbon Cable

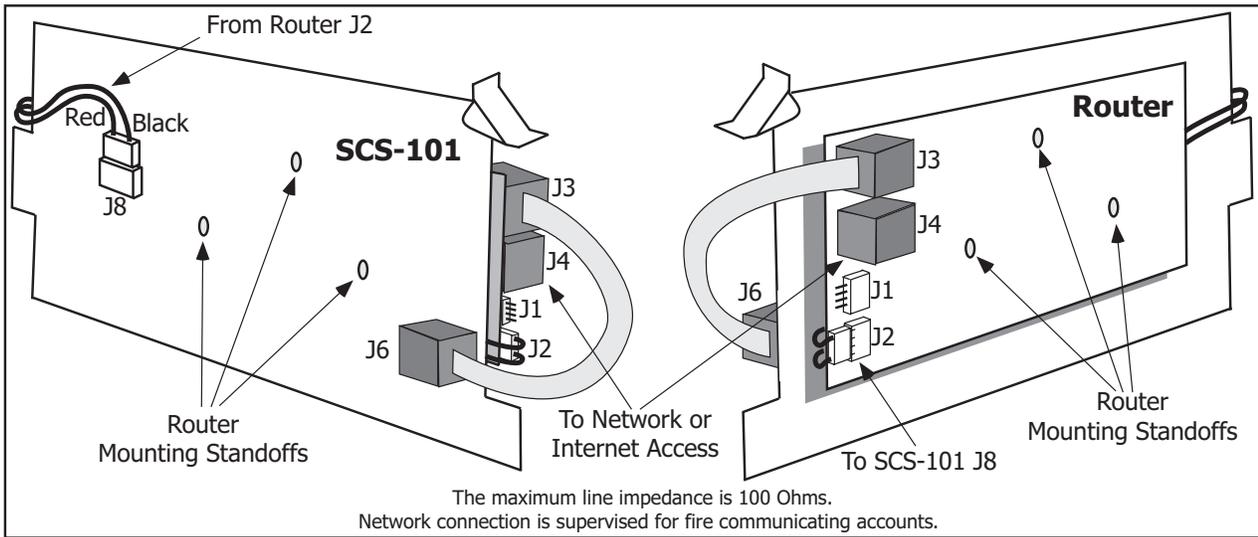


Figure 4: SCS-101 to Router Connectors and Mounting

## SCS-1R Receiver Line Card Programming

Using the SCS-1R Receiver LCD Keypad, access the line card programming menu. Refer to the following table to verify SCS-1R Receiver programming options.

Programming Option	Programming Option
Line Number	Enter the Line number being programmed.
Line Type	Displays the selected line number setting. Press any top row Select key.
Choose Type	Choose NET.

## Programming the Encrypted Network Alarm SCS-101

Program the SCS-101 with a 32-character keypad, with the CURRENT KEYPAD ADDRESS set to 1 (one) and Supervised. Refer to the keypad installation sheet for more information. After programming these two settings, follow the steps below.

1. Disconnect the 2-wire Power Cable from the SCS-101 Router J2 Power Connector. See Figure 2.
2. Connect a DMP 32-character LCD keypad to the J1 Programming Connector.
3. Reconnect the power cable to the J2 Power Connector.
4. The keypad displays SCS-101 PROGRAMMER with version and date code. Press the COMMAND key to enter programming mode.

While programming the SCS-101 with a keypad, press the COMMAND key to advance to the next programming option. To begin entering programming information press any top row Select key. You can return to the previous programming option by pressing the Back Arrow key.

**Note:** IP addresses and port numbers may need to be assigned by the network administrator. When entering an IP, Gateway, or Subnet Mask address be sure to enter all 12 digits and leave out the periods. For example, IP address 192.168.000.250 is entered as 192168000250.

LOCAL IP ADDRESS  
**192.168.000.250**

#### **Local IP Address**

Enter the LOCAL IP ADDRESS. This is the SCS-101 IP address. The Local IP Address must be unique and cannot be duplicated on other Network Alarm Routers. The default value is 192.168.000.250.

GATEWAY ADDRESS  
**000.000.000.000**

#### **Gateway Address**

Enter the local GATEWAY ADDRESS. You need the Gateway IP Address to exit your local network. The default value is 000.000.000.000.

SUBNET MASK  
**255.255.255.000**

#### **Subnet Mask**

Enter the local SUBNET MASK assigned to the SCS-101. The default value is 255.255.255.000.

LOCAL/RMT PORT  
**2001**

#### **Local/Rmt Port**

The LOCAL/RMT PORT identifies the port used to communicate messages to and from the panel. If a setting change is required, enter the new number. Valid range is 1 to 65,535. The default value is 2001.

TELNET PORT  
**9999**

#### **Telnet Port**

Use the TELNET PORT to connect to the SCS-101 to perform Telnet programming. If a setting change is required, enter the new number. The default value is 9999.

RS232 BAUD RATE  
**19200**

#### **RS-232 Baud Rate**

The RS-232 BAUD RATE identifies the rate at which serial data is exchanged between the SCS-150 processor board and the SCS-101. The Baud Rate should be set to 19200.

S16 & S17 ALWAYS  
YES **NO**

#### **S16 & S17 Always**

When NO is selected, the S16 Panel Not Responding message is sent to the automation computer for each supervised account that has stopped sending check-in messages unless 50 S16 messages have been generated for different accounts within one minute. This could occur because the network has failed. Once this occurs, S72 Network Trouble is sent and the receiver stops sending S16 messages to the automation computer. The receiver sends S73 Network Restored and will begin sending S16 messages after the receiver starts receiving check-in messages again.

When YES is selected, the S16 Panel Not Responding message is always sent to the automation computer for each supervised account that has stopped sending check-in messages without regard to the number of accounts generating S16 messages.

When YES is selected, the S17 Panel Response Restored message is sent to the automation computer each time a supervised account checks in for the first time after installation. This also occurs at an account's first check-in after the receiver or SCS-101 is powered-up. Default is NO.

TELNET ENABLED  
YES **NO**

#### **Telnet Enabled**

If you select YES for Telnet Enabled, Telnet programming is allowed. Selecting NO for Telnet Enabled does not allow Telnet programming. Any future programming must be completed locally if Telnet Enabled is NO. By default, Telnet programming is enabled.

**Note:** If NO is selected for TELNET ENABLED, the PASSWORD ENABLED and TELNET PASSWORD prompts do not appear.

PASSWORD ENABLED  
YES NO

### Password Enabled

To require a password for SCS-101 programming via telnet, press the Select key under YES. To allow SCS-101 programming without a password, press the Select key under NO. The default is YES.

**Note:** For Fire Protective Signaling use, this option must be programmed YES.

TELNET PASSWORD  
\*\*\*\*\*

### Telnet Password

If you choose to require a password for SCS-101 programming, press the COMMAND key to display TELNET PASSWORD. If no password is required, press the COMMAND key to display the next option. The default password is NEW.

If you are using a password at the TELNET PASSWORD option enter a password with up to 8 alphanumeric characters. The password displays on the keypad as it is entered for programming, so be certain that no unauthorized individuals are able to view the display as you enter characters.

PASSPHRASE  
-

### Passphrase

In order to communicate using encryption, all iCOM-E units, XR500 Series panels, or XR2500F panels reporting in to the same SCS-101 at the receiver must have the same password called a Passphrase. This Passphrase must be programmed into every iCOM-E unit or panel reporting in to the SCS-101 at the receiver. The SCS-101 installed in the receiver must also be programmed with the same Passphrase. To clear the passphrase press any Select Key and then press the COMMAND key.

To enable encryption type an 8 to 16-character Passphrase using alphanumeric characters. If you leave the Passphrase blank, the SCS-101 communicates with iCOM-E units, XR500 Series, or XR2500F panels, but the data is not encrypted. The Passphrase is blank by default.



**Note:** *DO NOT LOSE THE PASSPHRASE.* A lost or forgotten Passphrase requires that every iCOM-E unit, XR500 Series panel, or XR2500F panel reporting in to the same SCS-101 at the receiver be individually reprogrammed with a new passphrase.

ACK PNL SUB MSG  
YES NO

### Acknowledge Panel Substitution Message

When YES is selected, the SCS-101 replies with an acknowledgment to messages sent by substituted panels. See the Substitution Code section of the panel programming guide for the definition of a substituted panel. The SCS-101 generates only one S58 Alarm: Panel Substitution message to the host automation computer and receiver printer for each substituted panel. Subsequent messages from substituted panels do not generate additional S58 messages.

When NO is selected, substituted panels are not sent acknowledgments for their messages. For each message received from a substituted panel, an S58 Alarm: Panel Substitution message is sent to the host automation computer and receiver printer.

**Note:** Set this option to YES for all receiver installations except for Canadian receiver installations where the security requirement is ULC Level 5 and then this option should be set to NO.

CHECKIN TABLE IP  
000.000.000.000

### SCS-CTM Check-in Table IP Address

The optional SCS-CTM Check-in Table Manager software is used to backup the records of supervised network accounts on up to 32 different SCS-101 line cards. Use SCS-CTM to repopulate the list of supervised network accounts when one SCS-101 line card is replaced by another SCS-101. Additionally, the list of supervised network accounts used by an SCS-101 on a primary receiver can be mirrored by the SCS-CTM for use by an SCS-101 line card on a second receiver. Refer to the SCS-CTM User's Guide (LT-0940).

**Note:** The list of supervised network accounts on an SCS-101 line card is automatically populated as each panel sends its supervisory check-in message to the SCS-101 line card.

Enter the IP address for the computer where the SCS-CTM Check-in Table Manager software is installed. When no SCS-CTM software is installed, leave the IP address set to 000.000.000.000.

CHKIN TABLE PORT  
2005

### SCS-CTM Check-in Table Port

Enter the IP port used to communicate Check-In Table messages to the SCS-CTM Check-in Table Manager program. Valid range is 1 to 65,535. Default is 2005.

CHECKIN TABLE ID

### SCS-CTM Check-in Table ID

Enter the table ID number to be used by the SCS-CTM Check-in Table Manager to identify the check-in table. Valid range is 1 to 255. Default is 1.

STOP PROGRAMMER

### Stop Programmer

This option provides a way to exit programming mode when you are programming the SCS-101. When STOP PROGRAMMER appears on the keypad press any Select key to end programming.

### Remove Keypad

REMOVE KEYPAD displays after you press any Select key to end programming.

## Completing the Installation

After you finish programming the SCS-101, disconnect the keypad from the SCS-101 Router J1 Programming Connector. The SCS-101 now communicates as programmed.

## SCS-101 Data Jumper Settings

The SCS-101 data jumpers are pre-configured for NET at the factory. Figure 1 shows the SCS-101 Interface Card layout and Figure 5 is a close up of the SCS-101 jumper settings.

### TXD and RXD

The factory setting is Transmit Data (TXD) on pin #2 and Receive Data (RXD) on pin #3.

**Note:** If using an SCS-1062 processor card, the setting is Transmit Data (TXD) on pin #3 and Receive Data (RXD) on pin #2.

### FORCE CTS

The jumpers are set vertically as the factory default. This allows the SCS-101 to tie the CTS and RTS data lines together.

## Troubleshooting Notes

If an older SCS-101 Version 103 is installed with an SCS-1062 Processor Version 903 or newer, or an SCS-150 Processor, no network panel messages can be received by the SCS-1R Receiver. The panel keypad displays Network Trouble and the receiver sends an S81 Warning: Network Card Trouble message.

If an SCS-101 Version 200 or higher is installed with an SCS-1062 Processor Version 902 or older, network panel check-in messages are received and acknowledged by the SCS-101, but these check-in messages are not processed by the SCS-101 and panel supervision does not occur. All other panel messages (Alarm, Trouble, etc.) are not received or acknowledged and are ignored. The panel keypad displays Network Trouble but there is no indication at the SCS-1R Receiver.

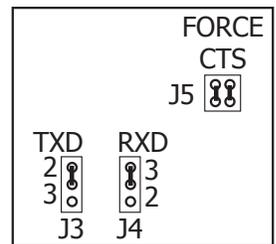


Figure 5: Jumper Settings

## Compliance Listing Specifications

The SCS-1R Receiver and all network enabled DMP panels conform to the following requirements:

- Supervision signals between premises alarm equipment and supervising station alarm receiver equipment shall be managed by the supervising station alarm receiver equipment and not an intermediary network agent, device, or service.
- Messages are transmitted via the User Datagram Protocol (UDP) or Transmission Control Protocol (TCP).
- Accommodates a minimum of 65,000 distinct account numbers.
- Device Network addressing must not make use of public Domain Name Servers (DNS).
- If an encryption certificate is being issued, each message sent between the premises and supervising station alarm receiver must be a minimum of 128-bit encryption.

### Compatibility

The SCS-101 communicates with the following products:

SCS-1R Security Control Receiver  
Using SCS-150  
Using SCS-1062 Version 903 or higher

All DMP panels and Alarm Routers using the  
NET Communication format

### Listings and Approvals

California State Fire Marshal (CSFM)

FCC Part 15

New York City (FDNY COA #6055)

Underwriters Laboratories (UL) Listed

ANSI/UL 365	Police Connected Burglar
ANSI/UL 864	Fire Protective Signaling, 9th edition
ANSI/UL 985	Household Fire Warning
ANSI/UL 1023	Household Burglar
ANSI/UL 1076	Proprietary Burglar
ANSI/UL 1610	Central Station Burglar
ANSI/UL 1635	Digital Burglar



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