

USER MANUAL

ERM01 GUI

Graphical User Interface Management Program

ERM01 Version 1.03

IP: Community String :

PWR ☐	PWR ☐	PWR ☐	PWR ☐	PWR ☐	PWR ☐	PWR ☐	PWR ☐	PWR ☐	PWR ☐	PWR ☐	PWR ☐
TD ☐	TD ☐	TD ☐	TD ☐	TD ☐	TD ☐	TD ☐	TD ☐	TD ☐	TD ☐	TD ☐	TD ☐
RD ☐	RD ☐	RD ☐	RD ☐	RD ☐	RD ☐	RD ☐	RD ☐	RD ☐	RD ☐	RD ☐	RD ☐
RTS ☐ LINK ☐	RTS ☐ LINK ☐	RTS ☐ LINK ☐	RTS ☐ LINK ☐	RTS ☐ LINK ☐	RTS ☐ LINK ☐	RTS ☐ LINK ☐	RTS ☐ LINK ☐	RTS ☐ LINK ☐	RTS ☐ LINK ☐	RTS ☐ LINK ☐	RTS ☐ LINK ☐
DCD ☐	DCD ☐	DCD ☐	DCD ☐	DCD ☐	DCD ☐	DCD ☐	DCD ☐	DCD ☐	DCD ☐	DCD ☐	DCD ☐
TxCLK ☐ Loss ☐	TxCLK ☐ Loss ☐	TxCLK ☐ Loss ☐	TxCLK ☐ Loss ☐	TxCLK ☐ Loss ☐	TxCLK ☐ Loss ☐	TxCLK ☐ Loss ☐	TxCLK ☐ Loss ☐	TxCLK ☐ Loss ☐	TxCLK ☐ Loss ☐	TxCLK ☐ Loss ☐	TxCLK ☐ Loss ☐
Sig ☐ Loss ☐	Sig ☐ Loss ☐	Sig ☐ Loss ☐	Sig ☐ Loss ☐	Sig ☐ Loss ☐	Sig ☐ Loss ☐	Sig ☐ Loss ☐	Sig ☐ Loss ☐	Sig ☐ Loss ☐	Sig ☐ Loss ☐	Sig ☐ Loss ☐	Sig ☐ Loss ☐
Sync ☐ Loss ☐	Sync ☐ Loss ☐	Sync ☐ Loss ☐	Sync ☐ Loss ☐	Sync ☐ Loss ☐	Sync ☐ Loss ☐	Sync ☐ Loss ☐	Sync ☐ Loss ☐	Sync ☐ Loss ☐	Sync ☐ Loss ☐	Sync ☐ Loss ☐	Sync ☐ Loss ☐
Alarm ☐	Alarm ☐	Alarm ☐	Alarm ☐	Alarm ☐	Alarm ☐	Alarm ☐	Alarm ☐	Alarm ☐	Alarm ☐	Alarm ☐	Alarm ☐
Err ☐	Err ☐	Err ☐	Err ☐	Err ☐	Err ☐	Err ☐	Err ☐	Err ☐	Err ☐	Err ☐	Err ☐
Test ☐	Test ☐	Test ☐	Test ☐	Test ☐	Test ☐	Test ☐	Test ☐	Test ☐	Test ☐	Test ☐	Test ☐
unframe E1	unframe E1	unframe E1	unframe E1	unframe E1	unframe E1	unframe E1	unframe E1	unframe E1	unframe E1	unframe E1	unframe E1
Card 12	Card 11	Card 10	Card 9	Card 8	Card 7	Card 6	Card 5	Card 4	Card 3	Card 2	Card 1

Date	Time	IP_Address	Channel / Information

Trap Group

TrapCount :



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WARNING:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CE NOTICE

Marking by the symbol CE indicates compliance of this equipment to the EMC directive of the European Community. Such marking is indicative that this equipment meets or exceeds the following technical standards: EN 55022:1994/A1:1995/A2:1997 Class A and EN61000-3-2:1995, EN61000-3-3:1995 and EN50082-1:1997

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ERM01-GUI

Description: Windows® based Graphical User Interface software program for remotely managing ERM01

User Manual

Version 1.0 Jan 2007 Re-released

This manual supports the following models:

ERM01-GUI

This document is the first official release manual. Please check CTC Union's website for any updated manual or contact us by E-mail at info@ctcu.com. Please address any comments for improving this manual or to point out omissions or errors to marketing@ctcu.com. Thank you.

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ERM01-GUI

1.1 Introduction

The ERM01-GUI is a Windows® based software that allows quick, easy, and remote configuration and monitoring of the ERM01 E1 Concentrator Rack. The GUI program consists of just one executable window's program. No installation is required, just copy the file to the Window's Desktop and double click it.

1.2 Preliminary SNMP configuration

Before starting the GUI program, the SNMP agent must be configured with proper TCP/IP parameters:

1. Agent's IP address
2. Agent's subnet mask
3. Agent's Gateway IP
4. Read and Read/Write community strings
5. Manager's IP address
6. Traps to Manager enabled

1.3 SNMP Configuration

The quickest way to configure the SNMP agent is to connect with terminal or terminal emulator directly to the serial console port of the SNMP line card. We recommend using HyperTerminal application on any windows PC. Configure the terminal for 38.4K Baud, 8 bits, 1 stop bit, no parity and no flow control.

Press the 'space bar' or 'ESC' key to display the main menu page.

```

*****
*****          CTC UNION TECHNOLOGIES CO., LTD          *****
*****          ERM-01 NMS Terminal Mode  V4.05          *****
*****
Main Menu and Rack Status:
1:Slot #1 >> FE1      << || 7:Slot #7 >> Empty      <<
2:Slot #2 >> FE1      << || 8:Slot #8 >> Empty      <<
3:Slot #3 >> FE1      << || 9:Slot #9 >> Empty      <<
4:Slot #4 >> FE1      << || A:Slot #10 >> Empty     <<
5:Slot #5 >> Empty    << || B:Slot #11 >> Empty     <<
6:Slot #6 >> Empty    << || C:Slot #12 >> Empty     <<

Command Function Key:
'1' to '9', 'A' to 'C': I/O Cards Setting
'R': Refresh Status
'ESC' Logout
'S': System Configuration and TFTP Setup
'M': Manager Configuration Setup

```

Figure 1. Main menu of the Network Management System for the ERM01

The main menu gives a quick inventory of all the 12 line card slots in the ERM01 chassis. Two line card types are available for the ERM01, FE1 (Fractional E1) line card or E1-U (Unframed E1 line card). When viewed from the front, Slot #1 is located at the far right. Using any number key 1~9 or letter a~c will select the sub-menu for configuration of that particular line card.

1.3.1 System Configuration

From the main menu select 'S', System Configuration and TFTP Setup option. The following menu will be displayed.

```

*****
*****      CTC UNION TECHNOLOGIES CO., LTD      *****
*****      ERM-01 NMS Terminal Mode  V4.05      *****
*****
System Configuration and TFTP Setup Menu:
  MAC Address      : 0002AB010101
  1:IP Address     : 172.24.1.17
  2:Subnet Mask    : 255.255.0.0
  3:Gateway IP     : 172.24.190.254
  4:TFTP Server IP : 172.24.1.125
  5:TFTP Server Path :
    ermv405.bin

Command Function Key:
'1' to '5': Configure Setting
'R': Reset All Setting to Default
'T': TFTP and Flash
'X': System Reset
'ESC': Main Menu (store and reboot if values are changed)

```

Figure 2. System Configuration menu of the Network Management System for the ERM01

The settings here are pretty self-explanatory. The IP, Subnet and Gateway settings are for the SNMP agent itself. Items 4&5 configure the SNMP card for upgrading by TFTP server. After the agent IP settings are modified to those desired, press the 'ESC' key and the settings will be saved and SNMP agent will reboot with the new IP settings.

1.3.2 Manager Configuration

From the main menu select 'M', Manager Configuration Setup option. The following menu will be displayed.

```

*****
*****      CTC UNION TECHNOLOGIES CO., LTD      *****
*****      ERM-01 NMS Terminal Mode  V4.05      *****
*****
Manager Configuration:
  Access Password: disable
  Community String #1 (Read/Write): public
  Community String #2 (Read Only) : public

  Access IP      SNMP Community Trap
  =====
  #1:172.24.1.125 public          Yes
  #2:*            *                *
  #3:*            *                *
  #4:*            *                *

Command Function Key:
'1': Change Access IP#1      '3': Change Access IP#3
'2': Change Access IP#2      '4': Change Access IP#4
'5': Change Community#1 String (Read/Write)
'6': Change Community#2 String (Read Only)
'7': Change User Password    '8': Change Manager Password
'9': Access Password ON/OFF  'R': Delete All Setting
'ESC': Main Menu

```

Figure 3. Manager Configuration menu of the Network Management System for the ERM01

Set the community strings and the IP of the workstation which will run the ERM01-GUI here on this page.

1.4 GUI Operation

The GUI program is a single executable file that requires no setup or installation. Just copy the 'exe' file or extract the 'zip' file on the PC and run it by double clicking the file icon. A convenient place to put the file is on the Window's Desktop. Alternatively you may also place a link to the file on the desktop. Since the program is not 'installed' in the system, there is no start menu item for it. The program does not need to be 'un-installed', simply deleting it is enough. The program makes no changes to the Window's registry.

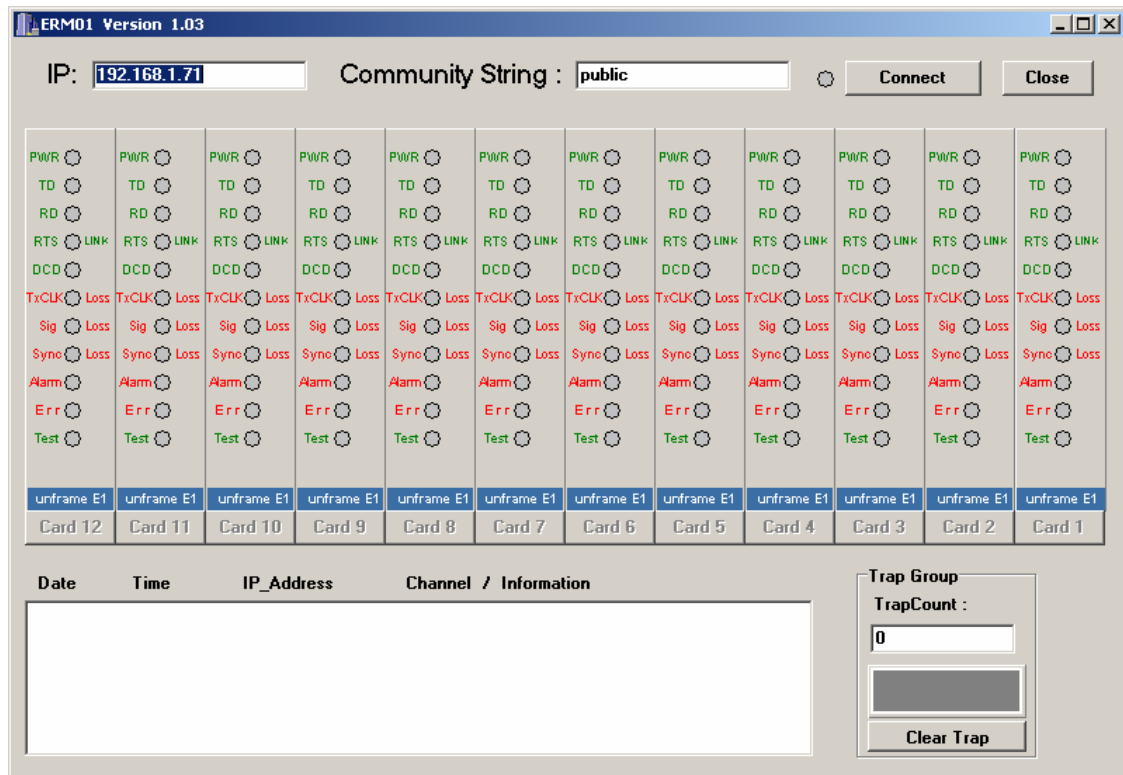


Figure 4. GUI at startup for the ERM01

Key in the agent's IP address, the R/W community string and click the "Connect" button.

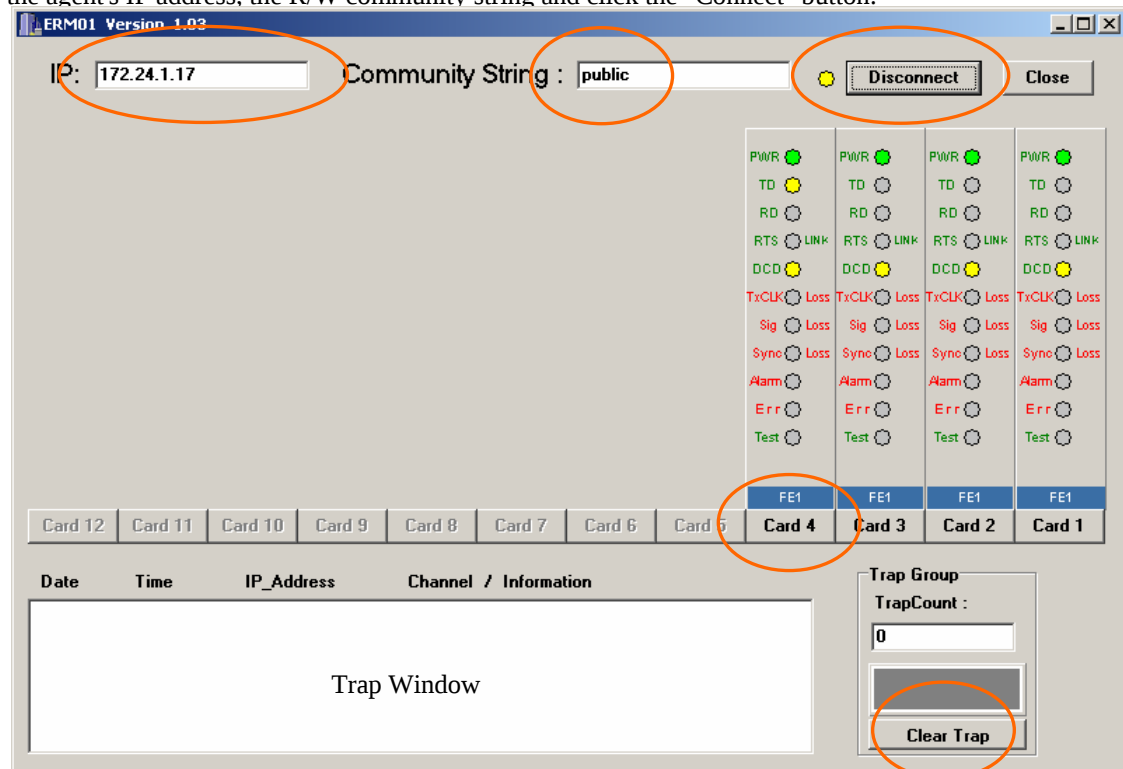
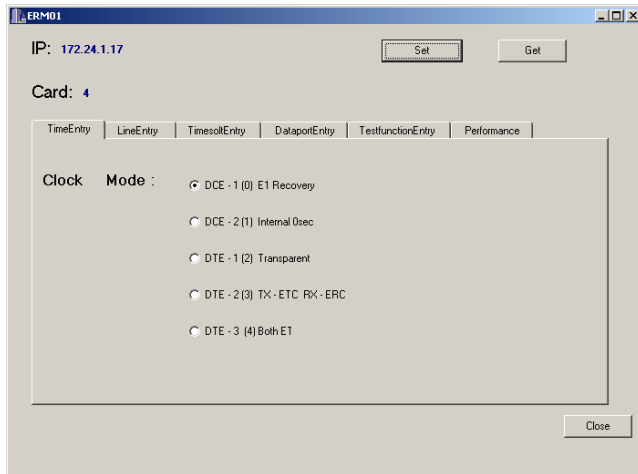


Figure 5. GUI showing connection to a rack with 4 FE1 line cards for the ERM01

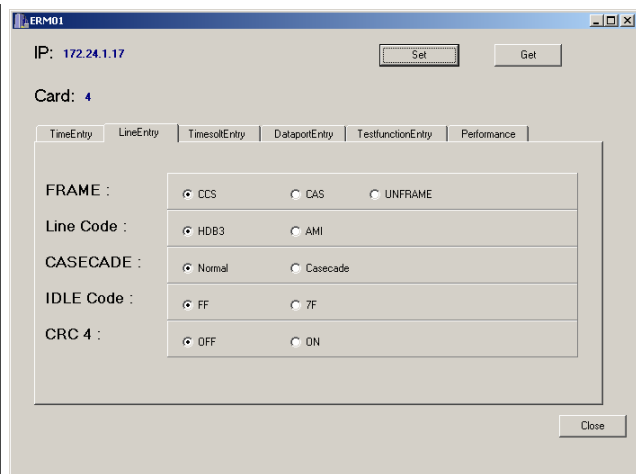
Click the 'Card 4' button to manage the Slot # 4 FE1 card.

1.4.1 Line Card Configuration



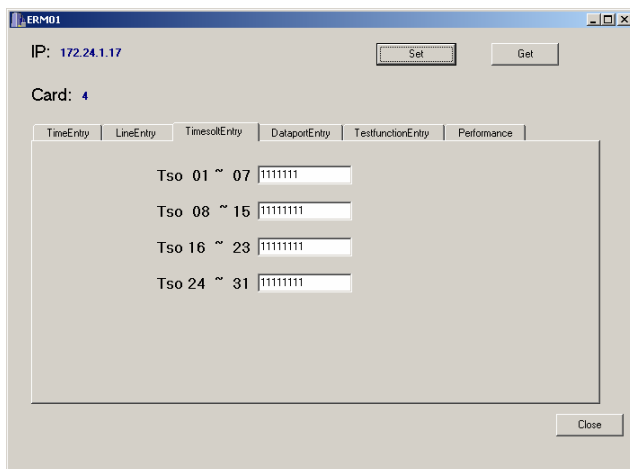
E1 Timing

Click 'Get' to read current settings of the card. Select 1 of the 5 clock modes, then click 'Set'. Refer to the ERM01 User Manual for detailed description and applications of the E1 clock modes.



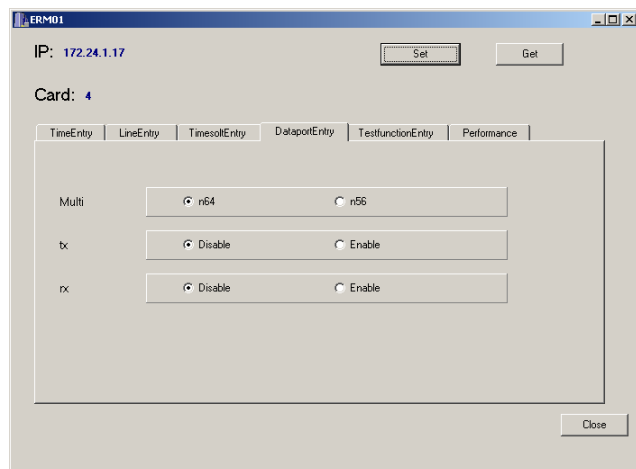
E1 Framing

Click 'Get' to read current settings of the card. Select the radio buttons for the Frame Mode, Line Coding, Cascade function, Idle Code and CRC4 enable/disable, then click 'Set'. Refer to the ERM01 User Manual for detailed description and applications of the E1 line settings.



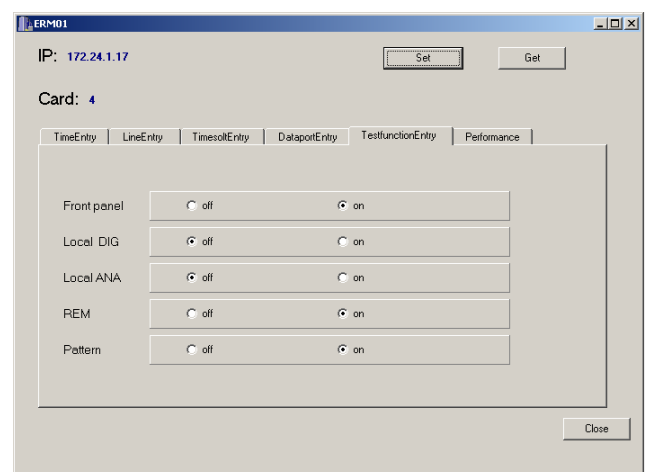
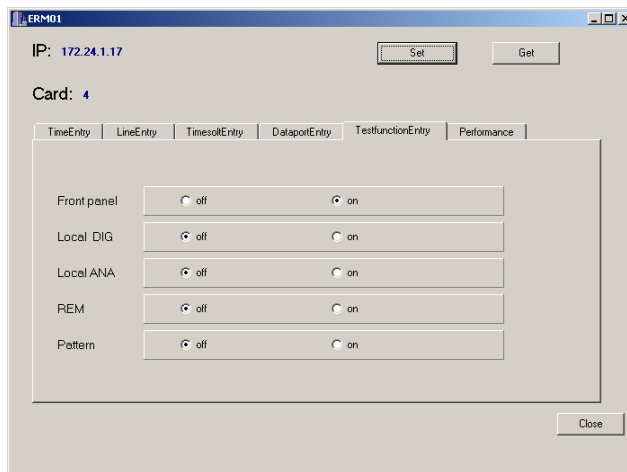
Timeslot Assignment

Click 'Get' to read current settings of the card. The Timeslot settings are organized into 4 groups. Setting the value to '1' will enable that timeslot, setting the value to '0' will bypass it. Then click 'Set'. Refer to the ERM01 User Manual for detailed description and applications of the E1 timeslots.



Dataport Multiplier & Clock Polarity

Click 'Get' to read current settings of the card. Serial data ports support nx56 or nx64 multiples; TC and RC clocks may be inverted. Then click 'Set'. Refer to the ERM01 User Manual for detailed description and applications of the data ports.



Diagnostic Loop Backs

Through SNMP, the line card's front panel switches may be disabled for security. By default, the push-button switches are enabled. Three loop back modes are available as well as a built-in 511 pattern generator for testing the E1 link. Click 'Get' to read current settings of the card. Select the desired loop back, then click 'Set'. Refer to the ERM01 User Manual for detailed description and applications of the E1 loop back diagnostics.

Remote Loop Back Example

In the above example, Remote loop back is selected along with Pattern generator, then 'Set' is clicked. Refer to the graphic below showing the LED status when in loop back test mode. Refer to the ERM01 User Manual for detailed description and applications of the E1 loop back diagnostics.

Caution: Normal transmission will be interrupted during any loop testing.

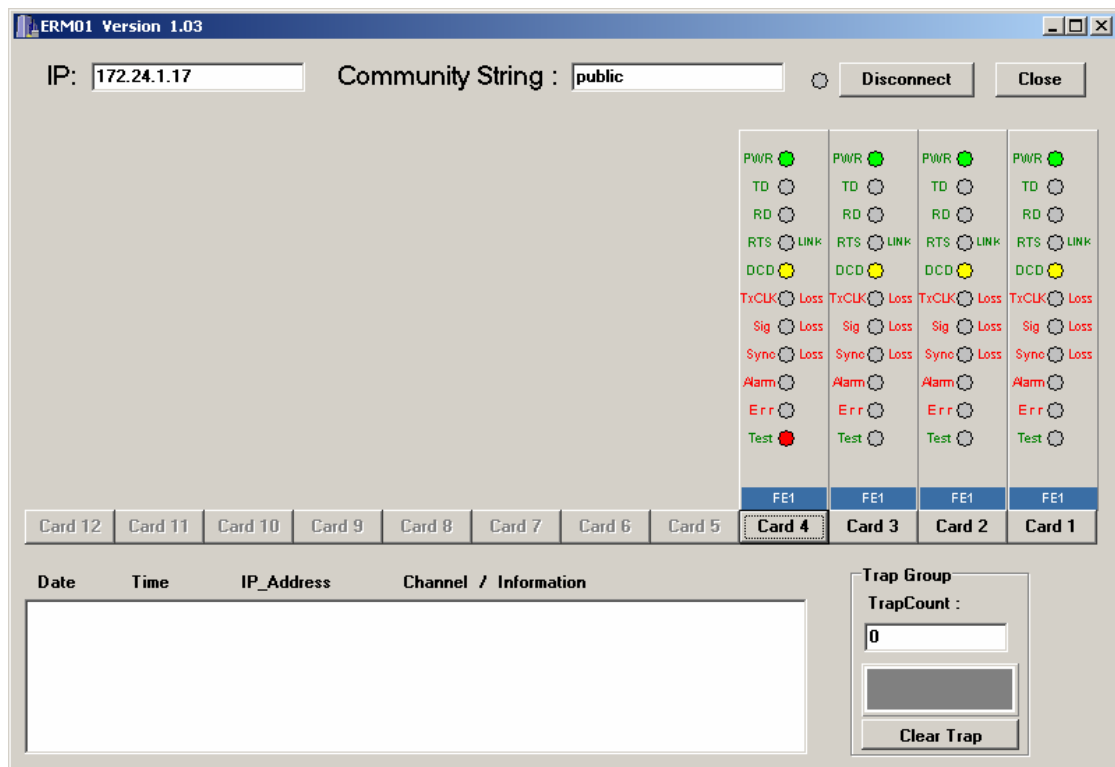


Figure 12. GUI showing line card #4 in test mode for the ERM01

1.4.2 Line Card Performance Monitoring

E1 performance monitoring data for ES (Error Seconds) and UAS (Unavailable Seconds) is available for display via the ERM01-GUI. Use the 'Get' button to read the current values. Use the 'Clear Sec' button to clear the performance buffer's counters.

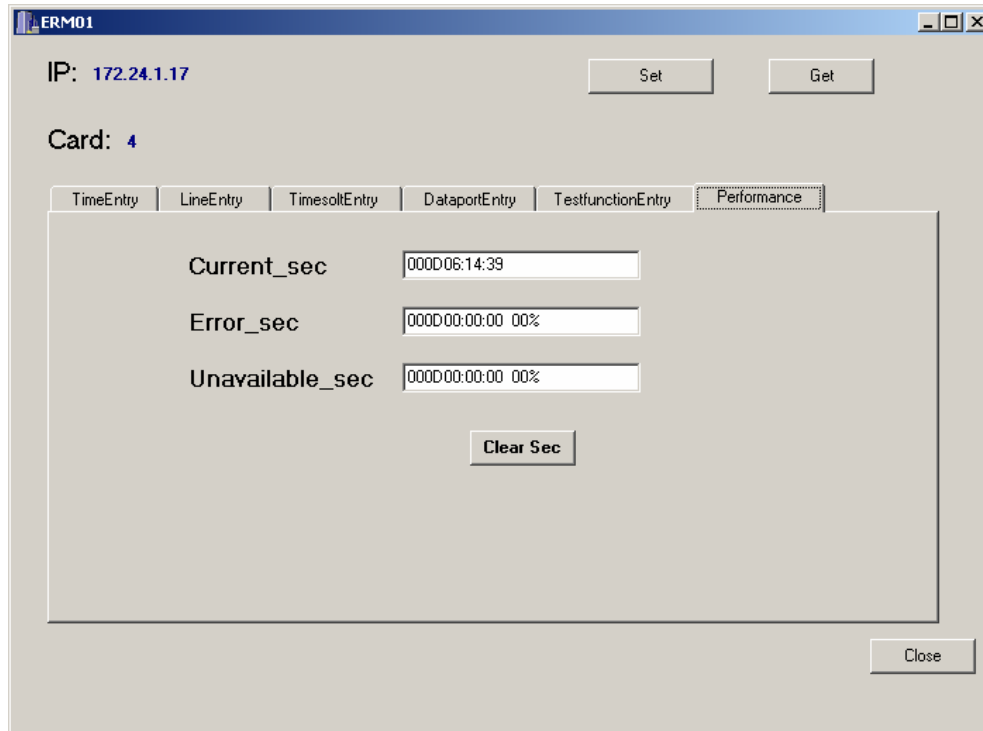
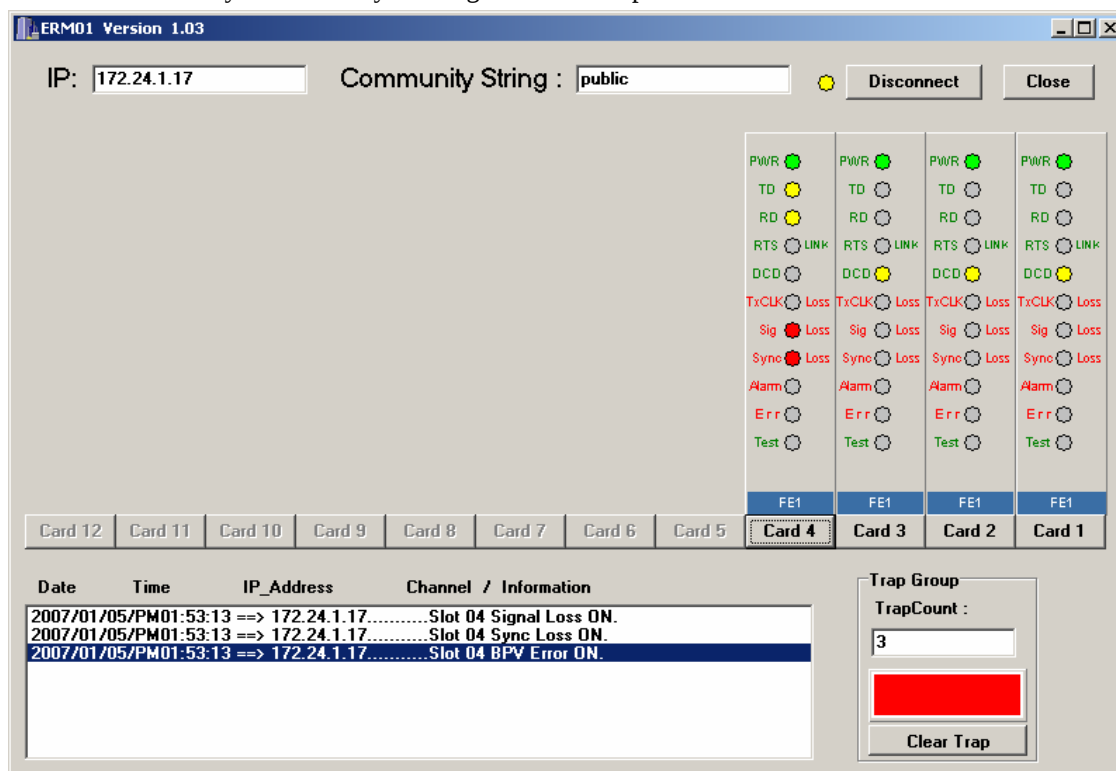


Figure 13. GUI showing line card #4 performance data for the ERM01

1.4.3 Line Card Error Indications

The GUI is able to display the LED indications of the line cards in real-time by using SNMP protocol and polling the card statuses. Additionally, errors will be reported to the GUI by unsolicited trap messages. These messages will be displayed in the trap window of the GUI and will include the date and time of the occurrence, the source IP address of the device issuing the trap, the card slot number, and a textual error message. A trap count is displayed and the counter and window may be cleared by clicking the 'Clear Trap' button.



This concludes the ERM01-GUI Operation.



E1 Series

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