# **USER MANUAL**

# **GUIMGR** Graphical User Interface Manager for FRM301/FRM401 Media Racks

	Run	Agent IP / Name										
vents muex	Rack1	172.24.1.3	16 15 14	13 12	11	10 09	08	07 06	05	04	03	02 01
oAccess	301 Pwr Fai	FRM301	E1BNCE1BNC AUTO	D AUTO AUTO	AUTO	AUTO AUTO	AUTO A	ито Аито	AUTO	AUTO A	айто А	JTO AUTO
	Rack2											
NK LOSS	XXX Pwr Fai		NOI	ACTIVE	?							
ink OK	Rack3	1										
TP Down	xxx 💻 🗖 Pwr Fai		Not	Active	2							
X Down SM Down	Rack4											
MM Down T1 Down	xxx 🔳 📕 Pwr Fai		Not	Active	2							
X Down	Rack5	1										
onn Error	xxx Pwr Ear	(	Not	Active	?							
Date	IIme	IP_Address	Lhannel /	r Informatio	n					Cł	nannel	: 12
										⊤Tra	p Grou	
										Tra	pCour	r it:
										0		



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GUIMGR User Manual

Graphical User Interface Manager, v1.0 June 2004

This manual applies to GUIMGR both Release and trial version 2.09.

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All specifications are subject to change without prior notice.

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### 1. Software Installation and Removal

### **1.1 Introduction**

This brief manual will explain the installation / removal, configuration and operation of the FRM GUI (Graphical User Interface), a Windows® based program that uses SNMP protocol to monitor and configure the FRM301/401 fiber media converter racks. This first section will deal with the installation and removal of the GUIMGR software.

### **1.2 System Requirements**

#### 1.11 Operation System

The GUI program, hereafter called GUIMGR, is designed for installation in any Microsoft<sup>TM</sup> Windows® based computer. The program runs a standard Windows installer and is compatible on any 32bit OS (Windows 95/98/ME) or NT based OS (Win NT 4.0, Windows 2000, & Windows XP). Also highly recommended is the HyperTerminal program which is not installed by default in Windows 95/98.

#### 1.12 Hardware

The minimum recommended hardware requirements for running GUIMGR are a Pentium<sup>™</sup> class computer with 128MB memory, 5MB free disk space (the final installed software is less than 2MB), CDROM drive (for installing the software), VGA graphics display with 800x600 minimum resolution (1024x768 recommended), and a configured 10Base-T or 100Base-TX Network Interface Card (NIC). Our example will use a PC with the following static settings:

IP of 172.24.1.126 Subnet mask 255.255.0.0 Gateway of 172.24.190.254

The management station may be attached directly to the FRM301/401 SNMP card with an Ethernet crossover cable.

### **1.2 Installation**

If you have only the trial version of GUIMGR, then it may not require normal installation. Simply un-zip the compressed transport file and place the executable file (GUI\_trial.exe) and information file (agentIP.INI) in a convenient location. Create a shortcut to the "exe" file on the desktop, or place the executable file on the desktop itself. The "agentIP.INI" file must be in the same directory as the "exe" file to run properly.



If you have the full distribution version of the GUIMGR program, then please follow the procedure below for installation.

Place the GUIMGR installation CDROM in the computer's CDROM drive. Use "My Computer" or "Explorer" to browse to the CDROM's contents. Double click on the "Setup" icon to start the program installation.



Figure 1.1 Setup started InstallShield Wizard



Figure 1.2 Setup welcome page, click "Next"



#### Figure 1.3 Choose program directory, click "Next" to use default.



Figure 1.4 Select the Program Folder, click "Next" for default.



Figure 1.5. Start copying files, click "Next"



This completes the installation of the GUIMGR software program.

### 1.4 Remove GUIMGR

### 1.3.1 Control Panel Add/Remove programs

To open the control panel, click the Windows "Start" button and from the "Settings" icon, select "Control Panel".



### Figure 1.6 Opening the Control Panel in Windows 2000

In the Control Panel window, double click the "Add/Remove Program" icon. The following window will open. Find the GUIMGR icon as shown below.



Figure 1.7 Add/Remove Programs window

Click the "Change/Remove" button.



Figure 1.8 Confirm application removal, click "Yes" to continue uninstall.

Remove Programs From You	r Computer
	unInstallShield will remove the software 'GUIMGR' from your computer. Please wait while each of the following components is removed    Shared program files  Standard program files  Folder items  Frogram folders  Program folders  Program registry entries
	Uninstall successfully completed.
	ОК

Figure 1.9 Uninstall completed successfully, then click "OK".

The GUIMGR computer program has now been completely uninstalled from your computer.

The registry entries created by the GUIMGR installation are not deleted. The password used to operate the GUI software is stored in the registry at:

HKEY\_LOCAL\_MACHINE/SOFTWARE/GUIMGR/config/Pass\_word

The default password is "1021".

To remove all traces of the GUIMGR from the registry, delete <u>GUIMGR</u> under the HKEY\_LOCAL\_MACHINE/SOFTWARE location.

# 2. SNMP Card Configuration

### **2.1 Introduction**

The FRM301/401 SNMP card is an optional component, installed in the FRM301/401 chassis, and provides Telnet and SNMP access. The setting of the SNMP card is performed through the terminal console port of the FRM301/401.

### 2.2 HyperTerminal<sup>™</sup> settings

The settings for console port communication with the FRM301/401 are 38.4K baud, 8 bits, no parity, 1 stop bit and no flow control. In the HyperTerminal program terminal window click the "properties" icon and set the communication parameters as in the following graphics. Click the "Configure..." button in the properties window and set the port settings. When set properly, click "OK".

frm301 Properties	<u>?</u> ×	COM1 Properties	? ×
Connect To Settings		Port Settings	
frm301 Change l.con		Bits per second. 38400	
Country/region:		Data bits: 8	
Ar <u>e</u> a code:		Parity: None	
Phone number:   Connect using: COM1		Stop bits: 1	
[Configure]		Elow control: None	
✓ Lise country/region code and area code ✓ Bedial on busy		<u>R</u> estore Defaults	
OK Car	ncel	OK Cancel App	ly.

Figure 2.1 HyperTerminal port settings for FRM301/401

### 2.3 Connecting to the FRM301/401

The console port of the FRM301/401 is an RS-232 interface (DCE) that utilizes a DB9F connector. Use the configuration cable that is supplied with the FRM301/401 or prepare a three wire DB9(F) to DB9(M) cable with the following pinout:

DB9(M)	signal	DB9(F)
5	GND	5
2	TD	2
3	RD	3

[103] 1929-1929 1929 1929 1929 1929 1929 1929
FRM-301 Fiber Optical Media Converter Rack Management         Wain Menu and Rack Status:         1:Slot W1 >> Empty         2:Slot W2 >> 10/100 Base <
Connected 0:00:17 AVSTW 38H00 8-H-1 SCROLL CAPS NUM Capture Print echo

Figure 2.2 FRM301/401 main screen in console mode.

Connect the PC running HyperTerminal to the FRM301/401 that has an installed SNMP card option. The above screen indicates successful communication with the FRM301/401.

### 2.4 FRM301/401 menu system

Details of the menu system operation and meaning of menu items are described in detail in the FRM301/401 User's Manual. The following information is only for configuration of the SNMP option for use with a network management system.

From the main welcome screen, press "S" to enter the system configuration of the FRM301/401.

### 2.5 SNMP Card settings

```
*** FRM-301 Fiber Optical Media Converter Rack Management ***
+++
                                             * * *
                              V3.42
System Configuration and TFTP Setup Menu:
  MAC Address
                     : 0002AB025678
 1:IP Address
                     : 192.168.0.218
 Gateway IP
                     : 255.255.255.0
                     : 192.168.0.254
 4:TFTP Server IP
                     : 192.168.0.45
                      :
 5:TFTP Server Path
  /300.bin
Command Function Key:
'1' to '5': Configure Setting
'R': Reset All Setting to Default
'S': Store Setting and Reboot
'T': TFTP and Flash
'ESC': Main Menu
```

#### 2.5.1 SNMP Agent Configuration

The "agent" is the FRM301/401 SNMP. The IP address, subnet mask, default gateway, and TFTP server's IP address/path are all set within the System Configuration.

Select "1" IP Address

IP Address->172.24.1.3

Key-in the IP address for the SNMP agent in the FRM301/401. This IP address is also the Telnet IP address of the FRM301/401 rack.

Select "2" Subnet Mask

Subnet Mask->255.255.0.0 Key-in the subnet mask for the agent.

Select "3" Gateway IP

Gateway IP->172.24.190.254 Key-in the default gateway IP address.

Select "4" TFTP Server IP

TFTP Server IP->172.24.1.126

Key-in the IP address of a server running the TFTP protocol (trivial FTP) used for updating the SNMP firmware image in the SNMP card.

Select "5" TFTP Server Path

TFTP Server Path->d:\342.bin

Review the settings and make any necessary corrections. If all entries are correct press "S" to Store Settings and Reboot the SNMP agent.

#### 2.5.2 Manager Configuration

From the SNMP main menu, select item "M", Manager Configuration Setup. Manager configuration is required to tell the agent (the SNMP card) who has authority to access the SNMP via "Get" commands (read) or "Set" commands (write) and where to send "trap" messages (unsolicited messages that are usually generated by alarms in the FRM301/401).

```
*****
*** FRM-301 Fiber Optical Media Converter Rack Management ***
+++
                                                * * *
                                V3.42
Manager Configuration:
 Access Password: disable
 Community String #1 (Read/Write): public
 Community String #2 (Read Only) : *
   Access IP SNMP Community Trap
   ----- ----
 #1:*
               public
                            Yes
 #2:*
                *
                            *
 #3:*
                *
                            *
 #4:*
                            *
Command Function Key:
                     '3': Edit Access IP#3
'4': Edit Access IP#4
'1': Edit Access IP#1
'2': Edit Access IP#2
'5': Edit Community#1 String (Read/Write)
'6': Edit Community#2 String (Read Only)
'7': User Password '8': Manager Password
'9': Access Password ON/OFF
'R': Delete All Setting
'ESC': Main Menu
```

The manager configuration has the ability to setup access for up to four (4) different management workstations. The community strings act like passwords in dealing with the device via SNMP protocol. By changing the community strings for read / write ('public' in this case) and read only (undefined here) access, and assigning a community string to an access IP, an administrator can control access to the FRM301/401.

Enter the IP address of the management workstation that will be running the GUIMGR software, the access authority and whether or not it will be sent trap messages. Select "1":

```
IP('*':disable) ->172.24.1.126 #IP of manager
community '1' or '2'->1 #Manager has r/w privilege
trap 'y'es or 'n'o->y #Manager will be sent trap messeges
```

Here are the results of our management configuration.

\*\*\* FRM-301 Fiber Optical Media Converter Rack Management \*\*\* \* \* \* \* \* \* V3.42 Manager Configuration: Access Password: disable Community String #1 (Read/Write): public Community String #2 (Read Only) : \* Access IP SNMP Community Trap #1:172.24.1.126 public Yes #2:\* \* #3:\* \* \* \* #4:\* Command Function Key: '1': Edit Access IP#1 '3': Edit Access IP#3 '2': Edit Access IP#2 '4': Edit Access IP#4 '5': Edit Community#1 String (Read/Write) '6': Edit Community#2 String (Read Only) '7': User Password '8': Manager Password '9': Access Password ON/OFF 'R': Delete All Setting 'ESC': Main Menu

When leaving the Manager Configuration menu, the changes are automatically saved.

Note that in the above example, the management workstation with IP address 172.24.1.126 and using the community string 'public', has full read and write access and receives traps. If your management workstation has a different IP address, modify the above settings for your application. It is highly recommended that the read/write community string 'public' be changed using the menu selection '5'. Please also note that community strings are case sensitive. (public is not equal to Public)

# 3. GUIMGR Configuration and Operation

### **3.1 Introduction**

This chapter assumes that the GUIMGR application has already been installed on the workstation as in Chapter 1 and that the SNMP agent has been correctly configured as in Chapter 2. This chapter will detail the GUIMGR configuration and the operation of the software in monitoring and controlling the FRM301/401 multiplexer.

### 3.2 Configuration

### 3.2.1 Start the GUIMGR application

Start the application by clicking the Windows "Start" button  $\Rightarrow$  Programs  $\Rightarrow$  SNMP GUIMGR  $\Rightarrow$  GUIMGR. A login password is required to enter the application. The password set from initial installation of the software is "1021". The user password may be changed via the "Config" pull down menu. Trial versions only need to click the "exe" file or shortcut and by default have no password set.



Figure 3.1 GUI manager login

ık Loss	Repk2	Not Active	
nk OK	Rock3	Not Active	
M Down M Down MM Down T1 Down	Rapké	Not Active	
nn Error	Rock5	Not Active	
)ate	Time IP_Ade	dress Channel / Information	1

Figure 3.2 GUIMGR first started

The GUIMGR behaves just like any other Windows® application. The following graphic shows all of the areas that may be clicked for further configuration. Some items are 'greyed' out until the application has connected with an actual FRM301/401 unit.

Config Edit Ab	<b>v2.09 trial</b> out E <u>x</u> it			_ 🗆 X
Events Index	Run	Agent IP / Name		<u>^</u>
NoAccess	Rack1	132.168.1.216 FRM301	Not Active	
Link Loss	Rack2		Not Active	
Link OK	Rack3 XXX Pwr Fan		Not Active	
FX Down FxSM Down FxMM Down E1T1 Down	Rack4 XXX Pwr Fan		Not Active	
Conn Error	Rack5 XXX Pwr Fan		Not Active	
Date	Time	IP_Address	Channel / Information	12
	Tra	ap Window	7	Clear Trap

Figure 3.3 Selectable features of the Main GUIMGR

#### 3.2.2 Configure user password

Click on "Config" from the window menu bar.

💞 ConfigForm
Pass Word Configration
PassWord
Save
About Trap
□ Log To Text File
OKClose

**Figure 3.4 Configuration Form** 

Use this form to change the user password for the GUI. Note also that trap messages may be sent to a text file for logging, output to the default printer, and/or issue a warning beep on the PC.

#### 3.2.3 Edit the SNMP Agent

Click on "Edit" from the window menu bar to enter the Edit SNMP Agent Window.



Figure 3.5 Edit the SNMP Agent

The entries already entered are there by default if the software was just installed. They are just for reference as examples of how the format should be entered into the window. If we continue with our example from the previous chapters, then the FRM301/401 unit which we wish to manage (the agent) is at IP address 172.24.1.3 and the r/w community string is 'public'. So we will click in the lower window (or select the already entered text) and backspace over it until the window is empty. Then we will enter our own format string:

#### 1 172.24.1.3 public FRM301

Then click the "Save" button. Now the GUIMGR is set to manage a FRM301/401 at IP address 172.24.1.3 with a community string of 'public' and our manager will display the rack name as FRM301.

### 3.3 Operation

The interface for the GUIMGR program is a point and click Windows® application that requires little use of the keyboard.

ents Index	Run		Agent IP / Name	e											
Access	₩ 301	Rack1 Pwr Fan	172.24.1.3 FRM301	16 15 14 E1BNCE1BNC AUTO	13 12 AUTO AUTO	11 AUTO A	10 09 RUTO AUTO	08 AUTO	07 AUTO	06 AUTO	OS AUTO	04 AUTO	03 AUTO	02 AUTO	01 Auto
nk Loss	∏ ××× į	Rack2 Pwr Fan		Not	Active										
ink OK IP Down	□ ×××	Rack8 Pwr Fan	 	Not	Active										
C Down SM Down MM Down T1 Down	∏ ××× į́	Rack4 Pwr Fan	[ [	Not	Active										
nn Error		Rack5 Pwr Fan	[ [	Not	Active										
Date	Time	:	IP_Address	Channel /	Informatio	n							hanne	. <b>I</b>	2
												Tra Tr	np Gro apCou	up Int :	s <b>4</b>

Figure 3.6 Operational GUIMGR screen

From the operational screen, the status of all rack units may be displayed. The Pwr and Fan indicators will display "green" when two power supplies are active and their fans are operating normally. Line card types are shown and link status displayed by color code:

"Green" status indicates that both the fiber and copper are linked.

"Yellow" indicates loss of link on the copper side.

"Magenta" indicates loss of link on fiber side.

"Grey" indicates neither copper nor fiber linked

"Black" color indicates an empty line card slot or un-identified card.

If all line cards are shown with "Red" color, it indicates a communication error. Possibly the configuration is not correct or there is a network error that prevents the manager from communicating with the agent.

The trap window at the bottom displays trap messages, indicating the source IP address, the time stamping of the trap and the trap message itself. New messages are displayed from the top, down. The "Clear Trap" button will erase all of the traps displayed and stored in memory.

#### 3.3.1 Rack Detail

From this main display, we can view the details of any rack by clicking on the "Rack" button for that particular rack. Select the first device by clicking on the "Rack 1" button. A new window will open displaying the rack's front and rear panel details.



Figure 3.7 Rack 1's GUIMGR screen

The front panel graphic shows the operational state of all the installed line cards. The LED indications are shown in real time. Fan and power status are also displayed in "green". A "Red" indication on any of the fans, power supplies, or power supply fans indicates device or power failure.

#### 3.3.2 Ethernet Line Card Settings

Click the button marked "Chx". From this window we can display the individual line card's status, setup the card's working status, configure the UTP and fiber modes, get the remote unit's status or do loop back functions. Use the "Get" button to read the card's status. Use the "Set" button to write new status to the card. (The operations are all preformed via SNMP protocol.)

Gui Card Setting [10/100]		X
Card : 9 Card Type :10/100	Ag Machine	ent IP : 172.24.1.3 Name : FRM301
Channel Enable/Disable	Enable	O Disable
UTP Speed	100 BASE	C 10 BASE
UTP TX/RX Duplex Mode	Full Duplex	C Half Duples
UTP Negotiation Mode	Auto	C Manual
FX TX/RX Duplex Mode	Full Duplex	C Half Duplex
Link Loss Forwarding	C Enable	Oisable
Frame Lengh Setting	Nomal	C Special
SetToDefault Read	Modify	Modify All Close
Load All CFG From DB Se	atAllFromSaved	Save All CFG To DB
Remote Status		
Card Type		1
UTP Link	Re	emote Loop Back Test
FX Link		
UTP TX/BX Dupley Modeum	G	et Remote CPE Status
LITP Negotiation Mode		
FX TX/RX Duplex Mode		
Link Loss Forwarding		
Frame Length		
Result Status :		

**Figure 3.8 Ethernet Line Card Settings** 

The card slot, type, address of machine and machine type are shown in the header information. The 'Command Set' window is used for channel enable/disable, UTP mode setting, Fiber mode setting, LLF function enable/disable, and normal or extended packet frame length setting. The settings may be set to default, loaded from a configuration file previously saved on the PC, or saved to PC. The 'Read' button will get all the settings for this card. The 'Modify' button will set the settings selected to the card. The 'Modify All' button will take the displayed settings and write them to every card of the same type in the rack.

#### 3.3.3 Remote Functions

The lower half of the window addresses the functions that can be performed when the fiber is connected to an FIB1-10/100 remote unit. Both of these functions are performed "in-band" and will cause a momentary loss of transmission in the link while they are being performed. The 'Remote Loop Back Test' button will test the fiber link by issuing a loopback code, sending pattern data, verifying the pattern data and then removing the loopback for normal transmissions.

Card : 9 Card Type :10/	00		Ag Machine	ent IP : 172.24.1 Name : FRM301	1.3 I
Command Set					
Channel Enable/D	isable	• E	nable	O Disabl	le
UTP Speed		• 1	JO BASE	C 10 BA	.SE
UTP TX/RX Duple	x Mode	F	ull Duplex	⊖ Half D	uples
UTP Negotiation N	lode	• A	uto	C Manu	al
FX TX/RX Duplex	Mode	(€ Fi	ull Duplex	🔿 Half D	uplex
Link Loss Forward	ng	C E	nable	<ul> <li>Disabl</li> </ul>	le
Frame Lengh Setti	ng	ΘN	omal	C Specia	al
SetToDefault	Read		lodify	Modify All	Close
Load All CFG F	rom DB Si	etAllFrom	nSaved	Save All CFG	i To DB
Load All CFG F Remote Status	rom DB St	etAllFro	nSaved	Save All CFG	i To DB
Load All CFG F Remote Status Card Type	rom DB Si	etAllFroi	nSaved	Save All CFG	i To DB
Load All CFG F Remote Status Card Type UTP Link	rom DB Si	etAllFro	nSaved	Save All CFG emote Loop Ba	i To DB ck Test
Load All CFG F Remote Status Card Type UTP Link FX Link	rom DB 51	etAllFro	nSaved	Save All CFG emote Loop Ba	i To DB ck Test
Load All CFG F Remote Status Card Type UTP Link FX Link UTP Speed UTP Div FV Divide	rom DB Si	etAllFro	nSaved R	Save All CFG emote Loop Ba et Remote CPE	i To DB ck Test Status
Load All CFG F Remote Status Card Type UTP Link FX Link UTP Speed UTP TX/FX Dupk	rom DB Si	etAllFro	nSaved R	Save All CFG emote Loop Bar et Remote CPE	i To DB ck Test Status
Load All CFG F Remote Status Card Type UTP Link FX Link UTP Speed UTP Speed UTP TX/RX Dupk UTP Negotiation N	x Mode	etAllFro	nSaved R	Save All CFG emote Loop Ba et Remote CPE	i To DB ck Test Status
Load All CFG F Remote Status Card Type UTP Link FX Link UTP Speed UTP Speed UTP TX/FX Dupk UTP Negotiation N FX TX/FX Dupks	x Mode	etAllFro	nSaved R	Save All CFG emote Loop Bar et Remote CPE	i To DB ck Test Status

Figure 3.9 Loopback test with CPE

The 'Get Remote CPE Status' button will attempt to identify and read all the settings in the remote CPE unit.

in cara second [10/100]		2		
Card : 9 Card Type :10/100	Agent IP : 172.24.1.3 Machine Name : FRM301			
Command Set Channel Enable/Disable	Enable	C. Disable		
UTP Speed	100 BASE	C 10 BASE		
UTP TX/RX Duplex Mode	<ul> <li>Full Duple</li> </ul>	x C Half Duples		
UTP Negotiation Mode	Auto	C Manual		
FX TX/RX Duplex Mode	Full Duple	x C Half Duplex		
Link Loss Forwarding	C Enable	Disable		
Frame Lengh Setting	Nomal	C Special		
SetToDefault Rea	d Modify	Modify All Close		
Load All CFG From DB	SetAllFromSaved	Save All CFG To DB		
Remote Status				
Card Type				
UTP Link	UTP UP jõ	Remote Loop Back Test		
FX Link	IFX UP 10			
FX Link UTP Speed	UTP 100	Get Remote CPE Status		
FX Link UTP Speed UTP TX/RX Duplex Mode	UTP 100	Get Remote CPE Status		
FX Link UTP Speed UTP TX/RX Duplex Mode UTP Negotiation Mode	UTP 100 UTP FULL	Get Remote CPE Status		
FX Link UTP Speed		Get Remote CPE Status		
FX Link	UTP 100 UTP FULL UTP MANUAL FX FULL DISABLE	Get Remote CPE Status		

Figure 3.10 Remote Status for CPE

The card type, UTP and Fiber link status and other settings are all displayed for the remote side CPE.

Click the "Close" button to close the Card Setting window.

### 3.3.4 Gigabit Ethernet Line Card Settings

Click the button for a 1000Base line card to view and configure the local line card. Under the GUI, the card's status, Tx/Rx Duplex mode and LLF function may be read or modified.

Gui Card Setting [1000]			×		
Card : 1 Card Type :1000	Agent IP : 172.24.1.3 Machine Name : FRM301				
Channel Enable/Disable	Enable	🔿 Disabl	e		
TX/RX Duplex Mode	🔿 Full Duplex	C Full Duplex 📀 Half Duples			
Link Loss Forwarding	🔿 Enable	💿 Disabl	e		
SetToDefault Rea	d Modify	Modify All	Close		
Load All CFG From DB	SetAllFromSaved	Save All CFG	To DB		
Card Type	R	emote Loop Ba	ck Test		
FX Link		et Remote CPE	Status		
UTP TX/RX Duplex Mode					
FX TX/RX Duplex Mode	-				
Link Loss Forwarding					
Result Status :					

#### Figure 3.11 Gigabit Line Card Settings

The functions are very similar to those of the 10/100 Ethernet converter. When connected to an FIB1-1000, the loop back and get remote status functions may be used as well.

#### 3.3.5 E1/T1 Line Card Settings

If an E1/T1 Line Card is installed in any slot, the status of the E1/T1 link, port settings and loop back functions may be viewed by clicking the channel button. Use the 'Get' button to read settings and the 'Set' button to send any modifications to the line card.

Gui Card Setting [E1/T1 Serial]				_ 🗆 🗙			
Card Number: 15         Agent IP: 172.24.1.3           Card Type: E1BNC         Machine Name: FRM301							
COMMAND SET	LOCAL SITE STATUS	E1T1-EX	REMOTE SITE STATUS	E1T1-EX			
Cocal C Remote	Card Status :		Card Status :				
	Card Type : E1BNC	PWR EX Link	Card Type : E1BNC	PWR EX Link			
Port : ENABLE	Firmware Ver: 1.0	TEST	Firmware Ver: 1.0	TEST			
	Hardware Ver: 1.0		Hardware Ver: 1.0				
DISABLE	AIS Status : OFF		AIS Status : OFF				
Line Code : HDB3/B8ZS 🔻	Fiber Link : LINK	E1/T1 Link	FIDER LINK : LINK	E1/T1 Link			
AIS : DISABLE	Current Settings		Current Settings				
	Port : ENABLE	E cald	Port : ENABLE				
	FEF : DISABLE	LOCAL	FEF : DISABLE	REMOTE			
E1/T1 LB : OFF 🗨	Line Code : HDB3/B8ZS		Line Code : HDB3/B8ZS				
	AIS : OFF		AIS : OFF				
Fiber I B : OFF	E1/T1 LB : OFF		E1/T1 LB : OFF				
	Fiber LB : OFF		Fiber LB : OFF				
	J			-			
Default Port Reset Set	Get			Close			
Result Status :							

#### Figure 3.12 E1/T1 Line Card Settings

The command sets may be performed on the local converter in the rack or on the remote FIB1-E1/T1 fiber converter. The LEDs show the real time status of the card and remote converter. A full set of loop back functions are available.



Figure 3.13 E1/T1 Loop Back Functions

### 4 Troubleshooting

### **4.1 Network Settings**

### 4.1.1 Review Agent Settings

During unit startup, the "SNMP" LED will light as the agent boots up, then it should blink at about one cycle per second after boot up and during normal operation. Refer to section 2.5.1 of the SNMP agent settings. Be sure you have a valid IP address for the attached network, that the subnet mask is properly set and that the default gateway is set if you wish to manage the FRM from a remote network.

Attach a network cable to the FRM's front panel LAN/SNMP connector using a straight cable if connecting to a HUB or a cross over cable if connecting directly to another MDI device, such as direct connection to a workstation. The Link LED should be on or flashing. No link LED means no link. From any PC on the network, confirm the agent can be pinged.

```
C:\WINNT\System32\cmd.exe
                                                                                                     - 0 ×
C:\>ipconfig
Windows 2000 IP Configuration
Ethernet adapter Local Area Connection 2:
             Connection-specific DNS Suffix
             172.
                                                                                  24 1
                                                                           255
                                                                                  255.0.0
24.190.254
C:>>ping 172.24.1.11
Pinging 172.24.1.11 with 32 bytes of data:
Reply from 172.24.1.11: bytes=32 time<10ms ITL=64
Ping statistics for 172.24.1.11:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = Oms, Maximum = Oms, Average = Oms
C:\>_
```

Figure 4.1 Ipconfig and Ping

The "ipconfig" command from a command window in NT will display the workstation's IP, subnet and gateway settings. The "ping" command will send an ICMP protocol message to the agent, which in turn should reply. If no reply, double check all network connects, connect directly from a workstation to the FRM, or as a last resort replace the SNMP card of the FRM.

#### 4.1.2 Review Manager Settings

For the GUIMGR to connect to the FRM for management, the FRM's SNMP must be properly configured with the manager's IP address and authorized for read/write (via community string setting) and trap messages. Review the settings explained in 2.5.2.

Review the "Edit" settings in 3.2.3 of the GUIMGR application, and confirm that the monitor mode is set to "1", IP address and community string for read/write match those as set from section 2.5.2.

If the management workstation is on a remote network, ensure it can also pass the ping test.

🖾 Command Prompt	
C:\WINNT>ipconfig	-
Windows 2000 IP Configuration	
Ethernet adapter Local Area Connection:	
Connection-specific DNS Suffix .: IP Address: 192.168.0.15 Subnet Mask: 255.255.255.0 Default Gateway: 192.168.0.254	
C:\WINNT>ping 172.24.1.11	
Pinging 172.24.1.11 with 32 bytes of data:	
Reply from 172.24.1.11: bytes=32 time=40ms TTL=62 Reply from 172.24.1.11: bytes=32 time=40ms TTL=62 Reply from 172.24.1.11: bytes=32 time=40ms TTL=62 Reply from 172.24.1.11: bytes=32 time=40ms TTL=62	
Ping statistics for 172.24.1.11: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 40ms, Maximum = 40ms, Average = 40ms	
C:\WINNT>	-
4	

Figure 4.2 Ipconfig and Ping Remote Network

Check with your network administrator to ensure that any firewalls in place will allow passing of SNMP protocol in order to connect with an FRM on a remote network. By default SNMP uses port 161.

Always check all connections and double check all configurations. We have tested the FRM and GUIMGR extensively on local networks, on remote networks through bridges and routers and even over wireless links. You should not experience any problems if you follow each and every step in this guide. We hope you enjoy using the FRM with SNMP option and GUIMGR manager software.

## **Fiber Series Units**



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