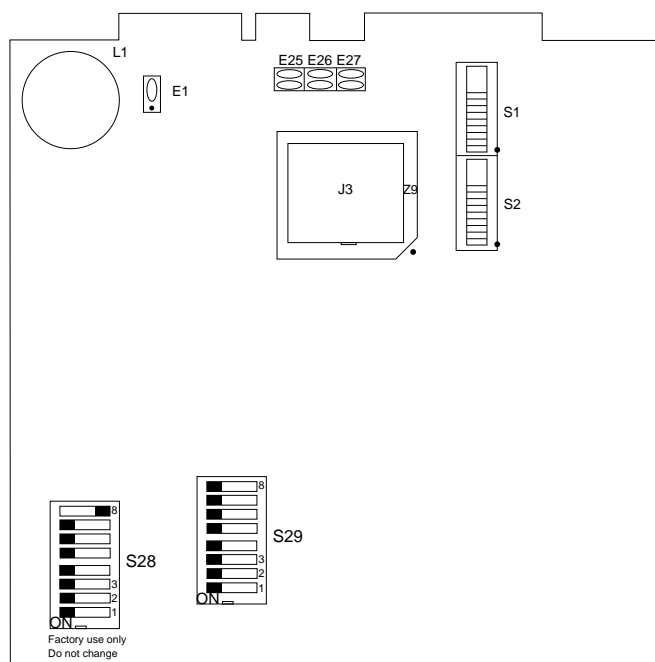


## Chapter 3 Configuration Management Card

### GENERAL

This chapter describes hardware and software configuration for the configuration management card. Most options for the FT100 M are accessed through screens. Other options are set with dip switches and straps on the board. These options are factory set to meet the needs of most systems. Verify your system requirements and adjust hardware options only if necessary.

Figure 3-1 shows where the dip switches are located on the board.



**Figure 3-1**  
**Configuration Management Card Switch and Strap Locations**

**DIP SWITCHES                    S29**

Switch 29 controls all switch options. Other dip switches on the PC board are for factory use and must not be changed. S29 is factory-set with all eight switches on.

Table 3-1 lists S29 functions and positions.

**Speed                                    1, 2**

MGT port speed is the rate at which serial information is transmitted and received. This speed is equivalent to the data transfer in bits per second.

**Parity                                    3, 4**

Parity bits are added to make the total number of 1s either even or odd. The parity bit helps detect errors when transmitting information from the FT100 M to the VT100 terminal.

**Stop Bit                                    5**

Stop bits follow the last data bit.

**Character Length                    6**

Character length defines the number of bits per character.

**Flow Control                            7, 8**

- None - No terminal flow control is implemented.
- XON/XOFF - In this mode, the FT100 M monitors data received from the management terminal. If an ASCII DC3 (hex 13) is received, the FT100 M inhibits data transmission to the terminal. An ASCII DC1 (hex 11) causes the FT100 M to resume transmitting data to the terminal.
- RTS/CTS - A negative voltage applied to this input pin causes the FT100 M to disable data transmission to the management terminal. A positive voltage enables data transmission.

**Table 3-1. S29 Dip Switch Options**

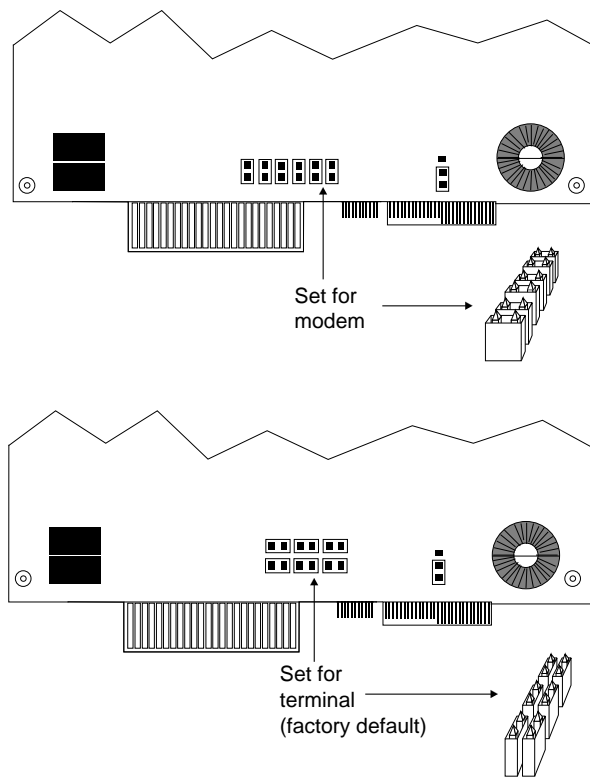
Option	Setting	Switch							
		1	2	3	4	5	6	7	8
Speed	19200 *	On	On						
	9600	On	Off						
	4800	Off	On						
	2400	Off	Off						
Parity	Disabled *			On					
	Enabled			Off					
	Even *				On				
	Odd				Off				
Stop bit	One *					On			
	Two					Off			
Character length	8 *						On		
	7						Off		
Flow control	None *							On	On
	XON/XOFF							On	Off
	RTS/CTS							Off	On

\* factory setting

**TERMINAL/MODEM INTERFACE STRAP**

The MGT port can be strapped to interface with a terminal or a modem. You should strap the MGT port to interface with a modem if the FT100 M is located remote to the terminal and is directly connected to a modem.

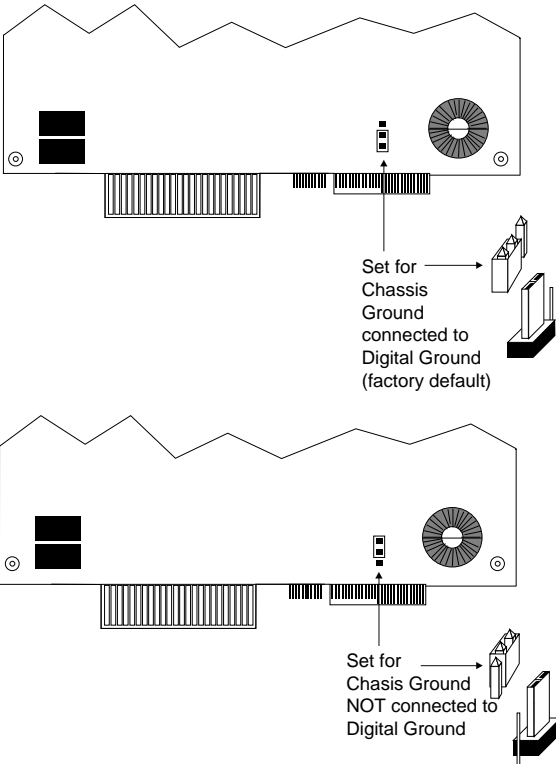
Figure 3-2 shows the strap configurations for both terminal and modem interfaces. See Figure 3-1 for strap locations.



**Figure 3-2**  
**MGT Port Interface Strap Settings**

**Chassis Ground to Digital Ground Connection**

Chassis ground is normally set strapped to digital ground. If interference occurs, remove the strap and relocate it in the reverse position. Figure 3-3 illustrates the strap option. Refer to Figure 3-1 for strap location.



**Figure 3-3**  
*Chassis/Digital Ground Strap Settings*

### **ALARM / SENSE TERMINAL BLOCK**

The 4-position terminal block located on the rear panel provides connections that help in monitoring FT100 M alarms. The block consists of the following:

- 1 Normally closed contact 1
- 2 Normally open contact 1
- 3 Common 1
- 4 Reserved

The set of normally closed and normally open contacts (1-2) reflect a no alarm state. They activate if there is an alarm, providing the ability to connect with alarm notification devices such as buzzers or lamps. The contacts return to their normal states when the FT100 M alarms are cleared using the local VT100 or Telnet session.

When activated by an alarm condition, the open contacts close and the closed contacts open. This lets you configure any desired alarm signal to be used externally.

Common 1 is the common ground for the FT100 M and is provided to prevent grounding differences between the FT100 M and the device connecting to the alarm contacts. Reserved is designed for future use.

### **TERMINAL SCREEN OPERATION**

The MGT port on the rear panel of the FT100 M connects to a VT100 terminal or equivalent.



#### **Note**

*When using Telnet, system management or any other function of terminal operation is exactly the same as for the VT100.*

A VT100 connection and a Telnet session can coexist, each operating independent of the other. A few obvious system-related activities are restricted -- such as, both cannot configure the T1 interface card at the same time.

The following sections explain the screens for accessing the software options related to the terminal.

**System Screen**

The first screen is the FT100 M System screen. This screen displays automatically when you plug in the FT100 M and a VT100 terminal is connected to the MGT port on the rear panel.

**Note**

*<Ctrl-R> refreshes the screen in a local VT100 terminal screen or a remote Telnet session at any time.*

The System screen (Figure 3-4) displays an overview of the FT100 M providing details about status information and alarm conditions.

The System screen is divided into four regions:

- BANNER
- MENU
- PARAMETER
- OPTIONS

Motorola FT100 M Copyright 1994	Device: FT100 CSU/DSU (DSX-1/U.35) Revision: 1.1.03 PT B.1.1      SN: 01A6ECB90000002A Time: 14:12:22    Date: 08-12-96	Banner
		Menu
Alarm Description: Hardware Reset Alarm Time: 14:10:04 Alarm Date: 08-12-96		Parameter
System Options <Config>    <Utility>    Clear Alarm Reset      <Alarms>		Options

**Figure 3-4**  
**System Screen**

### Banner Region

The BANNER region displays the current description, revision, serial number and the time and date. Users cannot access this region.

### Menu Region

The MENU region displays the current parameter settings. To change these settings, position the cursor using the arrow keys to highlight the new selection and press RETURN/ENTER. The cursor moves to the PARAMETER region showing parameters for your current selection.

Use the SPACE BAR to move between the MENU region and the OPTIONS region.

### Parameter Region

The PARAMETER region displays alarm information if you are in the System screen. Otherwise, this region displays instructions and provides prompts for configuration. In Figure 3-5, the first line in the PARAMETER region represents an instruction, and the second is user entry. After keying in an entry, you can press RETURN/ENTER after confirming your entry is correct, or arrow-down to Cancel and press RETURN/ENTER.

Motorola FT100 M Copyright 1994	Device: FT100 CSU/DSU (DSX-1/U.35) Revision: 1.1.03 PT B.1.1 SN: 01A6ECB90000002A
	Time: 14:13:43 Date: 08-12-96 Address/ID Menu
Serial Number	01E8F5B9000000C3
Ethernet Address	00C0D800D03F
IP Address	150.11.116.110
Default Gateway Address	150.150.160.2
Subnet Mask	255.255.255.0
System Name	1st Union to CHCA Data Center
System Location	1st Union
System Contact	Marty York
SNMP Read Community String	public
SNMP Write Community String	private
	Enter IP Address 150. 11.116.110 Cancel
	Utility Options
<System> Address/ID	Time/Date Terminal
	Password

**Figure 3-5**  
*Data Entry in the Parameter Region*



### **Options Region**

The bottom of the screen is the **OPTIONS** region, which contains a list of options that can perform functions affecting the system.

Use the arrow keys to move to the desired option and press the **RETURN/ENTER** key to execute it.

These options are:

- **<Config>** - Displays the configuration screens for the T1 interface card.
- **Reset** - Performs a hardware reset.
- **<Utility>** - Displays a submenu with the following entries:
  - Address/ID - Displays configuration management card serial-number, ethernet address; lets you set the IP address, default gateway address, subnet mask, system name, system location and contact, and SNMP read/write community string.
  - Time/Date - Lets you set system time and date.
  - Terminal - Displays the current console terminal port configuration.
  - <System>** - Returns to **SYSTEM OPTIONS** on the System screen.
- **<Alarms>** - Displays a submenu with the following entries:
  - History - Displays a record of FT100 M alarms.
  - Dest 1 - SNMP management station address.
  - Dest 2 - Second SNMP management station address.
  - Dest 3 - Third SNMP management station address.

Each of the Dest options let you set the alarm destination IP address.

- **Clear Alarm** - Clears the alarm level and description for the FT100 M in the System screen; does not affect the Alarm History.

The following paragraphs describe the use of these options in more detail.

#### <Config>

Use the arrow keys to highlight the <CONFIG> option. Press RETURN/ENTER to display configuration screens for the T1 interface card on the terminal.

#### Reset

To RESET the T1 interface card, use the arrow keys to highlight the RESET option and press RETURN/ENTER. This option reinitializes the FT100 M software. Unsaved changes to the T1 interface card configuration are reset to defaults.



#### Note

*The RESET option temporarily disrupts operation of the FT100 M for about 10 seconds.*

#### <Utility>

Use the arrow keys to highlight <UTILITY>. Press RETURN/ENTER and the OPTIONS region lists the utility options, providing access to the Address/ID and Time/Date screens.

#### Address/ID

Selecting this option displays the configuration management card's serial number, ethernet address; it lets you set the IP address, default gateway address, subnet mask, system name, system location and contact, and SNMP read/write community string.

Press RETURN/ENTER to change a highlighted value (the serial number and ethernet values are read only). In the PARAMETER region, a prompt appears, followed by highlighted space for entering a response. After entering the response, either press RETURN/ENTER to enter the change or select Cancel. Figure 3-6 shows the Address/ID screen.



#### Note

*The IP Address, Default Gateway Address and Subnet Mask are display only in a Telnet session. The display only fields cannot be changed.*

Motorola FT100 M Copyright 1994	Device: FT100 CSU/DSU (DSX-1/U.35) Revision: 1.1.03 PT B.1.1 SN: 01A6ECB90000002A
	Time: 14:13:43 Date: 08-12-96 <b>Address/ID Menu</b>
Serial Number	01E8F5B9000000C3
Ethernet Address	00C0D800D03F
IP Address	<b>150.11.116.110</b>
Default Gateway Address	150.150.160.2
Subnet Mask	255.255.255.0
System Name	1st Union to CHCA Data Center
System Location	1st Union
System Contact	Marty York
SNMP Read Community String	public
SNMP Write Community String	private
	Enter IP Address <b>150.</b> 11.116.110 Cancel Utility Options
<System> Address/ID	Time/Date Terminal Password

Figure 3-6  
Address/ID Menu

Time/Date

This screen displays the current time and date. Pressing RETURN/ENTER lets you change either value in the PARAMETER region. Figure 3-7 shows the Time/Date screen.

Motorola FT100 M Copyright 1994	Device: FT100 CSU/DSU (DSX-1/U.35) Revision: 1.1.03 PT B.1.1 SN: 01A6ECB90000002A
	Time: 14:23:37 Date: 08-12-96 <b>Time/Date Menu</b>
	Time 14:23:07 Date 08-12-96
	Enter Date MM-DD-YY 08-12-96 Cancel Utility Options
<System> Address/ID	Time/Date Terminal Password

Figure 3-7  
Time/Date Menu

### Terminal

Selecting Terminal in the UTILITY OPTIONS region displays the Terminal Port Configuration screen. This screen displays the settings for speed, character length, parity, stop bits, and flow control. These options are set by hardware dip switch S29, which is explained earlier in this chapter. Figure 3-8 shows the Terminal Port Configuration screen.

Motorola FT100 M Copyright 1994	Device: FT100 CSU/DSU (DSX-1/U.35) Revision: 1.1.03 PT B.1.1 SN: 01A6ECB90000002A Time: 14:25:14 Date: 08-12-96
<b>Terminal Port Configuration</b>	
	Speed 19200 Character Length 8 Parity NONE Stop Bits 1 Flow Control NONE
Utility Options	
<System> Address/ID	Time/Date Terminal
	Password

**Figure 3-8**  
**Terminal Port Configuration Screen**

### Password

Selecting this option displays the Password Menu. See Figures 3-9 and 3-10. Use this option to provide password security on remote Telnet sessions. Password security can be enabled or disabled. Up to a sixteen character password can be entered. This option is not accessible using Telnet. Password security status (enabled or disabled) can only be accessed from the local management port.

Motorola FT100 M Copyright 1994	Device: FT100 CSU/DSU (DSX-1/U.35) Revision: 1.1.03 PT B.1.1 Time: 14:31:17 Date: 08-12-96	SN: 01A6ECB90000002A
Password Menu		
Telnet Security                    ENABLED Telnet Password                ██████████		
Enter Telnet Password Motorola ██████████ Cancel Utility Options		
<System> Address/ID	Time/Date Terminal	Password

Figure 3-9  
Password Security Screen



Figure 3-10  
Password Security Enabled

<System>

Select <System> in the UTILITY OPTIONS region to return to SYSTEM OPTIONS on the System screen.

<Alarm>

When you highlight <Alarm> on the System screen, the OPTIONS region lists the alarm options, providing access to the History and Destination screens.

Alarm History

The Alarm History screens (Figure 3-11) display the most recent 108 alarms that have occurred in the FT100 M. The Next Page and Prev Page options in the OPTIONS region lets you scroll through the alarm history.

Motorola FT100 M Copyright 1994	Device: FT100 CSU/DSU (DSX-1/U.35) Revision: 1.1.03 PT B.1.1 SN: 01A6ECB90000002A Time: 14:34:20 Date: 08-12-96																
Alarm History - Page 1																	
	<table border="1"> <thead> <tr> <th>Level</th> <th>Description</th> <th>Time</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>OOF Detected</td> <td>14:34:06</td> <td>08-12-96</td> </tr> <tr> <td>8</td> <td>LOS Detected</td> <td>14:34:06</td> <td>08-12-96</td> </tr> <tr> <td>9</td> <td>Hardware Reset</td> <td>14:34:06</td> <td>08-12-96</td> </tr> </tbody> </table>	Level	Description	Time	Date	7	OOF Detected	14:34:06	08-12-96	8	LOS Detected	14:34:06	08-12-96	9	Hardware Reset	14:34:06	08-12-96
Level	Description	Time	Date														
7	OOF Detected	14:34:06	08-12-96														
8	LOS Detected	14:34:06	08-12-96														
9	Hardware Reset	14:34:06	08-12-96														
Alarm History Options																	
<System>	Next Page																
<Alarm>	Prev Page																

**Figure 3-11**  
**Alarm History**

Dest(ination) 1, 2, 3

Each destination screen (Figure 3-12) lets you set an alarm destination IP address. SNMP traps or SMTP mail may be sent to any of the three addresses. See Appendix E, Alarms and Traps, for a description of traps. To enable reception of traps, see your SNMP software documentation.

Motorola FT100 M Copyright 1994	Device: FT100 CSU/DSU (DSX-1/U.35) Revision: 1.1.03 PT B.1.1 SN: 01A6ECB90000002A Time: 14:38:51 Date: 08-12-96
Alarm Destination 2 Menu	
Enabled/Disabled            ENABLED Type                            SNMP IP Address                    0.0.0.0 SMTP Name	
Alarm Options	
<System> History	Dest 1            Dest 3 Dest 2

Figure 3-12  
Alarm Destination Menu

*Configuration Management Card*

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