Appendix E
Alarms and Traps

GENERAL

Alarming of important variables or events in the system is accomplished by sending the traps or by sending the through variables that are readable in a polling scheme. There are four variables which contain information about the alarming condition and control the reporting of alarm information: The State of the alarming variable, the Alarm, the AlarmTime, and the AlarmGate.

The following sections provide detailed explanations of alarms and traps.

STATE VARIABLE

The State variable contains the current value of the important variable. A transition in the value of the state causes an alarming condition.

ALARM

The alarm has two main functions. First, it is used to signify the occurrence of an alarming condition for a particular variable. Secondly, it is used to maintain the status that an alarming condition has occurred, even if the condition has correct itself. For example, if a variable causes an alarming condition, the variable's alarm will be activated and will remain active until the network manager acknowledges the alarm and clears the alarm. An alarm is a read/write variable with the values of **ALARMED** and **CLEARED**. To clear an alarm, the network manager must set the alarm variable to **CLEARED**. This variable can only be set to **CLEARED**. Setting this variable to **ALARMED** has no effect.

ALARMTIME

The AlarmTime is the time stamp relative to UpTime (in 0.01 seconds) when the latest alarm occurred.

ALARMGATE

The AlarmGate controls how the alarm is sent using a trap. The Alarm-Gate is used to allow or disallow sending the alarm using a trap. The FT100 M has a MasterAlarmGate that is used to allow or disallow sending all traps from the FT100 M. For traps to be sent to the SNMP manager, the FT100 M's ft100midMasterAlarmGate must be open.

In a polling scheme, a SNMP management station can periodically read the Alarm variable to determine if the alarming condition has occurred. The difference is that a trap will report every occurrence of the alarming condition; whereas the polling scheme will only realize the last occurrence of the alarming condition.