

# Alarms and Probable Causes

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DESCRIPTION

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# 1 Contents of This Document

This document describes alarm conditions and their probable causes in the SmartEdge chassis and in controller cards, carrier cards, line cards, media interface cards (MICs), and their ports.

This document applies to both the Ericsson SmartEdge® and SM family routers. However, the software that applies to the SM family of systems is a subset of the SmartEdge OS; some of the functionality described in this document may not apply to SM family routers.

For information specific to the SM family chassis, including line cards, refer to the SM family chassis documentation.

For specific information about the differences between the SmartEdge and SM family routers, refer to the Technical Product Description *SM Family of Systems* (part number 5/221 02-CRA 119 1170/1) in the **Product Overview** folder of this Customer Product Information library.

**Note:** In the following descriptions, the term controller card refers to any version of the Cross-Connect Route Processor (XCRP) Controller card (XCRP4), unless otherwise noted.

The term controller carrier card refers to the controller functions on the circuit board within the SmartEdge 100 chassis. The term I/O carrier card refers to the line card functions on the circuit board; these functions are compatible with the similar functions that are implemented on all SmartEdge 400 and SmartEdge 800 line cards.

**Note:** Alarm severities conform to the definitions provided in Generic Requirements, GR-474-CORE, Issue 1, December 1997, Network Maintenance: Alarm and Control for Network Elements.

The term replaceable unit is a generic description of a component (fan, power supply, controller card, controller carrier card, I/O carrier card, and others) with an alarm that cannot be resolved for the current unit. Because only SmartEdge 100 MICs and small form-factor plug-capable (SFP) transceivers are replaceable in a SmartEdge 100 chassis, the resolution of an alarm for any other SmartEdge 100 component requires that you replace the SmartEdge 100 chassis.





## 2 Chassis Alarms

Table 1 lists supported alarms for the SmartEdge 100 chassis and system as a whole.

*Table 1 Chassis Alarms*

Description	Severity	Probable Cause	Service Affecting
Chassis power failure—side A	Minor	PowerProblem	No
Fan unit failure	Minor	CoolingFanFailure	No
Local alarm cutoff activated	Minor	OperationNotification	No
Multiple fan failure	Major	ReplaceableUnitProblem	Yes
Power supply output fail	Minor	ReplaceableUnitProblem	Yes
Remote alarm cutoff activated	Minor	OperationNotification	No

Table 2 lists supported alarms for the SmartEdge router and system as a whole.

*Table 2 Chassis Alarms*

Description	Severity	Probable Cause	Service Affecting
Chassis power capacity exceeded	Major	MisMatchedControllerCard	Yes
AC power failure—side A	Minor	ReplaceableUnitProblem	No
AC power failure—side B	Minor	ReplaceableUnitProblem	No
AC power missing—side A	Minor	ReplaceableUnitMissing	No
AC power missing—side B	Minor	ReplaceableUnitMissing	No
AC power overheat—side A	Minor	ReplaceableUnitProblem	No
AC power overheat—side B	Minor	ReplaceableUnitProblem	No
Alarm card missing	Major	ReplaceableUnitMissing	Yes
Backplane power-on-diagnostic failed	Minor	ReplaceableUnitProblem	No
Chassis power failure—side A1	Minor	PowerProblem	No
Chassis power failure—side A2	Minor	PowerProblem	No
Chassis power failure—side B1	Minor	PowerProblem	No
Chassis power failure—side B2	Minor	PowerProblem	No
Chassis power failure—side A	Minor	PowerProblem	No



Table 2 Chassis Alarms

<b>Description</b>	<b>Severity</b>	<b>Probable Cause</b>	<b>Service Affecting</b>
Chassis power failure—side B	Minor	PowerProblem	No
Fan tray comm failure—side A	Minor	CoolingFanFailure	No
Fan tray comm failure—side B	Minor	CoolingFanFailure	No
Fan tray communication failure	Major	CoolingFanFailure	Yes
Fan tray controller (card) failure	Major	ReplaceableUnitProblem	Yes
Fan tray controller (card) overheat	Major	ReplaceableUnitProblem	Yes
Fan tray failure detected	Minor	ReplaceableUnitProblem	No
Fan tray filter replacement	Major	ReplaceableUnitProblem	Yes
Fan tray fuse failure	Major	ReplaceableUnitProblem	Yes
Fan tray missing	Major	ReplaceableUnitMissing	Yes
Fan tray reset occurred	Warning	Reinitialized	Yes
Fan unit failure	Minor	CoolingFanFailure	No
Local alarm cutoff activated	Minor	OperationNotification	No
Mesh diagnostic failure	Major	ReplaceableUnitFailure	Yes
Multiple fan failure	Major	ReplaceableUnitProblem	Yes
Remote alarm cutoff activated	Minor	OperationNotification	No



### 3 Controller and Carrier Card Alarms

Table 3 lists the supported alarms for the SmartEdge 100 controller carrier card.

*Table 3 Alarms for the Controller Carrier Card*

<b>Description</b>	<b>Severity</b>	<b>Probable Cause</b>	<b>Service Affecting</b>
Controller (card) code mismatch	Major	ReplaceableUnitTypeMismatch	Yes
Controller (card) fail	Critical	ReplaceableUnitProblem	Yes
Controller (card) overheating	Major	ReplaceableUnitProblem	Yes
Controller (card) power-on diagnostic failed	Major	ReplaceableUnitProblem	Yes
Controller (card) temperature critical	Major	ReplaceableUnitProblem	Yes
Diagnostic test fail	Major	ReplaceableUnitProblem	Yes
Local inventory fail	Major	ReplaceableUnitProblem	Yes
Nonvolatile memory fail	Major	CorruptData	Yes
Real-time clock failure	Major	RealTimeClockFailure	Yes

Table 4 lists the supported alarms for the XCRP4 Controller card.

*Table 4 Controller Card Alarms*

<b>Description</b>	<b>Severity</b>	<b>Probable Cause</b>	<b>Service Affecting</b>
Backup fail: peer dead <sup>(1)</sup>	Major	ReplaceableUnitProblem	Yes
Controller (card) auto switch completed <sup>(1)</sup>	Major	OperationNotification	Yes
Controller (card) code mismatch	Major	ReplaceableUnitTypeMismatch	Yes
Controller (card) exerciser switch failed <sup>(1)</sup>	Major	OperationFailure	Yes
Controller (card) fail	Critical	ReplaceableUnitProblem	Yes
Controller (card) forced switch requested <sup>(1)</sup>	Major	OperationNotification	Yes
Controller (card) manual switch requested <sup>(1)</sup>	Major	OperationNotification	Yes



Table 4 Controller Card Alarms

Description	Severity	Probable Cause	Service Affecting
Controller (card) missing <sup>(1)</sup>	Critical	ReplaceableUnitMissing	Yes
Controller (card) overheating	Major	ReplaceableUnitProblem	Yes
Controller (card) power-on diagnostic failed	Major	ReplaceableUnitProblem	Yes
Controller (card) software not supported	Major	SoftwareError	Yes
Controller (card) switch completed <sup>(1)</sup>	Major	OperationNotification	Yes
Controller (card) switch failed <sup>(1)</sup>	Major	OperationFailure	Yes
Controller (card) temperature critical	Major	ReplaceableUnitProblem	Yes
Controller (card) temperature hot	Minor	ReplaceableUnitProblem	Yes
Controller (card) type mismatch	Major	ReplaceableUnitTypeMismatch	Yes
Diagnostic test fail	Major	ReplaceableUnitProblem	Yes
Local backplane inventory fail	Major	ReplaceableUnitProblem	Yes
Local fan tray inventory fail	Major	ReplaceableUnitProblem	Yes
Local inventory fail	Major	ReplaceableUnitProblem	Yes
Nonvolatile memory fail	Major	CorruptData	Yes
Peer controller card (PCC) type incompatible <sup>(1)</sup>	Major	ReplaceableUnitProblem	Yes
PCC0 BSD L2 Cache Parity Error	Critical	ReplaceableUnitProblem	Yes
PCC1 VXW L2 Cache Parity Error	Critical	ReplaceableUnitProblem	Yes
Peer inventory fail <sup>(1)</sup>	Major	ReplaceableUnitProblem	Yes
Peer shared format mismatch <sup>(1)</sup>	Major	ReplaceableUnitProblem	Yes
Peer Sonet/Sdh mode incompatible <sup>(1)</sup>	Major	ReplaceableUnitProblem	Yes
Real-time clock battery failure	Major	BatteryFailure	Yes
Real-time clock failure	Major	RealTimeClockFailure	Yes
Redundancy link fail	Major	OperationFail	Yes
Backup fail: peer dead <sup>(2)</sup>	Major	ReplaceableUnitProblem	Yes
Controller (card) auto switch completed	Major	OperationNotification	Yes



Table 4 Controller Card Alarms

Description	Severity	Probable Cause	Service Affecting
Controller (card) code mismatch	Major	ReplaceableUnitTypeMismatch	Yes
Controller (card) exerciser switch failed	Major	OperationFailure	Yes
Controller (card) fail	Critical	ReplaceableUnitProblem	Yes
Controller (card) forced switch requested	Major	OperationNotification	Yes
Controller (card) manual switch requested	Major	OperationNotification	Yes
Controller (card) missing	Critical	ReplaceableUnitMissing	Yes
Controller (card) overheating	Major	ReplaceableUnitProblem	Yes
Controller (card) power-on diagnostic failed	Major	ReplaceableUnitProblem	Yes
Controller (card) switch completed	Major	OperationNotification	Yes
Controller (card) switch failed	Major	OperationFailure	Yes
Controller (card) temperature critical	Major	ReplaceableUnitProblem	Yes
Controller (card) temperature hot	Minor	ReplaceableUnitProblem	Yes
Controller (card) type mismatch	Major	ReplaceableUnitTypeMismatch	Yes
Diagnostic test fail	Major	ReplaceableUnitProblem	Yes
Local backplane inventory fail	Major	ReplaceableUnitProblem	Yes
Local fan tray inventory fail	Major	ReplaceableUnitProblem	Yes
Local inventory fail	Major	ReplaceableUnitProblem	Yes
Nonvolatile memory fail	Major	CorruptData	Yes
Peer controller card type incompatible	Major	ReplaceableUnitProblem	Yes
Peer inventory fail	Major	ReplaceableUnitProblem	Yes
Peer shared format mismatch	Major	ReplaceableUnitProblem	Yes
Peer Sonet/Sdh mode incompatible	Major	ReplaceableUnitProblem	Yes



Table 4 Controller Card Alarms

Description	Severity	Probable Cause	Service Affecting
Real-time clock failure	Major	RealTimeClockFailure	Yes
Redundancy link fail	Major	OperationFail	Yes

(1) This alarm is suppressed if the system has a single controller card and has been configured using the **system alarm** command (in global configuration mode) with the **redundancy suppress** construct.

(2) This alarm is suppressed if the system has a single controller card and has been configured using the **system alarm** command (in global configuration mode) with the **redundancy suppress** construct.



## 4 Line Card and Media Interface Card Alarms

Table 5 lists the supported alarms for the SmartEdge 100 I/O carrier card (which provides line card functions). In this table, the term circuit pack refers to any line card, MIC, or I/O carrier card.

*Table 5 Alarms for the I/O Carrier Card*

Description	Severity	Probable Cause	Service Affecting
Circuit pack card code mismatch	Minor	ReplaceableUnitTypeMismatch	No
Circuit pack failure	Critical	ReplaceableUnitProblem	Yes
Circuit pack mismatch	Critical	ReplaceableUnitTypeMismatch	Yes
Circuit pack missing	Critical	ReplaceableUnitMissing	Yes
Circuit pack overheating	Major	LineCardProblem	Yes
Circuit pack power-on diagnostic failed	Major	ReplaceableUnitProblem	Yes
Circuit pack reset completed	Warning	OperationNotification	Yes
Diagnostic fail	Major	ReplaceableUnitProblem	Yes
Software download completed	Warning	OperationNotification	Yes
Software download failed	Warning	OperationFailure	Yes
Synchronization failure	Critical	TimingProblem	Yes
Voltage failure detected	Major	ReplaceableUnitProblem	Yes

Table 6 lists the supported alarms for the SmartEdge 100 MICs. MIC-1 indicates the MIC in the first MIC slot (ports 3 to 14); MIC-2 indicates the MIC in the second MIC slot (ports 15 to 26).

*Table 6 MIC Alarms*

Description	Severity	Probable Cause	Service Affecting
MIC-1 diagnostic fail	Major	ReplaceableUnitProblem	Yes
MIC-1 failure	Critical	ReplaceableUnitProblem	Yes
MIC-1 MIC type mismatch	Critical	ReplaceableUnitTypeMismatch	Yes
MIC-1 missing	Critical	ReplaceableUnitMissing	Yes



Table 6 MIC Alarms

Description	Severity	Probable Cause	Service Affecting
MIC-1 overheat	Major	ReplaceableUnitProblem	Yes
MIC-1 power-on diagnostic failed	Major	ReplaceableUnitProblem	Yes
MIC-1 voltage failed	Major	ReplaceableUnitProblem	Yes
MIC-2 diagnostic fail	Major	ReplaceableUnitProblem	Yes
MIC-2 failure	Critical	ReplaceableUnitProblem	Yes
MIC-2 MIC type mismatch	Critical	ReplaceableUnitTypeMismatch	Yes
MIC-2 missing	Critical	ReplaceableUnitMissing	Yes
MIC-2 overheat	Major	ReplaceableUnitProblem	Yes
MIC-2 power-on diagnostic failed	Major	ReplaceableUnitProblem	Yes
MIC-2 voltage failed	Major	ReplaceableUnitProblem	Yes

Table 7 lists the supported alarms for SmartEdge line cards.

Table 7 Line Card Alarms

Description	Severity	Probable Cause	Service Affecting
Bridging Transmission Convergence (BTC) interface error detected	Major	ReplaceableUnitProblem	Yes
BTC not ready	Major	ReplaceableUnitProblem	Yes
Circuit pack backplane RX error <sup>(1)(2)</sup>	Major	BackplaneFailure	Yes
Circuit pack backplane TX error <sup>(1)(2)</sup>	Major	BackplaneFailure	Yes
Circuit pack card code mismatch	Minor	ReplaceableUnitTypeMismatch	No
Circuit pack failure	Critical	ReplaceableUnitProblem	Yes
Circuit pack mismatch	Critical	ReplaceableUnitTypeMismatch	Yes
Circuit pack missing	Critical	ReplaceableUnitMissing	Yes
Circuit pack overheating	Major	LineCardProblem	Yes
Circuit pack power-on diagnostic failed	Major	ReplaceableUnitProblem	Yes
Circuit pack reset completed	Warning	OperationNotification	Yes
Diagnostic fail	Major	ReplaceableUnitProblem	Yes



*Table 7 Line Card Alarms*

<b>Description</b>	<b>Severity</b>	<b>Probable Cause</b>	<b>Service Affecting</b>
Loss of backplane clock	Major	ReplaceableUnitProblem	Yes
Software download completed	Warning	OperationNotification	Yes
Software download failed	Warning	OperationFailure	Yes
Synchronization failure	Critical	TimingProblem	Yes
Voltage failure detected	Major	ReplaceableUnitProblem	Yes

*(1) Applies to SSE and PPA3-based line cards only.*

*(2) For additional information, refer to SW-WHP-0129 White Paper on PMA3 Line Card Silent Traffic Halt Faults Detection and Alarms Reporting\*.*





## 5 SSE Alarms

Faults are reported separately for SSE cards, SSE disks, SSE groups, and partitions. See Table 8, Table 9, Table 10, and Table 11 for alarm descriptions.

You can configure the threshold for low-partition-space alarms using the following command in SSE partition configuration mode:

```
alarm low-partition-space raise-at raise_percentage
clear-at clear_percentage
```

Verify card- and disk-level alarms using the `show hardware slot detail` command. Verify group- and partition-level alarms using the `show sse group group_name detail` command.

Table 8 SSE Card Alarms

Description	Severity	Probable Cause	Service Affecting
ASE ASP 1 down	Critical	processorProblem	Yes
ASE ASP 2 down	Critical	processorProblem	Yes
NFS server service down	Major	operationFailure	Yes
Disk type mismatch	Warning	replaceableUnitTypeMismatch	No
CPU Crash	Critical	processorProblem	Yes
DIMM revision mismatch	Critical	replaceableUnitProblem	Yes

Table 9 SSE Disk Alarms

Description	Severity	Probable Cause	Service Affecting
Hard disk health degraded	Minor	replaceableUnitProblem	No
Hard disk failed	Major	diskFailure	Yes
Hard disk missing	Major	replaceableUnitMissing	Yes
Hard disk not supported	Major	replaceableUnitTypeMismatch	Yes
Hard disk out of service	Minor	diskFailure	No
Hard disk voltage failure	Major	diskFailure	Yes
Hard disk overheating: extremely hot	Major	diskFailure	Yes
Hard disk overheating: temperature hot	Minor	diskFailure	No



Table 9 SSE Disk Alarms

Description	Severity	Probable Cause	Service Affecting
Hard disk read failure	Major	diskFailure	Yes
Hard disk power-on diagnostic failed	Major	diskFailure	Yes

Table 10 SSE Group Alarms

Description	Severity	Probable Cause	Service Affecting
SSE group block device not connected	Minor	nooperationNotification <sup>(1)</sup>	No
SSE group manual switch in progress	Major	operationNotification	Yes
SSE group auto switch in progress	Major	operationNotification	Yes
SSE group switch completed	Warning	operationNotification	No
SSE group switch failed	Major	operationNotification	Yes
SSE group auto switch waiting to restore	Minor	operationNotification	No
SSE group not operational	Major	operationFailure	Yes
SSE group block device failed	Major	operationFailure	Yes

(1) Probable causes: In some cases, the block device gets into a state where it is not able to resolve conflicts between the primary card and secondary card. Because of this, the primary and secondary instances of the block device are disconnected and the data is not synchronized. Solution: a) Remove the standby SSE from the group and issue the `configure` command, the `card sse slot` command, the `no bind sse group` command, and the `commit` command. b) Take the standby SSE out of the group before switch-over and format the disks on the card by issuing the `format sse slot 1` and `format sse slot 2` commands. c) Add the card back to the SSE group using the `configure` command, the `card sse slot` command, the `bind sse group group name secondary` command and the `commit` command.

Table 11 SSE Group Partition Alarms

Description	Severity	Probable Cause	Service Affecting
SSE group partition not operational <sup>(1)</sup>	Major	operationFailure	Yes
SSE group partition sync in progress	Minor	operationNotification	No
SSE group partition data sync failed	Major	operationFailure	Yes



Table 11 SSE Group Partition Alarms

Description	Severity	Probable Cause	Service Affecting
SSE group partition full	Major	operationNotification	Yes
SSE group partition low space	Minor	operationNotification	No
SSE group partition not operational at standby <sup>(2)</sup>	Major	operationFailure	Yes

(1) Probable causes: a) The disk does not have enough space to create the partition; b) Another partition of the same name but with a different size already exists on the disk from a previous configuration. Solution: Use the `delete partition` command to free up disk space or remove the existing partition, or use the `format sse` command to remove all user-configured partitions on the disk. The `format sse` command can only be run on an SSE card that is not bound to any SSE group.

(2) Probable causes: a) The disk does not have enough space to create the partition; b) Another partition of the same name but with a different size already exists on the disk from a previous configuration. Solution: Use the `delete partition` command to free up disk space or remove the existing partition, or use the `format sse` command to remove all user-configured partitions on the disk. The `format sse` command can only be run on an SSE card that is not bound to any SSE group.





## 6 Port and Channel Alarms

This section provides tables of alarms for the following types of ports.

### 6.1 Optical ATM, and POS Alarms

The tables in this section apply to ports on the ATM OC line cards and MICs and Packet over SONET/SDH (POS) line cards.

**Note:** If a major or critical alarm occurs on an ATM or a POS port and that port is a member of an Automatic Protection Switching (APS) group, either as a protected or a working port, the alarm is downgraded to a minor alarm because the service is protected by the redundant port. The severity levels in the table are the default levels, not the degraded levels.

Table 12 lists the supported optical port alarms for the physical layer.

*Table 12 Optical Port Alarms—Physical Layer*

Description	Severity	Probable Cause	Service Affecting
Port facility loopback enabled	Minor	OperationNotification	No
Port terminal loopback enabled	Minor	OperationNotification	No
Receive laser failure	Critical	DemodulationFailure	Yes

Table 13 lists the supported optical port alarms for the section/regenerator section layer.

*Table 13 Optical Port Alarms—Section/Regenerator Section Layer*

Description	Severity	Probable Cause	Service Affecting
Loss of frame	Critical	LossOfFrame	Yes
Loss of signal	Critical	LossOfSignal	Yes
Section DCC (data communications channel) link down	Major	ExternalIFFDeviceProblem	Yes
Section signal degrade (BER [bit error rate])	Major	DegradedSignal	Yes
Section signal failure (BER)	Major	ExcessiveBER	Yes

Table 14 lists the supported optical port alarms for the line/multiplex section layer.



Table 14 Optical Port Alarms—Line/Multiplex Section Layer

Description	Severity	Probable Cause	Service Affecting
Line alarm indication signal (AIS-L)	Minor	AIS	No
Line DCC (data communications channel) link down	Major	ExternalIFDeviceProblem	Yes
Line remote defect indication (RDI-L)	Minor	FarEndReceiverFailure	No
Line signal degrade (BER [bit error rate])	Major	DegradedSignal	Yes
Line signal failure (BER)	Major	ExcessiveBER	Yes
Lockout protection requested	Major	OperationNotification	Yes
Lockout working requested	Major	OperationNotification	Yes
Loss of clock	Major	LossOfTimingSource	Yes
Port auto switch completed	Major	OperationNotification	Yes
Port channel mismatch	Major	ApsChannelMatchFailure	Yes
Port diagnostic failed	Major	ReplaceableUnitProblem	Yes
Port far-end protection line failure	Major	ApsChannelProcessingFailure	Yes
Port fault oscillations detected	Critical	DegradedSignal	Yes
Port forced switch requested	Major	OperationNotification	Yes
Port manual switch request	Major	OperationNotification	Yes
Port mode mismatch	Major	ApsModeMismatch	Yes
Port protection switch byte failure	Major	ApsByteFailure	Yes
Port switch completed	Major	OperationNotification	Yes
Port switch lockout requested	Major	OperationNotification	Yes
Port payload loopback enabled	Minor	OperationNotification	No
Port switch failed	Major	OperationFailure	Yes
Port switch protection path failure	Major	OperationFailure	Yes
Port switch waiting to restore	Minor	OperationNotification	No
Severely errored frames (SEF)	Major	ErroredFrame	No

Table 15 lists the alarms and warnings supported by the SFP transceivers displayed by the `show system alarm` command.



Table 15 SFP Transceiver Alarms

Description	Severity	Probable Cause	Service Affecting
Transceiver access failure	Major	Replaceable Unit Problem	Yes
Transceiver bias current–high	Major	Replaceable Unit Problem	Yes
Transceiver bias current–high warning	Minor	Replaceable Unit Problem	No
Transceiver bias current–low	Major	Replaceable Unit Problem	Yes
Transceiver bias current–low warning	Minor	Replaceable Unit Problem	No
Transceiver mismatch	Minor	Replaceable Unit Problem	No
Transceiver missing	Major	Replaceable Unit Problem	Yes
Transceiver receive power–high	Major	Replaceable Unit Problem	Yes
Transceiver receive power–high warning	Minor	Replaceable Unit Problem	No
Transceiver receive power–low	Major	Replaceable Unit Problem	Yes
Transceiver receive power–low warning	Minor	Replaceable Unit Problem	No
Transceiver temperature–high	Major	Replaceable Unit Problem	Yes
Transceiver temperature–high warning	Minor	Replaceable Unit Problem	No
Transceiver temperature–low	Major	Replaceable Unit Problem	Yes
Transceiver temperature–low warning	Minor	Replaceable Unit Problem	No
Transceiver TX power–high	Major	Replaceable Unit Problem	Yes
Transceiver TX power–high warning	Minor	Replaceable Unit Problem	No
Transceiver TX power–low	Major	Replaceable Unit Problem	Yes
Transceiver TX power–low warning	Minor	Replaceable Unit Problem	No
Transceiver voltage–high	Major	Replaceable Unit Problem	Yes
Transceiver voltage–high warning	Minor	Replaceable Unit Problem	No
Transceiver voltage–low	Major	Replaceable Unit Problem	Yes
Transceiver voltage–low warning	Minor	Replaceable Unit Problem	No

Table 16 lists the alarms and warnings supported by the XFP transceivers displayed by the `show system alarm` command.



Table 16 XFP Transceiver Alarms

<b>Description</b>	<b>Severity</b>	<b>Probable Cause</b>	<b>Service Affecting</b>
Transceiver AUX1–high	Major	Replaceable Unit Problem	Yes
Transceiver AUX1–high warning	Minor	Replaceable Unit Problem	No
Transceiver AUX1–low	Major	Replaceable Unit Problem	Yes
Transceiver AUX1–low warning	Minor	Replaceable Unit Problem	No
Transceiver AUX2–high	Major	Replaceable Unit Problem	Yes
Transceiver AUX2–high warning	Minor	Replaceable Unit Problem	No
Transceiver AUX2–low	Major	Replaceable Unit Problem	Yes
Transceiver AUX2–low warning	Minor	Replaceable Unit Problem	No
Transceiver bias current–high	Major	Replaceable Unit Problem	Yes
Transceiver bias current–high warning	Minor	Replaceable Unit Problem	No
Transceiver bias current–low	Major	Replaceable Unit Problem	Yes
Transceiver bias current–low warning	Minor	Replaceable Unit Problem	No
Transceiver L-VCC2–high	Major	Replaceable Unit Problem	Yes
Transceiver L-VCC2–high warning	Minor	Replaceable Unit Problem	No
Transceiver L-VCC2–low	Major	Replaceable Unit Problem	Yes
Transceiver L-VCC2–low warning	Minor	Replaceable Unit Problem	No
Transceiver L-VCC3–high	Major	Replaceable Unit Problem	Yes
Transceiver L-VCC3–high warning	Minor	Replaceable Unit Problem	No
Transceiver L-VCC53–low	Major	Replaceable Unit Problem	Yes
Transceiver L-VCC3–low warning	Minor	Replaceable Unit Problem	No
Transceiver L-VCC5–high	Major	Replaceable Unit Problem	Yes
Transceiver L-VCC5–high warning	Minor	Replaceable Unit Problem	No
Transceiver L-VCC5–low	Major	Replaceable Unit Problem	Yes
Transceiver L-VCC5–low warning	Minor	Replaceable Unit Problem	No
Transceiver receive power–high	Major	Replaceable Unit Problem	Yes
Transceiver receive power–high warning	Minor	Replaceable Unit Problem	No
Transceiver receive power–low	Major	Replaceable Unit Problem	Yes
Transceiver receive power–low warning	Minor	Replaceable Unit Problem	No



Table 16 XFP Transceiver Alarms

Description	Severity	Probable Cause	Service Affecting
Transceiver TX power–high	Major	Replaceable Unit Problem	Yes
Transceiver TX power–high warning	Minor	Replaceable Unit Problem	No
Transceiver TX power–low	Major	Replaceable Unit Problem	Yes
Transceiver TX power–low warning	Minor	Replaceable Unit Problem	No
Transceiver temperature–high	Major	Replaceable Unit Problem	Yes
Transceiver temperature–high warning	Minor	Replaceable Unit Problem	No
Transceiver temperature–low	Major	Replaceable Unit Problem	Yes
Transceiver temperature–low warning	Minor	Replaceable Unit Problem	No

## 6.2 Ethernet Port Alarms

Table 17 lists the supported alarms for Ethernet ports.

Table 17 Ethernet Port Alarms

Description	Severity	Probable Cause	Service Affecting
Excessive collisions detected	Major	LinkFailure	Yes
Excessive speed 100M detected	Major	ConfigurationMismatch	Yes
Link down	Major	LinkFailure	Yes
Over subscription detected	Major	ConfigurationMismatch	Yes
Port diagnostic failed	Major	ReplaceableUnitProblem	Yes
Port terminal loopback enabled	Minor	OperatorNotification	No
Under subscription detected	Minor	ConfigurationMismatch	No

## 6.3 Gigabit Ethernet Port Alarms

Table 18 lists the supported alarms for Gigabit Ethernet ports.

Table 18 Gigabit Ethernet Port Alarms

Description	Severity	Probable Cause	Service Affecting
Link down	Major	LinkFailure	Yes



Table 18 Gigabit Ethernet Port Alarms

Description	Severity	Probable Cause	Service Affecting
Link flooded	Major	LinkFailure	Yes
Port diagnostic failed	Major	ReplaceableUnitProblem	Yes
Port terminal loopback enabled	Minor	OperatorNotification	No
Receive loss of signal (LOS)	Critical	LossOfSignal	Yes

## 6.4 Ethernet WAN-PHY Port Alarms

Table 19 lists the supported Ethernet WAN-PHY alarms.

Table 19 Ethernet WAN-PHY Port Alarms

Description	Severity	Probable Cause	Service Affecting
Receive loss of signal (LOS)	Critical	LossOfSignal	Yes
Receive loss of frame (LOF)	Critical	LossOfFrame	Yes
Transmit laser failure	Critical	Laser failure	Yes
Receive laser failure	Critical	DemodulationFailure	Yes
Line signal failure (BER)	Major	ExcessiveBER	Yes
Line signal degrade (BER [bit error rate])	Major	DegradedSignal	Yes
Path loss of pointer (LOP-P)	Major	LossOfPointer	Yes
Transmit signal label mismatch (PLM-P)	Major	SignalLabelMismatch	Yes
Line alarm indication signal (AIS-L)	Minor	AIS	No
Line remote defect indication (RDI-L)	Minor	FarEndReceiverFailure	No
Port facility loopback enabled	Minor	OperationNotification	No
Port terminal loopback enabled	Minor	OperationNotification	No
Path alarm indication signal (AIS-P)	Minor	TransmitFailure	Yes
Path remote defect indication (RDI-P)	Minor	FarEndReceiverFailure	No