

### CUSTOMER RELEASE NOTES

## ***X-Pedition Router – Maintenance Release System Firmware Version E8.2.1.1***

***Firmware Release Date: October 2001***

#### **INTRODUCTION:**

This document provides specific information for version E8.2.1.1 of the System Firmware for the X-Pedition Router family of products. It includes content from the E8.1.0.10, E8.1.0.11, and E8.1.0.12 Patch Releases, as well as the E8.2.0.2, E8.2.0.3, E8.2.0.4 and E8.2.0.5 Patch Releases.

**Enterasys Networks recommends these Release Notes be thoroughly reviewed prior to the installation or upgrade of this product.**

#### **GLOBAL SUPPORT:**

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For information regarding the latest firmware available, recent release note revisions, or if additional assistance is required, please visit the Enterasys Networks Support web site.

**SYSTEM FIRMWARE SPECIFICATION:**

Before installing the E8.2.1.1 System Firmware, the Boot Firmware should be upgraded to version E3.1.0.0. Refer to the E3.1.0.0 Boot Firmware Release Notes, or any X-Pedition Getting Started Guide, for instructions on upgrading the Boot Firmware.

System Firmware File Name	Version No.	Release Date
xp8210	E8.2.1.1	October 2001
xp8200	E8.2.0.0	June 2001
ssr8100	E8.1.0.0	February 2001
ssr8010	E8.0.1.0	October 2000
ssr8000	E8.0.0.0	September 2000
ssr3200	3.2.0.0	May 2000
ssr3100	3.1.0.0	April 2000
ssr3010	3.0.1.0	March 2000
ssr3002	3.0.0.2	November 1999
ssr3000	3.0.0.0	October 1999
ssr2220	2.2.2.0	September 1999
ssr2201	2.2.0.1	May 1999
ssr2200	2.2.0.0	April 1999
ssr2101	2.1.0.1	February 1999
ssr2100	2.1.0.0	December 1998
ssr2000	2.0.0.0	November 1998
ssr1200	1.2.0.0	September 1998
ssr1100	1.1.0.0	August 1998
ssr1010	1.0.1.0	June 1998
ssr1000	1.0.0.0	April 1998

**HARDWARE / BOOT FIRMWARE COMPATIBILITY:**

This version of System Firmware supports the X-Pedition Router hardware listed in the following table.

The Minimum Boot Firmware Version is a function of:

- The hardware installed in the system (as listed below).
- The version of VFS you want to use. For more information on VFS versions see the “PCMCIA Card VFS Version” sub-section in the following “INSTALLATION AND CONFIGURATION NOTES” section of the *X-Pedition Router Boot Firmware Version E3.1.0.0 Release Notes*.
- The need for new features or corrections that are provided in a specific version.

The issue of determining your minimum Boot Firmware version can be avoided by installing Boot Firmware version E3.1.0.0. For more information, please see the *X-Pedition Router Boot Firmware Version E3.1.0.0 Release Notes*.

For the two SSR-PCMCIA part numbers listed below, sub-part numbers, e.g. 35-028-02, are also listed. Find the sub-part number on your SSR-PCMCIA card. Then match it with a sub-part number listed above to aid in determining your minimum System Firmware and Boot Firmware versions.

Part	Description	Minimum System Firmware Version	Minimum Boot Firmware Version
5SSRM-02	Router module for the Matrix E5	E8.0.1.0	1.1.0.8
6SSRLC-FX-AA	8-port 100Base-FX (MTRJ) module for 5SSRM-02 and 6SSRM-02	3.0.50.11	
6SSRLC-LX-AA	2-port 1000Base-LX module for 5SSRM-02 and 6SSRM-02	3.0.50.11	
6SSRLC-LX70-AA	1-port 1000Base-LX 70 KM module for 5SSRM-02 and 6SSRM-02	3.0.50.11	
6SSRLC-SER-AA	2-port Serial module (No compression or encryption) for 5SSRM-02 and 6SSRM-02	3.0.50.11	
6SSRLC-SERC-AA	4-port Serial module with compression (No encryption) for 5SSRM-02 and 6SSRM-02	3.0.50.11	
6SSRLC-SERCE-AA	4-port Serial module with compression & encryption for 5SSRM-02 and 6SSRM-02	3.0.50.11	
6SSRLC-SX-AA	2-port 1000Base-SX module for 5SSRM-02 and 6SSRM-02	3.0.50.11	
6SSRLC-TX-AA	8-port 10/100Base-TX module for 5SSRM-02 and 6SSRM-02	3.0.50.11	
6SSRM-02	Router module for the Matrix E6 (SS6000) and Matrix E7	3.0.50.11	1.1.0.8
ER16-04	4-port 1000Base GBIC module [T-Series] for ER16	E8.0.0.0	
ER16-08	8-port 1000Base GBIC module [T-Series] for ER16	E8.0.0.0	
ER16-AC	AC power supply for ER16	E8.0.0.0	
ER16-CK	Clock module for ER16	E8.0.0.0	
ER16-CM3-128	Control Module 3 (291 MHz CPU) with 128MB for ER16	E8.0.0.0	E3.0.0.0
ER16-CM4-256	Control Module 4 (380 MHz CPU) with 256MB for ER16	E8.2.0.0	E3.1.0.0
ER16-CS	ER16 Chassis with 16 slots. Comes with ER16-CK, ER16-FN, and ER16-SF.	E8.0.0.0	
ER16-FN	Fan Tray module for ER16	E8.0.0.0	
ER16-SF	Switching Fabric module for ER16	E8.0.0.0	
ER16-SX-08	8-port 1000Base-SX module [T-Series] for ER16	E8.0.0.0	
ER16-TX-24	24-port 10/100 Base-TX module [T-Series] for ER16	E8.0.0.0	
ER16-TX-32	32-port 10/100 Base-TX module [T-Series] for ER16	E8.0.0.0	
SSR-16	X-Pedition 8600 Chassis with 16 slots. Comes with SSR-FAN-16 and SSR-SF-16.	1.2.0.0	
SSR-2-B128	X-Pedition 2000 Base Configuration with 16-ports 10/100 TX and 128 MB memory	3.1.0.0	1.1.0.9
SSR-2-FX	8-port 100BaseFX (MTRJ) module for X-Pedition 2000	2.1.0.1	
SSR-2-FX-AA	8-port 100BaseFX (MTRJ) module for X-Pedition 2000	3.0.0.0	
SSR-2-GSX	X-Pedition 2100 with 8-ports 1000Base-SX	2.2.0.1	1.1.0.5
SSR-2-HSSI-AA	2-port HSSI module for X-Pedition 2000	E8.0.0.0	
SSR-2-LX	2-port 1000Base-LX module for X-Pedition 2000	1.2.0.0	
SSR-2-LX-AA	2-port 1000Base-LX module for X-Pedition 2000	3.0.0.0	
SSR-2-LX70	1-port 70 km 1000Base-LX module MB for X-Pedition 2000	2.0.0.0	
SSR-2-LX70-AA	1-port 70 km 1000Base-LX module MB for X-Pedition 2000	3.0.0.0	
SSR-2-SER	2-port Serial module (No compression or encryption) for X-Pedition 2000	2.1.0.0	
SSR-2-SER-AA	2-port Serial module (No compression or encryption) for X-Pedition 2000	3.0.0.0	
SSR-2-SERC	4-port Serial module with compression (No encryption) for X-Pedition 2000	2.1.0.0	
SSR-2-SERC-AA	4-port Serial module with compression (No encryption) for X-Pedition 2000	3.0.0.0	
SSR-2-SERCE	4-port Serial module with compression and encryption for X-Pedition 2000	2.1.0.0	
SSR-2-SERCE-AA	4-port Serial module with compression and encryption for X-Pedition 2000	3.0.0.0	

Part	Description	Minimum System Firmware Version	Minimum Boot Firmware Version
SSR-2-SX	2-port 1000Base-SX module for X-Pedition 2000	1.2.0.0	
SSR-2-SX-AA	2-port 1000Base-SX module for X-Pedition 2000	3.0.0.0	
SSR-2-TX	8-port 10/100 TX module for X-Pedition 2000	1.2.0.0	
SSR-2-TX-AA	8-port 10/100 TX module for X-Pedition 2000	3.0.0.0	
SSR-8	X-Pedition 8000 Chassis with 8 slots. Comes with SSR-FAN-8.	1.0.0.0	
SSR-ARE	Advanced Routing Engine (currently supports AppleTalk) for X-Pedition 8000/8600	E8.1.0.0	
SSR-ATM29-02	2-port ATM OC-3c base module [T-Series] for X-Pedition 8000/8600	3.1.0.0	
SSR-CM2-128	Control Module 2 (198 MHz CPU) with 128 MB memory for X-Pedition 8000/8600	1.1.0.0	1.1.0.2
SSR-CM2-64	Control Module 2 (198 MHz CPU) with 64 MB memory for X-Pedition 8000/8600	1.1.0.0	1.1.0.2
SSR-CM3-128	Control Module 3 (291 MHz CPU) with 128MB memory for X-Pedition 8000/8600	E8.0.0.0	E3.0.0.0
SSR-CM4-256	Control Module 4 (375/380 Mhz) with 256MB memory for X-Pedition 8000/8600	E8.2.0.0	E3.1.0.0
SSR-FAN-16	Fan Tray module for X-Pedition 8600	1.0.0.0	
SSR-FAN-8	Fan Tray module for X-Pedition 8000	1.0.0.0	
SSR-FDDI-02	2-port FDDI base module [T-Series] for X-Pedition 8000/8600	3.2.0.0	
SSR-GLH39-02	2-port 1000 LLX / LH module (SCLX for MMF / SMF) [T-Series] for X-Pedition 8000/8600	3.1.0.0	
SSR-GLX19-02	2-port 1000 LX module (SCLX for MMF or SMF) with 4 MB for X-Pedition 8000/8600	1.0.0.0	
SSR-GLX29-02	2-port 1000 LX module (SCLX for MMF or SMF) with 16 MB for X-Pedition 8000/8600	1.0.0.0	
SSR-GLX29-02-AA	2-port 1000 LX module (SCLX for MMF or SMF) with 16 MB for X-Pedition 8000/8600	3.0.0.0	
SSR-GLX39-02	2-port 1000 LX module (SCLX for MMF or SMF) [T-Series] for X-Pedition 8000/8600	3.1.0.0	
SSR-GLX70-01	1-port 70 Km 1000 Base-LX module with 16 MB for X-Pedition 8000/8600	2.0.0.0	
SSR-GLX70-01-AA	1-port 70 Km 1000 Base-LX module with 16 MB for X-Pedition 8000/8600	3.0.0.0	
SSR-GSX11-02	2-port 1000 SX module (SCSX for MMF Only) with 4 MB for X-Pedition 8000/8600	1.0.0.0	
SSR-GSX21-02	2-port 1000 SX module (SCSX for MMF Only) with 16 MB for X-Pedition 8000/8600	1.0.0.0	
SSR-GSX21-02-AA	2-port 1000 SX module (SCSX for MMF Only) with 16 MB for X-Pedition 8000/8600	3.0.0.0	
SSR-GSX31-02	2-port 1000 SX module (SCSX for MMF Only) [T-Series] for X-Pedition 8000/8600	3.1.0.0	
SSR-GTX32-02	2-port 1000 TX module (Cat 5 RJ-45) [T-Series] for X-Pedition 8000/8600	3.1.0.0	
SSR-HFX11-08	8-port 100 FX module (MMF SC) with 4 MB for X-Pedition 8000/8600	1.0.0.0	
SSR-HFX21-08	8-port 100 Base-FX module (MMF SC) with 16 MB for X-Pedition 8000/8600	1.0.0.0	
SSR-HFX21-08-AA	8-port 100 Base-FX module (MMF SC) with 16 MB for X-Pedition 8000/8600	3.0.0.0	
SSR-HFX29-08	8-port 100 Base-FX SMF module with 16 MB for X-Pedition 8000/8600	2.0.0.0	
SSR-HFX29-08-AA	8-port 100 Base-FX SMF module with 16 MB for X-Pedition 8000/8600	2.0.0.0	
SSR-HSSI-02	2-port HSSI module for X-Pedition 8000/8600	2.1.0.0	
SSR-HSSI-02-AA	2-port HSSI module for X-Pedition 8000/8600	3.0.0.0	
SSR-HTX12-08	8-port 10/100 TX module (Cat 5 RJ-45) with 4 MB for X-Pedition 8000/8600	1.0.0.0	
SSR-HTX12-08-AA	8-port 10/100 TX module (Cat 5 RJ-45) with 4 MB for X-Pedition 8000/8600	3.0.0.0	
SSR-HTX22-08	8-port 10/100 TX module (Cat 5 RJ-45) with 16 MB for X-Pedition 8000/8600	1.0.1.0	
SSR-HTX22-08-AA	8-port 10/100 TX module (Cat 5 RJ-45) with 16 MB for X-Pedition 8000/8600	3.0.0.0	
SSR-HTX32-16	16-port 10/100 TX module (Cat 5 RJ-45) with 16 MB [T-Series] for X-Pedition 8000/8600	3.1.0.0	
SSR-MEM-128	128MB Memory Upgrade Kit for SSR-CM2-64, SSR-CM2-128, SSR-CM3-128, and ER16-CM3-128	1.1.0.0	1.1.0.2
SSR-PCMCIA 35-028-01 35-053-01 35-053-02 35-053-03 37-002-01	8MB PCMCIA card for SSR-CM2-64, SSR-CM2-128, SSR-CM3-128, SSR-CM4-256, ER16-CM3-128, and ER16-CM4-256	1.0.0.0	1.0.0.0
SSR-PCMCIA 35-028-02 35-053-04 37-010-01	8MB PCMCIA card for SSR-CM2-64, SSR-CM2-128, SSR-CM3-128, SSR-CM4-256, ER16-CM3-128, and ER16-CM4-256	3.0.1.6, 3.0.1.7, 3.1.0.8 and up excluding 3.2.0.0	E3.0.0.0
SSR-POS21-04	4-port OC-3c/STM-1 Packet over SONET/SDH MMF module [T-Series] for X-Pedition 8000/8600	3.1.0.0	
SSR-POS29-04	4-port OC-3c/STM-1 Packet over SONET/SDH SMF module [T-Series] for X-Pedition 8000/8600	3.1.0.0	
SSR-POS31-02	2-port OC-12c/STM-4 Packet over SONET/SDH MMF module [T-Series] for X-Pedition 8000/8600	3.1.0.0	
SSR-POS39-02	2-port OC-12c/STM-4 Packet over SONET/SDH SMF module [T-Series] for X-Pedition 8000/8600	3.1.0.0	

Part	Description	Minimum System Firmware Version	Minimum Boot Firmware Version
SSR-PS-16	AC Power Supply module for X-Pedition 8600	1.0.0.0	
SSR-PS-16-DC	DC Power Supply module for X-Pedition 8600	1.0.0.0	
SSR-PS-8	AC Power Supply module for X-Pedition 8000	1.0.0.0	
SSR-PS-8-DC	DC Power Supply module for X-Pedition 8000	1.0.0.0	
SSR-SERC-04	4-port Serial module with compression for X-Pedition 8000/8600	2.1.0.0	
SSR-SERC-04-AA	4-port Serial module with compression for X-Pedition 8000/8600	3.0.0.0	
SSR-SERCE-04	4-port Serial module with compression and encryption for X-Pedition 8000/8600	2.1.0.0	
SSR-SERCE-04-AA	4-port Serial module with compression and encryption for X-Pedition 8000/8600	3.0.0.0	
SSR-SF-16	Switching Fabric module for X-Pedition 8600	1.2.0.0	
XP-PCMCIA-16AT	16MB ATA PCMCIA card for SSR-CM2-64, SSR-CM2-128, SSR-CM3-128, SSR-CM4-256, ER16-CM3-128, and ER16-CM4-256	E8.2.0.0	E3.1.0.0
XP-PCMCIA-32AT	32MB ATA PCMCIA card for SSR-CM2-64, SSR-CM2-128, SSR-CM3-128, SSR-CM4-256, ER16-CM3-128, and ER16-CM4-256	E8.2.0.0	E3.1.0.0
XP-PCMCIA-16LN	16MB PCMCIA card for SSR-CM2-64, SSR-CM2-128, SSR-CM3-128, SSR-CM4-256, ER16-CM3-128, and ER16-CM4-256	3.0.1.6, 3.0.1.7, 3.1.0.8 and up excluding 3.2.0.0	E3.0.0.0

The following table lists hardware **not** supported by this Firmware Release. The last Firmware Release to support this hardware was 3.0.X.X.

Part	Description
SSR-2-B	SSR2000 with 32 MB
SSR-2-B-AA	SSR2000 with 32 MB
SSR-CM-128	Control Module 1 with 128 MB memory for SSR8000 and SSR8600
SSR-CM-64	Control Module 1 with 64 MB memory for SSR8000 and SSR8600

The following table lists supported hardware that is System Firmware and Boot Firmware version independent.

Part	Description
APHY-21	SSR-ATM29-02 1 port OC-3 MMF Physical Interface Module
APHY-22	SSR-ATM29-02 1 port OC-3 UTP Physical Interface Module
APHY-29IR	SSR-ATM29-02 1 port OC-3 SMF-IR Physical Interface Module
APHY-67	SSR-ATM29-02 1 port DS-3/T3 Physical Interface Module (Coax)
APHY-77	SSR-ATM29-02 1 port E-3 Physical Interface Module (Coax)
APHY-82	SSR-ATM29-02 1 port T-1 Physical Interface Module (UTP)
APHY-92	SSR-ATM29-02 1 port E-1 Physical Interface Module (UTP)
FPHY-01	SSR-FDDI-02 MMF DAS/SAS with SC connectors
FPHY-02	SSR-FDDI-02 UTP SAS with RJ45 connector
FPHY-09	SSR-FDDI-02 SMF DAS/SAS with SC connectors
GPIM-01	ER-16 Gigabit Ethernet Physical Interface Module, 1000BaseSX
GPIM-08	ER-16 Gigabit Ethernet Physical Interface Module, Long Haul (70Km)
GPIM-09	ER-16 Gigabit Ethernet Physical Interface Module, 1000BaseLX
SSR-2-RACKMOUNT	Rack Mount Kit for X-Pedition 2000 and X-Pedition 2100
SSR-449DTE-02	4 meter 2 lead cable with 2 male RS449 DTE (male) connectors
SSR-530DTE-02	4 meter 2 lead cable with 2 male RS530 (male) connectors
SSR-8-PS-IMPCT	SSR 8000 Impact Kit
SSR-HSSI-CAB	3 meter HSSI cable, male to male connector
SSR-V35-DTE-02	4 meter 2 lead cable with 2 male V35 DTE (male) connectors
SSR-X21DTE-02	4 meter 2 lead cable and 2 make X21 DTE (male) connectors

**HARDWARE REQUIREMENTS TABLE:**

**NOTE:** X-Pedition line card hardware makes use of three basic ASIC versions (pre AA-series, AA-series and T-series). The features supported by each line card are roughly defined by which series of ASIC hardware is used on that card.

The following table shows the hardware supporting specific features in this release:

X-Pedition Feature Set / Part Number	Description	Pre AA	AA – Series									T – Series				
		Weighted Fair Queuing	Network Address Translation	Server Load Balancing	Per Flow Rate Limiting	Flow Aggregate Rate Limiting	Per Protocol VLAN	Established Bit ACL	TOS Rewrite	Layer 4 Bridging	Multiple IPX Encapsulation	Per Port Rate Limiting	Aggregate Rate Limiting	Jumbo Frame Support	Weighted Fair Queuing	Weighted Random Early Detection
<b>XP 5SSRM-02</b>																
5SSRM-02	Router Module for the Matrix E5	X	X	X	X	X	X	X	X	X	X					
<b>XP 6SSRM-02</b>																
6SSRM-02	Router Module for the Matrix E6 & E7	X	X	X	X	X	X	X	X	X	X					
<b>XP 5SSRM-02&amp; XP 6SSRM-02</b>																
6SSRLC-FX-AA	8-port 100Base-FX (MTRJ)	X	X	X	X	X	X	X	X	X	X					
6SSRLC-LX-AA	2-port 1000Base-LX	X	X	X	X	X	X	X	X	X	X					
6SSRLC-LX70-AA	1-port 1000Base-LX 70 KM	X	X	X	X	X	X	X	X	X	X					
6SSRLC-SER-AA	2-port Serial	X	X	X	X	X	X	X	X	X	X					
6SSRLC-SERC-AA	4-port Serial, compression	X	X	X	X	X	X	X	X	X	X					
6SSRLC-SERCE-AA	4-port Serial, compression & encryption	X	X	X	X	X	X	X	X	X	X					
6SSRLC-SX-AA	2-port 1000Base-SX	X	X	X	X	X	X	X	X	X	X					
6SSRLC-TX-AA	8-port 10/100Base-TX	X	X	X	X	X	X	X	X	X	X					
<b>XP 2000 / 2100</b>																
SSR-2-B128	X-Pedition 2000	X	X	X	X	X	X	X	X	X	X					
SSR-2-FX	8-port 100Base-FX	X														
SSR-2-FX-AA	8-port 100Base-FX	X	X	X	X	X	X	X	X	X	X					
SSR-2-GSX (AA)	X-Pedition 2100		X	X	X	X	X	X	X	X	X					
SSR-2-HSSI-AA	2-port HSSI	X	X	X	X	X	X	X	X	X	X					
SSR-2-LX	2-port 1000Base-LX															
SSR-2-LX-AA	2-port 1000Base-LX		X	X	X	X	X	X	X	X	X					
SSR-2-LX70	1-port 70 km 1000Base-LX															
SSR-2-LX70-AA	1-port 70 km 1000Base-LX		X	X	X	X	X	X	X	X	X					
SSR-2-SER	2-port Serial	X														
SSR-2-SER-AA	2-port Serial	X	X	X	X	X	X	X	X	X	X					
SSR-2-SERC	4-port Serial, compression	X														
SSR-2-SERC-AA	4-port Serial, compression	X	X	X	X	X	X	X	X	X	X					
SSR-2-SERCE	4-port Serial, compression & encryption	X														
SSR-2-SERCE-AA	4-port Serial, compression & encryption	X	X	X	X	X	X	X	X	X	X					
SSR-2-SX	2-port 1000Base-SX															
SSR-2-SX-AA	2-port 1000Base-SX		X	X	X	X	X	X	X	X	X					
SSR-2-TX	8-port 10/100 TX	X														
SSR-2-TX-AA	8-port 10/100 TX	X	X	X	X	X	X	X	X	X	X					
<b>XP 8000 / 8600</b>																
SSR-ARE	Advanced Routing Engine															
SSR-ATM29-02	2-port ATM OC-3	X	X	X	X			X	X	X	X	X	X	X	X	X
SSR-FDDI-02	2-port FDDI	X	X	X	X			X	X	X	X	X	X	1	X	X
SSR-GLH39-02	2-port 1000 LLX/LH	X	X	X	X			X	X	X	X	X	X	X	X	X
SSR-GLX19-02	2-port 1000 LX – 4 MB															

X-Pedition Feature Set / Part Number	Description	Pre AA	AA – Series								T – Series					
		Weighted Fair Queuing	Network Address Translation	Server Load Balancing	Per Flow Rate Limiting	Flow Aggregate Rate Limiting	Per Protocol VLAN	Established Bit ACL	TOS Rewrite	Layer 4 Bridging	Multiple IPX Encapsulation	Per Port Rate Limiting	Aggregate Rate Limiting	Jumbo Frame Support	Weighted Fair Queuing	Weighted Random Early Detection
SSR-GLX29-02	2-port 1000 LX – 16 MB															
SSR-GLX29-02-AA	2-port 1000 LX – 16 MB		X	X	X	X	X	X	X	X						
SSR-GLX39-02	2-port 1000 LX	X	X	X	X		X	X	X	X	X	X	X	X	X	X
SSR-GLX70-01	1-port 70 km 1000Base-LX															
SSR-GLX70-01-AA	1-port 70 km 1000Base-LX		X	X	X	X	X	X	X	X						
SSR-GSX11-02	2-port 1000 SX – 4 MB															
SSR-GSX21-02	2-port 1000 SX – 16 MB															
SSR-GSX21-02-AA	2-port 1000 SX – 16 MB		X	X	X	X	X	X	X	X						
SSR-GSX31-02	2-port 1000 SX	X	X	X	X		X	X	X	X	X	X	X	X	X	X
SSR-GTX32-02	2-port 1000 TX	X	X	X	X		X	X	X	X	X	X	X	X	X	X
SSR-HFX11-08	8-port 100 Base-FX – 4 MB	X														
SSR-HFX21-08	8-port 100 Base-FX – 16 MB	X														
SSR-HFX21-08-AA	8-port 100 Base-FX – 16 MB	X	X	X	X	X	X	X	X	X						
SSR-HFX29-08	8-port 100 Base-FX SMF	X														
SSR-HFX29-08-AA	8-port 100 Base-FX SMF	X	X	X	X	X	X	X	X	X						
SSR-HSSI-02	2-port HSSI	X														
SSR-HSSI-02-AA	2-port HSSI	X	X	X	X	X	X	X	X	X						
SSR-HTX12-08	8-port 10/100 TX – 4 MB	X														
SSR-HTX12-08-AA	8-port 10/100 TX – 4 MB	X	X	X	X	X	X	X	X	X						
SSR-HTX22-08	8-port 10/100 TX – 16 MB	X														
SSR-HTX22-08-AA	8-port 10/100 TX – 16 MB	X	X	X	X	X	X	X	X	X						
SSR-HTX32-16	16-port 10/100 TX – 16 MB	X	X	X	X		X	X	X	X	X	X		X		
SSR-POS21-04	4-port OC-3/STM-1 POS MMF	X	X	X	X		X	X	X	X	X	X	X	X	X	X
SSR-POS29-04	4-port OC-3/STM-1 POS SMF	X	X	X	X		X	X	X	X	X	X	X	X	X	X
SSR-POS31-02	2-port OC-12/STM-4 POS MMF	X	X	X	X		X	X	X	X	X	X	X	X	X	X
SSR-POS39-02	2-port OC-12/STM-4 POS SMF	X	X	X	X		X	X	X	X	X	X	X	X	X	X
SSR-SERC-04	4-port Serial, compression	X														
SSR-SERC-04-AA	4-port Serial, compression	X	X	X	X	X	X	X	X	X	X					
SSR-SERCE-04	4-port Serial, compression & encryption	X														
SSR-SERCE-04-AA	4-port Serial, compression & encryption	X	X	X	X	X	X	X	X	X	X					
<b>ER16</b>																
ER16-04	4-port 1000Base GBIC	X	X	X	X		X	X	X	X	X	X	X	X	X	X
ER16-08	8-port 1000Base GBIC	X	X	X	X		X	X	X	X	X	X	X	X	X	X
ER16-SX-08	8-port 1000Base-SX	X	X	X	X		X	X	X	X	X	X	X	X	X	X
ER16-TX-24	24-port 10/100 Base-TX	X	X	X	X		X	X	X	X	X	X	X	X	X	X
ER16-TX-32	32-port 10/100 Base-TX	X	X	X	X		X	X	X	X	X	X	X	X	X	X

<sup>1</sup> SSR-FDDI-02 jumbo frame support is limited to 4500 bytes.

**NETWORK MANAGEMENT SOFTWARE SUPPORT:**

The following table displays information on the Network Management Software that supports this release:

<b>NMS Platform</b>	<b>Version</b>	<b>Part Number</b>
NETSIGHT-EM (NetSight Element Manager)	3.0	NS-EM-LIC-1 NS-EM-WEB NS-EM-CD NS-EM-LIC-5 NS-EM-LIC-10 NS-EM-LIC-20
NetSight Switch and Topology Manager	1.2	NETSIGHT-SM-TM
SPECTRUM Enterprise Manager	6.0.2	SM-CS11091 SM-ENT1001

**NOTE:** Network Management Software may not utilize the latest features in the E8.2.0.0 System Firmware. Enterasys Networks recommends reviewing the release notes included with the user's specific Network Management Platform for more information.



**INSTALLATION AND CONFIGURATION NOTES:**

## Password Recovery

If an X-Pedition password is lost and the user is unable to log in or enter Enable mode, the procedure outlined in <http://www.enterasys.com/support/techtips/tk0306-9.html> can provides access to the system.

**ISSUES RESOLVED IN E8.2.1.1**

- Because all of the issues in the following tables have been resolved, a statement with each issue declaring its resolution has not been included.
- Resolved Issues are sorted alphabetically by topic heading.

<b>Access Control List (ACL)</b>	<b>I.D.</b>
Commented-out ACL commands will be negated after an "acl-edit" mode command is performed and the change is saved. This issue occurs only if no other commented out lines exist in the configuration.	F1649
Attempting to delete a line using acl-edit will lock ACL commands into the configuration database.	F1675
In order to delete all ACLs, a reboot must be performed after a hot-swap.	F1692

<b>Address Resolution Protocol (ARP)</b>	<b>I.D.</b>
If the link to an end-station from an STP-enabled port is disconnected, the ARP table will clear. If the X-Pedition has attained a considerable amount of ARP entries, disconnecting this link could, therefore, introduce an ARP broadcast storm to the network. <i>This issue originally appeared in E8.1.0.3, and was resolved in E8.1.0.7.</i>	F1451
The <b>arp add</b> command now includes an additional <b>vlan</b> parameter. This parameter enables the specification of a VLAN for the static ARP entry, allowing packets destined for a specified IP address to be forwarded through all ports in the VLAN associated with that IP interface. <b>NOTE:</b> The <b>vlan</b> and <b>exit-port</b> parameters cannot be used simultaneously. <i>This issue was added in E8.1.0.9.</i>	F1474
When the CLI is used to add an ARP entry, the system incorrectly allows the inclusion of both the <b>exit-port</b> and <b>vlan</b> parameters in a single command. <i>This issue was resolved in E8.2.0.2.</i>	F1559
Static ARP entries configured on a VLAN rather than an exit port will be modified when new ARP traffic is seen. <i>This issue originally appeared in E8.1.0.9, and was resolved in E8.1.0.12.</i>	F1747

<b>AppleTalk / Advanced Routing Engine (ARE)</b>	<b>I.D.</b>
AppleTalk nodes (iMacs, for example) are able to communicate only in the default zone. When an AppleTalk node's zone membership is changed via the chooser, those nodes are unable to browse or communicate with any other nodes in the new zone. If the AppleTalk node's membership is changed back to the default zone, communication between nodes will resume. <i>This issue was resolved in E8.1.0.9.</i>	F1514
If a partial command for either <b>save active</b> (i.e. "save ac") or <b>save startup</b> (i.e. "save star") is entered while in 'are-config' mode, the command line will not complete itself, and will not be recognized. Hitting the space-bar will cause the commands to complete as they should. <b>NOTE:</b> This issue occurs ONLY when the user Telnets into the router over the network. <i>This issue was resolved in E8.1.0.9.</i>	F1521
AppleTalk ping results will not display during a Telnet management session. A serial console management session works correctly.	F1583

<b>Asynchronous Transfer Mode (ATM)</b>	<b>I.D.</b>
The second port of an ATM card will not pass multicast/broadcast traffic when the interface type is set to "point-to-point". <b>NOTE:</b> The default ATM interface type is "broadcast"; when in this mode, the ATM card passes multicast/broadcast traffic on both ports.	F1456

<b>Asynchronous Transfer Mode (ATM)</b>	<b>I.D.</b>
The X-Pedition does not correctly bridge packets between Virtual Circuits configured on the same physical ATM port. <i>This issue was resolved in E8.2.0.1.</i>	F1538
<b>Auto-Negotiation</b>	<b>I.D.</b>
When re-auto-negotiation between X-Pedition and Vertical Horizon product lines becomes necessary (example: the X-Pedition is rebooted), the re-auto-negotiate will work incorrectly. This causes affected ports to stop passing traffic. <i>This issue was resolved in E8.1.0.9.</i>	F1532
<b>Cabletron Discovery Protocol (CDP)</b>	<b>I.D.</b>
The container MAC address transmitted with CDP packets is 00 00 00 00 00 00. This is incorrect. <i>This issue was resolved in E8.1.0.7.</i>	F1321 F1322
The function level transmitted with CDP packets is 00 00 00 02. It should be 00 00 00 00. <i>This issue was resolved in E8.1.0.7.</i>	F1323
The "Local Port" column in output for the <b>cdp show neighbors</b> command displays incorrect information for the X-Pedition ER16. <i>This issue was resolved in E8.1.0.7.</i>	F1349
CDP does not free memory correctly when deleting neighbors from its database.	F1442
<b>Command Line Interface (Native)</b>	<b>I.D.</b>
With this release, the <b>arp add</b> command now includes an additional <b>vlan</b> parameter. This parameter enables the specification of a VLAN for the static ARP entry, allowing packets destined for a specified IP address to be forwarded through all ports in the VLAN associated with that IP interface. <b>NOTE:</b> The <b>vlan</b> and <b>exit-port</b> parameters cannot be used simultaneously. <i>This issue was resolved in E8.1.0.9.</i>	F1474
When the CLI is used to add an ARP entry, the system incorrectly allows the inclusion of both the <b>exit-port</b> and <b>vlan</b> parameters in a single command. <i>This issue was resolved in E8.1.0.10.</i>	F1559
The console session will freeze after negating the following configuration lines:  <b>port set &lt;wan-port&gt; wan-encapsulation ppp speed &lt;speed003E</b> <b>interface create &lt;ifname&gt; WAN address-netmask &lt;address&gt; port &lt;wan-port&gt;</b>	F1633
<b>Console Task</b>	<b>I.D.</b>
When the <b>system show cpu-utilization</b> command is entered repeatedly, followed by the <b>ip show routes</b> command, the console task may print the following error message:  %CONS-E-CONTROL_TIMER, NU_Control_Timer failed with status -26. <i>This issue was resolved in E8.1.0.12.</i>	F1635
<b>Copy</b>	<b>I.D.</b>
When using the <b>copy tftp-server to active</b> command to copy over an active configuration, the system will not replace the original active configuration with the new configuration. <i>This issue was resolved in E8.1.0.9.</i>	F0812

<b>Distance Vector Multicast Routing Protocol (DVMRP)</b>	<b>I.D.</b>
If DVMRP is stopped then restarted while using DVMRP scoping on an interface, an address list may be corrupted, producing a core dump. The address list may be corrupted through the <b>dvmrp show interfaces</b> command, used from Enable mode, however it may also occur when the X-Pedition accepts an IGMP Membership Response packet. <i>This issue was resolved in E8.2.0.1.</i>	F1558
When running DVMRP and Smart TRUNK(s) on the same interface, forwarding traffic will cause the X-Pedition to become a leaf router. It will subsequently prune the interface back to its source.	F1908

<b>Dynamic Host Configuration Protocol (DHCP)</b>	<b>I.D.</b>
The X-Pedition may core dump if the en0 Management Port is not configured while multiple DHCP clients are releasing and renewing DHCP leases.	F1805

<b>ER16</b>	<b>I.D.</b>
If an interface is pinged while the <b>port enable-forced-return-flows port all-ports</b> command exists in a configuration, the ER16 will core dump.	F1594
Attempting to remove power supplies may cause the ER16 to core dump.	F1660

<b>Frame-Relay</b>	<b>I.D.</b>
Frame-relay Data Link Connection Identifiers (DLCIs) between 992 and 1007 are not allowed as per standard ITU-T Q.922/ANSI T1.618.	F1814

<b>GateD</b>	<b>I.D.</b>
Entering a static route with a 32-bit netmask and the same destination and preference as an existing host route (and vice-versa) will cause GateD to stop functioning. <i>This issue was resolved in E8.1.0.7.</i>	F1399

<b>Gigabit Module</b>	<b>I.D.</b>
On T-Series Gigabit ports, the LEDs may flash intermittently while auto-negotiation is disabled.	F1296
When a port on a non-T-series gigabit line card is configured as a mirror destination, connecting the port will not turn the LEDs on.	F1525

<b>Internet Group Management Protocol (IGMP)</b>	<b>I.D.</b>
When snooping is enabled, certain channels on the ER16 will not forward IGMP membership updates. <i>This issue was resolved in E8.2.0.1.</i>	F1572
Multicast group joins seen on the same port that the multicast traffic is coming from may prevent subsequent joins on the same line card from receiving traffic. <i>This issue was resolved in E8.1.0.12.</i>	01576

<b>Internet Protocol (IP)</b>	<b>I.D.</b>
If the <b>ip disable proxy-arp interface &lt;interface name&gt;</b> command is applied to an interface, and then that interface is removed, proxy-ARP will be disabled for the entire system. Subsequently, unrouted packets will not be able to resolve across interfaces. <i>This issue was resolved in E8.1.0.7.</i>	F1374
After the negation and restoration of the <b>ip-helper address</b> command, the helper addresses (displayed through the <b>ip show helper-address interface</b> command) will disappear until the X-Pedition is rebooted. <i>This issue was resolved in E8.1.0.9.</i>	F1528

<b>Internet Packet Exchange (IPX)</b>	<b>I.D.</b>
When using a non-Ethernet II encapsulation type for IPX traffic, a novel client may not be able to communicate with its server for several minutes after a reboot; the X-Pedition may be using the wrong frame type for some SAP packets. <i>This issue was resolved in E8.2.0.1.</i>	F1375
With this release, IPX task priorities have been changed, and the following situations will no longer cause a core dump: <ul style="list-style-type: none"> <li>• Actions on ports with IPX configured (example: losing a link)</li> <li>• Hot-swapping a module with configured IPX interfaces</li> </ul> <i>This issue was resolved in E8.1.0.10.</i>	F1498
<b>Layer-3</b>	<b>I.D.</b>
When an exit port is disconnected, flows will not be removed if traffic directed toward the disconnected port does not decrease. This results in improper failover to other/backup routes. <i>This issue originally appeared in E8.0.1.2, and was resolved in E8.1.0.11.</i>	F1582 F1588
Layer-3 traffic may encounter difficulties with efficient flow setup. <i>This issue originally appeared in E8.1.0.4, and was resolved in E8.1.0.12.</i>	F1827
<b>Layer-4 Bridging</b>	<b>I.D.</b>
When enabling Layer-4 bridging ( <b>vlan enable l4-bridging on xxx</b> ) on a VLAN containing SmartTRUNKs, duplicate packet issues may occur. <b>Example:</b> A packet going into st.1 will emerge from st.2 twice.	F1234
When Layer-4 bridging is enabled on both IP and IPX VLANs located on same port(s), the X-Pedition may core dump while trying to delete a Layer-3 IPX flow entry during aging. <i>This issue was resolved in E8.1.0.9</i>	F1287
When using Layer-4 bridging, a 'tcp-established' ACL will not function properly. <i>This issue was resolved in E8.1.0.7.</i>	F1455
Layer-4 bridging hardware flows will be deleted (age-out) every 5 minutes when using the GMAC or OCMAC chipsets. <i>This issue was resolved in E8.2.0.3.</i>	F1636
<b>Link-Aggregation Control Protocol (LACP)</b>	<b>I.D.</b>
LACP advertisement packets will not transmit correctly if an LACP SmartTRUNK contains ports in the lower channels only.	F1510
With this release, LACP has progressed from a static implementation to a dynamic implementation more closely reflecting the 802.3ad standard; this is due to the dynamic configuration of LAGs and link allocation.	F1536
<b>Multicast</b>	<b>I.D.</b>
Adding a SmartTRUNK to a VLAN containing a multicast source will stop multicast traffic from routing. <i>This issue was resolved in E8.1.0.10.</i>	F0942
Multicast traffic does not pass correctly across Q-trunks on 1000Base-SX and 1000Base-LX (fiber gigabit) ports, or 10/100Base-TX (copper gigabit) ports. <i>This issue was resolved in E8.1.0.10.</i>	F1571
Multicast group joins that appear on the same port as multicast traffic will prevent any subsequent client attempting to join (on the same line card) from receiving traffic.	F1576

<b>Multicast</b>	<b>I.D.</b>
The workaround for multicast across Q-trunks in pre-“T-series” hardware has been restored. See tech bulletin TK609-1 for more information. <i>This issue originally appeared in E8.1.0.1, and was resolved in E8.1.0.12.</i>	F1685
Multicast streams on line cards using OCMAC and GMAC chips incorrectly age out every Layer-2 aging period.	F1818
When running IGMP and/or DVMRP on a SmartTRUNKed interface, multicast traffic will stop after 260 seconds.	F1871

<b>Network Address Translation (NAT)</b>	<b>I.D.</b>
The X-Pedition may core dump when NAT is dynamic and/or overloaded. <i>This issue was resolved in E8.2.0.4.</i>	01534 01652

<b>Open Shortest Path First (OSPF)</b>	<b>I.D.</b>
The configuration of Point-to-Multipoint interfaces will cause OSPF to remain in the “2-way” state. This issue occurs with many Frame Relay OSPF configurations. <i>This issue was resolved in E8.1.0.7.</i>	F1449

<b>Port</b>	<b>I.D.</b>
If the <b>ifg</b> sub-option is included in the <b>port set &lt;port#&gt; &lt;all-ports&gt;</b> command, or entered after previous <b>port set &lt;port#&gt; &lt;all-ports&gt;</b> commands have been included in the X-Pedition’s configuration, this sub-option will error the command line and disallow the line from being negated from the configuration. <i>This issue was resolved in E8.1.0.9.</i>	00617 01087 01345

<b>Port-Mirroring</b>	<b>I.D.</b>
When port-mirroring is configured, the monitor port will receive multiple copies of the same multicast packets. <i>This issue was resolved in E8.1.0.7.</i>	F1017
When mirroring under Layer-4 bridging mode, traffic matching an ACL may not be copied out of the destination ports if the ACL is applied to the inbound ports. Negating a mirroring command will also disable other configured mirrors. In rare cases, X-Pedition will core dump when a mirroring command is saved. <i>This issue was resolved in E8.2.0.1.</i>	F1527
When mirroring traffic from a port with Layer-4 bridging enabled, the X-Pedition may core dump.	F1591
When an X-Pedition is routing, and port-mirroring is included in the startup configuration, packets received by the source ports fail to be mirrored after reboot. <i>This issue originally appeared in E8.2.0.1, and was resolved in E8.2.0.2.</i>	F1625
Huntgroup SmartTRUNKs may temporarily lose connectivity when port-mirroring is configured on multiple source ports. Enterasys Networks recommends that no more than 8 source ports are mirrored to the same destination port(s).	F1725

Q-Mac	I.D.
<p>It has been determined that the QMAC may occasionally enter into a state of continual reset. With this release, the slot containing a port affected by this state will now be hot-swapped out and then back in again. This should recover the failing port.</p> <p>In addition, the following messages will display on the console:</p> <p style="padding-left: 40px;">Maximum in-a-row QMAC recoveries exceeded on port &lt;port name&gt;            Overflow counters - Ctl: &lt;num&gt;, Hi: &lt;num&gt;, Med: &lt;num&gt;, Low: &lt;num&gt;            Collision counters - Late: &lt;num&gt;, Excessive: &lt;num&gt;            Port %s QMAC recoveries: &lt;num&gt;            Total SSR QMAC recoveries: &lt;num&gt;            Hotswap OUT then IN slot &lt;slot num&gt;</p> <p>The information provided by these messages should be forwarded to Enterasys Networks for analysis. <i>This issue was resolved in E8.1.0.11.</i></p>	01499

Quality of Service (QoS)	I.D.
<p>Although entered as decimal numbers, the command <b>qos show ip</b> will display the ToS and ToS mask as decimal values preceded with the characters '0x', giving the impression that the value is in hexadecimal.</p> <p><b>NOTE:</b> With this release, the display will print the decimal value, followed by the hex equivalent:</p> <p style="padding-left: 40px;">TOS: 202 (0xca)            TOSMask: 175 (0xaf)</p> <p><i>This issue was resolved in E8.1.0.7.</i></p>	F1425

Rate-Limiting	I.D.
<p>When using the SSR-HTX32-16, attempts to apply port-based rate-limiting to the input and output ports of the same flow will result in inaccurate rate-limiting. <i>This issue was resolved in E8.1.0.7.</i></p>	F1094
<p>If a packet is broadcast for learning a Layer-2 flow, the VLAN rate-limiting policy for this flow may not be set. <i>This issue was resolved in E8.2.0.2.</i></p>	F1542
<p>If a VLAN rate-limit command does not specify a <b>destport</b> parameter, the rate limit will not get set. <i>This issue was resolved in E8.2.0.2.</i></p>	F1581
<p>When configuring a VLAN rate-limiting policy and specifying a destination port, the policy may be applied to other destination ports upon the learning of a Layer-2 flow.</p>	F1733
<p>The <b>input</b>, <b>flow-aggregate</b>, <b>vlan</b> and <b>aggregate rate-limit</b> commands have been modified with the addition of a burst compensating option. This option invokes an algorithm which will calculate rate-limit values to better handle traffic tending to come in bursts, such as FTP. The option is called "<b>burst-compensating</b>" and will automatically be invoked when specified.</p>	F1849

Remote Network Monitor Device (RMON)	I.D.
<p>While running RMON configured with <b>rmon set professional default-tables yes</b>, the X-Pedition may experience a core dump.</p>	F0871 F0973 F1023 F1042 F1500
<p>When configuring the X-Pedition to monitor a SmartTRUNK port in an RMON table, RMON will return the following inaccurate warning message:</p> <p style="padding-left: 40px;">%CLI-W-INTRUNK, port 'xx' is part of a SmartTRUNK st.x".</p> <p><i>This issue was resolved in E8.2.0.2.</i></p>	F1512

Remote Network Monitor Device (RMON)	I.D.
When monitoring traffic on the RMON “al-host” table, high protocol ports will report incorrect protocols. “Quake”, for example, will display as “LDAP”.	F1604

Routing	I.D.
Prior to this release, the number of multipath (equal cost) route entries in each route table was 16. This resulted in the allocation of excessive memory, which was subsequently never used. The number of multipath (equal cost) route entries has been altered to the more reasonable value of 4, resulting in the consumption of 30% less memory per route table entry. Because of this, the X-Pedition can now hold more route table entries and/or avoid low- or out-of-memory conditions.	F1506
When a link goes down within an OSPF or BGP domain, Layer-3 flows may not be properly removed. This may result in a misdirected flow that will not be removed unless traffic ceases on the flow for more than 30 seconds.	01770 01763 01757 01358 01801

Serial WAN Module	I.D.
Serial WAN modules (i.e. 2-port HSSI, 2-port Serial (SERC), 4-port Serial (SERC), and 4-port Serial Encrypted (SERCE)) cannot be hot-swapped out of slot 15 in the X-Pedition 8600. Upon attempting such a hot-swap, the system will fail to perform any other hot-swap request until the X-Pedition is rebooted.	F1555

Simple Network Management Protocol (SNMP)	I.D.
When querying the 'sysHwModuleTable' MIB on an X-Pedition 8000, slot “0” will not register if a Control Module exists in that slot. <i>This issue was resolved in E8.1.0.7.</i>	F0945 F1083
An SNMP Get or GetNext request for objects in the vrrpMIB may return invalid or incomplete results. In addition, SNMP Set requests for objects in the vrrpMIB will fail.	F1344
BGP management traps are not currently supported.	F1376
If a topology change occurs, and an X-Pedition is the root bridge both before and after the change, the X-Pedition will send out a new root bridge trap regardless of its previous function as the root. <i>This issue was resolved in E8.1.0.7.</i>	F1437
When Querying the 'dot1dTpFdbTable', addresses belonging to SmartTRUNKs will incorrectly display port “0”. Subsequently, the user cannot back trace the origin of a specific address. <i>This issue was resolved in E8.1.0.7.</i>	F1457
Entering the command <b>snmp set mib name &lt;MIB&gt; status disable</b> will cause the X-Pedition to lose pagination. <i>This issue was resolved in E8.1.0.7.</i>	F1471
The X-Pedition does not send the SNMP trap “envHotSwapOut” when the backup Control Module is hot-swapped out. <i>This issue was resolved in E8.1.0.10.</i>	F1549
Entering a <b>snmp set</b> command with a duplicate community name will produce an error. When the erroneous command is negated and the active configuration is saved, the error will still occur when the command is reentered using the same community name.	F1659
If using SNMP to query the ifTable at the exact time a link goes up or down, the X-Pedition will core-dump.	F1802
With SNMP turned on, removing the fan tray from an X-Pedition may cause a core dump or print out an error message. <i>This issue originally appeared in E8.1.0.7, and was resolved in E8.1.0.12.</i>	01809



<b>SmartTRUNK</b>	<b>I.D.</b>
In E8.1.0.0 and later releases, secondary SmartTRUNK ports are incorrectly forced into the blocking state when their links come up. It takes up to 30 seconds before these ports can settle to the correct STP state, resulting in lost traffic during that time frame. <i>This issue was resolved in E8.1.0.7.</i>	F1162 F1163
When a physical port in a SmartTRUNK is disconnected, the learned Layer-2 table entries are removed from the disabled port. As a result, Layer-2 activities will increase. <i>This issue was resolved in E8.1.0.7.</i>	F1261 F1297
BPDUs may incorrectly display the same cost for SmartTRUNK ports with different link speeds.	F1423
SmartTRUNK links may be affected when the Huntgroup protocol is enabled on SmartTRUNKs while the Control Module is too busy to send or receive Huntgroup PDUs. <b>NOTE:</b> This issue was resolved in conjunction with a timer fix used to correct a VRRP packet delay issue. For more information, please see "VRRP" on page 19 of these Release Notes.	F1433
SmartTRUNKs may prematurely age-out Layer-2 table entries, causing those entries to be relearned at 5 minute intervals.	F1612
Specifying an uncreated SmartTRUNK through the <b>smarttrunk lacp aggregator</b> command (Active configuration) will cause the X-Pedition to crash.	F1746

<b>Spanning Tree Protocol (STP)</b>	<b>I.D.</b>
Command conflicts between BPDU filtering and enabling STP on ports are not adequately detected. <b>NOTE:</b> With this release, the system will now detect these conflicts and give the user an opportunity to correct them. <i>This issue was resolved in E8.2.0.2.</i>	F1149
A core dump may occur on an X-Pedition running System Firmware version E8.1.2.0 or higher when a spanning-tree packet is received on a WAN port connected to another router using System Firmware version E8.1.0.6 or lower. <b>NOTE:</b> This issue does not occur when the routers on both ends of a WAN connection are using System Firmware prior to versions E8.1.0.6 and E8.1.2.0. In addition, this does not occur with any System Firmware versions E8.2.X.X. <i>This issue was resolved in E8.1.0.7.</i>	F1428
If a topology change occurs, and an X-Pedition is the root bridge both before and after the change, the X-Pedition will send out a new root bridge trap regardless of its previous function as the root. <i>This issue was resolved in E8.1.0.7.</i>	F1437
The <b>stp filter-bpdu all-ports</b> command will not apply BPDU filtering to newly hot-swapped modules. In order to filter BPDU from new modules, the user should either comment this command out and back in, or negate and re-enter it. <i>This issue was resolved in E8.1.0.9.</i>	F1468
Changes in STP root bridge variables (example: hello_time, forward_delay, max_age) will not be detected by non-root routers. This causes the X-Pedition to continue sending a TCN BPDU to the root bridge until the variables are returned to their original values. <i>This issue was resolved in E8.2.0.1.</i>	F1490
The X-Pedition will continue to forward VLAN-tagged BPDUs on a Q-trunk when STP is disabled. <i>This issue was resolved in E8.2.0.3.</i>	01630
The <b>stp enable port</b> command fails to initialize STP on some ports when multiple ports are specified.	F1687
BPDU filtering fails after a port is added to a VLAN. <i>This issue was resolved in E8.2.0.3.</i>	01691

<b>Statistics</b>	<b>I.D.</b>
The "In-errors" field, produced through the <b>statistics show ip-interface all</b> command, displays inaccurate information.	F1751

Switch Fabric Card	I.D.
When a switch fabric card is hot-swapped into an X-Pedition 8600, it is not fully ready to take over when the other switch fabric either fails or is hot-swapped out. This results in a fail-over time, which is slightly longer than it should be. <i>This issue was resolved in E8.1.0.9.</i>	F1531

System	I.D.
With this release, the System Firmware has been enhanced to prevent the use of unsupported hardware configurations. The following error messages will appear when an unsupported configuration is attempted: <pre> %SYS-E-CPU_CHASSIS_PROBLEM_1 %SYS-F-CPU_CHASSIS_PROBLEM_2 %SYS-F-CPU_CHASSIS_PROBLEM_3 %SYS-E-CM_TYPE_MISMATCH </pre>	F0899
With this release, the system names for the X-Pedition E5, E6, and E7 modules have been changed. Previously, they were referred to as "SSR 2000/6600", regardless of the system type. The System Firmware now detects the individual system type and alters the name accordingly. The individual system names are as follows: <ul style="list-style-type: none"> <li>• E5 = "5SSRM/5C105"</li> <li>• E6 = "6SSRM/6C105"</li> <li>• E7 = "6SSRM/6C107"</li> </ul> <i>This issue was resolved in E8.2.0.2.</i>	F1233
When the <b>system set idle-time</b> command is configured, timeouts will not occur if the console or a Telnet session is left paginated. This presents a security risk. <i>This issue was resolved in E8.1.0.9.</i>	F1507
The X-Pedition may freeze after extended periods of use. While in this condition, no console or Telnet access is possible, and the system will not pass traffic. <i>This issue was resolved in E8.1.0.10.</i>	F1622

Terminal Access Controller Access Control System+ (TACACS+/RADIUS)	I.D.
When responding to the <b>tacacs-plus set source x.x.x.x</b> command, the X-Pedition incorrectly allows any IP address as the source. The source IP address should already be associated to an interface on the router.  <b>Example:</b> If <b>tacacs-plus set source 2.2.2.2</b> is entered, the X-Pedition should first verify that an interface exists with an IP address of "2.2.2.2". If not, an error should display upon <b>save active</b> , and the command should be errored-out in the active configuration. <i>This issue was resolved in E8.1.0.8.</i>	F1197
TACACS +/RADIUS accounting functions may produce memory leaks. <i>This issue was resolved in E8.1.0.12.</i>	01760

Telnet	I.D.
When using Telnet to connect to an X-Pedition, utilizing certain UNIX clients as intermediate hops, the session may not connect.  In this case, the client will display the following: <pre> Trying 10.136.64.77... Connected to 10.136.64.77. Escape character is '^]'. Connection closed by foreign host. </pre> In addition, Telnet connection to the X-Pedition may occasionally fail when the router is busy. <i>This issue was resolved in E8.1.0.7.</i>	F1082

Telnet	I.D.
<p>Telnet users do not see error messages generated during a Telnet session.</p> <p><b>Example</b> (Normal Operation) :</p> <pre>xp(config)# vlan add ports gi.3.3 to red       %CLI-W-MODNOTFOUND, gi.3.3: module '3' does not exist - ignoring       %CLI-E-IVPORTLIST, invalid port list 'gi.3.3'</pre> <p>In this case, the error messages above will not be returned to the Telnet user. Serial console sessions do not have this problem. <i>This issue was resolved in E8.1.0.8.</i></p>	01501
<p>With this release, "inactive" Telnet sessions (during which a connection was opened but the "Enter" key was never pressed to activate the session) will timeout, allowing the connection of other Telnet sessions to the X-Pedition. The timeout value may be set with the Configure-mode command <b>system set idle-timeout telnet x</b>, where 'x' represents time in minutes. <i>This issue was resolved in E8.2.0.5.</i></p>	01557

Trivial File Transfer Protocol (TFTP)	I.D.
<p>When using TFTP to copy configurations from the X-Pedition to external TFTP servers, the marks around comments in the configuration will not be transferred. Consequently, any previously commented line in the configuration is no longer considered commented when the external TFTP server receives the file. <i>This issue was resolved in E8.1.0.9.</i></p>	F1367

Virtual Local Area Network (VLAN)	I.D.
<p>Applying the <b>qos set</b> and <b>port flow-bridging</b> configuration commands to a VLAN will cause traffic to be flooded through all ports in the VLAN.</p>	F1799

Virtual Router Redundancy Protocol (VRRP)	I.D.
<p>Extremely high levels of CPU utilization may delay VRRP packets. <i>This issue was resolved in E8.1.0.8.</i></p>	F1433
<p>With this release, VRRP can no longer be configured on a loopback interface.</p>	F1488
<p>When an exit port is disconnected, flows will not be removed if traffic directed toward the disconnected port does not decrease. This results in improper failover to other/backup routes. <i>This issue was introduced in E8.0.1.2.</i></p>	F1582 F1588
<p>Attempting to enter the <b>ip-redundancy show vrrp interface x</b> command, when 'x' is any string that is not a VRRP interface, may cause the X-Pedition to core dump or print out an error message. <i>This issue was resolved in E8.2.0.12.</i></p>	01686

**KNOWN RESTRICTIONS AND LIMITATIONS:**

Prior to E8.2.0.0, the Known Restrictions and Limitations section contained various hardware/feature informational statements. As of E8.2.0.0, those statements have been moved to the “Informational Notes” section of the System Firmware release notes.

6SSRM-02	I.D.
<p>When a 6SSRM-02 or 5SSRM-02 configuration includes the <b>system poweron-selftest on</b> command in startup, and the X-Pedition is cold booted, the diagnostic programs will run; these programs will subsequently report failures such as:</p> <pre style="margin-left: 40px;">%DDT-E-GMAC_PHY_LOOPBACK, (Slot 1, Port 1) : GMAC PHY Loopback : FAILED %DDT-E-GMAC_TEST, (Slot 1, Port 1) : GMAC Test : FAILED %DDT-E-PORT_STATUS, (Slot 1, Port 1) : FAILED</pre> <p>The system will be unable to use desired ports, which will be reported to have failed selftest. The X-Pedition functions as designed when the <b>system poweron-selftest on</b> command is not included in the startup configuration.</p>	F1295

Access Control List (ACL)	I.D.
<p>Entering <b>save</b> in the ACL editor when no ACLs are defined causes a core dump. This issue was introduced in E8.2.1.1.</p>	F1955

Address Resolution Protocol (ARP)	I.D.
<p>After the negation of an interface configured with an ARP command, the ARP command will automatically be reassigned to a non-existing interface in the same configuration. Attempts to negate the ARP command will produce the following error messages:</p> <pre style="margin-left: 40px;">%CLI-E-FAILED, Execution failed for "no arp set interface int1 keep-time 10" %INTERFACE-E-NOEXIST, Interface int1 does not exist. Please check the name and try again.</pre> <p>The user must then recreate the negated interface in order to negate the ARP command.</p>	F0309
<p>When the X-Pedition detects a topology change, it will clear the ARP entries on a specified VLAN (or an entire ARP table if running STP) in order to ensure that Layer-3 entries maintain their integrity. This may potentially cause all existing IP connections to re-ARP simultaneously. Therefore, Enterasys Networks recommends that the user does not enable STP or PVST on connections to end-stations. If this configuration is necessary, the following commands are recommended:</p> <pre style="margin-left: 40px;">stp set port &lt;portlist&gt; edge-port true, or pvst set port &lt;portlist&gt; edge-port true spanning-tree &lt;vlanname&gt;</pre> <p>The X-Pedition will not consider a link change to an edge-port as a topology change, thereby reducing the number of unnecessary ARP entries cleared.</p>	F0811

Bridging	I.D.
<p>When using line cards introduced prior to the “AA” series, SNA/DLC/NetBIOS traffic may not be properly bridged across the X-Pedition. The issue in bridging DLC packets occurs where the length field within an IEEE 802.3 frame indicates less than 46 bytes of data.</p> <p>The X-Pedition removes the length field information of incoming IEEE 802.3, 802.2, and Ethernet SNAP packets and recalculates the field prior to retransmission. Consequently, this calculation is based on the entire length of the data field. A packet entering the X-Pedition with a length field indicating a data field of less than 46 bytes will exit with the length field recalculated incorrectly. This can be a problem with LLC2 and legacy IPX applications. Typically, such packets exist only in SNA and NetBIOS/NetBEUI environments.</p>	Hardware Limitation

Cabletron Discovery Protocol (CDP)	I.D.
<p>Cabletron Discovery Protocol will not function on a SmartTRUNK if enabled with the following command:</p> <p style="text-align: center;"><b>cdp set port-status enable port &lt;port-list&gt;</b></p> <p>This command will be rejected.</p> <p><b>Workaround:</b> Enable CDP with the <b>all ports</b> parameter, rather than the <b>&lt;port-list&gt;</b> parameter. This should allow CDP to function properly on a SmartTRUNK.</p>	F1011
<p>CDP identifies some adjacent device types (such as switches, routers, etc.) incorrectly.</p>	F1324
<p>CDP packets are not being checked for authentication code length. This length should be 16 (in decimal); if the value, when checked, is not within this parameter, the packet should be dropped and the invalid authentication code counter incremented.</p>	F1340
<p>CDP does not correctly identify local ports which are a part of a SmartTRUNK.</p>	F1350
<p>If the CDP transmit frequency is altered from its default setting the hold time will not change. Hold time should always equal 3x the increment between transmits.</p> <p>CDP hold time will function normally at the default transmit frequency setting.</p>	F1401

Control Module (CM)	I.D.
<p>In a dual Control Module configuration, only the Primary Control Module’s Boot Firmware can be updated.</p>	F0535

Dynamic Host Configuration Protocol (DHCP)	I.D.
<p>The <b>dhcp &lt;scope_name&gt; set ping-timeout &lt;number&gt;</b> command is not currently supported.</p>	F1680
<p>The Enable mode command <b>dhcp show</b> displays incorrect information if the DHCP configuration is negated before lease expiration.</p>	F1682

Distance Vector Multicast Routing Protocol (DVMRP)	I.D.
<p>If T-series line cards are not in use, a multicast packet can be replicated to only one IP VLAN in an 802.1Q trunk port. Additionally, access-routed interfaces should be used when routing multicast packets between two DVMRP routers.</p>	Hardware Limitation

Fiber Distributed Data Interface (FDDI)	I.D.
<p>Changing the station mode on a FDDI port will negate all previously executed FDDI commands.</p>	F1266

<b>Hot-Swap</b>	<b>I.D.</b>
Point-to-Point Protocol (PPP) does not renegotiate when a POS card (with Automatic Protection Switch enabled) is hot-swapped, or if either end of a connection goes down. A system reboot is required at both ends in order for PPP to renegotiate.	08223
<b>Interface</b>	<b>I.D.</b>
If an IP and IPX interface are created for a VLAN, and the IP interface is removed, traffic may stop on both the IP and the IPX interface. <b>Workaround:</b> Comment-out the IPX interface, and then comment it back in.	F1421
<b>Internet Control Message Protocol (ICMP)</b>	<b>I.D.</b>
Ping packets sent by the X-Pedition have the default Type of Service (ToS) field assigned to 0xFF, which does not conform to current RFCs. <b>Workaround:</b> This value may be changed with the <b>ping</b> command parameter <b>tos</b> .	F0662
If the X-Pedition receives a packet larger than the receiving port's MTU size, and it cannot fragment that packet, the packet will be dropped. If the packet was to be routed, the X-Pedition will reply with an ICMP error message; however, if the packet was to be bridged then no message will be sent. <b>Workaround:</b> Configure the X-Pedition to route only ICMP packets.	F1268
<b>Internet Protocol (IP)</b>	<b>I.D.</b>
Entering a static route with a 32-bit netmask and the same destination and preference as an existing host route (and vice-versa) will cause GateD to stop functioning.	F1399
<b>Layer-2</b>	<b>I.D.</b>
The maximum available number of static-entry filters is 505.	F0731
<b>Layer-3</b>	<b>I.D.</b>
The X-Pedition may core dump while attempting to delete an Layer-3 flow entry; it may be unable to find the entry, or it may find a faulting address.	F0443
If a link is disconnected and then reconnected while the X-Pedition is passing traffic, Layer-3 entries may not be deleted correctly. If routing is configured, the X-Pedition will fail to redirect traffic to a new route.	F1358
<b>Layer-4 Bridging</b>	<b>I.D.</b>
When operating in Layer-4 bridging mode via the <b>vlan enable i4-bridging</b> configuration command, the user must only employ the default address-bridging mode for Layer-2 learning on ports in the Layer-4 bridging VLAN. In addition, the user must not apply the <b>port flow-bridging &lt;port-list&gt;</b> command to any ports in an Layer-4 VLAN. <b>NOTE:</b> This restriction exists only for T-Series line cards. These cards are recognizable by the "T" printed upon them.	F0760
<b>Link-Aggregation Control Protocol (LACP)</b>	<b>I.D.</b>
LACP SmartTRUNK will not connect to a destination router when located on a line card in slots 9-16 of the X-Pedition ER16. Unlike Huntgroup protocol SmartTRUNKs, LACP SmartTRUNKs should function in the upper slots.	F1627

Link-Aggregation Control Protocol (LACP)	I.D.
If a line card containing an LACP SmartTRUNK is hot-swapped out and then back in, the SmartTRUNK will not recover.	F1654
Open Shortest Pathway First (OSPF)	I.D.
OSPF incorrectly allows the entry of numeric interface names. Numerically defined OSPF interfaces are interpreted as IP addresses, and are not valid.	F0879
When adding interfaces to OSPF using the <b>ospf add interface</b> command, no function currently exists to determine whether the interface name is valid; therefore no warning message will appear upon the entry of an invalid interface name.	F1461
Point to Point Protocol (PPP)	I.D.
When creating an IP interface on a VLAN with a single PPP port configured, the interface should be set to parameter <b>type point-to-point</b> .	07757
Port-Mirroring	I.D.
When a T-series card is used in an X-Pedition router, the first two octets in the source MAC field of some mirror output packets may appear to be corrupted. This is due to a known issue with T-series cards that modifies the source MAC of any unlearned packets, and corruption will cease once the flow has been learned.  Normal switching and routing, excluding Layer-4 bridging in flow-based mode, will not be affected by this error.	H0007
If large numbers of flows exist on an ER16 during the addition of a port-mirroring command to the configuration, the console may appear to freeze; it may take 5 minutes or more to modify all flows for a single port-mirror command.	F1043
Power On Self-Test (POST)	I.D.
Entering the <b>system set poweron-selftest quick</b> command in the ER16's configuration causes the system to display the following errors during "DIAG BOOT TEST":  <pre> %DDT-E-MEMORY_ALIASING, Memory error @ 0x70000000 ; Possible aliasing with: 0x70800000 %DDT-E-MEMORY_ALIASING, Memory error @ 0x70000004 ; Possible aliasing with: 0x70800004 %DDT-E-MEMORY_ALIASING, Memory error @ 0x70000008 ; Possible aliasing with: 0x70800008 %DDT-I-MEM_MAX_ERRORS, Max Errors Reached; Suppressing further errors for this test %DDT-I-MEM_INFO, \$Memory Failure : SOPP Memory MAIN DRAM [16775168 bytes] %DDT-E-SOPP_MEM_TEST, (Slot 5) : SOPP Memory Test : FAILED %DDT-E-GE_MODULE, GE Module (Slot 5) : FAILED </pre> These errors are incorrect and should be ignored.	F0619
Quality of Service (QoS)	I.D.
The <b>interface name</b> parameter, which is the last parameter when configuring an IPX QoS entry, does not work. Do not enter an interface name when configuring an IPX QoS entry.	F1673

Rate-Limiting	I.D.
<p>When Flow-Aggregate Rate-Limiting is enabled, the amount of traffic exiting a serial WAN port running PPP may be significantly less than the specified rate-limit. This is due to a PPP priority-queue overflow.</p> <p><b>Workaround:</b> Change the PPP priority queue depths on the serial port using the following commands:</p> <pre> ppp define service &lt;name&gt; [low-priority-queue-depth med-priority-queue-depth high-priority-queue-depth] &lt;number&gt; ppp apply service &lt;name&gt; ports &lt;wan-port&gt; </pre>	F1475
<p>10/100, Gigabit, and FDDI cards containing SIPP ASIC versions 2.0 and 2.1 are restricted to these rate limiting ranges:</p> <ul style="list-style-type: none"> <li>• 1.5M – 100M for 10/100 and FDDI modules</li> <li>• 6M – 1G for Gigabit modules</li> </ul> <p>To display the version of the SIPP ASIC on the cards in your system enter the Enable mode command <b>system show hardware verbose</b> . For each slot listed locate the Service String line. The next two lines are examples of the service strings with the SIPP version bolded and slightly enlarged:</p> <pre> Service String: 4_G2.1_4_1<b>2.0</b>_16_02.0_2 Service String: 90_G1.1_16_1<b>2.1</b>_16_02.1_16 </pre>	10226

Remote Network Monitor Device (RMON)	I.D.
<p>RMON must be enabled in the configuration before RMON MIBs may be accessed via SNMP.</p>	F0832
<p>When the user negates and re-enters the <b>rmon enable</b> command, RMON memory will fill and deliver the following warning message:</p> <pre> %SNMP-W-RMON_MEM, RMON memory max'ed out. You may want to add more memory to RMON </pre> <p>Subsequently attempting to perform a hot swap through the <b>system hotswap out</b> command will cause the X-Pedition to freeze.</p>	F1215
<p>When passing traffic from one port to another, and using RMON to capture incoming packets on one of these ports, the receiving port will receive twice as many packets as the number that was sent.</p>	F1378
<p>Attempting to set the <b>data-mask</b> and <b>data-not-mask</b> options in the <b>rmon filter</b> command through the CLI will not succeed. The masks will not properly convert from a string to a mask.</p>	F1387
<p>X-Pedition hardware currently drops BAD CRC, Runt and Jumbo packets before RMON is able to capture them. Because of this, the RMON parameters <b>pkt-status</b>, <b>status-mask</b> and <b>status-not-mask</b> (designed to capture these specific packet types) do not work.</p>	F1390
<p>Netsight 3.0's RMON tool allows the user to create packet capture indexes. Currently, however, it will not allow the user to modify a previously created packet capture index.</p>	F1413
<p>After using the <b>rmon set protocol-directory</b> to set all parameters to "off", protocols will still be logged in the RMON matrix, address-map and hosts tables.</p>	F1416



<b>Routing</b>	<b>I.D.</b>
<p>Aggressive internal testing has uncovered a weakness in some configurations containing static routes. Configurations using only dynamic routing are unaffected.</p> <p>Erroneously configured static routes may produce a routing loop. As a result, excessive CPU utilization can occur when an improperly configured upstream router sends ICMP redirect messages to a downstream router. It appears this problem has been present in the Enterasys Networks System Firmware since the 2.1.0.0 release.</p> <p>Routing protocols (e.g. OSPF, BGP, RIP) automatically discover and correct any loops in dynamic routing configurations. In these cases, no excessive CPU utilization will occur.</p>	

<b>Simple Network Management Protocol (SNMP)</b>	<b>I.D.</b>
Sets to dot1qPvid in the Q MIB will fail for ports on line cards that do not support Layer-4 bridging.	F1020
Querying for dot1dStpPortEntry MIBs will return incorrect values for STP-disabled ports. In addition, querying for the constant dot1dStpHoldTime will return "0" rather than "1".	F1093
VLANs created via the CLI with names containing spaces cannot be modified using the IETF Q MIB. <b>Workaround:</b> Remove spaces from VLAN names.	F1245
The use of the <b>snmp set target</b> command has changed in E8.2.0.0. It is now allowed to configure multiple targets with the same IP address and different community strings. Traps will not be sent to a target if the community string specified on the target is not configured.	F1258
Attempting to set the dot1qPvid MIB on a PVST enabled port should produce an error. At this time it does not.	F1260
Attempting to set the dot1qPvid MIB for a port that has been forbidden from that VLAN should produce an error. At this time it does not.	F1446

<b>SmartTRUNK</b>	<b>I.D.</b>
Huntgroup protocol supports up to 256 ports. In the ER16, Huntgroup protocol is supported only for modules in slots 1 through 7. SmartTRUNK without Huntgroup protocol is supported for all modules.	F0480
BPDU may incorrectly display the same cost for SmartTRUNK ports with different link speeds.	F1423
Hot-swapping a line card several times will change the default Layer-2 aging time. A port on the line card in this condition may not be added to a SmartTRUNK port.	08724

<b>Spanning Tree Protocol (STP)</b>	<b>I.D.</b>
BPDU filtering fails on all ports after any port-mirroring command is negated. <b>Workaround:</b> After negating a port-mirroring command, negate and then re-enter the <b>stp bpdu filtering</b> command to turn BPDU filtering back on.	F1722
The X-Pedition does not recognize (and subsequently will not filter) VLAN-tagged BPDUs. When such a BPDU is received, it will be learned and forwarded as a normal Layer-2 packet. Because E8.2.0.2 and releases prior to it will VLAN-tag BPDUs when STP is disabled, System Firmware version E8.2.0.3 and above should be used on any X-Pedition with a Q-trunk connection.	F1726

<b>Statistics</b>	<b>I.D.</b>
The <b>statistics show port-errors</b> command incorrectly reports greater-than-1518-byte frames as Cyclic Redundancy Check errors.	F1388

<b>Terminal Access Controller Access Control System + (TACACS+)/RADIUS</b>	<b>I.D.</b>
<p>If the X-Pedition is configured for TACACS+ or RADIUS system event accounting, some system events may not be logged to the Accounting, Authorization, and Authentication (AAA) server.</p> <p><b>Workaround:</b> Rather than configuring TACACS+ or RADIUS for system event accounting, use the X-Pedition's SYSLOG facility to log all system events to a SYSLOG server.</p>	F1255

**INFORMATIONAL NOTES AND STATEMENTS:**

This section contains items previously listed in the Known Restrictions and Limitations section. These items are not limitations, but informational statements and notes about the firmware and hardware features of the X-Pedition products.

The following tables lists the designations used to denote where information on the statement is now located. If there is no manual designation, the information has not yet been moved to the correct reference materials. Once moved, the manual location will be noted.

Book	Designation
Getting Started Guide (model specific)	GSG
Quick Start	QS
X-Pedition Error Reference Manual	ERM
X-Pedition Native CLI Reference Manual	CLI
X-Pedition User Reference Manual	URM

6SSRM-02	Manual
Because important changes were introduced to Spanning Tree in E8.0.1.0 to prevent loops and backplane ports from blocking, a minimum System Firmware version of E8.0.1.0 is recommended for the 6SSRM-02 in a Matrix E7. The new changes are incorporated in firmware version 04.06.05 for the 6E2xx-xx, 6H2xx-xx, 6E3xx-xx, 6H3xx-xx, and 6G3xx-xx, and firmware version 04.11.06 for the 6E1xx-xx, 6H1xx-xx, and 6M1xx-xx.	

Asynchronous Transfer Mode (ATM) Module	Manual
The ATM default interface type is "broadcast"; therefore a peer address is not required. If an interface is connected to a router that is only capable of "point to point", such as a router using a release prior to E8.2.0.0, then the interface type must be specified as "point-to-point"; in this case, a peer address is required.	
A peer address must be specified as part of the <b>interface create</b> command if a virtual channel is configured in the "VC-Muxing" mode or if the interface type is set to "point-to-point".	
LSNAT is not supported on interfaces configured with PVCs.	
VRRP is not supported on interfaces configured with PVCs.	

Control Module (CM)	Manual
In a dual Control Module configuration, both modules must be of the same type (CM2, CM3, or CM4), the same Boot Firmware version, and use the same amount of memory. If PCMCIA cards are installed, they must contain the same System Firmware version.	
In a dual Control Module configuration, the MAC address of the Primary Control Module in slot "CM/0" is used for both Control Modules after the system is booted. If the Control Module in slot "CM/0" is removed and not replaced after a fail-over, or if it is replaced with a new Control Module, and if the system is rebooted, then the system will use the MAC address of the Control Module in slot 1 (or the new Control Module).	

<b>Fiber Distributed Data Interface (FDDI)</b>	<b>Manual</b>
<p>Because FDDI full duplex is not an industry standard, its implementation in the XP -FDDI-02 is based on the Digital Equipment Corporation (DEC) standard and will interoperate with all DEC products and most Enterasys Networks FDDI products.</p>	
<b>Gigabit Module</b>	<b>Manual</b>
<p>When connecting a 1000Base-SX/LX module to a device not supporting auto negotiation, ensure that both devices exhibit the same link negotiation mode and that the link negotiation mode is off.</p>	
<b>Management Port (en0)</b>	<b>Manual</b>
<p>The Ethernet port labeled "10/100 Mgmt" on the Control Module (referred to as <b>en0</b> in Configure mode) is a management port only, and is not intended to perform routing.</p>	
<b>Network Address Translation (NAT)</b>	<b>Manual</b>
<p>VRRP is not currently supported on NAT interfaces.</p>	
<b>PCMCIA Card File System</b>	<b>Manual</b>
<p>The file system on the PCMCIA card will not be corrupted under normal circumstances. Unusual circumstances, such as loss of power while adding a System Firmware image, may corrupt the PCMCIA card's file system. Re-initialization of the PCMCIA card's file system must be done from the Boot Firmware's CLI. The procedure is as follows:</p> <p><b>Note:</b> This procedure will erase the PCMCIA card. If the user boots the System Firmware from the PCMCIA card, a copy of the System Firmware image must be placed on a TFTP server so that it may be temporarily booted over the network.</p> <ol style="list-style-type: none"> <li>1. Reboot, or power off then on, the X-Pedition to reach the Boot Firmware's CLI. When the Boot Firmware goes through its initialization, stop it from booting the System Firmware by pressing the Escape key. Typically, the Boot Firmware waits two seconds for user interruption before starting to boot the System Firmware.</li> <li>2. After pressing the Escape key, the Boot Firmware's CLI prompt will display. Enter the following commands to unmount, erase, and mount (with initialization) the Virtual File System. <ul style="list-style-type: none"> <li>XP-boot&gt; <b>pcumount</b> (unmounts the PCMCIA card's Virtual File System)</li> <li>XP-boot&gt; <b>erasescvfs</b> (erases the PCMCIA card's Virtual File System)</li> <li>XP-boot&gt; <b>pcmount -i</b> (mounts and initializes the PCMCIA card's Virtual File System)</li> </ul> <p>If the file system on the PCMCIA flash card is not mounted, the <b>pcumount</b> command will fail; this results in an error message. The user may safely ignore this error message. Note that if the PCMCIA flash card is write-protected, the <b>erasescvfs</b> command will fail. The PCMCIA card's file system is now initialized, however it lacks a System Firmware image.</p> </li> <li>3. The Boot Firmware requires the netaddr, bootaddr, netmask, and/or gateway parameters be configured in order to boot a System Firmware image from a TFTP server over the network using the "10/100 Mgmt" port. To configure these parameters, use the <b>set</b> command as follows: <ul style="list-style-type: none"> <li>XP-boot&gt; <b>set netaddr &lt;IPaddr-of-management-port&gt;</b></li> <li>XP-boot&gt; <b>set bootaddr &lt;IPaddr-of-TFTP-host&gt;</b></li> <li>XP-boot&gt; <b>set gateway &lt;IPaddr-of-default-gateway&gt;</b></li> <li>XP-boot&gt; <b>set netmask &lt;default-netmask&gt;</b></li> </ul> </li> </ol>	

PCMCIA Card File System	Manual
<p>4. Temporarily boot a System Firmware image over the network through the following command: XP-boot&gt; <b>boot &lt;directory&gt; &lt;image-file-name&gt;</b></p> <p>5. After the System Firmware finishes booting, copy the System Firmware image from the TFTP server to the PCMCIA card as follows: xp# <b>system image add &lt;IPaddr-of-TFTP-host&gt; &lt;directory&gt; &lt;image-file-name&gt;</b></p> <p>6. Configure the Boot Firmware to boot the System Firmware image added to the PCMCIA card by entering the following command: xp# <b>system image choose &lt;image-file-name&gt;</b></p> <p>7. Optionally, the user may reboot the system to verify the above process.</p>	

SmartTRUNK	Manual
<p>When Spanning Tree Protocol (STP) is enabled on a SmartTRUNK, one link in the SmartTRUNK participates in STP. If you use STP with a SmartTRUNK that consists of ports of the same type, Enterasys Networks recommends that the ports in the SmartTRUNK be neighbors (i.e., in consecutive order) on the same line card.</p>	
<p>When SmartTRUNKing to an Ethernet GigaSwitch product, the IFG of the X-Pedition must be set to 4 or greater to allow the GigaSwitch time to properly process incoming frames.</p>	
<p>If a SmartTRUNK has been configured to carry traffic for an IP VLAN and you want to have it carry traffic for the L2 default VLAN as well, you must make the SmartTRUNK into an 802.1Q trunk, then disable and enable the SmartTRUNK.</p>	
<p>When hot swapping is performed on any card, the link for any SmartTRUNK configured with Huntgroup protocol goes down for a few seconds.</p>	
<p>If you hot-swap a card that has SmartTRUNK configured along with Layer 2 filters, the SmartTRUNK commands are marked with an "E".</p>	

Terminal Access Controller Access Control System + (TACACS+) and RADIUS	Manual
<p>During system boot-up, if the user hits the “enter” key or attempts to connect using Telnet while TACACS+ or RADIUS Authentication is enabled, the “last-resort” option will be exercised with the following error message:</p> <p style="padding-left: 40px;">%CONS-W-AUTH_SUCCEED, contact TACACS+ [or RADIUS] server failed: last-resort ____</p> <p>This may occur for the following reasons:</p> <ol style="list-style-type: none"> <li>1. The user is not giving the X-Pedition enough time to boot-up properly. Although the console may give the “Press RETURN to activate console...” message, the X-Pedition may still be bringing up interfaces or learning routes at this time. If the AAA server’s interface is not yet up, or the route has not yet been learned, the X-Pedition may give up attempts to communicate with the server and go to last resort.</li> <li>2. The <b>accounting system info</b> option for the AAA server has been activated, and the deadtime value is set. On boot-up, the X-Pedition will attempt to send accounting messages to the AAA server; it will fail until the interface containing the X-Pedition has come up. If the deadtime value is set, the AAA server will be flagged as dead, and the router will skip over it and automatically go to last-resort.</li> </ol> <p><b>Workaround:</b></p> <ul style="list-style-type: none"> <li>• Give the X-Pedition more time to boot-up (this may take longer with larger numbers of interfaces and/or more configuration).</li> <li>• If the AAA server is connected to the X-Pedition through multiple hops, attempt to bring the server closer to the router.</li> <li>• Increase the <b>retry</b> count.</li> <li>• If <b>accounting system info</b> is enabled, decrease the deadtime value.</li> </ul> <p><b>NOTE:</b> Until the system is fully booted, system messages will not be logged to the AAA server.</p>	

Virtual Local Area Network (VLAN)	Manual
<p>There are two special VLANs on the X-Pedition, the Default VLAN (ID=1) and the VLAN with ID=4095. The Default VLAN contains all of the ports not used in other VLANs. When ports are added to VLANs, they are removed from the Default VLAN. When ports are removed from a VLAN with an ID other than 1, they are returned to the Default VLAN. The VLAN with the ID of 4095 (a.k.a. the "blackhole VLAN") is used as the repository for all incoming frames with no destination.</p> <p>These two VLANs have the following restrictions:</p> <ul style="list-style-type: none"> <li>• Ports cannot explicitly be added to either of these VLANs.</li> <li>• Layer 3 interfaces cannot be associated with the "Blackhole VLAN" (ID = 4095)</li> <li>• IPX interfaces cannot be associated with the "Default VLAN" (ID = 1).</li> </ul>	
<p>In order to pass all IBM protocol types, a unique VLAN must be configured for both the SNA and the Bridged protocols.</p> <p>Additional information can be found online at: <a href="http://www.enterasys.com/support/techbltn/tb1169-9.html">http://www.enterasys.com/support/techbltn/tb1169-9.html</a></p>	

Wide Area Network (WAN) Modules	Manual
<p>Port mirroring, ACL, and Layer-2 filtering are supported on a per-WAN-card basis, not a per-port basis.</p>	

**COMPLIANCE SUPPORT:**

Compliance Level	Compliant
Year 2000	Yes

**IEEE STANDARDS MIB SUPPORT:**

Standard	Title
IEEE 802.3ad	LACP

**IEEE STANDARDS SUPPORT:**

Standard	Title
IEEE 802.1D	Spanning Tree
IEEE 802.1p	Traffic Prioritization
IEEE 802.1Q	VLAN Trunking
IEEE 802.1w	Rapid Spanning Tree
IEEE 802.3	10 Mbps Ethernet
IEEE 802.3ad	LACP (Link Aggregation)
IEEE 802.3u	100Base-T Ethernet
IEEE 802.3x	Full Duplex Ethernet
IEEE 802.3z	1000 Mbps Ethernet

**IETF STANDARDS SUPPORT:**

RFC No.	Title
RFC 1058	RIP v1
RFC 1075	DVMRP
RFC 1105	BGP
RFC 1157	SNMPv1
RFC 1163	BGP-2
RFC 1256	ICMP Router Discover Message
RFC 1265	BGP Protocol Analysis
RFC 1267	BGP-3
RFC 1293	Inverse ARP
RFC 1332	PPP Internet Protocol Control Protocol (IPCP)
RFC 1349	Type of Service in the Internet Protocol Suite
RFC 1397	BGP Default Route Advertisement
RFC 1483	Multiprotocol Encapsulation over ATM Adaptation Layer 5
RFC 1490	Multiprotocol Interconnect over Frame Relay
RFC 1519	CIDR
RFC 1552	The PPP Internetwork Packet Exchange Control Protocol (IPXCP)
RFC 1570	PPP LCP Extensions
RFC 1583	OSPF v2
RFC 1631	IP Network Address Translator
RFC 1638	PPP Bridging Control Protocol (BCP)
RFC 1657	BGP-4 Definitions of Managed Objects
RFC 1661	PPP (Point-to-Point Protocol)
RFC 1662	PPP in HDLC-like Framing

RFC No.	Title
RFC 1723	RIP v2
RFC 1771	BGP-4
RFC 1772	Application of BGP in the Internet
RFC 1812	Router Requirements
RFC 1966	BGP Route Reflection
RFC 1990	PPP Multi-Link Protocol
RFC 1997	BGP Communities Attribute
RFC 2131	Dynamic Host Configuration Protocol
RFC 2225	Classical IP and ARP over ATM
RFC 2236	Internet Group Management Protocol, Version 2
RFC 2338	VRRP
RFC 2391	Load Sharing using IP Network Address Translation (Load Balance)

**IETF STANDARDS MIB SUPPORT:**

RFC No.	Title
RFC 1213	MIB-2
RFC 1253	OSPF v2 MIB
RFC 1471	PPP LCP (Link Control Protocol)
RFC 1472	PPP Security Protocol
RFC 1473	PPP IP NCP (Network Control Protocol)
RFC 1474	PPP Bridge NCP
RFC 1493	Definitions of Managed Objects for Bridges
RFC 1512	FDDI MIB
RFC 1595	SONET / SDH MIB
RFC 1643	Ethernet Like Interface MIB
RFC 1657	BGP4 MIB
RFC 1695	ATM MIB
RFC 1724	RIPv2 MIB
RFC 1742	AppleTalk Management Information Base II
RFC 1850	OSPF MIB
RFC 1907	SNMP v2 MIB
RFC 2011	Internet Protocol (IP) MIB using SMIv2
RFC 2012	Transmission Control Protocol (TCP) MIB using SMIv2
RFC 2013	User Datagram Protocol (UDP) MIB using SMIv2
RFC 2021	Remote Network Monitoring Version 2 (RMON 2)
RFC 2096	IP Forwarding MIB
RFC 2115	Frame Relay DTE using SMIv2
RFC 2358	Ethernet-like Interface Types MIB
RFC 2495	E1 / DS1 MIB
RFC 2496	E3 / DS3 MIB
RFC 2571	SNMP Framework MIB
RFC 2572	SNMP Message Processing and Dispatching MIB
RFC 2573	SNMP Target and Notifications MIBs
RFC 2574	SNMP User-Based Security Model MIB
RFC 2575	SNMP View-Based Access Control Model MIB
RFC 2576	SNMP Community and Target Extensions MIBs
RFC 2618	Radius Authentication Client
RFC 2668	IEEE 802.3 Medium Attachment Units (MAUs) MIB
RFC 2674	IETF Q MIB for Bridge with Traffic Classes, Multicast Filtering and VLAN Extension
RFC 2819	Remote Network Monitoring (RMON) Management Information Base



RFC 2863	Interfaces Group using SMIv2
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**IETF EXPERIMENTAL MIB SUPPORT:**

Function	Draft
DVMRP	Draft 4
IGMP	Draft 5
VRRP	Draft 9

**IETF STANDARDS SNMP TRAP SUPPORT:**

RFC No.	Title
RFC 1157	linkDown, linkUp, authenticationFailure Traps
RFC 1493	newRoot, topologyChange Traps

**FRAME RELAY STANDARD SUPPORT:**

Standard	Title
Frame Relay Forum FRF.1.1	User-to-Network (UNI) Implementation Agreement
Frame Relay Forum FRF.3.1	Multiprotocol Encapsulation Implementation Agreement
ITU-T Q.922/ANSI T1.618	ISDN Core Aspects of Frame Relay Protocol
ITU-T Q.933	Access Signaling Annex A
ITU-T I.122/ANSI T1S1	Standards-Based Frame Relay Specification
ITU-T Annex D/ANSI T1.617	Additional Procedures for PVCs Using Unnumbered Information Frames

**FDDI STANDARD SUPPORT:**

Standard	Title
ANSI X3T9.5	Fiber Distributed Data Interface (FDDI)
ANSI X3T9.5/84-49 Rev 7.2	FDDI Station Management (SMT)
ANSI X3.139-1987	FDDI Media Access Control (MAC)
ANSI X3.148-1988	FDDI Physical Layer Protocol (PHY)
ANSI X3.166-1990	FDDI Physical Medium Dependent (PMD)

**ENTERASYS NETWORKS PRIVATE ENTERPRISE MIB SUPPORT:**

Title	Description
NOVELL-IPX-MIB	Novell Netware
CTRON-SSR-HARDWARE-MIB	Device specific hardware objects
CTRON-SSR-POLICY-MIB	L2 filters, L3 ACL set/get ability
CTRON-SSR-SERVICE-MIB	Status of major subsystems
CTRON-SSR-CAPACITY-MIB	New with 3.0 use for performance/capacity
CTRON-SSR-CONFIG	Retrieve/send configuration file via tftp

NOVEL-RIP-SAP-MIB	Novell Netware RIP SAP
CT-CONTAINER-MIB	Cabletron container MIB
CTRON-CHASSIS-MIB	Cabletron chassis MIB (6SSRM-02 Only)
DEC-ELAN-MIB	FDDI Extensions
CTRON-CDP-MIB	Cabletron Discovery Protocol MIB
CTRON-DOWNLOAD-MIB	Cabletron Download MIB

Enterasys Networks Private Enterprise MIBs are available in ASN.1 format from the Enterasys Networks Support web site at: <http://www.enterasys.com/support/mibs/>. Indexed MIB documentation is also available.