CUSTOMER RELEASE NOTES

Vertical Horizon
VH-2402S and VH-2402S2
Firmware Version 2.06.06.00
April 30, 2004

INTRODUCTION:

It is recommended that one thoroughly review this release note prior to the installation or upgrade of this product.

This release provides support for the Vertical Horizon 24-port 10/100 Ethernet switch, VH-2402S as well as the new replacement unit, VH-2402S2. The VH-2402S/VH-2402S2 is a 24-port dual-speed standalone, stackable or rack-mountable switch. The switch provides 24 10Base-T/100Base-TX ports, plus two rear-panel slots for optional slide-in 100Base-FX, 1000Base-SX or 1000Base-LX modules. One of these slots can also be used for an optional stacking module that allows you to attach up to seven switches to a 4 Gbps high-speed backplane. There is also another rear-panel slot that accepts an optional SNMP-based Management Module. This module supports both in-band and out-of-band access for managing the switch and the attached stack.

The VH-2402S/VH-2402S2 switches can be used in a standalone configuration, or can be stacked up to seven high to form a single logical switch with up to 168, 10/100 Mbps ports. One optional Management Module is required for configuring a standalone switch or an entire stack. The optional stacking Interconnect Module and Interconnect Cables are not included with the base unit and need to be ordered separately.
 Management of the switch or stack is provided when an optional Management Module is installed. Management access is provided in-band via Telnet, SNMP, or out of band, via the serial console port interface either directly or through an attached modem. An embedded Web agent also provides management capability to any computer on the network via common HTTP browsers such as Netscape Navigator or Microsoft's Internet Explorer (both browsers should be Version 4.0 or above).

Local Console Management (LCM) allows the user to monitor and configure the VH-2402S/VH-2402S2 from a VT-type terminal. LCM can be used to configure features such as SNMP community names and access rights, Port Enable/Disable, firmware downloads, and Device IP address as well as most other parameters. LCM can also provide statistical and diagnostic information about the entire device or an individual port.

Management of the switch or stack is password protected; the same password is used for LCM and for the Web browser interface. Prior to accessing the Management Module via a network connection, a valid IP address, subnet mask, and in some cases a default gateway must be configured using an out of band connection or the BootP protocol. The management option provides SNMP, RMON (4 groups: 1,2,3,9), and Web management for system control and statistical monitoring.

FIRMWARE SPECIFICATION:

Status	Version No.	Type	Release Date
Current Version	2.06.06.00	Customer Patch	4/30/2004
Prior Version	2.06.05.00	Customer Release	12/18/2003
Prior Version	2.05.19	Customer Patch	11/21/2003
Prior Version	2.05.09.01	Customer Patch	10/14/2003
Prior Version	2.05.09	Customer Patch	5/15/2003
Prior Version	2.05.02.42	Customer Patch	2/21/2003
Prior Version	2.05.02.31	Customer Patch	1/16/2003

HARDWARE COMPATIBILITY:

The ELS100-S24TX2M PHY chip has changed from Rev. 5208 to 5208R. If you are currently using hardware Rev. "0F" or greater, It is necessary to use firmware version 2.01.04.01 or greater on the ELS100-SMGMT module.

The VH-SMGMT2 module requires firmware release Version 02.05.02 or later. The version of firmware must be installed on the module whether the module is used in a VH-2402S2 or a VH-2402S base unit. If the VH-SMGMT module is used in the VH-2402 base unit it must be running version 02.05.02 or later. No restriction on the VH-STACK or VH-STACK2 card is required.

BOOTPROM COMPATIBILITY:

ALL

NETWORK MANAGEMENT SOFTWARE SUPPORT:

NMS Platform	Version No.
NetSight Atlas Console	1.3.0
NetSight Atlas Inventory Manager	1.4.0

If you install this image, you may not have control of all the latest features of this product until the next version(s) of network management software. Please review the software release notes for your specific network management platform for details.

SUPPORTED FUNCTIONALITY:

Features	Support
802.1p - Traffic Management	Yes
802.1Q - VLAN tagging and identification (256 VLANs supported)	Yes
802.1D - Spanning Tree support	Yes
IGMP v1/v2 Snooping	Yes
Address Data Base Maintenance	Yes
Local Management via TELNET (four sessions)	Yes
RMON Groups 1,2,3,9	Yes
Runtime Address Discovery	Yes
Online BOOTP/TFTP	Yes
TFTP download from a host	Yes
Broadcast Suppression	Yes
Trunking	Yes
SNMP	Yes
Modem support	Yes
Embedded HTTP Agent	Yes
Port Mirroring	Yes
Auto-Negotiation	Yes
Stacking	Yes
Redundant power support (option)	Yes
Configuration upload/download support	Yes
Port Security (MAC Locking)	Yes

INSTALLATION AND CONFIGURATION NOTES:

The VH-SMGMT2 is shipped pre-configured with the latest version of firmware, 2.05.09.01. If you would like to upgrade an existing VH-SMGMT2 with this release, please follow the TFTP download instructions that are included with your firmware image upgrade kit. TFTP download instructions are also available on the Enterasys Networks Support web site at: http://www.enterasys.com/support/techtips/tk0020-9.html

FIRMWARE CHANGES AND ENHANCEMENTS:

The following **known issues** have been fixed in this release of firmware:

A condition where an HTTP packet with a source IP address the same as the switch IP address would cause the switch to stop responding.
A condition where a negative length HTTP packet would cause the switch to stop responding.
A condition where a high rate of HTTP frames would cause SNMP failure to the switch.
A condition where a "negotiate authorization frame" would cause the switch to stop responding.

Previous Firmware Release Information
The following known issues and enhancements made in the prior release of firmware are outlined below. Please refer to the specific release notes of the firmware release for additional information.

Prior Release: <u>2.06.05</u>

Added support for closed loop stacking up to seven units.
Added support for redundant management.

VH 2.6 Closed Loop and Redundant Management

1. VH 2.05.xx customers upgrading to open stack:
   - Customers running firmware revisions prior to 2.5.9.x must upgrade to 2.5.9.x before upgrading to firmware revision 2.06.05 unless performing the upgrade as an Xmodem firmware upgrade.

2. VH 2.06.05 Closed Loop Stack:
   - Closed loop stacking requires the use of the closed loop cable (p/n VH-2402S-CBL). The cable is available as a separate orderable item.
   - Closed loop stacking requires that one VH-STACK2 module exist in the stack.
   - Closed loop stacking requires one VH-2402S2 (2nd generation 24-port switch) in the stack with one VH-STACK2 module configured in this unit.

3. VH 2.06.05 Closed Loop and Redundant Management:
   - Support for 'redundant management' requires the new management modules (VH-SMGMT2) and firmware revision 2.06.05 or higher.
   - Stacking with redundant management modules requires the new management modules (VH-SMGMT2) be running the same version 2.06.05 or higher firmware. The Primary module must be installed in a VH-2402S2 base along with a VH-STACK2 module.
   - For proper stack operation, the VH-STACK2 module (within the same base units as the VH-SMGMT2 management modules) cannot be within the serial number range of:

     02393107210A - 02394226210A
     02361221210A - 02362526210A
     02360221210A - 02361220210A
     02405207210A - 02406098210A

     If existing network installations are being upgraded, and VH-STACK2 modules are within this range, please contact Enterasys Support to RMA the stack cards.

     NOTE: Customers running VH 2.5 firmware will not experience problems with this serial number range of VH-STACK2 modules.

KNOWN RESTRICTIONS AND LIMITATIONS:

When modifying Speed/Duplex and Flow Control parameters on more than 8 Ports within the Port Configuration View, only the Speed/Duplex values will be saved after clicking on <OK> or <APPLY>.
When a VLAN is set to "Not in Service" and there is an Egress Port assigned to the VLAN traffic with that VLAN tag, traffic is forwarded instead of being dropped. **Work-around**: Within the "Bridge Settings" View, change the "VLAN Learning" parameter to IVL mode. **Note**: This issue will occur with an agent Module in the same switch within the stack. A "Learning" Broadcast packet will cause this event to happen.
Due to a Chip Limitation, the VH-2402S does not support "Admit Only VLAN-tagged frames."

The Root Port Cost on a Trunk will change back to the Default Port Cost (i.e., 15) after a respan or a reboot of the VH-2402S/VH-2402S2.
Under high broadcast loads, the VH-2402S/VH-2402S2 implements internal mechanisms to limit broadcast and multicast traffic to the Management Agent. This filtering of traffic to the CPU may cause the CPU not to see the IGMP streams for a group for which no "join" messages have been received. The outcome of this event is flooding of the multicast stream until either a "Join" (or "Leave") message is received or until the broadcast and multicast traffic is reduced to a small enough level that the Management Agent can process all of them.
The VH-2402S2 Filtering Database supports up to 8,000 entries compared to the VH-2402S Filtering Database which supports up to 12,000 entries due to internal chipset memory limitations. While the actual internal memory is slightly smaller in the new chip because of the sparse hashing mechanism used, it is often possible to have many more than 8000 table entries.
If a Static Router port is configured on a multi-port trunk (link aggregation group), it may not be saved following a reboot of the VH-2402S/VH-2402S2. Note: Static Router ports on other ports are not lost after a reboot. This issue will be fixed in a future release.
When VLANs are added in the Port Assignment VLAN Config View, they will not be saved following a reboot until the CPU Agent has had time to place them in NV-RAM. After configuring the Ports with VLANs, wait 5 Minutes before rebooting the Switch.
EMAN 3.0 Java Chassis Manager works properly, but at times it may not properly "draw" the VH-2402S2 Stack. **Work-around:** 1. Add the following line to the <install>/Resources/ChMgr.ini file under [ChMgrLayouts] etsysOidDevVHx2402S2=7 2. Add the enterasys-oids-mib to the EMAN 3.0 MIB database.
While a TFTP configuration upload is being done, an image download of new firmware cannot be done at the same time. The new firmware can be downloaded as soon as the TFTP configuration upload has finished.
When modifying Speed/Duplex and Flow Control parameters on more than 8 Ports within the Port Configuration View, only the Speed/Duplex values will be saved after clicking on <OK> or <APPLY>.

Other Known Issues and Restrictions can be found in the VH-2402S v02.05.00 Release Notes. Any problems other than those listed above should be reported to our Technical Support Staff.

COMPLIANCE SUPPORT:

Compliance Level	Compliant
Year 2000	YES

IEEE STANDARDS SUPPORT:

Standard	Title
IEEE 802.1D	Transparent Bridging Specifications (ISO/IEC 10038)
IEEE 802.1p	Traffic Class Expediting and Dynamic Multicast Filtering
IEEE 802.1Q	Virtual Bridged Local Area Networks
IEEE 802.2	Local Area Networks, Logical Link Control (LLC)
IEEE 802.3	CSMA/CD 9 (ISO/IEC 8802-3)
IEEE 802.3I	10Base-T (ISO/IEC 8802-3, clause 14)
IEEE 802.3u	100Base-TX (ISO/IEC 8802-3, clause 25)
IEEE 802.3u	100Base-FX (ISO/IEC 8802-3, clause 26)
IEEE 802.3x	Flow Control
IEEE 802.3z	1000Base-SX, 1000Base-LX

IETF STANDARDS MIB SUPPORT:

RFC No.	Article I. Title	Groups Supported
1157	Simple Network Management Protocol(SNMP)	
1213	MIB-II	System, Interfaces, IP, ICMP, UDP, Transmission (dot3), and SNMP
1493	Bridge MIB	Spanning Tree and various managed objects for bridges
1573	Interfaces Evolution MIB	MIB-II Interfaces Group extensions
1643	Ethernet-like	Various Ethernet specific aspects
1757	RMON MIB	Statistics, History, Alarm, and Event
2674	Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering and Virtual LAN Extensions	Groups in the P-BRIDGE MIB -- --- dot1dExtBase OBJECT IDENTIFIER ::= { pBridgeMIBObjects 1 } dot1dPriority OBJECT IDENTIFIER ::= { pBridgeMIBObjects 2 } Groups in the Q-BRIDGE MIB -- --- dot1qBase OBJECT IDENTIFIER ::= { qBridgeMIBObjects 1 } dot1qTp OBJECT IDENTIFIER ::= { qBridgeMIBObjects 2 } dot1qStatic OBJECT IDENTIFIER ::= { qBridgeMIBObjects 3 } dot1qVlan OBJECT IDENTIFIER ::= { qBridgeMIBObjects 4 }

ENTERASYS PRIVATE ENTERPRISE MIB SUPPORT:

Title	(i) Version
ELS100.MIB	01.00.00

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

SNMP TRAP SUPPORT:

RFC No.	Title
RFC 1215	coldStart_trap warmStart_trap linkUp_trap authenticationFailure_trap egpNeighborLoss_trap
RFC 1493	ENTERPRISE dot1dBridge NewRoot 1 topologyChange 2
RFC 1573	SnmpTraps linkDown 3 LinkUp 4
RFC 1757	IETF RMON, ENTERPRISE rmon -- 1.3.6.1.2.1.16 risingAlarm 1 fallingAlarm 2

GLOBAL SUPPORT:

By Phone: (603) 332-9400

1-800-872-8440 (toll-free in U.S. and Canada)

For the Enterasys Networks Support toll-free number in your country:

http://www.enterasys.com/support/gtac-all.html

By Email: mailto: support@enterasys.com

By Web: http://www.enterasys.com/support

By Fax: (603) 337-3075

By Mail: Enterasys Networks, Inc.
35 Industrial Way
P.O. Box 5005
Rochester, NH 03866

For information regarding the latest software available, recent "release note" revisions, or if you require additional assistance, please visit the Enterasys Networks Support web site.