

**CUSTOMER RELEASE NOTES**

**Vertical Horizon  
VH-2402-L3  
Firmware Version 1.00.16  
November 30, 2002**

**INTRODUCTION:**

The VH-2402-L3 is a 24 port dual-speed manageable, standalone, or rack-mountable switch. The switch provides 24 10Base-T/100Base-TX ports, plus one front-panel slot for optional slide-in, 1000Base-SX, 1000Base-T or 1000 Base XX GBIC modules. An SNMP-based Management agent is built into the switch. Management is supported both in-band and out-of-band for managing the switch.

The VH-2402-L3 switches support both Layer 2 switching and Layer 3 routing. The default mode of the switch when powered on is Layer 2 mode. Layer 3 features can be enabled via Console, and Telnet Management utilities.

An imbedded 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-2402-L3 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 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.

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

**FIRMWARE SPECIFICATION:**

Status	Version No.	Type	Release Date
Current Version	1.00.16	Customer	11/30/2002
Current Version	1.00.00	Customer	8/31/2001

**HARDWARE COMPATIBILITY:**

ALL

**BOOTPROM COMPATIBILITY:**

ALL

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**NETWORK MANAGEMENT SOFTWARE SUPPORT:**

NMS Platform	Version No.
TBD	TBD

If you install this image, you may not have control of all of 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:**

*Please refer to the User Manual for a complete listing of all features supported.*

Features	Support
802.1P - Traffic Management ( 4 queues)	Yes
802.1Q - VLAN tagging and identification (64 VLANs)	Yes
Spanning Tree support	Yes
IGMP Snooping	Yes
Local Management via TELNET	Yes
RMON Groups 1,2,3,9	Yes
Runtime Address Discovery	Yes
BOOTP/DHCP Client Relay Support	Yes
TFTP download from a host	Yes
Port Trunking	Yes
SNMP	Yes
Imbedded WEB Management	Yes
Port Mirroring	Yes
Auto-Negotiation	Yes
UPS support	Yes
Configuration upload/download support	Yes
Port Security (MAC Locking)	Yes
Broadcast Storm Protection	Yes
IGMP	Yes
IP Routing	Yes
RIP V1/V2 Support	Yes
DVMRP Support	Yes
PIM-DM Mode Support	Yes

**INSTALLATION AND CONFIGURATION NOTES:**

In general, the **VH-2402-L3** will be shipped to you pre-configured with this firmware version 01.00.00. To install this version of firmware utilize TFTP download. Instructions are also available on the Enterasys Support web site at: <http://www.enterasys.com/support/techtips/tk0020-9.html>.

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**FIRMWARE CHANGES AND ENHANCEMENTS:**

The following Known Issues have been fixed in this release of firmware.

1. The issue where VRRP packets were not forwarded when IGMP is enabled has been fixed.
2. This patch version of code allows the BOOT/DHCP relay time threshold to be set to a value of zero.
3. RMON Alarms and Events, rising and falling thresholds now operate properly.
4. This version provides new support for Fast Forwarding Spanning Tree.
5. Spanning Tree Path costs configurations are now persistent

**KNOWN RESTRICTIONS AND LIMITATIONS:**

1. This product complies with IP Multicasting routing standards. However, performance is limited. Please note this when implementing DVMRP and PIM-DM.
2. Under high traffic loads this product may drop some mid to large sized high priority packets. This may affect the ability of this product to support high rates of voice over IP.
3. Any packets that would normally egress a target mirror port, will be transmitted out the port only once.
4. If Rx RIP is set to V1 only on an IP subnet and a V1 compatible RIP response packet is transmitted into a port on that subnet, the router information contained in that packet will not be learned.
5. It is necessary to use NetSight Java Chassis Manager in order to manage the VH-2402-L3 with NetSight Element Manager. This is accomplished by manually configuring the node properties of the selected device. The node properties can be accessed via Device Properties -> Class Tab -> Node Classes button.
6. When a VH-2402-L3 configuration is saved to a TFTP server, the file name specified must be unique.
7. It is not possible to run a console session and a telnet session concurrently. If a user logs into the console while a telnet session is active, the telnet session will be closed.
8. If a dynamic IGMP group registration is registered with the same address as a previously existing static IGMP group registration, and if the static entry is disabled, the dynamic entry is deleted.
9. The 'Clear Table' command in the ARP Table screen will only clear the ARP entries for the specified IP interface, not for the entire ARP table.
10. IP interfaces should only be coupled with VLANs that have been created using the 'Configure 802.1Q Port Settings' screen.
11. If a port is configured to auto-negotiate, it will advertise 802.3x enabled. There is no way to have auto-negotiate enabled and 802.3x disabled.
12. Any time the switch configuration is changed, 'Save Changes' must be selected from the Main Menu in order to have the change saved to non-volatile memory.
13. It is necessary to install Microsoft Virtual Machine in order for Port Statistics, Port Utilization, and Port Packets Analysis to function from within Internet Explorer.
14. When managing the VH-2402-L3 from the Web, if the screen refreshes before Save has been selected, any changes must be entered again.
15. If the arrow keys do no work with Microsoft Windows 2000 HyperTerminal, you must download the latest service pack.
16. OSPF and GMRP is not supported in this release, although user screens may be accessible.

Any other problems than those listed above should be reported to our Technical Support Staff.

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**COMPLIANCE SUPPORT:**

Compliance Level	Compliant
Year 2000	Yes

Known Anomalies: None.

**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 802.3x	Flow Control
IEEE 802.3z	1000Base-SX, 1000Base-LX

**IETF STANDARDS MIB SUPPORT:**

RFC No.	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	<p>Groups in the P-BRIDGE MIB</p> <p>-----</p> <p>dot1dExtBase OBJECT IDENTIFIER ::= { pBridgeMIBObjects 1 }</p> <p>dot1dPriority OBJECT IDENTIFIER ::= { pBridgeMIBObjects 2 }</p> <p>Groups in the Q-BRIDGE MIB</p> <p>-----</p> <p>dot1qBase OBJECT IDENTIFIER ::= { qBridgeMIBObjects 1 }</p> <p>dot1qTp OBJECT IDENTIFIER ::= { qBridgeMIBObjects 2 }</p> <p>dot1qStatic OBJECT IDENTIFIER ::= { qBridgeMIBObjects 3 }</p> <p>dot1qVlan OBJECT IDENTIFIER ::= { qBridgeMIBObjects 4 }</p>

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**ENTERASYS PRIVATE ENTERPRISE MIB SUPPORT:**

Title	Version
NA	NA

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

**ENTERASYS PRIVATE ENTERPRISE TRAP SUPPORT:**

NONE

**GLOBAL SUPPORT:**

By Phone: (603) 332-9400  
By Email: [support@enterasys.com](mailto:support@enterasys.com)  
By Web: <http://www.enterasys.com/support>  
By Fax: (603) 337-3075  
By Mail: Enterasys Networks  
P.O. Box 5005  
Rochester, NH 03867-5005

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