**digital** ™

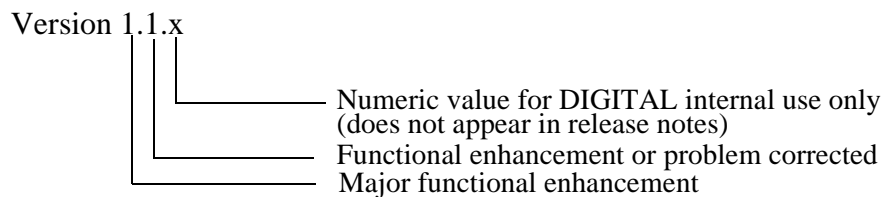TM appears as superscript trademark

**AA-QXW9C-TE**

**Ethernet Switch Enterprise RMON Upgrade
Release Notes
Firmware Version 2.0
June 1997**

These release notes contain firmware and software requirements that apply to the RMON functionality of the switch that you are upgrading with the Ethernet Switch Enterprise RMON firmware. For information on specific switch products, refer to the release notes for that individual switch.

These release notes can also be found online. For information about retrieving online release notes, refer to the section titled Accessing Online Information.

As warranted, DIGITAL changes the firmware of this device to make functional enhancements or to correct reported problems. These release notes identify enhancements and changes to the firmware that impact end-user operations. These also contain firmware and software requirements, and list updates in this release as well as known conditions and restrictions that apply to the operation of the upgrade.

The following example describes the firmware version number:

Version 1.1.x

Numeric value for DIGITAL internal use only (does not appear in release notes)
Functional enhancement or problem corrected
Major functional enhancement

# Contents

# Firmware Requirements

When configuring modules with the Ethernet Switch Enterprise RMON Upgrade firmware in a DEChub 900 MultiSwitch, ensure that the DEChub 900 MultiSwitch firmware version is V4.1, or higher.

Refer to your module-specific release notes for additional firmware revision information.

# Software Requirements

If you are using clearVISN MultiChassis Manager to manage the module, you must install MultiChassis Manager software version V5.0, or higher.

If you are using RMON Manager to manage the module's RMON functionality, you must install RMON Manager software version V3.3, or higher.

If you are using VLAN Manager to manage the module's VLAN functionality, you must install VLAN Manager software version V1.0, or higher.

# Hardware Requirements

The hardware and firmware revision levels can be displayed by selecting menu item 3 ([3] Show Current Settings) from the switch's Installation menu. (Refer to the switch's installation and configuration manual for additional information.) The revision levels are also displayed in the revision field of the Switch Summary window when you are using MultiChassis Manager (version V5.0 or higher), and in the MIB-II sysDescr using a generic SNMP manager.

The revision level for the DEChub 900 MultiSwitch Hub Manager can be displayed by selecting item 3 ([3] Show Current Settings) on the DEChub 900 MultiSwitch Installation menu. (Refer to the *DEChub 900 MultiSwitch Owner's Manual* for more information.)

Refer to your module-specific release notes for additional hardware revision information.

# Docking Station Requirements

When configuring modules in standalone mode, the following docking stations are available:

| Docking Station | Model Number | Available Power |
| --- | --- | --- |
| DEChub ONE | DEHUA | 90 Watts |
| DEChub ONE-MX | DEF1H | 90 Watts |

# Basic RMON MIB Notes

This section contains information that is common for all switch modules.

- **etherStatsCollisions** and **etherHistoryCollisions** counters only count collisions in which the switch was involved.

- **etherStatsUndersizePkts**, **etherStatsFragments**, **etherHistoryUndersizePkts**, and **etherHistoryFragments** counters are not supported.

- To access the **Basic RMON MIB** (4 groups: statistics, history, alarms, events), use the r/w community name you assigned to the switch.

- The MultiChassis Manager RMON screens currently access the **Basic RMON MIB** for information. The equivalent in the **Enterprise RMON MIB** would be to install the RMON domain with the statistics and history groups enabled.

# Enterprise RMON MIB Notes

This section contains information that is common to all switch modules.

- **etherStatsCollisions** and **etherHistoryCollisions** counters only count collisions in which the switch was involved for the RMON and ALL domains.

- **etherStatsUndersizePkts**, **etherStatsFragments**, **etherHistoryUndersizePkts**, and **etherHistoryFragments** counters are not supported.

- The **etherStatsDropEvents** counter is only incremented in the RMON and ALL domains. All other domains report a zero for this counter. Use this counter in the RMON or ALL domain to gauge the accuracy of all other domains. This counter does not reflect the accuracy of the statistics and history groups within the RMON and ALL domains, but it does reflect the accuracy of all other groups within those domains. For more information, refer to the section titled Enterprise RMON Performance Tips.

- **-rmon** must be appended to the r/w community string of the switch in RMON Manager to access the Enterprise RMON MIB. For example, if the r/w community string of the switch was "chris", place "chris-rmon" in the community string fields of the Agent Configuration window in RMON Manager (PROBEwatch). If you just placed "chris" in this field, you will only be able to access 4 groups of RMON in the RMON domain (Basic RMON MIB).

- RMON enable button lets you use any domain in RMON Manager. You must enable the RMON enable button for the particular port for which you want to collect data. This button is located in the port view for the switch in MultiChassis Manager. Click on the RMON enable button to activate it (make it green) in order to enable Enterprise RMON data collection on that port. We recommend enabling this button **only** on ports you need to collect data for because the number of ports enabled affects overall Enterprise RMON and switching performance. For more information about performance characteristics of this button, refer to the section titled Enterprise RMON Performance Tips

- A switch placed in a DEChub 900 MultiSwitch must have its own **IP address** in order to access the Enterprise RMON MIB. Use the switch IP address, not the DEChub 900 MultiSwitch IP address, to access the Enterprise RMON MIB.

- Normally, **traps** generated from alarms and events in the Enterprise RMON MIB will only be sent to the management station that configured the alarms and events using RMON Manager. If you would like the traps to be sent to other management stations, you must use RMON Manager to configure this. Please refer to your clearVISN documentation for more information on how to do this. Basic RMON sends traps to the trap addresses configured in the console screen of the switch, but Enterprise RMON does not.

- Enterprise RMON allows you to capture the **first 64 bytes** of any packet. Please be sure that the slice size is set to 64 bytes in the domain installation and packet capture windows of RMON Manager.

# Enterprise RMON Performance Tips

This section gives a detailed description of the Enterprise RMON's performance characteristics to help you configure optimum RMON functionality. The information in this section assumes that you are using RMON Manager and MultiChassis Manager to configure and use the RMON functionality.

A general rule of thumb is that most things you install mean more work for the Enterprise RMON module within the switch. Therefore, only install what you are going to need. Every domain you install, and almost every group within each domain (statistics, host, conversation, and data capture) that you enable will affect RMON data gathering performance. So, for example, to get the best performance in your statistics group, you should disable hosts, conversations, and data capture. Similarly, to get the best performance out of the host group within a particular domain, you should disable the statistics, history, conversation and packet capture groups if you don't need them.

The history group does not do any direct packet processing. It just polls the statistics group at a user-specified time interval. So, as long as your time interval is not very small (that is greater than 5 seconds), the history group will not noticeably affect your RMON data gathering performance. Therefore, if you have the statistics group enabled in a domain, enabling the history groups will not noticeably detract from the performance of the other groups. If you don't have the statistics group enabled, there's no reason to enable the history group.

The RMON and ALL domains have two groups, statistics and history, that are able to count every packet seen and processed by the switch on a particular port. Their performance does not depend on how many domains you install, and you do not have to enable the Enterprise RMON enable button in MultiChassis Manager to use statistics, history, alarms, or events in these two domains.

The rest of the groups within the RMON and ALL domains (host, conversation, and data capture) require that you enable the Enterprise RMON button, and their performance will depend on what else is configured.

The installation of alarms, domains, etc. will not affect switching performance, but the Enterprise RMON enable button in MultiChassis Manager will. Enabling this button on a port will slightly affect switching performance, and switching performance will be increasingly affected by each additional port on which you enable the Enterprise RMON button.

DIGITAL recommends that you only enable Enterprise RMON on a maximum of one or two ports at any time for RMON data gathering performance reasons.

# MIB and RFC Information

The switch modules support the following Request For Comments (RFC) and Management Information Base (MIB) extensions:

- SNMP management (RFC 1157)

- MIB II (RFC 1213)

- Bridge MIB (RFC 1493)

- FDDI MIB (RFC 1512)

- Ethernet MIB (RFC 1643)

- RMON MIB (RFC 1757)

- Digital ELAN MIB Extensions V3.2, April 1996

- DEChub 900 Common MIB Extensions V1.1, June 1995

# Accessing Online Information

Further information on this network product or topic is available on the DIGITAL Network Product Business (NPB) Web Site as well as its Bulletin Board System. Both systems maintain a common, rich set of up-to-date information on NPB's products, technologies, and programs.

The Web Site can be reached at geographic locations via the following URLs:

| | |
|---|---|
| North America Network Product Business Home Page | http://www.networks.digital.com/ |
| Europe Network Product Business Home Page | http://www.networks.europe.digital.com/ |
| Australia Network Product Business Home Page | http://www.digital.com.au/networks/ |
| Digital Equipment Corporation Home Page | http://www.digital.com/ |

To get firmware and management information base (MIB) information, please choose the "Technical Information" link, and from there choose the "Technical Information (Drivers, Manuals, Tech Tips, etc.)" link. You will see a listing of all the products available on the NPB Web Site.

To connect to the NPB Bulletin Board System, you need a PC and a modem. Set your modem to 8 bits, no parity, 1 stop bit. Dial 508-486-5777 (U.S.A.)

# Using Electronic Mail

The Network Information Center (NIC) of SRI International provides automated access to NIC documents and information through electronic mail. This is especially useful for users who do not have access to the NIC from a direct Internet link, such as BITNET, CSNET, or UUCP sites.

To use the mail service, follow these instructions:

**1**   Send a mail message to **SERVICE@NIC.DDN.MIL**.

**2**   In the SUBJECT field, request the type of service that you want followed by any needed arguments.

Usually, the message body is ignored, but if the SUBJECT field is empty, the first line of the message body is taken as the request.

The following example shows the SUBJECT lines you use to obtain NIC documents:

HELP

RFC 822

RFC INDEX

RFC 1119.PS

FYI 1

IETF 1IETF-DESCRIPTION.TXT

INTERNET-DRAFTS 1ID-ABSTRACTS.TXT

NETINFO DOMAIN-TEMPLATE.TXT

SEND RFC: RFC-BY-AUTHOR.TXT

SEND IETF/1WG-SUMMARY.TXT

SEND INTERNET-DRAFTS/DRAFT-IETF-NETDATA-NETDATA-00.TXT

HOST DIIS

Requests are processed automatically once a day. Large files are broken into separate messages.