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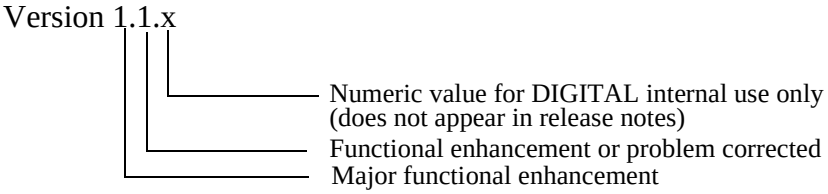
AA-R0KMD-TE

DIGITAL MultiSwitch 612EX Release Notes Version 1.0 July 1997

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. They 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 DIGITAL MultiSwitch 612EX module.

The following example describes the firmware version number:



Contents

Firmware Requirements

When you are configuring the DIGITAL MultiSwitch 612EX module in a DIGITAL MultiSwitch 600 System containing a Stack Director, ensure that the DIGITAL MultiSwitch 600 firmware is Version 1.0 or higher.

When you are configuring the DIGITAL MultiSwitch 612EX in a DEChub 900 MultiSwitch, please make sure that the DEChub 900 MultiSwitch firmware is Version 5.0 or higher.

Hardware Requirements

The minimum hardware revision level for the DIGITAL MultiSwitch 612EX module that is required to support this release of firmware is hardware version C/D.

The minimum hardware revision level of the optional Mod-MAC daughter cards are as follows:

Mod-MACs	Revision
10BaseFL	B01
100BaseTX	C01
100BaseFX	B01

Software Requirements

If you are using clearVISN software to manage the module, you must install clearVISN software Version 1.1 or higher. Note that clearVISN software Version 1.1 requires DEChub 900 MultiSwitch Version 5.0 or DIGITAL MultiSwitch 600 Version 1.0 or higher.

Known Conditions and Restrictions

The following conditions and restrictions apply to the DIGITAL MultiSwitch 612EX module.

100BaseTX Ports

Auto-negotiation is enabled by default on a port in which a 100BaseTX Mod-MAC is installed. However, if the port is connected to a device that does not auto-negotiate, and if the connected device operates in full-duplex mode, the connection will not function properly.

Auto-negotiation may be disabled and the port speed and duplex mode configured manually using clearVISN software.

100BaseFX Ports

Due to technology limitations, auto-negotiation cannot be supported on 100BaseFX ports. A port with an installed 100BaseFX Mod-MAC operates in half-duplex mode by default. The mode may be reconfigured to full-duplex using clearVISN software.

Hot-Swapping

Hot-swapping is the removal or insertion of a module into either the DIGITAL MultiSwitch 600 System or the DEChub 900 MultiSwitch without disrupting power to the unit. Do not hot-swap more than one module at a time. Simultaneously inserting or removing more than one module can cause problems with the operation of modules.

Address Aging

Address aging as specified in the IEEE 802.1D standard is not supported. A proprietary aging mechanism is used that guarantees that addresses will be aged out at some time between T and 2T seconds, since they were last learned, where T is the filtering database aging interval parameter. This parameter is associated with the MIB object dot1dTpAgingTime, and has a default value of 300 seconds.

Storm Control

Storm control restrictions are as follows:

- Two storm control actions, *port-isolation* and *frame-suppression*, perform input rate limiting. On the average, they ensure that no more than the specified rate of traffic (specified by the eSwitchStormRateLimit Management Information Bases (MIB) object with the default value of 200 packets-per-second) is admitted into the switch per port. These control actions are useful in limiting the extent to which Broadcast and multicast storm-generating stations attached to a port can affect the rest of the network. However, they do not ensure that the average rate of broadcast/multicast traffic that is forwarded out a port is less than the specified rate limit. For example, it is possible for several rate-limited streams from different input ports to be aggregated and forwarded out other ports.
- Storm control could occasionally be triggered at input traffic rates below the user-specified rate limit setting. This restriction should be considered, especially if you plan to use a resumption policy of *continue-control* or *auto-interval*.

Security

Security restrictions are as follows:

- Security features are not supported on 100BaseTX and 100BaseFX ports.
- In the auto-authorize mode of security, if multiple addresses are being authorized, packets will be authorized as follows:
  - — The switch may require a packet to be transmitted several times before it authorizes the station (whose source address appears on the packet).
  - — The switch will consider new addresses for authorization until it has authorized a specified maximum number of addresses. However, addresses are not necessarily authorized on a first-come basis. The maximum number of addresses to authorize may be specified using the MIB object eSwitchSecurityPortMaxAutoAuthAddr (default value is 1).
- Authorized addresses are always saved in nonvolatile random access memory (NVRAM), even if they are authorized in the auto-authorize mode of operation.

MIB Objects

MIB Object restrictions are as follows:

- There is no MAC address associated with the switch. The value returned for the MIB object dot1dBaseBridgeAddress is 00-00-00-00-00-00.
- The value unknown(2) is returned for the MIB object ifMauJabberState for the fixed 10BaseT and modular 10BaseFL ports.

- The following counters are not supported on this module:

Counter	RFC Number
ifInUnknownProtos	RFC 1213
dot1dBasePortDelayExceededDiscards	RFC 1493
dot1dTpPortInDiscards	RFC 1493
dot3StatsSQETestErrors	RFC 1398
dot3StatsCarrierSenseErrors	RFC 1398
ifMauFalseCarriers	dot3 MAU MIB

- The counter dot3StatsSingleCollisionFrames counts both single- and multiple-collision frames for 100BaseFX and 100BaseTX modular ports. The counter dot3StatsMultipleCollisionFrames always returns a 0 for these ports.
- Octet counters on 100BaseFX and 100BaseTX ports may not be accurate. Frame counters on 100BaseFX and 100BaseTX ports may not be accurate when operating at 10Mbps.

Transmit (Tx) Collision Counter

The Tx collision counter should be ignored for a port in full-duplex mode.

LEDs

The traffic LED on a 10BaseFL Mod-MAC may not reflect traffic on the port properly.

Duplex Mode

Backplane connections can operate in half-duplex mode only. If a port is configured for full-duplex operation but then configured to point to the backplane, the port will switch to half-duplex mode.

clearVISN

This software section provides information on clearVISN software.

Support for Products

clearVISN software Version 1.1 provides support for the DIGITAL MultiSwitch 612EX products. Refer to the clearVISN documentation and Release Notes for details on the use of clearVISN MultiChassis Manager and clearVISN Stack Manager.

Support for Flash Loader Application

The Flash Loader application may be used to upgrade the firmware in the DIGITAL MultiSwitch 612EX product, if needed.

Support for Recovery Manager

The recovery manager is not supported in clearVISN software Version 1.1.

Errata

The following three changes affect the *DIGITAL MultiSwitch 612EX Installation and Configuration* manual.

Mod-MAC LED States

The following table replaces Table A-4 in Appendix A of the *DIGITAL MultiSwitch 612EX Installation and Configuration* manual.

Table A-4: Mod-MAC LED States

LED Name	Off	Green On	Green Blinking
Activity	**For the 10BaseFL and 100BaseTX**, Off indicates no traffic. **For the 100BaseFX**, Off indicates not receiving traffic but may be transmitting traffic.	High level of traffic on the port.	Traffic detected on the port.
Port Status	**For the 10BaseFL,** Off indicates not connected.	Connected.	Port is disabled by management, or port failed self-test.
	For the 100BaseFX and 100BaseTX, this LED does not reflect the actual port status. This will be corrected in the next release of the DIGITAL MultiSwitch 612EX Firmware.		

100BaseTX Mod-MAC

The following note replaces the NOTE on page 1-7 in Chapter 1 of the *DIGITAL MultiSwitch 612EX Installation and Configuration* manual.

NOTE

The 100BaseTX card is a single port card. The two connectors are there to give you the flexibility of using either a straight-through or crossover cable. You should never have cables plugged into both connectors at the same time. This would cause very unpredictable network behavior.

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eSwitch MIB

eSwitch MIB replaces DEC StackSwitch MIB on page 1-11 in Chapter 1 of the *DIGITAL MultiSwitch 612EX Installation and Configuration* manual.

Product Specifications for the DIGITAL MultiSwitch 612EX

The following table replaces the table on page C-1 in Appendix A of the *DIGITAL MultiSwitch 612EX Installation and Configuration* manual.

Table C-1 lists the product specifications for the DIGITAL MultiSwitch 612EX.

Table C-1:Product Specifications for the DIGITAL MultiSwitch 612EX

Parameter	Specification
Environment	
Operating Temperature[1]	5° C to 50° C (41 ° F to 122 ° F)
Relative Humidity	10% to 95% noncondensing
Altitude	
• Operating	Sea level to 4267 m (14000 ft)
• Non-operating	Sea level to 12192 m (40000 ft)
Power	28.6W total power 5.5 A, 5 Vdc 90m A, 12 Vdc 0.0 A, 15 Vdc
Physical	
Height (installed horizontally) Height (installed vertically)	4.45 cm (1.75 in) 44.45 cm (17.5 in)
Width (installed horizontally) Width (installed vertically)	44.45 cm (17.5 in) 4.45 cm (1.75 in)
Depth	15.25 cm (6.02 in)
Weight	1.40 kg (3.00 lb.)
Shock (Class A/B for products weighing under 100 lbs)	10 G / 10 ms half sine pulse in three orthogonal axes
Vibration (Class C)	5 to 200 Hz sine sweep @ 0.25 G limited by 0.02" (0.5mm) displacement DA* 200 to 500 Hz sine sweep @ 0.10 G
Certification	CE, CSA, FCC, TÜV, UL, VCCI

[1] For sites above 2400 m (8,000 ft), decrease the operating temperature specification by 1.8° C for each 1000 m or 3.2°F for each 3200 ft.

Accessing Online Information

Network Product Business Web Site

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:

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 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 Network Product Business 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.

You can access MIBs and RFCs using the following:

ftp://ds.internic.net/rfc/

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 DDN 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.