d|i|g|i|t|a|l ™

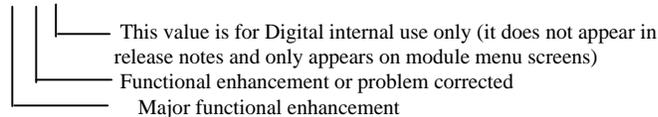**PEswitch 900TX Release Notes**
Firmware Version V1.7
August 1996

These release notes contain firmware and software requirements that apply to the operation of the PEswitch™ 900TX (also referred to in this document as the module). Additional release notes can 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 PEswitch 900TX product.

The following example describes the firmware version number:

Version V1.1.x

— This value is for Digital internal use only (it does not appear in release notes and only appears on module menu screens)
— Functional enhancement or problem corrected
— Major functional enhancement

Contents

Contents *(continued)*

Requirements

The following sections list requirements for the PEswitch 900TX module.

Firmware

When configuring PEswitch 900TX modules in a DEChub 900 MultiSwitch, ensure that the DEChub 900 MultiSwitch firmware version is V4.1, or higher.

Software

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

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

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

Hardware

The minimum hardware revision level required to support the features of this release is PEswitch 900TX hardware version V1/2.

The PEswitch 900TX hardware and firmware revision levels can be displayed by selecting menu item 3 ([3] Show Current Settings) from the PEswitch 900TX Installation menu. (Refer to the *PEswitch 900TX Installation 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.)

Docking Station

When configuring a PEswitch 900TX module 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

10BaseT Ports

The PEswitch 900TX 10BaseT ports are crossover wired ports. To connect a crossover port to a straight-through port (for example, a station port), use a straight-through cable. To connect a crossover port to another crossover port (for example, a repeater port), use a crossover cable. (Refer to the *PEswitch 900TX Installation and Configuration* manual for more information.)

FDDI Port

The PEswitch 900TX FDDI PHY ports (A/M and B/S) are available on the DEChub 900 backplane or when the appropriate (optional) ModPMDs are installed on the DEChub ONE-MX docking station. The ports can be configured using MultiChassis Manager, or when installed on the DEChub ONE-MX from the console (using the Module-Specific Options console menu selection).

When the module is connected to a DEChub ONE-MX docking station, the FDDI configuration state and station type depend on the number of ModPMDs installed, slot location of ModPMDs, and the configuration of the individual PHY ports, as shown in Table 1-1.

Table 1-1   ModPMD and PHY Port Configurations

Number of ModPMDs	ModPMD Slot	PHY Configuration	Configuration State
2	A/M and B/S	Docking Station: A, B	DAS
2	A/M and B/S	Docking Station: M, S	SAC
1	A/M	Docking Station: A, B	DAS C_WRAP_A
1	A/M	Docking Station: M, S	SAC
1	B/S	Docking Station: A, B	DAS C_WRAP_B
1	B/S	Docking Station: M, S	SAC
0	----	Any	No FDDI

DAS = Dual Attach Station   SAC = Single Attach Concentrator

Fixes in this Release

This section contains information on bug fixes in this release.

- A firmware problem that may cause a write to NVRAM to fail intermittently and reset the switch (error code 3000), has been fixed.

- A firmware problem that would cause the switch to stop responding to management queries when the switch was an IP services module in a hub and received very large SNMP requests from the FDDI interface, has been fixed.

- A firmware problem that would calculate the CRC on a bad image received during a downline upgrade, has been fixed.

- A firmware problem that may cause NVRAM writes to not occur on a standalone switch when an OBM IP address is assigned, a trap address is configured, nothing is connected to the OBM port, and the switch is manually reset, has been fixed.

- A firmware problem that could cause an Ethernet port in blocking mode to go into forwarding when the FDDI port's path cost was decreased and then get stuck in listening mode when the FDDI port's path cost was increased, has been fixed.

- A firmware problem that could cause one of the Ethernet ports to stop forwarding or the switch to reset when specific SNAP protocol filter entries were configured, has been fixed.

- A firmware problem that would not allow a filter table entry's port mask to be changed from any value to zero, has been fixed.

- A firmware problem that would allow a disabled port to learn, has been fixed.

Known Conditions and Restrictions

The following conditions and restrictions apply to the PEswitch 900TX module.

Downgrading to a Previous Image

If you upgrade to this firmware version and then decide to downgrade to a previous firmware version (V1.5 or earlier) at a later time, you may lose some of your configurations saved in NVRAM. To minimize this risk, we suggest that you use Recovery Manager to backup your switch's configuration information to minimize configuration data loss.

RMON Statistics and History Counters

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

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

Ethernet CRC and Alignment Errors

The module does not distinguish between Ethernet CRC and alignment errors. Both CRC and alignment errors are counted as alignment errors on Ethernet ports. As a result, the CRC Errors (MIB object: dot3StatsFCSErrors) counter on the MultiChassis Manager Bridge Port Information view always shows a zero. The Alignment Errors (MIB object: dot3StatsAlignmentErrors) counter on the same view also counts packets with CRC errors.

FDDI Tree Configurations

FDDI rules require that stations with M ports be called concentrators. Consequently, when a PEswitch 900TX is configured with M and S ports, it must report itself as a concentrator in FDDI NIF and SIF frames, and in the FDDI and SNMP MIBs. Therefore, MultiChassis Manager, FDDI monitors, and FDDI ring maps will announce the station type of a treed PEswitch 900TX as a Single Attach Concentrator (SAC), rather than as a Single Attach Station (SAS).

FDDI MIB: fddimibPORTLemCts

The value returned in response to an SNMP get request for the MIB object fddimibPORTLemCts is not meaningful. A value of 0 (zero) is always returned for this object.

FDDI Port: Front Bezel Labels

The FDDI A/M and B/S ports may be labeled as A and B on older units that are being upgraded to this new firmware release.

MIB and RFC Information

The PEswitch 900TX module supports 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) (statistics, history, alarms, events)

- Digital ELAN MIB Extensions V3.2, April 1996

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

Accessing Online Information

Network Product Business Web Site

Further information on this network product or topic is available on Digital's Network Product Business 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:

Americas 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 "Products and Technology" link, and from there choose the "Technical Data" link.

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

Using Electronic Mail

The DDN 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.

Normally 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.

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