

Software Product Description

PRODUCT NAME: DECbridge 500 and 600 Series
Software Microcode Version 1.5

SPD 36.23.06

DESCRIPTION

DECbridge 500 and 600 Series Software Microcode is dedicated microcode which runs in the DECbridge FDDI to 802.3/Ethernet hardware bridge platform. The DECbridge device is an ISO model Layer 2 protocol-independent bridge that allows customers to connect an existing 802.3/Ethernet LAN(s) to a high speed FDDI network.

DECbridge hardware is shipped from the factory with the DECbridge Software Microcode preloaded. The microcode resides in the bridge's electronically alterable memory, thus allowing subsequent versions of the microcode to be downline loaded. The DECbridge 500 and 600 Series Software Microcode is maintained in the hardware base even during power-off states.

Local area network bridges are the building blocks of the extended LAN. An extended LAN is a collection of LANs that are interconnected to logically appear as one large local area network. The bridge interconnects 802.3/Ethernet LAN(s) to an FDDI LAN allowing only data destined for an adjacent LAN to pass through the device. By performing this traffic control and direction, network bandwidth is maximized since only traffic required on the extended LAN is allowed to traverse the bridge. Additionally, the DECbridge device performs the necessary data packet conversions to allow FDDI and 802.3/Ethernet frame formats to interoperate on the extended LAN.

The general characteristics of DECbridge 500 and 600 Series Software Microcode are:

- Performs initialization and bootstrapping.
- Includes a simple network management protocol (SNMP) agent allowing "show" and "set" function requests when made from SNMP-based management systems.¹ MIB support includes MIB II (RFC 1213), FDDI MIB (RFC 1285) Bridge MIB (RFC 1286) and a DEC vendor MIB.

¹ Requires Network Management Software to access this function.

Note: Exact compliance with RFC 1285 is not possible due to conflicts between it and ANSI X3T9.5 SMT 7.2. See release notes for details.

- Performs Diagnostic Selftest automatically at power-up and also when initiated by network management software.
- Performs filter and forward decisions on incoming data packets.
- Performs bi-directional standard-based translation between FDDI and 802.3/Ethernet data formats, providing direct transparent communications between 802.3/Ethernet and FDDI LANs.
- Performs specialized translation of the AppleTalk® protocol to provide transparent communication between 802.3/Ethernet and FDDI LANs as specified by IEEE 802.1 part D Bridge Specification.
- Performs specialized translation of the Novell® NetWare® IPX protocol packet format. This feature can be enabled/disabled via network management.
- Provides Out-Of-Band-Management support via Local Console Management (LCM) and Serial Line Internet Protocol (SLIP). This feature provides the ability to manage the DECbridge product from an RS232 port. Two mechanisms are provided:
 - When a terminal is connected to the port, a Local Console Manager (LCM) is enabled. This utility allows the user to set the IP address, default gateway address, SNMP trap addresses, and serial interface baud rate. Using LCM, the port can be put into SLIP mode.
 - When in SLIP mode, the bridge can be managed by a SNMP NMS through the serial port using the SLIP protocol.
- Provides traffic Rate Limiting functionality to abate broadcast and multicast storms. This feature provides the network manager with a mechanism that will prevent the propagation of the "broadcast storms" that plague many extended LANs today. It allows the network manager to limit the rate at which selected addresses and protocols are forwarded through the bridge.

- Performs IP (TCP, UDP, ICMP, and EGP) data packet fragmentation per RFC 791. Allows transparent forwarding of large FDDI IP packets to 802.3/Ethernet LANs.
- Performs Spanning Tree loop detection in both the IEEE 802.1d implementation as well as in Digital's LAN Bridge implementation mode; automatically configures to 802.1d and Digital's LAN Bridge Spanning Tree implementations for backwards compatibility with the installed base of Digital's LAN Bridge users.
- Provides flexible filtering (destination, address, protocol) and password access protection for greater network control, increased security and bandwidth utilization, and reduced propagation of network problems.¹
- Performs FDDI station management as specified by the ANSI X3T9.5 SMT V7.2 standard. Support for the optional PMF frames is included.
- Performs Ring Map functions as per SMT V7.2.¹
- Updates all the DECbridge counters and settable parameters.¹
- Performs failure detection of the DECbridge's cooling fans, alerts the user through management software, and turns off the product.
- Performs operating system support scheduling, maintains timers, and receives requests.
- Provides functionality for Dual Homing connections.
- Provides functionality for Optical Bypass switch connections.

HARDWARE REQUIREMENTS

One of the following DECbridge products is required to run DECbridge 500 and 600 Series Software Microcode.

DECbridge 510	DECbridge 600
DECbridge 518	DECbridge 610
DECbridge 520	DECbridge 618
DECbridge 524	DECbridge 620
DECbridge 526	DECbridge 624
DECbridge 528	DECbridge 626
	DECbridge 628

Note: DECbridge 500 and 600 Series Software Microcode does NOT support the DECbridge 500 model.

SOFTWARE LICENSE

The software license required to run DECbridge 500 and 600 Series Software Microcode is included with the hardware.

This software microcode is furnished under the licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions. For more information about Digital's licensing terms and policies, contact your local Digital office.

SOFTWARE WARRANTY

Warranty of this software microcode product is provided by Digital with the purchase of a license for the product as defined in the Software Warranty Addendum of this SPD.

The above information is valid at time of release. Please contact your local Digital office for the most up-to-date information.

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