



# Software Product Description

**PRODUCT NAME:** DECbridge 90 and 90FL Software Microcode, Version 3.1

**SPD 44.32.04**

## DESCRIPTION

DECbridge Software Microcode runs in the DECbridge 90 and 90FL hardware bridging platforms. The DECbridge 90 and 90FL are ISO model Level 2 protocol-independent bridges that allow users to connect two 802.3 or two Ethernet LANS. The DECbridge 90FL supports an AUI and FOIRL interface to the backbone and a ThinWire interface to the work group. The DECbridge 90 supports a ThinWire and AUI interface to the backbone and a ThinWire interface to the work group.

DECbridge 90 and 90FL hardware platforms are shipped with the DECbridge 90 and 90FL Software Microcode preloaded. The microcode resides in the Flash ROM, allowing subsequent versions of the microcode to be downline loaded.

Local area network (LAN) bridges are the building blocks of the extended LAN, which is a collection of LANs that are interconnected to logically appear as one large LAN. The DECbridge 90 and 90FL are configured to learn up to 200 station addresses on the work-group side of the bridge, and to perform automatic address filtering of network traffic across the bridge. The DECbridge 90FL hardware also supports "flood mode," which allows use of the bridge in networks that have more than 200 stations in the work group, but with some loss of filtering capability.

The characteristics of the DECbridge 90 and 90FL are:

- Provides IEEE 802.1 compatible "Bridge Spanning Tree" support. The algorithm uses preloaded configuration values that cannot be changed.
- Provides DEC LANbridge 100 compatible "Bridge Spanning Tree" support. The algorithm uses

preloaded configuration values that cannot be changed.

- Provides access for remote "Hub Management" of the DECrepeater 90T and DECrepeater 90C when installed in the same DEChub 90 backplane. When enabled, the hub management feature allows a remote operator to enable and disable repeater ports in the hub, query the port status, and discover information about which stations are attached to the repeater ports.
- When the number of stations in the work group exceeds the table size limit of 200, "flood mode" is automatically enabled on those DECbridge 90 modules that support it.
- Provides remote management of bridge features and hub management features through Digital's MOP Console Carrier protocol. Access to the bridge console can be restricted by the bridge password.
- Provides remote management of bridge features and hub management features through Digital's RBMS (Remote Bridge Management) protocol, as required to support remote management by the DECagent-90, which does protocol translation from SNMP to RBMS to talk to the bridge. Write access to bridge parameters can be restricted by the bridge password.
- The following features are accessible by the MOP remote console and RBMS. When set in RBMS, or with the DEFINE command in the console interface, these settings are maintained when the bridge is powered off:
  - Set and examine the address lifetime for addresses in the bridge address table.

- Enable or disable the DEChub 90 repeater management features, and examine the current setting.
- Enable or disable the use of the Spanning Tree Algorithm, and examine the current setting.
- Change the bridge password.
- When used with bridge hardware that supports "flood mode," enable and disable the use of the bridge flood mode, and examine the current setting.
- Set the administrative state of either bridge port to be enabled or disabled, and examine the current setting, as well as each port's frame counters, error counters, and spanning tree parameters.
- Query the list of the first 200 station addresses known to be attached through the workgroup port.
- Set up to 16 protocol filters as either Ethernet protocol types (two bytes) or IEEE 802.3 SNAP SAP protocol identifiers (five bytes). Each filter can have one of five dispositions. (The first two dispositions cannot be used simultaneously on the same bridge.)

The default handling of IEEE 802.3 DSAP protocol identifiers (other than the SNAP SAP of "AA") is always forward. This behavior cannot be altered by the setting of IEEE 802.3 SNAP SAP protocol or Ethernet protocol filters.

1. Forward all messages of a specified protocol, filtering messages of all unspecified protocols.
  2. Filter messages of a specified protocol, forwarding messages of all unspecified protocols.
  3. Filter all group addressed messages of a specified protocol, forwarding all individually addressed messages of that protocol.
  4. Filter all group addressed messages of a specified protocol coming from the work group port, forwarding all individually addressed messages of that protocol, and group addressed messages from the backbone port.
  5. Filter all group addressed messages of a specified protocol coming from the backbone port, forwarding all individually addressed messages of that protocol, and group addressed messages from the workgroup port.
- The following features are accessible by the MOP remote console and RBMS, but settings in this group are not maintained when the bridge or hub is powered off. These features are only accessible when

hub management is enabled, and the DECbridge 90 and 90FL are used in a DEChub:

- Query which DECreeper 90 units are installed in the same hub as the DECbridge.
- Enable, disable, and query the port status of the individual repeaters.
- List the first 200 stations known to be in the work group, along with the repeater port number to which they are attached. Repeater port number information is available only if the station is sufficiently active for the bridge to discover it. (It may take several minutes for a newly installed station to be discovered.)
- Reset a repeater in a specific hub slot.

## HARDWARE REQUIREMENTS

The DECbridge 90 or 90FL hardware is required to run DECbridge 90 and 90FL Software Microcode.

## SOFTWARE REQUIREMENTS

None

## ORDERING INFORMATION

The DECbridge 90 and 90FL Software Microcode is included with the DECbridge 90 and 90FL hardware.

## SOFTWARE LICENSING

The software license required to run the DECbridge 90FL Software Microcode is included with the hardware.

This software 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 PRODUCT SERVICES

A variety of service options are available from Digital. For more information, contact your local Digital office.

**SOFTWARE WARRANTY**

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

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