Software Product Description

PRODUCT NAME: **VAX-11/780 Microprogramming Tools,** Version 3.0   SPD 25.09.08

DESCRIPTION

The VAX-11/780 Microprogramming Tools enable a programmer to assemble and load microprograms for the User Writable Control Store (UWCS) option of the VAX-11/780 central processor. The VAX-11/780 Microprogramming Tools operate under the VAX/VMS Operating System.

VAX-11/780 Microprogramming Tools consist of:

- MICRO-2 - An assembler for user-written source microcode. The assembler is written in BLISS-32.

- VAXDEF - The definition file that describes to the assembler the VAX-11/780 microarchitecture. The definition file is assembled with the file containing customer-written microcode statements. The output of the assembler is:

  — An object file containing absolute microcode

  — A listing file containing the user source microcode and related microcode output

- MICLD - A utility program to load the User Writable Control Store memory of a VAX-11/780 CPU from VAX-11/780 WCS microprogram object file. The Utility Program runs as a privileged task under VAX/VMS.

- A tool verification test that invokes a sample program to ensure that the tools have been installed correctly.

When the VAX-11/780 UWCS is loaded with user-written microcode, the category of support applicable to all DIGITAL-supplied software (including prerequisite software) is CUSTOMER SUPPORTED. It is the user's responsibility to ensure the correct operation of all DIGITAL-supplied software when the VAX-11/780 UWCS is loaded with user-written microcode.

MINIMUM HARDWARE REQUIRED

Refer to the VAX/VMS System Software Order Table for processor support.

VAX-11/780 User Writable Control Store (KU780-A).

Block Space Requirements (Block Cluster Size = 1):

Disk space required during installation: 427 blocks
(218,624 bytes)

Disk space required for use (permanent):   427 blocks
(218,624 bytes)

These block counts refer to the disk space required on the system disk. The sizes are approximate; actual sizes may vary depending on the user's system environment, configuration, and software options selected.

VAXcluster Environment

This layered product is fully supported when installed on any valid and licensed VAXcluster configuration, including those systems utilizing a common system disk, without restrictions.

OPTIONAL HARDWARE

None

PREREQUISITE SOFTWARE

VAX/VMS Operating System

Refer to the VAX/VMS System Software Order Table for the required version.

OPTIONAL SOFTWARE

None

SOFTWARE WARRANTY

THIS PRODUCT IS PROVIDED **"AS IS"** WITHOUT ANY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED.

INSTALLATION

This software product can be installed by the customer using the step-by-step documentation available for this product.

ORDERING INFORMATION

Single-Use licensed software is furnished under the licensing provisions of DIGITAL's Standard Terms and Conditions of Sale, which provide in part that the software and any part thereof may be used on only the single CPU on which the software is first installed, and may be copied, in whole or in part (with the proper inclusion of DIGITAL's copyright notice and any proprietary notices on the software) for use on that same CPU.

digital software

You will need a separate license for each CPU on which you will be using the software product (except as otherwise specified by DIGITAL). Then, Materials and Service Options are selected to utilize the product effectively. **THE LICENSE OPTIONS ARE DESCRIBED BELOW. IF YOU ARE NOT FAMILIAR WITH THE SERVICE OPTIONS, YOU MAY OBTAIN THE APPROPRIATE SOFTWARE PRODUCT SERVICE DESCRIPTION(S) FROM YOUR LOCAL DIGITAL OFFICE.**

The base option number for this software product is QE109.

LICENSE OPTIONS

Single-Use License Option

The Single-Use License is your right to use the software product on a single CPU.

For your first installation of this software product you must purchase as a **minimum:**

- Single-Use License Option, and

- Distribution and Documentation Option

The license gives you the right to use the software on a single CPU and the Distribution and Documentation Option provides the machine-readable software and related documentation.

To use this software product on additional CPUs, you must purchase as a **minimum:**

- Single-Use License Option

In addition to the right to use, the license gives you the one-time right to copy the software from your original CPU installation to the additional CPU. Therefore, the Distribution and Documentation Option is not required, but optional.

VAXcluster License Option

You are eligible for a VAXcluster License Option on your second or each subsequent CPU that is part of a VAXcluster system. This is a Single-Use License offered at a reduced price and provides all of the License rights described above. A standard, Single-Use License Option (example: Qxxxx-DZ) is required with the first purchase of this software product and is also required for the first CPU of a VAXcluster system.

Distribution and Documentation Option

The Distribution and Documentation Option provides the machine-readable software and the basic documentation. You must have, or order, a Single-Use License to obtain this option. You will need this option to install the software for the first time. You will also need this option to obtain revised versions of the software product when they become available.

Software Product Services

A variety of service options are available. For more information on these or other services, please contact your local DIGITAL office.