EMULEX MICROVAX DRIVER

DISTRIBUTION KIT VD9951803 REV G
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ONE</strong> GENERAL DESCRIPTION</td>
<td></td>
</tr>
<tr>
<td>1.1 INTRODUCTION</td>
<td>1-1</td>
</tr>
<tr>
<td>1.2 PRODUCT OVERVIEW</td>
<td>1-1</td>
</tr>
<tr>
<td>1.3 DISTRIBUTION MEDIA</td>
<td>1-1</td>
</tr>
<tr>
<td>1.4 COMPATIBILITY AND REQUIREMENTS</td>
<td>1-1</td>
</tr>
<tr>
<td>1.4.1 Hardware</td>
<td>1-1</td>
</tr>
<tr>
<td>1.4.2 Software</td>
<td>1-2</td>
</tr>
<tr>
<td>1.5 RELATED DOCUMENTATION</td>
<td>1-2</td>
</tr>
<tr>
<td><strong>TWO</strong> INSTALLATION</td>
<td></td>
</tr>
<tr>
<td>2.1 OVERVIEW</td>
<td>2-1</td>
</tr>
<tr>
<td>2.2 CONVENTIONS AND ABBREVIATIONS</td>
<td>2-1</td>
</tr>
<tr>
<td>2.3 INSTALLATION PROCEDURE</td>
<td>2-1</td>
</tr>
<tr>
<td>2.4 ERROR LOGGING</td>
<td>2-2</td>
</tr>
<tr>
<td>2.5 MAKING A STANDALONE BACKUP DISKETTE</td>
<td>2-3</td>
</tr>
</tbody>
</table>
EMULEX MicroVMS TS11 SOFTWARE DRIVER (TSDRIVER)

INSTALLATION GUIDE
Copyright (C) 1985 Emulex Corporation

The information in this manual is for information purposes and is subject to change without notice.

Emulex Corporation assumes no responsibility for any errors that may appear in the manual.

Printed in U.S.A.
This software distribution kit contains the following media:

<table>
<thead>
<tr>
<th>Emulex Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VD9960703</td>
<td>5.25-inch floppy for MicroVAX</td>
</tr>
<tr>
<td>VD9962003</td>
<td>TK50 cartridge for MicroVAX</td>
</tr>
</tbody>
</table>

This kit contains the following User's Manuals to document the programs contained on the distribution media:

<table>
<thead>
<tr>
<th>Emulex Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VD9951903</td>
<td>MicroVAX Driver Distribution Kit Cover</td>
</tr>
<tr>
<td>VD9950902</td>
<td>MicroVMS TS11 Software Driver Installation Guide</td>
</tr>
</tbody>
</table>
1.1 INTRODUCTION

This manual is a guide to installation of the MicroVMS TSll software driver, TSDRIVER, on Digital Equipment Corporation (DEC) MicroVAX I and II computers. The document contains two main sections:

- **General Description.** This section contains an overview of TSDRIVER.
- **Installation.** This section presents installation instructions for TSDRIVER.

There are no operating instructions, because TSDRIVER requires no user interaction once installed.

1.2 PRODUCT OVERVIEW

As written by DEC, the MicroVMS operating system does not support TSll-type devices. TSDRIVER is a software driver that provides TSll support under MicroVMS 4.n. The TSll-type device at the standard TSSR and vector address is designated as MSA0 by MicroVMS. Alternate TSSR and vector addresses can also be selected; see the appropriate tape coupler technical manual for details.

1.3 DISTRIBUTION MEDIA

The following table lists TSDRIVER distribution media.

<table>
<thead>
<tr>
<th>Emulex P/N</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VD9960703</td>
<td>5.25-inch floppy diskette</td>
</tr>
<tr>
<td>VD9962003</td>
<td>TK50 tape cartridge</td>
</tr>
</tbody>
</table>

1.4 COMPATIBILITY AND REQUIREMENTS

1.4.1 HARDWARE

TSDRIVER is compatible with DEC MicroVAX I and II computers. It supports DEC TSV05 and TQK25 subsystems and TSll emulations, including Emulex TC02, TC03, and TC05 tape couplers.
1.4.2 SOFTWARE

TSDRIVER is compatible with the DEC MicroVMS operating system, version 4.n. The Program Development version of MicroVMS is necessary for full TSll support, because the DEC MTACP (Magnetic Tape Ancillary Control Process) is required; however, with the baseline MicroVMS system, the TSll can still be used for backup and restore operations, as explained in subsection 2.3.

1.5 RELATED DOCUMENTATION

The following Emulex documents may be ordered from the following address:

Emulex Corporation
3545 Harbor Blvd.
Costa Mesa, CA 92626
(714) 662-5600 TWX 910-595-2521

Title: TC02/FS (TSll Compatible) Tape Coupler Technical Manual
Publication No.: TC0251002

Title: TC03 (TSll Compatible) Tape Coupler Technical Manual
Publication No.: TC0351001

Title: TC05 (TSll Compatible) Tape Coupler Technical Manual
Publication No.: TC0551001

The following DEC publication is available from:

Digital Equipment Corporation
P.O. Box CS2008
Nashua, New Hampshire 03061

Title: MicroVMS User's Manual
Publication No.: AA-2209B-TE
2.1 OVERVIEW

This section defines conventions and abbreviations used in this document, and explains how to install TSDRIVER under MicroVMS.

2.2 CONVENTIONS AND ABBREVIATIONS

Operator input appears in boldface type, in order to distinguish it from operating system messages and prompts. The symbol <return> signifies the carriage return key.

2.3 INSTALLATION PROCEDURE

The following installation procedure assumes that SPTREQ is set to 896, so that the command as shown, SET SPTREQ 1024, adds 128 to the current value. This step is necessary only for the MicroVAX I, which does not implement the Scatter-Gather function; TSDRIVER uses 128 entries in the system page table to perform this function, so SPTREQ must be increased by 128. This step is omitted for the MicroVAX II.

NOTE

For the MicroVAX I, SPTREQ must be increased by 128 for each tape drive that TSDRIVER serves.

1. Login to the system manager account.

NOTE

Before invoking VMSINSTAL, you must install the System Programming Option (SYSP). To ensure that SYSP has been installed, check the directory for the Magnetic Tape Ancillary Control Process (MTAAACP.EXE) and the system symbol table (SYS.STB) files. Use the following procedures (one at a time) to make this check:

$ DIR SYS$SYSTEM:SYS.STB<return>
$ DIR SYS$SYSTEM:MTAAACP.EXE<return>
Installation Procedure

2. Insert the media and invoke the VMSINSTAL procedure. For the floppy diskette, enter the following:

`$ @SYS$UPDATE:VMSINSTAL * DUAL:<return>`

For the TK50 cartridge, enter the following:

`$ @SYS$UPDATE:VMSINSTAL * MUA0:<return>`

3. Invoke SYSGEN and alter the value of SPTREQ (MicroVAX I only):

`$ RUN SYS$SYSTEM:SYSGEN<return>`
`SYSGEN> USE CURRENT<return>`
`SYSGEN> SET SPTREQ 1024<return>`
`SYSGEN> WRITE CURRENT<return>`
`SYSGEN> EXIT<return>`

After completing these steps, shut down the system and reboot.

The default file SYLOGIN.COM equates the INIT command to INIT/NOHIGHWATER. Magtapes do not support this option; therefore, an error occurs when you try to initialize the tape. To overcome this problem, you can either alter the SYLOGIN.COM file (not recommended) or use the INIT/HIGHWATER command to override the default:

`$ INIT/HIGHWATER MSAO: TEST<return>`

Failure to use the /HIGHWATER qualifier may cause INIT to fail with the message shown in the following sample dialog:

`$ INIT MSAO: TEST<return>`
% INIT-F-ILLOPT, qualifier(s) not appropriate to this device
$

2.4 ERROR LOGGING

On the MicroVAX I, ANALYZE/ERROR_LOG can be used to interpret the TSll subsystem errors that are logged. On the MicroVAX II, however, the tape error log module has been excluded, so the user can only obtain a hex dump of the TSll registers. To obtain this dump, use the following command:

`$ ANALYZE/ERROR_LOG/REGISTER_DUMP/INCLUDE=MS<return>`

2.5 MAKING A STANDALONE BACKUP DISKETTE

The following procedure can be used for making a new version of standalone backup on RX50 floppy diskettes with TSll support:

1. Login on the system account.
2. Invoke the editor and make a new, modified version of the standalone backup build command file, using the following command sequence. The modified file should be called by a different name (in this example, TSll_STABACKIT vs. STABACKIT) in order to differentiate the two files. Also, the standard file needs to remain unmodified for future patches.

```
$ SET DEF SYS$UPDATE:
$ EDIT/OUT=TSll_STABACKIT.COM SYS$UPDATE:STABACKIT.COM<return>
```

The following four steps are for MicroVAX I only:

```
*F "SRPCOUNT"<return>
*I<return>
SET SPTREQ 1024<return>
^Z
```

The following steps are for both MicroVAX I and II:

```
*F "TSDRIVER"<return>
*S ":IPNOTUVAX" <return>
*EXIT<return>
```

3. Invoke the new version of the command file, which will produce two rloppies with the new standalone backup. You must have two scratch RX50 diskettes available:

```
$ @SYS$UPDATE:TSll_STABACKIT.COM<return>
```
BLANK
Reader's Comments

Your comments and suggestions will help us in our continuous effort to improve the quality and usefulness of our publication.

Manual Part Number __________________________ Rev. ________________

What is your general reaction to this manual? In your judgment is it complete, accurate, well organized, well written, etc.? Is it easy to use? ____________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

What features are most useful? _____________________________________________

_______________________________________________________________________

_______________________________________________________________________

What faults or errors have you found in the manual? ____________________________

_______________________________________________________________________

_______________________________________________________________________

Does this manual satisfy the need you think it was intended to satisfy? ______________

Does it satisfy your needs? ______________________ Why? __________________________

_______________________________________________________________________

_______________________________________________________________________

□ Please send me the current copy of the Controller Handbook, which contains the information on the remainder of EMULEX’s controller products.

Name ___________________________________________ Street __________________________

Title ___________________________ City __________________________

Company ___________________________ State/Country __________________________

Department ___________________________ Zip __________________________

Additional copies of this document are available from:

Emulex Corporation
3545 Harbor Boulevard
P.O. Box 6725
Costa Mesa, CA 92626
Attention: Customer Services