FCO T1032-R001, Retrofit T1032 with T1034 making DEBNT a DEBNA

digital

FCO

Level of Urgency: R

FIELD CHANGE ORDER

Number: T1032-R001

Applicability: Retrofit all T1032 modules with a T1034 making the DEBNT option a DEBNA option. This FCO incorporates the following ECO: ECO T1032-MK005 - New Part Revision "F4". Field spares stock should also be upgraded.

| This revised FCO supersedes Rev. A releaed 05 January 1988.
|| It has been revised to correct the revision of the T1034
| module to "J".

Problem/Symptom:
See Page 2

Quick Check: Revision "J3/J4" - Look for 23-341E6-00 at location E2.

Compatibility/Prerequisite FCO: N/A	Est. Time to Install: 1 hour

Special Tools or Test Equipment: See page 2

FCO Parts Information

Order by FCO Kit#:	Quantity:	Part Number:	Description:
EQ-01486-01	1	T1034 Module	DEBNA (Rev J3/J4)
EQ-01500-XX			See Page 2
FA-04777-02	1		FCO Document

EQ Kit Variation System/Option Applic: N/A

Approvals

CSSE Engineer Jim Vermette	F.S. Product Safety Robert Brister	F.S. Logistics Ed Duggan
CSSE Manager Jan Sicard	F.S. Microfiche Libraries EP-FSNVX-LB VAX	Affected Population: 3,365

ESD&P Micropub.		Initial Kitting:
Ray LeBlanc	VAXnotes STARS	3,365
Revision: B		Hardcopy Publication: 3,365
FCO Release Date 18-Jul-1988		Parts Availability: January 1988

PROBLEM/SYMPTOM Cont.

T1034 - Rev F

1. Packet-overruns during high packet traffic.
2. Inadequate Firmware error recovery.
3. LANCE chip "hangs".
4. LANCE chip "underflow and overflow".
5. SYS_BUF_UNAVAIL errors, SBUA.
6. ULTRIX V2.0 "BUFFER CHAINING" Support.

T1034 - Rev H

The Firmware was changed to add the offset of the boot block to allow boots other than block zero.

T1034 - Rev J

The DEBNA can intermittently send incorrect-length "transmit packets" (abbrev. XMIT_LEN_ERR). These bad-packets will assume the length of previous XMIT-packet, either being shorter (truncated) or longer than intended by network applications. This may occur under any protocol-type. Due to the length-relationship with the previous packet, the problem has been named, "XMIT-PACKET STALE-LENGTH ERROR".

SPECIAL TOOLS: Continued from page 1

Field Service Tool Kit.
VELOSTAT Electrostatic Field Service Kit (P/N 29-26246-00).
Field Service Tool Kit

FCO KIT CONTENTS: Continued from page 1

	Quantity	Part Number	Description
EQ-01486-01	1	T1034	Module (Rev J)
	1	FA-04777-02	FCO Document
EQ-01500-02	1	FA-04795-02	ETDRIVER Floppy
EQ-01500-03	1	FA-04795-03	DEBNA Diagnostics Floppy

DEBNT MICROCODE UPGRADE TABLE OF CONTENTS: PAGE NO.

I. Installation Procedures for VAX 82X0/83X0 Configuration I..... 2

II. Installation Procedures for VAX 82X0/83X0 Configuration II..... 5

III. Installation Procedures for VAX 85X0/8700/8800/8810/8820 Conf. N 897X 8

****
* NOTE *
* *
* You must be running VMS V4.5 or above to install this FCO *
****

Section I - Installation Procedures for VAX 82X0/83X0 Configuration 1:

1. Before shutting down the operating system, you must install the new ETDRIVER and should install the DIAGNOSTICS contained on the floppy FA-04795-02 (EQ-01500-02) and FA-04795-03 (EQ-01500-03). These are the appropriate ETDRIVER for either VMS 4.5 (ETDRIVER_V45.EXE) or 4.6 (ETDRIVER_V46.EXE) and Diagnostics EBSAA, EZSAA, EVDYC, EVDYD.

2. Log into VMS and install floppy FA-04795-02 in CSA1: and mount;

   A. MOUNT/OVER=ID CSA1: ! VMS ETDRIVER.EXE should always be copied into SYS$COMMON:[SYSEXE]; not in SYS$SPECIFIC:[SYSEXE].

3. If you are running VMS version 4.5 do the following;

   A. RENAME SYS$COMMON:[SYSEXE]ETDRIVER.EXE ETDRIVER_OLD.EXE

B. COPY/LOG CSA1:[ETDRIVER]ETDRIVER_V45.EXE SYS$COMMON:
[SYSEXE]ETDRIVER.EXE

4. If you are running VMS version 4.6 do the following;

A. RENAME SYS$COMMON:[SYSEXE]ETDRIVER.EXE ETDRIVER_OLD.EXE
B. COPY/LOG CSA1:[ETDRIVER]ETDRIVER_V46.EXE SYS$COMMON:
[SYSEXE]ETDRIVER.EXE

5. Once the correct ETDRIVER has been copied dismount CSA1:

A. DISMOUNT CSA1:

6. Now place the second floppy FA-04795-03 into CSA1: and mount;

A. MOUNT/OVER=ID CSA1:

7. You may now copy the diagnostic supervisor and the correct DEBNA diagnostics;

A. COPY/LOG CSA1:[SYSMAINT]EBSAA.EXE SYS$COMMON:[SYSMAINT]
B. COPY/LOG CSA1:[SYSMAINT]EVDYC.EXE SYS$COMMON:[SYSMAINT]
C. COPY/LOG CSA1:[SYSMAINT]EVDYD.EXE SYS$COMMON:[SYSMAINT]

8. Shut down the system by executing the Shutdown Command Procedure.

$ @SYS$SYSTEM:SHUTDOWN

After VMS shuts down, type HALT.... you will now be in console mode
PROMPT is >>>

9. Turn the upper keyswitch on the console panel fully counterclockwise and set the main circuit breaker at the back of the BA32 box to the "OFF" (0) position.

****
* NOTE: If battery backup H7231 is present as an option, the *
* DEC-PWR-BUS cable 17-00931-0X must be in place between the *
* 877 power controller and the H7231 prior to the BA32 circuit*
* breaker being placed in the off position. If this cable *
* is not in place, battery backup may become activated. The *
* circuit breaker on the 877 power controller must not be *
* utilized. *
****

10. From the front of the CPU cabinet, fully extend the cabinet stabilizer leg.

11. From the rear of the processor cabinet, release the BA32 box track lock.

12. Slide the BA32 box out of the cabinet.

13. Remove the BA32 box top cover.

14. Put on the wrist strap found in the holding bag on the front base of the cabinet. Attach the other ground strap in the bag to the conductive package containing the T1034 module.


```
**************************************************************
*                        C A U T I O N                       *
*                                                            *
*       The module, as all other VAX 8XX0 modules,           *
*       contains electrostatic discharge sensitive           *
*       devices (ESDS).  The use of the VELOSTAT             *
*       kit is essential to prevent damage which may         *
*       not be noticed immediately.                          *
**************************************************************
```

15. Use ALL ESD safety precautions to prevent DOA modules in kit.

16. Open the EQ-01486-01 kit and check that the T1034 is at revision J3/J4 If the part number is incorrect return the module to the designated repair center for upgrade and discontinue this procedure.

17. Lift the lever of the VAXBI cardcage housing the T1032 module to be replaced. Remove the module from the cardcage and place it on the open top half of the conductive package.

18. Check the revision of the module taken from the machine. If the module is a T1034 at Rev J3/J4, it should be reinstalled. If the module is a T1032 module, replace it with EQ-01486-01 in the same slot.

19. Return the lever of the VAXBI cardcage to the locked position.

20. Place the top cover on the BA32 box but do not secure it with the 14 screws.

21. Power up the CPU by turning on the Circuit Breaker on the back of the BA32 box to the "ON" (1) position and turning the upper keyswitch on the front console panel to ENABLE. The DEBNA self-test runs upon power up. Check that the amber LED on the T1034 lights. If the

LED does not light, try reseating the module.

22. Secure the BA32 box's top cover.

23. Slide the BA32 box back into the cabinet making sure that cables are not harmed and retract the stabilizer leg.

24. Verify DEBNA by running the following diagnostics:

    a. Load and execute the diagnostics in the following numeric order:

        1. EBSAA Rev 10.8 (contained in EVNDX Release 29)

        2. EVDYC Rev 2.1 (prereleased diagnostic Release 31)

        3. EVDYD Rev 2.2

25. Bring up the VMS Operating System.

26. Update the Site Management Guide to reflect this FCO.

27. Report this FCO activity on the LARS for in the "Fail Area/ Module/FCO/Comments" column as follows: FCO T1032-R001 (See page 12 for further instructions.)

Section II - Installation Procedures for VAX 82X0/83X0 Configuration 2:

****
* NOTE *
* *
* You must be running VMS V4.5 or above to install this FCO *
****

1. Before shutting down the operating system you must install the new ETDRIVER and should install the DIAGNOSTICS contained on the floppy FA-04795-02 (EQ-01500-02) and FA-04795-03 (EQ-01500-03). These are the appropriate ETDRIVER for either VMS 4.5 (ETDRIVER_V45.EXE) or 4.6 (ETDRIVER_V46.EXE) and Diagnostics EBSAA, EZSAA, EVDYC, EVDYD.

2. Log into VMS and install floppy FA-04795-02 in CSA1: and mount;

   A. MOUNT/OVER=ID CSA1: ! VMS ETDRIVER.EXE should always be copied into SYS$COMMON:[SYSEXE]; not in SYS$SPECIFIC:[SYSEXE].

3. If you are running VMS version 4.5 do the following;

   A. RENAME SYS$COMMON:[SYSEXE]ETDRIVER.EXE ETDRIVER_OLD.EXE
   B. COPY/LOG CSA1:[ETDRIVER]ETDRIVER_V45.EXE SYS$COMMON:
      [SYSEXE]ETDRIVER.EXE

4. If you are running VMS version 4.6 do the following;

   A. RENAME SYS$COMMON:[SYSEXE]ETDRIVER.EXE ETDRIVER_OLD.EXE
   B. COPY/LOG CSA1:[ETDRIVER]ETDRIVER_V46.EXE SYS$COMMON:
      [SYSEXE]ETDRIVER.EXE

5. Once the correct ETDRIVER has been copied dismount CSA1:

   A. DISMOUNT CSA1:

6. Now place the second floppy FA-04795-03 into CSA1: and mount;

   A. MOUNT/OVER=ID CSA1:

7. You may now copy the diagnostic supervisor and the correct DEBNA diagnostics;

   A. COPY/LOG CSA1:[SYSMAINT]EBSAA.EXE SYS$COMMON:[SYSMAINT]
   B. COPY/LOG CSA1:[SYSMAINT]EVDYC.EXE SYS$COMMON:[SYSMAINT]
   C. COPY/LOG CSA1:[SYSMAINT]EVDYD.EXE SYS$COMMON:[SYSMAINT]

8. Shut down the system by executing the Shutdown Command Procedure.

   $ @SYS$SYSTEM:SHUTDOWN

   After VMS shuts down, type HALT.... you will now be in console mode
   PROMPT is >>>

9. Remove the processor cabinet rear door.

   ****
   * NOTE *
   * If battery backup H7231 is present as an option, the DEC- *
   * PWR-BUS cable 17-00931-0X must be in place between the 877 *
   * power controller and the H7231 prior to the AC input circuit*
   * breaker being placed in the off position. If this cable *
   * is not in place, battery backup may become activated. The *
   * circuit breaker on the 877 power controller must not be *
   * utilized. *

****

10. Turn the upper keyswitch on the console panel fully counterclockwise and set the main circuit breaker at the back of each AC input assembly to the "OFF" (0) position.

11. Put on the wrist strap found in the holding bag on the front base of the cabinet. Attach the other ground strap in the bag to the conductive package containing the T1034 module.

****
* C A U T I O N *
*
* The module, as all other VAX 8XX0 modules, *
* contains electrostatic discharge sensitive *
* devices (ESDS). The use of the VELOSTAT *
* kit is essential to prevent damage which may *
* not be noticed immediately. *
****

12. Use ALL ESD safety precautions to prevent DOA modules in kit.

13. Open the EQ-01486-01 kit and check that the T1034 is at revision J3/J4 If the part number is incorrect return the module to the designated repair center for upgrade and discontinue this procedure.

14. Lift the lever of the VAXBI cardcage housing the T1032 module to be replaced. Remove the module from the cardcage and place it on the open top half of the conductive package.

15. Check the revision of the module taken from the machine. If the module is a T1034 at Rev J3/J4, it should be reinstalled. If the module is a T1032 module, replace it with EQ-01486-01 in the same slot.

16. Return the lever of the VAXBI cardcage to the locked position.

17. Power up the CPU by turning both circuit Breakers on each AC input assembly to the "ON" (1) position and turning the upper keyswitch on the front console panel to ENABLE. Check that the amber LED on the T1034 lights to verify self-test passed.

18. Replace and latch the processor cabinet rear door.

19. Verify DEBNA by running the diagnostics:

a. Load and execute the diagnostics in the following numeric order:

1. EBSAA Rev 10.8 (contained in EVNDX Release 29)

2. EVDYC Rev 2.1 (prereleased diagnostic Release 31)

3. EVDYD Rev 2.2

20. Bring up the VMS Operating System.

21. Update the Site Management Guide to reflect this FCO.

22. Report this FCO activity on the LARS for in the "Fail Area/ Module/FCO/Comments" column as follows: FCO T1032-R001
(See page 12 for further instructions.)

Section III - Installation Procedures for VAX 85X0/8700/8800/897X.

I. VAX 85X0/8700/8800/897X - FIELD INSTALLATION AND TEST PROCEDURE

****
*
* NOTE
*
* You must be running VMS V4.5 or above to install this FCO
*
****

1. Before shutting down the operating system, you must install the new ETDRIVER and should install the DIAGNOSTICS contained on the floppy FA-04795-02 (EQ-01500-02) and FA-04795-03 (EQ-01500-03). These are the appropriate ETDRIVER for either VMS 4.5 (ETDRIVER_V45.EXE) or 4.6 (ETDRIVER_V46.EXE) and Diagnostics EBSAA, EZSAA, EVDYC, EVDYD.

2. Log into VMS and install floppy FA-04795-02 in CSA1: and mount;

A. MOUNT/OVER=ID CSA1: ! VMS ETDRIVER.EXE should always be copied into SYS$COMMON:[SYSEXE]; not in SYS$SPECIFIC:[SYSEXE].

3. If you are running VMS version 4.5 do the following;

A. RENAME SYS$COMMON:[SYSEXE]ETDRIVER.EXE ETDRIVER_OLD.EXE
B. COPY/LOG CSA1:[ETDRIVER]ETDRIVER_V45.EXE SYS$COMMON:

[SYSEXE]ETDRIVER.EXE

4. If you are running VMS version 4.6 do the following;

   A. RENAME SYS$COMMON:[SYSEXE]ETDRIVER.EXE ETDRIVER_OLD.EXE
   B. COPY/LOG CSA1:[ETDRIVER]ETDRIVER_V46.EXE SYS$COMMON:
      [SYSEXE]ETDRIVER.EXE

5. Once the correct ETDRIVER has been copied dismount CSA1:

   A. DISMOUNT CSA1:

6. Now place the second floppy FA-04795-03 into CSA1: and mount;

   A. MOUNT/OVER=ID CSA1:

7. You may now copy the diagnostic supervisor and the correct DEBNA diagnostics;

   A. COPY/LOG CSA1:[SYSMAINT]EZSAA.EXE SYS$COMMON:[SYSMAINT]
   B. COPY/LOG CSA1:[SYSMAINT]EVDYC.EXE SYS$COMMON:[SYSMAINT]
   C. COPY/LOG CSA1:[SYSMAINT]EVDYD.EXE SYS$COMMON:[SYSMAINT]

8. Shut down the system by executing the Shutdown Command Procedure.

   $ @SYS$SYSTEM:SHUTDOWN

   After VMS shuts down, type ^P .... you will now be in console mode PROMPT is >>>

   At the console prompt type HALT (CR)

9. Using the console command, power off the system,

   >>>POWER OFF (CR)

   If an 85X0, open the rear door and set CB1 on the H405-B to the OFF position. If an 8700/8800 open front left door and set CB1 on the 876-A to the "OFF" (0) position.

   ****
   * C A U T I O N *
   *
   * The module, as all other VAX 8XX0 modules, *
   * contains electrostatic discharge sensitive *

```
*       devices (ESDS).  The use of the new VELOSTAT          *
*       case is essential to prevent damage which may         *
*       not be noticed immediately.                           *
*************************************************************
```

10. Use ALL ESD safety precautions to prevent DOA modules in upgrade kit.

11. Using the hex key, open the doors of the 85X0/8700/8800/897X.

12. Hook static strap from 8XXX to ESD case, hook the other ESD strap to wrist. Open air-flow slides in front of the card cage exposing area around slot containing the T1032 module. Open ESD container by breaking the ESD SEAL on the front of the case. Check that the T1034 is at revision J3/J4 by using the quick check. If the part number is incorrect return the module to the designated repair center for upgrade and proceed to step 16.

13. Remove the module from the cardcage and place it on the open top half of the conductive package. Check the revision of the module taken from the machine. If module is a T1034 at rev J3/J4, reinstall it in the same slot and proceed to step 16. If the module revision is a T1032 proceed to the next step.

14. Remove the T1034, revision J3/J4 module (EQ-01486-01) from the container. Install it in the same slot from which you removed the T1032 module.

15. Package the old rev module in the same ESD container and close.

16. Remove grounding cable from ESD container once closed.

17. Set Circuit Breaker CB1 on the 876-A or H405-B Power Controller to the "ON" (1) position. Close and latch cabinet doors.

    Power up the CPU by typing the following command;

    >>>POWER ON <CR> at the console.

18. Verify that the DEBNA passes self test by observing that the amber light is illuminated on the DEBNA (T1034) module.

19. Verify DEBNA functionality by running the diagnostics.

    a. Type @SYSINIT.COM to initialize CPU.

b. Load and execute the diagnostics in the following numeric order:

1.	EZSAA	Rev 10.8 (contained in EVNDX Release 29)
2.	EVDYC	Rev 2.1 (prereleased diagnostic release 31)
3.	EVDYD	Rev 2.2

20. Bring up the VMS Operating System.

21. Update the Site Management Guide to reflect this FCO.

22. Report this FCO activity on the LARS for in the "Fail Area/ Module/FCO/Comments" column as follows: FCO T1032-R001
(See page 12.)

LARS

	USA	GIA	EUROPE
Activity -			
Contract and Warranty	W	U	Y
Non Contract/Non Warranty	F	F	F
DEC Option	DEBNA	DEBNA	DEBNA
Type of Call	M	M	M
Action Taken	D	D	I
Fail Area-Module-FCO-Comments	T1032-R001	T1032-R001	T1032-R001
Material Used	EQ-01486-01	EQ-01486-01	EQ-01486-01
	EQ-01500-02	EQ-01500-02	EQ-01500-02
	EQ-01500-03	EQ-01500-03	EQ-01500-03

\^ T1032
\\T1032
\\T1032-R001
\\VERMETTE
\\1988
\\JUL
\\FCO_DOCS