DIGITAL	FCO	CATEGORY [O]	PAGE 1 OF 5

FIELD CHANGE ORDER	NUMBER: KN7CC-AA-O001 KN7CC-AB-O001

APPLICABILITY:

This O coded FCO should be installed on all AlphaServer 8200/8400 systems replacing all E2056-DA (all revs) with new E2056-DA rev. P08/09/10 Replace all E2056-CA (all revs) with new E2056-CA rev. H07/08/09. This FCO insures that all applicable ECO's up to E2056-DA-TWO006 and E2056-CA-TWO006 are incorporated All E2056-CA/DA Field Spares must be updated to E2056-DA rev. P08/09/10, E2056-CA rev. H07/08/09.

PROBLEM & SYMPTOM:

Current E2056 (CPU) modules place system memory configuration restrictions that are checked on power up and prior to booting. Current limitations are that there must be 1, 2 or 4 memory arrays of identical size for the AlphaServer 8400 (restrictions are one or two memory arrays of identical size for the AlphaServer 8200). If there is a different configuration the console will indicate "Illegal memory configuration - booting disabled".

SOLUTION:
Eliminate the memory configuration restrictions by implementing new rev. CPU Modules. Replace the E2056-CA/DA CPU module(s) as per a procedure (See below) with;
 E2056-CA module, minimum revision must be H07/08/09.
 E2056-DA module, minimum revision must be P08/09/10.
CAUTION: All modules need a minimum Console version V3.0-9

QUICK CHECK:
Verify revision on module handle that all

    E2056-CA module, minimum revision must be H07/08/09.
         E2056-DA module, minimum revision must be P08/09/10.

PRE/CO-REQUISITE FCO:	MFIT HRS
N/A	.5hr

TOOL/TEST EQUIPMENT: Std FS tool kit and ESD kit

FCO PARTS INFORMATION

FCO KIT NO.	DESCRIPTION OF CONTENTS	
EQ-01745-01	1 E2056-CA Single CPU rev H07 or higher	
	1 FA-05080-01 Field Application Document	
EQ-01745-02	1 E2056-DA Dual CPU rev P08 or higher	
	1 FA-05080-01 Field Application Document	

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|_____|_____|_____|
|                          FCO CHARGING INFORMATION (see last page)                 |
|_____|
|                                    APPROVALS                                      |
|_____|
|                    |                    |                    |                    |
|TECH.ENGINEER       |BUSINESS Manager    |DSHQ Logistics      |DS Product Safety   |
|RAY GRUDA           |BOB MYERS           |BILL STANLEY        |ROBERT BRISTER      |
|--------------------------------------------------------------------------------------
|MICROMEDIA          | PARTS AVAILABILITY |FCO REVISION: MCS   |FCO RELEASE DATE    |
|DIANE MACDONALD     | 10-June-1996       |        C           |06-May-1996         |
|                    |                    |                    |                    |
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FIELD APPLICATION DOCUMENT (FA), Continuation Page

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|   |   |   |   |   |   |   | |   |              PAGE 2 OF 5
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UPGRADE PROCEDURE FOR THE E2056-CA/DA CPU MODULE.
===

This rework procedure gives step by step instructions on how to:
replace the E2056-CA/DA processor modules from the system, upgrade/verify
firmware revisions, and set the system parameters depending upon how
the customer wants the system configured.

  1. Shut down the operating system: Have the customer notify all
     affected system users and shutdown the operating system.

     - When replacing the processors in the system you must store the
       system serial number and customer boot path.

   - If the customer changed console environment variables from the
         default values, you will want to set them as the customer wishes.

       Consider the next factors when replacing CPUs:

       a) The desire to retain the system environment.
  b) If there is a firmware revision mismatch, update the FROMs to the
     latest revision (MINIMUM console revision is REV 3.0-9).
     For additional information refer to AS8200/AS8400 Service Manual.
     (Order number EK-T8030-SV.A01).
         c) Read carefully the release notes on the CD rom AG-PTMWS-BE REV 3.5
            or access http://ftp.digital.com:80/pub/Digital/Alpha/firmware/

      FIELD APPLICATION DOCUMENT (FA), Continuation Page

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|   |   |   |   |   |   |   | |   |              FCO    KN7CC-AA-O001
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2. Record system parameters: Show the environment variables. Record
   these for future use.

       >>> SHOW *

     Note: Some system parameters may require setting depending upon
           how the customer wants the system configured.

3. Power down the system: Wait for the control panel yellow
   fault LED to stop flashing. When the fault LED stops flashing,
   power has been removed from the TLSB backplane and you may safely
   proceed.

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

4. Set up VELOSTAT KIT

   a. Unfold the VELOSTAT mat to full size (24" x 24").
   b. Attach the 15 foot ground cord to the VELOSTAT snap fastener
      on the mat.
   c. Attach the alligator clip end of the ground cord to a good
      ground on the cabinet.
   d. Attach the wrist strap to either wrist.
   e. Remove the module from the spares kit and place it on the mat.

```
      ****************************************************************
      *                     *** C A U T I O N ***                   *
      *  If using a module in an ESD box, insure wrist strap is      *
      *  connected to the box and the box is connected to chassis    *
      *  of the device being upgraded.                               *
      ****************************************************************
```

5. Release the plate(s) covering the TLSB card cage

6. Remove the E2056-CA/DA CPU modules:
   Remove the modules and place on the velostat mat.

7. WARNING: Check the centreplane for "bent pins" before reseating
the modules. Install the new E2056-CA/DA CPU modules:

8. Replace the plate covering the card cage.

    FIELD APPLICATION DOCUMENT (FA), Continuation Page

9. Verify system: Power up the system. Power sequencing begins and the
system runs self tests. Observe console terminal
      for the results of the self tests. If the self tests indicate that
      everything passed proceed to next step.
If errors are indicated, try reseating the new CPU(s) and/or refer
to the Service Manual for further information.
WARNING: Check the centerplane for bent pins before reseating the
  modules.
Perform memory test for failing SIMMs by using console commands:
>>>set simm_callout on
>>>show simm
>>>set simm_callout off

10. Restore system specific configurations: Using the appropriate
      console commands, restore the system specific configurations.

      - Set the system serial number:
        >>> Set sys_serial_num

      - Show current environment parameters and compare to the
        information recorded earlier in Step 2.

         >>> SHOW *

      - Restore Environmental parameters to their original settings.
        This is done using the "SET" command as shown in the following
        example:

        >>> SET auto_action halt [return]
        >>> SET bootdef_dev DUA5.0.0.2.0 [return]

12. Once the console environment is set up, verify the repair
      by booting the system. If there are alternative boot paths,
      you will want to make sure that all boot paths function properly.

13. Boot the operating system and run one or two passes of VET.

        >>> BOOT

14. Package the E2056-CA/DA's into the containers and return through normal
      logistics channels. NOTE: IT IS CRITICAL THAT "FCO MODULE - NEEDS
UPGRADE ONLY" BE NOTED ON THE RETURN TAG TO INSURE THE QUICKEST
POSSIBLE RECYCLING OF RETURNED MODULES.

15. Report this FCO activity on the LARS form in the "Fail Area/Module/
FCO/Comments" column as follows: FCO KN7CC-AA-O001 or KN7CC-AB-O001
(see page 5).

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|   |   |   |   |   |   |   |   |              PAGE   5 OF 5
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                          LARS

   CATEGORY O   AMERICAS   APA   EUROPE

   Activity - Coverage Code
   (a)Contract   W   U   K
      Warranty   W   U   W
      Inhouse   A
      Invoiced per Call   F

   (b)IN-DEC Contract   K   U
      Non Contract/Non Warranty F   F
   (c)RTD/Off-site Agreement   F   U

      Mkt/FS/Seg Code
        Code for W,K   111   111
        Code for F   031   031
        BBC Code for K,W,A   111
        BBC Code for F   031

   DEC Option   KN7CC-AA   KN7CC-AA   KN7CC-AA
          or   KN7CC-AB   KN7CC-AB   KN7CC-AB

   Option ID   X   N/A   N/A
   Type of Call   M   M
   Request Type   I
   Action Taken   D   D   Y
   Quality Codes   M,L,J,R,X,A,Y,Z

   Fail Area-Module-
        FCO-Comments   KN7CC-AA-O001   KN7CC-AA-O001 FCO-KN7CC-AA-O001
    or FCO-Comments   KN7CC-AB-O001   KN7CC-AB-O001 FCO-KN7CC-AB-O001

   Material Used   EQ-01745-01   EQ-01745-01   EQ-01745-01
or Material Used   EQ-01745-02   EQ-01745-01   EQ-01745-02

   (a) Warranty Optimum, Warranty Standard and Warranty Basic (on-site)
       Agreements; * Note material (only) free of charge for all
customers.
   (b) Applies to IN-DEC Area Only
   (c) RTD=Return to Digital or Off-site Agreements; If Field Engineer
       On-site, use Activity Code "F".

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| FCO CHARGING INFORMATION |

WARRANTY/CONTRACT				NONWARRANTY/NONCONTRACT				
ON-SITE		OFF-SITE		ON-SITE		OFF-SITE		MATERIAL ONLY
TRAVEL/INSTALL	EQ KIT	INSTALL	EQ KIT	TRAVEL/INSTALL	EQ KIT	INSTALL	EQ KIT	ORDER-ADMIN,HANDLING PKG,SHIPPING & EQ KIT
DEC	DEC	DEC	DEC	CUS	CUS	CUS	CUS	CUS