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DIGITAL™ Server 5220 Series

Upgrade Addendum

ER-J2BWW-AA. A01

Thank you for purchasing a DIGITAL Server 5200 upgrade kit. This addendum is intended to assist you in identifying major component differences between model 5200 servers and upgrade model 5220 servers. This addendum also provides general guidelines to consider before upgrading your server.

Comparison Chart

Feature	DIGITAL Server 5200	DIGITAL Server 5220 Upgrade
Processor	Pentium II - 266 MHz, 300 MHz, and 333 MHz (512 KB L2 cache)	Pentium II - 350MHz and 400 MHz (512 KB L2 cache)
Memory	ECC/EDO DIMMs 1GB maximum	Registered PC100 SDRAM DIMMs 1GB maximum
Graphics	On-board PCI S3 Trio SVGA	Integrated PCI S3 Trio 64 V2/GX SVGA (dedicated PCI slot)
Networking	DIGITAL 21143 Controller	DIGITAL 21143-TD Controller
SCSI Interface	Two PCI Ultra-wide, Adaptec 7880 controllers; two single channels	PCI Fast Ultra-wide Symbios 896 controller, dual channel. Support for Ultra2 devices on external channel.
RAID controller	Mylex DAC960	Mylex DAC960
CD-ROM drive	SCSI	IDE 32X ATAPI CD-ROM
Tape drive (optional)	SCSI	SCSI Adapter card
Slots	6 PCI, 5 EISA	9 PCI, 1 PCI/ISA, 1 ISA
USB ports	No	Yes (2)
DIGITAL RSM Support (EISA card)	Yes	Not available

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Certified Operating Systems

	DIGITAL Server 5200	DIGITAL Server 5220 Upgrade
Windows NT Server	V4.x	V4.x/5.x
Novell NetWare	V3.x/4.x	V4.x only
IBM OS/2 Warp	V3.x	V4.0
SCO UNIX Open Server	V3.2.x	V5.0.4, 5.0.4c, 5.0.5
Banyan VINES	-	V7.0
SCO UNIXWARE	V3.x	V2.1.2, 7.0

Upgrade Procedure

The following section describes the procedure that should be followed to install the upgrade.

1. Before the scheduled upgrade, ensure that the customer has backed up the system and recorded all configuration information.

2. **CAUTION**: Make sure the voltage selection switch on the back of the new server is set to match your power source before plugging in the power cord, or you may damage the server.

3. Install any additional processor. (Refer to Chapter 5 in the *DIGITAL Server 5220 Series System Reference* manual, ER-J2BWW-UA.)

4. Install memory. The DIGITAL Server 5220 requires at least 64 MB and can accommodate up to 1 GB of SDRAM memory. (Refer to Chapter 6 in the *System Reference* manual.) . **NOTE:** You cannot use ECC/EDO DIMMs installed in a DIGITAL Server 5200.

5. Install any expansion boards. The DIGITAL Server 5220 has PCI and ISA slots only; EISA cards are not supported. (Refer to Chapter 8 in the *System Reference* manual).

6. Move or install disk drives. (Refer to Chapter 7 in the *System Reference* manual.) The DIGITAL Server 5220 has an integrated Symbios SCSI controller. **CAUTION:** For NT operating systems, refer to the instructions that follow. Also check for other software hints in the README files on the Quick Launch CD-ROM.

   A. *SCO UNIX Open Server, Banyan VINES, and SCO UNIXWARE*: Ensure that there is a good backup of your original system. Perform a fresh O/S install on the new system and restore data from the backup tape.

   B. *Windows NT*: Before moving disk drives to the new system, load the Symbios SCSI driver on the hard drive. Move the drives and boot the new system. Once operational, disable the Adaptec driver.

   C. *Novell NetWare 4.11*: Move the drives and boot the new system to DOS. Run Install and load the Symbios SCSI driver. Remove the Adaptec driver and restart the system.

   D. *IBM OS/2 Warp*: Operating System versions are not supported across these platforms, so a tape backup of the old system is required. Install the new O/S on the new system and restore from tape the needed data.

7. Power on the system and run AMI diagnostics to verify the hardware upgrade. ***NOTE: The hardware upgrade is complete***.

8. <u>Note to customer</u>: After hardware installation is completed, you may install the software on the new system. Refer to the operating system manuals, the *Installation Guide* (ER-J2BWW-IM), or the web page (`http://www.windows.digital.com`) for driver and operating system installation.

9. Call your software service provider to update your license with the new system serial number. If desired, you can continue to use your old system; in which case, you will need to buy a new software license for the new system.

Troubleshooting Guidelines

If the server does not boot properly after installing upgrade, use the procedures in this section to identify and correct the problem to get the server on-line.

- Check all the configuration information that you have recorded.

- Verify that all cables are seated properly.

- Verify that all cards, boards, and modules are seated properly.

- Check the processor speed settings.

Power-On Self Test

The DIGITAL Server 5220 Series server's Power-On Self Test (POST) can detect memory and other configuration errors when it boots. Power up the server and allow the POST to complete. If the POST detects any problems, use the error messages provided to correct the problem. POST messages are displayed on the monitor or OCP panel. Typical POST messages might be:

- DIMM memory module in location xx - illegal memory configuration

- Processor over temperature

- Processor failures

- Shutdown, fan fault

AMI Diagnostic Software

AMI Diagnostic software is shipped with the server on the Quick Launch CD-ROM. This software contains an advanced set of diagnostic utilities for identifying and correcting problems when upgrading the server. If the BIOS POST routines report memory errors, run the appropriate diagnostic from the AMIDiag program. For additional information on running the AMI Diagnostics, refer to the on-line manual, which is located under "Additional Documentation" on the Quick Launch CD-ROM.

Create Diagnostic Diskettes

Create diagnostic diskettes by using the Quick Launch CD-ROM. Creating diskettes allows you to run the diagnostics at any time for troubleshooting purposes or for testing existing system memory and cache memory.

1. Insert the Quick Launch CD-ROM into the server.

2. From the main menu, select **Installations & Utilities***.* Select **Utilities**. From **Utilities***,* select the product family of the server.

3. Insert a blank MS-DOS formatted diskette into drive A and select **Diagnostics, 1 of 3**.   Repeat for diskettes 2 and 3. When completed, label the diskette.

Running the Diagnostics

Run Diagnostics if the BIOS POST routines reported memory errors.

1. Select **Diagnostics**.

2. From the AMI diagnostic **Main Menu**, select **Memory**.

    Run the memory tests to pin-point the failing area. If a test fails, an error code is generated. These codes are listed at the end of the Memory section of the AMIDiag User's Guide.

Additional Information

For additional information on the DIGITAL Server 5220, refer to the manuals that shipped with the upgrade and the additional documentation on the Quick Launch CD-ROMs:

 DIGITAL Server 5220 Series Installation Guide

 DIGITAL Server 5220 Series System Reference

Supported Options List

Part Number	Description
	Memory
FR-SDSMA-AA	64MB (1X16MB) SDRAM DIMM
FR-SDSMA-AB	128MB (1X16MB) SDRAM DIMM
FR-SDSMA-AC	256MB (1X16MB) SDRAM DIMM
	SCSI Disk Drives – 7200 RPM
FR-CGCBA-CA	18 GB Ultra Wide Drive Carrier (white SBB)
FR-DECBA-CA	4GB Ultra-2 Drive Carrier (white SBB)
FR-DFCBA-CA	9GB Ultra-2 Drive Carrier (white SBB)
	SCSI Disk Drives – 10,000 RPM
FR-CECCA-CA	4 GB Ultra Drive Carrier (white SBB)
FR-DFCCA-CA	9 GB Ultra-2 SCSI HDD (white SBB)
	Diskette Drive
FR-PCXRJ-AD	3.5" 1.44MB Diskette Drive
	Tape Drives
FR-PCXAT-AJ	Sony 7000 4/8 GB DAT (SCSI)
FR-PCXAT-EA	AIT Sony 25/50 GB 5.25"
FR-PCXAT-AK	DAT Sony 12/24 GB 5.25"
	IDE CD-ROM
FR-PCXRN-AQ	32X Atapi Toshiba

Part Number	Description
	SCSI Host Adapters
FR-PCTAZ-DF	1 Channel 2940UW
FR-PCTAZ-FB	1 Channel 2944 Differential SCSI controller
FR-PCTAZ-EC	2-Channel 3940 Adaptec
	RAID Controllers
FR-PCTAR-UB	Battery Backup – Mylex
FR-PCTAR-GA	1 Channel Raid – Mylex PD
FR-PCTAR-GB	2 Channel Raid – Mylex PD
FR-PCTAR-GC	3 Channel Raid – Mylex PD
	Video Cards
FR-PCXAG-BG	Matrox Millennium II (4 Mb)
FR-PCCAM-CC	Matrox Millennium II (4 Mb upgrade)
	Storage Expansion
FR-BA356-PA	Storage Expansion Cabinet with Ultra support (pedestal)
FR-BN37A-02	2 Meter VHDCI external cable for RAID
FR-BN38C-02	2 Meter 68HD to VHDCI cable from SCSI to BA356
FR-BN37A-05	5 Meter VHDCI external cable for RAID
FR-BN38C-05	5 Meter 68HD to VHDCI cable from SCSI to BA356

Part Number	Description
	Cabling
FR-PCXAR-WG	Internal SCSI cable, 580mm, SCSI-3, 68-pin HD IDC to 68-pin HD panel mount (Suggested use - to extended storage backplane channels externally)
FR-PCXAR-WJ	External SCSI 68-pin fault bus supported terminator (Suggested use - with RAID using SSB's)
	Modems
FR-PCXFA-AA	56KB US/Can Modem, Internal
FR-PCXFA-AB	56KBS Modem, External
	Network Adapters
FR-DE500-BA	Digital PCI Fast Ethernet 10/100
FR-PCXDN-BC	SMC Epic 10/100 PCI Fast Ethernet NIC
FR-PCXTN-AD	IBM PCI Token Ring NIC
	FDDI
FR-DEFPA-AB	FDDI PCI- MM SAS
FR-DEFPA-DB	FDDI PCI- MM DAS
FR-DEFPA-UB	FDDI PCI- UTP SAS

Part Number	Description
	NT Cluster
FR-CK310-RF	RAID 310 Windows NT Cluster Kit
FR-CK356-UP	BA356 UW Windows NT Cluster Kit, Pedestal
FR-CK450-RP	RA450 Windows NT Cluster Kit, Pedestal
FR-CK300-UP	RA3000 Cluster Kit, Pedestal
FR-CK700-UP	RA7000 Windows NT 4.0 Cluster Kit, Pedestal
	External Storage
FR-SWXRA-Z1	RAID Array 310 Subsystem (legacy white box, blue drives supported)
DS-SWXRA-W0	RAID Array 450 Subsystem, office enclosure (blue box, blue drives)
DS-SWXRA-GA	RAID Array 3000 Subsystem, one HSZ22 controller, pedestal, 120V
DS-SWXRA-GC	RAID Array 3000 Subsystem, one HSZ22 controller, pedestal, 230V
DS-SWXRA-HA	RAID Array 7000 with dual HSZ70 controllers (blue box, blue drives)
DS-SWXRA-HC	RAID Array 7000 with single HSZ70 controller (blue box, blue drives)
	Other
FR-PCXLN-BB	Mouse 2 button (Frost White)
FR-PCXLA-KA	Windows 95 Keyboard (Frost White)