



DIGITAL Server 1000 Series Product Change Information

Initial Release: Jan 1998
Current Release: Jun 1998

This document details the following for the DIGITAL Server 1000/500 product change information:

- Introduction
- Product Change Summary
- BIOS Release Summary
- Product Change Release Notes
- BIOS Change Release Notes
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Introduction

This document is meant to provide customers with a synopsis of product changes. The change information enables customers to evaluate the impact any change has on their environment. All proposed product changes are appraised for their potential impact to daily customer operations. This evaluation includes, but is not limited to such items as safety, emission requirements, functionality, compatibility, reliability, and manufacturing process. Recommendations are then made to customers on whether any action needs to be taken. On occasion, emergency changes may be implemented before they are reflected in this document.

Product Change Summary

The Product Change Summary provides a overview of the "Engineering Change Orders" or ECOs that have been released. This matrix provided the part number, part description, date of release, customer impact, and brief description of the change. At this time, this document only covers Main Logic Board (MLB) and system BIOS changes. Future releases of this document will include ECO information for other major components.

BIOS Release Summary

The BIOS Release Summary is a subset of information from the Product Change Summary. It is meant to provide an overview of just the BIOS Release history. This matrix provides the BIOS release number, date of release, customer impact, and brief description. The brief description either denotes a specific change, maintenance release, and/or new feature support. A maintenance release implies that a series of changes or problem fixes were put in place.

Product Change Release Notes

The Product Change Release Notes provide information on each specific change. This information is meant to aid the customer in understanding in more detail what has changed and whether they need to take any action. The change descriptions include a change, solution if applicable, and a customer recommendation.

Customer Impact Rating

For each product change a customer impact rating is given. The customer impact rating can be one of four ratings: High, Medium, Low, or None.

- HIGH** A "HIGH" rating indicates that this change has some or significant customer impact. This change may affect safety, functionality, compatibility, or reliability.
- MEDIUM** A "MEDIUM" rating indicates that this change may impact some customers or customers using certain configurations. This change will have a minor effect on reliability, functionality, or compatibility.
- LOW** A "LOW" rating indicates that this change will have a minor impact on customers. This change is typically a product improvement and/or enhancement.
- NONE** A "NONE" rating indicates that this change has no customer impact. This type of change can range from a part substitution, documentation change, or yield enhancement.

Future Releases

Future releases of this document will incorporate information for other major system components. BIOS changes will be separated from the Main Logic Board (MLB) changes. Historically, BIOS releases were tied to MLB revision; therefore, a change in BIOS version would change the MLB revision. In the future, BIOS changes will be released independently and not affect the MLB revision.

Systems Supported

The information outlined in this document covers the following system variants:

System Variant	Description
1200 2233/256	Pentium II 233 MHZ
1205 2266/256	Pentium II 266 MHZ

Product Change Summary

Part Number	Part	Old Rev	New Rev	ECO Number	Date	Customer Impact	Change Description
54-24254-01	CPU	A01	A02	5424254-TA001	Nov 97	High	Correct Silkscreen for DS1200
54-25418-01	MLB	A01	A01	5425418-TA001	Jan 98	High	BIOS Release V1.01 for DS1200
70-33199-01	Krnl	A01	B01	7033199-TA001	Dec 97	None	Enclosure sub-assy for DS1200
70-33203-01	Krnl	A01	B01	7033203-TA001	Dec 97	High	MLB current problem for DS1200
54-25418-01	MLB	A01	A01	5425418-TA002	Feb 98	High	BIOS Release V1.03 for DS1200
54-25418-01	MLB	A01	B01	5425418-TA003	Mar 98	None	Upgrade PAL on MLB for DS1200
54-25418-01	MLB	B01	B01	5425418-TA004	Apr 98	High	BIOS Release V1.04 for DS1200
54-25424-01	CPU	A02	A03	5425424-TA002	Apr 98	Medium	Improved CPU Retention Assembly for DS1200
70-32720-07	CPU Ass'y	A01	B01	7032720-TA009	Apr 98	None	CPU assembly stepping needs to be updated and heatsink fails thermal test.
PCH2B-A9	Silver-stone Kernel	A01	B01	PCH2B-TA001	Apr 98	High	MLB switch settings label replaced with correct information.

BIOS Release Summary

BIOS Revision	MLB Revision	ECO Number	Date	Customer Impact	Change Description
1.01	A01	5425418-TA001	Jan 98	High	Upgrade for DS1200
1.01	B01	5425334-TA017	Feb 98	Medium	Upgrade for DS500
1.03	A01	5425418-TA002	Feb 98	High	Upgrade for DS1200
1.04	B01	5425418-TA004	Apr 98	High	Upgrade for DS1200

ECO Number: 5424254-TA001

Part	CPU
Revision	A02
Component	CPU
Severity	High
ECO Issue Date	Nov 97
Type of Notification	Action not required
Change Description	CPU DIMM Silkscreen not correct

Description

Severity: High

Description: CPU board DIMM Silkscreen (J1-J4) is not consistent with physical memory bank order

Symptom: N/A

Solution

Change the schematics and artwork location names as show below:

Was	Is
J1	J4
J2	J3
J3	J2
J4	J1

Compatibility

N/A

Customer Impact/Recommendations:

No customer impact since this change was implemented during the manufacturing process

ECO Number: 5425418-TA001

Part	MLB
Revision	A01
Component	BIOS
Severity	High
ECO Issue Date	Jan 98
Type of Notification	Action May be Required
Change Description	BIOS Release V1.01

Description:

The following issues are corrected in BIOS V1.01:

1. When CPU fails, POST always displays "Processor 02 Test Fail".
2. System displays the error message "Keyboard Controller Error" when keyboard doesn't connect to system.
3. The PCI IRQs can not be set by user.
4. Xircom do not work.
5. 8031 does not warn after boot to OS.
6. CPU C0 update code is not found during POST.
7. The E-Net address in F3 menu displays FFFFFFFF when Pnp OS set to "Yes".
8. There are two items for on-board E-Net and SCSI. One is in F2-Setup function, and the other one is in F3-PCI IRQ function.

Symptom:

1. When a bad processor is installed on the lower slot of the CPU card as Processor 01, POST always displays "Processor 02 Test Fail", instead of "Processor 01 Test Fail".
2. When keyboard does not connect to system, the system displays the error message "Keyboard Controller Error".
3. The system does not work when PCI network cards share IRQs with the host PCI card.
4. Xircom does not work in other mode when the system supports EPP runtime service functions.
5. BIOS always disables 8031 warning beep function before booting to OS.
6. System hangs sometimes.
7. The BIOS disables the E-Net IO space when Pnp OS is set to "Yes". It will not allow F3 to read the address.
8. Easy to confuse on-board E-Net and SCSI in F2. Also, it is easy to confuse Setup function to F3 and PCI IRQ function.

Solution:

Upgrade your MLB to BIOS V1.01 for the following resolutions:

1. Modify code to fix this bug.
2. Modify code to fix this bug.

3. Added the new function to set PCI IRQs in F3 (System Management).
4. Removed EPP runtime service functions.
5. Modify code to fix this bug.
6. Modify code to fix this bug.
7. Modify code to enable the IO space of E-Net when Pnp OS is set to "Yes", then disables it after getting the address.
8. Changed the setup selection for on-board E-Net and SCSI from "Enabled" and "Disabled" to "Installed" and "Not Installed".
 - a) The "Installed" and "not Installed" in F2 means do not install the H/W chip.
 - b) The BIOS does not set resources.
 - c) The "Disabled" and "Normal" in F3 means not to enable the device because the device still has resources, only disable its function.

Compatibility:

This release is backward compatible on all system variants

Customer Impact/Recommendations:

It is recommended that customers upgrade to BIOS V1.01.

ECO Number: 5425334-TA014

Part	MLB
Revision	A01
Component	MLB
Severity	High
ECO Issue Date	Jan 98
Type of Notification	Action not required
Change Description	New MLB variation for DS500

Description

Severity: High

Description: Add new variation 54-25334-04 for DIGITAL Server 500.

Symptom: N/A

Solution

Copy all parts from 54-25334-02 to -04 and changes as follows:

Del: 23-120Z4-00	1ea	E15
Add: 23-138Z4-00	1ea	E15

Compatibility

N/A

Customer Impact/Recommendations:

No customer impact since this is document change only.

ECO Number: 7033199-TA001

Part	Enclosure Sub-assy
Revision	B01
Component	Enclosure Sub-assy
Severity	None
ECO Issue Date	Dec 97
Type of Notification	Action not required
Change Description	Enclosure Sub-assy modification on DS1200

Description

Severity: None

Description: The MLB needs support when the power connector is plugged in.

Symptom: N/A

Solution

Add a bumper under the MLB

Compatibility

N/A

Customer Impact/Recommendations:

No customer impact since this change is implemented in the manufacturing process.

ECO Number: 7033203-TA001

Part	Enclosure assembly
Revision	B01
Component	Enclosure assembly
Severity	High
ECO Issue Date	Dec 97
Type of Notification	Action not required
Change Description	Enclosure assembly modification on DS1200

Description

Severity: High

Description: Not enough output current @+5Vsb to support the logic device change on the MLB

Symptom: N/A

Solution

Remove the 30-47661-01 from the substitution.

Compatibility

N/A

Customer Impact/Recommendations:

No customer impact since this change is implemented in the manufacturing process.

ECO Number: 5425334-TA017

Part	MLB
Revision	B01
Component	MLB
Severity	Medium
ECO Issue Date	Feb 98
Type of Notification	Action not required
Change Description	Enclosure assembly modification on DS500

Description

Severity: Medium

Problem:

1. VGA BIOS signon message, system BIOS signon message and DMI system information are not correct and do not have QuickLaunch string.
2. We want to add features into BIOS and this will cause F segment issue.
3. In Win95 HCT 7.0 test PIRQ routing table will fail.
4. Year 2000 problem
5. Sometimes system will hang during Micro_P test.
6. For some testing programs the Crystal Audio Plug and Play ID won't be shown correct.
7. We want the setup items "Power Management", "Integrated Audio", and "4236 Control Base" default to Disable.

Symptom:

1. The signon messages are not correct.
2. System BIOS can not be built.
3. Can not pass the Win95 HCT PIRQ routing test.
4. System time will be in error when it reaches year 2000
5. Sometimes system will hang during Micro_P test.
6. For some testing programs the Crystal Audio Plug and Play ID does not display correctly.
7. N/A

Solution

Upgrade your Main Logic Board (MLB) to BIOS V1.01

1. Change the signon messages. Added DEC! string.
2. Change code to fix F segment issue.
3. Change code to fix PIRQ routing test problem.
4. Change code to fix the year 2000 problem
5. Change code to fix Micro_P test problem.
6. Change the Crystal Audio config data to fix the error.
7. Change these setup items "Power Management", "Integrated Audio", and "4236 Control Base" default to Disable.

Compatibility

This release is backward compatible on all system variants.

Customer Impact/Recommendations:

It is recommended to upgrade to this version of BIOS.

ECO Number: 5425418-TA002

Part	MLB
Revision	A01
Component	BIOS
Severity	High
ECO Issue Date	Feb 98
Type of Notification	Action May be Required
Change Description	BIOS Release V1.03

Problem

1. The Date and Time items could not be saved by pressing F10 hot key in the SETUP menu.
2. The network PCI cards could not share the same IRQ.
3. The VGA IRQ line read/write function could not pass PC97 HCT.

Symptom:

1. The Date and Time items did not accept the F10 hot key in the SETUP.
2. The network PCI cards could not connect to the server when they are using the same IRQ in NT and Novell 2P server.
3. It will display the error message as below when testing the item of SYSTEM-BUS-PCI (Card 2.1) in PC97 HCT. The error message is:
Verify that we can WRITE to the Interrupt Line Register (offset 3Ch)FAIL!
Original ff: After Write ff, expected 00!
Error: The following bits are NOT writeable: ffffffff

Solution:

Upgrade your Main Logic Board (MLB) to BIOS V1.03

1. BIOS will add the F10 hot key checking for these items.
2. Modifycode to solve the problem.
3. For on-board VGA, phase in VGA BIOS V1.01.12 for S3 Trio64V2/GX. Also, the value of the PCI IRQ Line register (3Ch) is changed form FFh to 00h.

Compatibility:

This release is backward compatible on all system variants

Customer Impact/Recommendations:

It is recommended that customers upgrade to BIOS V1.03.

ECO Number: 54-25418-TA003

Part	MLB
Revision	B01
Component	PAL
Severity	None
ECO Issue Date	Mar 98
Type of Notification	Action not required
Change Description	PAL change on DS1200

Description

System can not power on when PCI RSM card is installed.

Severity: None

Symptom: N/A

Solution

Change E47 from 23-363Y3-00 to 23-370Y3-00

Compatibility

N/A

Customer Impact/Recommendations:

Customers must have an MLB with a minimum revision of B01 to support the PCI RSM.

ECO Number: 5425418-TA004

Part	MLB
Revision	B01
Component	BIOS
Severity	High
ECO Issue Date	Apr 98
Type of Notification	Action May be Required
Change Description	BIOS Release V1.04

Problem

1. The year 2000 function does not pass the DOSCHK.EXE
2. Cannot enable the PCI parity checking in 440FX and PPB.
3. The alarm timer will be changed when the BIOS flash is enabled.
4. The Memory status displays an error in the F3 memory function when an error is detected.
5. The USB IRQ does not disable in the F3 function.
6. The system reboot will hang when the MP selection in the SETUP menu is resetting from disabled to 1.1 or 1.4.
7. The MOXA multiport controller card (legacy ISA card) setup driver fails.
8. The diskette is anomaly when running the Quick Launch to create the utility diskette.
9. The BIOS sets E000h always cacheable.

Solution:

The BIOS upgrade will correct the following:

1. Check and update the century after the 24-hour rollover is set. (Hooks into the Timer Interrupt function.)
2. Checks the `cmosPCIParityConfig` setting . If enabled, set `INTEL_PMC_REG04 PERRE`(bit 6) enabled and `INTEL_PMC_REG05 SERR#` (bit 0) enabled.

Sets the register 3Eh and 3Fh of the onboard PPB to be 87h and 08h respectively. That is, enable "Parity Error Response", "SERR# Forward Enable", "ISA Enable", "Fast Back to Back Enable" and "Master Timeout SERR# Enable".
3. Saves the old alarm timer, seconds `alarm1(cmos0x01)`, minutes `alarm1(cmos0x03)`, hours `alarm1(cmos0x05)`, and register B (`coms0x0b`) before it is changed to the new alarm timer.
4. Changes the address of the BDA that 8031 reads to show the memory status from `0x0040000d0L` to `0x004000dal`.
5. Corrects the display message pointer for the USB device.
6. Enables the CPU local APIC in MP reset. CPU APIC registers will be correct after the CPU is installed.

7. Sets the C8000-DFFFF cache type to uncacheable.

This ISA card's firmware issues some ROM write cycle for checking status, but the BIOS sets all the option ROM cache type to "Write Protected". Therefore, the ISA card check status fails.

8. The diskette service INT 13h function 18h will return the wrong ES data – drive parameter table segment with the diskette change line is active. It will make the format of the diskette time-out.

The ES data is corrupted by the detection change line. The right ES data is set before it returns the data.

9. Setting CPU's MTRRfix4K_E000 and MTRRfix4k_E800 registers cache mode depends upon whether or not the system cache is enabled or disabled.

Compatibility:

This release is backward compatible on all system variants

Customer Impact/Recommendations:

It is recommended that customers upgrade to BIOS V1.04.

ECO Number: 5425424-TA002

Part	CPU
Revision	A03
Component	CPU
Severity	Medium
ECO Issue Date	Apr 98
Type of Notification	Action not required
Change Description	CPU Retention Assembly does not work well with the manufacturing process.

Description

Severity: Medium

Description: The CPU Retention Assembly (12-45806-01 and 12-45765-01) that is used on the 54-25424-01 CPU Module Assembly, does not work well with the manufacturing process.

Symptom: N/A

Solution

Replace 12-45806-01 and 12-45765-01 with 22-14977-01 (foldable retention) for improved efficiency.

Compatibility

N/A

Customer Impact/Recommendations:

No customer impact since this change was implemented during the manufacturing process

ECO Number: 7032720-TA009

Part	CPU Assembly, Pentium II 266M
Revision	B01
Component	CPU Assembly, Pentium II 266M
Severity	None
ECO Issue Date	Apr 98
Type of Notification	Action not required
Change Description	CPU assembly stepping needs to be updated and heatsink fails thermal test.

Description

Severity: None

Description: 1) The part needs to be changed to 266 with ECC C1 stepping and 2) the thermal test failed on DS1200.

Symptom: N/A

Solution

1. Change the Pentium II CPU from 20-47444-05 to 20-45694-05.
2. Change the heatsink from 12-47320-05 to 12-47320-08.

Compatibility

N/A

Customer Impact/Recommendations:

No customer impact since this change is implemented in the manufacturing process.

ECO Number: PCH2B-TA001

Part	Silverstone Kernel
Revision	B01
Component	Label, Prioris XL Server
Severity	High
ECO Issue Date	Apr 98
Type of Notification	Action not required
Change Description	MLB switch settings label replaced with correct information.

Description

Severity: High

Description: The label part number 36-48212-04, revision A, shows a wrong switch setting.

Symptom: N/A

Solution

Change the minimum revision of the label part number from A to B.

Compatibility

N/A

Customer Impact/Recommendations:

No customer impact since this change is implemented in the manufacturing process.