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Prioris HX 6000 Servers
Product Change Information

This document details the following for the Prioris HX 6000 Servers product change information:

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- 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" (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, a 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
6200/256	Pentium Pro 200 MHZ
6200/512	Pentium Pro 200 MHZ
6200/256 MP	Pentium pro 200 MHZ Multiple Processor
6200/512 MP	Pentium-pro 200 MHZ Multiple Processor

Product Change Summary

Part Number	Part	Old Rev	New Rev	ECO Number	Date	Customer Impact	Change Description
54-24568-01	MLB	B02	B02	5424568-TA003	Nov 96	Low	Component substitution
54-24568-01	MLB	B02	B02	5424568-TA004	Jan 97	High	BIOS Release V1.01
54-24568-01	MLB	B02	B02	5424568-TA005	Jan 97	Low	Component substitution
54-24568-01	MLB	B02	C03	5424568-TA009	May 97	Medium	Add component
54-24568-01	MLB	C03	C03	5424568-TA010	May 97	High	BIOS Release V1.03
54-24568-01	MLB	C03	C03	5424568-TA011	July 97	None	Part substitution
54-25304-01	CPU	A01	B01	5425304-TA001	Aug 97	High	Component change
54-25304-01	CPU	B01	B01	5425304-TA002	Aug 97	None	Component numbering
54-25304-01	MLB	C03	C03	5424568-TA012	Aug 97	High	BIOS Release V2.00
54-24568-01	MLB	C03	D03	5424568-TA013	Aug 97	None	Component EOL
54-25302-02	TERM		A01	5425302-TA001	Aug 97	None	Terminator card
54-24568-01	MLB	B01 / D03	B01 / D03	5424568-TA013A	Aug 97	High	BIOS Release V2.00
54-24568-01	MLB	D03	E03	5424568-TA014	Sept 97	High	Component change
54-24568-01	MLB	E03	E04	5424568-TA015	Sept 97	High	Component classification
54-24568-01	MLB	E04	E05	5424568-TA016	Sept 97	High	Component phase in
54-25304-01	CPU	B01	B01	5425304-TA001	Sept 97	High	Component change
54-25304-01	CPU	B01	B01	5425304-TA002	Sept 97	None	CPU component designation
54-25304-01	CPU	B01	B01	5425304-TA003	Sept 97	None	Document correction
54-25302-02	Term. Card		A01	5425302-TA001	Sept 97	None	New variation

BIOS Release Summary

BIOS Revision	MLB Revision	ECO Number	Date	Customer Impact	Change Description
1.01	B02	5424568-TA004	Jan 97	High	Maintenance Release
1.03	C03	5424568-TA010	May 97	High	Product fix
2.00	C03	5424568-TA012	Aug 97	High	For correct configuration
2.00	B01/D03	5424568-TA013A	Aug 97	High	For correct configuration

ECO Number: 5424568-TA003

Part	Motherboard
Revision	B02
Component	Component substitution
Severity	None
ECO Issue Date	11/22/96
Type of Notification	Action not required
Change Description	DRAM parts substitution

Description:

Substitute Micron DRAM 256Kx16, 60nx (21-39219-37) with either Hyundai (21-43685-37) or NPNX (21-43926-37)

Solution:

None required

Customer Impact/Recommendations:

None.

ECO Number: 5424568-TA004

Part	Motherboard
Revision	B02
Component	BIOS
Severity	High
ECO Issue Date	Dec 96
Type of Notification	Action required
Change Description	BIOS Release V1.01

Description

1. Severity: Low
   Description: There is a potential for the 8031 chip to incorrectly report the number of CPUs. This problem has never been seen in the field.
   Customer impact:

2. Severity: Medium
   Description: When "Exchange Diskette Drivers" within SCU is enabled, the floppy drives A: and B: were not swapped correctly.
   Customer impact:

3. Severity: Low
   Description: There is a potential for problems with the 8031 download function. This problem has not been seen in the field.
   Customer impact:

4. Severity: Medium
   Description: The registers of the SMC 665 chip were not set correctly by the BIOS resulting in LPT modes incorrectly set.
   Customer impact

5. Severity: Low
   Description: Repeated warm boots may hang the system. This was only seen in the manufacturing test environment.
   Customer impact:

6. Severity:Low
   Description: Repeat warm boots may result in the OCP message disappearing.
   Customer impact:

New Features

1. Severity: Medium
   Description: Added ECU/BIOS version string for Quick Launch installation support.
   Customer impact:

2. Severity: High
   Description: This BIOS release supports the Pentium PRO chip with stepping CPUID=619
   Customer impact:

3. Severity: Low
   Description: The BIOS release now reports memory size and type when ECC errors occur. For

example
a) When a single bit memory error occurs, the warning messages shown on the screen are:
        Correctable Error: Jxx
        Correctable Error: Jyy
b) When multiple bit memory errors occur, the warning messages shown on the screen are:
        Uncorrectable Error: Jxx
        Uncorrectable Error: Jyy

Compatibility

This release is backwards compatible on all system variants.

Solution

Upgrade you Main Logic Board (MLB) to BIOS V1.01 using the BIOS Flash utility.

Customer Impact/Recommendations:

It is recommended to upgrade to this version of BIOS.

ECO Number: 5424568-TA005

Part	Motherboard
Revision	B02
Component	Component substitution
Severity	None
ECO Issue Date	Jan 97
Type of Notification	Action not required
Change Description	Unitrode part substitution

Description:

19-39217-01 (Unitrode UC5603DP) can be substituted by 19-43778-02 (Unitrode UC5612DP) or 21-44010-01 (Unitrode UCC5614DP)

Solution:

None required.

Customer Impact/Recommendations:

No customer impact since this change is a manufacturing part substitution.

ECO Number: 5424568-TA009

Part	Motherboard
Revision	C03
Component	Add 0.1uf cap.
Severity	Medium
ECO Issue Date	May 97
Type of Notification	Action may be required
Change Description	EMI Audit failed

Description

1. **Severity:** Medium
   Description: The EMI audit failed. It was found while running the EMI test of Pocono product (Intel PII 266Mhz CPU).
   Symptom: N/A
   Customer Impact: No customer impact since change is implemented in manufacturing.

Solution

Add C652, 0.1uf cap. (p/n: 10-24053-34) between j52 pin 4 (power pin) of k/b, mouse conn.) and j52 pin 19 (ground pin) on side 2.

Compatibility

N/A

Customer Impact/Recommendations:

N/A

ECO Number: 5424568-TA010

Part	Motherboard
Revision	C03
Component	BIOS
Severity	High
ECO Issue Date	May 97
Type of Notification	Action may be required
Change Description	BIOS Release V1.03

Description

Severity: High
Description: Monitor flickering problem.
Symptom: Monitors flicker when connected to onboard Trio32 VGA chip.
Customer Impact: Customers' monitors will not function normally.

Solution

Upgrade System BIOS to Version V1.03

Compatibility

This release is backwards compatible on all system variants.

Customer Impact/Recommendations:

It is STRONGLY recommended to upgrade to this version of BIOS if the onboard VGA chip is S3 Trio32.

ECO Number: 5424568-TA011

Part	Motherboard
Revision	C03
Component	MLB
Severity	None
ECO Issue Date	July 97
Type of Notification	Action not required
Change Description	21-43925-01 is replaced with 21-43925-02

Description

Severity: None
Description: 21-43925-01, PPB 21150-AA/DC1030C, will End Of Life.
Symptom: N/A

Customer Impact: None

Solution

Substitute with 21-43925-02, PPB 21150-AA/DC1030E.

Compatibility

N/A

Customer Impact/Recommendations:

None

ECO Number: 5425304-TA001

Part	CPU
Revision	B01
Component	CPU
Severity	High
ECO Issue Date	Aug 97
Type of Notification	Action not required
Change Description	Change resistor values

Description

Severity: High
Description: System does not boot due to VRM failed.
Symptom: N/A

Customer Impact: None

Solution

Replace 330 ohm resistor (13-40998-37) R18, with 4.7K ohm (13-40998-65).

Compatibility

N/A

Customer Impact/Recommendations:

None

ECO Number: 5425304-TA002

Part	CPU
Revision	B01
Component	CPU
Severity	High
ECO Issue Date	Aug 97
Type of Notification	Action not required
Change Description	Correct component reference designator.

Description

Severity: None
Description: Location R18 and C28 are printed with wrong reference designator. R18 is printed with C28, and C28 is printed with R18.
Symptom: N/A

Customer Impact: None

Solution

Update the silkscreen to call out right reference designator for R18 and C28.

Compatibility

N/A

Customer Impact/Recommendations:

None

ECO Number: 5425304-TA012

Part	MLB
Revision	C03
Component	BIOS
Severity	High
ECO Issue Date	Sept 97
Type of Notification	Action may be required
Change Description	BIOS change from V1.03 to V2.00

Description

Severity: High
Description: Support Pocono CPU module (pentium II process card).
Symptom: Pentium II processor and DIMM are not configured correctly when Pocono CPU module is installed.

Solution

Add the corresponding codes.

Compatibility

This release is backward compatible on all system variants.

Customer Impact/Recommendations:

It is strongly recommended to upgrade BIOS version to V2.00 if customer wants to upgrade to Pentium II processor.

ECO Number: 5425304-TA013

Part	MLB
Revision	D03
Component	Graphics Accelerator
Severity	None
ECO Issue Date	Aug 97
Type of Notification	Action not required
Change Description	End of life for Graphics Accelerator

Description

Severity: N/A
Description: 32-bit Graphics Accelerator (21-43696-01) is going to end of life.

- 21-40815-06 (TRIO64V+) will replace 21-43696-01.
- Delete 10-38588-14 (C295 / quantity 1).
- Add 13-40998-73 (R296 / quantity 1).

Symptom: N/A

Solution

None required

Compatibility

N/A

Customer Impact/Recommendations:

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

ECO Number: 5425302-TA001

Part	TRM (terminator card)
Revision	A01
Component	Terminator card
Severity	None
ECO Issue Date	Aug 97
Type of Notification	Action not required
Change Description	New terminator card to allow for assembly on Pocono

Description

Severity: N/A
Description: It is impossible to assemble the terminator card with bracket on Pocono.
Symptom: N/A

Solution

Add new variation 54-25302-02 for the terminator card without bracket.

Compatibility

N/A

Customer Impact/Recommendations:

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

ECO Number: 5425304-TA013A

Part	MLB
Revision	B01/D03
Component	BIOS
Severity	High
ECO Issue Date	Aug 97
Type of Notification	Action may be required
Change Description	BIOS change from V1.03 to V2.00

Description

Severity: High
Description: BIOS Release V2.00

1. **Problem:** Support Pocono CPU module (Pentium II processor cars.
   Sympton: Pentium II processor and DIMM are not configured correctly when Pocono CPU module is installed.
   Solution: Add the corresponding codes.
   Severity: High

2. **Problem:** The revisions of 54-24568-01 and document as well as ECO number are not correct.
   Solution: Correct the revision of 54-24568-01 to D03, document to R, and ECO number to 5424568-TA013.

Compatibility

This release is backward compatible on all system variants.

Customer Impact/Recommendations:

It is strongly recommended to upgrade BIOS version to V2.00 if customer wants to upgrade to Pentium II processor.

ECO Number: 5424568-TA014

Part	MLB
Revision	E03
Component	MLB
Severity	High
ECO Issue Date	Sept 97
Type of Notification	Action not required
Change Description	Component change

Description

Severity: High
Problem: The VGA power source RC circuit contains a resistor that is too large and causes the RAM DAC test to fail when the phase is in Trio64V+. Trio64V requires more current than Trio32. The resistor value for Trio64V must be smaller than that for Trio32 which will reduce the drop voltage.

Solution

At location R394 delete the 10 ohm resistor and add a 5.1 ohm resistor

Customer Impact/Recommendations:

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

ECO Number: 5424568-TA015

Part	MLB
Revision	E04
Component	MLB
Severity	High
ECO Issue Date	Sept 97
Type of Notification	Action not required
Change Description	Component classification

Description

Severity: High
Problem: 93C46 (Serial EEPROM 1024 BITS-IN 8 pin) has wrong classification (21 class)

Solution

Correct the 93C46 classification to 23 class.

Customer Impact/Recommendations:

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

ECO Number: 5424568-TA016

Part	MLB
Revision	E05
Component	MLB
Severity	High
ECO Issue Date	Sept 97
Type of Notification	Action not required
Change Description	Component phase in

Description

Severity: High
Change description: Phase in new SCSI terminator (UCC5614DP) to provide enhanced reliability.

Solution

1. Delete 19-39217-61 (UC5603DP) and add 21-44010-61 (UC5C5614DP) in the KPL.

2. Change note in KPL:

   - WAS - 19-39217-61 (Unitrode UC5603DP) can be substituted by 19-43778-02 (Unitrode UC5612DP) or 21-44010-01 (Unitrode UCC5614DP).

   - IS - 21-44010-01 (Unitrode UC5614DP) can be substituted by 19-43778-02 (Unitrode UC5612DP) or 19-39217-61 (Unitrode UCC5603DP).

Customer Impact/Recommendations:

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

ECO Number: 5425304-TA001

Part	CPU
Revision	B01
Component	CPU
Severity	High
ECO Issue Date	Sept 97
Type of Notification	Action not required
Change Description	Component change

Description

Severity: High
Problem: System can not boot due to VRM failure.

Solution

Changed R18 from 330 ohm (13-40998-37) to 4.7K ohm (13-40998-65).

Customer Impact/Recommendations:

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

ECO Number: 5425304-TA002

Part	CPU
Revision	B01
Component	CPU
Severity	None
ECO Issue Date	Sept 97
Type of Notification	Action not required
Change Description	Component designation incorrect

Description

Severity: N/A
Problem: Location R18 and C28 are printed with wrong reference designator. Location R18 is printed with C28 and location C28 is printed with R18.

Solution

Update the silkscreen to call out right reference designator for R18 and C28.

Customer Impact/Recommendations:

None

ECO Number: 5425304-TA003

Part	CPU
Revision	B01
Component	CPU
Severity	None
ECO Issue Date	Sept 97
Type of Notification	Action not required
Change Description	Document update

Description

Severity: N/A
Problem: On the UA drawing, it shows incorrect default frequency multiple (3.5X) on SW1 default setting. The correct default Frequency multiple should be 4X not 3.5X.

Solution

Update the UA drawing to correct the frequency multiple of SW1 default setting to 4X.

Customer Impact/Recommendations:

None

ECO Number: 5425302-TA001

Part	Terminator card
Revision	A01
Component	Terminator
Severity	None
ECO Issue Date	Sept 97
Type of Notification	Action not required
Change Description	New component variation

Description

Severity: None
Problem: It is impossible to assemble the Terminator card with the bracket on Pocono or Firebird products.

Solution

Add a new variation 54-25302-02 for the terminator card without the bracket.

Customer Impact/Recommendations:

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

BIOS Release V1.01

Release Date: January 1997

Description

1. *Severity:* Low
    The number of CPUs reported by 8031 may be wrong. This has not happen in reality so far.

2. *Severity:* Medium
    Swapping floppies function did not work. When user enabled "Exchange Diskette Drivers" within SCU, floppy drivers A: and B: were not swapped correctly.

3. *Severity:* Low
    8031 download restring function did not work. This did not happen reality so far.

4. *Severity:* Medium
    LPT modes were not set correctly. The registers of SMC 665 chip were not set correctly by BIOS.

5. *Severity:* Low
    Repeat warmbooting hung the system under some test environments. Manufacturing colleagues reported that repeat warmbooting hung the system under their test environment.

6. *Severity:* Low
    Repeat warmbooting hung the 8031 subsystem. The message on OCP disappeared when system warmbooted repeatedly.

New Features

1. *Severity:* Medium
    QuickLaunch needs a method to associate BIOS with SCU. Add ECU/BIOS version string for QuickLaunch.

2. *Severity:* High
    BIOS V1.00 did not support Pentium Pro B1 CPU. CPU patch code was not loaded into CPU when Pentium Pro B! CPU was installed.

3. *Severity:* Low
    BIOS V1.00 did not report the memory size and type when ECC errors happened.

    a) When single bit memory error happened, the warning messages shown on the screen
        were -   Correctable Error : Jxx
                      Correctable Error : Jyy

    b) When multiple bits memory error happened, the warning messages shown on the
        screen were -   Uncorrectable Error : Jxx
                             Uncorrectable Error : Jyy

Compatibility

This release is backwards compatible on all system variants.

Solution

Upgrade your Main Logic Board (MLB) to BIOS V1.01, using the BIOS Flash Utility.

Customer Impact/Recommendations:

It is recommended to upgrade to this version of BIOS.

Release V1.03

Release Date: May 1997

Description

Severity: High
Description: Monitors of certain kinds have flickering problems.
Symptom: Monitors of certain kinds flicker when connected to onboard Trio32 VGA chip.
Customer Impact: Customers' monitors will not function normally. After phasing in the new System BIOS, DDC function of monitor may not function.

Solution

Upgrade System BIOS to Version V1.03

Compatibility

This release is backwards compatible on all system variants.

Customer Impact/Recommendations:

It is STRONGLY recommended to upgrade to this version of BIOS if the onboard VGA chip is S3 Trio32.

Release V2.00

Release Date: August 1997

Part	MLB
Revision	C01
Component	Bios
Severity	High
ECO Issue Date	Aug 97
Type of Notification	Action may be required
Change Description	BIOS change from V1.03 to V2.00

Description

Severity: High
Description: Support Pocono CPU module (Pentium II process card).
Symptom: Pentium II processor and DIMM are not configured correctly when Pocono CPU module is installed.

Solution

Update the silkscreen to call out right reference designator for R18 and C28.

Compatibility

This release is backward compatible on all system variants.

Customer Impact/Recommendations:

It is strongly recommended to upgrade BIOS version to V2.00 if customer wants to upgrade to pentium II processor.

Release V2.00

Part	MLB
Revision	B01/D03
Component	BIOS
Severity	High
ECO Issue Date	Aug 97
Type of Notification	Action may be required
Change Description	BIOS change from V1.03 to V2.00

Description

Severity: High
Description: BIOS Release V2.00

1. **Problem:** Support Pocono CPU module (Pentium II processor cars.
   Sympton: Pentium II processor and DIMM are not configured correctly when Pocono CPU module is installed.
   Solution: Add the corresponding codes.
   Severity: High

2. **Problem:** The revisions of 54-24568-01 and document as well as ECO number are not correct.
   Solution: Correct the revision of 54-24568-01 to D03, document to R, and ECO number to 5424568-TA013.

Compatibility

This release is backward compatible on all system variants.

Customer Impact/Recommendations:

It is strongly recommended to upgrade BIOS version to V2.00 if customer wants to upgrade to Pentium II processor.