

System bios 130 for hp workstation i2000

Summary

This is a BIOS release for the hp workstation i2000. The WFlash64 FLASH update utility is an EFI application program use for updating the flash for the hp i2000 workstation. These FLASH Update Utility Release Notes are Copyright (c) 1999-2001 Intel Corporation, All Rights Reserved.

Note: the bios 1.30 is supported only with processors with C2 Stepping

Applies To

System(s):	hp workstation i2000
Operating system(s):	Windows XP 64 Bits edition hp-ux 11.x Red Hat Linux distribution 7.1
Language(s):	<input checked="" type="checkbox"/> English, <input type="checkbox"/> French, <input type="checkbox"/> Italian, <input type="checkbox"/> German, <input type="checkbox"/> Spanish, <input type="checkbox"/> Swedish, <input type="checkbox"/> Norwegian, <input type="checkbox"/> Finnish, <input type="checkbox"/> Danish, <input type="checkbox"/> Japanese
Certifications:	None

Version History

File name: Bios_130.exe

Version: 130

Release date: 12/10/02

Version replaced

File name: 117c.exe

Version: 117

Release date: 12/17/01

How to determine your current version

On boot up of the workstation:

1. At the Itanium logo select enter setup
2. Select the tab labeled "system bios"
3. The system bios tab has a field labeled BIOS:
BIOS= W460GXBS2.86E.**0130**.P13.200210311550

The reference **bolded** in this example reflects the Version 130

Detailed Description

Upgrade recommendation

Recommended
 Critical

commands added to IA-64 HP-UX version for efi shell.

HP-UX 11.x now has some new commands that were added for the IA-64 product offering. Performing a "# man efi" will list all of the HP-UX commands used to communicate with both the EFI shell found on the boot disk, as well as the commands used to communicate with the new LS120MB/240MB floppy drive

Enhancements and Fixes

Bios 130

- Integrate PAL 8.8.30
- Modification of the keyboard handler code allowing the zero key of the keypad to function correctly within Configuration Manager
- Fixed issue to allow beep code 1-1-3 and 1-1-5 to function properly
- Modified BIOS to allow the Power Management Event, within Configuration Manager, to control PME enable.
- Fixed boot problems with 256MB DIMMs based on 256Mb (32x8) technology
- Added PCI Bus section to MCA records
- SAL support added for mixed stepping i.e. C0 and C1
- Fixed issue where system would intermittently freeze within Configuration manager
- DIMM numbering within event log modified to match specification. See Specification Update.
- Fixed processor speed not being automatically set after clearing CMOS with the override jumper.
- MP configuration table modified to include two processors entries
- Modified RTC default values to allow day light savings time to be controlled by the software and not the hardware.
- Modification of the Identify Packet Device protocol implementation, allowing BIOS recovery with LGCED-8080 CD-RW, also fixing BIOS recovery with LS-240 drive and media using the FAT file system
- Type 0 SMBIOS value changed to reflect correct size of Firmware from 1 MB to 4 MB
- Memory segmentation access modified allowing for the LSI 22910 and Adaptec 39160 SCSI adapters to coexist in the system without system hangs
- Integration of Extensible Firmware Interface (EFI) version 1.02.12.39 fixing three EFI test assertion failures with PC2001 v10.0
- Only single bit and double bit ECC memory error related events are being displayed within the System Error Log. All non-ECC memory error related events will no longer be displayed within CM
- Modified the ECC event log record to clearly indicate a failing DIMM and the reference designator pointing to its location
- Mixed stepping support incorporated for C0/C1 combination

Bios 117c

- Code Specification is missing the beep code, 3-1-1, identifying FMM failing to initialize.
- (Sub-system vendor ID) failing PCI 2.2 Compliance Testing on Bus 1.
- (Sub-system vendor ID) failing PCI 2.2 Compliance Testing on Bus 2.
- System hangs with SCSI adapters LSI22910 and Adaptec 39160 installed.
- Additional beep codes added to enhance serviceability 91-1-2, 2-1-1).
- BIOS causing system to hang before EFI in a Maximum Configured system.
- PAL version reported correctly in information screen during EFI boot
- 1-1-5 Memory Error beep code is now functional

- Additional changes to resolve issue where incorrect processor and FSB speeds are reported during boot
- Added support for the WSETUP.EFI utility included in the OEM Toolkit rev 2.01. When used with BIOS RC8, this utility facilitates automatic setting of processor errata workarounds. Use the WCONFIG.EFI or CMOS.EFI utility to set the processor speed.
- Removed IBIOSI marker in AMI runtime library
- Implemented fix to prevent possible RTC corruption when processing an MCA on a DP system
- Fixed issue where single-bit memory error events were displaying incorrect DIMM location in Event Log
- Remove Event Log records that have been read by the OS
- Add CMOS switches to enable/disable processor workarounds
- Fixed system freezes when accessing video mode information in EFI
- Fixed hang with EFI MEM command if start address argument does not end in 0
- Double-bit memory error now results in MCA instead of a hang in PMI handler
- EFI Boot maintenance menu enhanced to make adding a boot option easier
- Resolved issue in which the Mylex* EXR2000 RAID controller began executing memory transactions before being allocated memory space
- Resolved AGP Aperture memory space overlap with GXB PCI space
- Fixed issue where incorrect CPU and FSB speeds were being reported during boot

Known issues and limitations

IDE Enumeration Delay of approximately 45 seconds on drives containing Linux* formatted EFI partitions.

Excessive delay observed when clearing flash error log object. Expected: 2-3 seconds. Actual: 12 - 65 seconds.

Benign MCA error may occur on application processor during BIOS recovery. MCA POST error code EB.

BIOS splash screen countdown timer is 10 seconds, but may display count down starting at 9 or 8 and not 10.

USB Mitsumi* keyboard and mice intermittently non-functional with MicroSoft* 64-bit Windows* XP. Mitsumi keyboard -driver is NOT native to the Microsoft 64-bit WindowsXP. Using Mitsumi driver fixes this issues.

Installation Instructions – Windows 64 bits edition

- 1 Copy WFlash64.EFI and binary input file (bios130.bin) to an LS120 disk
- 2 Boot to the EFI shell
- 3 Enter the following command line: WFlash64 /P
- 4 When prompted for the required system reset press 'y' key to continue.
- 5 On the system reset boot to the EFI shell.

- 6 Enter the following command line and follow screen instructions:
Wflash64 bios130.bin
- 7 Reboot system after the update is completed.

Installation Instructions - hp-ux

Placing the BIOS directly into the EFI partition with hp-ux

- 1 Boot the i2000 into hp-ux mode
- 2 use "ftp" to obtain the necessary files for the bios upgrade (i.e., wpgbios.bin and wflash64.efi)

****NOTE*** The name for the bios file is not critical except when trying to perform a BIOS RECOVERY at which time, the .bin file located on the LS120/240 Media MUST be named "wpgbios.bin" to be recognized by the recovery process.*

- 3 use "ioscan" to determine the disk drive device files

```
# ioscan -fnC disk
```

```
Class I H/W Path Driver S/W State H/W Type Description
```

```
=====
disk 0 0/16/1/3/1.0.0.0 sdisk CLAIMED DEVICE HITACHI DVD-ROM
GD7500
/dev/dsk/c0t0d0 /dev/rdisk/c0t0d0
disk 1 0/16/1/3/1.0.1.0 sflop CLAIMED DEVICE MATSHITALS-120
SLIM4 00
/dev/floppy/c0t1d0 /dev/rfloppy/c0t1d0
disk 2 0/18/1/0/0.0.0.0 sdisk CLAIMED DEVICE QUANTUM
ATLAS10K2-TY184L
/dev/dsk/c2t0d0 /dev/rdisk/c2t0d0
/dev/dsk/c2t0d0s1 /dev/rdisk/c2t0d0s1
/dev/dsk/c2t0d0s2 /dev/rdisk/c2t0d0s2
```

- 4 verify if the boot disk EFI partition already contains any files. This is determined by adding an "s1" at the end of the character device file:

```
# efi_ls -d /dev/rdisk/c2t0d0s1
FileName Last Modified Size
EFI/ 7/24/2001 0
STARTUP.NSH 7/24/2001 336
WPGBIOS.BIN 7/27/2001 10240
WFLASH64.EFI 7/27/2001 221184
```

total space 103215616 bytes, free space 102008320 bytes

***NOTE. The "s1" designation means the EFI partition on the hard drive while the an "s2" means the partition that has HP-UX on it.*

- 5 copy the previously ftp'ed files to the EFI partition:

```
# pwd
/bios
# ll
total 452
* rw-r----- 1 root sys 10240 Jul 26 11:35 wpgbios.bin
* rw-r----- 1 root sys 221184 Jul 26 09:19 wflash64.efi

# efi_cp -d /dev/rdisk/c2t0d0s1 wpgbios.bin wpgbios.bin
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
//
(HP-UX filename) (nameitThisOntheLS120/240)
# efi_cp -d /dev/rdisk/c2t0d0s1 wflash64.efi wflash64.efi
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
//
(HP-UX filename) (nameitThisOntheLS120/240)

# efi_ls -d /dev/rdisk/c2t0d0s1
FileName Last Modified Size
EFI/ 7/24/2001 0
STARTUP.NSH 7/24/2001 336
WPGBIOS.BIN 8/ 6/2001 10240
WFLASH64.EFI 8/ 6/2001 221184
```

total space 103215616 bytes, free space 102008320 bytes

Placing the BIOS onto an LS120/240 floppy within hp-ux

- 1 prepare the floppy media to accept the efi files:

```
# efi_fsinit -d /dev/rfloppy/c0t1d0
```

- 2 list the floppy to verify for proper structure:

```
# efi_ls -d /dev/xfloppy/c0t1d0
FileName Last Modified Size
WPGBIOS.BIN 11/28/2001 4194304
WFLASH64.EFI 11/28/2001 221184
```

total space 124249600 bytes, free space 119831552 bytes

- 3 listing of the local HP-UX directory where the bios files were ftp'ed to:

```
# cd /tmp/firm
# ll
total 16816
* rw-r----- 1 root sys 221184 Nov 18 08:18 wflash64.efi
* rw-rw-r-- 1 root sys 4194304 Nov 28 07:55 wpgbios.bin
```

- 4 copy the hp-ux files to the floppy media

```
# efi_cp -d /dev/xfloppy/c0t1d0 wpgbios.bin wpgbios.bin
# efi_cp -d /dev/xfloppy/c0t1d0 wflash64.efi wflash64.efi
```

- 5 verify that the copy process was succesful

```
# efi_ls -d /dev/xfloppy/c0t1d0
FileName Last Modified Size
WPGBIOS.BIN 11/28/2001 4194304
WFLASH64.EFI 11/28/2001 221184
```

total space 124249600 bytes, free space 119831552 bytes

- 6 reboot the I2000 and select the EFI shell:

from the EFI shell prompt, type the "fs0:" or corresponding value for the floppy drive.

***NOTE** the "." is necessary.*
shell>fs0:

- 7 list the bios files to use during the flash procedure

```
fs0:>ls
```

- 1 Copy the firmware image to an LS120 (Super Disk™) with a File name of "wpgbios.bin"
- 2 Place the disk into the LS120 drive
- 3 Move the recovery jumper in the system board to the recovery setting (no jumper). Remove the Configuration Mode jumper (J29). Save the jumper
- 4 Turn on the system power.
- 5 Listen for the startup beep sequence (3-3-1-0)
- 6 The LS120 drive light will come on and in about 2-3 minutes Will turn off.
- 7 At this point FLASH will be erased and programmed. Losing Power at this point will warrant a restart of the recovery process. This stage may take from 1-2 minutes.
- 8 When programming is complete (with SUCCESS) you will here a sequence of (3-3-3-0). Otherwise you will hear a beep code specific to the type of failure.
- 9 Power down the system, restore the recovery jumper to the Normal setting (pins 2-3).
- 10 Enter the following command line:

edd30 on

Power down the workstation
- 11 NOTE: In the event of a failure during recovery the beep sequence indicating the type of failure will repeat until the system is powered down.

Additional information can be obtained from using the utility help option from the EFI Shell:

Wflash64 /?

Disclaimer

The information in this document is subject to change without notice.

Hewlett-Packard makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

This document contains proprietary information that is protected by copyright. All rights are reserved. No part of this document may be reproduced, photocopied, or translated to another language without the prior written consent of Hewlett-Packard Company.