AlphaBIOS

Release Notes

April 1999

This document describes fixes, feature changes, and problems discovered since the last AlphaBIOS User's Guide was published.

Revision/Update Information: Includes AlphaBIOS 5.69.

Compaq Computer Corporation
Houston, Texas

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Introduction

These release notes document fixes, feature changes, and problems discovered since the last AlphaBIOS User's Guide was published. For more detailed information about installing and using AlphaBIOS, download the AlphaBIOS User's Guide from:

http://www.compaq.com/support/files/alphant/index.html

AlphaBIOS has scheduled and unscheduled (out-of-cycle) releases. It is released quarterly for all AlphaBIOS products, and it is released out-of-cycle for new products or subsets of products.

AlphaBIOS 5.69

AlphaBIOS 5.69 is a scheduled release and supports all the AlphaBIOS products listed in the Appendix.

Improvements

Windows 2000 Advanced Configuration & Power Interface (ACPI)

Where system platform allows, this version of AlphaBIOS release provides the fullest support for Advanced Configuration & Power Interface (ACPI) features that will be present in Windows 2000. If you are planning to install the Beta 3 or later releases of Windows 2000, you must update your system with this AlphaBIOS release.

New LSI/Symbios SCSI Adapters

AlphaBIOS supports all LSI/Symbios SCSI adapters, built on the SCSI cores ranging from C810 to C896 inclusive, as boot devices.

New Mylex RAID Adapters

AlphaBIOS supports the following Mylex intelligent RAID adapters as boot devices:

- KZESC-AA *(EISA to 8-bit Single Ended SCSI RAID)*
- KZESC-BA *(EISA to 8-bit Single Ended SCSI RAID)*
- KZPAC *(PCI to Wide Single Ended UltraSCSI RAID)*
- KZPSC-AA *(PCI to Wide Single-Ended SCSI RAID)*
- KZPSC-BA *(PCI to Wide Single-Ended SCSI RAID)*
- AcceleRAID 150 *(PCI to Ultra2SCSI RAID)*
- ExtremeRAID *(PCI to Ultra2SCSI RAID)*

New Mylex RAID Configuration Utility

Compaq offers the new ARCCF for configuring the Mylex intelligent RAID adapters. This utility supports all Mylex RAID products listed above. Compaq recommends using ARCCF, instead of the older SWXCRMGR utility, to configure your adapters. It is available at

http://www.compaq.com/support/files/alphant/drivers/index.html

Adaptec AIC-7895 SCSI Adapter Support

The AlphaPC 264DP on-board Adaptec adapter (AIC-7895) is now supported as a boot device.

Using Intel 8255x and DC21x4 Network Adapters

AlphaBIOS supports the network adapters that are built on the Intel 8255x and DC21x4 NIC cores. You can use the 8255x or DC21x4 network adapters separately, or you can use both types of adapters simultaneously.

Specifically, AlphaBIOS supports these adapters on the following Alpha models:

- Compaq AlphaServer™ DS20
- Compaq AlphaPC 264DP
- Compaq Professional Workstation XP 1000

On other Alpha platforms, only the DC21x4 is supported by AlphaBIOS.

Timing the Start of the Operating System

Normally, if you do not select an operating system, AlphaBIOS automatically starts the primary operating system 30 seconds after the selection screen appears. The primary operating system is the one highlighted on the selection screen.

AlphaBIOS determines when to start the operating system by inspecting the Auto Start Count field in CMOS Setup. If you want more time to select an operating system, increase the value in the Auto Start Count field. If you want less time, decrease the value in this field.

If you do not want AlphaBIOS to automatically start the primary operating system when the Auto Start Count reaches 0, you must clear the Auto Start Enable field in CMOS Setup.

Enabling or Disabling Network Adapters

When the user enables or disables a network adapter, the system has to be rebooted to put it into effect.

This is no longer necessary.

Recognizing Supported PCI Devices

When the user displays the PCI configuration, some new devices supported by AlphaBIOS were not recognized by it.

AlphaBIOS now recognizes the following PCI devices:

- KZPCA *(Compaq SCSI)*
- KGPSA *(Compaq FibreChannel)*
- 6021L *(Compaq Video/Ethernet)*
- NC31XX *(Compaq Ethernet)*
- PowerStorm 4D10 *(Compaq Video)*
- Single RAID *(Mylex AcceleRAID 150)*
- Multi RAID *(Mylex ExtremeRAID)*
- C896 *(LSI/Symbios 896 SCSI)*

Displaying SCSI Adapters' Manufacturer Names

On boot screens like the Hard Disk Setup screen, AlphaBIOS displays the manufacturers of devices. For example, the Compaq KZPSx adapter appears as: COMPAQ STORAGE - KZPSX #X.

Bug Fixes

Timing Out AlphaBIOS Upgrade

When heavy LAN traffic forced a second attempt to upgrade the AlphaBIOS via the network, the system would hang.

This has been fixed.

Now, the users can also get out, by pressing the Escape key, amidst an unsuccessful attempt to upgrade AlphaBIOS via the network instead of having to wait until the timeout period (about 1 to 2 minutes) expires.

Disabling Network After AlphaBIOS Update

After AlphaBIOS was updated via the network, the network could not be disabled.

This has been fixed.

Bypassing Network Initialization May Crash System

If the user pressed the Escape key during network initialization to bypass it and subsequently tried to run an ARC application via the “Run a Program” menu, the system would crash.

This has been fixed.

Media Search Order During AlphaBIOS Update

When the user attempted an “AlphaBIOS Upgrade...” with a diskette containing FWUPDATE.EXE, and while Network was enabled, AlphaBIOS would overlook the local presence of FWUPDATE.EXE and proceeded to update the AlphaBIOS via the network.

This has been fixed.

The media search order is now as follows:

1. CDROM
2. A: Drive
3. Network Interface(s)

The user interface has been updated to notify users when image-loading error occurs.

Testing Partial Memory

When AlphaBIOS started to run a partial system memory test, it would continue to count past 256MB.

This has been fixed.

Validating NTFS Paths

AlphaBIOS has never been capable of validating an NTFS path and currently does not support that feature. However, when the user attempted to validate an NTFS path, AlphaBIOS would report that the path is valid, with no basis for doing so.

This has been fixed.

When AlphaBIOS detects a directory in an NTFS partition, it displays the message “NTFS path validation not supported”.

KGPSA Prevents Warm Reboot

When an AlphaServer 800 or Alpha XLT system was configured with a KGPSA FibreChannel adapter, the system would not perform a warm reboot successfully.

This has been fixed.

Known Issues

Despite the above improvements and bug fixes to AlphaBIOS, the following issues persist for which a temporary workaround exists or no solution exists.

SCSI ID of Storage Devices Attached to Mylex RAID Adapters

This behavior shows up on all AlphaBIOS systems.

Devices attached to SWXCR storage adapters (also known as KZPAC, KZPSC, KZESC, or Mylex DAC960 adapters) may seem to have large, erroneous, SCSI IDs.

This is cosmetic and will not affect the operation of these devices under Windows NT 4.0.

Incomplete Handling of Large IDE Disks

This behavior shows up on all AlphaBIOS systems that support IDE controllers.

AlphaBIOS can partition and format only the first 8GB of an IDE disk that is larger than 8GB.

You must partition and format the remainder of the disk under Windows NT 4.0.

SCSI BIOS Configuration Utilities Prevent System Reboot

This behavior shows up on the following Alpha models:

- AlphaServer 4100
- AlphaServer 1200
- DIGITAL Server 7300
- DIGITAL Server 5300
- DIGITAL Ultimate Workstation Systems

Under certain conditions, running the Qlogic or Adaptec BIOS configuration utilities would prevent the system from being subsequently rebooted.

The workaround is to press the Reset button on the front panel.

Failure to Convert FAT to NTFS

This behavior shows up on the following Alpha models:

- AlphaServer 4100
- AlphaServer 1200
- DIGITAL Server 7300
- DIGITAL Server 5300
- DIGITAL Ultimate Workstation Systems

Under certain conditions, during a Windows NT installation, the system would not be able to convert a disk partition from FAT to NTFS. This would likely to have happened if the system is being installed to a disk attached to an Adaptec 2940UW SCSI adapter.

The workaround is to place the adapter on the first PCI bus in the system (PCI-0).

Lost Advanced CMOS Settings

This behavior shows up on all AlphaBIOS systems.

AlphaBIOS may present erroneous information in Advanced CMOS Settings when the user interacts with it as follows:

1. Presses <F2> to enter AlphaBIOS Setup
2. Selects CMOS Settings
3. Presses <F6> to enter Advanced CMOS Settings
4. Changes a value
5. Presses <F10> to save the change and exit from Advanced CMOS Settings
6. Presses <F6> to enter Advanced CMOS Settings again

After Step 6, the change that was saved in Step 5 would now be lost.

Failure to Recognize DE425 EISA Network Adapter

This behavior shows up on all AlphaBIOS systems.

Under certain conditions, AlphaBIOS cannot detect the presence of a DE425 EISA Network Interface Card.

TGA Graphics Adapter Prevents BIOS Emulation

If an AlphaBIOS system is configured with the DIGITAL TGA graphics display adapter, no BIOS emulation will be allowed.

AlphaBIOS 5.68

AlphaBIOS 5.68 is a scheduled release and supports all the AlphaBIOS products listed in the Appendix.

Release 5.68 of AlphaBIOS primarily addresses support for new hardware, support for Windows 2000 features, serviceability support, and PCI configuration enhancements.

Overview

Support for New Hardware

AlphaBIOS supports hardware that uses the next generation Alpha 21264 CPUs.

Support for Windows 2000 Features

Where hardware allows, AlphaBIOS supports features that will be present in Windows 2000, such as ACPI.

Serviceability Support

AlphaBIOS adds to the serviceability provided by earlier versions of AlphaBIOS.

PCI Configuration Enhancements

AlphaBIOS eliminates some problems with PCI configurations and allows new peripherals to run correctly.

Fixes in This Release

The fixes in this release fall into the following categories: USB, ACPI, PCI, and all other fixes.

USB

- Initialize the USB port properly.

ACPI

- Include all ACPI information required to boot Windows 2000.
- Check for a video card before trying to get PCI configuration information about a video card.
- If a parallel port is configured in standard mode, do not report that an ECP port is present. Similarly, if a parallel port is configured as an ECP port, do not report that a parallel port is present.
- Exit the configuration mode in the SMC before returning the device status for COM1, COM2, or a floppy disk drive.
- Change the key value of the ACPI BIOS node to zero. This value is what Windows 2000 expects.
- Add AlphaBIOS support for ACPI for booting Windows 2000.

PCI

- Enable 64-bit PCI after warm starts in AlphaServer 800 and DIGITAL Server 3300 systems.
- Enable SERR when an Alteon Gigabit ACEnic (1Gb Ethernet card) is the only card on the PCI bus; otherwise, disable SERR when this card is not the only one on the bus.
- Abbreviate terms on the PCI Config menu to prevent truncation of those terms.
- Add PCI configuration failure warnings to AlphaBIOS. On the PCI menu, highlight the PCI devices that failed so that the user can go to the advanced PCI menu for those devices and identify the resources, which failed for each device.
- Change AlphaBIOS PCI initialization and error handling to reflect multiple processors for PCI I/O.
- Correct the regression introduced by defining BAD_ADDRESS_REGISTER as 0xDeadBeef by redefining BAD_ADDRESS_REGISTER as zero. This correction prevents the x86 emulator from interpreting 0xDeadBeef as a valid address for devices that cannot meet PCI requirements.
- Add support for Ultra DMA with the AcerLabs IDE controller, and update the PCI configuration code to support the Polaris core logic and the Acer Labs PCI-ISA bridge chip. This includes the following PCI devices:

Polaris System Controller (PSC)

AcerLabs m1543C PCI-ISA Bridge

AcerLabs m5229 IDE Controller

AcerLabs m5237 USB

AcerLabs m7101 PMU

Other fixes

- Provide Common Console support for UNIX/VMS by adding the “Install Operating System” command to the AlphaBIOS menu.
- Make Common Console changes to SCB backward compatible with existing SCB definitions.
- Update the DHCP client by removing code that obtains the server IP address from the option field of the DHCP packet.
- Set the DHCP client to get the TFTP server IP address from the server field and do not allow the IP address to be overwritten with the server name. Adjust the UDP to read the size from UPD header.
- Add a Reset routine and change the DC21X4 Driver Entry and Initialize routine, allowing the driver to initialize a network card that was not initialized at start up or to reinitialize a network card after it was shut down.
- Add double error halt logging to HAL, AlphaBIOS (for Turbolaser and common code), and the Windows 2000 event log.
- On the AlphaServer 1000a Model 5 platform, prevent a black-screen hang in the transition from HAL via PAL to AlphaBIOS by implementing a warm-start-enable option. Include in CMOS Advanced Settings a “Warm Restart” option under CMOS Settings, Advanced Setup that can set the Environmental Variable WARMREBOOT to YES or NO.
- During debug, update the error logging callback API to allow frame sizes to be transferred between the HAL and AlphaBIOS.
- Add error halt logging support to Turbolaser EV6.
- Ensure that “Power-up Memory Test” changes in advanced CMOS setup are preserved when saved.

AlphaBIOS 5.67

AlphaBIOS 5.67 is an out-of-cycle release that addresses PCI configuration enhancements, NT serviceability support, and post NT 5.0 (Beta 2) issues.

The AlphaBIOS products supported by this release are:

- DIGITAL* Personal Workstation
- DIGITAL* Ultimate Workstation
- Alpha Server 1200
- Alpha Server 4000
- Alpha Server 4100
- DIGITAL* Server 5000/5300
- DIGITAL* Server 7000/7300

* Now owned by Compaq Computer Corporation.

Overview

PCI Configuration Enhancements

PCI configuration enhancements were added to AlphaBIOS 5.67 to relax PCI configurator error handling of devices that reported non-compliant PCI resources. The enhancement allows devices that request PCI resources in a non-compliant manner to now function under Windows NT.

Previously, when AlphaBIOS encountered a non-compliant PCI resource, the entire configuration for the non-compliant device was filled with zeros thereby disabling the device. AlphaBIOS was changed to behave as follows:

- Non-compliant PCI resources will be invalidated. Non-compliant resources will be written with the hexadecimal number 0xdeadbeef. Writing this unique value provides users with the ability to identify invalid PCI resources from the AlphaBIOS configuration menu.
- All other settings will be honored. AlphaBIOS will attempt to assign, to the device, all PCI resources not identified as non-

compliant. This will enable the device to function under Windows NT. The degree of functionality is dependent on the device.

- Although this change was specifically required to support the Gerber Woodbridge device, it greatly enhances the flexibility of the AlphaBIOS PCI configurator.

NT Serviceability Support

AlphaBIOS 5.67 includes latent NT serviceability support for the following products:

- DIGITAL* Ultimate Workstation Alpha Server 1200
- Alpha Server 4000
- Alpha Server 4100
- DIGITAL* Server 5300
- DIGITAL* Server 7300

* Now owned by Compaq Computer Corporation.

AlphaBIOS implements only a small component of the overall serviceability scheme. Customers must also update the SRM V5.3 console and Windows NT HAL revision E in order to obtain a system software configuration that includes NT serviceability.

Post Windows NT 5.0 (Beta 2) Support

AlphaBIOS release 5.67 contains fixes necessary to support post Windows NT 5.0 (Beta 2) on Alpha systems. See Fix Descriptions section for more detail.

Fixes In This Release

Following are the fixes for AlphaBIOS 5.67.

Fixes Common to all Platforms

PCI Configuration

- Relax error handling of non-compliant PCI resources.

NT 5.0 (Beta 2):

- Add support for NT 5.0 advanced boot configuration menu (Safeboot). This menu is entered by pressing F5 or F8 from the boot selection menu and provides advanced boot options that enhance the repair of Windows NT 5.0. Entering this menu for non-NT5 boot selections has no impact on system boot behavior. Although this feature was not officially supported on

Alpha systems for NT 5.0 (Beta 2), latent support in Windows NT 5.0 (Beta 2) does exist. See Windows NT 5.0 (Beta 2) release notes for more information.

- Fixes for AlphaServer 1200, AlphaServer 4000/4100, DIGITAL* Server 5000/5300, DIGITAL* Server 7100/7300, & Digital* Ultimate Workstation
- Add latent NT serviceability support. See Release Overview for more details.
- Add SRM-dependency server-management warning to inform customers of potentially invalid firmware configurations. See Release Overview for more details.

* Now owned by Compaq Computer Corporation.

Known Issues in AlphaBIOS 5.67

Following are issues for which no solution exists or a temporary workaround exists.

Issues common to all AlphaBIOS products

- The PCI configurator enhancement for this release may potentially cause problems for certain PCI configurations behind a PCI-to-PCI bridge (PPB). One side effect of the enhancement is for handling of errors where PCI configuration PCI IO or PCI memory resource requests cannot be satisfied for a device installed in a PPB slot. If this occurs, the PCI IO or PCI memory resources for all devices behind the PPB are invalidated. Invalidation is performed by writing the hexadecimal value 0xdeadbeef to PCI IO or PCI memory resources for all devices behind the PPB. If such configurations include devices that advertise a ROM BIOS, then AlphaBIOS may crash during BIOS emulation. The BIOS emulator will misinterpret the value 0xdeadbeef as a valid PCI address and attempt to read this address. This problem will be fixed in the next release.
- Due to the focused nature of this out-of-cycle AlphaBIOS release, all Known Issues for the AlphaBIOS 5.66 release still exist in AlphaBIOS 5.67.

Known Issues for AlphaServer 1200, AlphaServer 4000/4100, DIGITAL Server 5000/5300, DIGITAL Server 7100/7300, & Digital Ultimate Workstation

Special steps must be taken to update the firmware configuration for NT serviceability support. This is because the AlphaBIOS firmware image has been moved to a new location in flash in order to provide space for fatal -error logging. SRM v5.3 will be the first SRM version to support

the new flash layout. When updating the system firmware to obtain NT serviceability support, the following steps must be taken:

7. Update the SRM to v5.3 using the LFU.
8. Reboot the system so that we are now running SRM v5.3.
9. Update the AlphaBIOS to v5.67 or greater using the LFU. SRM v5.3 will put AlphaBIOS in the new flash location.
10. When the SRM required for NT serviceability support is made available, more details will be provided on how to update the firmware configuration.

AlphaBIOS 5.66

AlphaBIOS 5.66 provides support for SCSIBIOS emulation, enhanced PCI DMA mode, and NT 5.0 (Beta 2). This release supports all AlphaBIOS products.

Overview

SCSIBIOS Emulation

SCSIBIOS emulation support has been added for platforms that incorporate the CIA/DSW host bridge chip-set, including:

- Alpha XL 300/366/433
- AlphaStation 600 5/266, 300, 333
- AlphaServer 600A 5/500
- AlphaServer 1000 5/266, 300
- AlphaServer 1000A 5/266, 300
- AlphaServer 800 5/333, 400, 600
- DIGITAL* Server 3000/3300

* Now owned by Compaq Computer Corporation.

When AlphaBIOS 5.66 is first installed, SCSIBIOS emulation is disabled by default. This prevents undesirable changes to changes to system behavior. You can enable SCSBIOS emulation through the AlphaBIOS Advanced CMOS Settings Menu.

When SCSIBIOS emulation is enabled, AlphaBIOS scans the system for SCSI adapters containing a BIOS. If a SCSI BIOS is detected, AlphaBIOS initializes the BIOS for the corresponding adapter.

You might encounter the following issues after enabling SCSIBIOS emulation:

- The first time SCSIBIOS emulation is enabled, you might be prompted to run the SCSIBIOS configuration utility to repair the SCSI adapter's NVRAM settings. Run the configuration utility as instructed.

- For systems that contain a Qlogic-based PCI adapter in addition to an on-board Qlogic SCSI device, you will notice that the system takes a long time to complete initialization of the Qlogic PCI adapter. Until this problem is resolved, you can minimize the impact of this problem by enabling SCSIBIOS emulation for Qlogic-based controllers only when it is necessary to run the Qlogic configuration utility.

Enhanced PCI DMA Mode Support

PCI Master DMA-Window Mode configuration support has been added for platforms that support PCI Scatter-Gather DMA. This new Advanced CMOS feature allows you to control the DMA resources allocated under Windows NT 4.0 for the PCI Master Scatter-Gather DMA Window.

To use the enhanced DMA functionality, your system must have Windows NT 4.0 with OEM HAL Revision D or later installed. You can avoid manually installing the updated HAL file by installing Windows NT 4.0 Service Pack 4 when it becomes available.

Supported DMA modes include:

- Legacy Mode - use the legacy (original) settings with fixed window base and size. This mode may be required for certain non-compliant PCI devices.
- Dynamic Mode - Dynamically size the Master DMA-window proportional to the amount of physical memory present in the system. Relocate the DMA-window base address to a location compatible with the system IO address space. This DMA mode is the default setting.
- Maximum Mode - Select the maximum size, 512 MB, for the Master DMA-window. Relocate the DMA-window base address to a location compatible with the system IO address space. This mode may be required for large PCI device configurations.

Windows NT 5.0 Beta 2 Support

AlphaBIOS release 5.66 contains fixes necessary to support beta 2 of Windows NT 5.0 on Alpha systems. See Fix Descriptions section for more detail.

Fixes In This Release

Following are fixes for AlphaBIOS 5.66.

Fixes Common to all Platforms

SCSIBIOS Emulation:

- SCSIBIOS emulator fix to support configurations with more than ten drives when an AdvanSys SCSI adapter is installed in the system.
- Changed the SCSBIOS emulated memory back to 512K to fix long KZPCM SCSIBIOS initialization times.
- Remove interrupt-bitmask checking in SCSIBIOS emulator to fix problems with entering the Qlogic SCSIBIOS configuration utility when the Qlogic installed behind an Adaptec SCSI controller.

Network Support:

- Speed optimizations for the AlphaBIOS DC21X4 network driver, including use transmit-threshold mode and reduce minimum wait time in polling to finish transmit.
- Fix a check-sum error in the network file-cache that occurred after loading a smaller image with same file name from network.
- Reduce TFTP server overhead by modifying the AlphaBIOS TFTP client to terminate the TFTP touch-file transaction. This will increase the reliability of TFTP file transactions.

Miscellaneous AlphaBIOS network fixes.

NT 5.0 (Beta 2):

- Update the AlphaBIOS ATAPI IDE Miniport driver to NT 4.0 (1381) version. For NT 5.0 and certain NT 4.0 configurations, the new driver is required to support AlphaBIOS clean IDE device reset after NT shutdown. The previous AlphaBIOS driver version was not able to reset devices that NT had configured in bus-master DMA modes, resulting in the device disappearing under AlphaBIOS.
- Change the AlphaBIOS heap-sizing algorithm to reserve a maximum of 8 MB of space for AlphaBIOS heap. This restriction reduces the memory footprint of AlphaBIOS and is necessary to support NT 5.0 hibernation features.
- To prevent conflicts with NT 5.0 network PnP support, shutdown the AlphaBIOS network device prior to loading NT.

CMOS Setup:

- Add the Master DMA Window Mode setting to Advanced CMOS Settings for platforms that support PCI Scatter-Gather DMA. See Release Overview for more detail.
- Align Advanced CMOS setting fields and single space Advanced CMOS entries to allow enlargement of help window.
- Due to NVRAM space limitations, reduce the maximum number of Operating System (OS) boot selections from four to three. Attempting to install more than three instances of Window NT on a system will now result in failure to create the OS boot selection.

Miscellaneous:

- Pass the PCI device present bitmap to HAL for all products. AlphaBIOS calculates this bitmap during PCI device configuration. By passing the bitmap to NT, we reduce boot time by saving the HAL from having to recalculate this bitmap.
- Fixes for AlphaServer 1200, AlphaServer 4000/4100, DIGITAL* Server 5000/5300, DIGITAL* Server 7100/7300, & Digital* Ultimate Workstation
- Add support for 8 MB BCache size CPU daughter cards by reporting the proper Bcache size to NT.
- Implement a workaround to support Qlogic SCSIBIOS configure utility.

* Now owned by Compaq Computer Corporation.

Fixes for Digital* Personal Workstation

On systems with an on-board Cypress 82CY693U IDE controller, implement a workaround to prevent Windows NT 4.0 ATAPI miniport driver from generating NT EventLog entries. The workaround will prevent the second IDE PCI function from responding to PCI configuration accesses under NT. Note this does not prevent devices on the second IDE channel from functioning under NT because the IDE controller is configured in legacy mode. When configured in legacy mode, access to devices on both channels is supported from the first PCI IDE function. All necessary device configurations for the second channel is performed under AlphaBIOS.

Fixes for Alpha XL 300/366/433 AlphaStation 600, AlphaServer 600A. AlphaServer 1000, AlphaServer 1000A & AlphaServer 800

- Add SCSIBIOS emulation support for CIA-based products. See Major Features for more information.
- Disable SCSIBIOS emulation support by default on CIA-based products. See Major Features for more information.

Known Issues in AlphaBIOS 5.66

Following are issues for which no solution exists or a temporary workaround exists.

Known Issues for AlphaServer 1200, AlphaServer 4000/4100, DIGITAL* Server 5000/5300, DIGITAL* Server 7100/7300, & Digital* Ultimate Workstation

- You might not be able to exit SCSIBIOS configuration utilities. When attempting to exit a SCSIBIOS configuration utility, the system may hang. To work around this issue, either perform a system reset or disable the "Warm Reboot" Advanced CMOS setting. Note that disabling "Warm Reboot" will cause AlphaBIOS to perform a full system reset during NT reboots.
- Qlogic SCSIBIOS initialization takes longer when the Qlogic is installed behind an Adaptec-based controller and SCSIBIOS emulation is enabled for both adapter types. To work-around this issue, only enable SCSIBIOS emulation when it is necessary to run the adapter's Auto-configuration utility.

* Now owned by Compaq Computer Corporation.

Known Issues for Alpha XL 300/366/433 AlphaStation 600, AlphaServer 600A. AlphaServer 1000, AlphaServer 1000A & AlphaServer 800

- When running SCSIBIOS emulation for the first time, you might be required to run the SCSIBIOS configuration utility to repair the adapter's NVRAM settings. See the Release Overview section for more information.
- When Qlogic-based SCSI plug-in adapters are installed on systems with on-board Qlogic devices, Qlogic SCSIBIOS initialization will take up to two minutes, with one additional minute for each adapter installed. See the Release Overview section for more information.

Appendix

Following is a list of products supported by AlphaBIOS.

- AlphaPC 164LX
- AlphaPC 164RX
- AlphaPC 164SX
- AlphaPC 264DP
- AlphaServer 800
- AlphaServer DS20
- AlphaServer 1000 5/xxx
- AlphaServer 1000A 5/xxx
- AlphaServer 1200
- AlphaServer 4000
- AlphaServer 4100
- AlphaStation 255
- AlphaStation 600A
- Alpha XLT
- Compaq Professional Workstation XP1000
- DIGITAL Personal Workstation
- DIGITAL Ultimate Workstation
- DIGITAL Server 3000/3300
- DIGITAL Server 5000/5300
- DIGITAL Server 7000/7300