Illustrated Parts & Service Map

HP Compaq 6005 Pro Microtower Business PC



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Key Specifications

Processor Type	AMD Athlon dual core, Phenom Quad Core, Triple Core, Dual Core, Sempron	
RAM Type	DDR3-SDRAM DIMMs, PC2-10600 (1333 MHz) non-ECC	
Maximum RAM Supported	16 GB	
Expansion Slots	 1 full-height PCI slot 2 full-height PCIe x1 slots 1 full-height PCIe x16 (ADD2/SDVO) 	
Graphics Adapter	Integrated Radeon HD 4200 supporting DirectX 10.1	
Chipset	AMD 785G	
Drive Support	 (2) 5.25-inch external optical drive bays (2) 3.5-inch internal hard disk drive bays (1) 3.5-inch external bay for optional HP 22-in-1 media card reader, pocket media drive, or other 3.5-inch device 	
I/O Interfaces	USB 2.0 (10, 4 front, 6 rear), DisplayPort, parallel (optional), serial (1 standard, 1 optional), RJ-45, front and rear audio jacks (2 each), PS/2 ports (2), VGA connector, dual color diagnostic LEDs	
Operating Systems	 Windows 7 Windows Vista Windows XP 	

Spare Parts



System Unit

1	Front bezel	581571-001
2	Access panel	585159-001
3	Power supply, 320W	508153-001
3	Power supply, 320W, 89% efficient	508154-001
*	5.25-inch bezel blank, jack black	570838-001
	-	

* Not shown



Cables

1	Front I/O with USB	581573-001
2	Power switch/LED cable assembly	581574-001
3	SATA HDD cable, 18 inch, 1 straight end, 1 angled end	393958-001
4	Hard drive power cable	581575-001
*	SATA cable, 14 inch, 2 straight ends	391740-001
*	eSATA port assembly	497726-001
*	Optical drive power cable	581576-001
*	Display Port (DP) to DVI cable	484156-001
*	Display Port (DP) to VGA cable	484155-001

*Not shown

Keyboards (not illustrated)

PS/2, Basic		537745-xxx	
USB, Standard		537746-xxx	
USB SmartCard		53//4/-XXX 535873 xxx	
USD, Willia Washahle[h]		555675-XXX 577495-XXX	
	1.51		VDI
Arabic	-171	Korean (Hangul)[a]	-KD1
Belgian	-181	LA Spanish	-161
BHCSY*	-B41	Netherlands	-331
Brazilian Portuguese	-201	Norwegian[b]	-091
Bulgarian	-261	Polish	-241
Czech	-221	PRC[a][b]	-AA1
Danish	-081	Portuguese	-131
Finnish	-351	Romanian	-271
French[b]	-051	Russian	-251
French Arabic	-DE1	Slovakian	-231
French Canadian[a][b]	-121	Spanish[b]	-071
German	-041	Swedish[b]	-101
Greek	-151	Swiss	-111
Hebrew	-BB1	Taiwanese[a]	-AB1
Hungarian	-211	Thai[b]	-281
Iceland	-DD1	Turkish	-141
International	-B31	Turkish F	-541
Italian[b]	-061	U.S.[a][b]	-001
Japanese[a]	-291	U.K.[b]	-031
Kazakhatan	DE1		

*Not for 537747-xxx [a] only countries marked with [a] are valid for 535873-xxx [b] only countries marked with [b] are valid for 577495-xxx

Mass Storage Devices (not illustrated)

22-in-1 media card reader, 3.5-inch	480032-001
Blu-ray ROM DVD+/-RW SuperMulti DL Drive	581601-001
16X DVD±RW SuperMulti drive with LightScribe	581059-001
16X DVD-ROM drive	581599-001
500 GB SATA hard drive	504339-001
500-GB hard drive, 2.5-inch	449980-001
250 GB, 7200-RPM SATA hard drive	504337-001
160 GB, 10000-RPM SATA hard drive, 2.5-inch with adapter	508312-001
160 GB, hard drive, 3.5-inch	504336-001
80 GB Solid-State Drive (SSD), 2.5-inch with adapter	508311-001
64 GB Solid-State Drive	581057-001
250-GB portable USB hard drive	500019-001



Standard and Optional Boards

System boards with thermal grease, alcohol pad, and CPU socket cover			
1	System board	531966-001	
*	System board, excludes ES (for use in Russia)	581349-001	
Me	mory modules		
2	4 GB, PC3-10600	585157-001	
2	2 GB, PC3-10600	576110-001	
2	1 GB, PC3-10600	576109-001	
Oth	er boards		
*	Broadcom NetXtreme GbE PCIe NIC	488293-001	
*	HP Wireless 802.11b/g/n WLAN card	538048-001	
*	Antenna for use with 538048-001	583345-001	
*	LSI 56K modem, PCIe	490689-001	
*	ATI HD3470 (RV620) 256-MB graphics card, one DP 1.1a connector, one dual-link DVI connector, includes bracket	516913-001	
*	ATI Radeon HD4550 (RV710) PCIe x16 graphics card, 512 MB	538051-001	
*	ATI Radeon HD4650 (RV730) PCIe x16 graphics card, 1 GB	538052-001	
*	Nvidia Quadro NVS290 256-MB PCIe graphics card	460815-001	
*	HP FireWire IEEE 1394 PCI card, FH	515182-001	
AM	ID Athlon II X2 processors with alcohol pad and thermal grease:		
*	X2 B24, dual core, 2-MB cache, 3.0 GHz	585152-001	
*	X2 B22, dual core, 2-MB cache, 2.8 GHz	585151-001	
AM	ID Phenom II processors with alcohol pad and thermal grease:		
*	X4 B95, quad core, 2-MB cache, 3.0 GHz	585156-001	
*	X4 B93, quad core, 2-MB cache, 2.8 GHz	585155-001	
*	X3 B75, triple core, 1.5-MB cache, 3.0 GHz	585154-001	
*	X3 B73, triple core, 1.5-MB cache, 2.8 GHz	585153-001	
*	X2 B55, dual core, 1-MB cache, 3.0 GHz	590134-001	
*	X2 B53, dual core, 1-MB cache, 2.8 GHz	590133-001	
AMD Sempron processors with alcohol pad and thermal grease:			
*	140, single core, 1-MB cache, 2.7 GHz	590132-001	

* Not shown



Miscellaneous Parts

1	Chassis fan with guard	585884-001			
2	Heatsink with alcohol pad and factory-applied thermal grease	581354-001			
3	Internal speaker	581577-001			
*	Fan duct assy	581572-001			
*	Printer port	497727-001			
*	Mouse, PS2, optical	537748-001			
*	Mouse, optical, jack black	537749-001			
*	Mouse, USB laser	570580-001			
*	Powered USB speakers	571536-001			
*	Second serial port, LP	392414-001			
*	HP Business PC Security Lock Kit	508987-001			
*	Hard drive conversion kit, 2.5-inch to 3.5-inch	397117-001			
*	Solenoid lock	392416-001			
***	*****				

*Not shown LP = Low profile

System Board



System Board Connectors and Jumpers (position of some untitle
components may vary in location)

ROM RCVRY	ROM recovery header	SATS PWR1	Hard drive power connec- tor
X16PCIEXP	PCIe x16 expansion slot	PWR	6-pin main power connec- tor
PCI1	PCI expansion slot	COMB	Serial port connector
XU1	Processor slot	IN/OUT	External audio connectors
CHFAN1	System fan connector	PS2	External PS2 connectors
CPU FAN	Fan sink connector	PAR	Parallel port connector
PWR CPU	4-pin power connector	PS STAT	Power supply connector
DIMM1 - 4	Memory slots	PSWD	Password header
PB/LED	Power switch connector	DISPLAY PORT	External monitor connector
SPKR	Internal speaker connector	HLCK	Hood lock connector
P23	Front panel audio connector	USB	External USB connectors
FRNT USB1	Front panel USB connector	RJ45	External RJ45 connector
SATA0 - 3	SATA drive connectors	X1PCIEXP1	PCIe x1 expansion slot
MEDIA	Media card reader connector	X1PCIEXP2	PCIe x1 expansion slot
USB	Internal USB connector	BAT	RTC battery slot
SATS PWR2	Optical drive power connec- tor		

Setup Utility

Basic system information is in the Setup Utility held in the system ROM, accessed by pressing F10 when prompted (on screen) during the boot sequence.

Computer	Setup Menu			
Heading	Option/Description			
File	System Information - Lists the following main system specifications:			
	Product name Integrated MAC Address Sktl number (come models) Sustam PIOS			
	Processor type/speed/stepping Chassis serial number			
	Cache Size (L1/L2/L3) Asset tracking number			
	Memory size/speed/ no. channels Management mode			
	About - Displays copyright notice.			
	Set Time and Date - Allows you to set system time and date.			
	Flash System ROM - Allows you to select a drive containing a new BIOS.			
	Replicated Setup-Save to Removable Media & Restore from Removable Media			
	Default Setup Save Current Settings as Default Restore Factory Settings as Default 			
	Apply Defaults and Exit - Applies the selected default settings and clears any established passwords.			
	Ignore Changes and Exit - Exits setup without applying or saving any changes. Save Changes and Exit - Saves changes to system configuration or default set-			
<u>C:</u>	tings and exits Computer Setup.			
Storage	 Emulation Type - ATAPI Zip or LS-120 drive, hard disk, CD-ROM drive Drive Emulation Type Options 			
	 Translation Mode (AIA disks only) Translation Parameters (ATA disks only) SATA Default Values 			
	Storage Options: Removable Media Boot, eSATA Port, Max eSATA Speed, SATA Emulation			
	DPS Self-Test - Allows you to execute self-tests on ATA hard drives.			
	Boot Order - Allows you to specify boot order. • Shortcut to Temporarily Override Boot Order			
Security	Setup Password - Allows you to set and enable setup (Administrator) password.			
	Power-On Password - Allows you to set and enable power-on password.			
	Password Options - When any password exists allows you to lock legacy resources, enable/disable network server mode, specify password requirement for warm boot, and allows you to enable/disable Setup Browse Mode, enable/ disable Stringent Password.			
	Smart Cover (some models) - Allows you to lock/unlock the Cover Lock or set			
	Device Security (some models) - Enables/disables all serial and parallel ports,			
	audio, network controllers, embedded security devices., SATA0-3.			
	Front USB Ports 1-6, Rear USB Ports 1-12.			
	Slot Security - Allows you to disable PCIe/PCI slots and associated cards.			
	Network Service Boot - Enables/disables boot from OS on a server.			
	UUID, and keyboard locale setting.			
	DriveLock Security-Lets you assign/modify hard drive p/w for added security.			
	System Security (some models) - Allows you to enable/disable: Data Execution Prevention			
	Protected Audio Video Path (PAVP) (some models)			
	Virtualization Technology(some models) Embedded Security Device Support			
	 OS management of Embedded Security Device (some models) 			
	Master Boot Record Security - Allows you to save or restore master boot record			
	Setup Security Level - Provides method to allow users limited access to change			
	specified setup options without knowing Setup password.			
Power	OS Power Management - Lets you enable/disable Idle Power Savings, ACPI S3 Hard Disk Reset, ACPI S3 PS2 Mouse Wakeup, USB Wake on Device Inser- tion, Unique Sleep State Blink Rates.			
	Hardware Power Management-Lets you enable/disable SATA bus power mgmt.			
	Thermal - Allows you to control minimum permitted fan idle speed.			
Advanced	Power-On Options - Allows you to set: POST mode-QuickBoot, FullBoot, Clear Memory, FullBoot every x days POST messages - Enable/disable			
	• F9 prompt - Enable/disable			
	 F10 prompt - Enable/disable F12 prompt - Enable/disable 			
	Factory Recovery Boot Support - Enable/disable			
	Option ROM prompt - Enable/disable Remote wakeup boot source - Remote server/local hard drive			
	After Power Loss - Off/on/previous state			
	 POST delay - None, 5, 10, 15, or 20 seconds Bypass E1 prompt 			
	Evacute Memory Test. Destarts computer and evacutes DOST memory test			
	PLOS Power On Allows you to get the computer to turn on et a preset time			
	Onboard Daviage. Lets you set resources or disable onboard system daviage.			
	PCI Devices - Lists installed PCI devices with their IRQ settings and allows you to move the settings are settings and allows you to move the settings and allows you to move the settings and allows you to move the settings are settings and allows you to move the settings are setti			
	PCI VGA Configuration - Allows you to specify which VGA controller will be			
	used when multiple video adapters are available. Bus Options (some models) - Allows vou to enable/disable PCI SERR# Genera-			
	tion and PCI VGA palette snooping.			
	Printer Mode - Bi-Directional, EPP & ECP, Output Only Num Lock state at power-on - off/on			
	• S5 Wake on LAN - enable/disable			
	Processor cache - enable/disable Multi-Processor - enable/disable			
	 Integrated graphics memory size - automatic, 32M, 64M, 128M, 256M 			
	Integrated Video - enable/disable Integrate Sector - anable/disable			
	Internal speaker - enable/disable NIC PXE Option ROM Download - enable/disable			
	SATA RAID Option ROM Download - enable/disable			

HPET - enable/disable

PCIe x16 Slot

Recovering the Configuration Settings

This method of recovery requires that you first perform the Save to Removable Media command with the Computer Setup (F10) Utility before Restore is needed.

NOTE: It is recommended that you save any modified computer configuration settings to a USB flash media device or a diskette-like device (a storage device set to emulate a diskette drive) and save the device for possible future use

To restore the configuration, insert a USB flash media device or other storage media emulating a diskette with the saved configuration and perform the **Restore from Removable Media** command with the Computer Setup (F10) Utility.

Drive Protection System

The Drive Protection System (DPS) is a diagnostic tool built into the hard drives installed in some computers. DPS is designed to help diagnose problems that might result in unwarranted hard drive replacement.

Running DPS will not affect any programs or data stored on the hard drive. The test resides in the hard drive firmware and can be executed even if the computer will not boot to an operating system. The time required to execute the test depends on the manufacturer and size of the hard drive; in most cases, the test will take approximately two minutes per gigabyte

Use DPS when you suspect a hard drive problem. If the computer reports a SMART Hard Drive Detect Imminent Failure message, there is no need to run DPS; instead, back up the information on the hard drive and contact a service provider for a replacement hard drive.

Accessing DPS through Computer Setup

1 Turn on or restart the computer

- 2. When the F10 Setup message appears in the lower-right corner of the screen, press the F10. 3. Select Storage > DPS Self-Test.

4. Select the hard drive to be tested and follow the screen prompts to complete the testing process

Password Security

This computer supports security password features, which can be established through the Computer Setup Utilities menu

This computer supports two security password features that are established through the Computer Setup Utilities menu: setup password and power-on password. When you establish only a setup password, any user can access all the information on the computer except Computer Setup. When you establish only a power-on password, the power-on password is required to access Computer Setup and any other information on the computer. When you establish both passwords, only the setup password will give you access to Computer Setup. When both passwords are set, the setup password can also be used in place of the power-on password as an override to log in to the computer. This is a useful feature for a network administrator.

If you forget the password for the computer, you can clear that password so you can gain access to the information on the computer by resetting the password jumper.

CAUTION: Pushing the CMOS button will reset CMOS values to factory defaults.

Resetting the password jumper

1. Shut down the computer.

- 2. With the power cord disconnected, press the power button again to drain the system of any residual power.
- 3. Remove the access panel.
- 4. Locate the header and jumper.
- 5. Remove the jumper from pins 1 and 2. Place the jumper on either pin 1 or 2, but not both.
- 7. Plug in and turn on power. Allow the operating system to start. This clears the current passwords and disables the password features
- 8. To establish new passwords, repeat steps 1 4, replace the password jumper on pins 1 and 2, then repeat steps 6 - 8. Establish new passwords in Computer Setup.

Clearing and Resetting the CMOS

The CMOS button resets CMOS but does not clear the power-on and setup passwords. Clearing CMOS will clear the Active Management Technology (AMT) settings in the Management Engine BIOS Extension (MEBx), including the password. The password will default to "admin" and will need to be reset. The AMT settings will also need to be reset. To access the MEBx, press Ctrl+P during POST.

- 1. Turn off the computer and any external devices, and disconnect power.
- 2. Remove the access panel.
- 3. On the system board, press and hold the CMOS button for 5 seconds.
- 4. Replace the access panel, external devices, and reconnect the power cord.
- 5. Turn on the computer

You will receive POST error messages after clearing CMOS and rebooting advising you that configuration changes have occurred. Use Computer Setup to reset any special system setups along with the date and time.

HP Vision Field Diagnostics

The Hewlett-Packard Vision Field Diagnostics utility allows you to view information about the hardware configuration of the computer and perform hardware diagnostic tests on the subsystems of the computer. The utility simplifies the process of effectively identifying, diagnos-ing, and isolating hardware issues.

The Survey tab is displayed when you invoke HP Vision Field Diagnostics. This tab shows the current configuration of the computer. From the Survey tab, there is access to several categories of information about the computer. Other tabs provide additional information, including diagnostic test options and test results. The information in each screen of the utility can be saved as an html file and stored on a diskette or USB flash drive. Use HP Vision Field Diagnostics to determine if all the devices installed on the computer are

recognized by the system and functioning properly. Running tests is optional but rec mended after installing or connecting a new device.

Vision Field Diagnostics may be found on the CD that shipped with some computer models The tool may also be downloaded from the HP Web site using the following procedure:

- 1. Go to www.hp.com
- 2. Click the Software & Download driver link.
- 3. Select Download drivers and software (and firmware).
- 4. Enter the product number in the text box and press Enter.
- 5. Select the specific product.
- 6. Select the OS.
- 7. Click the **Diagnostic** link.
- 8. Click Hewlett-Packard Vision Field Diagnostics.
- 9. Click Download

NOTE: The download includes instructions on how to create a bootable CD or USB flash drive.

6. Replace the access panel.

Common POST Error Messages

	meeeugee	1
Screen Message	Description	Recommended Action
101-Option ROM Error	1. System ROM checksum.	1. Verify ROM, reflash if required
	2. Expansion board option	2. If expansion board recently added,
	ROM checksum.	remove to see if problem remains.
		3. Clear CMOS.
		4. If message disappears, may be
		problem with expansion card.
		5. Replace system board.
103-System Board	DMA or timers	1. Clear CMOS.
1 anuic		2. Remove expansion boards.
		3. Replace the system board.
162-System Options	Configuration incorrect.	Run Computer Setup and check con-
Not Set	RTC battery may need to be replaced.	figuration in Advanced > Onboard
	ĩ	trol Panel. If problem persists,
		replace RTC battery.
163-Time & Date Not	Invalid time or date in con-	Reset the date and time under Con-
Set	figuration memory. RTC battery may need to be	trol Panel (Computer Setup can also
	replaced.	replace the RTC battery.
	- or - CMOS jumper may not be	- or -
	properly installed.	Check for proper placement of the
1(4 Manuary 8:	Manua management has	Proce E1 to one many shares a
Error	changed since the last	-or-
	boot (memory added or removed)	1. Run Setup (F10).
	- or -	2. Make sure the memory module(s)
	Incorrect memory configu-	are installed properly.
	ration.	3. If 3rd party memory added, test
		using HP-only memory.
		4. Verify proper memory type.
201-Memory Error	RAM failure.	1. Ensure memory modules are
		2 Vorify more many f
		2. Verify proper memory type.
		3. Remove and replace the identified faulty memory module(s).
		4 If the error persists after replacing
		modules, replace system board.
213-Incompatible	A memory module in mem-	1. Verify proper memory type.
Memory Module in Memory Socket(s) X	ory socket identified in error	2. Try another memory socket.
X,	SPD information, or incom-	3. Replace DIMM with a module
	patible with the chipset.	conforming to the SPD standard.
214-DIMM Configura-	Populated DIMM configura-	Rearrange DIMMs so each channel
tion warning	non is not optimized.	has the same amount of memory.
tion Warning	tion is not optimized.	reinstall memory modules. On AMD
-		systems, populate modules starting
		XMM2, XMM1. On Intel systems,
		populate modules starting with slot
		DIMM1, then DIMM3, DIMM2, DIMM4.
219-ECC Memory	Recently added memory	1. If additional memory was recently
Module Detected ECC	module(s) support ECC	added, remove it to see if the
on this Platform	memory error correction.	problem remains.
		2. Check product documentation for memory support information
301 304 Keyboard	Keyboard failure or System	1 Reconnect keyboard with
error	Unit Error	computer turned off.
		2. Check connector for bent or
		missing pins.
		3. Ensure no keys are depressed.
		4. Replace keyboard.
		5. If 304 possible system board issue
501-Display Adapter	Graphics display controller.	1. Reseat graphics card.
Fallure		2. Clear CMOS.
		3. Check monitor connection.
		4. Replace graphics card if possible
510-Flash Screen	Flash Screen image has	Reflash the system ROM with the
Image Corrupted	errors.	latest BIOS image.
511-CPU Fan not Detected	CPU fan is not connected or may have malfunctioned	1. Reseat CPU fan.
2000000	may have manufactioned.	2. Reseat fan cable.
		3. Replace CPU fan.
512-Rear Chassis Fan	Rear chassis fan is not con-	1. Reseat rear chassis fan.
not Dettettu	functioned.	2. Reseat fan cable.
		3. Replace rear chassis fan.
605-Diskette Drive	Mismatch in drive type.	1. Disconnect any other diskette
Type Error		controller devices (tape drives).
		2. Clear CMOS.
917-Front Audio Not	Front audio harness has	Reconnect or replace front audio
Connecteu	from motherboard.	natuess.
921-Device in PCI	There is an incompatibility/	Try rebooting the system. If the error
Express slot failed to	problem with this device and	reoccurs, the device may not work
initialize	the system or PCI Evorece	with this area
initialize	the system or PCI Express Link could not be retrained	with this system

Common POST	Error Messages	s (continued)
	Enter Messages	, (continucu)

Screen Message	Description	Recommended Action
1720-SMART Hard Drive Detects Immi- nent Failure	Hard drive is about to fail. (Some hard drives have a hard drive firmware patch that will fix an erroneous error message.)	 Determine if hard drive is giving correct error message. Enter Computer Setup and run the Drive Protection System test under Storage > DPS Self-test. Apply hard drive firmware patch if applicable. Back up contents and replace hard
1796-SATA Cabling Error	One or more SATA devices are improperly attached. For optimal performance, the SATA 0 and SATA 1 con- nectors must be used before SATA 2 and SATA 3.	drive. Ensure SATA connectors are used in ascending order. For one device, use SATA 0. For two devices, use SATA 0 and SATA 1. For three devices, use SATA 0, SATA1, and SATA 4.
1797-SATA Drivelock is not supported in RAID mode.	Drivelock is enabled on one or more SATA hard drives, and they cannot be accessed while the system is config- ured for RAID mode.	Either remove the Drivelocked SATA device or disable the Drive- lock feature. To disable the Drive- lock feature, enter Computer Setup, change Storage > Storage Options > SATA Emulation to IDE, and select File > Save Changes and Exit, Re-enter Computer Setup and select Security > Drivelock Secu- rity. For each listed Drivelock-capa- ble SATA device, ensure Drivelock is Disabled. Lastly, change Storage > Storage Options > SATA Emula- tion back to RAID and select File > Save Changes and Exit.
1801-Microcode Patch Error	Processor not supported by ROM BIOS.	 Upgrade BIOS to proper version. Change the processor.
2200-PMM Allocation Error during MEBx	Memory error during POST execution of the Manage-	Reboot the computer. Linglug power cord recent
Download	ment Engine (ME) BIOS Extensions option ROM.	 Onplug power cord, resear memory, reboot computer. If memory configuration recently
		changed, unplug computer, restore original memory configuration, and reboot computer.
		4. If the error persists, replace the system board.
2201-MEBx Module did not checksum cor- rectly	Memory error during POST execution of the Manage- ment Engine (ME) BIOS	 Reboot the computer. Unplug power cord, reseat
	Extensions option ROM.	memory, reboot computer. 3. If memory configuration recently changed, unplug computer, restore original memory configuration, and reboot computer.
		4. If the error persists, replace the system board.
2202-PMM Dealloca- tion Error during MEBx cleanup	Memory error during POST execution of the Manage- ment Engine (ME) BIOS Extensions option ROM.	 Reboot the computer. Unplug power cord, reseat memory, reboot computer. If memory configuration recently changed, unplug computer, restore original memory configuration, and reboot computer. If the error persists, replace the system board.
2203-Setup error dur- ing MEBx execution	MEBx selection or exit resulted in a setup failure.	 Reboot the computer. Unplug power cord, reseat memory, reboot computer.
		 If memory configuration recently changed, unplug computer, restore original memory configuration, and reboot computer.
		4. If the error persists, replace the system board.
2204-Inventory error during MEBx execu- tion	BIOS information passed to the MEBx resulted in a fail- ure.	 Reboot the computer. If error persists, update to latest BIOS version. If the error still persists, replace
2205-Interface error	MEBx operation experi-	the system board. 1. Reboot the computer.
during MEBx execu- tion	enced a hardware error dur- ing communication with ME.	 If error persists, update to latest BIOS version. If the error still persists, replace
2211-Memory not con- figured correctly for proper MEBx execu- tion	DIMM1 is not installed.	the system board. Make sure there is a memory module in the black DIMM1 socket and that it is properly seated.
Invalid Electronic Serial Number	Electronic serial number is missing.	Enter the correct serial number in Computer Setup.
Memory Parity Error	Parity RAM failure. Third-party graphics card	Run Computer Setup and Diagnostic utilities. Remove 3rd party graphics
Network Server Mode Active and No Key- board Attached	May be causing a problem. Keyboard failure while Net- work Server Mode enabled.	 Card to see if the problem goes away. Reconnect keyboard with computer turned off. Check connector for bent or missing pins. Ensure that no keys are depressed. A pulse hydrograf.
Parity Check 2	Parity RAM failure. Third-party graphics card may be causing a problem.	 replace keyboard. Run Computer Setup and Diagnostic utilities. Remove 3rd party graphics card to see if problem goes away.