Illustrated Parts & Service Map

HP EliteDesk 800 G1 - Small Form Factor

Key Specifications

|	
Processor Type	Intel® Core i7, i5
RAM Type	Non-ECC DDR3 PC3-12800 (1600 MHz)
Maximum RAM	32 GB
Expansion Slots	• (2) PCIe-x16 • (1) PCIe-x1
Chipset	Intel Q87
Graphics Adapter	Integrated Intel HD graphics
Bays	• (1) Slimline optical drive bay • (1) external 3.5-inch • (1) internal 3.5-inch storage drive bay • (1) internal 2.5-inch storage drive bay
I/O Interfaces	Front: (2) USB 3.0 ports, (2) USB 2.0 ports, headphone jack, microphone jack Rear: (2) USB 3.0 ports, (4) USB 2.0 ports, (2) DisplayPort, VGA, serial port, PS/2 mouse and keyboard, RJ-45 network connector, 3.5mm audio in/out jacks
Preinstalled Operating Systems	• Windows 8 • Windows 7 • Novell SUSE Linux Enterprise Desktop 11 • FreeDOS 2.0

Spare Parts

System Unit

1	Front bezel	732757-001
2	Access panel	732760-001
3	Power supply, 92% efficient	702455-001
*	Power supply, 90% efficient	702456-001
*	Power supply, standard	702457-001
*	Optical drive bezel blank	732769-001

Not shown
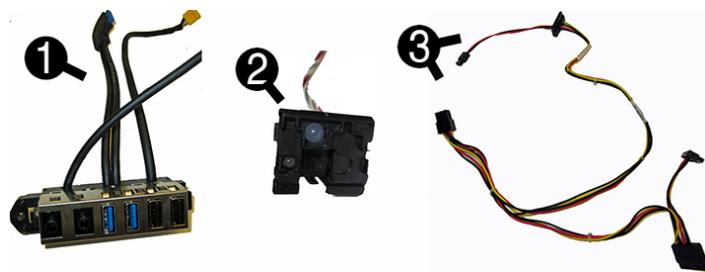
Cables

1	Front I/O assembly	732755-001
2	Power switch assembly	732756-001
3	SATA drive power cable	732759-001
*	Hard drive SATA cable, 14 inch, 1 straight end, 1 angled end	732753-001
*	Optical drive SATA cable, 19.5 inch, 2 straight ends	638813-001
*	SATA cable, 25.2 inch, 1 straight end, 1 angled end	638814-001
*	DMS-59 to dual VGA cable	463023-001
*	Adapter, DisplayPort to VGA	632484-001
*	Adapter, DisplayPort to DVI	662723-001
*	Adapter, DisplayPort to HDMI	617450-001
*	DisplayPort cable	487562-001

Not shown

Keyboards (not illustrated)

PS/2	724718-xx1
USB	724720-xx1
Wireless	724722-xx1
Smart card	701427-xx1
Wireless (keyboard, mouse, dongle)	730323-xx1

Arabic	-17x	LA Spanish	-16x
Belgian	-18x	Norwegian	-09x
Brazilian Portuguese	-20x	People's Republic of China	-AAx
Bulgaria	-26x	Portuguese	-13x
Czech	-22x	Romanian	-27x
Danish	-08x	Russian	-25x
Finnish	-35x	Saudi Arabia	-DEx
French	-05x	Slovakian	-23x
French Canadian	-12x	South Korea	-KDx
German	-04x	Spanish	-07x
Greek	-15x	Swedish	-10x
Hebrew	-BBx	Swiss	-11x
Hungarian	-21x	Taiwanese	-ABx
International	-37x	Thai	-28x
International English	-L3x	Turkish	-14x
Italian	-06x	U.S.	-00x
Japanese	-29x	U.K.	-03x

Mass Storage Devices (not illustrated)

DVD-ROM drive	608394-001
DVD±RW drive	657958-001
Blu-ray BD-RW SuperMulti XL Drive	719157-001
2 TB, 7200 rpm hard drive	616608-001
1 TB, hybrid SSD, 2.5-inch hard drive	724937-001
1 TB, 10000 rpm hard drive	719106-001
1 TB, 7200 rpm hard drive	613202-001
750 GB, 7200 rpm hard drive, hybrid, 2.5-inch hard drive	719105-001
500 GB, hybrid SSD, 2.5-inch hard drive	724938-001
500 GB, 10000 rpm hard drive	683923-001
500 GB, 7200 rpm hard drive, self-encrypting (SED)	696442-001
256 GB Solid State Drive (SSD), self-encrypting (SED)	680020-001
128 GB Solid State Drive (SSD)	665961-001
32 GB mSATA drive	686616-001
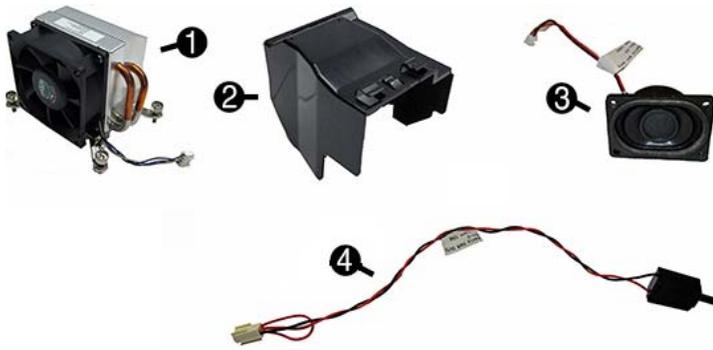
Miscellaneous Parts

1	Fan sink	727150-001
2	Fan duct	727145-001
3	Speaker	727149-001
4	Hood sensor	638816-001
*	Solenoid lock	732772-001
*	Printer port, PCI card	638817-001
*	HP Ultraslim Keyed Cable Lock	703372-001
*	Rubber foot	583654-001
*	Chassis stand	688952-001
*	Serial port, PCI card	638815-001
*	Hard drive conversion bracket	397117-001
*	USB powered speakers	636917-001
*	Mouse, PS2, optical	674315-001
*	Mouse, USB, HP Elite	674318-001
*	Mouse, washable	724795-001
*	Mouse, wireless, HP Elite	674317-001
*	Mouse, USB, optical	674316-001

Not shown

Diagnostic LEDs

LED	Color	LED Activity	State/Message
Power	White	On	Computer on
Power	White	1 blink every 2 seconds	Normal Suspend Mode
Power	Red	1 blink every second followed by a 2 second pause	CPU thermal shutdown
Power	Red	3 blinks, 1 blink every second followed by a 2 second pause	Processor not installed
Power	Red	4 blinks, 1 blink every second followed by a 2 second pause	Power failure (power supply overload)
Power	Red	5 blinks, 1 blink every second followed by a 2 second pause	Pre-video memory error
Power	Red	6 blinks, 1 blink every second followed by a 2 second pause	Pre-video graphics error
Power	Red	7 blinks, 1 blink every second followed by a 2 second pause	System board failure (ROM
Power	Red	8 blinks, 1 blink every second followed by a 2 second pause	Invalid ROM based on Checksum
Power	Red	9 blinks, 1 blink every second followed by a 2 second pause	System powers on but is unable to boot
Power	Red	10 blinks, 1 blink every second followed by a 2 second pause	Bad option card
Power	Red	11 blinks, 1 blink every second followed by a 2 second pause	Current processor does not support a feature previously enabled.
none	none	System does not power on and LEDs are not flashing	System unable to power on

Standard and Optional Boards (not illustrated)

System board (includes replacement thermal material)

System board for use in models without Windows 8	717522-001
System board for use in models with Windows 8 Standard	717522-501
System board for use in models with Windows 8 Professional	717522-601
System board for use in models with Windows 8 Professional	727722-001

Memory modules (PC3-12800, CL11)

8-GB	689375-001
4-GB	671613-001
2-GB	671612-001

Other boards

nVidia Quadro NVS315 PCIe x16 graphics card, 1 GB	720837-001
nVidia Quadro NVS310 PCIe x16 graphics card, 512 MB	707252-001
AMD Radeon HD8490 PCIe x16 graphics card, 1 GB	717219-001
AMD Radeon HD8350 DH PCIe x16 graphics card, 1 GB DDR3	717220-001
Intel PRO/1000 single port GbE NIC, includes bracket	728562-001
HP WLAN 802.11 a/b/g/n 2x2 PCIe module	695915-001

Intel Core i7 processors (include thermal material)

4770, 3.4 GHz, 8-MB L3 cache	727373-001

Intel Core i5 processors (include thermal material)

4670, 3.4 GHz, 6-MB L3 cache	727381-001
4570, 3.2 GHz, 6-MB L3 cache	727380-001

Common POST Error Messages

Screen Message	Probable Cause	Recommended Action
101-Option ROM Error	1. System ROM checksum error. 2. Expansion board option ROM checksum	1. Verify ROM, reflash if required 2. Remove suspected card, reboot 3. Clear CMOS memory, reboot 4. Replace system board
103-System Board Failure	DMA, timers	1. Clear CMOS memory. 2. Remove expansion boards. 3. Replace system board.
164-Memory Size Error and 201-Memory Error	Incorrect memory configuration	1. Run Setup (F10). 2. Check DIMMs for proper seating, type, and HP compatibility. 3. Remove DIMMs singularly and reboot to isolate faulty DIMM. 4. Replace system board.
214-DIMM Configuration Warning	Populated DIMM configuration is not optimized	Rearrange the DIMMs so that each channel has the same amount of memory.
301-, 304-Keyboard error	Keyboard failure.	Check keyboard connection or keys. Check connector for bent or missing pins. Replace keyboard. If 304, possible system board problem.
501-Display Adapter Failure	Graphics display controller.	1. Reseat graphics card. 2. Clear CMOS. 3. Check monitor connection. 4. Replace graphics card.
1720-SMART Hard Drive Detects Imminent Failure	Hard drive is about to fail.	1. Determine if hard drive is giving correct error message. Enter Computer Setup and run the Drive Protection System test under **Storage > DPS Self-test**. 2. Apply hard drive firmware patch if applicable. 3. Back up contents and replace hard drive.

System Setup and Boot

Access the Setup Utility during computer boot by pressing the **F10** key. If you do not press **F10** at the appropriate time, you must restart the computer and again press **F10** when the monitor light turns green. NOTE: Not all settings are available for all models.

Computer Setup Menu

Heading	Option/Description
File	**System Information** - Lists the following main system specifications: • Product name • SKU number (some models) • Processor type/speed/stepping • Cache size (L1/L2/L3) • Installed memory size/speed/ch • Integrated MAC Address • System BIOS • Chassis serial number • Asset tracking number • ME firmware version • ME management mode
	About - Displays copyright notice.
	Set Time and Date - Allows you to set system time and date.
	Replicated Setup - Allows you to save or restore system configuration to/from a USB flash drive.
	Default Setup - Allows you to save current settings as default or restore factory settings as default.
	Apply Defaults and Exit - Applies the selected default settings and clears any established passwords.
	Ignore Changes and Exit - Exits Computer setup without saving changes.
	Save Changes and Exit - Saves changes to system configuration or default settings and exits Computer Setup.
Storage	**Device Configuration** - Lists all installed BIOS-controlled storage devices. The following options are available: • CD-ROM • Hard Disk • Default Values • Translation Mode • SSD Life Used • SMART (ATA disks only) • Diskette • SATA Defaults
	Storage Options - Allows you to set: • eSATA Port - Set SATA port as eSATA port for use with external drive. • SATA Emulation - Choose how the SATA controller and devices are accessed by the OS. SATA Emulation choices are AHCI, RAID, or IDE. • Removable Media Boot - Enables/disables ability to boot the system from removable media. • Max eSATA Speed - Allows you to choose 1.5 Gbps or 3.0 Gpbs as the maximum eSATA speed. By default, the speed is limited to 1.5 Gbps for maximum reliability.
	DPS Self-Test - Execute self-tests on ATA hard drives capable of performing the Drive Protection System (DPS) self-tests.
	Boot Order - Specify boot order for UEFI and legacy boot sources. Also specify hard drive boot order. • Shortcut to Temporarily Override Boot Order
Security	**Setup Password** - Set and enable the setup (Admin) password.
	Power-On Password - Set and enable power-on password.
	Password Options - Allows to you enable/disable: • Lock Legacy Resources • Setup Browse Mode • Password prompt on F9 & F12 • Network Server Mode
	Smart Cover - Allows you to lock/unlock the smart cover and set the cover removal sensor to disable/notify user/setup password.
	Device Security - Set Device Available/Device Hidden for: embedded security device, system audio, network controller, USB controller, serial/parallel ports, and SATA ports.
	USB Security - Set Device Available/Device Hidden for front USB ports, rear USB ports, internal USB ports, accessory USB ports.
	Slot Security - Disable the PCI, PCIe, and Mini Card slots.
	Network Boot - Enables/disables boot from OS (NIC models only).
	System IDs - Allows you to update asset tag, ownership tag, UUID, keyboard locale setting.
	Master Boot Record Security - enables/disables MBR.
	System Security - Allows you to set: • Data Execution Prevention (enable/disable) • SVM CPU Virtualization (enable/disable). • Virtualization Technology (VTx) (enable/disable) • Virtualization Technology/Directed IO (VTd) (enable/disable) • Trusted Execution Technology (enable/disable) • Embedded Security Device (enable/disable) • Reset to Factory Settings (Do not reset/Reset) • Measure boot variables/devices to PCR1 (enable/disable) • OS management of Embedded Security Device (enable/disable) • Reset of Embedded Security Device through OS (enable/disable) • No PPI provisioning (Windows 8 only; enable/disable) • Allow PPI policy to be changed by OS (enable/disable)
	DriveLock Security - Allows you to assign or modify a master or user password for hard drives.
	Secure Boot Configuration (Windows 8 only) • Legacy Support (enable/disable) • Secure Boot (enable/disable). • Key Management (enable/disable) • Fast Boot (enable/disable)
Power	**OS Power Management** - Allows you to enable/disable Runtime Power Management, Idle Power Savings, Unique Sleep State Blink Rates.
	Hardware Power Management - Enable/disable SATA power management, S5 maximum power savings., PCI slots, network controller, USB 3.0 controller
	Thermal - Control minimum fan speed.
Advanced	**Power-On Options** - Allows you to set: • POST mode (QuickBoot, Clear Memory, FullBoot, or FullBoot Every x Days) • POST messages (enable/disable) • Press the ESC key for Startup Menu (enable/disable) • Option ROM Prompt (enable/disable) • After Power Loss (off/on/previous state) • POST Delay (none, 5, 10, 15, 20, or 60 seconds) • Remote Wakeup Boot Source (remote server/local hard drive) • Factory Recovery Boot Support (enable/disable) • Bypass F1 Prompt on Configuration Changes (enable/disable)
	BIOS Power-On - Set the computer to turn on at a preset time.

Heading	Option/Description
Advanced (continued)	**Bus Options** - Allows you to enable/disable PCI SERR# Generation and PCI VGA palette snooping.
	Onboard Devices - Allows you to set resources for or disable on-board system devices.
	Device Options - Allows you to set: • Printer mode (Bi-Directional, EPP + ECP, Output Only) • Num Lock State at Power-on (off/on) • Integrated Video (enable/disable) • Integrated Graphics (Auto/Disable/Force) • Internal Speaker (enable/disable) • NIC PXE Option ROM Download (enable/disable) • SATA RAID Option ROM Download (enable/disable) • Multi-Processor (enable/disable) • Hyper-threading (enable/disable) • Turbo Mode (enable/disable)
	VGA Configuration - Allows you to specify which VGA controller is the "boot"/primary. Displayed only if add-in video card installed.
	AMT Configuration - Allows you to set: • AMT (enable/disable) • Unconfigure AMT/ME (enable/disable) • Hide Unconfigure ME Confirmation Prompt (enable/disable) • Watchdog Timer (enable/disable)

Password Security

Establishing a Setup or Power-On password:

1. Turn on or restart the computer.
2. As soon as the computer turns on, press the **Esc** key while "Press the ESC key for Startup Menu" message is displayed at the bottom of the screen.
3. Press the **F10** key to enter Computer Setup.
4. To establish Setup password, select **Security > Setup Password** and follow the instructions.
   - or -
   To establish a Power-On password, select **Security > Power-On Password** and follow the instructions on the screen
5. Before exiting, click **File > Save Changes and Exit**.

Changing a Setup or Power-On password:

1. Turn on or restart the computer.
To change the Setup password, go to step 2.
To change the Power-on password, go to step 3.
2. To change the Setup password, as soon as the computer turns on:
   - Press the **Esc** key while "Press the ESC key for Startup Menu" message is displayed.
   - Press the **F10** key to enter Computer Setup.
3. When the key icon appears, type your current password, a slash (/) or alternate delimiter character, your new password, another slash (/) or alternate delimiter character, and your new password again as shown:
   current password/new password/new password.
   NOTE: Type the new password carefully since the characters do not appear on the screen.
4. Press **Enter**.
The new password will take effect the next time the computer is restarted.

Deleting a Power-On or Setup password

1. Turn on or restart the computer.
 To delete the Setup password, go to step 2.
 To delete the Power-On password, go to step 3.
2. To delete the Setup password, as soon as the computer turns on:
   - Press the **Esc** key while "Press the ESC key for Startup Menu" message is displayed.
   - Press the **F10** key to enter Computer Setup.
3. When the key icon appears, type your current password followed by a slash (/) or alternate delimiter character as shown. Example: currentpassword/
4. Press **Enter**.

Clearing CMOS

1. Turn off the computer and disconnect the power cord from the power outlet.
2. Remove the access panel.
3. On the system board, press and hold the CMOS button for 5 seconds.
4. Replace the chassis access panel and reconnect the power cord.
5. Turn on the computer and allow it to start.

System Board
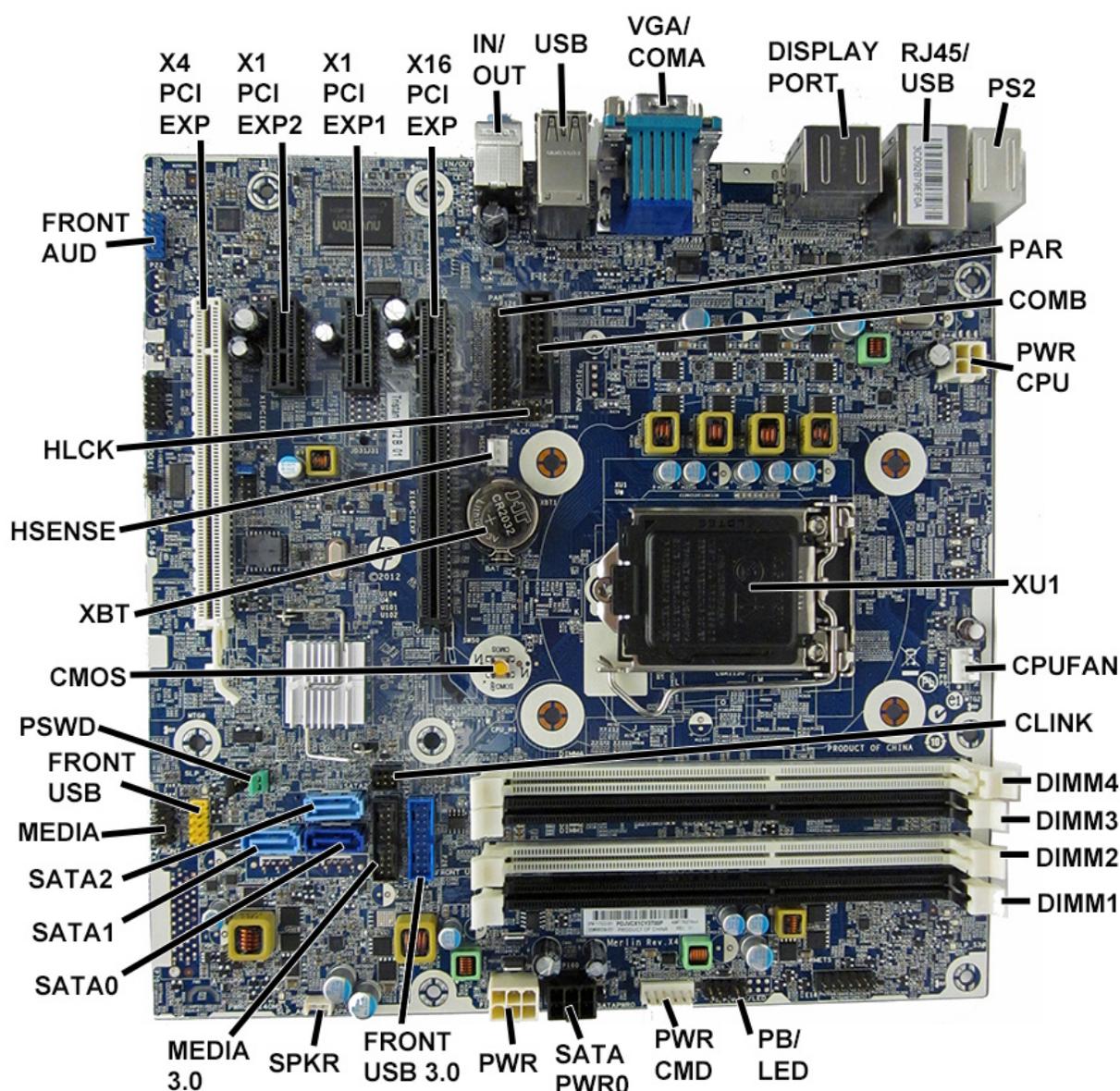
System Board Connectors and Jumpers (component location may vary)

X4PCIEXP	PCI Express x16 slot downshifted to a x4	DIMM1	Memory socket – Channel B
X1PCIEXP2	PCIe x1 slot	PB/LED	Power switch connector
X1PCIEXP1	PCIe x1 slot	PWR CMD	Power connector
X16PCIEXP	PCI Express x16 slot	SATA PWR0	SATA drive power connector
IN//OUT	Audio connectors	PWR	Main power connector
USB	USB connectors	FRONT USB 3.0	Front USB 3.0 Ports
VGA/COMA	Monitor connector/serial port	SPKR	Speaker connector
DISPLAYPORT	DisplayPort connector	MEDIA 3.0	USB 3.0 device, such as a USB 3.0 media card reader
RJ45/USB	Network/USB connectors	SATA0	Primary hard drive
PS2	PS/2 keyboard/mouse connectors	SATA1	Any SATA device other than the primary hard drive
PAR	Parallel port connector	SATA2	Any SATA device other than the primary hard drive
COMB	Serial port connector	MEDIA	USB 2.0 device, such as a USB 2.0 media card reader
PWRCPU	CPU power connector	FRONT USB	Front USB connector
XU1	Processor socket	PSWD	Password header
CPUFAN	Fan sink fan connector	CMOS	CMOS header
CLINK	C-link connector	XBT	RTC battery socket
DIMM4	Memory socket – Channel A	HSENSE	Hood sensor connector
DIMM3	Memory socket – Channel A	HLOCK	Hood lock connector
DIMM2	Memory socket – Channel B	FRONT AUD	Front panel connector