

Illustrated Parts & Service Map

HP Pro 3420 All-in-One Business PC



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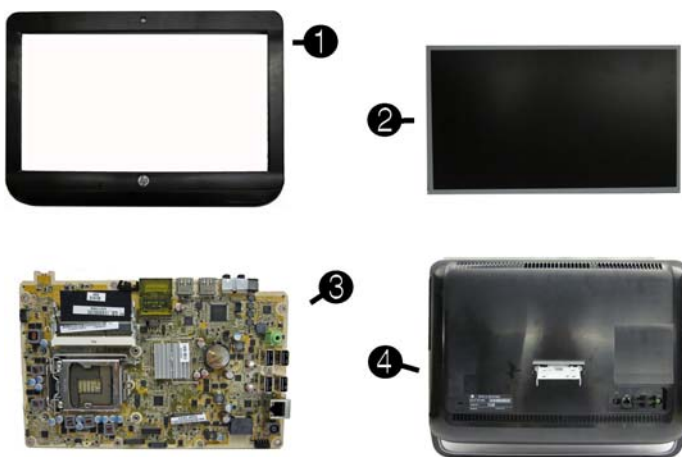


Key Specifications

Processor Type	Intel® Pentium dual core, Intel Core™ i3, Pentium Dual-Core, Celeron
RAM Type	PC3-10600 DDR3, 1333 MHz, non-ECC SDRAM
Maximum RAM Supported	8 GB (2 slots)
Display	20-inch, LED HD+, anti-glare, non-touch
Expansion Slots	(1) Mini PCIe x1 (half-height)
Graphics Adapter	Integrated Intel HD, Microsoft® DirectX®9 10 capable
Chipset	Intel H61
Drive Support	<ul style="list-style-type: none"> (1) 5.25-inch Slimline (1) 3.5-inch hard drive
I/O Interfaces	(2) USB 2.0 (left), (4) USB 2.0 (rear), (1) stereo audio headphone jack (left), (1) Microphone jack (left), (1) Stereo audio line out (rear), (1) Power connector (rear), (1) RJ-45 Ethernet (rear)
Operating Systems	Windows 7 Home Professional 32/64, Home Basic 32, Starter 32

Spare Parts

System Unit

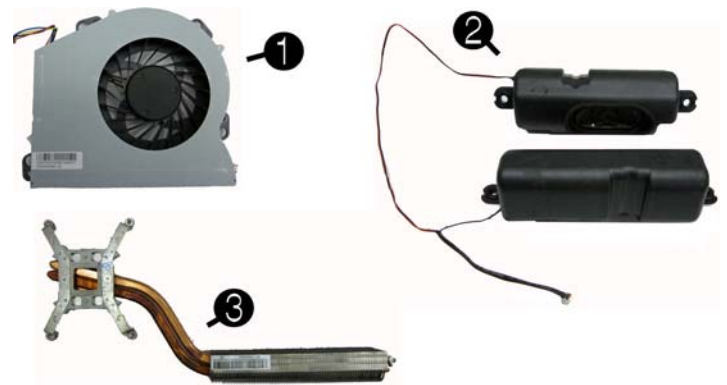


System Unit

1	Front bezel for use in models with a webcam	667106-001
*	Front bezel for use in models without a webcam	667107-001
2	Display panel, 20.5-inch, non-ZBD, Samsung	665473-001
*	Display panel, 20.5-inch, non-ZBD, CMI	665474-001
*	Display panel, 20.5-inch, non-ZBD, LG	665472-001
3	System board (includes replacement thermal material)	665465-001
4	Rear cover	665478-001
*	Stand	665477-001

* Not shown

Miscellaneous Part



Miscellaneous Parts

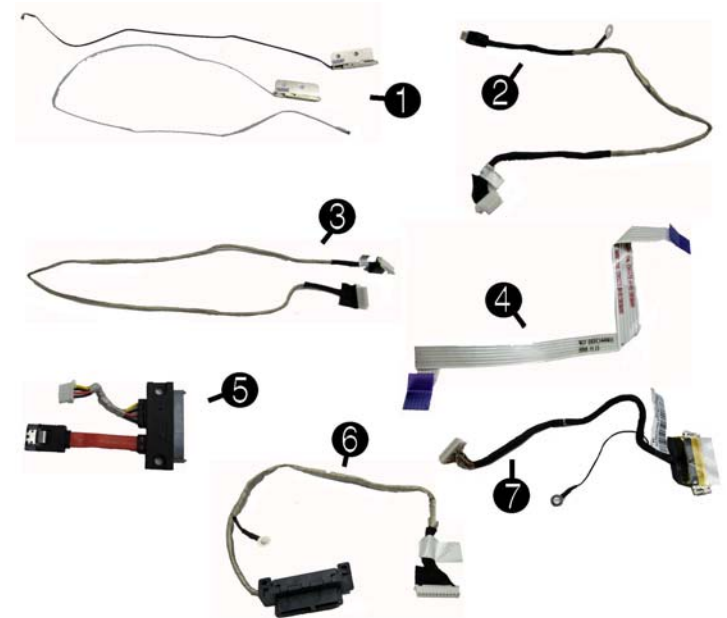
1	Fan (blower)	665469-001
2	Speakers (left and right)	665476-001
3	Thermal module (heat sink)	665468-001
*	Power supply, 120W, external	665470-001
*	Mouse, USB, optical	596410-001
*	Mouse, wireless	625685-001
*	Misc hardware kit (includes rubber feet, grommets)	665770-001

*Not shown

Mass Storage Devices (not illustrated)

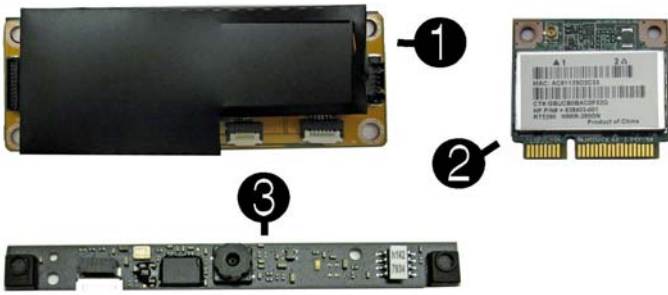
HP SuperMulti DVD Writer Drive, LightScribe (includes bezel)	595115-001
HP SuperMulti DVD Writer Drive, non-LightScribe (includes bezel)	657958-001
2 TB, 7200-rpm hard drive	613210-001
2 TB, 5400-rpm hard drive	616608-001
1.5 TB, 7200-rpm hard drive	613209-001
1.5 TB, 5400-rpm hard drive	652272-001
1 TB hard drive	621418-001
750 GB hard drive	632938-001
500 GB hard drive	621421-001
320 GB hard drive	621420-001
250 GB hard drive	621419-001

Cables



Cables

1	Antenna for use with WLAN modules	646806-001
2	Webcam cable	665729-001
3	Converter to system board	665727-001
4	Converter - Samsung panels	665731-001
*	Converter - LG panels	665730-001
*	Converter - CMI panels	665732-001
5	Hard drive data and power	665725-001
6	Optical drive data	665726-001
7	LVDS	665728-001

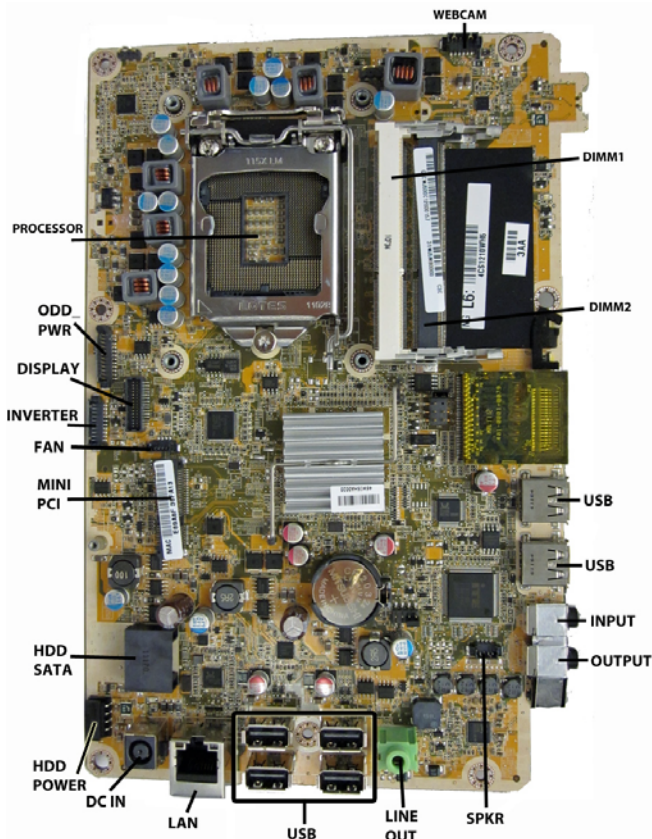


Boards, memory processors

1	Converter	665466-001
2	HP WLAN combo 802.11b/g/n + Bluetooth 2.1 card	652279-001
*	802.11b/g/n (1x1) WLAN module	634906-001
3	Webcam module	665475-001
*	Webcam lens cover	665769-001
Memory modules (PC3-10600)		
*	4 GB	646801-001
*	2 GB	646800-001
*	1 GB	647448-001
Intel Core i3 processors (include thermal replacement material)		
*	2130, 3.4 GHz, 3-MB L3 cache	665120-001
*	2120, 3.3 GHz, 3-MB L3 cache	638629-001
*	2105, 3.1 GHz, 3-MB L3 cache	655970-001
*	2100, 3.1 GHz, 3-MB L3 cache	638628-001
Intel Pentium Dual-Core processors (include thermal replacement material)		
*	G860, 3.0 GHz, 3-MB L3 cache	665123-001
*	G850, 2.9 GHz, 3-MB L3 cache	655973-001
*	G840, 2.8 GHz, 3-MB L3 cache	655972-001
*	G630, 2.7 GHz, 3-MB L3 cache	665122-001
*	G620, 2.6 GHz, 3-MB L3 cache	655971-001
Intel Celeron processors (include thermal replacement material)		
*	G540, 2.5 GHz, 2-MB L3 cache	665119-001
*	G530, 2.4 GHz, 2-MB L3 cache	665117-001
*	G440, 1.6 GHz, 1-MB L3 cache	665467-001

*Not shown

System Board



System Board Components

WEBCAM	Webcam connector	DC IN	Power in connector
DIMM1	Memory module slot - channel A	HDD POWER	Hard drive power connector
DIMM2	Memory module slot - channel B	HDD SATA	Hard drive data connector
USB	USB connector	MINI PCI	Mini PCIe slot
INPUT	Audio input (microphone)	FAN	Fan connector
OUTPUT	Audio output (headphone)	INVERTER	Inverter connector
SPKR	Speaker connector	DISPLAY	Display connector
LINE OUT	Line out connector	ODD PWR	Optical drive power
USB	USB connectors	PROCESSOR	Processor
LAN	RJ-45 connector		

Common POST Error Messages

Screen Message	Probable Cause	Recommended Action
101-Option ROM Error	System ROM or expansion board option ROM checksum.	<ol style="list-style-type: none"> 1. Verify ROM, reflash if required 2. Remove recently added cards to see if problem remains. 3. Clear CMOS. If message disappears, may be card problem. 4. Replace system board
103-System Board Failure	DMA or timers	<ol style="list-style-type: none"> 1. Clear CMOS memory. 2. Remove expansion boards. 3. Replace system board.
164-Memory Size Error	Memory amount has changed since the last boot (memory added/removed).	Press the F1 key to save the memory changes.
164-Memory Size Error	Incorrect memory configuration	<ol style="list-style-type: none"> 1. Run Setup (F10). 2. Make sure memory module(s) installed properly. 3. If third-party memory added, test using HP-only memory. <ol style="list-style-type: none"> 1. Verify proper module type.
201-Memory Size Error	RSM failure	<ol style="list-style-type: none"> 1. Ensure memory modules are correctly installed. 2. Verify proper module type. 3. Remove and replace faulty module(s). 4. If error persists after replacing modules, replace system board.
214-DIMM Configuration Warning	Populated DIMM configuration is not optimized	Rearrange DIMMs so that each channel has the same amount of memory.
301-, 304-Keyboard error	Keyboard failure.	<ol style="list-style-type: none"> 1. Reconnect keyboard with system turned off. 2. Check kybd connection or keys. 3. Check connector for bent or missing pins. 4. Replace keyboard. 5. If 304, possible sys bd problem.
511-Display Adapter Failure	CPU Fan not Detected.	<ol style="list-style-type: none"> 1. Reseat CPU fan. 2. Reseat fan cable. 3. Replace CPU fan.

Computer Setup.

Heading	Option/Description
File	System Information - Lists the following main system specifications: <ul style="list-style-type: none"> • Product name • SKU number (some models) • Processor type/speed/stepping • Cache size • Memory size/speed/ no. channels • Integrated MAC Address • System BIOS • Chassis serial number • Asset tag
	About - Displays copyright notice.
	Set Time and Date - Allows you to set system time and date.
	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 settings and exits Computer Setup.
Storage	Device Configuration - Lists all installed BIOS-controlled storage devices. <ul style="list-style-type: none"> • Hard Disk - size, model, firmware, serial number, emulation type • CD-ROM - model, firmware, serial number.
	Storage Options: SATA Emulation (AHCI, IDE).
	DPS Self-Test - Lets you execute self-tests on DPS-capable ATA hard drives.
	Boot Order - Allows you to specify boot order or order of attached hard drives.
Security	Setup Password-Lets you 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, set up password prompt on F9, F11, & F12.
	Device Security (some models)-Enables/disables audio, network controllers, card reader, SATA connectors.
	USB Security - Allows you to enable/disable groups of or individual USB ports. Front USB Ports, Rear USB Ports, internal USB ports. Default is enabled.
	Slot Security - Allows you to enable/disable any Mini PCI x1 slot.
	Network Service Boot - Enables/disables boot from OS on a network server.
	System IDs - Allows you to view product name, serial number, UUID, SKU number, family name, asset tag, feature byte, build ID, and keyboard locale setting.
	System Security (some models) - Allows you to enable/disable: <ul style="list-style-type: none"> • Data Execution Prevention • Protected Audio Video Path (PAVP) (some models) • Virtualization Technology(some models) • Virtualization Technology Directed I/O (some models) • Trusted Execution Technology I/O • Embedded Security Device Support • OS management of Embedded Security Device (some models)
	Master Boot Record Security - Lets you 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	Hardware Power Management-Lets you enable/disable SATA bus power management, S5 maximum power savings, and S5 Wake on LAN.
	Thermal - Allows you to view CPU fan speed.
Advanced	Power-On Options - Allows you to set: <ul style="list-style-type: none"> • POST mode-QuickBoot, FullBoot, Clear Memory, FullBoot every x days • After Power Loss - Off/on/previous state • POST Delay - None, 5, 10, 15, 20, or 60 seconds • POST messages - Enable/disable
	BIOS Power-On - Allows you to set the computer to turn on at a preset time.
	PCI Devices - Lists installed PCI devices with their IRQ settings and allows you to reconfigure IRQ or disable devices.
	Bus Options (some models) - Allows you to enable/disable PCI SERR# Generation and PCI VGA palette snooping.
	Device Options - Allows you to set: <ul style="list-style-type: none"> • Num Lock State at Power-On (on/off) • Hyper-threading • NIC Option ROM Download (PXE, Disable, iSCSI)
	Management Devices - Only displayed in the Advanced Menu when the BIOS detects multiple management options. This option is for installed NIC cards that support ASF or DASH. Use the Management Devices menu to select if the BIOS management operations will be through the embedded solution or one of the installed NIC cards.