

Illustrated Parts & Service Map

HP ProOne 600 All-in-One Business PC



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Key Specifications

Processor Type	Intel® Core i7, i5
RAM Type	Non-ECC, DDR3 SDRAM, 1600 MT/s, SODIMM, 2 slots
Maximum RAM	16 GB
Expansion Slots	<ul style="list-style-type: none"> (1) Mini PCIe half-length (used by wireless LAN module) (2) MXM 3.0 Type A - 35W (1) mSATA
Chipset	Intel Q85
Bays	<ul style="list-style-type: none"> (1) 3.5" hard drive; supports up to two - 2.5" hard drives or one - 3.5" hard drive (1) 5.25" slim line optical drive
I/O Interfaces	Side: card reader, (1) USB 3.0, (1) USB 3.0 fast-charging, mic, headphone Rear: PS/2 mouse and keyboard, (2) USB 2.0, (2) USB 3.0, DisplayPort, RJ-45, stereo line out, serial (optional)
Display	21.5-inch (1920 x 1080) diagonal widescreen WLED backlit anti-glare
Operating Systems	<ul style="list-style-type: none"> Windows 8 Windows 7 FreeDOS Novell SUSE Linux Enterprise Desktop 11

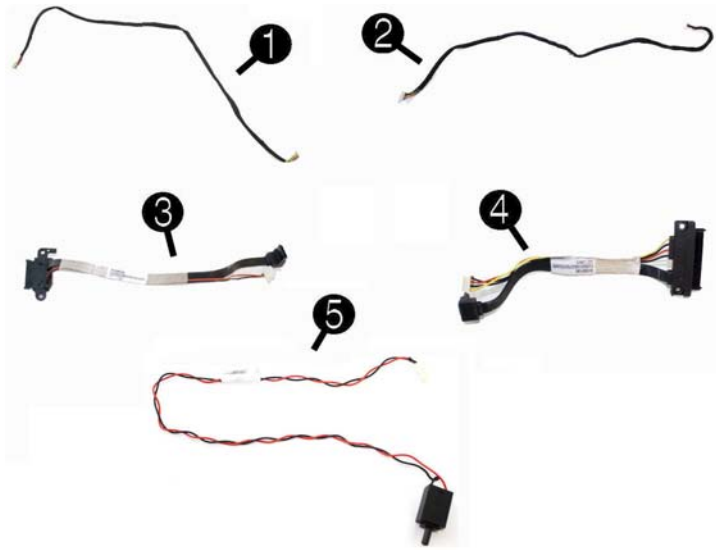
Spare Parts



System Unit

1	Front bezel with camera lens	732487-001
2	Power supply, 180W	732494-001
3	Left side panel	732489-001
4	Right side panel	698193-001
5	Standard stand assembly	732509-001
*	Height adjustment stand	698226-001
6	Upper rear access panel (security screw and hardware are not spared)	698194-001
*	Lower rear access panel	732488-001
7	Rear I/O security cover	732492-001
*	Display panel, WLED	732495-001

*Not shown



Cables

1	Power button board cable	698208-001
2	Backlight cable	732496-001
3	Optical drive cable (data and power assembly)	698221-001
4	Hard drive cable (data and power assembly)	698215-001
5	Intrusion sensor with cable	688665-001
*	2nd hard drive cable	698216-001
*	Converter board side cable	698206-001
*	LVDS (display) cable	732491-001
*	Capacitive strip sensor cable	698210-001
*	Webcam cable	698211-001
*	Adapter, DisplayPort to VGA	603250-001
*	Adapter, DisplayPort to DVI	662723-001
*	Adapter, DisplayPort to HDMI	617450-001
*	DisplayPort cable	487562-001

*Not shown

Keyboards (not illustrated)

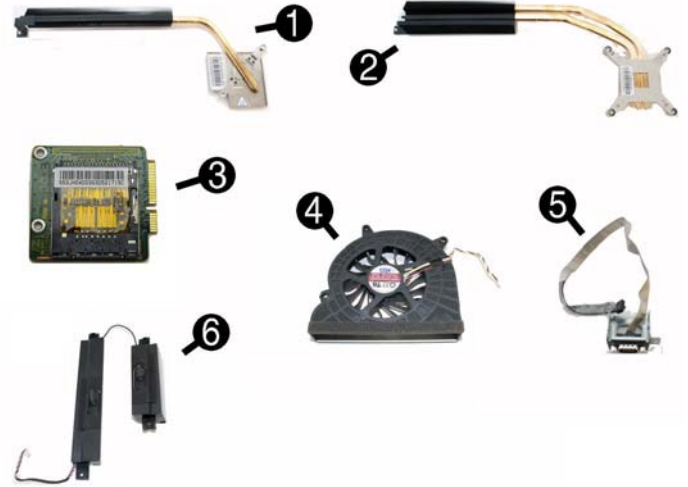
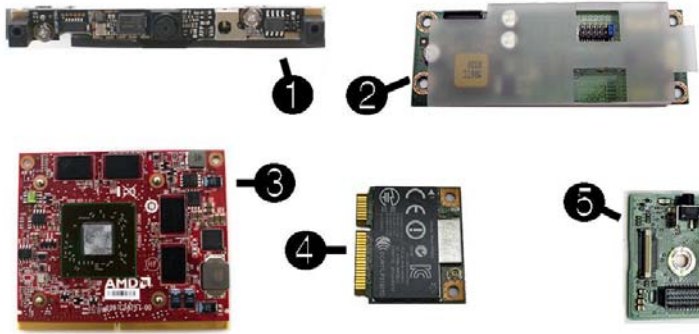
PS/2	724718-xx1		
USB	724720-xx1		
Wireless with mouse and dongle	730323-xx1		
Washable*	700510-xx1		
Smart card	701427-xx1		
Smart card, CCID	701671-xx1		
Arabic	-17x	Japanese	-29x
F Arabic	-DE1	LA Spanish	-16x
BHCSY	-B41	Norwegian	-09x
Belgian	-18x	People's Republic of China	-AAx
Brazilian Portuguese	-20x	Portuguese	-13x
Bulgaria	-26x	Romanian	-27x
Czech and Slovakian	-22x	Russian	-25x
Danish	-08x	Slovenian	-23x
French	-05x	South Korea	-KDx
French Canadian	-12x	Spanish	-07x
German	-04x	Swedish	-10x
Greek	-15x	Swiss	-11x
Hebrew	-BBx	Taiwanese	-ABx
Hungarian	-21x	Thai	-28x
India	-D61	Turkish	-14x
International**	-37x	U.S.	-00x
International English	-L3x	U.K.	-03x
Italian	-06x		

*-001, -121, -161, -201 only

** 701427-xx1 only

Mass Storage Devices (not illustrated)

Blu-ray writer (BD-RE) drive	719157-001
DVD-ROM drive	608394-001
DVD±RW drive	657958-001
2 TB, 7200 rpm hard drive	616608-001
1 TB, 7200 rpm hard drive	667719-001
500 GB, 7200 rpm hard drive, self-encrypting (SED)	696442-001
500 GB, 7200 rpm hard drive, 2.5-inch	686217-001
500 GB, 7200 rpm, hard drive, 3.5-inch	613208-001
320 GB, 7200 rpm hard drive	639135-001
256 GB Solid State Drive (SSD), self-encrypting (SED)	680020-001
160 GB Solid State Drive (SSD)	646809-001
128 GB Solid State Drive (SSD)	665961-001
120 GB Solid State Drive (SSD)	661841-001



Standard and Optional Boards

Misc Boards

1	Webcam	732510-001
2	Converter board	732493-001
3	AMD Radeon HD 7650A 2-GB MXM discrete graphics board	708866-001
4	HP WLAN 802.11 a/g/n, 2x2	701398-001
*	HP WLAN 802.11 a/b/g/n, 2x2	695915-001
*	Near field communication (NFC) NXP controller (use with NFC assembly kit, spare part number 732502-001)	732503-001
5	Power button board	732490-001

System Boards

*	System board for use in models without Windows 8	700629-001
*	System board for use in models with Windows Standard	700629-501
*	System board for use in models with Windows Professional	700629-601

Memory Modules

*	8-GB	689374-001
*	4-GB	689373-001
*	2-GB	689372-001

Processors (include thermal material)

*	Intel Core i7-4770s, 3.1 GHz, 8-MB L3 cache	732507-001
*	Intel Core i5-4670s, 3.1 GHz, 6-MB L3 cache	732506-001
*	Intel Core i5-4570s, 2.9 GHz, 6-MB L3 cache	732505-001

*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	11 blinks, 1 blink every second followed by a 2 second pause	Current processor does not support a feature previously enabled.
Power	Red	12 blinks, 1 blink every second followed by a 2 second pause	MXM thermal shutdown
none	none	System does not power on and LEDs are not flashing	System unable to power on

Miscellaneous Parts

1	Heat sink for use with graphics board	698214-001
2	Heat sink for use with the processor	698201-001
3	Card reader	732504-001
4	Fan/blower	698196-001
5	Serial port assembly	698212-001
6	Speakers (left and right)	698197-001
*	Label for use in models without speakers	732508-001
*	Thermal pad	706867-001
*	HP ultraslim keyed cable lock	703372-001
*	Optical drive insert	698222-001
*	Optical drive removable frame carrier	732060-001
*	Card reader insert	698220-001
*	Hard drive isolation grommet	450712-001
*	Hard drive carrier, 2.5-inch to 3.5-inch	703597-001
*	Fan grommet	706866-001
*	Mouse, PS2, optical	674315-001
*	Mouse, washable	724795-001
*	Mouse, wireless	674317-001
*	Mouse, USB, optical	674316-001
*	Mouse, USB, laser	674318-001
*	Webcam assembly kit for models without a webcam (includes webcam cover for bezel)	732511-001
*	Antenna kit	698218-001
*	NFC assembly kit (holder, cable, antenna) for use with NFC controller, spare part number 732503-001	732502-001

*Not shown

Common POST Error Messages

Screen Message	Probable Cause	Recommended Action
101-Option ROM Error	System ROM checksum error.	1. Verify ROM, reflash if required 2. Clear CMOS memory, reboot 3. Replace system board
103-System Board Failure	DMA, timers	1. Clear CMOS memory. 2. 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, 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	1. Check DIMMs for proper seating, type, compatibility. 2. Rearrange the DIMMs so that each channel has the same amount of memory.
301-, 304-Keyboard error	Keyboard failure.	Check kybd connection or keys. Check connector for bent or missing pins. Replace kybd. If 304, possible system board problem.
501-Display Adapter Failure	Graphics display controller.	1. Reseat graphics card. 2. Clear CMOS. 3. 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	<p>System Information - Lists the following main system specifications:</p> <ul style="list-style-type: none"> 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 <p>About - Displays copyright notice.</p> <p>Set Time and Date - Allows you to set system time and date.</p> <p>Replicated Setup - Allows you to save or restore system configuration to/from a USB flash drive.</p> <p>Default Setup - Allows you to save current settings as default or restore factory settings as default.</p> <p>Apply Defaults and Exit - Applies the selected default settings and clears any established passwords.</p> <p>Ignore Changes and Exit - Exits Computer setup without saving changes.</p> <p>Save Changes and Exit - Saves changes to system configuration or default settings and exits Computer Setup.</p>
Storage	<p>Device Configuration - Lists all installed BIOS-controlled storage devices. The following options are available:</p> <ul style="list-style-type: none"> CD-ROM Hard Disk Default Values Translation Mode SSD Life Used SMART (ATA disks only) Diskette SATA Defaults <p>Storage Options - Allows you to set:</p> <ul style="list-style-type: none"> 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 Gbps as the maximum eSATA speed. By default, the speed is limited to 1.5 Gbps for maximum reliability. <p>DPS Self-Test - Execute self-tests on ATA hard drives capable of performing the Drive Protection System (DPS) self-tests.</p> <p>Boot Order - Specify boot order for UEFI and legacy boot sources. Also specify hard drive boot order.</p> <ul style="list-style-type: none"> Shortcut to Temporarily Override Boot Order
Security	<p>Setup Password - Set and enable the setup (Admin) password.</p> <p>Power-On Password - Set and enable power-on password.</p> <p>Password Options - Allows you to enable/disable:</p> <ul style="list-style-type: none"> Lock Legacy Resources Setup Browse Mode Password prompt on F9 & F12 Network Server Mode <p>Smart Cover - Allows you to lock/unlock the smart cover and set the cover removal sensor to disable/notify user/setup password.</p> <p>Device Security - Set Device Available/Device Hidden for: embedded security device, system audio, network controller, USB controller, serial/parallel ports, and SATA ports.</p> <p>USB Security - Set Device Available/Device Hidden for front USB ports, rear USB ports, internal USB ports, accessory USB ports.</p> <p>Slot Security - Disable the PCI, PCIe, and Mini Card slots.</p> <p>Network Boot - Enables/disables boot from OS (NIC models only).</p> <p>System IDs - Allows you to update asset tag, ownership tag, UUID, keyboard locale setting.</p> <p>Master Boot Record Security - enables/disables MBR.</p> <p>System Security - Allows you to set:</p> <ul style="list-style-type: none"> 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) <p>DriveLock Security - Allows you to assign or modify a master or user password for hard drives.</p> <p>Secure Boot Configuration (Windows 8 only)</p> <ul style="list-style-type: none"> Legacy Support (enable/disable) Secure Boot (enable/disable). Key Management (enable/disable) Fast Boot (enable/disable)
Power	<p>OS Power Management - Allows you to enable/disable Runtime Power Management, Idle Power Savings, Unique Sleep State Blink Rates.</p> <p>Hardware Power Management - Enable/disable SATA power management, S5 maximum power savings., PCI slots, network controller, USB 3.0 controller</p> <p>Thermal - Control minimum fan speed.</p>
Advanced	<p>Power-On Options - Allows you to set:</p> <ul style="list-style-type: none"> 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) <p>BIOS Power-On - Set the computer to turn on at a preset time.</p>

Advanced <i>(continued)</i>	<p>Bus Options - Allows you to enable/disable PCI SERR# Generation and PCI VGA palette snooping.</p> <p>Onboard Devices - Allows you to set resources for or disable on-board system devices.</p> <p>Device Options - Allows you to set:</p> <ul style="list-style-type: none"> 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) <p>VGA Configuration - Allows you to specify which VGA controller is the "boot"/primary. Displayed only if add-in video card installed.</p> <p>AMT Configuration - Allows you to set:</p> <ul style="list-style-type: none"> AMT (enable/disable) Unconfigure AMT/ME (enable/disable) Hide Unconfigure ME Confirmation Prompt (enable/disable) Watchdog Timer (enable/disable)
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Password Security

Establishing a Setup or Power-On password:

- Turn on or restart the computer.
- 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.
- Press the **F10** key to enter Computer Setup.
- 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
- Before exiting, click **File > Save Changes and Exit**.

Changing a Setup or Power-On password:

- 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.
- 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.
 - 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.
 - Press **Enter**.
- The new password will take effect the next time the computer is restarted.

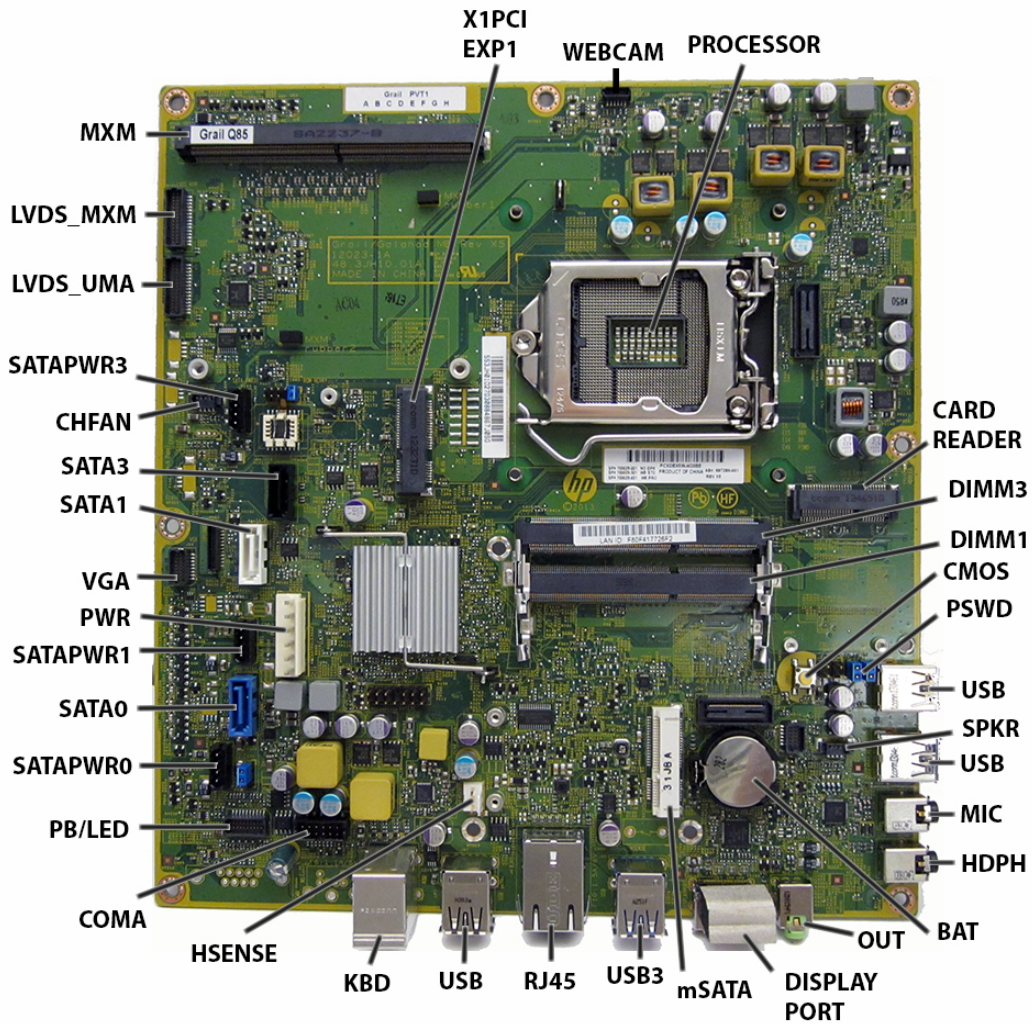
Deleting a Power-On or Setup password

- 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.
- 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.
 - When the key icon appears, type your current password followed by a slash (/) or alternate delimiter character as shown. Example: *currentpassword/*
 - Press **Enter**.

Clearing CMOS

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

System Board



System Board Connectors and Jumpers (component location may vary)

X1PCIEXP1	PCIe X1 slot	RJ45	Network jack
WEBCAM	Webcam connector	USB	External USB 2.0 connectors
PROCESSOR	Processor socket	KBD	PS/2 connectors
CARD READER (J107)	Card reader slot	HSENSE	Hood sensor connector
DIMM3	Memory socket - Channel B	COMA	Serial port
DIMM1	Memory socket - Channel A	PB/LED	Power switch connector
CMOS	CMOS button	SATA PWR0	Hard drive power connector
PSWD	Password header	SATA0	1st hard drive data connector
USB	External USB 2.0 connectors	SATA PWR1	2nd hard drive power connector
SPKR	Speaker connector	PWR	Main power connector
USB	External USB 2.0 connectors	VGA	Display connector
MIC	External microphone connector	SATA1	2nd hard drive data connector
HDPH	External headphone connector	SATA3	Optical drive data connector
BAT	RTC battery socket	CHFAN	Fan connector
OUT	External audio out connector	SATA PWR3	Optical drive power connector
DISPLAYPORT	DisplayPort connector	LVDS UMA	Display connector - UMA graphics
mSATA	mSATA slot	LVDS MXM	Display connector - discrete graphics
USB3	Two external USB 3.0 connectors	MXM	Graphics card connector