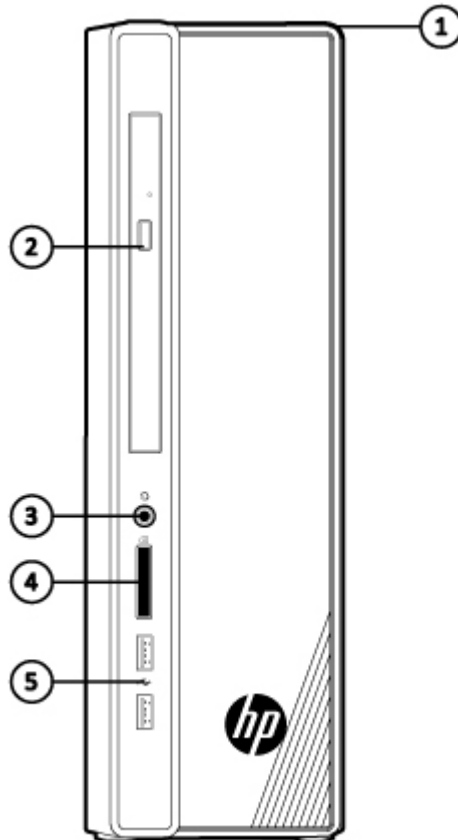


Overview

HP 280 G1 Slim Tower Business PC



Front

1. Power Button
2. 9.5mm Optical Disc Drive (DVDRW)
3. 3.5mm Combo Audio Jack (2)
4. 7-in-1 Media Card Reader
5. USB 2.0 Ports

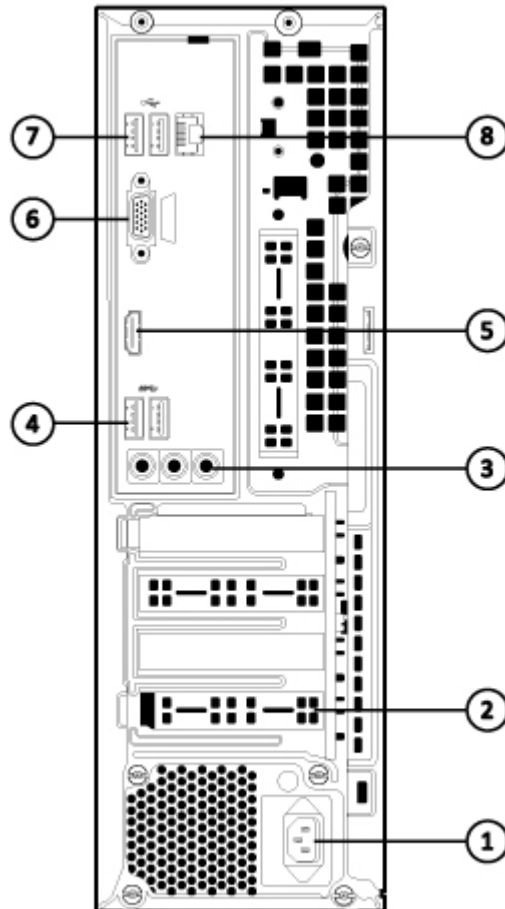
Not Shown

Slots (1) PCI Express x16 Graphics Connector
(1) M.2 Connector

Bays (1) 3.5" internal storage drive bay

Overview

HP 280 G1 Slim Tower Business PC



Back

- | | |
|----------------------------------|------------------------------|
| 1. Power Cord Connector | 5. HDMI Display Interface |
| 2. PCIe 2.0 x16 expansion slot | 6. VGA Monitor Connector |
| 3. Audio Line Out; Audio Line In | 7. (2) USB 2.0 Ports + RJ-45 |
| 4. (2) USB 3.0 Ports | |

Overview

AT A GLANCE

- Windows 7 Professional 64 (available through downgrade rights from Windows 10 Pro) operating system
- Intel® H81 chipset supporting Intel® 4th generation Intel® processors featuring Intel® HD Graphics
- Available PCIe x16 slot supports discrete graphics upgradeability
- Integrated 10/100/1000 Ethernet Controller
- Supports Wake-on-LAN (WOL)
- Up to 16GB DDR3/DDR3L Un-buffered Memory (UDIMM)
- Independent monitor support via VGA and HDMI video interfaces
- High definition audio
- 6 USB ports (including 2-USB 3.0 ports)
- Security cable lock supported (sold separately)
- ENERGY STAR® 6 certified computer
- Protected by HP Services; terms and conditions vary by country; certain restrictions and exclusions apply

NOTE: See important legal disclosures for all listed specs in their respective features sections.

Standard Features and Configurable Modules

CHIPSET

Intel® 8 Series (H81 Express) Chipset

PROCESSOR*

Intel® Core™ i3

Intel® Core™ i3-4170 with Intel® HD Graphics 4400 (3.7 GHz, 3 MB cache, 2 cores)

*Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology.. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering is not a measurement of higher performance.

GRAPHICS

Integrated

Intel Integrated HD Graphics Varies by Processor

NOTE: HD content required to view HD images.

MEMORY*

Both slots are customer accessible / upgradeable, Supports Dual Channel Memory

Form Factor	Type	Maximum	# of Slots
Slim Tower	1600 MT/s DDR3	16 GB	2 UDIMM

4GB DDR3-1600 UDIMM (1x4GB) (Transfer rates up to 1600 MT/s)

* Full availability of 4 GB or more of memory requires a 64-bit operating system. With Windows 32-bit operating systems, the amount of usable memory is dependent upon your configuration, so that above 3 GB all memory may not be available due to system resource requirements. Memory modules support data transfer rates up to 1600 MT/s; actual data rate is determined by the system's configured processor. See processor specifications for supported memory data rate.

STORAGE*

Supports SATA 3.5" 6Gb/s HDDs*

500GB 7200 RPM SATA Hard Disk Drive

Removable

HP Multi-Format Digital Media Card Reader

*NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 16 GB (for Windows 7) and 36 GB (for Windows 8.1/10) of system disk is reserved for the system recovery software.

FIXED OPTICAL DRIVES*

SuperMulti DVD-RW Drive

*Optical drives are optional or add on features. Duplication of copyrighted material is strictly prohibited. Actual speeds may vary. Double Layer media compatibility will widely vary with some home DVD players and DVD-ROM drives. Note that DVD-RAM cannot read or write to 2.6GB Single Sided/5.2 Double Sided-Version 1.0 Media.

Standard Features and Configurable Modules

AUDIO/MULTIMEDIA

- Integrated Realtek ALC3863-CG HD Audio High Definition audio (all ports are stereo)
- Combo Audio Jack front ports (3.5mm)
- Line-out and Line-in rear port (3.5mm)
- Standard internal Buzzer

NETWORKING

Ethernet (RJ-45)

- Integrated Realtek PCIE 10/100/1000M Gigabit Ethernet Controller
- Supports Wake-on-LAN (WOL)

PORTS

Front I/O Ports

- Two (2) USB 2.0 ports
- Combo Audio Jack
- Media card reader

Rear I/O Ports

- Two (2) USB 2.0 ports
- Two (2) USB 3.0 ports
- One (1) RJ45 network connection
- One (1) Audio Line out
- One (1) Audio Line in
- One (1) VGA
- One (1) HDMI

Internal I/O Ports

- One (1) PCIe x 16
- One (1) M.2

BAYS

- (1) 3.5" internal storage drive bay

KEYBOARDS AND POINTING DEVICES*

- Universal USB Wired Windows 8 Keyboard
- Universal USB Wired Optical Mouse

*Keyboards and mouse are optional or add-on features.

SERVICE AND SUPPORT

On-site Warranty ¹: One-year (1-1-1) limited warranty delivers one year of on-site, next business day ² service for parts and labor and includes free support 24 x 7³. Three-year onsite and labor are not available in all countries. Service offers terms up to 5 years by choosing an optional HP Care Pack. To choose the right level of service for your HP product, visit HP Care Pack Central: www.hp.com/go/cpc.⁴

NOTE 1: Terms and conditions may vary by country. Certain restrictions and exclusions apply. Other warranty variations may be offered in your region.

Standard Features and Configurable Modules

NOTE 2: On-site service may be provided pursuant to a service contract between HP and an authorized HP third-party provider, and is not available in certain countries. Global service response times are based on commercially reasonable best effort and may vary by country.

NOTE 3: Technical telephone support applies only to HP-configured and third-party HP qualified hardware and software. Toll-free calling and 24 x 7 support may not be available in some countries.

NOTE 4: Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.

Operating Systems & Software

OPERATING SYSTEMS

Preinstalled (Windows)

Windows 7 Professional 64 (available through downgrade rights from Windows 10 Pro)*

*This system is preinstalled with Windows 7 Pro software and also comes with a license and media for Windows 10 Pro software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.

Operating Systems & Software

SOFTWARE

Preinstalled (varies by country)

Browser and Toolbars

- Internet Explorer 11

Optical Disc Drive Read/Write

- CyberLink Power Media Player 14

Utilities and Support

- HP Recovery Manager
- HP Support Assistant
- Microsoft Security Essentials
- MS Office 2013 Trial
- Foxit Phantom PDF Reader

Technical Specifications

UNIT ENVIRONMENT AND OPERATING CONDITIONS

General Unit Operating Guidelines

- Keep the computer away from excessive moisture, direct moisture and the extremes of heat and cold, to ensure that unit is operated within the specified operating range.
- Leave a 10.2 cm (4 in) clearance on all vented sides of the computer to permit the required airflow.
- Never restrict airflow into the computer by blocking any vents or air intakes.
- Do not stack computers on top of each other or place computers so near each other that they are subject to each other's re-circulated or preheated air.
- Occasionally clean the air vents on the front, back, and any other vented side of the computer. Lint, dust and other foreign matter can block the vents and limit the airflow.
- If the computer is to be operated within a separate enclosure, intake and exhaust ventilation must be provided on the enclosure, and the same operating guidelines listed above will still apply.

Temperature Range	Operating: 50° to 95° F (10° to 35° C)* Non-operating: -22° to 140° F (-30° to 60° C)
Relative Humidity	Operating: 10% to 90% (non-condensing at ambient) Non-operating: 5% to 95% (non-condensing at ambient)
Maximum Altitude (unpressurized)	Operating: 10,000 ft (3048 m) Non-operating: 30,000 ft (9144 m)

* Operating temperature is de-rated 1.0 deg C per 300 m (1000 ft) to 3000 m (10,000 ft) above sea level, no direct sustained sunlight. Maximum rate of change is 10 deg C/Hr. The upper limit may be limited by the type and number of options installed.

POWER SUPPLY

180 W, up to 85% efficient, active PFC, ENERGY STAR® 6.0/6.1, Bronze Power Supply Unit

WEIGHTS & DIMENSIONS (configured with 1 HDD and 1 ODD)

Chassis (H x W x D)	12.5 x 4 x 15 in 31.8 x 10 x 38 cm
System Weight	15.51 lbs / 7.05 kg

PACKAGING DIMENSIONS AND WEIGHT

Dimensions (H x W x D)	24.3 x 19.41 x 23.5 in 4.96 x 2.40 x 5.20 cm
Weight	19.72 lbs / 8.74 kg
Palletization and Container Profile	6 Units per layer; 8 layers per Pallet : 48 units/pallet 10 pallets/20 foot container : 480 units/20 foot container 21 pallets/40 foot container : 1008 units/40 foot container

SECURITY FEATURES

Security cable slot

Technical Specifications

CERTIFICATIONS

EPEAT® Silver*
CECP (for 2015 cycle)
SEPA (for 2015 cycle)
WEEE (Waste, Electric and electronic equipment)
ENERGY STAR® 6.0/6.1
CEL level1
FCC
UL

*EPEAT® registered where applicable/supported. EPEAT registration varies by country. See www.epeat.net for registration status by country.

Technical Specifications - Graphics

Intel HD Graphics	
VGA Controller	Integrated
DisplayPort	Multimode capable; supports HDCP, Display Port Audio (2 streams), HBR2 link rates and Multi-Stream Technology for a maximum of 2 displays (including the integrated panel)
Bus Type	N/A
RAMDAC	N/A
Memory	<p>Intel graphics do not have dedicated memory but utilizes some of the computer's system memory. The amount of memory used for graphics depends on the amount of system memory installed, BIOS settings, operating system, and system load. 32 MB is pre-allocated for graphics use at system boot time. Additional memory can be allocated at boot time by the BIOS for PAVP (Protected Audio Video Playback) support for playback of protected video content.</p> <p>Additional memory is allocated for graphics as needed using Intel's Dynamic Video Memory Technology (DVMT), to provide an optimal balance between graphics and system memory use.</p>
Maximum Color Depth	32 bits/pixel
Graphics/Video API Support	<p>4th Generation Intel® Core™ processors:</p> <ul style="list-style-type: none"> • The Processor Graphics contains a refresh of the seventh generation graphics core enabling substantial gains in performance and lower power consumption. Up to 16 EU support. • Next Generation Intel Clear Video Technology HD Support is a collection of video playback and enhancement features that improve the end user's viewing experience <ul style="list-style-type: none"> ○ Encode/transcode HD content ○ Playback of high definition content including Blu-ray Disc ○ Superior image quality with sharper, more colorful images • DirectX Video Acceleration (DXVA) support for accelerating video processing <ul style="list-style-type: none"> ○ Full AVC/VC1/MPEG2 HW Decode • Advanced Scheduler 2.0, 1.0 • Windows 7 & Win 10 • DirectX 11.1 • OpenGL 4.3 • Open CL 1.2

Supported Display Resolutions and Refresh Rates

Note: other resolutions may be available but are not recommended as they may not have been tested and qualified by HP

Resolution	Refresh Rates
800x600	60 Hz
1024x768	60 Hz
1152x864	60 Hz
1280x600	60 Hz
1280x720	60 Hz
1280x800	60 Hz
1280x960	60 Hz
1280x1024	60 Hz
1360x768	60 Hz
1366x768	60 Hz
1400x1050	60 Hz

Technical Specifications - Graphics

1440x900	60 Hz
1600x900	60 Hz
1600x1200*	60 Hz
1680x1050	60 Hz
1920x1080	60 Hz
1920x1200*	60 Hz
1920x1440*	60 Hz
2560x1440*	60 Hz
2560x1600*	60 Hz

* Only supported on displays connected to the external DisplayPort connector.

Technical Specifications - Hard Disk and Solid State Storage

500GB 7.2K RPM SATA 6.0Gb/s 3.5" Hard Disk Drive	
Capacity	500,107,862,016 bytes
Rotational Speed	7,200 rpm
Interface	Serial ATA 3.0 (6.0 Gb/s)
Buffer Size	16 MB
Logical Blocks	976,773,168
Seek Time (typical reads, includes controller overhead, including settling)	Single Track: 2.0 ms
	Average: 11 ms
	Full-Stroke: 21 ms
Height (nominal)	1 in/2.54 cm
Width (nominal)	Media diameter: 3.5 in/8.89 cm
	Physical size: 4 in/10.2 cm
Operating Temperature	41° to 131° F (5° to 55° C)

Technical Specifications - Removable Storage

HP SuperMulti DVD Writer Drive*			
Height	9.5mm, tray-load		
Orientation	Either horizontal or vertical		
Interface type	Serial ATA		
Performance	CD Media Read Access	Random	< 120 ms typical
		Full Stroke	< 200 ms typical
	DVD Media Read Access	Random	< 130 ms typical
		Full Stroke	< 240 ms typical
	CD Media Read Transfer	CD-ROM, CD-R Read	Up to 6000 KB/s (40X)
		CD-RW Read	Up to 4800 KB/s (32X)
		Digital/Analog Audio Playback	Up to 2400 KB/s (16X)
		Digital Audio Extraction (CD-ROM, CD-R)	Up to 6000 KB/s (40X)
		Digital Audio Extraction (CD-RW)	Up to 4800 KB/s (32X)
		Video CD Playback	Up to 2400 KB/s (16X)
	DVD Media Read Transfer	DVD-ROM SL Read	Up to 21600 KB/s (16X)
		DVD-ROM DL Read	Up to 10800 KB/s (8X)
		DVD Video Playback	Up to 10800 KB/s (8X)
		DVD Video SL (other than playback)	Up to 21600 KB/s (16X)
		DVD Video DL (other than playback)	Up to 10800 KB/s (8X)
		DVD-R	Up to 21600 KB/s (16X)
		DVD+R	Up to 21600 KB/s (16X)
		DVD-RW	Up to 10800 KB/s (8X)
		DVD-R DL	Up to 10800 KB/s (8X)
		DVD+RW	Up to 10800 KB/s (8X)

Technical Specifications - Removable Storage

	CD Media Write Transfer	CD-R Write	Up to 6000 KB/s (40X)
		CD-RW	600 KB/s (4X)
		CD-RW (High speed)	1500 KB/s (10X)
		CD-RW (Ultra speed)	Up to 3600 KB/s (24X)
		CD-RW (Ultra speed+)	Up to 4800 KB/s (32X)
	DVD Media Write Transfer	DVD+R	Up to 21600 KB/s (16X)
		DVD+R DL (v1.2)	Up to 16200 KB/s (12X)
		DVD+R DL (v1.1)	Up to 10800 KB/s (8X)
		DVD+RW (Volume 2 v1.0)	Up to 10800 KB/s (8X)
		DVD+RW (Volume 1 v1.3)	Up to 5400 KB/s (4X)
		DVD-R (v2.1 rev. 6.0)	Up to 21600 KB/s (16X)
		DVD-R (v2.1 rev. 4.0)	Up to 10800 KB/s (8X)
		DVD-R DL (v3.0 rev. 5.0)	Up to 16200 KB/s (12X)
		DVD-R DL (v3.0 rev. 3.0)	Up to 10800 KB/s (8X)
		DVD-RW (v1.2 rev. 3.0)	8100 KB/s (6X)
		DVD-RW (v1.2 rev. 2.0)	Up to 5400 KB/s (4X)
		DVD-RAM (v2.2 rev. 5.0)	Up to 16200 KB/s (12X)
		DVD-RAM (v2.2 rev. 2.0)	Up to 6750 KB/s (5X)
		Media Compatibility	Media
CD-ROM	Yes		No
CD-R	Yes		No
CD-RW	Yes		No
DVD-ROM	Yes		No
DVD-ROM DL	Yes		No
DVD-RAM	Yes		No
DVD+R	Yes		No

Technical Specifications - Removable Storage

	DVD+R DL	Yes	No
	DVD+RW	Yes	No
	DVD-R	Yes	No
	DVD-RW	Yes	No
	DVD-R DL	Yes	No

*Actual speeds may vary. Does not permit copying of commercially available DVD movies or other copyright-protected materials. Intended only for creation and storage of original material and other lawful uses. Note that DVD-RAM cannot read or write to 2.6GB Single Sided/5.2 GB Double Sided – Version 1.0 media. Double Layer discs can store more data than single layer discs. However, double-layer discs burned with this drive may not be compatible with many existing single-layer DVD drives and players.

Technical Specifications - Audio

High Definition Audio	
Type	Integrated
HD Stereo Codec	Realtek ALC3863-CG HD Audio
Audio I/O Ports	Front microphone-In (150-K ohm Input Impedance)
	Rear Line-In/Microphone input (150-K ohm Input Impedance, function is configurable by audio driver)
	Rear Line-Out* (190 ohms Output Impedance, expects at least a 10-K ohm load)
	Front Headphone-Out (0.5 Ohm Output Impedance, expects at least a 32 ohm load) Front Microphone/Headphone jack is re-task able to provide Microphone input, line-in or Headphone output to support connecting two headphones to the front of the system. When configured as a second front headphone output, both front headphone outputs are always driven with the same signal.
	All ports are 3.5mm
Multi-streaming Capable	Multi-streaming can be enabled in the Realtek control panel to allow independent audio streams to be sent to/from the front and rear jacks.
Sampling	8 kHz - 192 kHz
Wavetable Syntheses	Yes – Uses OS soft wavetable
Analog Audio	Yes
# of Channels on Line-Out	Stereo (Left & Right channels)
Internal Speaker	Yes
External Speaker Jack	Yes

Options and Accessories

Type	Description	Part #
Memory	HP 8GB DDR3-1600 DIMM	B4U37AA
	HP 4GB DDR3-1600 DIMM	B4U36AA
Security	HP Chassis Security Kit	AR639AA
	HP UltraSlim Cable Lock Kit	H4D73AA
	HP Business PC Security Lock Kit	PV606AA
Input	HP Business Headset	QK550AA
	HP USB Business Speakers	D9J19AA
	HP USB HD 720P v2 Business Webcam	D8Z08AA
	HP USB Mouse	QY777AA
	HP USB Keyboard	QY776AA

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Change Log

Date of change:	Version History:	Description of change:
	From v1 to v2	
November 14, 2016	From v2 to v3	Internal Speaker Amplifier Section deleted