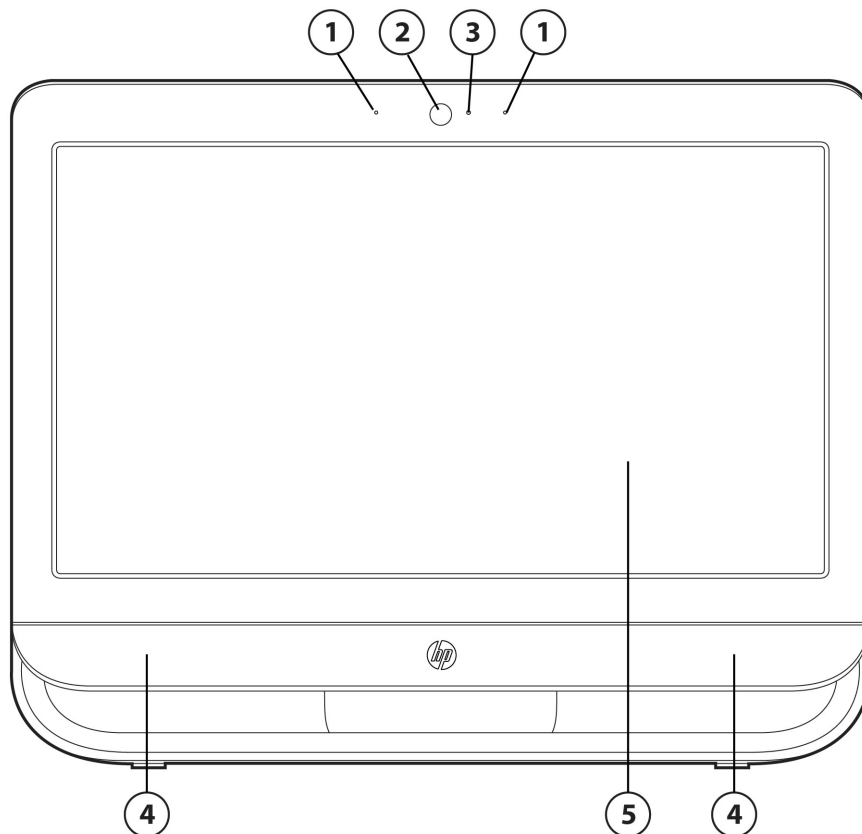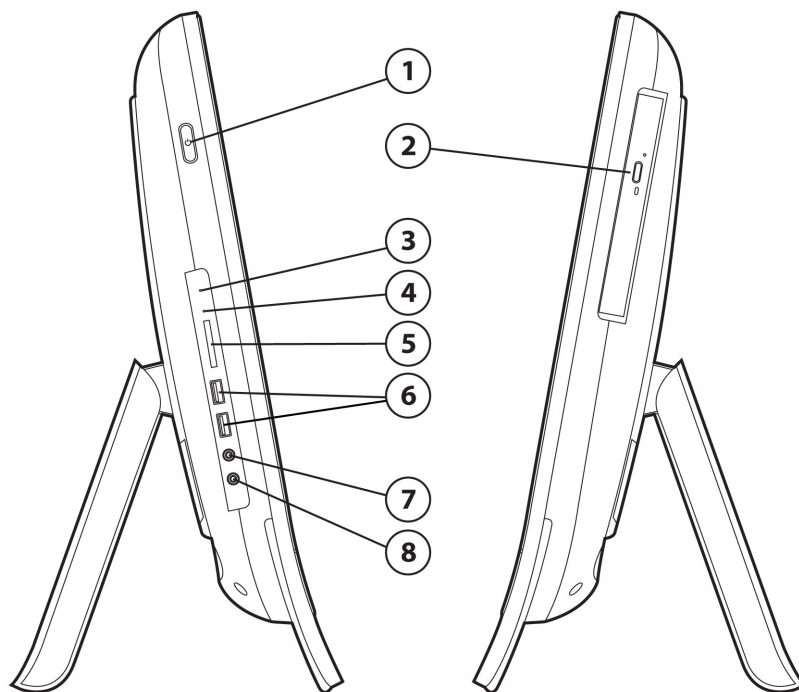## Overview

1. Dual Microphone Array
2. Webcam
3. Webcam LED

4. Stereo Speakers
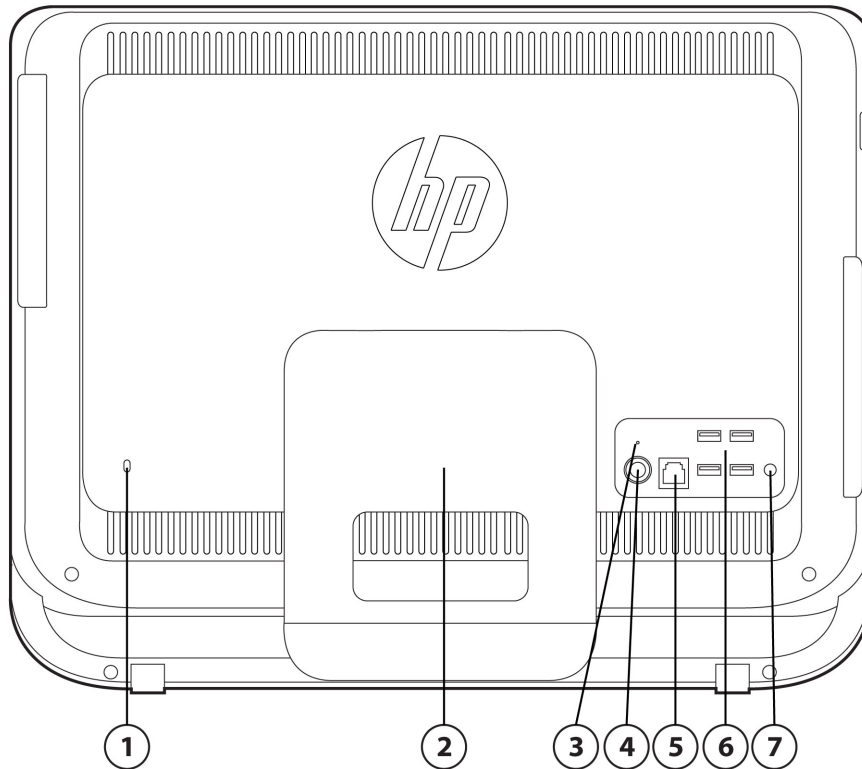5. 20" Diagonal Widescreen LCD HD Anti-glare Display

Overview

1. Power Button
2. Optical Disk Drive
3. Hard Disk Drive LED Indicator
4. Media Card Reader LED Indicator

5. 6-in-1 Media Card Reader
6. USB 3.0 Ports
7. Microphone Port
8. Headphone Port

Overview

1. Security Lock Slot
2. Adjustable Tilt Stand
3. Power Connector LED Indicator
4. Power Connector

5. RJ45 Ethernet Port
6. USB 2.0 Ports
7. Audio Line Out

At A Glance

- Windows® 8 Professional 64-bit and Windows® 8 64-bit
- 20" 16:9 WLED 1600x900 NonGlare 250nit
- Integrated All-in-One form factor
- Adjustable tilt stand
- Intel H61 chipset supporting Intel 2nd and 3rd generation processors featuring Intel HD Graphics
- Integrated Realtek RTL8171FH-CG Gigabit Ethernet Controller
- Integrated low-light webcam with dual microphone array
- Integrated audio card and stereo speakers
- Up to 8GB of DDR3 SDRAM supported
- Up to 2 TB hard drive
- HP Slim-Tray SuperMulti SATA 8X Drive
- 6-in-1 Media Card Reader
- USB Keyboard and Mouse - wireless option
- ENERGY STAR® (for Windows OS only)
- EPEAT Silver certification*
- BFR/CFR/PVC-free**

Overview

- Protected by HP Services. Terms and conditions vary by country. Certain restrictions and exclusions apply.

* Where HP registers commercial desktop products. See http://www.epeat.net for registration status in your country.

** Meeting the industry definition of 'BFR/PVC-free' per the iNEMI Position Statement on "Low Halogen" Electronics. Plastic parts incorporated into the chassis generally contain < 1000 ppm (0.1%) of bromine or chlorine. Printed circuit board and substrate laminates generally contain < 1500 ppm (0.15%) of total bromine and chlorine. Service parts after purchase may not be BFR/PVC-free. External accessories, including power supplies, power cords, and peripherals may not be BFR/PVC-free.

QuickSpecs

Standard Features

CHIPSET

Intel® H61

PROCESSOR

Intel® Core™ i3 Processors

Intel® Core™ i3-3240
3.40 GHz base frequency, 3 MB cache, 2 cores, 4 threads
Intel® HD Graphics 2500

Intel® Core™ i3-3225
3.30 GHz base frequency, 3 MB cache, 2 cores, 4 threads
Intel® HD Graphics 4000

Intel® Core™ i3-3220
3.30 GHz base frequency, 3 MB cache, 2 cores, 4 threads
Intel® HD Graphics 2500

Intel® Core™ i3-3210
3.20 GHz base frequency, 3 MB cache, 2 cores, 4 threads
Intel® HD Graphics 2500

Intel® Core™ i3-2130
3.40 GHz base frequency, 3 MB cache, 2 cores, 4 threads
Intel® HD Graphics 2000

Intel® Core™ i3-2120
3.30 GHz base frequency, 3 MB cache, 2 cores, 4 threads
Intel® HD Graphics 2000

Intel® Pentium® Processors

Intel® Pentium® G2130
3.20 GHz base frequency, 3 MB cache, 2 cores, 2 threads
Intel® HD Graphics

Intel® Pentium® G2120
3.10 GHz base frequency, 3 MB cache, 2 cores, 2 threads
Intel® HD Graphics

Intel® Pentium® G2020
2.90 GHz base frequency, 3 MB cache, 2 cores, 2 threads
Intel® HD Graphics

Intel® Pentium® G645
2.90 GHz base frequency, 3 MB cache, 2 cores, 2 threads
Intel® HD Graphics

Intel® Pentium® G640
2.80 GHz base frequency, 3 MB cache, 2 cores, 2 threads
Intel® HD Graphics

Intel® Celeron® Processors

Standard Features

Intel® Celeron® G1620
2.70 GHz base frequency, 2 MB cache, 2 cores, 2 threads
Intel® HD Graphics

Intel® Celeron® G1610
2.60 GHz base frequency, 2 MB cache, 2 cores, 2 threads
Intel® HD Graphics

Intel® Celeron® G550
2.60 GHz base frequency, 3 MB cache, 2 cores, 2 threads
Intel® HD Graphics

Intel® Celeron® G540
2.50 GHz base frequency, 3 MB cache, 2 cores, 2 threads
Intel® HD Graphics

NETWORKING/COMMUNICATIONS

Integrated Realtek RTL8171FH–CG Gigabit Ethernet Controller; with Wake on LAN

HP WLAN 802.11 b/g/n 1x1 - WiFi

GRAPHICS

Intel HD Graphics (integrated; varies by processor)

DISPLAY

20" diagonal TN widescreen WLED backlit, Non-Glare LCD

Type	TN (Twisted Nematic) LED Backlit LCD
Viewable image area (horizontal & vertical)	442.8(H) x 249.075(V) [mm]
Screen opening (H x V)	446.8(H)×253.2(V) [mm]
Resolution	1600 × 900
Aspect ratio	16:9
Contrast ratio (typical)	1000:1
Brightness (typical)	250 nits (cd/m^2)
Viewing angle (typical)	85/85/80/80 (L/R/U/D)
Pixel pitch	0.27675(H) x 0.27675(W) [mm]
Backlight lamp life (to half brightness)	30,000 hours minimum
Color support	Over 16 million colors (through FRM)
Color gamut (typical)	72%
Anti-glare	Yes
Default color temperature	Warm (6500K)

NOTE: All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

Standard Features

AUDIO/MULTIMEDIA

Realtek ALC269 codec
Integrated business class 2.0 speakers (2W x 2)
Stereo headphone jack
Microphone in
Stereo line out
Integrated 1MP, 720p HD low-light Webcam with 2 Microphone Array

STORAGE DRIVES

2TB 7200 RPM SATA 6G Hard Drive

1TB 7200 RPM SATA 6G Hard Drive

500GB 7200 RPM SATA 6G Hard Drive

MEDIA DEVICES

HP 6-in-1 Media Card Reader

Slim 8X SuperMulti DVDRW SATA ODD

KEYBOARDS AND POINTING DEVICES

HP USB Keyboard

HP USB Optical Mouse

HP Wireless Keyboard & Mouse with USB dongle

MEMORY

2GB DDR3-1600 SODIMM (1x2GB) RAM

4GB DDR3-1600 SODIMM (1x4GB) RAM

6GB DDR3-1600 SODIMM (1x4GB+1x2GB) RAM

8GB DDR3-1600 SODIMM (2x4GB) RAM

SECURITY

Security lock slot

Norton Internet Security

Standard Features

PORTS

Side I/O Ports

Two (2) USB 3.0 ports

One (1) microphone in

One (1) headphone out

One (1) 6 in 1 Card reader

Rear I/O Ports

Four (4) USB 2.0 ports

One (1) RJ45 network connection

One (1) Stereo audio line out

One (1) DC in power

BAYS

One (1) 3.5" HDD

One (1) 5.25" slimtray ODD

SLOTS

1 PCIe Mini-Card (WLAN)

POWER SUPPLY

External 87% efficient 120watt power adapter: 19V/4.7A

SERVICE AND SUPPORT

On-site Warranty[Note 1:] One-year (1-1-1) limited warranty delivers one year of on-site, next business-day[Note 2:] service for parts and labor and includes free telephone support[Note 3:] 24 x 7. One-year onsite and labor are not available in all countries. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at: http://www.hp.com/hps/carepack.

NOTE 1: Terms and conditions may vary by country. Certain restrictions and exclusions apply.

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. Response times are based on commercially reasonable best effort and may vary by country.

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

OPERATING SYSTEMS

Preinstalled	Windows® 8 Professional 64-bit
	Windows® 8 64-bit
	FreeDOS

For all Preinstalled operating systems HP provides Microsoft WHQL certified (where applicable) drivers on www.hp.com at the time of product announcement.

Standard Features

SOFTWARE

Preinstalled (varies by country)

(Buy Office)

Browser and Toolbars

- Internet Explorer 10
- Norton Toolbar

Security and Protection

- HP Client Security

Productivity

- Buy Office

Optical Disc Drive Playback and TV Tuners

- CyberLink PowerDVD
- Avermedia TV app
- Hauppauge TV app

Windows® Live™

- Movie Maker
- Writer
- Photo Gallery

Windows 8 applications

- Mail
- Calendar
- People
- SkyDrive
- Photos
- Messaging

Photos and Videos

- CyberLink YouCam
- CyberLink Media Suite
- CyberLink Power2Go
- CyberLink Label Print

A/V Integration

- HP Connected Remote

Audio Post Processing

- Beats Audio™

Standard Features

Games

- HP Games by WildTangent

Communication

- Broadband connection utility
- HP MyRoom

Utilities and Support

- HP Online User Guide
- HP Recovery Manager
- HP Support Assistant
- HP MyDisplay
- HP ePrint (driver)

Technical Specifications

STAND ALONE POWER REQUIREMNTS

Electrical Ratings	100-240 V, 50/60 Hz, 2.0 A
Idle Operating Power	30W
Max Operating Power	<90W

TEMPERATURE, HUMIDITY, ALTITUDE

Temperature Range	Operating: 41 to 95°F / 5 - 35°C Non-operating: -22 to 149°F / -30° to 65°C
Relative Humidity	Operating: 15% - 80% at 26° C (non-condensing at ambient)
Maximum Altitude (unpressurized)	Operating: 0 to 6500 ft (0 to 2000 m) Non-operating: 0 to 15,000 ft (0 to 4,572 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.

WEIGHTS & DIMENSIONS

Dimensions (WxDxH)	19.94 x 3.98 x 15.75 in 506.45 x 101.18 x 399.94 mm
Weight	13.8 lbs / 6.28 kg
Shipping Carton Dimensions (WxDxH)	24.09 x 7.72 x 20.35 in 612 x 196 x 517 mm
Shipping Carton Weight	21.1 lbs / 9.58 kg
Pallet (32 units) Dimensions (WxDxH)	47.24 x 39.27 x 86.54in 1200 x 1000 x 2198 mm
Pallet (32 units) Weight	696.4 lbs / 316.56 kg

CERTIFICATIONS

UL	Yes
CUL	Yes
FCC Compliance	Yes
ENERGY STAR®	Yes (for Windows OS only)
EPEAT	Silver* (for Windows OS only)

Environmental Data	**Eco-Label Certifications & declarations**	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: ● US Energy Star® ● IT ECO declaration ● EPEAT Silver where HP registers commercial desktop products. See http://www.epeat.net for registration status in your country.

Technical Specifications

System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Micro tower Desktop model is based on a typically configured product.

Energy Consumption

	115 VAC	230 VAC	100 VAC
Normal Operation	20.4 W	20.1 W	20.5 W
Sleep (Energy Star® low power mode)	1.76 W	1.8 W	1.76 W
Off	0.32 W	0.35 W	0.31 W

Note:
Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family . HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured model.

Heat Dissipation*

	115 VAC	230 VAC	100 VAC
Normal Operation	70 BTU/Hr	69 BTU/Hr	70 BTU/Hr
Sleep	6 BTU/Hr	6 BTU/Hr	6 BTU/Hr
Off	1 BTU/Hr	1 BTU/Hr	1 BTU/Hr

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

(Typically configured)	Sound Power (LWAd, bels	Sound Pressure (LpAm, decibels)
Idle	3.5	27
Fixed Disk (random writes)	3.6	37

Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include:

- Intel LGA775 processor socket
- 8 USB ports
- 1 empty PCI slot (w/ optional PCI riser card), or
  1 empty PCIe x16 slot (w/optional PCIe riser card)
- 1 internal drive slot
- 1 Slimline optical drive slot
- 3 memory slots
- 1 Serial/Parallel Port (optional)

Technical Specifications

	Spare parts are available throughout the warranty period and or for up to "5" years after the end of production.
Batteries	This battery(s) in this product comply with EU Directive 2006/66/EC
	Batteries used in the product do not contain: Mercury greater the 5ppm by weight Cadmium greater than 10ppm by weight

Battery size:	CR2032 (coin cell)
Battery type:	Lithium

Additional Information USDT

- This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.
- This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.
- This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).
- This product is in compliance with the IEEE 1680 (EPEAT) standard at the Silver where HP registers commercial desktop products. See http://www.epeat.net for registration status in your country.
- Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.
- This product contains 0% post consumer recycled plastic (by wt.)
- This product is 96% recyclable when properly disposed of at end of life.

Packaging Materials

 External:

- PAPER/Corrugated 1356 g

Internal:

- PLASTIC/Polyethylene low density 28 g
- PLASTIC/EPE-Expanded Polyethylene 198 g

- The PAPER/Corrugated packaging materials contains at least 50% recycled content..
- The PLASTIC/Polyethylene low density packaging materials contains at least 0% recycled content.
- The PLASTIC/EPE-Expanded Polyethylene packaging materials contains at least 0% recycled content.

RoHS Compliance
Hewlett-Packard is committed to compliance with all applicable environmental laws and regulations, including the European Union Restriction of Hazardous Substances (RoHS) Directive. HP's goal is to exceed compliance obligations by meeting the requirements of the RoHS Directive on a worldwide basis. By July 1, 2006, RoHS substances will be virtually eliminated (virtually = to levels below legal limits) for all HP electronic products subject to the RoHS Directive, except where it is widely recognized that there is no technically feasible alternative (as indicated by an exemption under the EU RoHS Directive).

Material Usage
This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification forthe Environment at

Technical Specifications

http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants - may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Nickel - finishes must not be used on the external surface designed to be frequently handled or carried by the user.
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) - except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

Packaging

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

End-of-life Management and Recycling

Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities.

Technical Specifications

This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

Hewlett-Packard Corporate Environmental Information

For more information about HP's commitment to the environment:
Global Citizenship Report
http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html
Eco-label certifications
http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html
ISO 14001 certificates:
http://www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html

This system is Windows 8 certified and supports the new Windows UI. The integrated display resolution is below the threshold for Snap, a WIndows UI feature that allows two Windows Store apps to be viewed simultaneously. This feature may be enabled by attaching an external 1366 x 768 or higher resolution display.