

### Technical Specifications

#### HP P224 21.5-inch Monitor



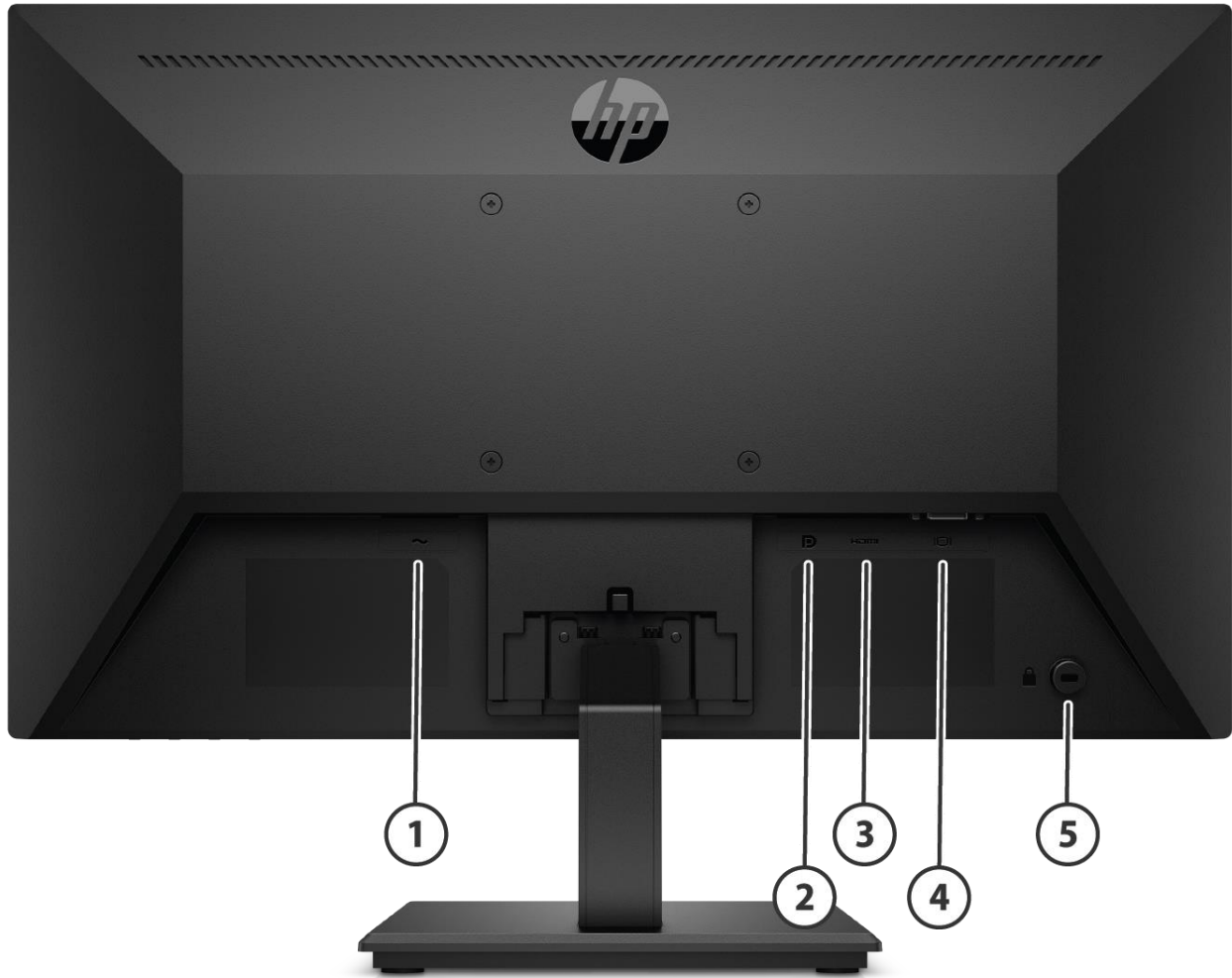
#### Front

1. Function Buttons

2. Power Button

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#### HP P224 21.5-inch Monitor



1. Power Connector
2. DisplayPort™ Connector
3. HDMI Connector

#### Back

4. VGA Connector
5. HP Security Lock

### Technical Specifications

**Models:** 5QG34AA

<b>Panel Specifications</b>	<b>Display Size (Diagonal)</b>	21.5-in
	<b>Display Panel Type</b>	IPS (IPS panel is from Dec 2019 production onwards)
	<b>Micro-Edge Bezel</b>	Yes, 3-sided
	<b>Native Resolution/Timing</b>	1920x1080 @ 60 Hz
	<b>Native Resolution Note</b>	DisplayPort™ 1.2 or HDMI 1.4 only to drive panel at its native resolution
	<b>Panel Bit Depth</b>	8-bit
	<b>Aspect Ratio</b>	16:9
	<b>Brightness - Typical</b>	250 cd/m <sup>2</sup>
	<b>Static Contrast Ratio – Typical</b>	1000:1
	<b>Static Contrast Ratio - Minimum</b>	700:1
	<b>Dynamic Contrast Ratio (DCR)</b>	10,000,000:1
	<b>Flicker Free</b>	Yes
	<b>Pixel Pitch</b>	0.248 x 0.248 mm
	<b>Pixels Per Inch (PPI)</b>	102
	<b>Backlight Lamp Life (to half brightness - in hours)</b>	30k minimum
	<b>Anti-Glare Panel</b>	Yes
	<b>Response Time - Typical</b>	5ms Gray to Gray
	<b>Horizontal Viewing Angle (typical CR&gt;10)</b>	178°
	<b>Vertical Viewing Angle (typical CR&gt;10)</b>	178°
	<b>Panel Active Area (w x h)</b>	476.06 x 267.79 mm (18.74 x 10.54 in)
	<b>Preset Graphic Modes/Supported Resolutions</b>	640x480@60Hz 720x400@70Hz 800x600@60Hz 1024x768@60Hz 1280x720@60Hz 1280x800@60Hz 1280x1024@60Hz 1440x900@60Hz 1600x900@60Hz 1680x1050@60Hz 1920x1080@60Hz
	<b>Maximum Resolution</b>	1920x1080 @ 60 Hz
	<b>Recommended Resolution</b>	1920x1080 @ 60 Hz
	<b>Vertical Scan Range</b>	50 - 60 Hz
	<b>Horizontal Scan Range</b>	30 - 80 kHz
	<b>Default Color Temperature</b>	Neutral (6500K)
	<b>Maximum Pixel Clock Speed</b>	170 MHz

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

<b>Color Gamut Coverage</b>	<b>NTSC</b>	72%
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<b>Color Management</b>	<b>Factory Color Presets</b>	Native
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	<b>Color Space / Subsampling Support</b>	RGB 4:4:4, YCBCR 4:4:4, YCBCR 4:2:2
	<b>Default Color Temperature</b>	Neutral (6500K)
	<b>Low Blue Light Modes</b>	Yes
	<b>RGB Channel Adjust</b>	Yes, Gain
<b>Monitor Specifications</b>	<b>Exterior Color of Monitor Bezel and Stand</b>	Black
	<b>Backlight Flicker Free</b>	Yes
	<b>Plug &amp; Play</b>	Yes
	<b>Tilt</b>	Yes, -5° to +25°
	<b>VESA Mounting</b>	Yes, 100 mm with integrated mount or with included bracket
	<b>Security Lock Ready</b>	Yes
	<b>Detachable Base</b>	Yes, ships detached
	<b>Warranty</b>	3/3/0 (NA/LA/TW/ANZ/JPN/VIET/THAI/EMEA) 3/3/3 (INDIA/PRC)
<b>On Screen Display (OSD)</b>	<b>On Screen Display User Controls</b>	Brightness+, Color, Image, Input, Power, Menu, Management, Information, Exit.
	<b>Monitor Control Buttons or Switches</b>	Enter/Select/OK, Down/Minus ("-"), Up/Plus("+"), Exit/Back, Power
	<b>User-Assignable Function Buttons</b>	Yes, 3 (6 options)
	<b>Languages</b>	10 (English, Spanish, German, French, Italian, Netherlands, Portuguese, Japanese, T-Chinese and S-Chinese)
<b>Connector Types</b>	<b>DisplayPort™</b>	1, DP 1.2
	<b>HDMI</b>	1, HDMI 1.4
	<b>VGA</b>	1
	<b>HDCP support</b>	Yes, (DisplayPort™ and HDMI)
<b>Power &amp; Operating Specs</b>	<b>Power Supply</b>	Internal
	<b>Power Source</b>	100 – 240 VAC 50/60 Hz
	<b>Power Consumption - Maximum</b>	22 W
	<b>Energy Saving/Standby Mode</b>	0.3 W
	<b>Power Consumption - Typical</b>	17 W
	<b>Power cable length</b>	1.8 m
<b>Energy Star Data</b>	<b>Operational Mode at 100 VAC</b>	34.26 W
	<b>Operational Mode at 115 VAC</b>	34.27 W
	<b>Operational Mode at 230 VAC</b>	34.49 W
<b>EU Energy Efficiency Class (EC1062)</b>	<b>On-mode Power Consumption (EC 1062/2010)</b>	14 W
	<b>Annual Power Consumption (EC 1062/2010)</b>	20 kWh
	<b>Energy Efficiency Class (EC 1062/2010)</b>	A+
	<b>Visible Screen Size</b>	21.5" / 54,6 cm Diagonal
<b>Operating Conditions</b>	<b>Operating Temperature - Celsius</b>	5° – 35°C
	<b>Operating Temperature - Fahrenheit</b>	41°C -95°F
	<b>Non-operating Temperature - Celsius</b>	-20° – 60°C
	<b>Non-operating Temperature - Fahrenheit</b>	29° - 140°F
	<b>Operating Humidity</b>	20 – 80% Relative Humidity (non-condensing)
	<b>Non-operating Humidity</b>	5 – 95%
	<b>Operating Altitude</b>	0 - 5,000 m (16,400 ft.)
	<b>Non-operating Altitude</b>	0 - 12.192 m (40,000 ft.)

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<b>Environmental Features and Certifications</b>	<b>Mercury-free LED display backlighting</b>	Yes, Mercury-free LED backlighting
	<b>Arsenic-Free Display Glass</b>	Yes
	<b>Low Halogen</b>	Yes GSE HP-00011-01B, table 2 defines low-halogen (BFR, CFR, PVC) NOTE: External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.
	<b>Agency Approvals and Certifications</b>	WW application CE,CB,KC/KCC/NOM/PSB/ICE/TUV-S/ISO 9241-307/ EAC/UL/CSA/PSB/ISC/CCC/CEL/CECP/SEPA/TCO/TCO Certified Edge/Energy Star/ISC/VCCI/FCC/BSMI/Vietnam MEPS/Australian-New Zealand MEPS/WEEE
	<b>Microsoft WHQL Certification</b>	Win 10, Win 8, Win 7
	<b>ENERGY STAR<sup>®</sup>**</b>	Yes
	<b>EPEAT<sup>®</sup> Registered*</b>	EPEAT <sup>®</sup> Silver
	<b>China Energy Label</b>	CEL Grade 2
	<b>TCO Certified Edge</b>	Yes
	<b>TCO Certified</b>	Yes
	<b>SmartWay Transport Partnership - NA only</b>	Yes (NA SKU)

\*EPEAT<sup>®</sup> Silver registered in the U.S. EPEAT registration varies by country. See <http://www.epeat.net> for registration status by country.

\*\*External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.

Note: DisplayPort<sup>™</sup> and the DisplayPort<sup>™</sup> logo are trademarks owned by the Video Electronics Standards Association (VESA<sup>®</sup>) in the United States and other countries.

<b>Contains Recycled Plastics</b>	<b>Contains Recycled Plastics in Back Cover</b>	Yes	
	<b>Contains Recycled Plastics in Base/Stand Recyclable Packaging (Box, packing materials)</b>	Yes Yes	
<b>Unit Product/Package Specifications</b>	<b>Product Dimensions</b> (Unpacked with stand) (W x D x H)	<b>Metric</b> 48.85 x 18.1 x 37.1 cm	<b>Imperial</b> 19.23 x 7.1 x 14.6 in
	<b>Product Dimensions</b> (Packed) (W x D x H)	56.5 x 15.4 x 39.8cm	22.2 x 6.06 x 15.67 in
	<b>Display Head Dimensions</b> (Unpacked without stand) (W x D x H)	48.85 x 4.01 x 29.32 cm	19.23 x 1.57 x 11.54 in
	<b>Base Area Footprint</b> (w x d mm)	181x 181 mm	71.26 x 71.26 in
	<b>Bezel Measurements</b>	top1.5 mm side 1.5 mm bottom18.2 mm	top 0.06 in side 0.06 in bottom 0.72 in
	<b>Product Weight</b> (Unpacked with stand)	3.0 kg	6.6 lb
	<b>Product Weight</b> (Packed)	4.3 kg	9.5 lb
<b>Product Weight</b> (Head Only)	2.5 kg	5.5 lb	

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<b>Pallet Information</b>	<b>Pallet Dimensions</b> (L x W x H)	A : 1130 x 1232 x 120mm B : 1130 x 1078 x 120mm	A : 43.7 x 54.2 x 4.7in B : 43.7 x 27.1 x 4.7in
	<b>Pallet Total Weight</b> (L x W x H)	A:362.3kg B:317.6kg	A:798.8 lbs B:700.2 lbs
	<b>Pallet Layers</b>	5	
	<b>Pallet Product per Layer</b>	A :16 B : 14	
	<b>Total Products per Pallet</b>	A : 80 B : 70	
	<b>Container Load, 20-Foot</b>	740 units	
	<b>Container Load, 40-Foot</b>	1540 units	
	<b>Container Load, 40-Foot HighQ</b>	1848 units	

<b>Recommended Accessories*</b>	<b>Description</b>	<b>Part Number</b>
	HP USB-C Universal Dock	1MK33AA
	HP Recycled Series 15.6" Backpack	5KN28AA
	HP Quick Release Bracket 2	6KD15AA
	HP S101 Speaker Bar	5UU40AA
	HP Hot Desk Stand	W2Z73AA
	HP Dual Head Keyed Cable Lock 10 mm	T1A64AA

\*Sold separately and availability may vary by country

<b>What's in the box?</b>	AMS: AC Power Cord (1.8m) 5.9 ft, HDMI Cable (1.8m) 5.9 ft, DP Cable (1.8m) 5.9 ft LA: AC Power Cord (1.8m) 5.9 ft, HDMI Cable (1.8m) 5.9 ft, DP Cable (1.8m) 5.9 ft APJ: AC Power Cord (1.8m) 5.9 ft, VGA Cable (1.8m) 5.9 ft, HDMI Cable (1.8m) 5.9 ft, DP Cable (1.8m) 5.9 ft EMEA: AC Power Cord (1.8m) 5.9 ft, VGA Cable (1.8m) 5.9 ft, HDMI Cable (1.8m) 5.9 ft
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NOTE: Included cables may vary by country

<b>User Guide and Warranty Languages</b>	<b>User Guide Languages</b>	English, S. Chinese, T. Chinese, Bahasa Indonesia, Japanese, Korean, French, Spanish, B. Portuguese, Danish, Dutch, Russian Slovak, Turkish, Arabic, Lithuanian, Romanian, Finnish, German Hebrew, Italian, Norwegian, Swedish, Czech, Greek, Hungarian Polish, Portuguese, Iberian, Kazakh, Slovenian, Ukrainian, Bulgarian, Latvian
	<b>Warranty Languages</b>	English, S. Chinese, T. Chinese, Bahasa Indonesia, Japanese, Korean, French, Spanish, B. Portuguese, Danish, Dutch, Russian Slovak, Turkish, Arabic, Lithuanian, Romanian, Finnish, German Hebrew, Italian, Norwegian, Swedish, Czech, Greek, Hungarian Polish, Portuguese, Iberian, Kazakh, Slovenian, Ukrainian, Bulgarian, Latvian

<b>Service and Warranty</b>	Protected by HP, including a 3-year standard limited warranty. Optional HP Care Pack Services are extended service contracts that extend your protection beyond the standard warranties.
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<b>Environmental Data</b>	<b>Eco-Label Certifications &amp; declarations</b>	<p>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:</p> <ul style="list-style-type: none"> <li>IT ECO declaration</li> <li>US ENERGY STAR®</li> <li>TCO 5.0</li> <li>EPEAT® Silver registered in the United States. See <a href="http://www.epeat.net">http://www.epeat.net</a> for registration status in your country.</li> <li>US Federal Energy Management Program (FEMP)</li> </ul>		
	<b>Energy Consumption (in accordance with US ENERGY STAR® test method)</b>	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 50Hz</b>
	Normal Operation	10.98 W	10.85 W	11.06 W
	Sleep	0.11 W	0.17 W	0.10 W
	Off	0.07 W	0.14 W	0.07 W
	<b>Heat Dissipation*</b>	<b>115VAC, 60Hz</b>	<b>230VAC, 50Hz</b>	<b>100VAC, 50Hz</b>
	Normal Operation	38 BTU/hr	38 BTU/hr	37 BTU/hr
	Sleep	0 BTU/hr	1 BTU/hr	0 BTU/hr
	Off	0 BTU/hr	0 BTU/hr	0 BTU/hr
		*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.		
	<b>Additional Information</b>	<ul style="list-style-type: none"> <li>This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.</li> <li>This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC.</li> <li>This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).</li> <li>This product is in compliance with the IEEE 1680 (EPEAT) standard at the silver level, see <a href="http://www.epeat.net">http://www.epeat.net</a></li> <li>Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.</li> <li>This product contains 85% post-consumer recycled plastic (by wt.) according to IEEE 1680.1-2018 standard, criterion 4.2.1.1.</li> <li>This product is 98.6% recycle-able when properly disposed of at end of life.</li> </ul>		
	<b>Packaging Materials</b>	<b>External:</b>	PAPER/Corrugated	992 g
		<b>Internal:</b>	PLASTIC/EPS (Expanded Polystyrene)	243 g
			PLASTIC/Polyethylene low density	9 g
	<b>RoHS Compliance</b>	<p>HP Inc. complies fully with materials regulations. We were among the first companies to extend the restrictions in the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive to our products worldwide through the HP GSE. HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam.</p> <p>We believe the RoHS directive and similar laws play an important role in promoting industry-wide elimination of substances of concern. We have supported the inclusion of additional substances—including PVC, BFRs, and</p>		



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		<p>certain phthalates—in future RoHS legislation that pertains to electrical and electronics products.</p> <p>We met our voluntary objective to achieve worldwide compliance with the new EU RoHS requirements for virtually all relevant products by July 2013, and we will continue to extend the scope of the commitment to include further restricted substances as regulations continue to evolve.</p> <p>To obtain a copy of the HP RoHS Compliance Statement, see <a href="#">HP RoHS position statement</a>.</p>
	<p><b>Material Usage</b></p>	<p>This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at <a href="http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html">http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html</a>):</p> <ul style="list-style-type: none"> <li>• Asbestos</li> <li>• Certain Azo Colorants</li> <li>• Certain Brominated Flame Retardants – may not be used as flame retardants in plastics</li> <li>• Cadmium</li> <li>• Chlorinated Hydrocarbons</li> <li>• Chlorinated Paraffins</li> <li>• Bis(2-Ethylhexyl) phthalate (DEHP)</li> <li>• Benzyl butyl phthalate (BBP)</li> <li>• Dibutyl phthalate (DBP)</li> <li>• Diisobutyl phthalate (DIBP)</li> <li>• Formaldehyde</li> <li>• Halogenated Diphenyl Methanes</li> <li>• Lead carbonates and sulfates</li> <li>• Lead and Lead compounds</li> <li>• Mercuric Oxide Batteries</li> <li>• Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user.</li> <li>• Ozone Depleting Substances</li> <li>• Polybrominated Biphenyls (PBBs)</li> <li>• Polybrominated Biphenyl Ethers (PBBEs)</li> <li>• Polybrominated Biphenyl Oxides (PBBOs)</li> <li>• Polychlorinated Biphenyl (PCB)</li> <li>• Polychlorinated Terphenyls (PCT)</li> <li>• Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.</li> <li>• Radioactive Substances</li> <li>• Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)</li> </ul>



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	<b>Packaging</b>	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p> <ul style="list-style-type: none"> <li>• Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.</li> <li>• Eliminate the use of ozone-depleting substances (ODS) in packaging materials.</li> <li>• Design packaging materials for ease of disassembly.</li> <li>• Maximize the use of post-consumer recycled content materials in packaging materials.</li> <li>• Use readily recyclable packaging materials such as paper and corrugated materials.</li> <li>• Reduce size and weight of packages to improve transportation fuel efficiency.</li> <li>• Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.</li> </ul>
	<b>End-of-life Management and Recycling</b>	<p>Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: <a href="http://www.hp.com/go/reuse-recycle">http://www.hp.com/go/reuse-recycle</a> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.</p> <p>The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <a href="http://www.hp.com/go/recyclers">http://www.hp.com/go/recyclers</a>. 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.</p>
	<b>HP, Inc. Corporate Environmental Information</b>	<p>For more information about HP's commitment to the environment:</p> <p>Global Citizenship Report  <a href="http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html">http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html</a></p> <p>Eco-label certifications  <a href="http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html">http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html</a></p> <p>ISO 14001 certificates:  <a href="http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842">http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842</a>          and  <a href="http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf">http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</a></p>

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 ENERGY STAR is a registered trademark owned by the U.S. Environmental Protection Agency.

### Summary

<b>Change Log</b>	
<b>V1 to V2</b>	
<b>April 21, 2019</b>	Added Environmental Section
<b>V2 to V3</b>	
<b>September 24, 2019</b>	Updated display panel
<b>V3 to v4</b>	
<b>December 6, 2019</b>	Updated Panel Specifications
<b>V4 to v5</b>	
<b>February 25, 2020</b>	Updated What 's in the box section