QuickSpecs

Technical Specifications

HP P224 21.5-inch Monitor

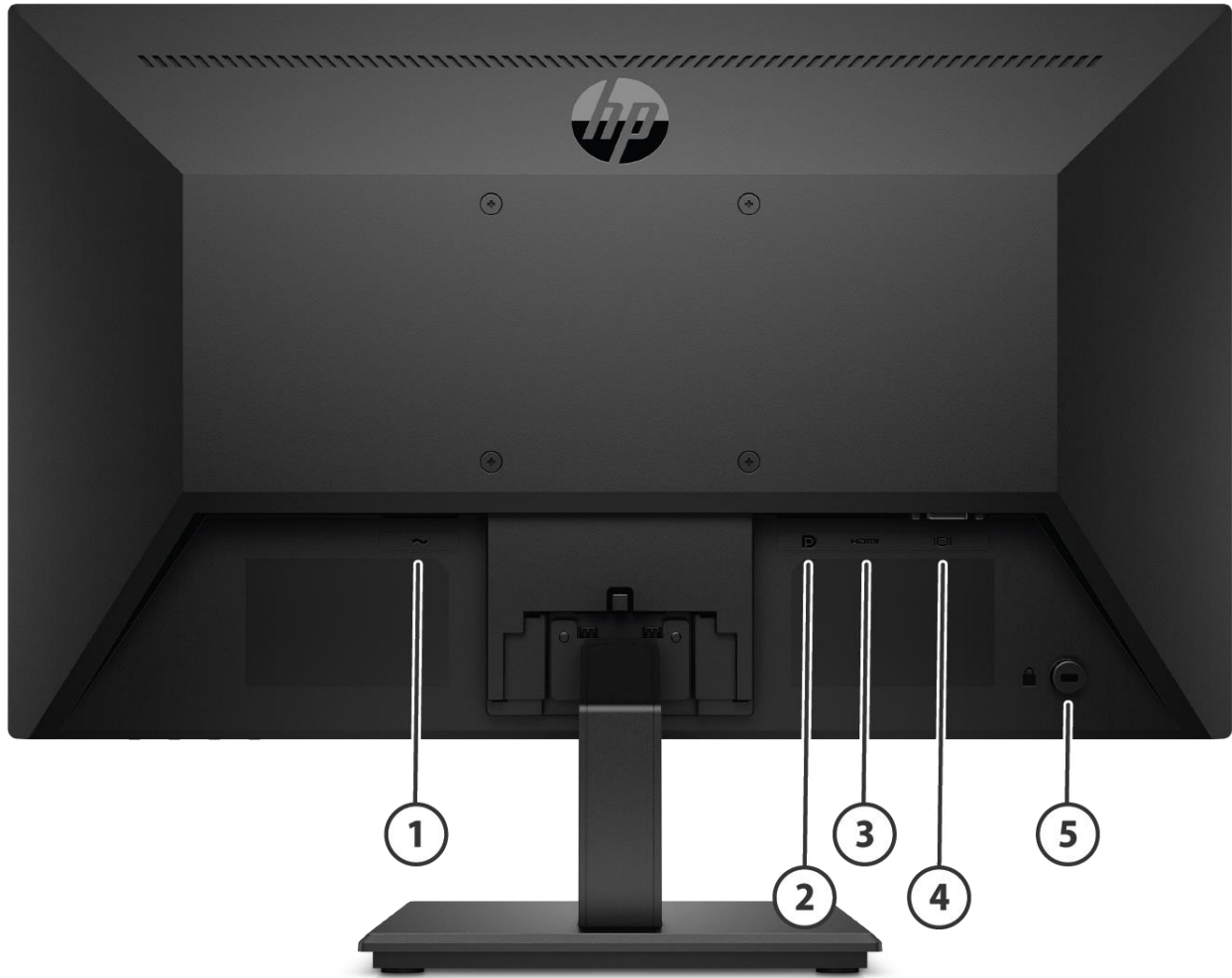**Front**

1. Function Buttons   **2.** Power Button

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Back

1. Power Connector
2. DisplayPort™ Connector
3. HDMI Connector
4. VGA Connector
5. HP Security Lock

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Models: 5QG34AA

Panel Specifications	**Display Size (Diagonal)**	21.5-in
	Display Panel Type	IPS
	Micro-Edge Bezel	Yes, 3-sided
	Native Resolution/Timing	1920x1080 @ 60 Hz
	Native Resolution Note	DisplayPort™ 1.2 or HDMI 1.4 only to drive panel at its native resolution
	Panel Bit Depth	8-bit
	Aspect Ratio	16:9
	Brightness - Typical	250 cd/m²
	Static Contrast Ratio - Typical	3000:1
	Static Contrast Ratio - Minimum	2000:1
	Dynamic Contrast Ratio (DCR)	10,000,000:1
	Flicker Free	Yes
	Pixel Pitch	0.248 x 0.248 mm
	Pixels Per Inch (PPI)	102
	Backlight Lamp Life (to half brightness - in hours)	30k minimum
	Anti-Glare Panel	Yes
	Response Time - Typical	5ms Gray to Gray
	Horizontal Viewing Angle (typical CR>10)	178°
	Vertical Viewing Angle (typical CR>10)	178°
	Panel Active Area (w x h)	476.06 x 267.79 mm (18.74 x 10.54 in)
	Preset Graphic Modes/Supported Resolutions	640x480@60Hz 720x400@70Hz 800x600@60Hz 1024x768@60Hz 1280x720@60Hz 1280x800@60Hz 1280x1024@60Hz 1440x900@60Hz 1600x900@60Hz 1680x1050@60Hz 1920x1080@60Hz
	Maximum Resolution	1920x1080 @ 60 Hz
	Recommended Resolution	1920x1080 @ 60 Hz
	Vertical Scan Range	50 - 60 Hz
	Horizontal Scan Range	30 - 80 kHz
	Default Color Temperature	Neutral (6500K)
	Maximum Pixel Clock Speed	170 MHz

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

Color Gamut Coverage	**NTSC**	72%
Color Management	**Factory Color Presets**	Native
	Color Space / Subsampling Support	RGB 4:4:4, YCBCR 4:4:4, YCBCR 4:2:2

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

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Environmental Features and Certifications	Mercury-free LED display backlighting	Yes, Mercury-free LED backlighting
	Arsenic-Free Display Glass	Yes
	Low Halogen	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.
	Agency Approvals and Certifications	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
	Microsoft WHQL Certification	Win 10, Win 8, Win 7
	ENERGY STAR®**	Yes
	EPEAT® Registered*	EPEAT® Silver
	China Energy Label	CEL Grade 2
	TCO Certified Edge	Yes
	TCO Certified	Yes
	SmartWay Transport Partnership - NA only	Yes (NA SKU)

*EPEAT® 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™ and the DisplayPort™ logo are trademarks owned by the Video Electronics Standards Association (VESA®) in the United States and other countries.

Contains Recycled Plastics	Contains Recycled Plastics in Back Cover	Yes
	Contains Recycled Plastics in Base/Stand	Yes
	Recyclable Packaging (Box, packing materials)	Yes

		Metric	**Imperial**
Unit Product/Package Specifications	Product Dimensions (Unpacked with stand) (W x D x H)	48.85 x 18.1 x 37.1 cm	19.23 x 7.1 x 14.6 in
	Product Dimensions (Packed) (W x D x H)	56.5 x 15.4 x 39.8cm	22.2 x 6.06 x 15.67 in
	Display Head Dimensions (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
	Base Area Footprint (w x d mm)	181x 181 mm	71.26 x 71.26 in
	Bezel Measurements	top1.5 mm side 1.5 mm bottom18.2 mm	top 0.06 in side 0.06 in bottom 0.72 in
	Product Weight (Unpacked with stand)	3.0 kg	6.6 lb
	Product Weight (Packed)	4.3 kg	9.5 lb
	Product Weight (Head Only)	2.5 kg	5.5 lb

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Pallet Information	**Pallet Dimensions** (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
	Pallet Total Weight (L x W x H)	A:362.3kg B:317.6kg	A:798.8 lbs B:700.2 lbs
	Pallet Layers	5	
	Pallet Product per Layer	A :16 B : 14	
	Total Products per Pallet	A : 80 B : 70	
	Container Load, 20-Foot	740 units	
	Container Load, 40-Foot	1540 units	
	Container Load, 40-Foot HighQ	1848 units	

Recommended Accessories*	**Description**	**Part Number**
	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

What's in the box?	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

NOTE: Included cables may vary by country

User Guide and Warranty Languages	**User Guide Languages**	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
	Warranty Languages	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

Service and Warranty	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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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:
		• IT ECO declaration • US ENERGY STAR® • TCO 5.0 • EPEAT® Silver registered in the United States. See http://www.epeat.net for registration status in your country. • US Federal Energy Management Program (FEMP)

Energy Consumption (in accordance with US ENERGY STAR® test method)	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
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

Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
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.

Additional Information	
	• 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 level, see http://www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043. • This product contains 85% post-consumer recycled plastic (by wt.) according to IEEE 1680.1-2018 standard, criterion 4.2.1.1. • This product is 98.6% recycle-able when properly disposed of at end of life.

Packaging Materials	External:	PAPER/Corrugated	992 g
	Internal:	PLASTIC/EPS (Expanded Polystyrene)	243 g
		PLASTIC/Polyethylene low density	9 g

RoHS Compliance	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. 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

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		certain phthalates—in future RoHS legislation that pertains to electrical and electronics products. 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. To obtain a copy of the HP RoHS Compliance Statement, see HP RoHS position statement.
	Material Usage	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 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 • Bis(2-Ethylhexyl) phthalate (DEHP) • Benzyl butyl phthalate (BBP) • Dibutyl phthalate (DBP) • Diisobutyl phthalate (DIBP) • 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)

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	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. 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.
	HP, Inc. 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://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842 and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

Summary

Change Log	
V1 to V2	
April 21, 2019	Added Environmental Section
V2 to V23	
September 24, 2019	Updated display panel