

Technical Specifications

HP Z24q G3 QHD Display



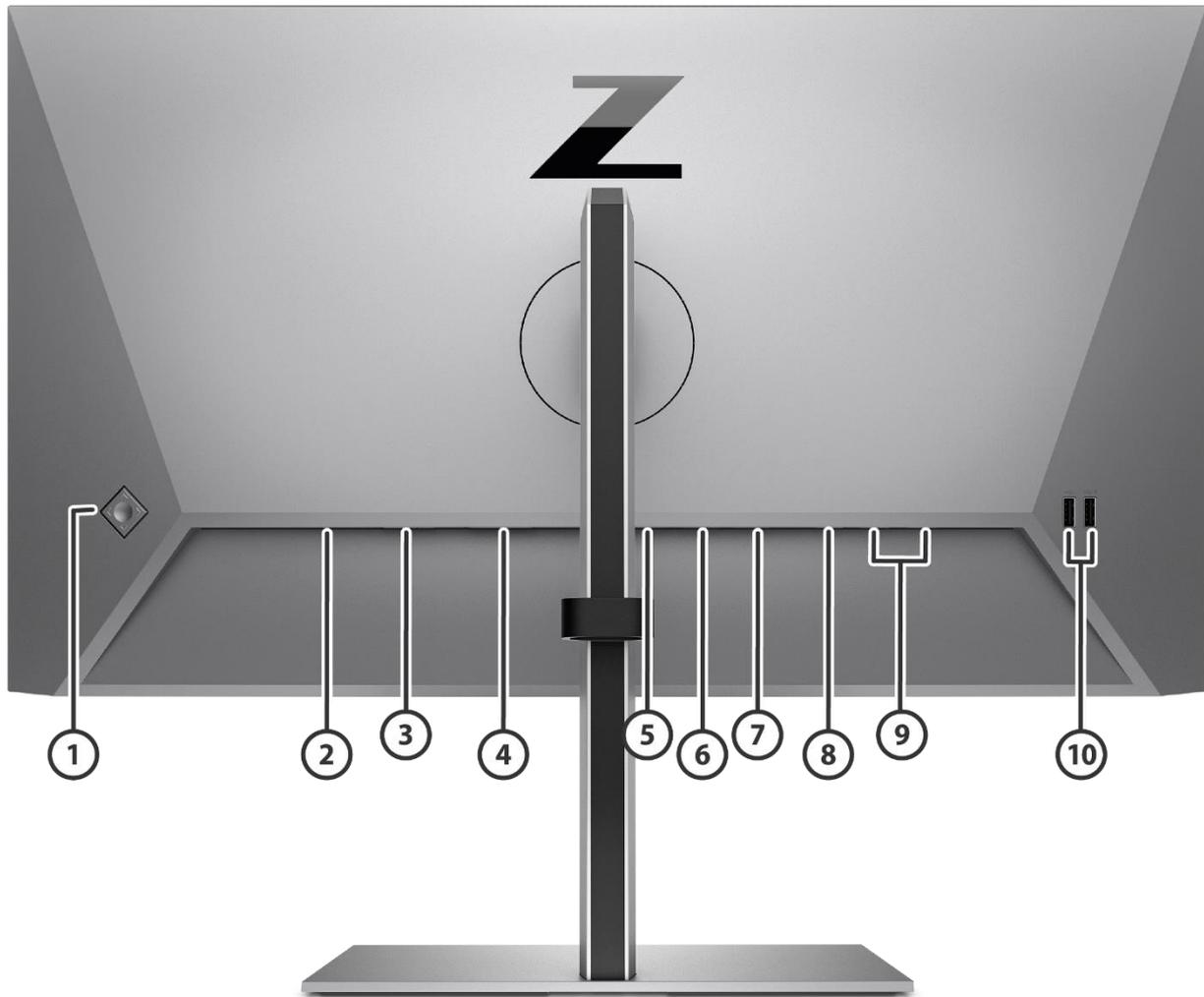
1. Power Button

Front

2. Power LED

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HP Z24q G3 QHD Display



Back

1. OSD Button
2. Security Cable Slot
3. On/Off Switch
4. Power Connector
5. HDMI 2.0 Connector
6. DisplayPort™ 1.4 connector
7. DisplayPort™ 1.4-out
8. USB-B (Hub enablement)
9. SuperSpeed USB Type-A 5Gbps signaling rate (2)
10. SuperSpeed USB Type-A 5Gbps signaling rate (2)

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Model: 4Q8N4AA

Panel Specifications	Display Size (Diagonal)	23.8 inch
	Panel Technology	IPS
	Max Refresh Rate	90Hz
	Native Resolution	QHD (2560 x 1440)
	Panel Bit Depth	10 bit (8bit + FRC)
	Aspect Ratio	16:9
	Brightness (Typical)	400nits
	HDR	HDR 400
	Contrast Ratio (Static)	1000:1
	Dynamic Contrast Ratio	10m:1
	Flicker Free	Yes
	Pixel Pitch	0.21 X 0.21
	Pixels Per Inch (PPI)	123ppi
	Display Colors	Up To 1.07 Billion Colors Supported
	Backlight Lamp Life Minimum (To Half Brightness – In Hours)	30k
	Backlight Type	Edge-Lit
	Screen Treatment	Anti-Glare
	Hardness	3h
	Haze	25
	Response Time (Typical)	5ms GtG (with overdrive)
	Horizontal Viewing Angle (Typical Cr>10)	178°
	Vertical Viewing Angle (Typical Cr>10)	178°
	Panel Active Area Metric (W X H)	52.68 X 29.64 cm
Panel Active Area Imperial (W X H)	20.74 X 11.67 in	
NOTE: Performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.		
Color	sRGB	99%
	BT.709	99%
	DCI-P3	90%
Color Management	Factory Color Calibrated	Yes
	Calibrated Color Presets	sRGB 99%
	Color Space/ Subsampling Support	RGB 4:4:4, YCBCR 4:4:4, YCBCR 4:2:2
	RGB Channel Adjust	Yes, Gain
	Default Color Temperature	Standard (6500K)
Monitor Specifications	Bezel Type	4-sided Micro Edge
	Color Of Stand	Sliver
	Color Of Head	Black/Sliver
	Tilt	-5 to +20°
	Swivel	±45°
	Pivot	±90°
	Height Adjust Range	150 mm

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Vesa Mounting	100 mm x 100 mm (bracket included)
Security Lock	Standard Security Lock Slot
Detachable Stand	Yes
Warranty	3/3/0 for LA, NA, APJ, EMEA 3/3/3 in select APJ Countries
Low Blue Light	Yes, HP Eye Ease (TÜV Low Blue Light Hardware Solution certified)
Zero Bright Dot Warranty	Yes
Management Software	HP Display Center, HP Display Manager* <i>*Host PC requires Windows 10. HP Display Center is available on the Microsoft store</i>
On Screen Display (OSD)	On Screen Display Brightness, Contrast, Color Control, Input Control, Image Control, Power Control, Menu Control, Management, Language, Information, Exit
	Native Resolution QHD (2560 x 1440) NOTE: DisplayPort 1.2 or HDMI 1.4 required to drive panel at its native resolution The video card of the connected PC must be capable of supporting 2560 x 1440 at 60 Hz with 10-bit color using one DP, HDMI. The video card of the connected PC must be capable of supporting 2560 x 1440 at 60 Hz and include 1 DP or 1 HDMI outputs to drive the monitor at the Preferred Mode
	Maximum Resolution 2560 x 1440 @90Hz
	Preset Graphic Modes/Supported Resolutions 640 x 480 @ 60Hz 720 x 400 @ 70 Hz 800 x 600 @ 60 Hz 1024 x 768 @ 60 Hz 1280 x 720 @ 60 Hz 1280 x 1024 @ 60 Hz 1440 x 900 @ 60 Hz 1600 x 900 @ 60 Hz 1600 x 1200 @ 60 Hz (Digital inputs only) 1680 x 1050 @ 60 Hz 1920 x 1080 @ 60 Hz 1920 x 1200 @ 60 Hz 2560 x 1400 @ 60 Hz (Digital inputs only) 2560 x 1400 @ 90 Hz (Digital inputs only)
	Minimum Vertical Scan Rate 50 Hz
	Maximum Vertical Scan Rate 90 Hz
	Minimum Horizontal Scan Rate 30.0 kHz
	Maximum Horizontal Scan Rate 140.0 kHz
	Maximum Pixel Clock 370.0 MHz
	User Programmable Modes Yes, 14
	User-Assignable Function Buttons Yes, 4 (6 options)
	Languages 11 (English, Spanish, German, French, Italian, Netherlands, Portuguese, Japanese, T-Chinese, S-Chinese and Russian)

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Connector Types	DisplayPort™	1 DisplayPort™ 1.4
	DisplayPort™ Out	1 DisplayPort™ 1.4-out
	HDMI	1 HDMI 2.0
	HDCP	Yes, DisplayPort and HDMI
	USB- A	4 SuperSpeed USB Type-A 5Gbps signaling rate
	USB-B (Hub enablement)	1 USB-B
Special Features	SWITCH	joystick control
	User Presets	14
	User Updateable Firmware	Yes
	Daisy Chain	Yes
Power & Operating Specs	Power Supply	Internal
	Power Source	100 – 240 VAC 50/60 Hz
	Power Consumption- Max	74W
	Energy Saving/Stand By Mode	0.5W
	Power Consumption - Typical	34W
Energy Star Data	Operational Mode at 100 VAC	16.41 W
	Operational Mode at 115 VAC	16.51 W
	Operational Mode at 230 VAC	16.51 W
EU Energy Efficiency Class (ErP LOT-5)	On-mode Power Consumption for Standard Dynamic Range (SDR)	19.5 W
	ErP LOT5 Energy Efficiency Class for Standard Dynamic Range (SDR)	
	On-mode Power Consumption for High Dynamic Range (HDR)	30
	ErP LOT5 Energy Efficiency Class for High Dynamic Range (HDR)	
Operating Conditions	Operating Temperature - Celsius	5° – 35°C
	Operating Temperature - Fahrenheit	41° – 95°F
	Non-Operating Temperature - Celsius	-34° – 60°C
	Non-Operating Temperature - Fahrenheit	-29° – 140°F
	Operating Humidity	20 – 80%
	Non-Operating Humidity	5 – 95%
	Operating Altitude	0 – 5,000 m (16,400 ft.)
	Non-operating Altitude	0 – 12,192 m (40,000 ft.)
Certifications and Compliances	Low Halogen	Yes* *External power supplies, WWAN modules, power cords, cables and peripherals excluded.
	Agency Approvals and Certifications	WW application CE,CB,KC/KCC/NOM/PSB/ICE/TUV-S/GS/ISO 9241-307/ HW Low Blue Light/ EAC/cTUVus/PSB/ISC/CCC/CEL/CECP/SEPA/TCO/TCO Certified Edge/Energy Star/ISC/VCCI/FCC/BSMI/BIS/South

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	<p>Microsoft WHQL Certification</p> <p>ENERGY STAR® Certified</p> <p>EPEAT® Registered</p> <p>Regions need to verify by country</p>	<p>Africa/UAE/Ukraine/Vietnam MEPS/Australian-New Zealand MEPS/WEEE</p> <p>Win 11</p> <p>Yes</p> <p>EPEAT® registered*</p>	
	<p>China Energy Label</p> <p>TCO Certified Edge</p> <p>TCO Certified</p>	<p>*Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit http://www.epeat.net for more information</p> <p>CEL Grade 1</p> <p>Yes</p> <p>Yes</p>	
Contains Recycled Plastics	Contains Recycled Plastics	<p>PCR 85%* and 5% Ocean Bound Plastic**</p> <p>*Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 EPEAT® standard.</p> <p>**5% ocean bound plastic by weight in each of the following components: Rear Cover, OSD holder, Bezel Chin, OSD Joystick, USB Holder, Power Button, Pivot Cover, Column front cover, Column back cover and Cable holder.</p>	
	Recycled Aluminum	<p>90%*</p> <p>*Percent of recycled metal varies by product.</p>	
	Recyclable Packaging (Box, packing materials)	<p>Outside Box and corrugated cushions are 100% sustainably sourced and recyclable*</p> <p>*100% outer box packaging and corrugated cushions made from sustainably sourced certified and recycled fibers.</p>	
Unit Product/Package Specifications	<p>Product Dimensions (Unpacked with stand) (W x D x H)</p> <p>Product Dimensions (Packed) (W x D x H)</p> <p>Display Head Dimensions (Unpacked without stand) (W x D x H)</p> <p>Base Area Footprint (w x d mm)</p> <p>Bezel Measurements (Unpacked with stand) (W x D x H)</p> <p>Product Weight (Unpacked with stand)</p> <p>Product Weight (Packed)</p> <p>Product Weight (Head Only)</p>	<p>Metric</p> <p>53.84 x 19.5x 48.93</p> <p>62.5 x 14.1 x 37.3 cm</p> <p>53.84 x 3.85 x 31.37 cm</p> <p>232 x 195 mm</p> <p>Bottom:530.2 mm</p> <p>4.8 kg</p> <p>7.4 kg</p> <p>3.6 kg</p>	<p>Imperial</p> <p>21.2 x 7.68 x 19.26</p> <p>24.61 x 5.55 x 14.69 in</p> <p>21.2 x 1.52 x 12.35 in</p> <p>9.13 x 7.7 in</p> <p>Bottom:20.87 in</p> <p>10.6 lb</p> <p>16.3 lb</p> <p>7.94 lb</p>

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Pallet Information	Pallet Dimensions (L x W x H mm)	Slip sheet: 1210 x 1070 x 2254 mm (40'ft HQ)	Slip sheet: 47.64 x 42.13 x 88.74 inch (40'ft HQ)
		Pallet: 1210 x 1070 x 2002 mm (40'ft)"	Pallet: 47.64 x 42.13 x 78.82 inch (40'ft)"
	Pallet Total Weight	Slip sheet: 626.6kg (40'ft HQ)	Slip sheet: 1381.4 lb (40'ft HQ)
		Pallet: 538kg (40'ft)"	Pallet: 1186.07 lb (40'ft)
	Pallet Layers	Slip Sheet: 6 layers (40' ft HQ)	
	Pallet Product per Layer	Pallet: 5 layers (40' ft)"	
	Total Products per Pallet	14 per layer	
	Container Load, 20-Foot	Slip Sheet: 84 sets (40' ft HQ)	
	Container Load, 40-Foot	Pallet: 70 sets (40' ft)	
	Container Load, 40-Foot HighQ	700 sets (slip sheet and pallet)	
		1470 sets (slip sheet and pallet)	
		1764 sets (slip sheet and pallet)	
What's in the box?	AC power cord (1.83m) 5.9ft HDMI 2.0 cable (1.8m) 5.9 ft USB 3.0 A-B cable (1.8m) DP 1.4 cable (1.8m) Warranty Quick Setup Poster Color Calibration Report. VESA Mount Adapter		
User Guide and Warranty Languages	User Guide Languages	Arabic, Bahasa Indonesia, Bulgarian, Chinese-S, Chinese-T, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Kazakh, Korean, Latvian, Lithuanian, Norwegian, Polish, Portuguese (Brazilian), Portuguese (Iberian), Romanian, Russian, Serbian, Slovak, Slovenian, Spanish, Swedish, Thai, Turkey, Ukrainian	
	Warranty Languages	Arabic, Bahasa Indonesia, Bulgarian, Chinese-S, Chinese-T, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Kazakh, Korean, Latvian, Lithuanian, Norwegian, Polish, Portuguese (Brazilian), Portuguese (Iberian), Romanian, Russian, Serbian, Slovak, Slovenian, Spanish, Swedish, Thai, Turkey, Ukrainian	

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ENVIRONMENTAL DATA

Eco-Label Certifications & declarations	<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"> • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT[®] Gold registered in the United States. See http://www.epeat.net for registration status in your country. • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • TCO Certified • Korea Eco-label • Japan PC Green label* 		
Sustainable Impact Specifications	<ul style="list-style-type: none"> • Ocean-bound plastic in Stand • 70% post-consumer recycled plastic • Low halogen • Outside Box and corrugated cushions are 100% sustainably sourced and recyclable • Recycled Plastic cushions 		
System Configuration	<p>The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook”.</p>		
Energy Consumption (in accordance with US ENERGY STAR® test method)	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	16.51 W	16.5 W	16.44 W
Normal Operation (Long idle)	N/A	N/A	N/A
Sleep	0.24 W	0.25 W	0.23 W
Off	0.15 W	0.17 W	0.15 W
	<p>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 PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.</p>		
Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	56.5 BTU/hr	56.4 BTU/hr	56.2 BTU/hr
Normal Operation (Long idle)	N/A	N/A	N/A
Sleep	0.8 BTU/hr	0.9 BTU/hr	0.8 BTU/hr
Off	0.5 BTU/hr	0.6 BTU/hr	0.5 BTU/hr

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	*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.		
Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the		
	Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.		
Additional Information	<ul style="list-style-type: none"> • This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/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 Gold level, see www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product is 98.2% recycle-able when properly disposed of at end of life. 		
Packaging Materials	External:	PAPER/Paper	1.670 g
	Internal:	PLASTIC/Polyethylene Expanded - EPE	0.071 g
	The plastic packaging material contains at least 57.4% recycled content.		
	The corrugated paper packaging materials contains at least 31.4% recycled content.		
RoHS Compliance	<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 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 HP RoHS position statement.</p>		
Material Usage	<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 http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html):</p> <ul style="list-style-type: none"> • Asbestos • Certain Azo Colorants • Certain Brominated Flame Retardants – may not be used as flame retardants in plastics 		

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	<ul style="list-style-type: none"> • 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)
Packaging Usage	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p> <ul style="list-style-type: none"> • 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	<p>HP 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.</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: 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.</p>

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<p>HP, Inc. Corporate Environmental Information</p>	<p>For more information about HP’s commitment to the environment:</p> <p>Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html</p> <p>Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html</p> <p>ISO 14001 certificates: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842 and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf</p>
<p>footnotes</p>	<ul style="list-style-type: none"> • Percentage of ocean-bound plastic contained in each component varies by product • Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard. • External power supplies, WWAN modules, power cords, cables and peripherals excluded. • 100% outer box packaging and corrugated cushions made from sustainably sourced certified and recycled fibers. • Plastic cushions are made from >90% recycled plastic.

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Summary

Change Log

Change Log			
May 26, 2022	V1 to V2	Added	Environmental Data
	V1 to V2		