QuickSpecs

Technical Specifications

HP Engage 16t FHD Monitor
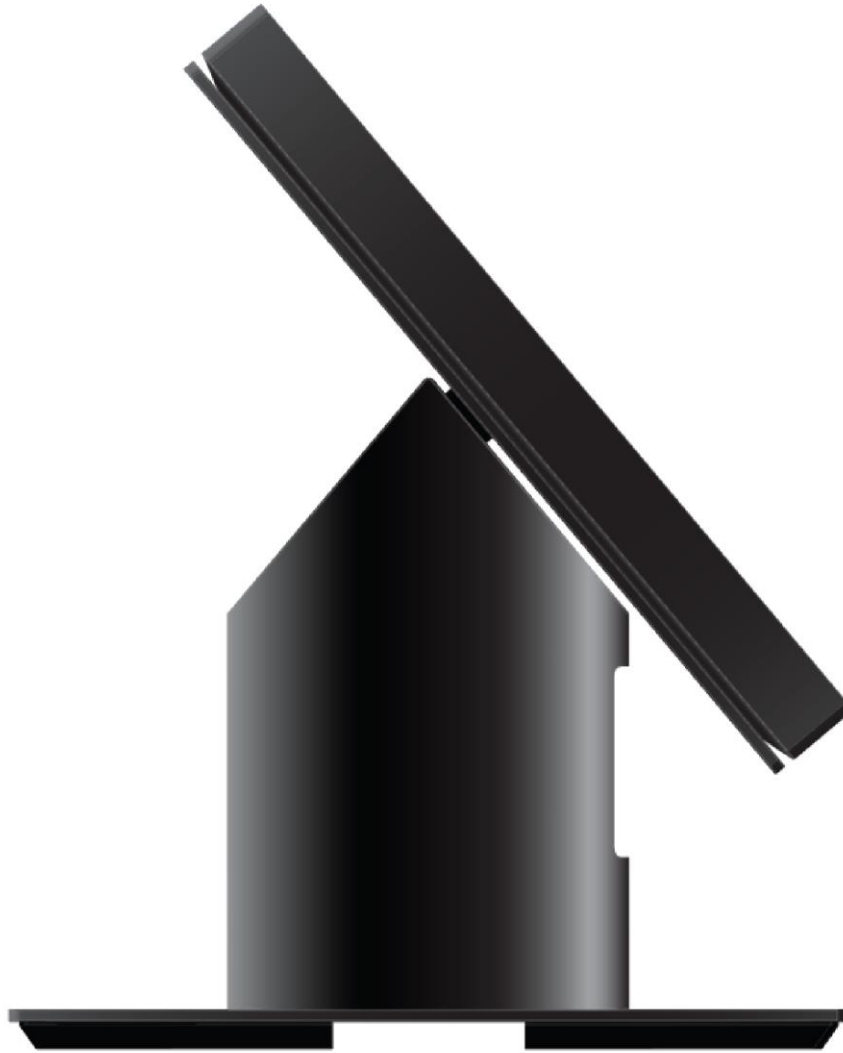**HP Engage 16t MSR FHD Monitor**

Front

1.	Power Button	**3.**	MSR LED (HP Engage 16t FHD MSR Monitor Only)
2.	OSD Buttons		

Technical Specifications

HP Engage 16t FHD Monitor
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Side

Technical Specifications

Models: 2D9X0AA; 2D9Z4AA

Panel Specifications		
	Display Size (Diagonal)	15.6"
	Panel Technology	AHVA
	Max Refresh Rate	60 Hz
	Native Resolution	1920 x 1080
	Panel Bit Depth	8 bit
	Aspect Ratio	16:9
	Brightness (Typical)	400 nits
	Contrast Ratio (Static)	800:1
	Pixel Pitch	0.17925mm
	Pixels Per Inch (PPI)	141 PPI
	Backlight Lamp Life Minimum (To Half Brightness - In Hours)	50,000
	Backlight Type	Edge-lit
	Screen Treatment	Anti-glare
	Hardness	7H
	Response Time (Typical)	25ms on/off
	Horizontal Viewing Angle (Typical CR>10)	178°
	Vertical Viewing Angle (Typical CR>10)	178°
	Panel Active Area Metric (W X H)	34.42 x 19.36
	Panel Active Area Imperial (W X H)	13.55 x 7.62

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	45%

Color Management		
	Color Space/ Subsampling Support	RGB 4:4:4
	Rgb Channel Adjust	Yes, Gain
	Default Color Temperature	Neutral (6500K)

Monitor Specifications		
	Bezel Type	3-sided Micro Edge
	Color Of Stand	Black
	Color Of Head	Black
	Tilt	15° to 40°
	VESA Mounting	100 mm x 100 mm
	Detachable Stand	Yes
	Low Blue Light	Yes (TÜV certified)
	Touch Technology	Projected Capacitive technology 10 point multi-touch

Multimedia		
	Webcam	5M resolution (2592 x1944), IR, RGB
	Microphone	Yes
	Speaker Output Power	2 x 1.5W
	Display Software	HP Display Center

On Screen Display (OSD)		
	Native Resolution	Full HD (1920 x 1080)*
		*Apply to high resolution and/or high frame rate displays only. CONFIRM WITH EPM whether disclaimer applies.
	Maximum Resolution	1920x1080@60Hz
	Preset Graphic Modes/Supported Resolutions	640 x 480 @ 60Hz
		720 x 400 @ 70Hz
		800 x 600 @ 60 Hz
		1024 x 768 @ 60 Hz
		1280 x 720 @ 60 Hz

Technical Specifications

		1280 x 800 @ 60Hz
		1280 x 1024 @ 60 Hz
		1366 x 768 @ 60 Hz
		1440 x 900 @ 60 Hz
		1600 x 900 @ 60 Hz
		1600 x 1200 @ 60 Hz
		1680 x 1050 @ 60 Hz
		1920 x 1080 @ 60 Hz
	Minimum Vertical Scan Rate	50 Hz
	Maximum Vertical Scan Rate	76 Hz
	Minimum Horizontal Scan Rate	30.0 kHz
	Maximum Horizontal Scan Rate	80.0 kHz
	Maximum Pixel Clock	170.0 MHz
	Audio	Built-in speakers
	Languages	10 (English, Spanish, German, French, Italian, Netherlands, Portuguese, Japanese, T-Chinese and S-Chinese)
Connector Types	**DisplayPort™**	1 DisplayPort™ 1.2
	HDCP	Yes, USB-C® Alt mode DP
	USB-C® Video Input	1 USB-C® (DisplayPort™ 1.2, power delivery up to 65W)
	AUDIO PORT	1 Headphone Out Combo Jack
Special Features	**SWITCH**	Menu, Minus, ("-"), Plus ('+'), Exit, Power
	User Presets	10
	User Updateable Firmware	Yes
	Integrated NFC	Yes
Power & Operating Specs	**Power Supply**	External
	Power Source	100 – 240 VAC 50/60 Hz
	Power Consumption- Max	65W
	Energy Saving/Stand By Mode	0.5W
	Power Consumption- Typical	20W
ENERGY STAR DATA	**Operational Mode at 100 VAC**	8.6W
	Operational Mode at 115 VAC	8.6W
	Operational Mode at 230 VAC	8.8W
EU ENERGY EFFICIENCY CLASS (EC1062)	**On-mode Power Consumption (EC 1062/2010) - (EC 2019/2013)**	10W
	Annual Power Consumption (EC 1062/2010) - (EC 2019/2013)	10KWh
	Energy Efficiency Class (EC 1062/2010) - (EC 2019/2013)	E
Operating Conditions	**Operating Temperature - Celsius**	5° – 35°
	Operating Temperature - Fahrenheit	41° – 95°
	Non-operating Temperature - Celsius	−20° – 60°
	Non-operating Temperature - Fahrenheit	−4° – 140°
	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.)

Technical Specifications

Environmental Features and Certifications	Mercury-free LED display backlighting	Yes	
	Arsenic-Free Display Glass	Yes	
	Low Halogen	Yes	
	Agency Approvals and Certifications	CE, CB, KC/KCC/NOM/ICE/TUV-S/ISO 9241-307/ EAC/UL/CSA/CCC/CEL/CECP/Energy Star/VCCI/FCC/BSMI/Vietnam MEPS/Australian-New Zealand MEPS/WEEE	
	Microsoft WHQL Certification	Win10	
	ENERGY STAR® Certified	Yes	
	EPEAT® Registered	Yes*	
		*Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit http://www.epeat.net for more information	
	China Energy Label	CEL Grade 2	

Recycled Plastics	Contains Recycled Plastics	ABS 85%	
	Recyclable Packaging (Box, packing materials)	EPE Cushion 90%	

		Metric	**Imperial**
Unit Product/Package Specifications	Product Dimensions (Unpacked with stand) (W x D x H)	39.14 x 26.93 x 22 cm	15.4 x 10.6 x 8.66 in
	Product Dimensions (Packed) (W x D x H)	47.6 x 32.6 x 39.6 cm	18.74 x 12.83 x 15.59 in
	Display Head Dimensions (Unpacked without stand) (W x D x H)	39.14 x 24.08 x 2.72 cm	15.4 x 9.48 x 1.07 in
	Base Area Footprint (w x d mm)	305 x 220 mm	12 x 8.66 in
	Bezel Measurements	Top: 22 mm Side: 22 mm Bottom: 22 mm	Top: 0.86 in Side: 0.86 in Bottom: 0.86 in
	Product Weight (Unpacked with stand)	4.28 kg	9.43 lb
	Product Weight (Packed)	6.78 kg	14.95 lb
	Product Weight (Head Only)	2.45 kg	5.4 lb

		Metric	**Imperial**
Pallet Information	Pallet Dimensions (L x W x H)	1200 x 1000 x 118 mm	47.2 x 39.4 x 4.6 in
	Pallet Total Weight	260 kg	573.2 lbs
	Pallet Layers	5	
	Pallet Product per Layer	7	
	Total Products per Pallet	35	
	Container Load, 20-Foot	350 units	
	Container Load, 40-Foot	735 units	
	Container Load, 40-Foot HighQ	882 units	

What's in the box?	HP Engage 16t FHD Monitor (2D9X0AA/8Q3N2AA ***)	HP Engage 16t FHD Monitor DisplayPort cable (1.8 m/6 ft) USB-C to USB-C cable (1.8m/6 ft) USB-C to USB-A cable (1.8m/6 ft) Power Adapter Documentation
	HP Engage 16t MSR FHD Monitor (2D9Z4AA/8Q3W5AA ***)	HP Engage 16t MSR FHD Monitor DisplayPort cable (1.8 m/6 ft)

Technical Specifications

<table>
<tr><td></td><td>
USB-C to USB-C cable (1.8m/6 ft)
USB-C to USB-A cable (1.8m/6 ft)
Power Adapter
Documentation
*** If attaching to Engage Flex Pro G2 or Engage Flex Pro C G2, please order part number 8Q3N2AA or 8Q3W5AA
</td></tr>
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Compatible Accessories	4A2F9AA – HP Engage 16t Column Stand 4A2G0AA – HP Engage 16t VESA Plate
Service and Support	Three (3) year limited warranty with advance exchange.
Key Features and Benefits	Deliver superb visibility and lasting value with 400 nits of brightness and a LED half life of ≥ 50,000 hours. Plug your HP Engage 16t/16t MSR either into an Engage platform or local outlet to power through transactions. Rest easy with a durable display that undergoes Military Standard testing (MIL-STD)[1], resists dust and liquid intrusion (IP44 rated)[2]. 1. Military Standard testing (MIL-STD-810H) is not intended to demonstrate fitness of U.S. Department of Defense (DoD) contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack. 2. IP44 disclaimer: Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack. Built with sustainability in mind with ocean-bound and recycled plastics, ENERGY STAR® 8.0 certification, and recycle-friendly metals.[3] 3. 5% ocean bound plastics in speaker enclosure. 100% outer box/corrugate cushion packaging made from sustainably sourced certified and recycled fiber. Fiber cushions made from 100% recycled wood fiber and organic material. Any plastic cushions are made from >90% recycled plastic. Excludes plastic bags and plastic foam sheeting. Adapt to an ever-shifting marketplace with touch functionality featuring water drop recognition

Technical Specifications

Environmetal Data

HP Engage 16t FHD Monitor	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 EDGE • EPEAT® Gold with Climate+ registered configurations available. See http://www.epeat.net for registration status and tier levels by country.* *Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit http://www.epeat.net for more information • US Federal Energy Management Program (FEMP)
	Sustainable Impact Specifications	• 85 % post-consumer recycled plastic[1] • Low halogen[2] • Outside Box and corrugated cushions are 100% sustainably sourced and recyclable[3] 1. Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard. 2. External power supplies, WWAN modules, power cords, cables and peripherals are not low halogen. 3.100% outer box packaging made from sustainably sourced certified and recycled fibers. Fiber cushions made from 100% recycled wood fiber and organic material. Any plastic cushions are made from >90% recycled plastic.

Energy Consumption (in accordance with US ENERGY STAR® test method)	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation	8.60 W	8.80 W	8.60 W
Sleep	0.22 W	0.26 W	0.22 W
Off	0.13 W	0.17 W	0.13 W
Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation	29 BUT/hr	30 BUT/hr	29 BUT/hr
Sleep	1 BUT/hr	1 BUT/hr	1 BUT/hr
Off	0.5 BUT/hr	0.6 BUT/hr	0.5 BUT/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 Gold 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 is 96.4% recycle-able when properly disposed of at end of life.

Technical Specifications

Packaging Materials	**External:**	PAPER/Paper	722 g
		PAPER/Corrugated	396 g
		PLASTIC/Polyethylene Expanded - EPE	74 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 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		

Technical Specifications

		• 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	HP Inc. 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 HP 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

QuickSpecs

HP Engage 16t FHD Monitor
HP Engage 16t MSR FHD Monitor

Technical Specifications

HP Engage 16t MSR FHD Monitor	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 EDGE • EPEAT® Gold with Climate+ registered configurations available. See http://www.epeat.net for registration status and tier levels by country.* *Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit http://www.epeat.net for more information • US Federal Energy Management Program (FEMP)		
	Sustainable Impact Specifications	• 85 % post-consumer recycled plastic[1] • Low halogen[2] • Outside Box and corrugated cushions are 100% sustainably sourced and recyclable[3] 1. Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard. 2. External power supplies, WWAN modules, power cords, cables and peripherals are not low halogen. 3. 100% outer box packaging made from sustainably sourced certified and recycled fibers. Fiber cushions made from 100% recycled wood fiber and organic material. Any plastic cushions are made from >90% recycled plastic.		
	Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
	Normal Operation	8.60 W	8.80 W	8.60 W
	Sleep	0.22 W	0.26 W	0.22 W
	Off	0.13 W	0.17 W	0.13 W
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	Packaging Materials	External:	PAPER/Paper	944 g
			PAPER/Corrugated	774 g

Technical Specifications

		PLASTIC/Polyethylene Expanded - EPE	220 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 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.	
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	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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	End-of-life Management and Recycling	HP Inc. 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 HP 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			
August 10, 2021	V1 to V2	Added	Cable length in What's in the box? Section
October 12, 2021	V2 to V3	Updated	VESA Mounting in Monitor Specifications
November 9, 2021	V3 to V4	Added	Service and Support, Key Features and Benefits section
November 18, 2021	V4 to V5	Added	Integrated NFC in Special Features section
December 10, 2021	V5 to V6	Updated	What's in the box? Section
January 18, 2022	V6 to V7	Updated	Webcam specs
November 23, 2023	V7 to V8	Updated	What's in the box? Section
January 25, 2024	V8 to V9	Updated	Environmetal Data section
May 31, 2024	V9 to V10	Update	Monitor Specifications section update