

Overview

HP VH24 23.8-inch Monitor



1. **Menu:** Opens, selects or exits the OSD menu.
2. **Minus "-":** If the OSD menu is on, press to navigate backward through the OSD menu and decrease adjustment levels.
3. **Plus "+/Input:** Select input source. If the OSD menu is on, press to navigate forward through the OSD menu and increase adjustment levels.
4. **OK/Auto:** If the OSD menu is on, press to select the highlighted menu item. If the OSD menu is inactive, press to activate the auto adjustment feature to optimize the screen image.
5. **Power:** Turns the monitor on or off. LED Indicators: fully powered = green; sleep mode = amber; sleep timer mode = flashing amber.
6. **Power Input**
7. **VESA Mounting:** Available upon removal of column stand
8. **Security lock slot**
9. **DisplayPort™ v1.2 Input**
10. **DVI-D Input**
11. **VGA Input**



Use two HP VH24 23.8-inch monitors with an HP Adjustable Dual Display Stand (AW664AA) for a small footprint, high productivity work solution.

(Multi-monitor support depends on your PC capability. Monitors, stands, keyboard, mouse and notebook are sold separately.)

Technical Specifications

Part number

M1T03AA

Technical Specifications

Panel	Type	IPS with LED backlight
	Viewable Image Area	60.452 cm (23.8 in) widescreen; diagonally measured
	Active Area (W x H)	52,704 x 29,646 cm (20.74 x 11.67 in)
	Aspect Ratio	16:9
	Viewing Angle (typical)	Up to 178° horizontal/178° vertical (1000:1 minimum contrast ratio)
	Brightness (typical)*	250 cd/m ²
	Contrast Ratio (typical)*	1000:1
	Dynamic Contrast Ratio (typical)*	5,000,000:1
	Response Rate (typical)***	5 ms (on/off)
	Pixel Pitch	0.2745 mm
	Pixels Per Inch	92.56 PPI
	Hardness Rating	3H
	Backlight Lamp Life * (to half brightness)	30K hours minimum
	Color Gamut *	72% (typical)
	Color Support **	Can display up to 16.7 million colors
	<p>*Performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower. ** With the use of FRC technology. ***Product default is 14 ms response time and can be adjusted to as low as 5 ms in the display menu. See user guide for more information. All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.</p>	
On Screen Display (OSD)	Buttons or Switches	Menu, Minus ("-"), Plus ("+")/Input Control, OK/Auto, Power
	Languages	10 (English, Spanish, German, French, Italian, Netherlands, Portuguese, Japanese, T-Chinese and S-Chinese)
	User Controls	Brightness, Contrast, Color Control, Input Control, Image Control, Power Control, Menu Control, Management, Language, Information, Exit
Signal Interface/ Performance	Horizontal Frequency	30 to 80 kHz
	Vertical Frequency	50 to 75 Hz
	Native Resolution	1920 x 1080 @ 60Hz
	Preset VESA Graphic Modes (non-interlaced)	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 800 @ 60 Hz 1280 x 1024 @ 60 Hz 1440 x 900 @ 60 Hz 1600 x 900 @ 60 Hz

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		1680 x 1050 @ 60Hz	
		1920 x 1080 @ 60Hz	
	Maximum Pixel Clock Speed	170 MHz	
	User Programmable Modes	Yes, 10	
	Anti-Glare	Yes	
	Default Color Temperature	6500 K	
Video/Other Inputs	Plug and Play	Yes	
	Input Signal	VGA, DVI-D, DisplayPort™ v1.2 (HDCP support on DVI and DisplayPort™)	
	USB Hub	None	
	Video Cables	VGA, DVI-D	
	Video Cable Lengths	1,8 m (5.9 ft)	
Power	Power Supply	Internal	
	Input Power	100 - 240 VAC (50/60 Hz)	
	Typical Power Consumption	20 W	
	Maximum	30 W	
	Power Saving	0.5 W	
	Power Cable Length	1,9 m (6.2 ft)	
	Operational Mode at 100 VAC	54.15 kWh/year	
	Operational Mode at 115 VAC	54.15 kWh/year	
	Operational Mode at 230 VAC	54.15 kWh/year	
Mechanical	Dimensions (W x D x H)	Unpacked w/stand	55,72 x 21,8 x 50,59 cm (21.76 x 8.58 x 19.92 in)
		Unpacked w/o stand (head only)	55,72 x 4,98 x 34,22 cm (21.76 x 1.96 x 13.47 in)
		Packaged	65,5 x 25 x 42 cm (25.79 x 9.84 x 16.54 in)
	Weight	Head Only	3,8 kg (8.37 lb)
		Unpacked	5,9 kg (13.01 lb)
		Packaged	8,0 kg (17.64 lb)
	Tilt Range	-5° to +23° vertical	
	Swivel Range	Yes, 360°	
	Height Adjustable	Yes, 100 mm	
	Pivot Rotation	Yes, 90° clockwise	
Base	Detachable, ships detached		
Environmental	Temperature – Operating	5° to 35° C (41° to 95° F)	
	Temperature – Non-operating	-20° to 60° C (-4° to 140° F)	
	Humidity – Operating	20% to 80% non-condensing	
	Humidity – Non-operating	5% to 95%, 38.7° C max wet-bulb	
	Altitude – Operating	0 to 5,000 m (0 to 16,400 ft)	
	Altitude – Non-operating	0 to 12,192 m (0 to 40,000 ft)	
	White LED Backlights	Yes	
	CCFL Panel	No	

Technical Specifications

	Arsenic-Free Display Glass	Yes		
	Low Halogen⁴	Yes		
	Mercury-Free Display Backlights	Yes		
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: <ul style="list-style-type: none"> • IT ECO declaration • TCO 7.0 		
	Energy Consumption	115VAC, 50Hz	230VAC, 50Hz	100VAC, 50Hz
	Normal Operation	14.58 W	14.66 W	14.76 W
	Sleep	0.28 W	0.31 W	0.27 W
	Off	0.21 W	0.23 W	0.2 W
	Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
	Normal Operation	50 BTU/hr	50 BTU/hr	50 BTU/hr
	Sleep	1 BTU/hr	1 BTU/hr	1 BTU/hr
	Off	1 BTU/hr	1 BTU/hr	1 BTU/hr
		*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.		
	Additional Information	<ul style="list-style-type: none"> • 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). • Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043. • This product contains 46.9% post-consumer recycled plastic (by wt.) • This product is 98.6% recycle-able when properly disposed of at end of life. 		
	Packaging Materials	External:	PAPER/Corrugated	1164 g
			COMPOSITE/paper/carton+plastic	3 g
		Internal:	PLASTIC/Other	1 g
			PLASTIC/Polyethylene high density - HDPE	28 g
			PLASTIC/Polystyrene Expanded - EPS	422 g
	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		

Technical Specifications

Material Usage

where it is widely recognized that there is no technically feasible alternative (as indicated by an exemption under the EU RoHS Directive).

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/pdf/gse.pdf>):

- 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.

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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.

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://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842>

and

<http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf>

Options (sold separately)

HP LCD Monitor Quick Release – Part number EM870AA¹

An easy-to-use, VESA-compliant, LCD monitor mounting solution that allows you to quickly and securely attach an LCD monitor to a variety of stands, brackets, arms or wall mounts. For more information, refer to this product's QuickSpecs document.

HP Business PC Security Lock V2 Kit — Part number N3R93AA

Help prevent chassis tampering and secure your PC and display in workspaces and public areas. Simply route the cable through the PC's lock slot and your display, anchor to a desk, table, or other fixed surface, and lock with your individual key. A master key configuration is also available upon request.

HP Single Monitor Arm – Part number BT861AA

The flexible design of the HP Single Monitor Arm provides a seemingly endless range of display adjustments with an amazing 13 inches of lift, 50 degrees of tilt, and 360 degrees of pan and rotation – all at your fingertips -- helping you stay comfortable and productive throughout the day.

HP Adjustable Dual Display Stand – Part Number AW664AA

Premium space-saving dual screen solution provides access to more monitor real estate and makes it possible to manage multiple applications simultaneously. Weight adjustable for dual monitors from 17-24". Rotate displays into portrait/landscape positions.

HP PC Mounting Bracket for Monitors – Part Number N6N00AA

Customize an altogether better solution with the HP PC Mounting Bracket for Monitors, which lets you attach your HP Desktop Mini, HP Chromebox, or select HP Thin Client directly behind your VH24 display.

What's in the box?

Monitor and accessories

HP VH24 23.8-inch Monitor
AC power cord **1,9 m** (6.2 ft)
VGA cable **1,8 m** (5.9 ft)
DVI cable **1,8 m** (5.9 ft)

Documentation

CD and printed documentation

Software

HP Display Assistant is a software utility that allows you to quickly and accurately adjust the display settings and save the configurations that are best suited for you and your environment.

Technical Specifications

Other	User Guide Languages	English, Arabic, B. Portuguese, Czech, Danish, French Canadian, Finnish, French, Greek, German, Hungarian, Hebrew, Italian, Kazakh, Spanish, Dutch Norwegian, Polish, Portuguese, Russian, Swedish, Slovak, Slovenian, Turkish
	Warranty Languages	English, Arabic, B. Portuguese, Czech, Danish, French Canadian, Finnish, French, Greek, German, Hungarian, Hebrew, Italian, Kazakh, Spanish, Dutch Norwegian, Polish, Portuguese, Russian, Swedish, Slovak, Slovenian, Turkish
	Bezel Color	Black
	VESA External Mounting	Yes, one set of standard 4-hole pattern, 100 mm.
	Security Lock-Ready	Yes, one security lock slot available
	Country of Origin	China
Certifications and Compliance	cTUVus, FCC, ICES, TCO, SmartWay - NA only, Microsoft WHQL Certification (Windows 7, 8, 10), IEC60950-1	
Compatibility	Compatible with platforms using the VESA standard video modes. Recommended for use with HP products.	
Service and Warranty	Warranty Protected by HP, including a 4-year standard limited warranty. Optional HP Care Pack Services are extended service contracts that extend your protection beyond the standard warranties. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc . ²	

1. The HP Quick Release has been designed to support a maximum of up to 24 lbs (10.9 kg) for all devices mounted. Because mounting surfaces vary widely and the final mounting method and configuration may vary, mounting fasteners are not supplied (other than the VESA-compliant screws). HP recommends that you consult with a qualified engineering, architectural or construction professional to determine the appropriate type and quantity of mounting fasteners required for your application and to ensure that your mounting solution is properly installed to support applied loads.

2. Service levels and response times for HP Care Pack Services may vary depending on your geographic location. Service starts from date of hardware purchase. Restrictions and limitations apply. See www.hp.com/go/cpc for details..

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

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Change Log

Summary of Changes

Date of change:	Version History:		Description of change:
01/18/2017			Removed Discontinued PV606AA, and replaced with N3R93AA
01/18/2017	1		Updated Packaged Weight to 17.64 lbs
02/07/2017	2		Corrected Warranty
02/15/2017	3		Added Environmental Section
02/15/2017	3		Added "USB Hub" Row
02/15/2017	3		Removed 4/0/0 language from warranty
02/15/2019	4		Certifications
05/28/2019	5		EPEAT
09/30/2019	6		Country of Origin
12/09/2019	7		Energy Star