QuickSpecs

Overview

HP VH22 21.5-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.

6. **Power LED**: fully powered = green; sleep mode = amber; sleep timer mode = flashing amber.

(Multi-monitor support depends on your PC capability.

Use two HP VH22 21.5-inch monitors with an HP Adjustable Dual Display Stand (AW664AA) for a small footprint, high productivity work solution.

Overview

Monitors, stands, keyboard, mouse and notebook are sold separately.)

Overview

Part numbers

V9E67AA, V9E67A6 – Americas

X0N05AA - EMEA

Introduction

Invest wisely, boost productivity, and work comfortably with the business-class HP VH22 21.5-inch Display, which has Full HD resolution, four-way adjustable comfort, and connectivity for your legacy and current technology.

Key Benefits

- Breeze through your day and achieve optimal productivity when you set the height, tilt, swivel, and pivot for the way you work best.
- View your everyday content on the 21.5-inch diagonal panel with sharp 1920 x 1080 FHD resolution.[1]
- Get legacy and current compatibility with VGA, DVI, and DisplayPort connections.
- Attach your HP Desktop Mini, HP Chromebox or select HP Thin Client directly behind the display[2] for an integrated, affordable workspace that's perfect for small spaces. Or, use the integrated VESA mount to place the display on a wall or stand.[3]
- Reduce power consumption and help lower your costs with an energy-smart, EPEAT® Gold registered[4] design.
- Design the screen for how you work with HP Display Assistant software, which enables screen partitioning and helps deter theft by deactivating a monitor that's disconnected without approval.
- Create a complete solution with HP accessories[5] designed and tested to work with your display.
- Customize your display's position with adjustable tilt settings and wide 178-degree viewing angles.
- Rest assured that your IT investment is supported by an HP standard one - year (EMEA Region) or four-year (Americas Region) limited warranty (varies by region). To extend your protection, select optional HP Care Packs.[6]

1. All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
2. Sold separately. See product QuickSpecs for exact compatibility. HP Quick Release required and sold separately. Mounting hardware sold separately.
3. Mounting hardware sold separately.
4. EPEAT® registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status in your country.
5. Each sold separately.
6. Sold separately. 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. HP Services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.

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Panel	Type	TN with LED backlight
	Viewable Image Area	**55 cm** (21.5 in) widescreen; diagonally measured
	Active Area (W x H)	**47,66 x 26,81 cm** (18.76 x 10.55 in)
	Aspect Ratio	16:9
	Viewing Angle (typical)	Up to 170° horizontal/160° vertical (10:1 minimum contrast ratio)
	Brightness (typical)*	250 cd/m²
	Contrast Ratio (typical)*	1000:1
	Dynamic Contrast Ratio (typical)*	5,000,000:1
	Response Rate (typical)*	5 ms (on/off)
	Pixel Pitch	0.248 mm
	Pixels Per Inch	102 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

*All 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.

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

Signal Interface/ Performance	Horizontal Frequency	24 to 80 kHz
	Vertical Frequency	50 to 76 Hz
	Native Resolution	1920 x1080 @ 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 x1080 @ 60Hz	
	Maximum Pixel Clock Speed	170 MHz	
	User Programmable Modes	Yes, 11	
	Anti-Glare	Yes	
	Default Color Temperature	6500 K	
Video/Other Inputs	**Plug and Play**	Yes	
	Input Signal	VGA, DVI-D, DisplayPort (HDCP support on DVI and DisplayPort)	
	Video Cables	VGA, DVI	
	Video Cable Lengths	**1,8 m** (5.9 ft)	
Power	**Power Supply**	Internal	
	Input Power	100 - 240 VAC (50/60 Hz)	
	Typical Power Consumption	22.5 W	
	Maximum	28.5 W	
	Power Saving	0.5 W	
	Power Cable Length	**1,9 m** (6.2 ft)	
Mechanical	**Dimensions** (W x D x H)	**Unpacked w/stand**	**50,76 x 19,29 x 44,64 cm** (20.00 x 7.59 x 17.58 in)
		Unpacked w/o stand (head only)	**50,76 x 4,82 x 44,64 cm** (20.00 x 1.90 x 17.68 in)
		Packaged	**58,9 x 18,7 x 4,2 cm** (23.19 x 7.36 x 1.65 in)
	Weight	**Head Only**	**2,8 kg** (6.16 lb)
		Unpacked	**4,5 kg** (9.92 lb)
		Packaged	**6,23 kg** (13.73 lb)
	Tilt Range	-5° to + 25° vertical	
	Swivel Range	Yes, 360°	
	Height Adjustable	Yes, 100 mm	
	Pivot Rotation	Yes, 90 degree clockwise	
	Base	Detachable, ships detatched	
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, 404 ft)	
	Altitude – Non-operating	**0 to 12,192 m** (0 to 40,000 ft)	
	White LED Backlights	Yes	
	CCFL Panel	No	

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	Arsenic-Free Display Glass	Yes		
	Low Halogen[4]	Yes		
	Mercury-Free Display Backlighting	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: • IT ECO declaration • US ENERGY STAR® • TCO 7.0 • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country

Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation	15.68 W	15.73 W	15.73 W
Sleep	0.38 W	0.38 W	0.4 W
Off	0.28 W	0.28 W	0.3 W

Heat Dissipation*	**115VAC, 60Hz**	**230VAC, 50Hz**	**100VAC, 60Hz**
Normal Operation	54 BTU/hr	54 BTU/hr	54 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	• 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 www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043. • This product contains 36.3% post-consumer recycled plastic (by wt.) • This product is 98.4% recycle-able when properly disposed of at end of life.

Packaging Materials	**External:**	PAPER/Cardboard & misc	880 g
	Internal:	PLASTIC/EPE-Expanded Polyethylene	340 g
		PLASTIC/Polyethylene low density	80 g

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

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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. |

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 |

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Options (sold separately)	**HP LCD Monitor Quick Release –** **Part number EM870AA**[1]	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 Kit **– Part number PV606AA**	Attaches to the rear of the PC with a six-foot steel cable that can be used to secure a PC or peripherals such as mice, keyboards, monitors or USB security devices to protect them against unauthorized removal by physically connecting the system to an anchor point.
	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 VH22 display.
What's in the box?	**Monitor and accessories**	HP VH22 21.5-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.
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	Mexico and China
Certifications and Compliance		EPEAT® Gold (select regions)[3], ENERGY STAR® qualified, CE, CB, TUV-S, ISO 9241-307, TUV Bauart, cTUVus, Mexico CoC, CCC, TCO, China Energy Label (CEL) Grade 1, SmartWay - NA only, Microsoft WHQL Certification (Windows 10)

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Compatibility	Compatible with platforms using the VESA standard video modes. Recommended for use with HP products.
Service and Warranty	Protected by an HP standard one - year (EMEA Region) or four-year (Americas Region) limited warranty (varies by region). Certain restrictions and exclusions apply.*Optional Care Pack Services are extended service contracts which go beyond your standard warranties.[2]
	*Warranty term may vary by region.

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. EPEAT® Gold where HP registers commercial display products. See www.epeat.net for registration status in your country.
4. External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.

Change Log

Summary of Changes

Date of change:	Version History:	Status	Description of change:
May 3, 2016	From v1 to v2	Update	Launch
July 13, 2016	From v2 to v3	Update	Added environmental data