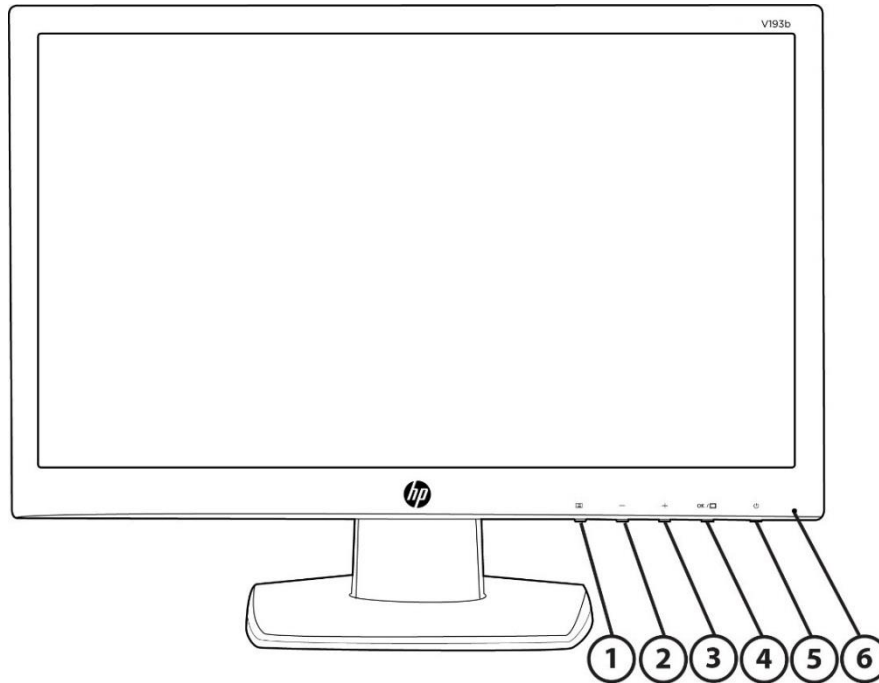
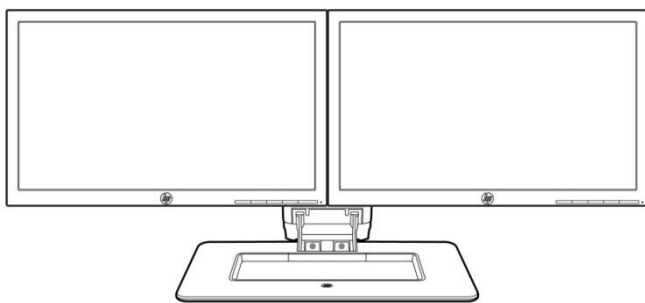


Overview

HP V193b 18.5-inch LED Backlit 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 "+":** Select input source. If the OSD menu is on, press to navigate forward through the OSD menu and increase adjustment levels.
- 4. OK:** 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.
Monitors and stands are sold separately.)

Use two HP V193b 18.5-inch LED Backlit monitors with an HP Adjustable Dual Display Stand (AW664AA) for a small footprint, high productivity work solution.

Overview

Part number

L4S23AA

Introduction

Get quality presentation features at a price point that doesn't break the bank with the HP V193b 18.5-inch LED Backlit Monitor, a sleek, thin-profile monitor in a compact, space-saving screen size with an unbelievably low price point.

Key Benefits

- Enjoy crisp, clear views of your documents and e-mail with 1366 x 768 resolution, 5M:1 dynamic contrast ratio, and 5 ms response time on an 18.5-inch diagonal screen.* Quickly and easily connect to your devices with a VGA input.
- Customize your display's position with adjustable tilt settings and viewing angles.
- Free up valuable desk space and take the monitor completely off the desk; the integrated 100-mm standard VESA pattern supports wall or swing arm mounting with the HP Quick Release***.
- Reduce power consumption and help lower your costs with an intelligent, energy-efficient design that is ENERGY STAR® qualified and EPEAT® Silver registered.** The display also includes mercury-free display backlights and arsenic-free display glass.
- Rest assured that your IT investment is supported by a three-year standard limited warranty. To extend your protection beyond the standard warranties, select optional HP Care Pack Services.

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

** EPEAT® Silver where HP registers commercial display products. See www.epeat.net for registration status in your country.

*** Each accessory sold separately. Mounting hardware sold separately.

Technical Specifications

Panel	Type	TN w/LED backlight
	Viewable Image Area	47 cm (18.5 in) widescreen; diagonally measured
	Active Area (W x H)	40,98 x 23,04 cm (16.13 x 9.07 in)
	Aspect Ratio	16:9
	Viewing Angle (typical)	Up to 90° horizontal/65° vertical (10:1 minimum contrast ratio)
	Brightness (typical)*	200 cd/m ²
	Contrast Ratio (typical)*	600:1
	Dynamic Contrast Ratio (typical)*	5,000,000:1
	Response Rate (typical)*	5 ms (on/off)
	Pixel Pitch	0.3 mm
	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.

Technical Specifications

On Screen Display (OSD)	Buttons or Switches	Menu, Minus ("-"), Plus ("+"), OK, Power		
	Languages	10 (English, Spanish, German, French, Italian, Netherlands, Portuguese, Japanese, T-Chinese and S-Chinese)		
Signal Interface/ Performance	User Controls	Brightness, Contrast, Color, Image Control, OSD control, Management, Language, Information, Factory Reset		
	Horizontal Frequency	24 to 70 kHz		
	Vertical Frequency	50 to 60 Hz		
	Native Resolution	1366 x 768 @ 60 Hz		
	Preset VESA Graphic Modes (non-interlaced)	1366 x 768 @ 60 Hz		
		1280 x 1024 @ 60 Hz		
		1280 x 800 @ 60 Hz		
		1280 x 720 @ 60 Hz		
		1024 x 768 @ 60 Hz		
		800 x 600 @ 60 Hz		
Video/Other Inputs	720 x 400 @ 70 Hz	720 x 400 @ 70 Hz		
	640 x 480 @ 60 Hz	640 x 480 @ 60 Hz		
	Maximum Pixel Clock Speed	110 MHz		
	User Programmable Modes	Yes, 20		
	Anti-Glare	Yes		
	Default Color Temperature	6500 K		
	Plug and Play	Yes		
	Input Signal	VGA		
	Video Cable	(1) VGA		
	Video Cable Lengths	1,5 m (4.9 ft)		
Power	Power Supply	Internal		
	Input Power	100 - 240 VAC (50/60 Hz)		
	Typical Power Consumption	15 W		
	Maximum	17 W		
	Power Saving	0.5 W		
Mechanical	Power Cable Length	1,5 m (4.9 ft)		
	Dimensions (W x D x H)	Unpacked w/stand	44,14 x 18,9 x 33,86 cm (17.38 x 7.44 x 13.33 in)	
		Unpacked w/o stand (head only)	44,14 x 4,54 x 27,77 cm (17.38 x 1.79 x 10.94 in)	
		Packaged	52,2 x 10 x 34,6 cm (20.55 x 3.94 x 13.62 in)	
	Weight	Head Only	2,4 kg (5.3 lb)	
		Unpacked	2,7 kg (6 lb)	
		Packaged	3,8 kg (8.4 lb)	
	Tilt Range	-5° to + 20° vertical		
	Swivel Range	N/A		
	Height Adjustable	N/A		
Pivot Rotation	N/A			

Technical Specifications

Base Detachable

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
Arsenic-Free Display Glass	Yes
Low Halogen⁴	No
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®

EPEAT® Silver 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	10.9 W	11.6 W	11.5 W
Sleep	0.27 W	0.35 W	0.27 W
Off	0.24 W	0.25 W	0.23 W

Heat Dissipation*

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation	37 BTU/hr	40 BTU/hr	39 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 Silver 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 0 % post-consumer recycled plastic (by wt.)

Technical Specifications

	<p>This product is 98.4 % recycle-able when properly disposed of at end of life.</p>												
Packaging Materials	<table><tr><td>External:</td><td>PAPER/Paper</td><td>535.6 g</td></tr><tr><td>Internal:</td><td>PLASTIC/EPS (Expanded Polystyrene)</td><td>259.56g</td></tr><tr><td></td><td>PLASTIC/EPE-Expanded Polyethylene</td><td>25.2 g</td></tr><tr><td></td><td>PLASTIC/Other plastics unknown</td><td>3 g</td></tr></table>	External:	PAPER/Paper	535.6 g	Internal:	PLASTIC/EPS (Expanded Polystyrene)	259.56g		PLASTIC/EPE-Expanded Polyethylene	25.2 g		PLASTIC/Other plastics unknown	3 g
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	PLASTIC/EPE-Expanded Polyethylene	25.2 g											
	PLASTIC/Other plastics unknown	3 g											
RoHS Compliance	<p>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).</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/pdf/gse.pdf):</p> <ul style="list-style-type: none">• 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	<p>HP follows these guidelines to decrease the environmental impact of product packaging:</p>												

Technical Specifications

- 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.

End-of-life Management and Recycling

Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

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://www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html>

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 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.

Technical Specifications

	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.
What's in the box?	Monitor and accessories	HP V193b 18.5-inch LED Backlit Monitor; VGA cable; AC Power cable
	Documentation	Printed documentation
Other	User Guide Languages	English, Latin America, B. Portuguese, French Canadian, Japanese, T. Chinese, S. Chinese, Korean, Indonesian, Arabic, Czech, Danish, Finnish, French, Greek, German, Hungarian, Italian, Kazakh, Dutch, Norwegian, Polish, Portuguese, Russian, Swedish, Slovenian, Spanish, Turkish.
	Warranty Languages	English, Latin America, B. Portuguese, French Canadian, Japanese, T. Chinese, S. Chinese, Korean, Indonesian, Arabic, Czech, Danish, Finnish, French, Greek, German, Hungarian, Italian, Kazakh, Dutch, Norwegian, Polish, Portuguese, Russian, Swedish, Slovenian, Spanish, 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		EPEAT® Silver (select regions) ³ , ENERGY STAR® qualified, CE, CB, KC, KCC, NOM, PSB, ICES, TUV-S, CCC, CECP, EPA, ISC, VCCI, FCC, ETL, TUV-GS, TUV, Taiwan: BSMI, China Energy Label (CEL) Grade 1, SmartWay - NA only
Compatibility		Compatible with platforms using the VESA standard video modes. Recommended for use with HP products.
Service and Warranty		Protected by HP, including up to a 3 year standard limited warranty*. 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. HP Care Pack Services extend service contracts beyond the standard warranties. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts from date of hardware purchase. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at <http://www.hp.com/go/lookuptool>. Additional HP Care Pack Services information by product is available at <http://www.hp.com/hps/carepack>.
3. EPEAT® Silver registered models of this product are available 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.

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Technical Specifications

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Change Log

Summary of Changes

Date of change:	Version History:		Description of change:
	From v1 to v2		