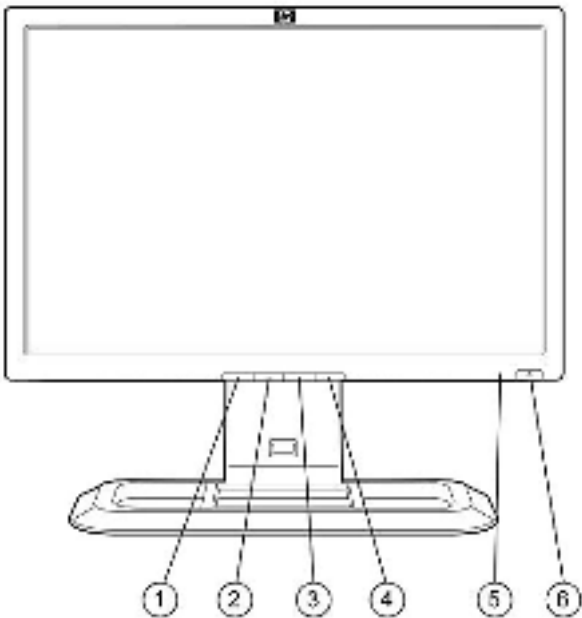# QuickSpecs

Technical Specifications

HP L2045w Flat Panel Monitor

1. **Menu/select**: Opens, selects or exits the OSD menu.
2. **"-"/Auto**: Navigates backward through the OSD menu and decreases adjustment levels; when the OSD menu is inactive, activates the auto adjustment feature to optimize the screen image.
3. **"+"**: Navigates forward through the OSD menu and increases adjustment levels.
4. **Input select:** Select video input (DVI-D or VGA)
5. **Power LED:** fully powered = green; sleep mode = amber; sleep timer mode = flashing amber.
6. **Power**: Turns the monitor on or off.

Model
RB145AA#xxx (carbonite and silver), RD125AA#ABA (all carbonite)

Panel	Type	20.1-inch Wide-Aspect Active Matrix TFT (thin film transistor)
	Viewable Image Area (diagonal)	20.1 inches wide (WSXGA+); diagonally measured
	Screen Opening (W x H)	17.05 x 10.66 in (43.3 x 27.1 cm)
	Viewing Angle (typical)	Up to 160° horizontal/140° vertical (10:1 minimum contrast ratio)
	Brightness (typical)*	300 nits (cd/m^2)
	Contrast Ratio (typical)*	600:1
	Response Time (typical)*	5 ms (on/off)
	Pixel Pitch	0.258 mm
	Color Depth Support	16.2 million colors
	Backlight Lamp Life (to half brightness)	45K hours

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

On Screen Display	Buttons or Switches	Input select, auto adjust/OSD down, OSD UP, OSD menu select, power

QuickSpecs

Technical Specifications

(OSD) **Controls**	Languages	English, French, German, Spanish, Italian, Dutch, and Japanese, S. Chinese	
	User Controls	Brightness, contrast, positioning, color temperature (6500k, 9300k, custom), individual color control, serial number, display, clock, clock phase, monitor management, factory reset, zoom	
Signal Interface/ Performance	Horizontal Frequency	24 to 93 kHz (VGA input); 24 to 93 KHz (DVI input for modes with pixel clock less than 157 MHz)	
	Vertical Frequency	50 to 76 Hz (VGA input); 50 to 76 Hz (DVI input for modes with pixel clock less than 157 MHz)	
	Native Resolution	1680 x 1050 @ 60 Hz	
	Preset VESA Graphic Modes (non-interlaced)	1280 x 1024 @ 60 Hz	
		1024 x 768 @ 60 Hz, 75 Hz, and 70 Hz	
		800 x 600 @ 60 Hz, 72 Hz and 75 Hz	
		640 x 480 @ 60 Hz, 72 Hz, and 75 Hz	
	Text Mode	720 x 400 @ 70 Hz	
	Mac Mode	1152 x 870 @ 75 Hz and 832 x 624 @ 75 Hz	
	Sun Mode	1152 x 900 @ 76 Hz	
	Maximum Pixel Clock Speed	205 MHz (analog input); 165 MHz (DVI input)	
	User Programmable Modes	Yes, 10	
	Anti-Glare	Yes	
	Anti-Static	Yes	
	Default Color Temperature	6500 K	
Video/Other Inputs	Plug and Play	Yes	
	Self Powered USB 2.0 Hub	One upstream, two downstream ports (cable not included)	
	Input Signal	VGA and DVI-D connectors	
	Input Impedance	75 ohms ± 10%	
	Sync Input	TTL separate synch or Composite Sync	
	VGA Cable	15 pin D-sub VGA	
	VGA Cable Length	5.9 ft (1.8 m)	
Power	Input Power	Auto-Sensing, 100 to 240 VAC, 50 +/-3 Hz to 60 +/-3 Hz)	
	Frequency	47.5 to 63 Hz	
	Typical Power Consumption	60 watts (USB ports fully loaded)	
	Maximum	< 60 watts	
	Power Saving	< 2 watts standby; <1 watt off	
	Power Cable Length	6.2 ft (1.9 m)	
Mechanical	Dimensions (H x W x D)	Unpacked w/stand	14.91 to 18.85 x 18.56 x 8.78 in (37.89 to 47.89 x 47.14 x 22.3 cm)
		Unpacked w/o stand (head only)	12.41 x 18.56 x 2.94 in (31.52 x 47.14 x 7.46 cm)
		Packaged	11.89 x 22.56 x 17.95 in (30.2 x 57.3 x 45.6 cm)
	Weight	Unpacked	16.7 lbs (7.68 kg)
		Packaged	22 lbs (10 kg)
	Tilt Range	-5° to + 30° vertical	
	Swivel Range	-45° to + 45°	

QuickSpecs

Technical Specifications

	Height Adjustable	Yes, range 3.94 in (10.0 cm)
	Pivot Rotation	Yes
	Base	Detachable, ships attached
Environmental	Temperature - Operating	41° to 95° F (5° to 35° C)
	Temperature - Non-operating	-29° to 140° F (-34° to 60° C)
	Humidity - Operating	20% to 80% non-condensing
	Humidity - Non-operating	5% to 95%, 38.7° C max wet-bulb
	Altitude - Operating	+12,000 ft (3,658 m)
	Altitude - Non-operating	+40,000 ft (12,192 m)
Environmental Data	Eco-Label Certifications and 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:

- US Energy Star
- US Federal Energy Management Program (FEMP)
- IT ECO declaration
- TCO 03
- Taiwan Green Mark
- CECP
- EU Flower (2001/686/EC & 2001/687/EC)
- GEEA

Technical Specifications

Energy Consumption (in accordance with US Energy Star test method)	AC Input Voltage at 100 VAC +/- 5 VAC, 50 Hz +/- 3 Hz	AC Input Voltage at 115 VAC +/- 5 VAC, 60 Hz +/- 3 Hz	AC Input Voltage at 230 VAC +/- 5 VAC, 50 Hz +/- 3 Hz
Normal Operation	50.3 watts	50.4 watts	49.7 watts
Sleep	0.58 watts	0.59watts	0.66 watts
Off	0.05watts	0.51 watts	0.59 watts

Heat Dissipation*	AC Input Voltage at 100 VAC +/- 5 VAC, 50 Hz +/- 3 Hz	AC Input Voltage at 115 VAC +/- 5 VAC, 60 Hz +/- 3 Hz	AC Input Voltage at 230 VAC +/- 5 VAC, 50 Hz +/- 3 Hz
Normal Operation	172 BTU/hr	172 BTU/hr	169 BTU/hr
Sleep	2 BTU/hr	2 BTU/hr	2.2 BTU/hr
Off	1.7 BTU/hr	1.7 BTU/hr	2.0 BTU/hr

*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Longevity and Upgrading	Upgradeability features contained in the product include: One upstream and two downstream USB ports
Ergonomics	The monitor meets the ergonomic requirement of EN-ISO 13406-2 for flat panel displays.
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.

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

Display meets the requirement for low frequency electromagnetic fields per MPR-II, TCO, and prEN50279 A/B/C.

This product contains 0% recycled materials (by wt.)

This product is 95% recycleable when properly disposed of at end of life.

Packaging Materials
- Corrugated Carton   1.5 kg
- HDPE Bag   0.04 kg
- Polystyrene   0.26 kg

Technical Specifications

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
- 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/recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

Technical Specifications

	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	HP Silver Flat Panel Speaker Bar – Part number: EE418AA	Powered directly by the monitor or the PC, the Speaker Bar seamlessly attaches to the monitor's lower bezel to bring full audio support to select HP flat panel monitors. Features include dual speakers with full sound range and external jack for headphones. Sold separately. For more information, refer to the HP Silver Flat Panel Speaker Bar QuickSpec.
	HP Flat Panel Monitor Quick Release – Part number EM870AA[i]	An easy-to-use, VESA-compliant, flat panel monitor mounting solution that allows you to quickly and securely attach a flat panel monitor to a variety of stands, brackets, arms or wall mounts. For more information, refer to this product's QuickSpec document.
Other	Accessories Included	VGA cable – connects the graphic card's VGA connector to the monitor's VGA input
	Software	HP Display Assistant is a software utility that allows monitor adjustment, color calibration, and security/asset management using the Display Data Channel Command Interface (DDC/CI) protocol of the connected PC.
		HP Display LiteSaver allows you to schedule Sleep mode at preset times to help protect the monitor against image retention, drastically lower power consumption and energy costs, and extend the lifespan of the monitor.
		Pivot Pro software from Portrait Displays, Inc. interacts with your PC's native graphics driver to enable seamless portrait screen redraws with a simple mouse-click or keyboard command. Pivot Pro supports 90-degree portrait and landscape views. Language support is available in English, Japanese, French, German, Spanish, Italian, and Traditional and Simplified Chinese.
	User Guide Languages	English, B. Portuguese, French, LA Spanish, Korean, S. Chinese, T. Chinese, Bahasa, Japanese, Danish, Finnish, German, Norwegian, Spanish, Swedish, Greek, Polish, Russian, Slovenian, Turkish
	Warranty Languages	English, Canadian French, LA Spanish, Brazilian Portuguese, Danish, German, Castilian Spanish, French, Italian, Dutch, Norwegian, Finnish, Swedish, Bahasa Indonesian, Korean, T. Chinese, S. Chinese
	Color	Carbonite/Silver, All carbonite (NA only)
	VESA External Mounting	Yes (Two sets of Standard 4 hole pattern, 100 mm) Use of the top VESA 4 hole pattern will allow the user to set monitor head lower to the desk surface
	Kensington Lock-Ready	Yes
Certification and Compliance		TCO'03, ISO 13406-2 VDT Guidelines Approval, MPR-II Compliant, CISPR Requirements, VCCI Approvals, MIC (Korean) Requirements, CSA, Australian ACA Approval, "GS" Mark, TUV Approvals, CE Marking, FCC Approval, Energy Star Compliant, PC-2001 Certified Microsoft® Windows® Certification (Microsoft® Windows® 98, Microsoft Windows 2000, Microsoft Windows XP, and Windows Vista™)
Compatibility		Compatible with platforms using the VESA standard video modes. Recommended for use with HP products.

Technical Specifications

Service and Warranty	Three years parts, labor, and on-site service. 24-hour, 90-day, toll-free technical support. Replacement options may include second business day on-site service, or next business day direct replacement, at HP's sole discretion. With direct replacement, HP will ship a replacement display product directly to you. Using the prepaid shipping labels provided, return your failed display to HP in the same packaging as the replacement. Certain restrictions and exclusions apply. For details see your product warranty or contact HP Customer Support.

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[i] The HP Flat Panel Monitor Quick Release has been designed to support a maximum of up to 24 lbs (10.9 kg) depending upon the mounting configuration used. Please note this is a total weight limit for all devices mounted, i.e. the combined weight of the monitor and a second device such an HP Compaq t5000 Series Thin Client cannot exceed 24 pounds. 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.