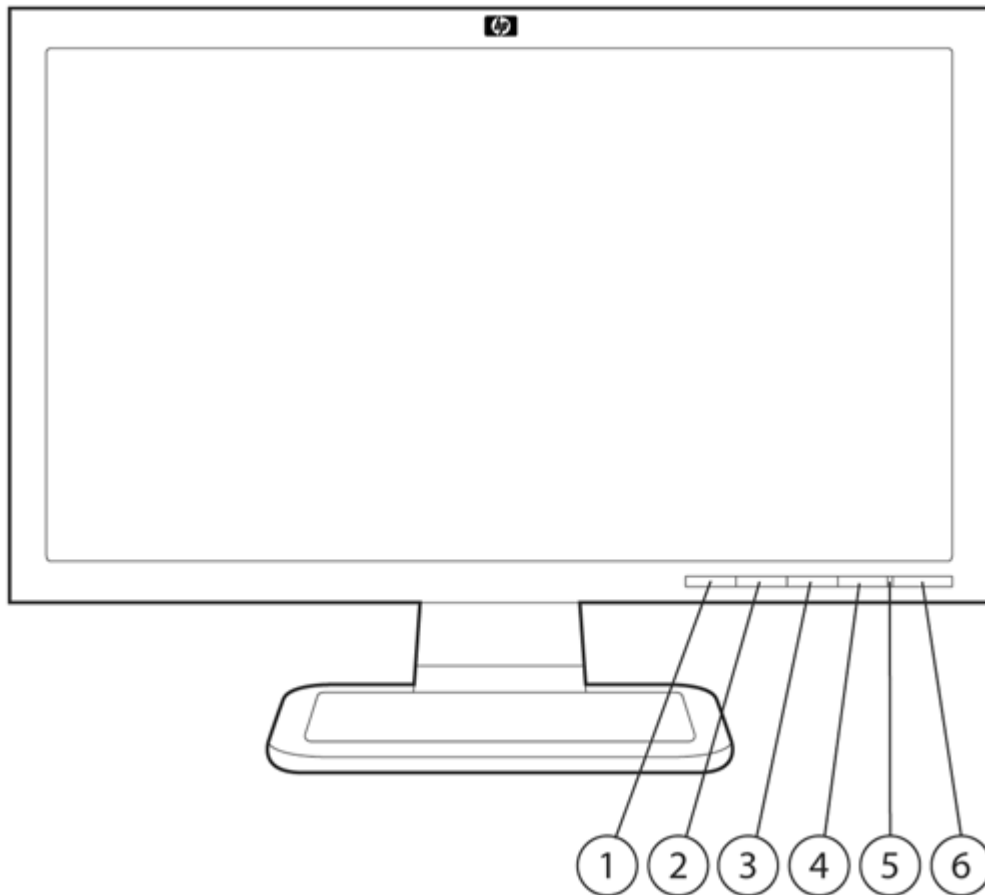


Overview



1. **Menu/select:** Opens, selects or exits the OSD menu.
2. **"-":** If the OSD menu is on, press to navigate backward through the OSD menu and decrease adjustment levels.
3. **"+":** 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 LED:** fully powered = green; sleep mode = amber; sleep timer mode = flashing amber.
6. **Power:** Turns the monitor on or off.

Model

NK128AA#ABA

Technical Specifications

Panel	Type	20.0-inch Wide-Aspect Active Matrix TFT (thin film transistor)
	Viewable Image Area (diagonal)	20.0 inches (51 cm) widescreen; diagonally measured
	Screen Opening (W x H)	17.42 x 9.79 in (44.3 x 24.9 cm)
	Viewing Angle (typical)	Up to 160° horizontal/160° vertical (10:1 minimum contrast ratio)
	Panel Type	TN
	Aspect Ratio	16:9
	Brightness (typical)*	250 nits (cd/m ²)
	Contrast Ratio (typical)*	1000:1
	Response Time (typical)*	5 ms (on/off)
	Pixel Pitch	0.2768 mm
	Backlight Lamp Life (to half brightness)	50K hours
	Color Gamut	72%
<i>*All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.</i>		
On Screen Display (OSD) Controls	Buttons or Switches	OSD menu select, OSD down, OSD UP, Ok/auto adjust, power
	Language	English, French, German, Spanish, Italian, Japanese, S. Chinese, T. Chinese, Netherlands, and Portuguese
	User Controls	Brightness, contrast, positioning, color temperature (6500k, 9300k, sRGB, custom), individual color control, serial number, display, clock, clock phase, monitor management, factory reset, scaling
Signal Interface/ Performance	Horizontal Frequency	24 to 85 kHz
	Vertical Frequency	48 to 76 Hz
	Native Resolution	1600 x 900 @ 60 Hz (WSXGA+)
	Preset VESA Graphic Modes (non-interlaced)	640 x 480 @ 60 Hz
		800 x 600 @ 60 Hz
		1024 x 768 @ 60 Hz
		1280 x 720 @ 60 Hz
		1280 x 1024 @ 60 Hz
		1440 x 900 @ 60Hz
	Text Mode	720 x 400 @ 70 Hz
	Mac Mode	TBD
	Sun Mode	TBD
	Maximum Pixel Clock Speed	170 MHz (analog input)
User Programmable Modes	Yes, 8	
Anti-Glare	Yes	
Anti-Static	Yes	

Technical Specifications

	Default Color Temperature	6500 K	
Video/Other Inputs	Plug and Play	Yes	
	Self Powered USB 2.0 Hub	No	
	Input Connectors	VGA connector	
	Input Impedance	75 ohms	
	Sync Input	TTL separate synch or Composite Sync	
	Video Cables	1 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	45 to 63 Hz	
	Typical Power Consumption	20 watts	
	Maximum 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	14.19 x 18.84 x 8.11 in (36.05 x 47.86 x 20.6 cm)
		Unpacked w/o stand (head only)	11.38 x 18.84 x 2.16 in (28.9 x 47.86 x 5.5 cm)
		Packaged	17.62 x 21.26 x 5.51 in (45 x 54 x 14 cm)
	Weight	Unpacked	9.48 lbs (4.3 kg)
		Packaged	13.23 lbs (6 kg)
		Head only	8.16 lbs (3.7kg)
	Tilt Range	-5° to + 25° vertical	
	Swivel Range	No	
	Height Adjustable	No	
	Pivot Rotation	No	
Base	Detachable, ships detached		
Environmental	Temperature – Operating	41° to 95° F (5° to 35° C)	
	Temperature – Non-operating	-29° to 140° F (-20° to 60° C)	
	Humidity – Operating	20% to 80% non-condensing	
	Humidity – Non-operating	5% to 95%, 38.7° C max wet-bulb	
	Altitude – Operating	+0 to 16,404 ft (5000 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:	
		<ul style="list-style-type: none">● ENERGY STAR®● IT ECO declaration	

Technical Specifications

		<ul style="list-style-type: none"> ● EPEAT® Silver ● TCO 5.0 		
Energy Consumption (in accordance with 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	20.4W	20.4W	20.6W	
Sleep	0.71W	0.72W	0.88W	
Off	0.65W	0.67W	0.81W	

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	70 BTU/hr	70 BTU/hr	71 BTU/hr	
Sleep	2 BTU/hr	2 BTU/hr	3 BTU/hr	
Off	2 BTU/hr	2 BTU/hr	3 BTU/hr	

* 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.

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

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

This product is 92.7% recyclable when properly disposed of at end of life.

Packaging Materials

- External:
 - Paper / Cardboard 20 g
- Internal:
 - EPS (Expanded Polystyrene) 150 g
 - EPE-Expanded Polyethylene 53 g

RoHS Compliance Hewlett-Packard is committed to compliance with all applicable environmental laws and regulations, including the European Union



Technical Specifications

Material Usage

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).

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:

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.

Technical Specifications

- 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: 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.

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 www.hp.com/hpinfo/globalcitizenship/gcreport/index.html
Eco-label certifications www.hp.com/hpinfo/globalcitizenship/environmentproductdesign/ecolabels.html
ISO 14001 certificates: www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html

Options

HP LCD Speaker Bar—Part number NQ576AA

Powered directly by the connected PC, the Speaker Bar seamlessly attaches to the monitor's lower bezel to bring full audio support to select HP LCD monitors. Features include dual speakers with full sound range and dual external headphone jacks. Sold separately. For more information, refer to the product's QuickSpecs.

HP LCD Monitor Quick Release—Part number EM870AA*

An easy-to-use, VESA-compliant, LCD 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 QuickSpecs document.

* 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.

HP Integrated Work Center Stand—Part number GN783AA

Allows mounting of select 17- to 22-inch diagonal HP LCD monitors and an HP Compaq dc7900 Ultra-slim Desktop PC or HP thin client on a single stand for the convenience of an "all-in-one" form factor. Sold separately. For more information, refer to this product's QuickSpecs document.

HP USB Graphics Adapter—Part number NL571AA

Enables connection of up to six simultaneous displays to help you boost productivity and multi-task across several open applications. Use one Adapter to bridge between a notebook or desktop PC and second monitor or use multiple Adapters to connect several displays to each other.

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.

Technical Specifications

Other	Accessories Included	VGA cable, power cable	
	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.	
	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	Black	
	VESA External Mounting	Yes, standard 4 hole pattern, 100 mm	
	Kensington Lock-Ready	Yes, one Kensington slots available	
	Certification and Compliance	TCO 5.0 Displays, ISO 9241-307, CISPR Requirements, VCCI Approvals, KC and KCC (Korean) Requirements, CSA 60950-1, UL 60950-1, EN55022 Class B, CNS 13438 Class B, IEC 60950-1, China Energy Label (CEL), China MEPS, Korea MEPS (pending, Energy Boy), SmartWay - NA only - Energy logistics, EUP Lot 6 Tier 1 AS/NZS 3548 Class B Approval, "GS" Mark, TUV Approvals, GEEA, CE Marking, FCC Part 15 class B Approval, ENERGY STAR® qualified, EN55024 Class B, EN60950 - 1, CUL, CCIB, CCEE, IT ECO (EDS), EPEAT™ Silver	
	Compatibility	Compatible with platforms using the VESA standard video modes. Recommended for use with HP products.	
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. * 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: www.hp.com/go/lookuptool . Additional HP Care Pack Services information by product is available at: www.hp.com/hps/carepack .		

© Copyright 2010 Hewlett-Packard Development Company, L.P.

ENERGY STAR is a US registered mark of the United States Environmental Protection Agency. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.