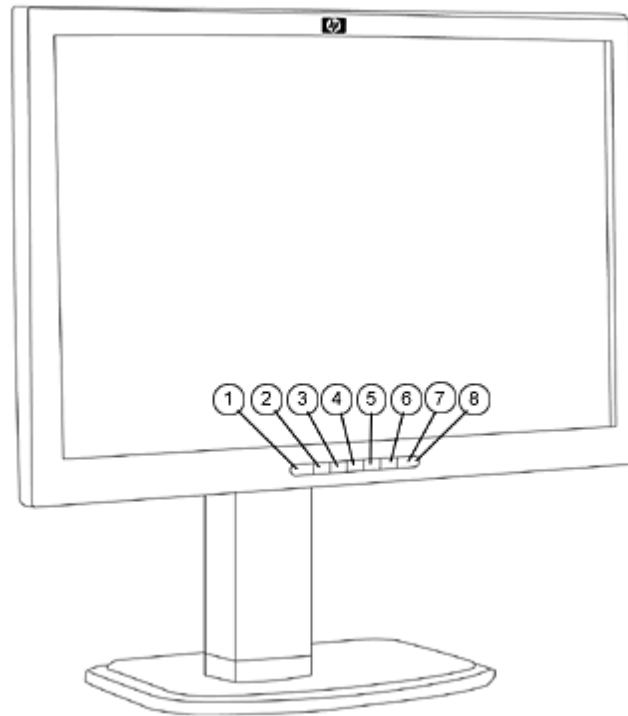


Overview



1. Activates Picture in Picture (PiP) window
2. Signal input selection
3. Auto adjustment of displayed Image
4. Select/adjust OSD menu settings; selects VGA input when OSD is not active
5. Select/adjust OSD menu settings; selects DVI-I input when OSD is not active
6. Launches OSD menu and selects functions
7. Full power = green; Sleep = amber
8. Turns the monitor on and off

Models

Business Desktop Channel
Workstation Volume Channel
Workstation Value Channel

P9615A#xxx
P9615W#xxx
P9615X#xxx

Technical Specifications

Panel	Type	23-inch Active Matrix TFT (thin film transistor)
	Viewable Image Area (diagonal)	23 in (58.4 cm)
	Screen Opening (W x H)	19.53 x 12.24 in (49.6 x 31.1 cm)
	Viewing Angle (typical)*	Up to 170° H/ 170° V (10:1 minimum contrast ratio)
	Brightness (typical)*	Up to 250 nits (cd/m ²)
	Contrast Ratio (typical)*	Up to 500:1
	Response Rate (typical)*	16 ms (typical, rise + fall)
	Pixel Pitch	0.258 mm
	Color Depth Support	16.7 million colors
On Screen Display (OSD) Controls	Buttons or Switches	PiP (Picture in Picture), Input Select, Auto Adjust, OSD Up, OSD Down, OSD Menu Select, Power
	Languages	English, French, German, Spanish, Italian
	User Controls	Brightness, contrast, positioning, color temperature, individual color control, serial number display, full screen resolutions, clock, clock phase, video picture-in-picture (size and position), input selection (includes separate direct access key for dedicated swap between inputs 1 and 2), factory reset
Signal Interface/ Performance	Horizontal Frequency	30 to 94 kHz (VGA input); 30 to 92 KHz (DVI input) (for modes with pixel clock less than 157 MHz)
	Vertical Frequency	48 to 85 Hz (VGA and DVI input)
	Graphics Controller	Pixelworks PW172
	Native Resolution	1920 x 1200 @ 60 Hz (recommended) (native aspect ratio of 16:10)
	Preset VESA Graphic Modes (non-interlaced)	1920 x 1200 @ 60Hz
		1600 x 1200 @ 60 Hz, 75 Hz
		1280 x 1024 @ 60 Hz, 75Hz, 85 Hz
		1280 x 960 @ 60 Hz
		1152 x 900 @ 66 Hz
		1024 x 768 @ 60 Hz, 75 Hz, 85 Hz
		800 x 600 @ 60 Hz, 75Hz
		640 x 480 @ 60 Hz, 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 @ 66 Hz
	Maximum Pixel Clock Speed	202 MHz (VGA input); 162 MHz (DVI input)
User Programmable Modes	Yes, 10	
Anti-Glare	Yes	
Anti-Static	Yes	
Default Color Temperature	6500 K	

Technical Specifications

Video Input	Plug and Play	Yes	
	Input Signal	Five connectors, including one 15-pin mini D-sub VGA, one DVI-I (VGA analog and digital input), one composite video, one s-video, component video	
	Input Impedance	75 ohms \pm 10%	
	Sync Input	Separate sync (HSYNC/VSYNC); composite sync, Sync on Green	
	Video Cable	VGA to VGA; VGA to DVI-I; DVI-D to DVI-D	
Power	Video Cable Length	5.9 ft (1.8 m)	
	Input Power	Auto-Ranging, 90 to 132 VAC and 195 to 265 VAC; internal power supply, 50 Hz/60 Hz	
	Frequency	47.5 to 63 Hz	
	Typical Power Consumption	66 watts	
	Maximum	< 100 watts	
	Power Saving	< 5 watts	
	Power Cable Length	5.9 ft (1.8 m)	
	Mechanical	Dimensions (H x W x D)	Unpacked
		Unpacked w/o stand (head only)	14.57 x 21.46 x 3.35 in (37.0 x 54.5 x 8.5 cm)
		Packaged	11.5 x 25.75 x 23.86 in (29.2 x 65.4 x 60.6 cm)
Weight		Unpacked	22.27 lb (10.1 kg)
		Packaged	30.87 lb (14.0 kg)
Tilt Range		-5° to + 25° vertical	
Swivel Range		-35° to + 35°	
Height Adjustable		Yes, range 3.54 in (9.0 cm)	
Pivot Rotation		Yes	
Base		Detachable, ships attached	
Environmental	Temperature – Operating	46° to 95° F (10° to 35° C)	
	Temperature – Non-operating	6° to 140° F (-10° to 60° C)	
	Humidity – Operating	20% to 80% non-condensing	
	Humidity – Non-operating	5% to 85%	
	Altitude – Operating	+12,000 ft (3657.6 m)	
	Altitude – Non-operating	+40,000 ft (12,192 m)	
Environmental Data	Eco-Label Certifications and Declarations	<p>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:</p> <ul style="list-style-type: none"> • US Energy Star (meets tier I) • IT ECO declaration • TCO 03 • CECP 	

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	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	67 watts	66.9 watts	68.2 watts
Sleep	1.5 watts	1.5 watts	2 watts
Off	1.4 watts	1.4 watts	1.9 watts
Heat Dissipation*	100 VAC, 60 Hz	115 VAC, 60 Hz	230 VAC, 50 Hz
Normal Operation	235.595 BTU/hr	228.425 BTU/hr	232.863 BTU/hr
Sleep	5.121 BTU/hr	5.121 BTU/hr	6.828 BTU/hr
Off	4.780 BTU/hr	4.780 BTU/hr	6.487 BTU/hr

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

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 5% recycled materials (by wt.)

This product is 81% recyclable when properly disposed of at end of life.

Packaging Materials

- Corrugated Paper 6.512 lb (2.954 kg)
- Polystyrene foam (PS) 0.97 lb (0.44 kg)
- Polyethylene (LDPE) 0.013 lb (0.006 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
Other	Accessories Included	VGA to VGA cable – connects the graphic card's VGA analog connector to the monitor's input #1 (VGA analog) connector VGA to DVI-I cable – connects the graphic card's VGA connector to the monitor's input #2 (DVI-I analog) connector DVI-D to DVI-D cable – connects the graphic card's DVI-D digital connector to the monitor's input #2 (DVI-I digital) connector
	Software	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
	VESA External Mounting	Yes (Standard 4 hole pattern, 100 mm)
	Kensington Lock-Ready	Yes
Certification and Compliance		Australian ACA Approval, Canadian Requirements/CSA, CE Marking, China CCIB/CCEE Approval, CISPR Requirements, Eastern European Approvals, Energy Star Compliant, FCC Approval, German Ergonomic (TUV and GS Mark), ISO 9241-3,7,8 VDT Guidelines, ISO 13406-2 Pixel Defect Guidelines, Mexican NOM Approval, MIC Requirements (New Zealand), MPR-II Compliant, Nordic Approvals (Nemko, Fimko, Demko, Semko), PC2001 Compliant, PC99 Certified, S. Korean MIC Approval, Taiwan BSMI Approval, TCO 03 (emissions, ergonomics, environment), TUV-Ergo, UL Listed, VCCI Approvals, Microsoft® Windows® Certification (Microsoft® Windows® 98, Microsoft Windows 2000, and Microsoft Windows XP)
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.

Technical Specifications

© Copyright 2006 Hewlett-Packard Development Company, L.P.

Microsoft and Windows are trademarks or registered trademarks of Microsoft Corporation in the U.S. and other countries.

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

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.