QuickSpecs

Overview

HP DreamColor Z24x Professional Display
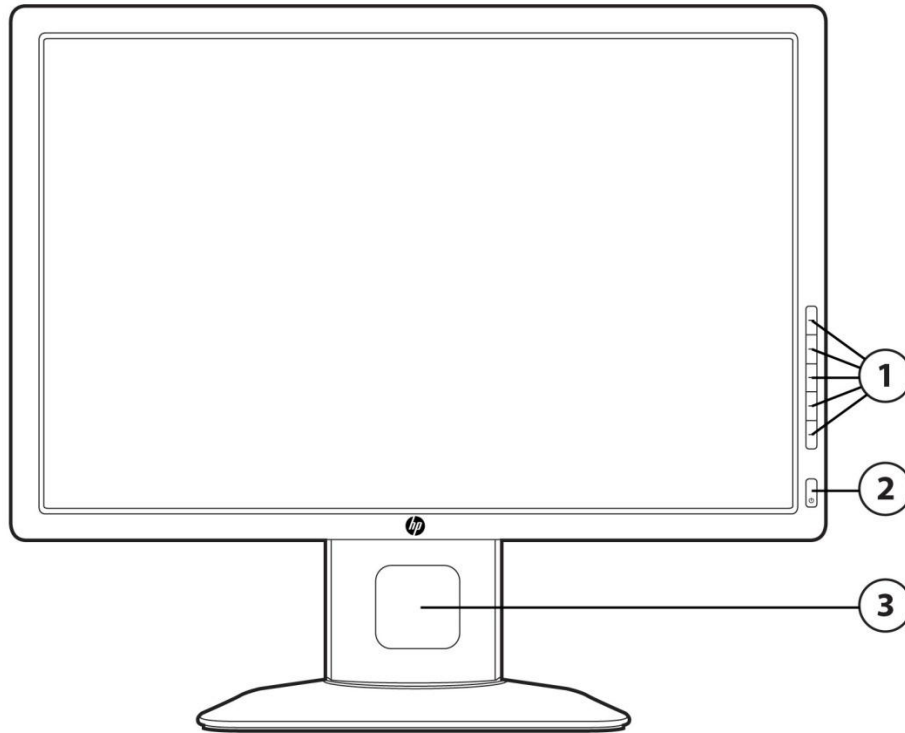
1.	**Programmable hotkey Function buttons**	4 programmable hotkey function buttons with 12 mappable funtions

2.	**Power/LED**	Power On/Off
		
		LED:
		fully powered = white;
		sleep mode = amber;
		sleep timer mode = flashing amber.

3.	**Cable Management**	Effortless routing of cables through the cable management tunnel at the base of the column.

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Models: E9Q82A4, E9Q82A8, E9Q82AS, E9Q82AT

Panel		
	Type	24-inch IPS Gen 2, LED Backlit
	Viewable Image Area (diagonal)	**60,96 cm** (24 in) widescreen; diagonally measured
	Panel Active Area (W x H)	**52 x 32,56 cm** (20.47 x 12.81 in.)
	Panel Type	Gen 2 IPS (Gen 2 technology, also called AH-IPS, enables lower power consumption)
	Resolution	1920 x 1200 @ 60 Hz
	Aspect Ratio	16:10
	Viewing Angle (typical)	Up to 178° horizontal/178° vertical (10:1 minimum contrast ratio)
	Brightness (typical)*	350 cd/m^2
	Contrast Ratio (typical)*	1,000:1
	Dynamic Contrast Ratio (typical)*	5,000,000:1
	Response Time (typical)*	20 ms typical; 6 ms gray-to-gray
	Pixel Pitch	0.270 mm
	Backlight Lamp Life (to half brightness)	30,000 hours minimum
	Color Support**	Up to 1.07 Billion colors
	Color Gamut	100% of sRGB, 100% of BT.709, 99% of AdobeRGB, 96% of DCI-P3

*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.

User Controls		
	Buttons or Switches	Master power switch (rear), secondary power, 5 programmable OSD/function buttons
	Languages	10 (English, Spanish, German, French, Italian, Netherlands, Portuguese, Japanese, T-Chinese and S-Chinese)
	On Screen Display (OSD) User Controls	Color Space, Video Inputs, Image Control, PIP Control, Language, Management Features, Message Control, Information, Factory Reset.

DreamColor Functions		
	DreamColor Engine 2	Internal color palette of 4.4 Trillion colors driven by 14-bit internal color precision. The engine outputs 10-bit color that produces 1,024 gray levels per channel and up to 1.07 billion on-screen colors.
	Factory Calibrated Presets	sRGB, AdobeRGB, BT.709, User and Native
	User Calibration support	Calibrate with optional HP DreamColor calibration solution (listed under options below). Includes customized X-Rite 1i Display Pro precision colorimeter and Windows software.

Signal Interface/ Performance		
	Horizontal Frequency	24-80 kHz
	Vertical Frequency	24-60 Hz
	Native Resolution	1920 x 1200 @ 60 Hz
	Preset VESA Graphic Modes (non-interlaced)	640 x 480 @ 60Hz
		800 x 600 @ 60 Hz
		1024 x 768 @ 60 Hz
		1280 x 720 @ 60 Hz
		1280 x 960 @ 60 Hz
		1280 x 1024 @ 60 Hz
		1440 x 900 @ 60 Hz
		1600 x 1200 @ 60 Hz
		1680 x 1050 @ 60 Hz
		1920 x 1200 @ 60 Hz
	Maximum Pixel Clock Speed	170 MHz
	User Programmable Modes	20
	Anti-Glare	Yes

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	Default Color Temperature	Native (Monitor has four calibrate-able color spaces)
Video/Other Inputs	**Plug and Play**	Yes
	Self Powered USB 3.0 Hub	USB 3.0, (1) upstream and (4) downstream ports (2 on side and 2 on bottom)
	Input Connectors	(1) DVI-D, (1) DisplayPort 1.2 (1 input and 1 output), (1) HDMI; HDCP support on all inputs.
	Video Cables Included	(1) DVI-D **1,8 m** (5.9 ft), (1) DisplayPort **1,8 m** (5.9 ft)
	USB Cable Included	(1) USB 3.0 **1,8 m** (5.9 ft)
	Audio	(1) Audio out (analog)
Power	**Power Supply**	Internal
	Input Power	90 - 265 VAC at 45 - 63 Hz
	ENERGY STAR® Power[1]	28.9 W
	Default Power[2]	58 W
	Maximum Power[3]	84 W
	Sleep Power	> 0.5 W
	Power Cable Length	**1,9 m** (6.2 ft)

Mechanical	**Dimensions** (W x D x H)	**Unpacked w/stand** (highest setting)	**55,94 x 23,8 x 52,5 cm** (22 x 9.4 x 20.7 in)
		Unpacked w/o stand (head only)	**55,94 x 6,65 x 36,5 cm** (22 x 2.6 x 14.4 in)
		Packaged	**66 x 45 x 30,1 cm** (26 x 17.7 x 11.8 in)
	Weight	**Head Only**	**4,73 kg** (10.4 lb)
		Unpacked	**6,98 kg** (15.4 lb)
		Packaged	**8,96 kg** (19.7 lb)

Ergonomic Features	**4-Way Comfort Adjust**	Easily adjust the display in height, tilt, swivel and pivot for maximum comfort.
	Integrated Quick Release[9]	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.
	Cable Management	Enhanced cable management for easy concealment of power, video and USB cables. Effortless routing of cables through the cable management tunnel at the base of the column.
	Detachable Stand	Yes, ships detached
	Tilt Range	-5° to + 20° vertical
	Swivel Range	45°L to 45°R
	Height Adjustable	Yes, 0 to 120 mm
	Pivot Rotation	Yes
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 Halogen[4]	Yes (except cables)
	Mercury-Free Display Backlighting	Yes

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	HP DreamColor Calibration System —B1F63AA	The HP DreamColor Calibration Solution (DCS) is an affordable color calibration solution, allowing users to quickly and accurately recalibrate their monitor. Includes precision colorimeter and calibration software for the HP Z24x and other HP DreamColor displays and notebooks. The DCS colorimeter is a direct-connect calibration device for the Z27x.
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 6.0
- 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	28.93 W	29.43 W	28.88 W
Sleep	0.48 W	0.54 W	0.47 W
Off	0.23 W	0.30 W	0.23 W

Heat Dissipation*

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation	99 BTU/hr	101 BTU/hr	99 BTU/hr
Sleep	2 BTU/hr	2 BTU/hr	2 BTU/hr
Off	1 BTU/hr	1 BTU/hr	1 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 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 19 % post-consumer recycled plastic (by wt.)
- This product is 98.6 % recycle-able when properly disposed of at end of life.

Packaging Materials

External:	PAPER/Corrugated	1265 g
Internal:	PLASTIC/EPS (Expanded Polystyrene)	450 g
	PLASTIC/Polystyrene High Impact	55 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)

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

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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://www.hp.com/hpinfo/globalcitizenship/ environment/operations/envmanagement.html
Options For more information refer to the product's QuickSpecs.	**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 Thin Client Mount Kit—Part number E5J35AA	Attach your HP Thin Client or USDT PC to the back of select HP Z Displays and maintain optimal ergonomic adjustability with the HP Thin Client Mount Kit. Simply mount an HP Thin Client to the Kit's VESA plate, slide it into place on the back of an HP Z24i, Z27i or Z30i IPS Display stand, and you're ready to go.
	HP Dual Output USB Graphics Adapter—Part number C5U89AA	Create a dual-monitor setup with the HP Dual Output USB Graphics Adapter – featuring both DVI-I and DisplayPort inputs to drive displays at high resolutions through a single USB 3.0 connection to your PC.
	HP LCD Speaker Bar—Part number NQ576AA	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 LCD monitors. Features include dual speakers with full sound range and external jack for headphones. Sold separately.

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HP Integrated Work Center Stand - USDT / Thin Clients — Part numbers E8H16AA/AT (black and meteorite), LH526AA/AT (black and silver).[8]	HP Integrated Work Center Stand - USDT / Thin Clients - The HP Integrated Work Center Stand is designed to help maximize the use of limited desk space without compromising performance or productivity by accommodating an HP Ultra-slim Desktop PC or an HP Thin Client, and most HP 17 to 24-inch1 diagonal LCD monitors, with VESA standard mounting brackets.
HP Integrated Work Center Stand for Small Form Factors v3 —Part number F2P06AA[7]	Maximize your available work space with the stylish and innovative HP Integrated Work Center for Small Form Factors v3 (HP IWC SFF v3), designed to match the newest HP PC designs. Create a customized "all-in-one" solution by combining an HP Small Form Factor (SFF) Business Desktop PC or Workstation with an LED monitor up to 24 diagonal inches.
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 Display and Notebook II Stand—Part number E8G00AA	Quickly and easily create a comfortable workspace for your notebook or notebook and docking station and an external display with the HP Display and Notebook II Stand, which brings your notebook PC, docking station, and display up off the desk.
HP Adjustable Display Stand—Part number AW663AA	Turn your HP Business Notebook into a desktop solution supporting up to a 24 inch display. A dual-hinged, smooth-motion display stand allows for greater depth, height and tilt adjustment for maximum comfort.
HP DisplayPort Cable Kit —Part number VN567AA	Connects a DisplayPort connector on an HP Business Desktop computer to a DisplayPort connector on a monitor
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.

What's in the box?	**Monitor and Accessories**	HP DreamColor Z24x Professional Display, AC power cord, USB cable, DVI-D cable, DisplayPort 1.2 cable
	Documentation	DVD documentation kit, factory calibration report
Other	**User Guide Languages**	English, Arabic, Bahasa Indonesia, S. Chinese, T. Chinese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Kazakh, Korean, Norwegian, Polish, B. Portuguese, Russian, Slovenian, Spanish, Swedish and Turkish.
	Warranty Languages	English, Arabic, Bahasa Indonesia, S. Chinese, T. Chinese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Kazakh, Korean, Norwegian, Polish, B. Portuguese, Russian, Slovenian, Spanish, Swedish and Turkish.
	Color	Black

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	VESA External Mounting	Yes (one set 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.
	Security Lock-Ready	Yes
	Country of Origin	China
Certification and Compliance		TCO Certified, CEL Grade 1, Microsoft WHQL Certification (Windows 8 and Windows 7), ENERGY STAR® Qualified, EPEAT® Gold[5], FCC, CE mark, UL, Energy Star 6.0, TCO 6.0, TUV-GS, TUVKC–Ergonomics, WEEE, RoHS, C-Tick, Argentina S-Mark, VCCI, CECP, CCC, CEL Grade 1, Singapore PSB, EAC (Russia), NOM (Mexico), Ukraine.
Compatibility		Compatible with platforms using the VESA standard video modes. Recommended for use with HP products.
Service and Warranty		Protected by HP, including a 3 year standard limited warranty. Optional HP Care Pack Services are extended service contracts that extend your protection beyond the standard warranties.[6]

1. ENERGY STAR® power is measured with factory defaults, brightness at ENERGY STAR® level of 200 cd/m^2 and with no USB loads.
2. Default Power is measured with factory defaults, including factory default brightness and USB ports loaded at 25% of maximum.
3. Maximum Power is measured with monitor at maximum brightness and with USB ports loaded at 100% of maximum.
4. External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.
5. EPEAT® Gold where HP registers commercial display products. See www.epeat.net for registration status in your country.
6. 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.
7. 17 to 24-inch diagonal monitors need to meet supported weight limits of 6 to 12.1 lbs. (2.7 to 5.5 kg).
8. The Integrated Work Center Stand has been designed to support 17 to 24-inch diagonal HP LCD monitors from 2.3 kg to 5.2 kg (5.07 lbs to 11.24 lbs).
9. 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.

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Change Log

April 11, 2014 - From Version April 9 to April 11		
	Added	
	Removed DreamColor ports reference. Adding additional model numbers.	