Overview

HP DreamColor Z24x Professional Display
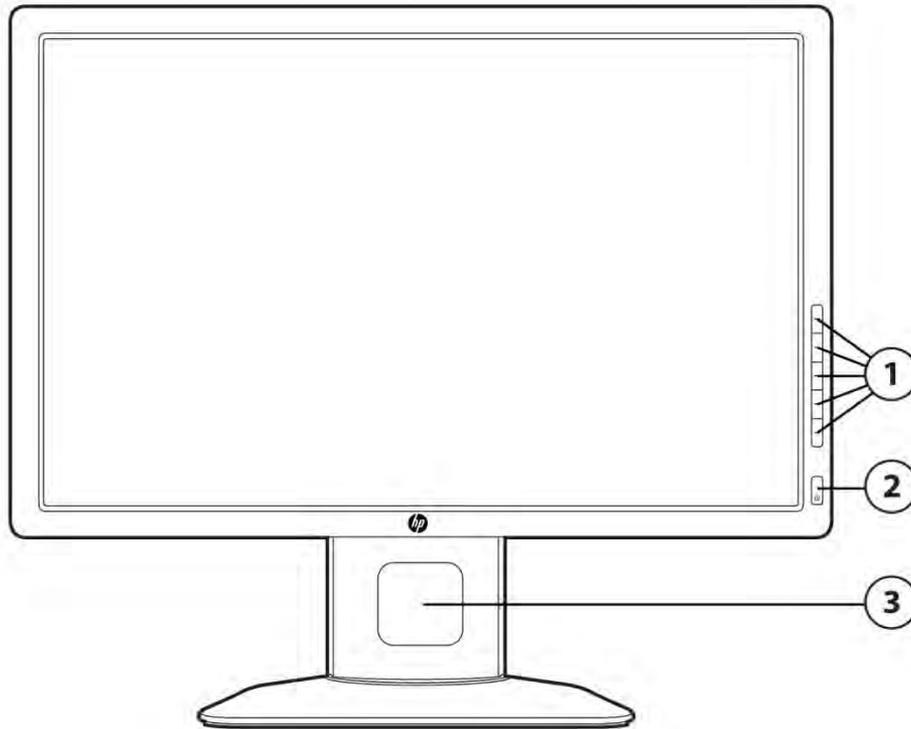
1.	**Programmable hotkey Function buttons**	4 programmable hotkey function buttons with 12 mappable funtions
2.	**Power/LED**	Power On/Off

		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.

QuickSpecs

Technical Specifications

Models: E9Q82A4, 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

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		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
	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)
	DreamColor Ports	(2) downstream (to monitor)
	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**	**55,94 x 23,8 x 52,5 cm**
		(highest setting)	(22 x 9.4 x 20.7 in)
		Unpacked w/o stand	**55,94 x 6,65 x 36,5 cm**
		(head only)	(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

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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
	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.
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.
	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.

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	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
	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.

Technical Specifications

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]

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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.