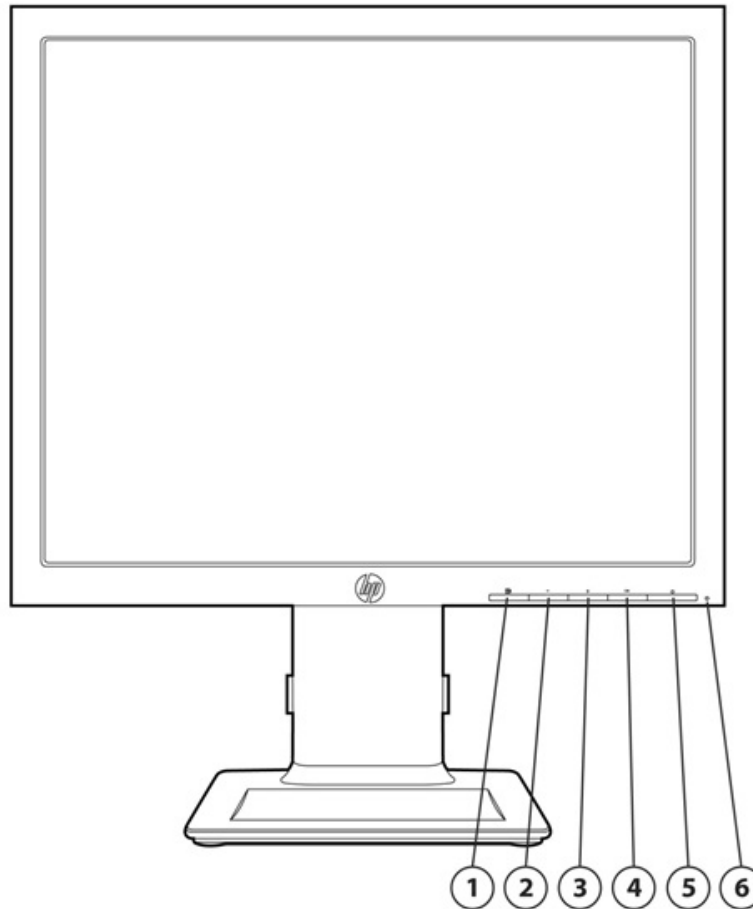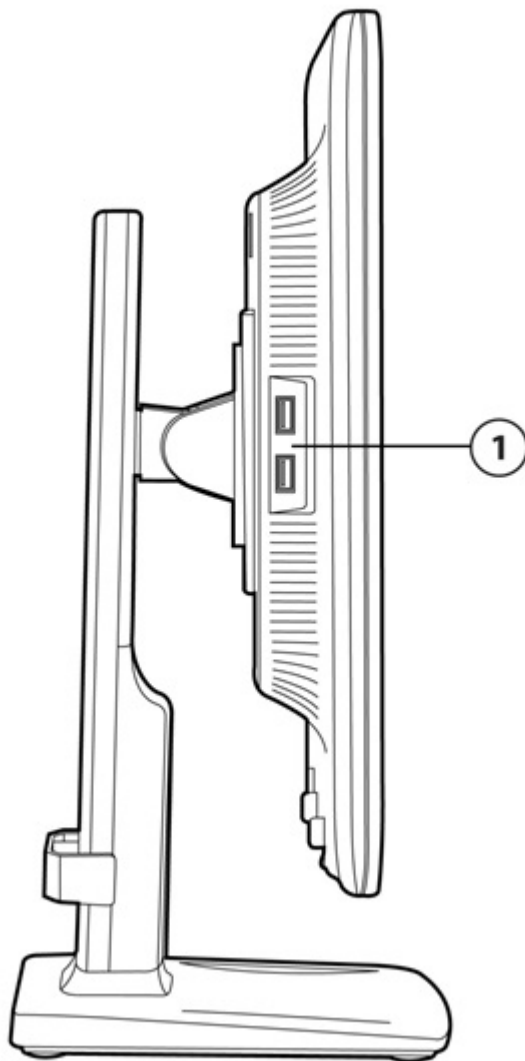## Overview

1. Menu/Select
2. "-" OSD Navigation/Auto Adjust
3. "+" OSD Navigation/Input Select
4. OK
5. Power
6. Power LED

Overview

Side view

1.   USB 2.0 ports

Pivot view (monitor pivoted to reveal bottom ports)

1. USB upstream connector
2. VGA connector
3. DVI-D connector

4.   DisplayPort connector
5.   Power connector

Overview

Your ideal compact, space saving configuration begins with a HP EliteDisplay E190i monitor combined with an HP Integrated Work Center Stand - USDT/Thin Clients (LH526AA) with attached Ultra Slim Desktop or Thin Client PC for a small footprint, All-in-Two form factor.

Models

Part Number: E4U30AA, E4U30A8, E4U30AP, E4U30AC, E4U30AT, E4U30AS

Introduction

The HP ProDisplay E190i helps you be more productive with a mission critical 5:4 aspect ratio business monitor designed for all of your business-specific applications, now with the impeccable presentation and extra-wide viewing angles of IPS wide viewing angle technology. Enjoy customizable comfort from a completely adjustable stand and be environmentally responsible with designed-in energy efficiency.

Key Benefits

- Keep the 5:4 aspect ratio that your business-specific enterprise and public sector applications are designed to work with
- Get great 178-degree viewing angles and stunning color integrity from In-Plane Switching (IPS) technology
- Get crisp, clear views of your content with 1280 x 1024 resolution, fast response time, and 3 M:1 dynamic contrast ratio
- Quickly and easily connect to your media and devices with DisplayPort 2.1, VGA and DVI inputs and USB 2.0 Hub
- Reduce power consumption and help lower your costs with an intelligent, energy-efficient design that is ENERGY STAR® and TCO qualified and EPEAT® Gold[3] registered.

Technical Specifications

Panel		
	Type	IPS w/LED backlight
	Viewable Image Area (diagonal)	**48 cm** (18.9 in)
	Panel Active Area (WxH)	**37,47 x 29,98 cm** (14.75 x 11.8 in)
	Aspect Ratio	5:4
	Viewing Angle (typical)*	Up to 178° horizontal/178° vertical (10:1 contrast ratio)
	Brightness (typical)*	250 cd/m^2
	Dynamic Contrast Ratio (typical)	3,000,000:1
	Contrast Ratio (typical)*	1000:1
	Response Time (typical)*	8 ms (gray to gray)
	Pixel Pitch	0.2928 mm
	Backlight Lamp Life (to half brightness)	30K hours
	Color Gamut	72%
	Color Support**	Can display up to 16.7 million colors

* 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.

Video/Other Inputs		
	Plug and Play	Yes
	USB 2.0 Hub	Self-powered; two ports (cable included)
	USB Cable	**1,8 m** (5.9 ft); detached
	Input Connectors	Three connectors: (1) 15-pin mini D-sub analog VGA and (1) DVI-D and (1) Display Port (select regions)
	Input Impedance	75 ohms ± 2%
	Sync Input	Separate sync (HSYNC/VSYNC)
	Video Cables	VGA, DVI-D, DisplayPort (select regions)
	Video Cable Length	**1,8 m** (5.9 ft); detached

Signal Interface/ Performance		
	Horizontal Frequency	53 to 82 kHz
	Vertical Frequency	50 to 76 Hz
	Native Resolution	1280 x 1024 @ 60 Hz (analog)
		1280 x 1024 @ 60 Hz (digital)
	Max Resolution (Analog)	1280 x 1024 @ 60 Hz
	Max Resolution (Digital)	1280 x 1024 @ 60 Hz
	Preset VESA Modes (non-interlaced)	640 x 480 @ 60 Hz
		720 x 400 @ 70 Hz
		800 x 600 @ 60 Hz
		1024 x 768 @ 60 Hz
		1280 x 1024 @ 60 Hz
	Max Pixel Clock Speed	135 MHz

Technical Specifications

	User Programmable Modes	Yes, 10	
	Anti-Glare	Yes	
	Anti-Static	Yes	
	AssetControl	Yes (accessible on HP Compaq Business Desktops featuring HP Client Manager)	
	Default Color Temperature	Warm (6500° Kelvin)	
On Screen Display (OSD) **Controls**	**Buttons and Switches**	"Menu" "-" "+" "OK" "Power"	
	Languages	English, Spanish, French, German, Dutch, Simplified Chinese, Japanese, Portuguese, and Traditional Chinese	
	User Controls	Brightness, Contrast, Color, Image Control, OSD Control, Management, Language, Factory Reset, Source Control	
Power	**Power Supply**	Internal	
	Power Source	100-240V at 50/60Hz	
	Maximum	28 W	
	Typical Power Consumption	25 W	
	Power Saving Mode	< 0.5 W	
	Off Mode	< 0.5 W	
	Power Cable Length	1,9 m (6.2 ft); detached	
Mechanical	**Dimensions** (W x D x H)	**Packaged**	**48,6 x 19 x 42,2 cm** (19.1 x 7.5 x 16.6 in)
		Unpacked with stand (minimum)	**41,7 x 19,2 x 36,6 cm** (16.4 x 7.5 x 14.4 in)
		Unpacked with stand (maximum height)	**41,7 x 19,2 x 48,6 cm** (16.4 x 7.5 x 19.1 in)
		Base area (footprint)	**21,45 x 19,2 cm** (8.5 x 7.6 in)
		Panel only (without stand)	**41,7 x 4,7 x 34,7 cm** (16.4 x 1.8 x 13.6 in)
	Weight	**Packaged**	**6,7 kg** (14.77 lb)
		Unpacked with stand	**4,9 kg** (10.8 lb)
		Panel Only (without stand)	**3 kg** (6.6 lb)
	Bezel Width	**20,59 mm** (.81 in) left and right, **20,58 mm** (.81 in) top, and **26,35 mm** (10.4 in) bottom	
	Tilt Range	-5° to +25°	
	Swivel Range	± 180° horizontal swivel	
	Height Adjustable	Yes, **12 cm** (4.7 in) adjustment range	
	Pivot Rotation	Yes, 90° into portrait orientation	
	Base	Ships detached	
Environmental	**Temp. - Operating**	32° to 104° F (0° to 40° C)	

Technical Specifications

Temp. - Non-operating	-4° to 140° F (-20° to 60° C)
Humidity - Operating	15% to 80%, non-condensing
Humidity - Non-operating	80% to 90%
Altitude - Operating	**0 to 5000 m** (0 to 16,404 ft)
Altitude - Non-operating	**0 to 12000 m** (0 to 39,370 ft)
White LED Backlights	Yes
CCFL Panel	No
Arsenic-Free Display Glass[4]	Yes
Low Halogen[5]	Yes
Mercury- Free Display Backlighting	Yes

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	14.30 W	14.61 W	14.25 W
Sleep	0.18 W	0.28 W	0.18 W
Off	0.17 W	0.26 W	0.16 W

Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation	49 BTU/hr	50 BTU/hr	49 BTU/hr
Sleep	1 BTU/hr	1 BTU/hr	1 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 18 % post-consumer recycled plastic (by wt.)

Technical Specifications

- This product is 98.4% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
  - PAPER/Corrugated 656 g
- Internal:
  - PLASTIC/EPS (Expanded Polystyrene) 215 g
  - PLASTIC/Polystyrene High Impact 25 g

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

Technical Specifications

- 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/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		
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 flat panel 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[1]	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. 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.

Technical Specifications

	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.
	HP DVI to DVI cable- Part number DC198A	Connect to external monitors with a DVI connector from an HP Compaq Business Desktop computer with a DVI connector. The cable is a single link cable with DVI-D support on both connectors. The cable will connect to either a DVI-D or DVI-I connector on the monitor and the graphics card.
	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.
What's in the box?	**Monitor and Accessories**	HP EliteDisplay E190i 18.9-inch 5:4 LED Backlit IPS Monitor; VGA cable; DisplayPort cable; USB cable; AC Power cable
	Documentation	Warranty card and CD
	Featured Software	Monitor Driver (ICM/INF) Display Assistant Auto adjustment pattern utility Adobe Acrobat Reader
Other	**User Guide Languages**	AMS: English, French, Spanish, B. Portuguese EMEA: Danish, Dutch, Finnish, French, German, Hebrew, Italian, Norwegian, Spanish (Int'l), Swedish, Czech, Greek, Hungarian, Polish, Portuguese, Russian, Slovak, Turkish, Arabic, Kazakh APJ: English, S. Chinese, T. Chinese, Bahasa Indonesia, Korean, Japanese
	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	Meteorite bezel, Black chassis and stand
	VESA External Mounting	Yes (one set of standard 4-hole pattern, 100 mm). Stand must first be removed.
	Security Lock-Ready	Yes
Certification and Compliance		TCO Displays, EPEAT® Gold[3], ENERGY STAR® qualified, CECP eco label (China Energy Conservation Program), SEPA eco label (China), TGM eco label(Taiwan Green Mark), EuP lot6 Tier2, China Energy Label (CEL), China MEPS, Korea MEPS (E-standby), ISO 9241-307, Requirements, CSA 60950-1, UL 60950-1, EN55022 Class B, EN60950 -1, CNS 13438 Class B, IEC 60950-1, "GS" Mark, TUV Approvals, VCCI Approvals, KC and KCC (Korean) Requirements, CE Marking, FCC Part 15 class B Approval, CCC, IT ECO (EDS), EN55024 Class B, CISPR Requirements, SmartWay - NA only - Energy logistics
Compatibility		VESA Video Signal Standard (VSIS) Compliant video cards have been tested and proven compatible for use with this monitor. Recommended for use with HP products.
Service and Warranty		Protected by HP, including a 3 year standard limited warranty. Optional Care Pack Services are extended service contracts which go beyond your standard warranties.[2]

Technical Specifications

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[1]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.

[2]HP Care Pack Services are sold separately. 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.

[3]EPEAT® Gold where HP registers commercial display products. See www.epeat.net for registration status in your country.

[4]External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.

All 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.