

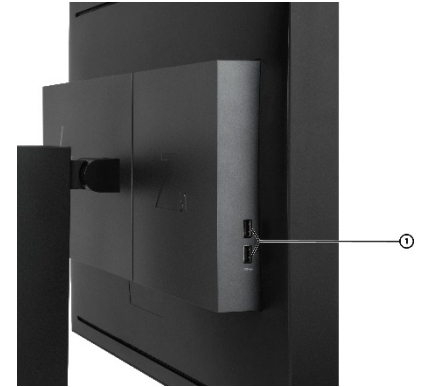
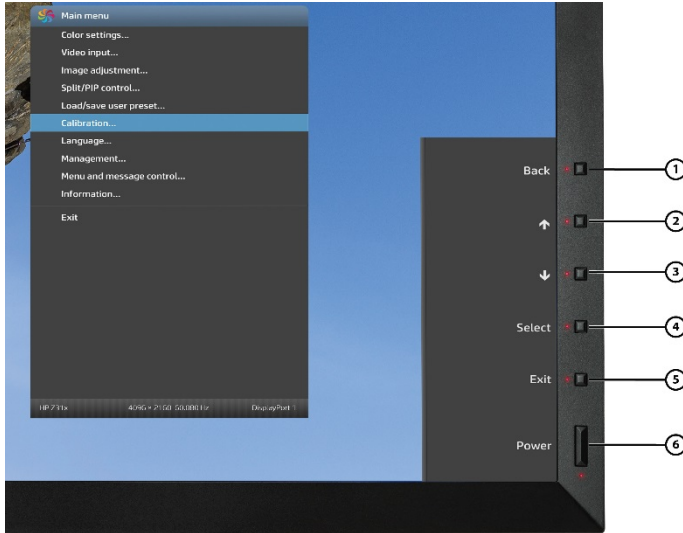
### Technical Specifications

#### HP DreamColor Z31x Studio Display



1. **Color preset**
2. **Video input**
3. **Luminance**
4. **Display info**
5. **Open menu**
6. **Power**

### Technical Specifications

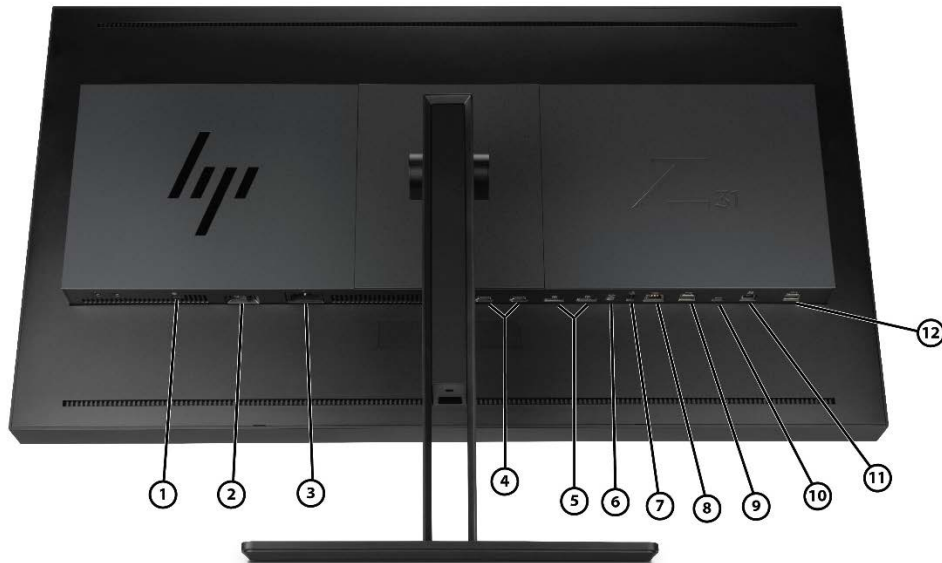


#### Controls

- |                        |                       |                     |
|------------------------|-----------------------|---------------------|
| <b>1. Color preset</b> | <b>2. Video input</b> | <b>3. Luminance</b> |
| <b>4. Display info</b> | <b>5. Open menu</b>   | <b>6. Power</b>     |

#### Side

- 1. (2) USB 3.0**



- |                                 |   |
|---------------------------------|---|
| <b>1. Security Lock Slot</b>    | <b>7. KVM Keyboard Connection (USB)</b> |
| <b>2. Power Switch</b>          | <b>8. RJ-45 Network Connector</b>       |
| <b>3. Power Cable Connector</b> | <b>9. (2) DreamColor Ports (USB)</b>    |
| <b>4. (2) HDMI 2.0</b>          | <b>10. USB Type-C™</b>                  |
| <b>5. (2) DisplayPort™ 1.2</b>  | <b>11. USB 3.0 Type-B</b>               |
| <b>6. Audio out (analog)</b>    | <b>12. (2) USB 3.0 Type-A</b>           |

### Technical Specifications

Models: 1JR59A4

<b>Panel</b>	<b>Type</b>	31.1-inch Real IPS, LED Backlit
	<b>Viewable Image Area (diagonal)</b>	<b>79 cm</b> (31.1 in) widescreen; diagonally measured
	<b>Panel Active Area (W x H)</b>	<b>69,8 x 36,8 cm</b> (27.48 x 14.49 in.)
	<b>Panel Type</b>	Real IPS
	<b>Native Resolution/Timing</b>	4096 × 2160 @ 60 Hz <sup>1</sup>
	<b>Aspect Ratio</b>	17:9
	<b>Viewing Angle (typical)</b>	Up to 178° horizontal/178° vertical (10:1 minimum contrast ratio)
	<b>Brightness (typical)*</b>	250 cd/m <sup>2</sup> **
	<b>Static Contrast Ratio (typical)*</b>	1,500:1
	<b>Static Contrast Ratio (minimum)*</b>	1,200:1
	<b>Dynamic Contrast Ratio (typical)*</b>	N/A
	<b>Flicker Free</b>	Yes
	<b>Response Time (typical)*</b>	10 ms with Overdrive enabled
	<b>Pixel Pitch</b>	(H) 0.1704 × (V) 0.1704
	<b>Pixels Per Inch (PPI)</b>	149
	<b>Backlight Lamp Life (to half brightness)</b>	30,000 hours minimum
	<b>Panel Bit Depth</b>	True 10-bit (Up to 1.07 Billion colors)
	<b>Color Gamut</b>	100% of sRGB, 100% of BT.709, 100% of AdobeRGB, 99% of DCI-P3, 80% of BT.2020

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

\*\* HP applied uniformity compensation to each Z31x display, which brings the typical uniform peak luminance down to 250 cd/m<sup>2</sup> from a 350 cd/m<sup>2</sup> native peak brightness. Display supports luminance calibration up to 250 cd/m<sup>2</sup>, reserving any luminance headroom for panel aging compensation.

<b>User Controls</b>	<b>On Screen Display (OSD) User Controls</b>	Color settings, Video input, Image scaling, Markers, Digital cinema region, PIP/Split, User preset, Calibration, Language, Management, Menu and message control, Information
	<b>Monitor Control Buttons or Switches</b>	Power, 5 OSD buttons
	<b>User-Assignable Function Buttons</b>	Yes, 4 (19 options)
	<b>Languages</b>	10 (English, Spanish, German, French, Italian, Netherlands, Portuguese, Japanese, T-Chinese and S-Chinese)
<b>Color Management</b>	<b>Factory Color Calibrated</b>	Yes
	<b>Factory Color Presets</b>	DCI P3 D65, BT.709, BT.2020, sRGB D65, sRGB D50, Adobe RGB D65, EPD, Native
	<b>Color Space / Subsampling Support</b>	RGB 4:4:4, YC <sub>B</sub> C <sub>R</sub> 4:4:4, YC <sub>B</sub> C <sub>R</sub> 4:2:2, YC <sub>B</sub> C <sub>R</sub> 4:2:0
	<b>Default Color Temperature</b>	D65
	<b>Low Blue Light Modes</b>	Yes
	<b>RGB Channel Adjust</b>	Yes, Setup and Gain, downstream from color preset
	<b>User Calibration Support</b>	Integrated
	<b>Integrated Calibration Instrument</b>	Yes

### Technical Specifications

<b>External Calibration Instrument Support</b>	X-Rite i1Display Pro, X-Rite- i1 Pro, Klein K10-A, Photo Research PR-6xx/7xx, Colorimetry Research CR-100/CR-250, Konica Minolta CA-310
<b>Standalone/Schedulable Calibration</b>	Yes
<b>Scriptable Calibration</b>	Yes
<b>Signal Interface/ Performance</b>	<p><b>Horizontal Frequency</b> 30 – 135 kHz</p> <p><b>Vertical Frequency</b> 24-60 Hz</p> <p><b>Native Resolution</b> 4096 × 2160 @ 60 Hz<sup>1</sup></p> <p><b>Preset VESA Graphic Modes (non-interlaced)</b></p> <p>640 × 480 @ 60 Hz</p> <p>720 × 400 @ 70 Hz</p> <p>800 × 600 @ 60.317 Hz</p> <p>1024 × 768 @ 60.004 Hz</p> <p>1280 × 720 @ 24 Hz</p> <p>1280 × 720 @ 30 Hz</p> <p>1280 × 720 @ 50 Hz</p> <p>1280 × 720 @ 60 Hz</p> <p>1280 × 1024 @ 60.020 Hz</p> <p>1366 × 768 @ 60.000 Hz</p> <p>1920 × 1080 @ 23.976 Hz</p> <p>1920 × 1080 @ 24 Hz</p> <p>1920 × 1080 @ 30 Hz</p> <p>1920 × 1080 @ 50(i) Hz</p> <p>1920 × 1080 @ 50 Hz</p> <p>1920 × 1080 @ 59.94(i) Hz</p> <p>1920 × 1080 @ 59.94 Hz</p> <p>1920 × 1080 @ 60.000 Hz</p> <p>1920 × 1200 @ 59.950 Hz</p> <p>1920 × 1200 @ 59.995 Hz</p> <p>2048 × 1080 @ 24.000 Hz</p> <p>2048 × 1080 @ 48.000 Hz</p> <p>2048 × 1080 @ 60.000 Hz</p> <p>3840 × 2160 @ 24 Hz</p> <p>3840 × 2160 @ 25 Hz</p> <p>3840 × 2160 @ 30 Hz</p> <p>3840 × 2160 @ 47.952 Hz</p> <p>3840 × 2160 @ 48 Hz</p> <p>3840 × 2160 @ 50 Hz</p> <p>3840 × 2160 @ 60 Hz</p> <p>4096 × 2160 @ 23.976 Hz</p> <p>4096 × 2160 @ 24 Hz</p> <p>4096 × 2160 @ 47.952 Hz</p> <p>4096 × 2160 @ 48 Hz</p> <p>4096 × 2160 @ 59.94 Hz</p> <p>4096 × 2160 @ 60 Hz</p> <p>2048 × 2160 @ 60 Hz</p>

### *Technical Specifications*

<b>Maximum Pixel Clock Speed</b>	600 MHz
<b>Anti-Glare Panel</b>	Yes
<b>Default Color Temperature</b>	D65 (6504K)

### Technical Specifications

#### VIDEO/OTHER INPUTS

<b>Connector Types</b>	<b>DisplayPort™</b>	(2) DisplayPort™ 1.2	
	<b>HDMI</b>	(2) HDMI 2.0	
	<b>HDCP support</b>	Yes, all video inputs	
	<b>Audio</b>	(1) Audio out (analog)	
	<b>Network</b>	(1) RJ-45 Network Connector	
<b>USB Port Specifications</b>	<b>USB Version</b>	3.0	
	<b>USB Hub</b>	Yes	
	<b>Downstream Ports</b>	4, Type A	
	<b>Upstream Ports</b>	1, Type B	
	<b>Fast Charging USB Ports</b>	2 Ports (side)	
	<b>HP DreamColor USB Ports</b>	2, USB 3.0	
	<b>KVM Keyboard Port</b>	Yes	
	<b>Power Output Maximum</b>	Fast Charging 12.5 W; Standard 4.75 W	
	<b>USB-Type C™ Port Specifications</b>	<b>USB-Type C™ Version</b>	USB 3.1 Gen1 / 5G bps
		<b>USB-Type C™ Hub</b>	No (USB-C™ can provide upstream to USB Type-A Hub)
<b>Downstream USB-Type C™ Ports</b>		0	
<b>Upstream USB-Type C™ Ports</b>		1	
<b>Video Support</b>		USB-C Alt mode – DisplayPort™ 1.2	
<b>Power Output</b>		5V/5.25V/9V/10V/12V/15V/20V, 3A	
<b>Power Output Maximum</b>		60W Max	
<b>Cables Included</b>	<b>Video Cables Included</b>	(1) HDMI <b>1,8 m</b> (5.9 ft), (1) DisplayPort™ <b>1,8 m</b> (5.9 ft)	
	<b>USB Cables Included</b>	(1) USB Type-C™ <b>1,8 m</b> (5.9 ft) (1) USB Type-C™ to Type-A cable <b>1,8 m</b> (5.9 ft) (1) USB Type-B to Type-A cable <b>1,8 m</b> (5.9 ft)	
<b>POWER</b>	<b>Power</b>	<b>Power Supply</b>	Internal
		<b>Input Power</b>	100 – 240 VAC 50/60 Hz
		<b>Typical Power<sup>2</sup></b>	120 W
		<b>Maximum Power<sup>3</sup></b>	260 W
		<b>Energy Saving/Standby Mode</b>	0.5 W
		<b>Power Cable Length</b>	<b>1,9 m</b> (6.2 ft)

#### DIMENSIONS AND WEIGHT

<b>Mechanical</b>	<b>Dimensions (W x D x H)</b>	<b>Unpacked w/stand</b> (highest setting)	<b>73,80 x 24,80 x 56,60 cm</b> (29.06 x 97.64 x 22.38 in)
		<b>Unpacked w/o stand</b> (head only)	<b>73,80 x 8,26 x 41,41 cm</b> (29.06 x 3.25 x 16.30 in)
		<b>Packaged</b>	<b>88,80 x 38,80 x 53,60 cm</b> (34.96 x 15.28 x 21.10 in)
	<b>Weight</b>	<b>Head Only</b>	<b>9,9 kg</b> (21.83 lb)
		<b>Unpacked</b>	<b>15 kg</b> (33 lb)
		<b>Packaged</b>	<b>18,5 kg</b> (40.7 lb)

### Technical Specifications

#### MONITOR FEATURES

<b>Plug and Play</b>	Yes
<b>Color</b>	Black
<b>Integrated Quick Release<sup>9</sup></b>	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.
<b>Cable Management</b>	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.
<b>Detachable Stand</b>	Yes, ships detached
<b>Tilt Range</b>	-5° to +20° vertical
<b>Swivel Range</b>	-45° to +45°R
<b>Display height adjustment:</b>	Adjustment Range: 144 mm Min (desk to bottom of display): 11 mm Max (desk to bottom of display): 155 mm
<b>Pivot Rotation</b>	N/A
<b>VESA Mounting</b>	Yes, 100 mm Integrated with mount
<b>Security Lock-Ready</b>	Yes

#### SPECIAL FEATURES

<b>Picture-in-Picture, Picture-by-Picture</b>	Yes
<b>KVM Switch</b>	Yes, Keyboard/OSD-control
<b>Remote Manageability</b>	Yes, Web Dashboard, Host API, WS-Management
<b>User Presets</b>	Yes
<b>True 2K Image Scaling</b>	Yes
<b>Digital Cinema Region Masking</b>	Yes, 1.85:1, 2.39:1
<b>Marker Overlays</b>	Yes, preset and programmable
<b>Video legal limiting (64–960)</b>	Yes, all inputs
<b>Rename Video Inputs</b>	Yes
<b>User Updateable Firmware</b>	Yes

#### ENVIRONMENTAL

<b>Specifications</b>	<b>Temperature - Operating</b>	<b>5° to 35° C</b> (41° to 95° F)
	<b>Temperature - Non-operating</b>	<b>-20° to 60° C</b> (-4° to 140° F)
	<b>Humidity – Operating</b>	20% to 80% Relative Humidity non-condensing
	<b>Humidity – Non-operating</b>	5% to 95%, 38.7° C max wet-bulb
	<b>Altitude – Operating</b>	<b>0 to 5,000 m</b> (0 to 16,404 ft)
	<b>Altitude – Non-operating</b>	<b>0 to 12,192 m</b> (0 to 40,000 ft)
	<b>White LED Backlights</b>	Yes
	<b>CCFL Panel</b>	No
	<b>Arsenic-Free Display Glass</b>	Yes
	<b>Low Halogen<sup>4</sup></b>	Yes (except cables, SOC board and colorimeter motor)
	<b>Mercury-Free Display Backlights</b>	Yes

### Technical Specifications

<b>OPTIONS (EACH SOLD SEPARATELY)</b>	<b>HP B500 PC Mounting Bracket — Part number 2DW52AA</b>	Maximize your available work area with a single-footprint solution. Simply attach the bracket to the back of your display, and your PC platform to the bracket via the 100mm VESA pattern. It's that easy!
	<b>HP DisplayPort™ Cable Kit —Part number VN567AA</b>	Connects a DisplayPort™ connector on an HP Business Desktop computer to a DisplayPort™ connector on a monitor
	<b>HP Business PC Security Lock Kit— Part number PV606AA</b>	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?

<b>What's in the box?</b>	<b>Monitor and Accessories</b>	HP DreamColor Z31x Studio Display, AC power cord, (1) HDMI 1,8 m (5.9 ft), (1) DisplayPort™ 1,8 m (5.9 ft) (1) USB Type-C™ 1,8 m (5.9 ft) (1) USB Type-C™ to Type-A cable 1,8 m (5.9 ft) (1) USB Type-B to Type-A cable 1,8 m (5.9 ft) Accessory bracket Rear cover for VESA mounting CD (includes user guide, warranty, drivers, calibration report)
<b>Other</b>	<b>Documentation</b>	
	<b>Software included</b>	N/A
	<b>User Guide Languages</b>	English, Arabic, S. Chinese, T. Chinese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Kazakh, Korean, Norwegian, Polish, Brazilian Portuguese, Russian, Slovenian, Spanish, Swedish and Turkish.
	<b>Warranty Languages</b>	English, Arabic, S. Chinese, T. Chinese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Kazakh, Korean, Norwegian, Polish, Brazilian Portuguese, Russian, Slovenian, Spanish, Swedish and Turkish.
	<b>Country of Origin</b>	China

### CERTIFICATION AND COMPLIANCE

<b>Certification and Compliance</b>	Microsoft WHQL Certification (Windows 10), SmartWay Transport Partnership (NA only), CEL/EUP Lot-5/EUP Lot-6/CE/CB/TUV GS/TUV ERGO/ISO 9241-307/CSA/FCC/ICES/KC/KCC/E-STAND BY/Vietnam MEPS/S-MARK/VCCI/CCC/BSMI/CECP
<b>Compatibility</b>	Compatible with platforms using the VESA standard video modes. Recommended for use with HP products.
<b>Service and Warranty</b>	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. <sup>5</sup>
<b>Zero Bright Dot Policy*</b>	Yes

\*The HP Pixel Policy allows no bright sub-pixel defects for this display. For complete details, see <http://support.hp.com/us-en/document/c00288895>.





### *Technical Specifications*

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1. The video card of the connected PC must be capable of supporting 4096 × 2160 at 60 Hz with 10-bit color using one DP, HDMI, or USB-C (DP alt mode).
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. 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 <http://www.hp.com/go/cpc> for details.

