Datasheet

## HP EliteDisplay E232 23-inch Monitor



Work smart and comfortably with the HP EliteDisplay E232 23-inch Monitor, a large-screen Full HD IPS display with Elite-class presentation features and ergonomic adjustability for everything you do every day.



#### Put every detail on display.

• Enjoy sharp Full HD resolution for all your projects and collaborate easily with colleagues around the room with 178-degree viewing angles from IPS technology. The large 23-inch diagonal screen gives you plenty of room for your open applications.

#### Find your perfect fit.

• Create the view that's right for you and boost your productivity with adjustable tilt and swivel and an impressive 150 mm height adjustment range. Use pivot rotation to customize portrait or landscape views.

#### **Convenient connections.**

- Connect to your choice of PC or device with HDMI, DisplayPort, VGA, and USB inputs. Keep your frequently-used devices right where you need them with USB connections at the display.
- Attach your HP Desktop Mini, HP Chromebox, or select HP Thin Client directly behind the display.<sup>1</sup> Keep things tidy with an integrated power supply and cable management features.
- Get an intelligent, energy-efficient design that is ENERGY STAR<sup>®</sup> certified, EPEAT<sup>®</sup> Gold registered<sup>2</sup>, and meets TCO Certified Edge requirements with 85% Post-Consumer Recycled plastics.
- Design the screen for how you work with HP Display Assistant software.
- Customize a complete solution with HP accessories.<sup>3</sup> Use the HP Speaker Bar for audio, an HP Single Arm to take the display off the desk, or an HP USB Graphics Adapter for multi-monitor<sup>3</sup> setups. Go stand-less with the head-only model.<sup>4</sup>
- Get three years of service and support, and extend your protection with optional HP Care Packs.<sup>5</sup>





HDMI, VIGA



1080

### HP EliteDisplay E232 23-inch Monitor Specifications Table



Product Number	M1N98AA
	N2Q02AA, Head Only
Display Size (diagonal)	23"
Display Type	IPS w/LED backlight
Panel Active Area	20.046 x 11.276 in; 509.184 x 286.416 mm
Viewing Angle	178° horizontal; 178° vertical
Brightness	250 cd/m <sup>2</sup> 1
Contrast Ratio	1000:1 static; 5000000:1 dynamic 1
Response Time	7 ms gray to gray 1
Aspect Ratio	16:9
Native Resolution	1920 x 1080 @ 60 Hz
<b>Resolutions Supported</b>	1920 x 1080; 1680 x 1050; 1600 x 900; 1440 x 900; 1280 x 1024; 1280 x 800; 1280 x 720; 1024 x 768; 800 x 600; 640 x 480
<b>Display Features</b>	Anti-glare; In plane switching; Language selection; LED Backlights; On-screen controls; Pivot rotation; Plug and Play; User programmable
User Controls	Menu; Function ; Power
Input Signal	1 VGA; 1 HDMI (with HDCP support); 1 DisplayPort 1.2 (with HDCP support);
Ports and Connectors	3 USB 2.0 (two downstream and one upstream)
Input Power	Input voltage: 100 to 240 VAC
Power Consumption	35 W (maximum), 28 W (typical), 0.5 W (standby)
Dimensions without Stand (W x D x H)	21.64 x 1.95 x 13.27 in 54.93 x 4.96 x 33.69 cm Without stand
Weight	12.56 lb (with stand); 8 lb (without stand) 5.7 kg (with stand); 3.63 kg (without stand)
Ergonomic Features	Tilt: -5° to +25°; Swivel: 45°; Pivot rotation: 90°
Environmental	Arsenic-free display glass; Mercury-free display backlights; Low halogen <sup>2</sup>
Energy Efficiency Compliance	ENERGY STAR® certified
What's in the box	Monitor; AC power cord; VGA cable; DisplayPort cable; USB cable; CD (includes User Guide, warranty, drivers)

See important legal disclaimers on the last page

#### Accessories and services (not included)

HP PC Mounting Bracket for Monitors		Customize an altogether better solution with the HP PC Mounting Bracket for Monitors, which lets you attach your HP Desktop Mini, HP Chromebox, or select HP Thin Client directly behind select HP Z Displays and EliteDisplays. <b>Product number: N6N00AA</b>
HP Desktop Mini Security/Dual VESA Sleeve		Wrap your HP Desktop Mini PC in the HP Desktop Mini Security/Dual VESA Sleeve to securely mount your PC behind your display, position your solution on a wall, and lock it down with the optional HP Ultra-Slim Cable Lock. <b>Product number: G1K22AA</b>
HP Single Monitor Arm		The HP Single Monitor Arm is the perfect desk accessory for your work life. Sleek and streamlined, the HP Single Monitor Arm is designed to complement the way you work. <b>Product number: BT861AA</b>
HP Adjustable Dual Display Stand	et e	The HP Adjustable Dual Display Stand allows you to use two displays to maximize your productivity and optimize efficiency. Either or both displays can be rotated to landscape or portrait orientation, and the stand is depth-, height-, tilt-, and angle-adjustable so you can view both screens at eye-level as well as slightly facing each other, letting you track multiple applications and information sources at the same time. Integrated base rollers let you rotate the stand so you can more easily share your work. <b>Product number: AW664AA</b>
HP LCD Speaker Bar		The LCD Speaker Bar seamlessly attached to the bezel of the HP Business Monitor and provides full multimedia capabilities. <b>Product number: NQ576AA</b>
HP UHD USB Graphics Adapter		Boost your productivity by extending or mirroring your desktop to a UHD display with the HP UHD USB Graphics Adapter. <b>Product number: N2U81AA</b>
HP 4 year Next business day Exchange Large Monitor Service	Care Pack	Support Exchange Service offers a reliable and fast exchange service for eligible HP products. Specifically targeted at products that can easily be shipped and on which customers may easily restore data from backup files, HP Hardware Support Exchange Service is a cost-efficient but still convenient alternative to onsite support. HP Hardware Support Exchange Service provides a replacement product or part to be delivered free of freight charges to your location within a specified period of time. Replacement products or parts are new or equivalent to new in performance. <b>Product number: U0J12E</b>

#### **Messaging Footnotes**

<sup>1</sup> Requires HP PC Mounting Bracket for Monitors, sold separately. See product QuickSpecs for exact PC and thin client compatibility. <sup>2</sup> EPEAT® registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country.

#### **Technical Specifications Footnotes**

<sup>1</sup> All specifications represent the typical specifications provided by HP's component manufacturers, actual performance may vary either higher or lower. <sup>2</sup> External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.

- <sup>3</sup> Each sold separately.

<sup>4</sup> Sold separately. Availability varies by region. Solus separately. Availability variability variability

applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.

Sign up for updates hp.com/go/getupdated Learn more at hp.com

The product could differ from the images shown. © 2015 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. Specific features may vary from model to model. 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.

ENERGY STAR® and the ENERGY STAR® mark are registered trademarks of the U.S. Environmental Protection Agency.





## DS3608-HD/DS3678-HD Ultra-Rugged Scanner

#### **UNSTOPPABLE PERFORMANCE FOR HIGH-DENSITY 1D/2D BARCODES**

Every day, workers on the manufacturing plant floor scan thousands of barcodes on product components to ensure product quality. Their productivity depends on the quality of the scanner you put in their hands. When your workers need to capture the small and dense 1D and 2D barcodes common in electronics and medical equipment manufacturing, with the corded DS3608-HD and cordless DS3678-HD High Density imagers, you can give them the best — unmatched rugged design, unmatched scanning performance and unrivaled manageability. Advanced scanning delivers lightning-fast capture of any 1D or 2D barcode printed directly on product components or on labels in virtually any condition — or displayed on a screen. The ultra-rugged design is practically indestructible — ideal for punishing environments. The scanners couldn't be easier and less time-consuming to deploy and manage. And when it comes to cordless technology, the DS3678-HD is loaded with Zebra-only features that put it in a class of its own. The DS3608-HD/DS3678-HD — the unstoppable performance you need to maximize workforce productivity and throughput, improve product quality, reduce production cycle times and prevent unplanned production line downtime.



## Superior scanning performance on any high density 1D/2D barcode

This advanced imager delivers first time capture of high-density 1D and 2D barcodes printed on labels or directly on product components — including tiny and dense 3 mil codes that are barely visible to the naked eye. These scanners also capture standard printed barcodes in virtually any condition — damaged, dirty, poorly printed or under shrinkwrap. This dual functionality provides excellent value: you get one scanner you can use on the production line for end-to-end track and trace of materials — and in the warehouse from receiving to shipping.

## Ultra-rugged — the most indestructible design in its class

The DS3608-HD/DS3678-HD is our most rugged scanner yet, with the highest drop, tumble and sealing specification in its class. The DS3608-HD/DS3678-HD is built to survive an 8 ft./2.4 m drop to concrete — 23 percent more durable than any other scanner in this class. The DS3608-HD/ DS3678-HD operates reliably after 5,000 tumbles, simulating the real-world tumbling that occurs with a drop. Both models are dust proof, spray proof and waterproofed to IP67 — they can be sprayed down with jetting water and even submersed in water for up to 30 minutes.

## Easy management with our complimentary industry-best tools

Remotely configure scanners, upgrade firmware, format data properly for your back end and monitor PowerPrecision+ battery statistics and more with 123Scan<sup>2</sup> and Scanner Management Service (SMS).

#### Multi-code captures and processes up to 20 barcodes simultaneously

Many labels have multiple barcodes your workers need to capture. Now, one press of the trigger captures the right barcodes and applies the unique data format required for each one for instant transmission to your backend systems — all with complete control over the order barcodes are processed.

#### Faster pick-list processing

Users can easily select and capture an individual barcode from any pick list.

#### A Bluetooth model in a class of its own for superior cordless freedom

Bluetooth 4.0 (Low Energy) provides lightning fast wireless communication and maximum energy efficiency.

Our Zebra *Wi-Fi Friendly Mode* eliminates the wireless interference that Bluetooth devices can often create in your Wi-Fi environment.

The 'go anywhere' rugged cradle offers superior versatility and durability. The DS3678-HD is the only scanner in its family to offer a cradle with IP65 sealing. And its industrial charging contacts withstand 250,000 insertions.

The first-in-its-class battery 'charge gauge' and Bluetooth status LED make it easy to monitor battery power as well as Bluetooth connectivity.

The PowerPrecision+ battery delivers the ultimate in battery power and management. You get 56 percent more scans-per-charge compared to competitive models, plus visibility into a wealth of battery healthrelated data, including charge cycles consumed, current battery status and a State of Health meter, which identifies if batteries are healthy and holding a full charge or ready for retirement.

THE DS3608-HD/DS3678-HD — PROTECT PRODUCT QUALITY, REDUCE PRODUCTION TIME AND PREVENT UNPLANNED PRODUCTION LINE DOWNTIME WITH THE ULTRA-RUGGED SCANNER THAT REDEFINES RELIABILITY.

FOR MORE INFORMATION, VISIT WWW.ZEBRA.COM/DS36X8-HD OR ACCESS OUR GLOBAL CONTACT DIRECTORY AT WWW.ZEBRA.COM/CONTACT

## DS3608-HD/DS3678-HD Specifications Chart

Dimensions	Corded: 7.3 in. H x 3.0 in. W x 5.2 in. D
Dimensions	18.5 cm H x 7.6 cm W x 13.2 cm D
	Cordless: 7.3 in. H x 3.0 in. W x 5.6 in. D
	18.5 cm H x 7.6 cm W x 14.2 cm D
Weight	Corded: 10.9 oz./309 g; Cordless: 14.5 oz./411 g
Input Voltage Range	Host powered: 4.5 VDC min., 5.5 VDC max. External power supply: 11.4 VDC min., 12.6 VDC max
Operating Current	DS3608-HD (corded): 450 mA (typical)
Standby Current	DS3608-HD (corded): 100 mA (typical)
Color	Industrial Green
Supported Host Interfaces	USB, RS232, Keyboard Wedge
Battery	PowerPrecision+ 3100 mAh Li-Ion rechargeable battery
User Indicators	Direct decode indicator; LEDs; beeper; vibration
PERFORMANCE CHAR	ACTERISTICS
Scans per Full Charge	70,000+
Illumination	Two (2) warm white light LEDs
Imager Field of View	Horizontal: 31°, Vertical: 23°
Image Sensor	1,280 x 960 pixels
Minimum Print Contrast	15% minimum reflective difference
Skew/Pitch/Roll	Skew: ± 60°; Pitch: ± 60°; Roll: ± 360°
DECODE CAPABILITIES	*
1D	Code 39, Code 128, Code 93, Codabar/NW7, Code 11, MSI Plessey, UPC/EAN, I 2 of 5, Korean 3 of 5, GS1 DataBar, Base 32 (Italian Pharma)
2D	PDF417, Micro PDF417, Composite Codes, TLC-39, Aztec, DataMatrix, MaxiCode, QR Code, Micro QR, Chinese Sensible (Han Xin), Postal Codes
USER ENVIRONMENT	
Operating Temp.	Corded: -22° F to 122° F/-30° C to 50° C Cordless: -4° F to 122° F/-20° C to 50° C
Storage Temp.	-40° F to 158° F/-40° C to 70° C
Humidity	5% to 95% condensing
Drop Specification	Withstands multiple 8.0 ft. / 2.4 m drops to concrete
Tumble Specification	5000 tumbles @ 3.3 ft. (1 m)
Sealing	Scanner: IP65 and IP67; FLB cradle: IP65
ESD	Per EN61000-4-2, $\pm 25$ KV air discharge, $\pm 10$ KV direct discharge, $\pm 10$ KV indirect discharge
Ambient Light Immunity	0 to 10,037 Foot Candles/0 to 108,000 Lux (direct sunlight)
UTILITIES AND MAINTE	NANCE
123Scan <sup>2</sup>	Programs scanner parameters, upgrades firmware, provides scanned barcode data and prints reports.

#### UTILITIES AND MAINTENANCE (CONTINUED)

Scanner SDK	Generates a fully-featured scanner application, including documentation, drivers, test utilities and sample source code. For more information, visit www.zebra.com/windowsSDK
Scanner Management Service (SMS)	Remotely manages your Zebra scanner and queries its asset information. For more information, visit www.zebra.com/sms
WIRELESS CONNECTI	VITY
Bluetooth Radio	Bluetooth Class 1, Version 4.0 (LE), serial port (SPP) and HID profiles
Data Rate	3 Mbit/s (2.1 Mbit/s) for Classic Bluetooth 1 Mbit/s (0.27 Mbit/s) for Low Energy
Radio Range	Direct line of sight in open air : Class 1: Minimum 300 ft. (100.0 m); Class 2: Minimum 30 ft. (10.0 m)
REGULATORY	
Environmental	RoHS EN 50581: 2012
Electrical Safety	EU Safety: EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + AC 2011 + A2: 2013; International Safety: IEC 60950-1: 2005 + A1: 2009 + A2: 2013 US/Canada Safety: UL 60950-1, second edition, CAN/CSA-C22.2 No. 60950-1-07
Laser/LED Safety	International LED Safety: IEC 62471: 2006 (Ed.1.0); EN 62471: 2008 (LED); UL, VDE and CU recognized laser component
EMI/RFI	IT Emissions: EN 55022: 2010/AC: 2011 (Class B); IT Immunity: EN 55024: 2010; Heavy Industrial: EN 61000-6-2: 2005/AC:2005; Harmonic Current Emissions: EN 61000-3-2: 2006 + A1: 2009 + A2: 2009 (Class B); Voltage Fluctuation and Flicker: EN 61000-3-3: 2013; Medical Electrical Equipment: EN 60601-1-2: 2007/AC: 2010, IEC 60601-1-2: 2007 (Modified); Radio Frequency Devices: 47 CFR Part 15, Subpart B, Class B Digital Apparatus: ICES-003 Issue 5, Class B

#### WARRANTY

Subject to the terms of Zebra's hardware warranty statement, the DS3608-HD/ DS3678-HD is warranted against defects in workmanship and materials for a period of three (3) years from the date of shipment. For complete warranty statement, go to: http://www.zebra.com/warranty

# RECOMMENDED SERVICES Zebra OneCare Select; Zebra OneCare Essential DECODE RANGES Symbology/Resolution Near/Far Code 128: 3 mil 2.0-3.0 in./5.1-7.6 cm Code 128: 20 mil 2.2-26.0 in./5.6-66.0 cm Datamatrix: 10 mil 1.0-9.0 in./ 2.5-22.9 cm

\* Refer to Product Reference Guide for complete list of symbologies.



NA and Corporate Headquarters +1 800 423 0442 inquiry4@zebra.com

For more information, visit www.zebra.com/123Scan

Asia-Pacific Headquarters +65 6858 0722 contact.apac@zebra.com

PDF417: 5 mil

EMEA Headquarters zebra.com/locations mseurope@zebra.com

2.0-6.0 in./5.1-15.2 cm

Latin America Headquarters +1 847 955 2283 la.contactme@zebra.com

©2016 ZIH Corp and/or its affiliates. All rights reserved. Zebra and the stylized Zebra head are trademarks of ZIH Corp registered in many jurisdictions worldwide. All other trademarks are the property of their respective owners. Part number: SS-DS36X8-HD 2/2016.

The Zebra 3600 Ultra-Rugged Scanner Series

This family of scanners offers a model to meet virtually every need in warehousing and manufacturing:

- LI3608/LI3678: 1D barcode capture
- DS3608-SR/ DS3678-SR: Standard range scanning of 1D and 2D barcodes
- DS3608-HP/ DS3678-HP: High performance scanner captures 1D/2D barcodes over longer distances, plus OCR, photos, and documents
- DS3608-HD/ DS3678-HD: Captures highdensity 1D/2D barcodes
- DS3608-DP/ DS3678-DP: Capture of Direct Part Marks (DPM)
- DS3608-ER/ DS3678-ER: All-range 1D/2D barcode capture

## Legacy Technology Services

## We Rent & Sell All Types Of Barcode Equipment

## Call now to talk to an expert 866-271-9891

#### About us

- Legacy Technology Services is a leading nationwide provider of mobile computing, barcode, printers and point of sale equipment and services.
- For over a decade, thousands of clients across North America have trusted us to provide equipment from leading manufacturers backed by the services to support them.

#### Latest Hardware from top manufacturers

• Legacy handles virtually every major manufacturer of mobile computing, barcoding and point of sale equipment.

#### **Expert Repair and Maintenance services**

· Legacy is one of the best repair facilities in North America

#### **Discontinued product sourcing**

• They don't make it anymore? Our inventory also includes manufacturer close-outs and discontinued equipment to support our clients legacy infrastructure.

#### Trade-in and Disposal services

- That old equipment laying around your facility may still have some value. Legacy routinely purchases equipment from our clients around the globe.
  - Data destruction
  - · Hardware disposal
  - Auditing services

#### Dedicated client account team

• Dedicated, highly trained account managers are here to answer all your questions and provide top notch service.

#### **Equipment rental services**

• Sometimes renting is a better solution, Legacy's huge rental inventory provides the equipment you need for temporary needs and projects.





<u>Legacy, Inc.,</u> 160 West Road, Ellington, CT 06029

Toll Free: 866-271-9891 Fax: 888-522-4684

#### www.LegacyGlobal.com

#### Some brands we carry







## Honeywell













