ZEBRA

# 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 waterproof to IP67 — they can be sprayed down with jetting water and even submersed in water.

**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 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 picklist.

**Extreme temperature rating**
Built to handle extreme cold, heat and humidity, you can use the DS3608-HD and DS3678-HD anywhere — even in the freezer*.

**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 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 class 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 more than three times the amount of scans per charge than with competitive models in this product class — more than 100,000 scans per charge, so workers can scan more items over a longer period of time. You also get visibility into a wealth of battery health-related 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.

**Three flexible feedback modes**
Mix and match the feedback modes that are ideal in your environment — vibration, red and green LEDs located in an area where they are always easy to see, plus the traditional loud beep tone.

**Instantly connect to your Industrial Ethernet network**
Zebra's Network Connect for Automation delivers a seamless connection between DS3608-HD/DS3678-HD scanners and a manufacturer's Industrial Ethernet network without the need for third party conversion equipment. The solution eliminates vulnerability points, improves security, reduces complexity and is compatible with every Zebra 3600 Series scanner.

**DataCapture DNA**
Zebra's DataCapture DNA is a technology platform of highly intelligent firmware, software, utilities and apps exclusively engineered for Zebra scanners. Leveraging more than 35 years of Zebra's industry expertise, DataCapture DNA delivers innovations that give our best-in-breed imagers greater intelligence and simplicity. When combined with the unstoppable performance found in every 3600 Series ultra-rugged scanner, DataCapture DNA turns Zebra's 3600 Series scanners into powerful tools that help to resolve tomorrow's data capture challenges today — and help your workers get more done each day.

## The Zebra 3600 Ultra-Rugged Scanner Series

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

- **LI3608-SR/LI3678-SR:** Standard range 1D barcode capture
- **LI3608-ER/LI3678-ER:** All-range 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 high-density 1D/2D barcodes
- **DS3608-DP/DS3678-DP:** Capture of Direct Part Marks (DPM)
- **DS3608-ER/DS3678-ER:** All-range 1D/2D barcode capture

**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.**

# DS3608-HD/DS3678-HD Specifications Chart

| PHYSICAL CHARACTERISTICS | |
|---|---|
| **Dimensions** | Corded: 7.3 in. H x 3.0 in. W x 5.2 in. D<br>18.5 cm H x 7.6 cm W x 13.2 cm D<br>Cordless: 7.3 in. H x 3.0 in. W x 5.6 in. D<br>18.5 cm H x 7.6 cm W x 14.2 cm D |
| **Weight** | Corded: 10.9 oz./309 g<br>Cordless: 14.5 oz./411 g |
| **Input Voltage Range** | Host powered: 4.5 VDC min., 5.5 VDC max.<br>External power supply: 11.4 VDC min., 12.6 VDC max. |
| **Operating Current** | DS3608-HD (corded): 360 mA (RMS typical) |
| **Standby Current** | DS3608-HD (corded): 100 mA (RMS typical) |
| **Color** | Industrial Green |
| **Supported Host Interfaces** | USB, RS232, Keyboard Wedge<br>Industrial Ethernet: EtherNet/IP, Profinet, Modbus TCP & Std TCP/IP |
| **Battery** | PowerPrecision+ 3100 mAh Li-Ion rechargeable battery |
| **User Indicators** | Direct decode indicator; LEDs; beeper; vibration |
| **PERFORMANCE CHARACTERISTICS** | |
| **Scans per Full Charge** | 100,000+ |
| **Image Capture** | Basic |
| **Illumination** | Two (2) warm white light LEDs |
| **Aimer** | 655 nm laser |
| **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°<br>Pitch: ± 60°<br>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 |
| **IUID Support** | Supports IUID parsing, the ability to read and separate IUID fields per application requirements |
| **USER ENVIRONMENT** | |
| **Operating Temp.** | Corded: -22° F to 122° F/-30° C to 50° C<br>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% non-condensing |
| **Tumble Specification** | 5000 tumbles @ 3.3 ft. (1 m) |

| USER ENVIRONMENT (CONTINUED) | |
|---|---|
| **Drop Specification** | Withstands multiple 8.0 ft./2.4 m drops to concrete |
| **Sealing** | Scanner: IP65 and IP67; FLB cradle: IP65 |
| **ESD** | Per EN61000-4-2, ±25 KV air discharge, ±10 KV direct discharge, ±10 KV indirect discharge |
| **Ambient Light Immunity** | 0 to 10,037 Foot Candles/0 to 108,000 Lux (direct sunlight) |
| **UTILITIES AND MAINTENANCE** | |
| **123Scan** | Programs scanner parameters, upgrades firmware, provides scanned barcode data and prints reports. For more information, visit www.zebra.com/123Scan |
| **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 |
| **Network Connect** | Seamlessly connects 3600 Series scanners directly to your Industrial Ethernet network without any third party conversion equipment. For more information, visit www.zebra.com/NetworkConnect |
| **WIRELESS CONNECTIVITY** | |
| **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<br>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 |

# DS3608-HD/DS3678-HD Specifications (continued)

## DATACAPTURE DNA

### PRODUCTIVITY TOOLS

- PRZM Intelligent Imaging
- Multi-code Data Formatting
- Wi-Fi™ Friendly Mode
- Preferred Symbol

### MANAGEMENT TOOLS

- 123Scan
- Remote Management
- PowerPrecision+

### VISIBILITY TOOLS

- Remote Diagnostics
- ScanSpeed Analytics

### DEVELOPMENT TOOLS

- Scanner Control Application
- Software Development Kit
- Scan-to-Connect

For more information about DataCapture DNA and its applications, please visit www.zebra.com/datacapturedna

## 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 |
| PDF417: 5 mil | 2.0-6.0 in./5.1-15.2 cm |

## 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: Scanner and Cradle: thirty-six (36) months, Battery twelve (12) months from the date of shipment. For complete warranty statement, go to: http://www.zebra.com/warranty

## RECOMMENDED SERVICES

Zebra *OneCare* Select; Zebra *OneCare* Essential

* Heated scanner holder accessory recommended to reduce condensation on the outside of scan window when moving in and out of freezers.

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

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