LI3600-ER Ultra-Rugged Scanner

Unstoppable performance for extended range 1D barcode scanning

Every day, workers in your warehouse scan thousands of 1D barcodes near and far to ensure order accuracy and on-time delivery. Their productivity depends on the quality of the scanner you put in their hands. With the LI3600-ER Ultra-Rugged scanner, you can give them the best. This linear imager enables extended range capture of virtually any 1D barcode displayed on a screen or printed on a label —nearer and farther than any scanner in this class, from 2 in./5.1 cm to 56 ft/17.1 m away. Built for your toughest environments, the LI3600-ER is virtually indestructible, including an enhanced 10 ft./3 m drop spec to concrete and dual IP65/IP68 sealing. With DataCapture DNA, Zebra's exclusive software ecosystem, you can simplify every stage of the scanning experience over the life of your device. And when it comes to cordless technology, the LI3678-ER's Zebra-only features put it in a class of its own. The LI3600-ER—the unstoppable performance you need to maximize workforce productivity and throughput in your operations.

Performs In Your Toughest Environments

Best-In-Class Scanning Performance—and Scanning Range
This linear imager delivers an extraordinary scanning range as far as 56 ft./17.1 m, enabling your workers to scan 1D printed barcodes 26% farther than the prior generation laser model. Your workers only need one scanner to read barcodes a hands-length away (including extra-wide codes) and on the uppermost shelves of your warehouse racks. Capture virtually any barcode in any condition—including under shrinkwrap, damaged, dirty or poorly printed—as fast as workers can pull the trigger, for first-time, every-time scanning.

Ultra-Rugged—the Most Indestructible Design in its Class
Zebra ultra-rugged scanners earned their name for a reason—you won't find a tougher family of scanners. Ready for the world's harshest environments, the LI3600-ER has the highest drop, tumble and sealing specifications in its class. It can survive 10 ft./3 m drops to concrete and 7,500 tumbles. With dual IP65/IP68 sealing, the LI3600-ER is dust proof, can handle the force of jetting water and be fully submerged in water. Built to withstand extreme heat, cold and humidity, the LI3600-ER can be used anywhere—indoor, outdoor and even in the freezer.[1]

Ultra-Rugged Cradle and Charging Contacts Designed to Last
The LI3600-ER is the first scanner in its class to offer a cradle with IP65 sealing. Its industrial charging contacts withstand 250,000 insertions. And Zebra's exclusive Connect+ Contact technology assures reliable, corrosion-free charging over the life of the scanner.

Intuitive Aiming Pattern for Ultra Simple Scanning at Any Distance
A new aiming pattern provides foolproof aiming for codes in hand—and on the uppermost warehouse racks.

Flexible Feedback Modes
Mix and match the feedback modes that best fit your environment—vibration, wraparound LEDs that are easy to see from any position, a beep tone and Zebra's Direct Decode Indicator that projects illumination on the captured barcode.

Superior Cordless Technology

More Than 100,000 Scans on a Single Charge
The PowerPrecision+ battery delivers the ultimate in battery power and management. You get more than twice the amount of scans per charge than with competitive models, 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, no longer holding a full charge, or at end of life and require replacement.

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

Switch Workflows in an Instant with AutoConfig
Since scanner settings are stored in the cradle base, simply pair the LI3600-ER to a different base to automatically configure it for a new host application. For example, you can take a scanner from the forklift and use it for shipping without manually changing settings.

Keep Track of Your Scanners and Prevent Workflow Interruptions
With Virtual Tether, you won't have to worry about a warehouse worker leaving a scanner behind on a pallet. Both the scanner and cradle will alert users when a scanner is taken beyond its Bluetooth range or left out of the cradle for a predefined length of time.

Eliminate Bluetooth Interference with Wi-Fi Friendly Mode
Zebra's exclusive Wi-Fi Friendly Mode eliminates the wireless interference that Bluetooth devices can create in your Wi-Fi environment.

Unrivaled Manageability

Identify and Correct Problem Barcodes with ScanSpeed Analytics
Only from Zebra, ScanSpeed Analytics provides detailed metrics on every barcode captured—enabling you to identify poor performing barcodes that slow down your operations.

No-Cost Tools to Meet Your Management Needs
With 123Scan, you can easily create configuration barcodes to program scanners. If your imagers are in multiple locations across the country or around the world, with Scanner Management Service (SMS) you can configure and update the firmware for any LI3600-ER device that is plugged into the host—no depot staging or user action is required.

Up-To-The-Minute Insight Into Every Aspect of Your Scanners
The logging agent's Remote Diagnostics capabilities automate the recording of scanner asset information, health and statistics, configuration settings and barcode data—giving you the information needed for event verification, blockchain traceability, pilot site ROI generation, troubleshooting and predictive fleet-wide trend analysis.

Specifications

Physical Characteristics	
Dimensions	Corded: 7.3 in. H x 3.0 in. W x 5.2 in. D 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 7.7 cm W x 14.2 cm D
Weight	Corded: 11.5 oz./327 g Cordless: 15.0 oz./424 g
Input Voltage Range	Host powered: 4.5 VDC min., 12.6 VDC max. External power supply: 11.4 VDC min., 12.6 VDC max.
Operating Current	LI3608-ER (corded): 250 mA (RMS typical)
Standby Current	LI3608-ER (corded): 110 mA (RMS typical)
Color	Industrial Green
Supported Host Interfaces	USB, RS232, Keyboard Wedge 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+
Illumination	660 nm LED
Aimer	655 nm laser
Imager Field of View	30.7° (H)
Image Sensor	2,496 pixels
Minimum Print Contrast	25% minimum reflective difference
Skew/Pitch/Roll	Skew: ± 65° Pitch: ± 65° Roll: ± 45°
Decode Capabilities[2]	
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)
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% non-condensing
Drop Specification	LI36X8: Withstands multiple 10.0 ft/3.0 m drops to concrete at room temperature LI3678: Withstands multiple 8.0 ft/2.4 m drops to concrete at -20° C to 50° C LI3608: Withstands multiple 8.0 ft/2.4 m drops to concrete at -30° C to 50° C
Tumble Specification	7500 3.3 ft./1.0 m tumbles
Sealing	Scanner: IP65 and IP68 per applicable IEC sealing specifications 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 10,000 Foot Candles/0 to 107639 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 with no additional 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 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	Complies with 21 CFR1040.10 and 1040.11 except for deviations pursuant to Laser Notice NO. 50, dated June 24, 2007 and IEC/EN 60825-1:2007 and/or IEC/EN 60825-1:2014
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

Decode Ranges (Typical)[3]	
Symbology/Resolution	**Near/Far**
Code 39: 7.5 mil	3 to 28 in./7.6 to 71.2 cm
Code 39: 10 mil	2 to 70 in./5.1 to 177.8 cm
Code 128: 15 mil	5 to 85 in./12.7 to 215.9 cm
Code 39: 20 mil	3 to 140 in./7.62 to 355.6 cm
Code 39: 55 mil	6 to 350 in./15.24 to 889.0 cm
Code 39: 100 mil	20 to 680 in./50.8 to 1727.2 cm
Code 39: 100 mil Reflective	30 to 780 in./76.2 to 1981.2 cm

The Zebra 3600 Ultra-Rugged Scanner Series

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

- LI3600-SR: Standard range 1D barcode capture
- LI3600-ER: Extended range 1D barcode capture
- DS3600-SR: Standard range scanning of 1D and 2D barcodes
- DS3600-HP: High-performance scanner captures 1D/2D barcodes over longer distances, plus OCR, photos and documents
- DS3600-HD: Captures high-density 1D/2D barcodes
- DS3600-DP: Capture of Direct Part Marks (DPM)
- DS3600-ER: Extended range 1D/2D barcode capture
- DS3600-DPA: Optimized to read Direct Part Marks (DPM) and wide 1D barcodes
- DS3600-KD: Versatility of a keypad and color display

Warranty

Subject to the terms of Zebra's hardware warranty statement, the LI3608-ER/ LI3678-ER 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

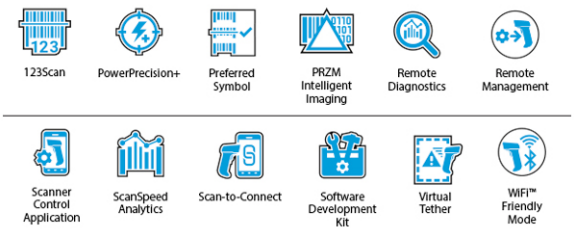
Zebra OneCare™ Select; Zebra OneCare Essentials

Footnotes

1. Heated scanner holder accessory recommended to reduce condensation on the outside of scan window when moving in and out of freezers.
2. Refer to Product Reference Guide for complete list of symbologies. Specifications are subject to change without notice.
3. Printing resolution, contrast, and ambient light dependent.

DataCapture DNA

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



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