DS3608-DPA/DS3678-DPA Ultra-Rugged Scanner

UNSTOPPABLE PERFORMANCE FOR DIRECT PART MARKS (DPM), 1D/2D AND WIDE 1D BARCODES IN INDUSTRIAL MANUFACTURING

Whether you are involved in automotive, aerospace, farm and fleet or other industrial manufacturing, you rely on track and trace applications to provide better control over product quality, protect consumer safety and ensure regulatory compliance. Zebra's corded DS3608-DPA and cordless DS3678-DPA are designed to help industrial manufacturers meet these track and trace requirements, without jeopardizing "on time every time" delivery goals. With a single scanner, workers can capture virtually any direct part mark, as well as 1D/2D and wide 1D barcodes for superior versatility. The ultra-rugged design is practically indestructible — ideal for punishing environments. The scanners offer unparalleled ease of management, and with Zebra's EA3600 Network Connect for Automation, the DS3608-DPA and DS3678-DPA connect to your Industrial Ethernet network without third party conversion equipment. The DS3608-DPA/DS3678-DPA — the unstoppable performance you need to maximize workforce productivity, ensure traceability, reduce production cycle times and prevent unplanned production line downtime.



Capture it all — from direct part marks to 1D/2D and wide 1D paper barcodes

The DS3608-DPA/DS3678-DPA can capture virtually every type of direct part mark (DPM) including laser etch, ink mark, chemical etch, inkjet mold, cast, thermal spray and dot peen. In addition, the same scanner can capture barcodes printed on labels in virtually any condition — including damaged, dirty, poorly printed or under shrinkwrap — as well as 4-inch wide 1D barcodes found on picklists, carton labels and packages. This dual functionality provides excellent value: you can use the same scanner on the production line for end-to-end track and trace as well as throughout the plant floor and warehouse.

Ultra-rugged — the most indestructible design in its class

The DS3608-DPA/DS3678-DPA is our most rugged scanner yet, with the highest drop, tumble and sealing specification in its class. The DS3608-DPA/DS3678-DPA 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 scanners operate 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 be submersed in water.

Advanced illumination system

Advanced illumination provides the multiple lighting effects required to capture marks on any type of surface — including reflective, irregular and curves as well as low and high contrast marks. The built-in diffuser provides the indirect light required to capture marks printed on very shiny and reflective surfaces. The proprietary design of the diffuser also directs additional lighting to the edges of barcodes marked on a curved surface, enhancing the image for easier decoding. Finally, a glancing direct light mode provides the bright light required to successfully read low contrast barcodes marked on any type of surface, including challenging polished materials.

Easy management with 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).

Connect to your Industrial Ethernet network without third-party converter boxes

Zebra's Network Connect for Automation delivers a seamless connection between DS3608-DPA/DS3678-DPA scanners and a manufacturer's Industrial Ethernet network without the need for third party conversion equipment. The solution supports a wide range of programmable logic controller (PLC) vendors, including support for EtherNet/IP for Rockwell Automation, PROFINET for Siemens, as well Modbus TCP and standard TCP/IP. By streamlining the connection between scanners and the PLC, Network Connect eliminates vulnerability points, improves security and reduces complexity.

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-DPA 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.

Extreme temperature rating

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

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.

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-ER/DS3678-ER:** All-range 1D/2D barcode capture
- **DS3608-DP/DS3678-DP:** Optimized to read high-density barcodes and Direct Part Marks (DPM)
- **DS3608-DPA/DS3678-DPA:** Optimized to read 1D/2D, wide 1D paper barcodes and Direct Part Marks (DPM)

THE DS3608-DPA/DS3678-DPA — STREAMLINE END-TO-END PRODUCT TRACEABILITY IN INDUSTRIAL MANUFACTURING WITH THE ULTRA-RUGGED SCANNER THAT REDEFINES RELIABILITY AND VERSATILITY.

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

DS3608-DPA/DS3678-DPA Specifications Chart

PHYSICAL CHARACTERISTICS	
Dimensions	Corded: 7.3 in. H x 3.0 in. W x 5.2 in. D 18.5 cm H x 7.7 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 14.3 cm D
Weight	Corded: 10.72 oz./304g Cordless: 14.18 oz./402 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-DPA (corded): 360 mA (RMS typical)
Standby Current	DS3608-DPA (corded): 100 mA (RMS typical)
Color	Gray and Black
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+
Image Capture	Basic
Illumination	Direct: Two (2) warm white light LED; Diffuse: Ring of red 634 nm LEDs
Aimer	655 nm laser
Imager Field of View	Horizontal: 46°, Vertical: 30°
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
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 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	Withstands multiple 8.0 ft./2.4 m drops to concrete

USER ENVIRONMENT (CONTINUED)	
Tumble Specification	5000 tumbles @ 3.3 ft. (1 m)
Sealing	Scanner: IP65 and IP67 FLB cradle: IP65
ESD	Per EN61000-4-2, ±20 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 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	Exempt Risk Group LED per IEC/EN 62471 (Ed 1) Class 2 Laser per IEC/EN 60825-1 (Ed 3) Complies with 21CFR1040.10
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

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DS3608-DPA/DS3678-DPA 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 39: 3.0 mil	0.5-4.7 in./1.3-11.9 cm
Code 39: 5.0 mil	0.2-5.6 in./0.5-14.2 cm
PDF417: 6.6 mil	0.1-4.0 in./0.3-10.2 cm
Datamatrix: 5.0 mil	1.2-2.9 in./3.0-7.4 cm
Datamatrix: 10.0 mil	0.1-4.9 in./0.3-12.5 cm
QR: 10.0 mil	0.1-4.8 in./0.3-12.2 cm
100% UPC: 13.0 mil	***0.4-9.6 in./***1.0-24.4 cm
C128: 15.0 mil	***3.3-10.0 in./***8.4-25.4 cm

WARRANTY

Subject to the terms of Zebra's hardware warranty statement, the DS3608-DPA/DS3678-DPA 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

EA3600 NETWORK CONNECT INDUSTRIAL ETHERNET

Network Protocols Supported	Ethernet/IP, Profinet, Modbus TCP, TCP/IP
Certification	ODVA EtherNet/IP, PROFIBUS
Standards	Complies with IEEE 802.3af standard
Power	12 VDC or 24 VDC, 1 amp
LED Indicators	LED1 for Power: bi-color green/yellow LED; Green: unit powered and OK; yellow: in bootloader LED2 for Link Status: blinking yellow LED controlled by the PHY indicating Ethernet traffic
Mounting	DIN rail brackets; mountable to both wide (120mm) and slim (35mm) DIN rails
Industrial Ethernet Customer Application Development	**Device Definition Files (Profinet and EtherNet/IP):** EDS file; GSD file; a single sample application that can switch between the three scan modes for TIA (Totally Integrated Automation) v13 or higher, Step 7 v 5.5, Logix Studio 5000 v24 **Function Block (FB) for Siemens IDE's:** TIA, Step 7 v5.5 (Step 7 v5.5 FB should take in IO Addresses in INT form) **Routine for Rockwell IDE**

* 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.
*** FOV/barcode width limited; Decode ranges measured with DPM Mode OFF, photographic paper barcodes, under 30fcd ambient light conditions.
Specifications are subject to change without notice.

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