



# DS8100 Series Handheld Imagers

## THE ULTIMATE IN PERFORMANCE, INNOVATION AND MANAGEABILITY

As a retailer, you know the checkout experience is crucial — it's the last chance to leave your shoppers with a good impression. The quality of the checkout experience is heavily dependent upon the performance of the scanner you choose. If cashiers need to scan barcodes multiple times or enter unreadable barcodes manually, your checkout lanes can back up quickly, translating into long lines and long wait times. Cashiers are then forced to focus on ringing up merchandise instead of providing shoppers with a great in-store experience. Now, give every shopper the ultimate last impression with the DS8100 Series handheld imager, only from Zebra. The DS8100 Series rises above the conventional imagers to deliver unprecedented scanning performance on 1D and 2D barcodes, innovative productivity enhancing tools and unrivaled manageability to keep your checkout lines moving and your cashiers free to deliver a more personal checkout experience. The DS8100 Series — because when it comes to the checkout experience, only the best will do.



### UNPRECEDENTED PERFORMANCE

#### Unparalleled Performance on Virtually Every Barcode in Any Condition

Only the DS8100 Series combines the power of an 800 MHz microprocessor, a high-resolution megapixel sensor and Zebra's exclusive PRZM technology. With this unique combination of hardware and advanced algorithms, the DS8100 Series instantly captures the most problematic barcodes — including dense, poorly printed, crinkled, faded, distorted, dirty or damaged, as well as electronic barcodes on dimly lit displays.

#### Superior Scan Range

A scanning range up to 24 in./61 cm, a high resolution imaging sensor and a bright "aiming spot" improve checkout speed. Now, cashiers in busy checkout environments can easily scan items in a customer's shopping cart — without leaving the cash-wrap.

#### Power to Scan Continuously for 24 Hours

No matter how busy your store is, with Zebra's exclusive PowerPrecision+ smart battery in the cordless DS8178, your workers will always have the power they need for the busiest shift. Your devices are always available — no need for charging during the business day.

### INNOVATION BEYOND THE BARCODE

#### PRZM Intelligent Imaging

Only from Zebra, PRZM features reset the bar for imaging performance. Poor images are turned into instantly useful images for faster decoding. PRZM then handles some of the processing typically handled in the decoder to reduce power usage, improve battery cycle times and further increase decoding speed.

#### Support for the Barcode of the Future — Digimarc®\*

The DS8100 Series supports Digimarc digital watermark technology, which enables a barcode to be printed repeatedly over all surfaces of a product like wallpaper — yet remain completely invisible to the naked eye. Cashiers no longer need to locate and position a barcode in the field of view of the imager, enabling faster checkout and easier self-checkout.

#### Capture Multiple Barcodes with One Press of the Scan Trigger

Multi-code Data Formatting (MDF) provides the ability to capture multiple barcodes and transmit only those required in the precise order the application requires.

## SPECIFICATION SHEET

### DS8100 SERIES CORDED AND CORDLESS 1D/2D IMAGERS

#### Exclusive Battery Charge Gauge

No more guess work on the status of a battery at the start of a shift. The DS8178 is the only scanner in its class that makes it easy to see at a glance whether a battery needs to be replaced before the scanner is placed into service.

#### Eliminate Bluetooth Interference with Zebra's Proprietary Wi-Fi Friendly Mode

Ensure that your DS8178 Bluetooth scanners only operate on channels that are not shared with your wireless LAN (WLAN), protecting WLAN service levels for your workers and your customers.

#### Instantly Capture Full Page Documents

The DS8100 Series is the only device in its class that can capture a full page document. With a single press of the scan trigger, Zebra's Intelligent Document Capture and the high-resolution 1280 x 960 camera work together to capture a high-resolution image of a full page 8.5 x 11 or A4 document, and transmit the data in the right format for electronic storage — eliminating the cost and space requirements for a document scanner.

#### Capture Drivers License Data (DL version required)

With one press of the scan trigger, cashiers can capture and parse data on drivers licenses to automatically populate a loyalty or credit card application, verify age for age-restricted purchases and more.

#### Direct Decode Indicator Improves Productivity

Since the illumination on the barcode flashes to indicate a good decode, workers never need to pause to make sure a barcode was captured correctly.

## UNRIVALED MANAGEABILITY

#### Visionary Visibility into Scanning and Battery Performance Metrics — only from Zebra

With detailed scanning performance metrics that include speed and type of barcode for every barcode scanned, it's easy to spot and correct barcode issues before

they impact worker productivity and the quality of customer service. And with a wealth of battery health information, including charge cycles consumed, a State-of-Health meter and full charge capacity, you can easily spot and replace aging batteries before they can no longer last a full shift. Armed with this information, you can order and install new batteries before battery failures interrupt front end operations and cause checkout delays.

#### Control Your Scanners from a Smartphone, Tablet or PC

With this easy-to-use application, you can: control your imager's beeper, vibration and LED to set user alerts; display scanned barcode data; access model and serial number; and access battery statistics and more from Android, iOS and Windows smartphones, tablets and PCs.

#### Easily Manage All of Your Scanners with Powerful Complimentary Tools

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 DS8100 Series device that is plugged into the host — no depot staging or user action is required — such as the scanning of a configuration barcode.

#### Easy Application Development

Get everything you need to easily integrate scanning into your business applications with our Scanner Software Development Kits (SDKs) for Windows, Android, iOS and Linux. These SDKs provide documentation, drivers, test utilities and sample source code.

## Put the DS8100 Series to work in:

### Retail

- Point-of-Sale (POS)
- Loyalty applications
- Electronic coupon redemption
- Backroom receiving
- Inventory management

### Hospitality

- Check-in
- Ticketing (concerts, sporting events and more)
- Loyalty cards

### Transportation & Logistics

- Shipping and receiving
- Picking
- Product tracking
- Ticketing (airports, train and bus terminals)
- Postal

### Light/Clean Manufacturing

- Product and component tracking
- Work-in-Process (WIP)

### Government

- Lottery and gaming
- Administration
- Banking

## THE DS8100 SERIES — WHEN YOUR BUSINESS DEMANDS THE ULTIMATE IN PERFORMANCE, WORKFORCE PRODUCTIVITY AND CUSTOMER SERVICE.

For more information, visit [www.zebra.com/ds8100](http://www.zebra.com/ds8100) or access our global contact directory at [www.zebra.com/contact](http://www.zebra.com/contact)

# DS8100 Series Specifications

| PHYSICAL CHARACTERISTICS    |                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions                  | <b>Corded DS8108 and Cordless DS8178:</b><br>6.6 in. H x 2.6 in. W x 4.2 in. D<br>16.8 cm. H x 6.6 cm. W x 10.7 cm. D<br><br><b>Standard Cradle:</b><br>2.8 in. H x 3.3 in. W x 8.3 in. D<br>7.1 cm. H x 8.4 cm. W x 21.1 cm. D<br><br><b>Presentation Cradle:</b><br>2.9 in. H x 3.7 in. W x 4.8 in. D<br>7.4 cm. H x 9.4 cm. W x 12.2 cm. D |
| Weight                      | <b>Corded DS8108:</b> 5.4 oz./154 g<br><b>Cordless DS8178:</b> 8.3 oz./235.3 g<br><b>Desk/Wall Cradle:</b> 7.1 oz./202 g<br><b>Presentation Cradle:</b> 6.5 oz./182 g                                                                                                                                                                         |
| Input Voltage Range         | <b>DS8108:</b> 4.5 to 5.5VDC<br><b>DS8178 Cradles:</b> 5V: 4.7 to 5.5VDC; 12V: 10.8 to 13.2VDC                                                                                                                                                                                                                                                |
| Current <sup>1</sup>        | <b>Corded DS8108 Operating Current at Nominal Voltage (5.0V):</b><br>450 mA<br><b>Cradle:</b> 470 mA (typical) Standard USB; 743mA (typical) 12V                                                                                                                                                                                              |
| Color                       | Nova White, Twilight Black                                                                                                                                                                                                                                                                                                                    |
| Supported Host Interfaces   | USB Certified, RS232, Keyboard Wedge, TGCS (IBM) 46XX over RS485                                                                                                                                                                                                                                                                              |
| Keyboard Support            | Supports over 90 international keyboards                                                                                                                                                                                                                                                                                                      |
| FIPS Security Certification | Certified Compliant with FIPS 140-2                                                                                                                                                                                                                                                                                                           |
| User Indicators             | Direct Decode Indicator, Good Decode LEDs, Rear View LEDs, Beeper (Adjustable Tone & Volume), Battery Indicator                                                                                                                                                                                                                               |
| PERFORMANCE CHARACTERISTICS |                                                                                                                                                                                                                                                                                                                                               |
| Light Source                | Aiming Pattern: Circular 617nm Amber LED                                                                                                                                                                                                                                                                                                      |
| Illumination                | (2) 645nm Red LEDs                                                                                                                                                                                                                                                                                                                            |
| Imager Field of View        | 48° H x 37° V Nominal                                                                                                                                                                                                                                                                                                                         |
| Image Sensor                | 1,280 x 960 pixels                                                                                                                                                                                                                                                                                                                            |
| Minimum Print Contrast      | 16% minimum reflective difference                                                                                                                                                                                                                                                                                                             |
| Skew/Pitch Roll Tolerance   | +/- 60°; +/- 60°; 0-360°                                                                                                                                                                                                                                                                                                                      |
| IMAGING CHARACTERISTICS     |                                                                                                                                                                                                                                                                                                                                               |
| Graphics Format Support     | Images can be exported as Bitmap, JPEG or TIFF                                                                                                                                                                                                                                                                                                |
| Image Quality               | 109 PPI on an A4 document                                                                                                                                                                                                                                                                                                                     |
| Minimum Element Resolution  | Code 39 - 3.0 mil; Code 128 - 3.0 mil; Data Matrix - 6.0 mil;<br>QR Code - 6.0 mil; PDF - 5.0 mil                                                                                                                                                                                                                                             |
| USER ENVIRONMENT            |                                                                                                                                                                                                                                                                                                                                               |
| Operating Temperature       | 32° to 122° F/0° to 50° C                                                                                                                                                                                                                                                                                                                     |
| Charging Temperature        | 32° to 104° F/0° to 40° C                                                                                                                                                                                                                                                                                                                     |
| Storage Temperature         | -40° to 158° F/-40° to 70° C                                                                                                                                                                                                                                                                                                                  |

| USER ENVIRONMENT (CONTINUED)                                                                     |                                                                                                                            |                                           |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Humidity                                                                                         | 5% to 95% RH, non-condensing                                                                                               |                                           |
| Drop Specification                                                                               | Designed to withstand multiple drops at 6.0 ft./1.8 m to concrete                                                          |                                           |
| Tumble Specification                                                                             | Designed to withstand 2,000 tumbles in 1.5 ft./0.5 m tumbler <sup>2</sup>                                                  |                                           |
| Environmental Sealing                                                                            | IP42                                                                                                                       |                                           |
| Electrostatic Discharge (ESD)                                                                    | DS8108/DS8178 and Cradles: ESD per EN61000-4-2, +/-15 KV Air, +/-8 KV Direct, +/-8 KV Indirect                             |                                           |
| Ambient Light Immunity                                                                           | 0 to 9,000 Foot Candles/0 to 96,840 Lux                                                                                    |                                           |
| RADIO SPECIFICATIONS                                                                             |                                                                                                                            |                                           |
| Bluetooth Radio                                                                                  | Standard Bluetooth Version 4.0 with BLE: Class 1 330 ft. (100m) and Class 2 33 ft. (10m), Serial Port and HID Profiles     |                                           |
| Adjustable Bluetooth Power                                                                       | Class 1: Output power adjustable down from 4 dBm in 8 Steps<br>Class 2: Output power adjustable down from 2 dBm in 8 Steps |                                           |
| BATTERY                                                                                          |                                                                                                                            |                                           |
| Battery Capacity/ Battery Type                                                                   |                                          | 2,500 mAh Li-Ion Power Precision+ Battery |
| Scans Per Battery Charge                                                                         | 65,000 (1 scan per second)                                                                                                 |                                           |
| Operating Time Per Full Charge <sup>3</sup>                                                      | 83 hours                                                                                                                   |                                           |
| Typical Charge Time from Empty to Full Charge                                                    |                                                                                                                            |                                           |
| Power Source                                                                                     | Desk/Wall Cradle                                                                                                           | Presentation Cradle                       |
| Standard USB                                                                                     | 7 hrs 45 min                                                                                                               | 9 hrs 15 min                              |
| BC1.2 USB                                                                                        | 3 hrs                                                                                                                      | 3 hrs 15 min                              |
| External 5V Source                                                                               | 4 hrs 30 min                                                                                                               | 5 hrs                                     |
| External 12V Source                                                                              | 2 hrs 15 min                                                                                                               | 2 hrs 15 min                              |
| REGULATORY                                                                                       |                                                                                                                            |                                           |
| Electrical Safety                                                                                | EN 60950-1 2ed + A11 + A1 + A12 + A2:2013, IEC 60950-1 2ed + A1 + A2, UL 60950-1, CAN/CSA-C22.2 No. 60950-1-07             |                                           |
| Environmental                                                                                    | RoHS EN 50581                                                                                                              |                                           |
| LED Safety                                                                                       | IEC 62471                                                                                                                  |                                           |
| IT Emissions                                                                                     | EN 55022 (Class B); EN 55032 (Class B)                                                                                     |                                           |
| IT Immunity                                                                                      | EN 55024                                                                                                                   |                                           |
| Harmonic Current Emissions                                                                       | EN 61000-3-2                                                                                                               |                                           |
| Voltage Fluctuation and Flicker                                                                  | EN 61000-3-3                                                                                                               |                                           |
| Radio Frequency Devices                                                                          | 47 CFR Part 15, Subpart B, Class B                                                                                         |                                           |
| Digital Apparatus                                                                                | ICES-003 Issue 6, Class B                                                                                                  |                                           |
| ACCESSORIES                                                                                      |                                                                                                                            |                                           |
| Standard Cradle, Presentation Cradle, Wall Mount Bracket, Spare Battery, Document Capture Stands |                                                                                                                            |                                           |

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## SPECIFICATION SHEET

DS8100 SERIES CORDED AND CORDLESS 1D/2D IMAGERS

# DS8100 Series Specifications (continued)

| DECODE CAPABILITIES <sup>4</sup>                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1D</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Code 39, Code 128, Code 93, Codabar/NW7, Code 11, MSI Plessey, UPC/EAN, 1 2 of 5, Korean 3 of 5, GS1 DataBar, Base 32 (Italian Pharma)                                                                              |
| <b>2D</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                  | PDF417, Micro PDF417, Composite Codes, TLC-39, Aztec, DataMatrix, MaxiCode, QR Code, Micro QR, Chinese Sensible (Han Xin), Postal Codes                                                                             |
| <b>Digimarc</b>                                                                                                                                                                                                                                                                                                                                                                                                                                            | Digital watermark technology, available April 2017                                                                                                                                                                  |
| WARRANTY                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                     |
| Subject to the terms of Zebra's hardware warranty statement, the DS8178 and the CR8178 are warranted against defects in workmanship and materials for a period of three years from the date of shipment. The DS8108 is warranted against defects in workmanship and materials for a period of five years from the date of shipment. Complete Zebra hardware product warranty statement: <a href="http://www.zebra.com/warranty">www.zebra.com/warranty</a> |                                                                                                                                                                                                                     |
| RECOMMENDED SERVICES                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                     |
| Zebra OneCare Select; Zebra OneCare Essential                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                     |
| UTILITIES AND MANAGEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                     |
| <b>123Scan</b>                                                                                                                                                                                                                                                                                                                                                                                                                                             | Programs scanner parameters, upgrades firmware, displays scanned barcode data, scanning statistics, battery health, asset data and prints reports. <a href="http://www.zebra.com/123scan">www.zebra.com/123scan</a> |
| <b>Symbol Scanner SDK</b>                                                                                                                                                                                                                                                                                                                                                                                                                                  | Generates a fully-featured scanner application, including documentation, drivers, test utilities and sample source code. <a href="http://www.zebra.com/scannersdkforwindows">www.zebra.com/scannersdkforwindows</a> |
| <b>Scanner Management Service (SMS)</b>                                                                                                                                                                                                                                                                                                                                                                                                                    | Remotely manages your Zebra scanner and queries its asset information. <a href="http://www.zebra.com/sms">www.zebra.com/sms</a>                                                                                     |

| DECODE RANGES (TYPICAL) <sup>5</sup> |               |                 |                   |
|--------------------------------------|---------------|-----------------|-------------------|
| SYMBOLGY                             | RESOLUTION    | NEAR            | FAR               |
| Code 39                              | 3 mil         | 2.2 in./5.6 cm. | 5.0 in./12.7 cm.  |
| Code 39                              | 20 mil        | .0 in./0 cm.    | 36.8 in./93.5 cm. |
| Code 128                             | 3 mil         | 2.6 in./6.6 cm. | 4.5 in./11.4 cm.  |
| Code 128                             | 5 mil         | 1.6 in./4.1 cm. | 8.4 in./21.3 cm.  |
| Code 128                             | 15 mil        | .0 in./0 cm.    | 27.1 in./68.8 cm. |
| PDF 417                              | 5 mil         | 2.3 in./5.8 cm. | 6.4 in./16.3 cm.  |
| PDF 417                              | 6.7 mil       | 1.8 in./4.6 cm. | 8.5 in./21.6 cm.  |
| UPC                                  | 13 mil (100%) | .0 in./0 cm.    | 24.0 in./61.0 cm. |
| Data Matrix                          | 7.5 mil       | 2.1 in./5.3 cm. | 6.9 in./17.5 cm.  |
| Data Matrix                          | 10 mil        | 1.1 in./2.8 cm. | 9.9 in./25.1 cm.  |
| QR                                   | 20 mil        | .1 in./3 cm.    | 17.6 in./44.7 cm. |

<sup>1</sup> Refer to Product Reference Guide for currents when other power sources are used.

<sup>2</sup> Note: 1 tumble = 0.5 cycle.

<sup>3</sup> Simulated Checkout profile of XX scans in XX seconds with a XX second rest.

<sup>4</sup> Refer to Product Reference Guide for complete list of symbologies.

<sup>5</sup> Printing resolution, contrast, and ambient light dependent.

\* Available April 2017



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