

## DS2200 Series for Healthcare

Dependable, affordable and purpose-built for healthcare

Whether your healthcare workers are admitting a patient, administering medication, collecting a specimen or performing inventory and dietary management, there's no room for error. Now you can give your staff the power to get it all done right with the DS2200 Series for Healthcare. Unlike general purpose scanners, the DS2200-HC Series can withstand the constant disinfecting required at the point-of-care. It easily and accurately captures the many kinds of barcodes commonly used in hospitals—from barcodes on patient wristbands and medication vials to IV bags and specimen trays. You get a purpose-built healthcare scanner that fits your budget—without compromising on performance or features. Corded and cordless models meet your scanning needs from the patient bedside to the pharmacy, admitting and more. The DS2200 Series for Healthcare—the affordable and dependable scanning you need to improve patient safety and staff productivity.



### Purpose-built for healthcare

#### Instant decoding with PRZM Intelligent Imaging

The DS2200-HC Series is engineered to ensure instant and accurate decoding of the many barcodes found at the point-of-care, labs and pharmacies. Only from Zebra, PRZM's software decode algorithms deliver superior performance on poor quality and challenging barcodes. And a wide working range minimizes the precision needed when positioning the scanner for point-and-shoot simplicity. The result is the first-time, every-time scanning your caregivers need to improve patient safety and workflow efficiency.

#### Easy to clean and sanitize

Unlike general purpose scanners, the DS2200-HC Series features a disinfectant-ready housing designed to handle regular sanitizing with popular disinfectants.

#### "Do Not Disturb" mode

Scanner feedback is critical, and so is the patient experience. For sound-sensitive environments, Zebra's Direct Decode Indicator projects illumination on the barcode to indicate a good decode. Clinicians instantly know if a medicine, wristband or IV bag was properly scanned, while patients aren't disturbed by a loud beep.

#### Patent-pending technology for the most intuitive aiming

An innovative aim line removes the guesswork by guiding clinicians to scan at the ideal distance from the barcode.

#### Full-shift battery power guaranteed

With 14 hours of power, your cordless DS2278-HC scanners are always available for use—there's no need to waste valuable time recharging a battery during a clinician's shift.

#### On-the-fly switching between handheld and hands-free scanning

In the lab and pharmacy, some tasks may be better suited for handheld scanning and others for hands-free. With the DS2200-HC Series, switching modes is fast and easy. Simply place the scanner in the optional presentation stand to automatically switch to hands-free mode; then pick up the scanner for handheld mode.

**Improve patient safety and staff productivity with the DS2200 Series for Healthcare—the healthcare scanner that doesn't compromise on performance or features for price.**

For more information, visit [www.zebra.com/ds2200hc](http://www.zebra.com/ds2200hc)

## PRODUCT SPEC SHEET

DS2200 SERIES FOR HEALTHCARE: LATIN AMERICA, EUROPE, MIDDLE EAST, AFRICA, ASIA PACIFIC

### Fast, flexible and easy charging

Plug the scanner directly into the host or any standard wall socket via the Micro USB cable to charge the cordless DS2278-HC in just an hour. The presentation cradle, which provides hands-free scanning, charges the DS2278-HC in just four hours. The presentation cradle charges the battery during use, so you can keep the scanner in service during charging. And since the presentation cradle doesn't require a separate power supply, charging can take place directly on the workstation-on-wheels.

### Easy to deploy and manage

#### Pre-configured and ready to use, right out of the box

The DS2200-HC Series couldn't be easier to setup. Right out of the box, the scanner is configured for the healthcare applications you use everyday, while auto-host detect cables automatically select the right host interface—just plug in the scanner and you're ready to go.

#### Deploy anywhere in the world

With support for 97 international keyboards, the DS2200-HC Series is easy to deploy all around the world.

#### Easily customize settings with 123Scan

123Scan is intuitive enough for first-time users. You can easily create configuration barcodes to program scanners, update firmware or stage a large number of devices.

#### Easiest pairing on the planet

With our industry-first Scan-to-Connect technology, clinicians can pair the cordless DS2278-HC with any Bluetooth-enabled PC, tablet or smartphone with a single scan.

#### Easy integration with tablet-based EMR applications

The DS2200-HC Series offers all the features you need to add high-quality scanning to your tablet-based Electronic Medical Record (EMR) application. The Micro USB cable provides a low-cost charging alternative to a cradle. And with our simplified app development tools, you can easily configure and update the DS2200-HC Series right from the tablet.

#### Eliminate Bluetooth interference with Zebra's proprietary Wi-Fi Friendly Mode

Offered exclusively from Zebra, Wi-Fi Friendly mode ensures that your cordless DS2278-HC scanners do not operate on channels that are shared with your Wi-Fi network, protecting Wi-Fi network performance for your caregivers, clinicians, patients and visitors.

### A battery and charging system designed to last

The long-lasting 2400 mAh Lithium Ion battery in the cordless DS2278-HC will likely never need to be replaced, reducing total cost of ownership and simplifying everyday management by eliminating the need to purchase and manage a battery pool. Additionally, the position of the charging contacts in the DS2278-HC's charging cradle, combined with Zebra's exclusive Connect+ Contact Technology, assures reliable, corrosion-free charging over the life of the scanner.

### Control your scanners from a smartphone, tablet or PC

You can easily control the beeper, LED and Symbology settings; display scanned barcode data; access model and serial number information and more from Windows, Android and iOS hosts.

### No-cost tools to meet advanced management and application development needs

If you have scanners in different locations, you can remotely manage them all with our Scanner Management Service (SMS) application. This complimentary tool makes it easy to configure and update the firmware for any DS2200-HC Series device that is plugged into a host—no depot staging or user action is required. Need a custom scanning application? Our Scanner Software Development Kits (SDKs) provide everything you need, including documentation, drivers, test utilities and sample source code for Windows, Android, iOS and Linux.

### DataCapture DNA—transforming scanners from the inside

#### Simplify the entire scanning experience

Hardware is just the start of what you need to maximize the value of your scanners. The DS2200-HC Series is powered by DataCapture DNA, a set of unique development, management, visibility and productivity tools. Leveraging Zebra's 50 years of innovation, DataCapture DNA turns Zebra scanners into powerful tools that lower your TCO and help workers get more done each day. Decrease development cycles with development tools. Dramatically simplify scanner deployments of any size with management tools. Get the remote analytics you need to keep scanners up and running with visibility tools. And reach new levels of productivity with innovations that streamline tasks.

# DS2200 Series for Healthcare Specifications

## Ideal for these applications

### Healthcare

- Patient administration
- Positive patient identification
- Medication dispensary: at patient bedside, in pharmacy, on discharge
- Medication administration, authentication
- Medication tracking in pharmacy and on pharmacy cart
- Patient wristbands
- Patient IV bag
- Specimen tracking
- Electronic healthcare record access
- Blood product administration

| Physical Characteristics  |                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions                | <b>Corded DS2208-HC:</b><br>6.5 in. H x 2.6 in. W x 3.9 in. D<br>16.5 cm H x 6.6 cm W x 9.9 cm D<br><br><b>Cordless DS2278-HC:</b><br>6.9 in. H x 2.6 in. W x 3.5 in. D<br>17.5 cm H x 6.6 cm W x 9.0 cm D<br><br><b>Presentation Cradle:</b><br>2.8 in. H x 3.7 in. W x 4.8 in. D<br>7.2 cm H x 9.4 cm W x 12.2 cm                                                                            |
| Weight                    | <b>Corded DS2208-HC:</b> 5.7 oz. / 161.6 g<br><b>Cordless DS2278-HC:</b> 7.5 oz. / 214 g<br><b>Presentation Cradle:</b> 5.2 oz. / 151 g                                                                                                                                                                                                                                                        |
| Input Voltage Range       | <b>DS2208-HC/DS2278-HC and Cradle:</b> 4.5 to 5.5 VDC Host Powered; 4.5 to 5.5 VDC External Power Supply                                                                                                                                                                                                                                                                                       |
| Current                   | <b>Corded DS2208-HC Operating Current at Nominal Voltage (5.0V):</b> 250 mA (typical).<br>(Note: Auto-Aim and Illumination on Acquiring Image)<br><br><b>Corded DS2208-HC Standby Current (idle) at Nominal Voltage (5.0V):</b> 150 mA (typical).<br>(Note: Auto-Aim On)<br><br><b>Presentation Cradle and Micro USB Cable:</b><br>500 mA (typical) Standard USB; 1100 mA (typical) BC 1.2 USB |
| Color                     | Healthcare White                                                                                                                                                                                                                                                                                                                                                                               |
| Supported Host Interfaces | USB, RS232, Keyboard Wedge, TGCS (IBM) 46XX over RS485                                                                                                                                                                                                                                                                                                                                         |
| USB Certification         | USB Certification                                                                                                                                                                                                                                                                                                                                                                              |
| Keyboard Support          | Supports over 90 international keyboards                                                                                                                                                                                                                                                                                                                                                       |
| User Indicators           | Direct Decode Indicator; Good Decode LEDs; rear view LEDs; beeper (adjustable tone and volume)                                                                                                                                                                                                                                                                                                 |

| Performance Characteristics |                                                                                       |
|-----------------------------|---------------------------------------------------------------------------------------|
| Motion Tolerance (Handheld) | Up to 5 in./13 cm. per second for 13 mil UPC                                          |
| Swipe Speed (Hands-Free)    | Up to 30.0 in./76.2 cm. per second for 13 mil UPC                                     |
| Light Source                | Aiming Pattern: Linear 624nm Amber LED                                                |
| Illumination                | (2) 645nm Super-Red LEDs                                                              |
| Imager Field of View        | 32.8° H x 24.8° V Nominal                                                             |
| Image Sensor                | 640 x 480 pixels                                                                      |
| Minimum Print Contrast      | 15% minimum reflective difference                                                     |
| Skew Tolerance              | +/- 65°                                                                               |
| Pitch Tolerance             | +/- 65°                                                                               |
| Roll Tolerance              | 0°-360°                                                                               |
| Minimum Element Resolution  | Code 39 - 4.0 mil<br>Code 128 - 4.0 mil<br>Data Matrix - 6.0 mil<br>QR Code - 6.7 mil |

| User Environment              |                                                                                                                                                     |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Temperature         | <b>DS2208-HC/DS2278-HC Imagers:</b><br>32.0° to 122.0° F/0.0° to 50.0° C<br><b>Presentation Cradle:</b><br>32.0° to 104.0° F/0.0° to 40.0° C        |
| Storage Temperature           | -40.0° to 158.0° F/-40.0° to 70.0° C                                                                                                                |
| Humidity                      | 5% to 95% RH, non-condensing                                                                                                                        |
| Drop Specification            | Designed to withstand multiple drops at 5.0 ft./1.5 m to concrete                                                                                   |
| Tumble Specification          | Designed to withstand 250 tumbles in 1.5 ft./0.5 m tumbler <sup>1</sup>                                                                             |
| Environmental Sealing         | IP52                                                                                                                                                |
| Approved Cleaners             | Disinfectant Ready. Refer to the product reference guide for the complete list of approved cleaners.                                                |
| Electrostatic Discharge (ESD) | DS2208/DS2278 and CR2278 Cradle: ESD per EN61000-4-2, +/-15 KV Air, +/-8 KV Direct, +/-8 KV Indirect                                                |
| Ambient Light Immunity        | 0 to 10,000 Foot Candles/0 to 107,600 Lux                                                                                                           |
| Radio Specifications          |                                                                                                                                                     |
| Bluetooth Radio               | Standard Bluetooth Version 4.0 with BLE: Class 2 33 ft. (10.0m), Serial Port and HID Profiles; output power adjustable down from 2.0 dBm in 8 Steps |

| Battery                                     |                                                                             |
|---------------------------------------------|-----------------------------------------------------------------------------|
| Battery Capacity/ Battery Type              | 2,400 mAh Li-Ion Battery                                                    |
| Scans per Battery Charge <sup>2</sup>       | 110,000 scans at 60 Scans per Minute or 50,000 scans at 10 Scans per Minute |
| Operating Time per Full Charge <sup>2</sup> | 84.0 hours                                                                  |

| Battery Charge Time (from empty) |                                                  |
|----------------------------------|--------------------------------------------------|
| Standard USB                     | 14 Hour Shift: 4 hours<br>Full Charge: 17 hours  |
| BC1.2 USB                        | 14 Hour Shift: 1 hour<br>Full Charge: 5 hours    |
| External 5V Source               | 14 Hour Shift: 1 hour<br>Full Charge: 5 hours    |
| Micro USB                        | 14 Hour Shift: 1.5 hours<br>Full Charge: 7 hours |
| BC1.2 Micro USB                  | 14 Hour Shift: 1 hour<br>Full Charge: 4 hours    |

| Regulatory        |                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------|
| Environmental     | RoHS EN 50581                                                                                                  |
| 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 |
| LED Safety        | IEC 62471                                                                                                      |
| IT Emissions      | EN 55032 (Class B)                                                                                             |
| IT Immunity       | EN 55024                                                                                                       |

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# DS2200 Series for Healthcare Specifications (continued)

## Regulatory (continued)

**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

## Cordless Accessories

CR2278 Presentation Cradle, Spare Battery, Micro USB Cable

## Symbol Decode Capability

|           |                                                                                                                                        |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>1D</b> | 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) |
| <b>2D</b> | PDF417, Composite Codes, TLC-39, Aztec, DataMatrix, MaxiCode, QR Code, Micro QR, Han Xin, Postal Codes                                 |

Refer to Product Reference Guide for complete list of symbologies.

## Decode Ranges (Typical)<sup>3</sup>

| Symbology/Resolution       | Near/Far                           |
|----------------------------|------------------------------------|
| <b>Code 39: 5 mil</b>      | 0.2 in./0.5 cm to 6.0 in./15.2 cm  |
| <b>Code 128: 5 mil</b>     | 0.6 in./1.5 cm to 4.0 in./10.1 cm  |
| <b>PDF 417: 6.7 mil</b>    | 0.8 in./2.0 cm to 5.7 in./14.5 cm  |
| <b>UPC: 13 mil (100%)</b>  | 0.5 in./1.3 cm to 14.5 in./36.8 cm |
| <b>Data Matrix: 10 mil</b> | 0.3 in./0.8 cm to 6.2 in./15.7 cm  |
| <b>QR: 20 mil</b>          | 0 in./0 cm to 11 in./27.9 cm       |

## Warranty

Subject to the terms of Zebra's hardware warranty statement, the DS2200 Series for Healthcare is warranted against defects in workmanship and materials for the following period from the date of shipment:

DS2208-HC Corded Scanner: Sixty (60) months

DS2278-HC Cordless Scanner: Thirty-six (36) months

CR2278 Presentation Cradle: Thirty-six (36) months

Battery: Twelve (12) months

For the complete Zebra hardware product warranty statement, please go to:

<http://www.zebra.com/warranty>

## Recommended Services

Zebra OneCare® Select; Zebra OneCare Essential

## Footnotes

1. Note: 1 tumble = 0.5 cycle.
2. Simulated profile of 10 scans in 10 seconds with a 50 second rest.
3. Printing resolution, contrast, and ambient light dependent.

## DataCapture DNA

DataCapture DNA is a suite of highly intelligent firmware, software, utilities and apps exclusively engineered to add functionality and simplify the deployment and management of Zebra scanners. For more information about DataCapture DNA and its applications, please visit [www.zebra.com/datacapturedna](http://www.zebra.com/datacapturedna)



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