ZEBRA
CAPTURE
YOUR EDGE

DS8100 Series for Healthcare

Better workflows for healthcare professionals. Better experience for patients.

As a healthcare provider, you need to deliver the very best in care, every second of every day. That means giving your healthcare professionals the tools they need to improve patient outcomes, increase productivity and streamline everyday processes. With the purpose-built DS8100 Series for Healthcare, you can. With the ability to instantly capture the most difficult to read barcodes, an industry-first housing that offers maximum protection against the spread of bacteria, Night Mode with Vibrate for can't miss feedback on decodes and a built-in lamp, the DS8100-HC Series can seamlessly integrate into existing healthcare workflows to boost process efficiencies and ensure that patients are left undisturbed until necessary. Combined with swappable power sources — a PowerPrecision+ battery or PowerCap™ capacitor[1] — and unrivaled manageability tools to keep your scanners up, running and in the hands of your staff, the DS8100-HC Series is the ideal solution to enhance patient safety and the efficiency of point-of-care operations.

Improved patient experiences

Unparalleled performance on virtually every barcode in any condition
Only the DS8100-HC Series combines the power of an 800 MHz microprocessor, a high-resolution megapixel sensor and Zebra's exclusive PRZM Intelligent Imaging technology. With this unique combination of hardware and advanced algorithms, the DS8100-HC Series instantly captures the most problematic barcodes found in pharmacies, labs and at the point-of-care — including dense, tiny, curved, poorly printed, shiny, crinkled, faded, distorted, dirty or damaged, as well as electronic barcodes on dimly lit displays.

First-of-its-kind housing offers maximum protection against the spread of infection
Only the DS8100-HC Series offers a purpose-built housing specially designed to help prevent the spread of bacteria. Special plastics allow for safe wipe-downs with the widest selection of the harshest and most aggressive disinfectants used in today's hospitals. And concealed screw holes and seams eliminate areas where bacteria could hide — even after a wipedown.

Flexible feedback modes including Night Mode with Vibrate
Choose from a wide array of easily controllable feedback modes designed for virtually any hospital environment — from the Intensive Care Unit to a quiet night shift or a busy day shift. Staff can choose between haptic/vibration, a good decode LED, a traditional beep tone with adjustable volume and frequency, and Zebra's Direct Decode Indicator that projects the illumination on the barcode to confirm that it has been captured. In Night Mode, a quick press of the trigger toggles between an audible beep and vibration. Clinicians can be confident that a medicine, specimen or IV bag was properly scanned — without disturbing patients or interrupting the workflow to look at the scanner.

Green LED aimer is easy on the eyes
Thanks to a highly visible and safe LED aimer, the DS8100-HC Series can be used in the NICU where the use of laser aimers is not advised. And the green aimer reduces the likelihood of triggering PTSD episodes.

The DS8100-HC Series — when your operations demand the ultimate in performance, workforce productivity and patient care.

For more information, visit **www.zebra.com/ds8100hc** or access our global contact directory at **www.zebra.com/contact**

Adaptable to clinician workflows

Swappable power options reduce your investment risk
Two interchangeable power options are available to power your devices: a PowerPrecision+ battery or a PowerCap capacitor. You can swap power options at any time on all models, right in your facility — no need to purchase separate battery-free and battery powered devices. And since the PowerPrecision+ battery and PowerCap capacitor can report their model and serial numbers, you'll always know which power source is in each scanner.

On a single charge, the advanced PowerPrecision+ battery provides over three around-the-clock days of continuous scanning, plus a wealth of metrics for better battery management.

The PowerCap capacitor is ideal when the scanner can always be inserted into a charging cradle when not in use. The largest capacitor in its category, the superior PowerCap offers 2,000 scans on a full charge and 100 scans after as little as 35 seconds in the cradle — both metrics are four times greater than competitive scanners.

Exclusive Power Charge Gauge
No more guess work on the status of a battery at the start of a shift. Nurses can see at-a-glance if the PowerPrecision+ battery or the PowerCap capacitor are sufficiently charged at the start of a shift. And both the battery and PowerCap can be changed without tools.

Easily unlock the benefits of UDI
Zebra's UDI Scan+ makes it easy to capture and enter Unique Device Identification (UDI) information into your application. Simply scan the barcode on the medical device packaging. The UDI barcode data is automatically parsed, properly formatted and sent in the right order to the right fields in your EHR or other application. No manual data entry is required.

Connect+ Contact Technology designed to last
The position of the charging contacts in the DS8178-HC charging cradles combined with Zebra's exclusive Connect+ Contact Technology assures reliable, corrosion-free charging over the life of the scanner.

Choice of compact USB powered cradles
The minimal footprint of the presentation cradle easily fits on the most crowded workstation-on-wheels (WOWs), allowing nurses to easily switch between hands-free and handheld modes as needed. The desk/wall cradle can be mounted on a wall, mechanical arm or mobile workstation, and is a perfect solution for facilities that put a computer in every room.

Doubles as a workstation lamp
The DS8178-HC's built-in lamp can illuminate a nurse's workspace, so there's no need to disturb sleeping patients by turning on the room lights.

Eliminate Bluetooth interference with Zebra's proprietary Wi-Fi Friendly Mode
Ensure that your DS8178-HC Bluetooth scanners only operate on channels that are not shared with your wireless LAN (WLAN), protecting WLAN service levels for your caregivers, workers, patients and visitors.

Locate a misplaced scanner in seconds
The cradle's paging button can easily locate a misplaced scanner so nurses don't need to waste critical time searching for a scanner in the bedding.

Unrivaled manageability

Visionary visibility into scanning and battery performance metrics — only from Zebra
Only from Zebra, ScanSpeed Analytics tracks metrics that include symbology and decode speed to spot and correct barcode issues before they impact worker productivity and the quality of care. And PowerPrecision+ batteries provide detailed battery health information, including charge cycles consumed, a State-of-Health meter and remaining percentage of full charge capacity, you can easily spot and replace aging batteries before they can no longer last a full shift and interrupt critical operations at the point of care.

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

Simplify the entire scanning experience with DataCapture DNA
Hardware is just the start of what you need to maximize the value of your scanners. The DS8100-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.

DS8100 Series for Healthcare Specifications

Physical Characteristics

Dimensions	**Corded DS8108-HC and Cordless DS8178-HC:** 6.6 in. H x 2.6 in. W x 4.2 in. D 16.8 cm. H x 6.6 cm. W x 10.7 cm. D **Standard Cradle:** 2.8 in. H x 3.3 in. W x 8.3 in. D 7.1 cm. H x 8.4 cm. W x 21.1 cm. D **Presentation Cradle:** 2.9 in. H x 3.7 in. W x 4.8 in. D 7.4 cm. H x 9.4 cm. W x 12.2 cm. D
Weight	**Corded DS8108-HC:** 5.4 oz./154 g **Cordless DS8178-HC:** 8.3 oz./235.3 g **Desk/Wall Cradle:** 7.1 oz./202 g **Presentation Cradle:** 6.5 oz./182 g
Input Voltage Range	**DS8108-HC:** 4.5 to 5.5VDC **DS8178-HC Cradles:** 5V: 4.7 to 5.5VDC; 12V: 10.8 to 13.2VDC
Current[2]	**Corded DS8108-HC Operating Current at Nominal Voltage (5.0V):** 450 mA **Cradle:** 470 mA (typical) Standard USB; 743mA (typical) 12V
Color	Healthcare White
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
Apple MFi Certification	MFi certified for use with iPhones and iPads (cordless DS8178-HC)
User Indicators	Direct decode indicator, good decode LEDs, rear view LEDs, beeper (adjustable tone and volume), dedicated Power Charge Gauge

Performance Characteristics

Light Source	Aiming pattern: True Green (528 nm) Circular
Illumination	Two (2) warm white 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	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 - 5.0 mil; QR Code - 5.0 mil; PDF - 4.0 mil

User Environment

Operating Temperature	**Scanner:** 32° to 122° F/0° to 50° C **Presentation Mode:** 32° to 104° F/0° to 40° C
Charging Temperature	32° to 104° F/0° to 40° C
Storage Temperature	-40° to 158° F/-40° to 70° C
Humidity	5% to 95% RH, non-condensing
Drop Specification	Designed to withstand multiple drops at 6.0 ft./1.8 m to concrete

User Environment (continued)

Tumble Specification	Designed to withstand 2,000 1.5 ft./0.5 m tumbles[3]
Environmental Sealing	IP52
Approved Cleaners	Disinfectant Ready. Refer to the product reference guide for the complete list of approved cleaners.
Electrostatic Discharge (ESD)	**DS8108-HC/DS8178-HC 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 Class 2: Output power adjustable down from 2 dBm in 8 Steps

Power

PowerPrecision+ Li-Ion Battery	Capacity: 2500 mAh Number of scans from full charge: 65,000[4] Charge time from empty to full: 9 hours over USB Charge time from audible low charge warning to Ready-to-Scan at 20% of full charge (default): 3 hours over USB
PowerCap Capacitor	Capacity: 440 F Number of scans from full charge: 2,000[4] Number of scans from Ready-To-Scan at 20% of full charge (default): 200[4] Number of scans from Ready-To-Scan at 15% of full charge: 100[4] Charge time from empty to full: 30 min over USB Charge time from audible low charge warning to Ready-to-Scan at 20% of full charge (default): 90 sec over USB Charge time from audible low charge warning to Ready-to-Scan at 15% of full charge: 35 sec over USB

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
Medical Equipment Apparatus	EN60601-1-2: 2015

Improve virtually every aspect of patient care with the DS8100 Series for Healthcare.

The DS8100-HC Series gives nurses and other healthcare staff the tools they need to provide their patients with the best of care — and perform everyday duties faster and more accurately.

- Patient identification and verification
- Medication administration
- Hospital Pharmacy: medication intake and inventory
- Hospital Laboratory: specimen track and trace
- Caregiver accountability and audit trail
- Dietary management
- Chain of custody of controlled substances
- Operating Room: surgical supply instruments and implants
- Patient admission: ER/triage/admissions
- Electronic record access
- Inventory management

DS8100 Series for Healthcare Specifications (continued)

Accessories

Standard cradle, presentation cradle, wall mount bracket, spare battery, spare PowerCap; document capture stands

Decode Capabilities[5]

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, securPharm, DotCode, Dotted DataMatrix

Decode Ranges (Typical)[6]

Symbology/Resolution	Near/Far
Code 39: 3 mil	1.4 in./3.6 cm to 5.1 in./13.0 cm
Code 128: 3 mil	1.8 in./4.6 cm to 4.1 in./10.4 cm
Code 128: 5 mil	1.2 in./3.0 cm to 8.1 in./20.6 cm
Code 128: 15 mil	1.0 in./2.5 cm to 16.9 in./42.9 cm
PDF 417: 5 mil	1.5 in./3.8 cm to 6.1 in./15.5 cm
PDF 417: 6.67 mil	1.1 in./2.8 cm to 8.1 in./20.6 cm
Data Matrix: 5 mil	1.9 in./4.8 cm to 4.5 in./11.4 cm
Data Matrix: 7.5 mil	1.3 in./3.3 cm to 6.7 in./17.0 cm
Data Matrix: 10 mil	0.6 in./1.5 cm to 8.5 in./21.6 cm
UPC: 13 mil (100%)	0.0 in./0.0 cm to 15.9 in./40.4 cm
QR: 10 mil	0.6 in./1.5 cm to 7.7 in./19.6 cm
QR: 20 mil	0.0 in./0.0 cm to 12.5 in./31.8 cm

Warranty

Subject to the terms of Zebra's hardware warranty statement, the DS8178-HC and the CR8178-HC are warranted against defects in workmanship and materials for a period of three years from the date of shipment. The DS8108-HC 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: www.zebra.com/warranty

Recommended Services

Zebra OneCare Select; Zebra OneCare Essential
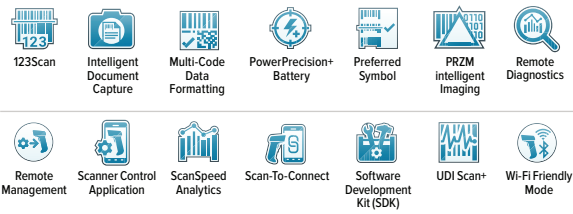
Utilities and Management

123Scan	Programs scanner parameters, upgrades firmware, displays scanned barcode data, scanning statistics, battery health, asset data and prints reports. www.zebra.com/123scan
Symbol Scanner SDK	Generates a fully-featured scanner application, including documentation, drivers, test utilities and sample source code. www.zebra.com/scannersdkforwindows
Scanner Management Service (SMS)	Remotely manages your Zebra scanner and queries its asset information. www.zebra.com/sms

Footnotes

[1] Requires firmware version CAACXS00-004-R00 or later.
[2] Refer to Product Reference Guide for currents when other power sources are used.
[3] 1 tumble = 0.5 cycle.
[4] At one scan per second.
[5] Refer to Product Reference Guide for complete list of symbologies.
[6] 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

123Scan	Intelligent Document Capture	Multi-Code Data Formatting	PowerPrecision+ Battery	Preferred Symbol	PRZM intelligent Imaging	Remote Diagnostics
Remote Management	Scanner Control Application	ScanSpeed Analytics	Scan-To-Connect	Software Development Kit (SDK)	UDI Scan+	Wi-Fi Friendly Mode