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-leading housing that helps offer 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 DataCapture DNA, Zebra's exclusive software ecosystem that simplifies every stage of the scanning experience, 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, the highest sensor resolution in its class, a high density focus 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 tiny and curved barcodes on medicine bottles, IV bags, syringes, specimen trays and biopsy cassettes.

Purpose-built housing helps offer maximum protection against the spread of infection

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 harsh and 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.

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

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 and white illumination LEDs reduce the likelihood of triggering PTSD episodes.

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. 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

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 capture UDI information and blood bag data

Two DataCapture DNA tools make it easy for clinicians to instantly capture more data to help protect patient safety and improve inventory management. UDI Scan+ automatically parses and formats Unique Device Identification (UDI) information on medical device packaging, sending the right data in the right fields to your application. And with Blood Bag Parse+, clinicians can capture all the data required on every blood bag — including blood type, date of donation, donation location and expiration date — with a single scan.

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.

Choice of compact USB powered cradles

The minimal footprint of the presentation cradle easily fits on the most crowded workstation-on-wheels, allowing nurses to easily switch between hands-free and handheld modes. The desk/wall cradle can be mounted on a wall, mechanical arm or mobile workstation.

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 Wi-Fi Friendly mode

Ensure that your DS8178-HC Bluetooth scanners only operate on channels that are not shared with your wireless LAN (WLAN).

Prevent downtime with anti-loss tools

With Zebra's Virtual Tether, both the cradle and scanner will alert users when a device is taken out of range or left out of the cradle for an extended period of time. And if a DS8178-HC is lost, simply press the cradle's paging button to locate it.

Switch workflows in an instant with AutoConfig

Zebra's AutoConfig automatically configures the DS8178-HC for your workflow. For example, you can take a DS8178-HC from a patient room and use it in the pharmacy, phlebotomy or lab without having to change settings. Since scanner settings are stored in the cradle base, simply pair the scanner to a different base to automatically configure it for a new host application and use case.

Unrivaled manageability

Optimize workflows with scanning performance metrics

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.

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.

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.

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. DStandard 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. DPresentation 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<[b]>[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

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

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

Markets and Applications

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

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
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

Decode Ranges (Typical)[6]

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

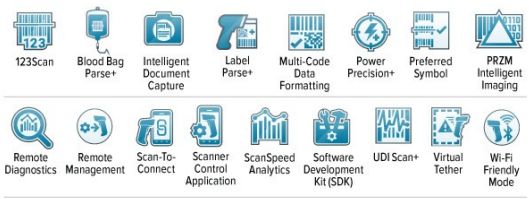
123Scan	Programs scanner parameters, upgrades firmware, displays scanned barcode data, scanning statistics, battery health, asset data and prints reports. www.zebra.com/123scan
Symbol Scanner SDK	Generates a fully-featured scanner application, including documentation, drivers, test utilities and sample 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.
Specifications are subject to change without notice.

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



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