



BCS3600^{ex} – Product Information Data Capture DNA - software and programming tools

Bad Mergentheim, 27th September 2021

Content

Bad Mergentheim, 27th September 2021

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Zebra's Data Capture DNA for barcode scanner

What is the ZEBRA Data Capture DNA?

DataCapture DNA is the genetic code that simplifies the entire scanning experience. The result is innovation-driven performance that not only makes our data capture devices the best in the industry, but also the easiest. From integration to deployment and then management, Zebra has stripped away all the complexity.

Zebra data capture devices turn into powerful tools that get more done and resolve tomorrow's challenges today.

Now this functionality is available in hazardous area with BARTEC BCS36x8^{ex} series. (is based on the Zebra DS36x8-HP and -ER version)

For whom is it build?

For end users, IT administrators, frontline workers, App developers and independent software vendors

What does the ZEBRA Data Capture DNA resolves?

- Alleviate IT Headaches
- Overcome Operational Obstacles
- Lift Worker Productivity
- Resolve App Development Challenges

For further information to Data Capture DNA [click here](#)



During your scanner hardware's long lifecycle, you'll face **different needs at different stages.**



Deploy
Devices



Manage
Devices



Optimize
Workflows



Integrate
Software



Secure
Devices

The right software can **simplify that process at every point.**



ZEBRA – Data Capture DNA

Alleviate IT Headaches

Access greater control, including the ability to configure scanners at the point of use, to eliminate time-intensive configurations and security risks.

Configuring scanners can be overly complicated

Simultaneously configure scanners locally, and stage hundreds for mass deployments.

Troubleshooting often means traveling to the site

Centrally and remotely manage Zebra scanners anytime, anywhere.

Total cost of ownership can increase without management tools

Reduce the time, cost and logistics of managing scanners. Load parameters, update scanner firmware and query asset data.

Lack of insights prevent optimization

Speed up data capture by identifying patterns that slow down scanning.

Rollouts can be unnecessarily difficult

Speed up deployments; quickly stage and simultaneously configure large quantities of devices.

Inefficient battery management can cause interruptions

ID and remove aging batteries before they jeopardize work.



ZEBRA – Data Capture DNA

BARTEC

Overcome Operational Obstacles



of enterprises **ranked network connectivity issues** a leading cause of mobile solution failure.

Manually inputting data wastes workers' time

In one trigger pull, capture, prioritize and parse data from multiple barcodes and auto-populate data in the right order to the right fields.

Single barcode scanning slows productivity

Scan up to 20 labels at a time, and single out one barcode to prioritize it while excluding others.

Wi-Fi interference slows productivity

Eliminate the wireless interference that Bluetooth® devices can create in your Wi-Fi environment.

Challenging barcodes delay workflows

Enable workers to capture any barcode in virtually any condition up to 30% faster.*

*Study by US Ergonomics, October 2016.



ZEBRA – Data Capture DNA

Lift Worker Productivity

Scan faster by capturing data the first time, every time for increased productivity.

Paper-based processes burden workers and risk errors

Scan a document and automatically optimize its appearance and extract its data.

You lose time looking for lost scanners

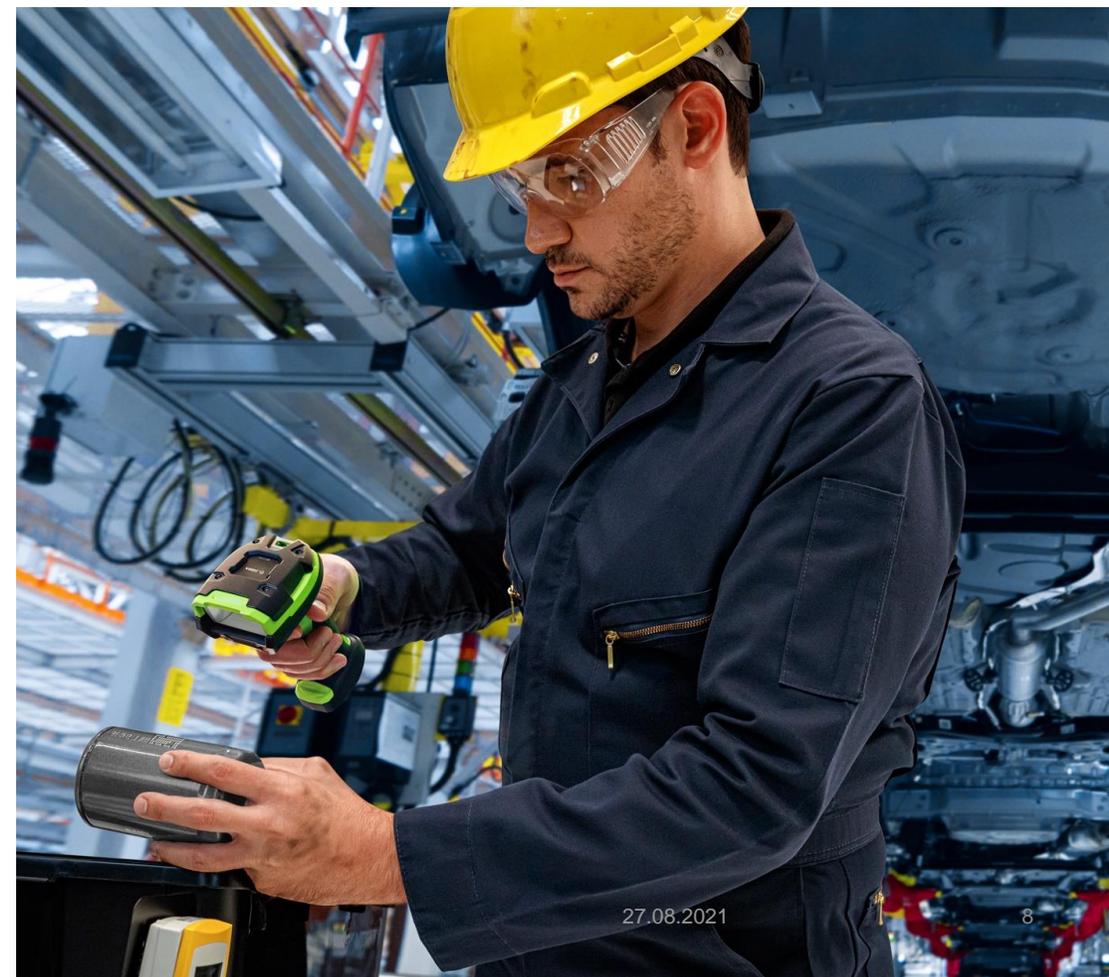
Alert workers when cordless scanners need recharging, are misplaced or left unattended.

Workers struggle to capture the data they need

Scan any barcode in practically any condition; prioritize one code from many and simultaneously capture multiple labels with one trigger pull.

Workers are limited by lack of device interoperability

In one step, pair Bluetooth scanners from any smartphone, tablet or PC.



ZEBRA – Data Capture DNA

Resolve App Development Challenges

By 2023, 65% of large organizations will **enable their non-IT personnel to perform integration tasks.**

Tired of struggling with coding and integration?

Leverage Zebra's source code, how-to videos and easy-to-follow guides to develop apps.

Want to save time?

Forego developing your own pairing solution and use Zebra's readymade solution—or integrate its code into your own app.

Want to accelerate your timelines and deployment?

Gain swift, smooth app integration, to prevent slow and error-filled development.



ZEBRA – Data Capture DNA

Security Manager, Database Admin

Secure

While scanners pose a minimal security risk, you and your IT staff have additional options to protect sensitive data

- Trust the highly secure cord that connects your Zebra scanner to a PC
- Encrypt data using Bluetooth® Secure and Simple Pairing
- Count on FIPS encryption on select models

CIO, Developer Manager
(IT, ISV, SW vendor)

Integrate

Empower developers to create and integrate data-intensive apps without difficulty or delay

- Create apps that do more than capture barcodes
- Pair scanners in a single step
- Develop apps faster with source code, sample apps and how-to videos

DevOps, Network Admin

Deploy

Configure your scanner at the point of use

- Auto-detect and program devices
- Configure at the point of use
- Don't lose existing settings if staging locally

DevOps, Network Admin,
Support Technician

Manage

Give IT hassle-free, scanner management and insight

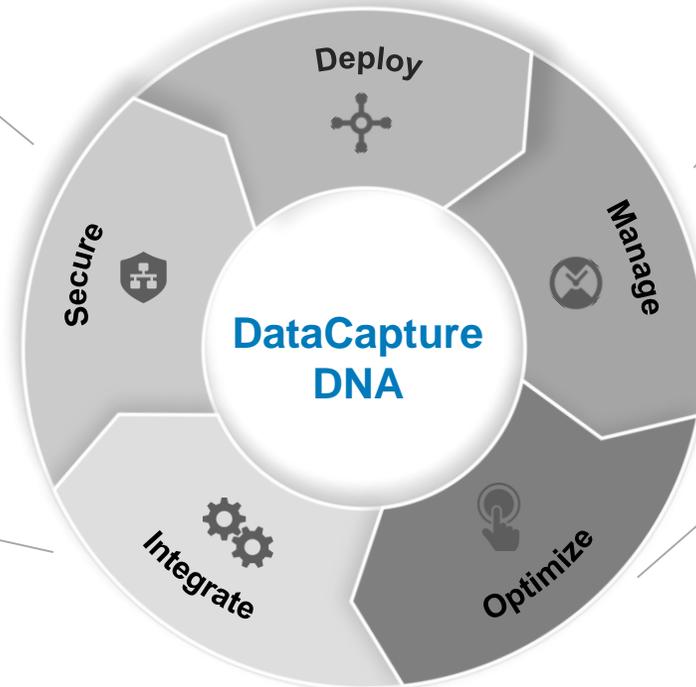
- Simplify fleet management with remote management and troubleshooting
- Update firmware, view stats, and generate reports
- Correct small issues before they become big problems

Frontline Workers, Operations Manager,
Site Supervisor, Associate Manager

Optimize

Help workers scan and complete jobs faster

- Prioritize a barcode or simultaneously capture them all at once
- Read virtually any barcode the first time, every time
- Capture documents and auto-populate data fields



	Tool	Benefits
Deploy	Remote Management (SMS/WMI)	Eliminate the need to pre-stage at a depot; configure at the point of use
	123Scan	Simultaneously stage up to 10 scanners locally
	Remote Diagnostics	Remotely verify that scanners are properly functioning and configured
	Scan-to-Connect	In one step, connect Bluetooth® scanner to a phone, tablet or PC
	Wi-Fi Friendly Mode	Ensure Bluetooth scanners don't interfere with your Wi-Fi network
Manage	Remote Management (SMS/WMI)	Automate configuration at the point of use; update firmware without losing settings and access critical asset data
	PowerPrecision+ Batteries	Gain easy access to fleetwide metrics, including battery state of health
	Remote Diagnostics	Troubleshoot without traveling to sites and resolve issues faster
	ScanSpeed Analytics	Identify patterns that slow down scanning
	123Scan	Create an SMS package to remotely manage your fleet of scanners
	Virtual Tether	Both the scanner and cradle alert user when the cordless scanner is moving out of range, misplaced or left unattended for an extended time
Integrate	123Scan	Configure your scanner using a wizard with options to program electronically or via a printed 2D barcode
	Scanner Software Development Kit (SDK)	Leverage our SDK, videos and source code to develop your own apps
	Scanner Control Application	Connect and control Bluetooth scanners with a tablet or smartphone
	Scan-to-Connect	Forego developing your own pairing solution; instead, use ours or integrate its code into your app

	Tool	Benefits
Optimize	PRZM Intelligent Imaging	Capture any barcode in virtually any condition the first time
	Preferred Symbol	Prioritize one barcode while excluding others
	Multi-Code Data Formatting	Scan multiple barcodes with a single trigger pull
	Scan-to-Connect	In one step, connect Bluetooth scanners to a phone, tablet or PC
	UDI Scan+	Capture and parse UDI data in the right order to the right fields, in one trigger pull
	Label Parse+	Instantly capture all the barcodes on a GS1 label and parse data in the right order to the right fields, in one trigger pull
	Blood Bag Parse+	With one trigger pull, instantly capture, parse and transmit data to your app
	Intelligent Document Capture	Capture an image and automatically optimize its appearance
	Virtual Tether	Alert workers when cordless scanners need recharging, are misplaced or left unattended
	PowerPrecision+ Batteries	Get visual feedback of charge status on demand
Secure	<p>While scanners pose a minimal security risk, you and your IT staff have additional options to protect sensitive data.</p> <ul style="list-style-type: none"> • Trust the highly secure cord that connects your Zebra/BARTEC scanner to a PC • Encrypt data using Bluetooth Secure and Simple Pairing • Count on FIPS encryption on select models 	

Compatibility list for ZEBRA Data Capture DNA Tools

	BCS3608 – corded (ZD2)			BCS3608 – corded Z1			BCS3678 – bluetooth (Z1)			BCS3678 – bluetooth (Z1)		
✓ = supported	BCS3608ex-NI – SE4750-HP with programming cable in safe area with HMI limiting cable (USB) (depends on HMI if USB-HID is supported)			BCS3608ex-IS – SE4750-HP with programming cable in safe area			BCS3678ex-NI – SE4750-HP and SE4850+ER with base station (USB)			BCS3678ex-IS – SE4750-HP with base station (USB)		
✓* = supported with restrictions	BCS3608ex-NI – SE4750-HP with Universal Supply Module			BCS3608ex-IS – SE4750-HP with Universal Supply Module with Supply Module Ex i			BCS3678ex-NI – SE4750-HP and SE4850+ER with Universal Supply Module			BCS3678ex-IS – SE4750-HP with Universal Supply Module with Supply Module Ex i		
X = not supported	BCS3608ex-NI – SE4850-ER with programming cable in safe area with HMI limiting cable (USB) (depends on HMI if USB-HID is supported)			BCS3608ex-IS – SE4850-ER with Universal Supply Module			BCS3678ex-NI – SE4750-HP and SE4850+ER Paired with other Bluetooth devices (e.g. BARTEC SMART USB Device, Smartphone, Laptop, ...)			BCS3678ex-IS – SE4750-HP Paired with other Bluetooth devices (e.g. BARTEC SMART USB Device, Smartphone, Laptop, ...)		
N/A = not offered by Zebra												

Deploy – Configure your scanner at the point of use

123Scan (USB-HID via programming cable or base station required)	✓	X	✓	X	✓	X	✓	X	X	✓*	X	X
Remote Management (SMS/WMI)	✓	X	✓	X	✓	X	✓	X	✓	✓	X	✓
Remote Diagnostics	✓	X	✓	X	✓	X	✓	X	✓	✓	X	✓
Scan-To-Connect	(only supported with Bluetooth version) (Android or Windows OS required)						X	X	✓	X	X	✓
Wi-Fi Friendly Mode	(only supported with Bluetooth version)						✓	✓	✓	✓	✓	✓

Manage – Give IT hassle-free, scanner management and insight

123Scan (USB-HID via programming cable or base station required)	✓	X	✓	X	✓	X	✓	X	X	✓*	X	X
Remote Management (SMS/WMI)	✓	X	✓	X	✓	X	✓	X	✓	✓	X	✓
PowerPrecision and Battery Management	(only supported with Bluetooth version)						✓	✓	✓	X	X	X
Remote Diagnostics	✓	X	✓	X	✓	X	✓	X	✓	✓	X	✓
ScanSpeed Analytics	✓	X	✓	X	✓	X	✓	X	✓	✓	X	✓
Virtual Tether	(only supported with Bluetooth version)						✓	✓	✓	✓	✓	✓

Compatibility list for ZEBRA Data Capture DNA Tools



	BCS3608 – corded (ZD2)				BCS3608 – corded Z1		BCS3678 – bluetooth (Z1)			BCS3678 – bluetooth (Z1)		
✓ = supported	BCS3608ex-NI – SE4750-HP • with programming cable in safe area • with HMI limiting cable (USB) (depends on HMI if USB-HID is supported)	BCS3608ex-NI – SE4750-HP • with Universal Supply Module	BCS3608ex-NI – SE4850-ER • with programming cable in safe area • with HMI limiting cable (USB) (depends on HMI if USB-HID is supported)	BCS3608ex-NI – SE4850-ER • with Universal Supply Module	BCS3608ex-IS – SE4750-HP • with programming cable in safe area	BCS3608ex-IS – SE4750-HP • with Universal Supply Module • with Supply Module Ex i	BCS3678ex-NI – SE4750-HP and SE4850+ER • with base station (USB)	BCS3678ex-NI – SE4750-HP and SE4850+ER • with Universal Supply Module	BCS3678ex-NI – SE4750-HP and SE4850+ER • Paired with other Bluetooth devices (e.g. BARTEC SMART USB Device, Smartphone, Laptop, ...)	BCS3678ex-IS – SE4750-HP • with base station (USB)	BCS3678ex-IS – SE4750-HP • with Universal Supply Module • with Supply Module Ex i	BCS3678ex-IS – SE4750-HP • Paired with other Bluetooth devices (e.g. BARTEC SMART USB Device, Smartphone, Laptop, ...)
✓* = supported with restrictions												
X = not supported												
N/A = not offered by Zebra												

Optimize – Help workers scan and complete jobs faster

PRZM Intelligent Imaging	✓	✓	✓	✓	✓*	✓*	✓	✓	✓	✓*	✓*	✓*
Preferred Symbol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multi-Code Data Formatting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Scan-To-Connect	(only supported with Bluetooth version) (Android or Windows OS required)						X	X	✓	X	X	✓
UDI Scan+	✓	✓	✓	✓	✓*	✓*	✓	✓	✓	✓*	✓*	✓*
Label Parse+	✓	✓	✓	✓	✓*	✓*	✓	✓	✓	✓*	✓*	✓*
Intelligent Document Capture (only supported with SE4750-HP scan engine)	✓	✓	✓	✓	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
Virtual Tether	✓	✓*	N/A	N/A	✓*	✓*	✓	✓	✓	✓	✓	✓
PowerPrecision+ Batteries	(only supported with Bluetooth version)						✓	✓	✓	X	X	X

Integrate – Empower developers to create and integrate data-intensive apps without difficulty or delay

123Scan (USB-HID via programming cable or base station required)	✓	✓	✓	✓	✓	✓	✓	X	X	✓*	X	X
Scanner Software Development Kit (SDK)	✓*	✓*	✓*	✓*	✓*	✓*	✓	✓*	✓	✓	✓*	✓
Scanner Control Application	(only supported with Bluetooth version)						X	X	✓	X	X	✓
Scan-To-Connect	(Android or iOS OS required)						X	X	✓	X	X	✓

Data Capture DNA – Deployment Tools

Remote Management (SMS/WMI)

123 Scan Utility

Remote Diagnostics

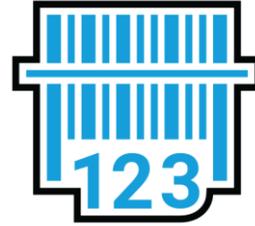
Scan-to-Connect

Wi-Fi Friendly Mode



Remote Management (SMS/WMI)

Eliminate the need to pre-stage at a depot; configure at the point of use.



123Scan

Simultaneously stage up to 10 scanners locally.



Remote Diagnostics

Remotely verify that scanners are properly functioning and configured.



Scan-To-Connect

In one step, connect Bluetooth® scanner to a phone, tablet or PC,



Wi-Fi Friendly Mode

Ensure Bluetooth scanners don't interfere with your Wi-Fi network.

ZEBRA Data Capture DNA – Remote Management

Eliminate the need to pre-stage at a depot; configure at the point of use.

Reduce the time, cost and logistical headache of managing scanners remotely. With Zebra, you can choose from two options to remotely manage your Zebra Scanners: our easy to use Scanner Management Service (SMS) or Windows Management Instrumentation (WMI). While WMI may be used by some, it's complicated. By comparison, SMS is a cinch. A wizard helps you generate an SMS package. No need to learn any new network management tools. Simply use the ones you already have and know. In three easy steps, you can configure devices, load parameters, update firmware and query asset data.

Supported devices:

- BCS3678^{ex} Bluetooth scanner with base station or direct connection to other Bluetooth devices.
Does not work in combination with Universal Supply module.
- BCS3608^{ex} corded scanner with USB programming cable or HMI USB limiting cable.
Does not work in combination with Universal Supply module.

For further information to Remote Management [click here](#)



Simultaneously stage up to 10 scanners locally.

If you think configuring scanners is a hassle, think again. The Zebra's 123Scan utility has a patented configuration wizard that simplifies every step of deploying a scanner. Loaded with time-saving features and functionality, it's intuitive enough for first-time users. From the start, it automatically detects your data capture devices and walks you through the configuration process. You'll find it just as simple when it comes to updating scanner firmware, staging large numbers of devices, displaying barcode data and images, and generating reports. Little wonder then that hundreds of thousands of IT administrators swear by it.

Overview

- 123Scan is an easy-to-use, PC-based software tool that enables the quick and easy set-up of Zebra and BARTEC scanners.
- 123Scan uses a wizard tool to guide users through a streamlined set up process. Once parameters are set, the values are saved to a configuration file that can be distributed via email, electronically downloaded via USB cable or used to generate a : codes that can be scanned.
- 123Scan can generate multiple reports that can be easily rebranded using Microsoft Word and Access. Report options include parameters, asset tracking (inventory) information and a validation of scanned data.
- Additionally, 123Scan can display scanned barcode data including non-printable characters. It can display, optimize and save pictures from an imager scanner. It can also upgrade scanner firmware, automatically check online to enable support for newly released products, generate a single 2D barcode for one scan programming and stage large numbers of scanners simultaneously via USB hub(s).



123 Scan Utility functions

- Optimized for first time users
- Generation of an electronic configuration file
- Generation of your configuration as programming barcode
- Program Advanced Data Formatting (ADF) Rules
- Program Multi Data Formatting (MDF) Rules and Label Parse+ (for GS1 label)
- Firmware upgrade of scanners via a standard USB cable
- Data Viewer
- And more

Supports only USB connection

- BCS3678^{ex} Bluetooth scanner requires base station + USB programming/connection cable
- BCS3608^{ex} corded scanner requires USB programming cable

For further information to 123 Scan Utility

Product homepage [click here](#)

Download/Support page [click here](#)



Remotely verify that scanners are properly functioning and configured.

Turn Device Diagnostics Into Lower Total Cost of Ownership

Not only does Remote Diagnostics give you up-to-the-minute insight into every aspect of your Zebra scanners, it makes it easy to understand. Now, you can easily turn information into action to prevent disruptions that drain profits. Rely on Remote Diagnostics to verify your set-up procedures, anticipate and schedule maintenance and remotely troubleshoot.

Supported devices:

- BCS3678^{ex} Bluetooth scanner with base station or direct connection to other Bluetooth devices.
Does not work in combination with Universal Supply module.
- BCS3608^{ex} corded scanner with USB programming cable or HMI USB limiting cable.
Does not work in combination with Universal Supply module.

For further information to Remote Diagnostics [click here](#)



ZEBRA Data Capture DNA – Scan-to-Connect (STC)

In one step, connect Bluetooth® scanner to a phone, tablet or PC.

With Zebra's Scan-to-Connect (STC) utility, users can instantly connect Zebra data capture devices to a Bluetooth®-enabled PC, tablet or smartphone, in just a single action. STC reduces the process from up to 15 steps and screen changes to only one.

Scan-To-Connect Features and Benefits

- **Pair it in one step**

Users simply scan the STC barcode that appears on their device's screen and the imager automatically connects to their Android or Windows PC, tablet or smartphone.

- **Instantly launch your app**

Once you connect your scanner to your Android device, STC will automatically launch your data-capture application. From then on, the scanner and application will remain paired.

Supports only the BCS3678^{ex} Bluetooth scanner

For further information to Scan to connect [click here](#)

Download the Android App [here](#)

Download the Windows App [here](#)



What is "Wi-Fi friendly mode" and how does it work?

Zebra's Wi-Fi Friendly Mode eliminates the wireless interference that Bluetooth devices can often create in Wi-Fi environments because both technologies operate in the same frequency band. Wi-Fi friendly mode is accomplished via a combination of innovative technologies called Adaptive Frequency Hopping, Automatic Power control, and intelligent link management, assuring that use of Bluetooth enabled BCS3678ex series cordless scanners (Zebra DS3678 series) in a Wi-Fi environment will not interfere with Wi-Fi devices.

Wi-Fi Friendly Mode Features and Benefits

- **Bypass network interference**

Unlike competitors, Zebra gives users the ability to remove Wi-Fi channels—commonly 1, 6 and 11 from the hopping sequence of our Zebra Bluetooth scanners. As our Bluetooth technology hops from one channel to another, it will have zero chance of colliding with those channels utilized by the wireless network.

- **Implement with ease**

Wi-Fi Friendly Mode is simple to implement with our user-friendly wizard, 123Scan. Just choose the channels you want your Bluetooth scanners to use and organize them in your preferred order.

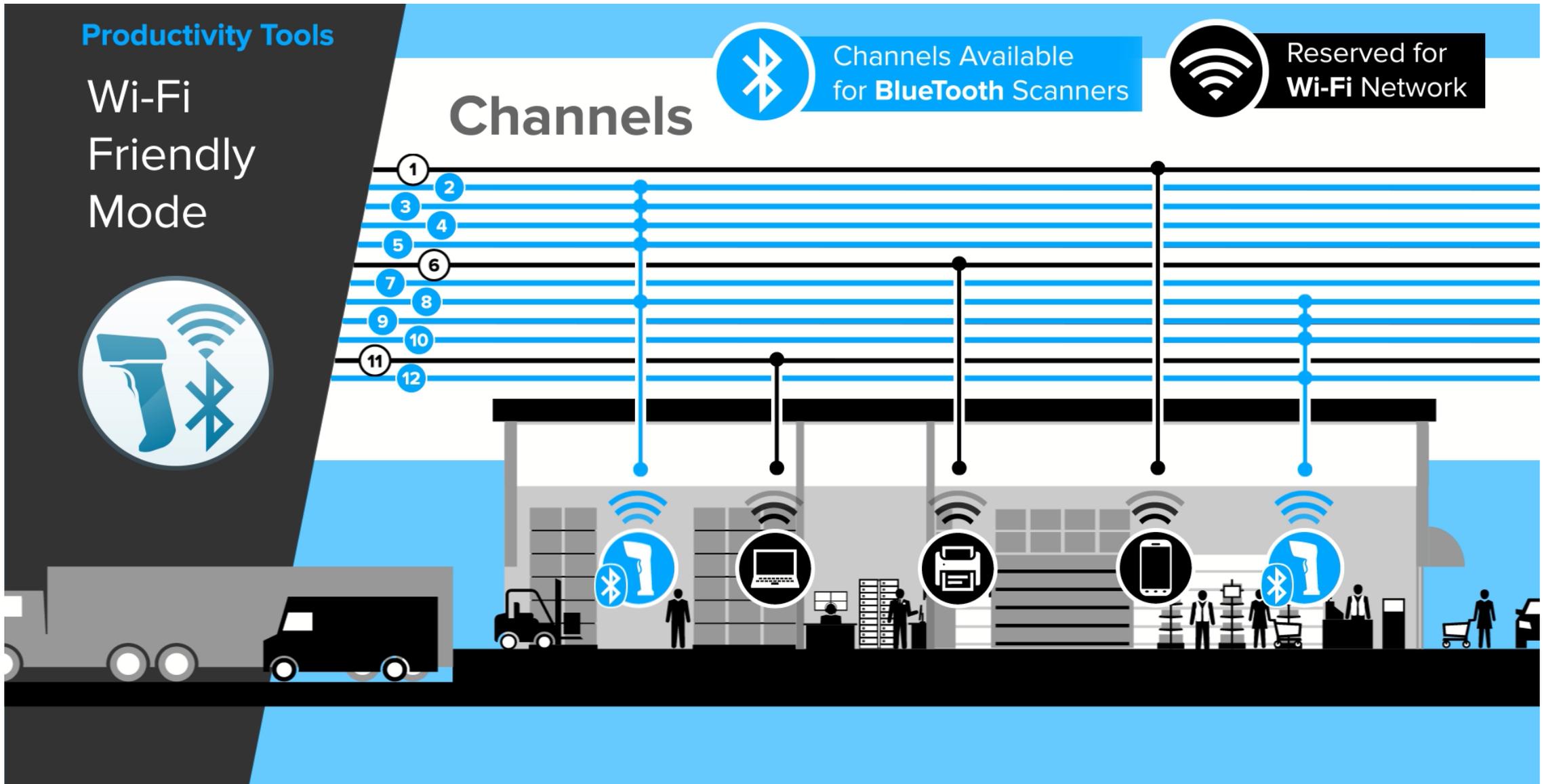
- **Benefit from cordless scanners**

Put Wi-Fi interference behind you and move ahead with the mobility and intelligence of our productivity-boosting Bluetooth scanners.

Supports only the BCS3678 Bluetooth scanner

For further information to WiFi Friendly Mode [click here](#)





ZEBRA Data Capture DNA – WiFi Friendly Mode

The Issue: Overlapping Bluetooth/Wi-Fi Spectrum

The reason Bluetooth devices can interfere with devices connected to the Wi-Fi network is because of overlap in the Bluetooth and Wi-Fi spectrum.

Bluetooth: There are 79 channels in the full Bluetooth spectrum (see **Diagram 1**) — each channel is 1 MHz wide. Bluetooth devices constantly hop around the channels in random order and are supposed to hit every channel while operating (known as Spread Spectrum Frequency Hopping)

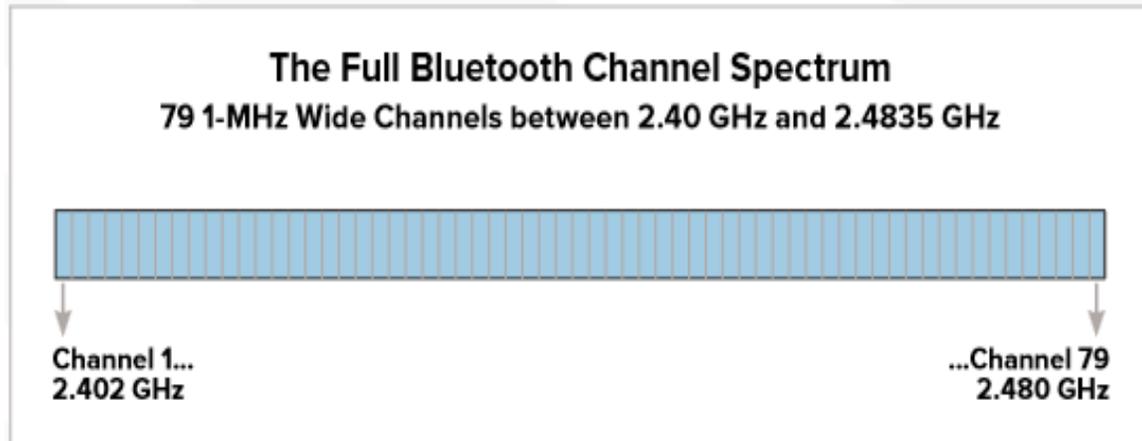


Diagram 1

Operation of Wi-Fi:

Wi-Fi operates differently. Instead of Bluetooth’s 79 channels that are all 1 MHz wide, Wi-Fi operates on channels 1, 6 and 11. Each of these three channels has a center frequency and is approximately 23 MHz wide. As you can see from **Diagram 2**, Wi-Fi and Bluetooth share most of the channel spectrum.

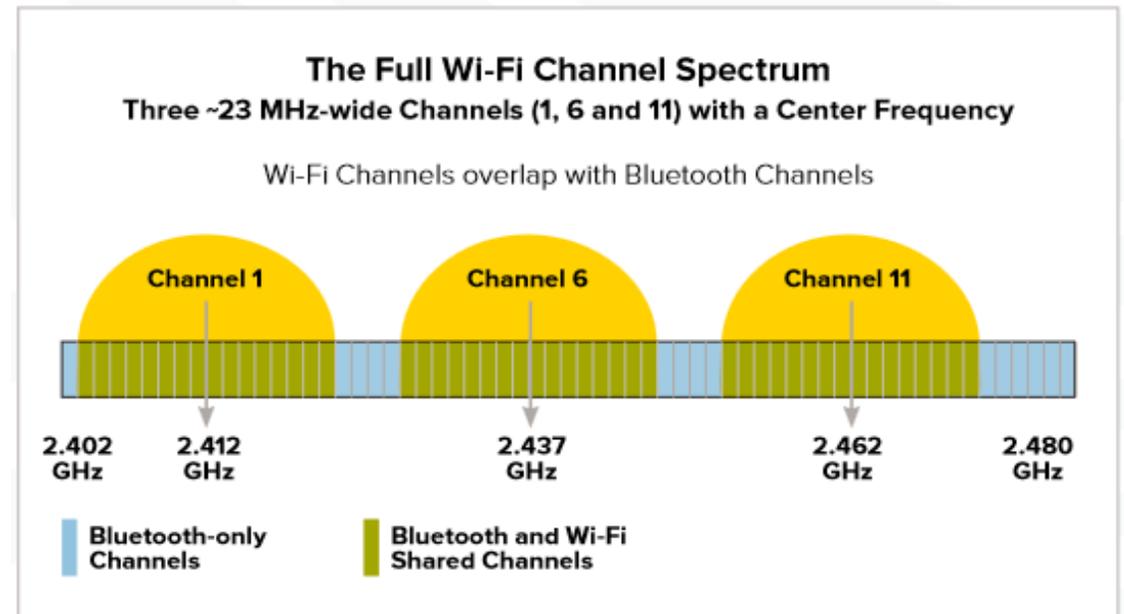


Diagram 2

The Solution – Wi-Fi Friendly Mode

With Zebra's Wi-Fi Friendly Mode, in the time it takes to scan a barcode, your customers can manually constrain Bluetooth communications to those Bluetooth channels that do not overlap with the Wi-Fi channels currently in use.

Why does it work?

Bluetooth's Adaptive Frequency Hopping (found in Bluetooth 2.1 and later) can be implemented automatically or manually. When implemented automatically, all 79 Bluetooth channels are available to all Bluetooth devices. Manual mode can be utilized to constrain Bluetooth devices to specific channels in the Bluetooth spectrum.

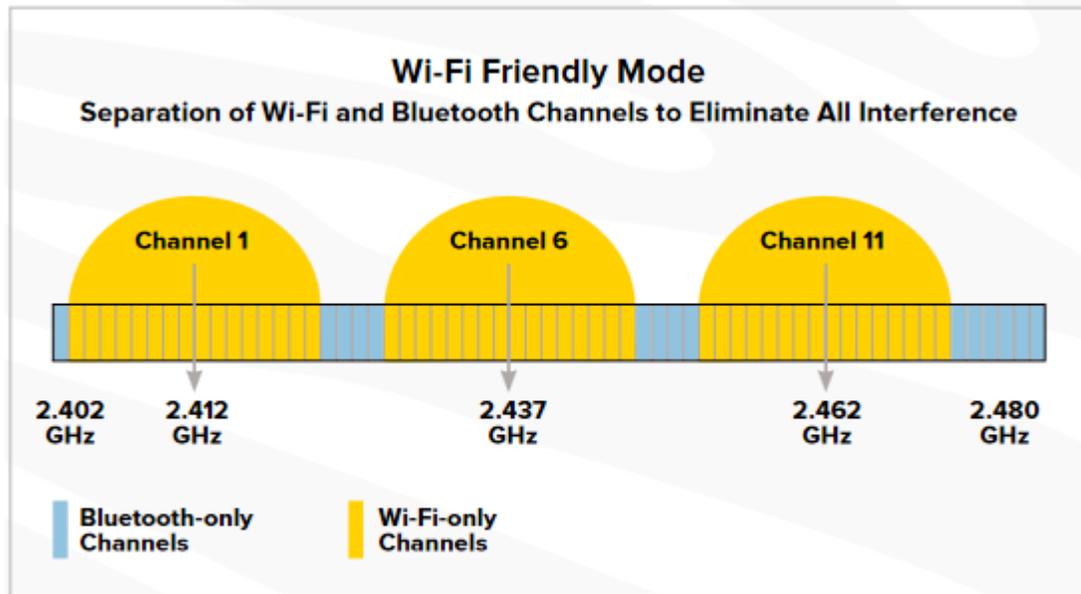


Diagram 3

The result?

Wi-Fi and Bluetooth devices operate on separate channels, effectively eliminating Bluetooth interference on the Wi-Fi network (see Diagram 3).

Additional Bluetooth features Zebra uses to minimize interference

- Bluetooth 4.0: Adaptive Power Control - Reduces power to the minimum required to maintain the Bluetooth Link.
- User Defined Max Power Setting - Enables manual configuration of the transmit maximum power level.
- Limited Page Requests
When a scanner is out of range or if the cradle has been unplugged, the scanner only pages the cradle for seconds. After that, paging begins when the scanner is triggered or inserted into the cradle. While the Bluetooth specification supports this feature, Zebra modifications control the timing and enable easy implementation.

Easy Split-Second Deployment

Out of the box, all BARTEC BCS3678^{ex} models (Zebra DS3678 series) are configured with automatic Adaptive Frequency Hopping (AFH) for Bluetooth. In order to implement Bluetooth Friendly mode, your customers just need to identify the Wi-Fi channels in use and scan the appropriate barcode. If the Wi-Fi channels change down the road, updating the configuration of Wi-Fi Friendly Mode is as simple as scanning the correct barcode.

Seven barcodes are provided in the Zebra DS3600 series users manuals to cover every possible combination of Wi-Fi channels:

- 1. Channel 1
- 2. Channel 6
- 3. Channel 11
- 4. Channel 1, 6 and 11
- 5. Channel 1,6
- 6. Channel 1, 11
- 7. Channel 6, 11

In Diagram 3 above, barcode 4 has been scanned to eliminate interference on all three Wi-Fi Channels (1, 6 and 11).

Programming options to setup Wi-Fi Friendly Mode:

- 123 Scan Utility
- Use Zebra Product Reference Guide by scan of programming barcodes



Data Capture DNA – Management Tools

Remote Management (SMS/WMI)

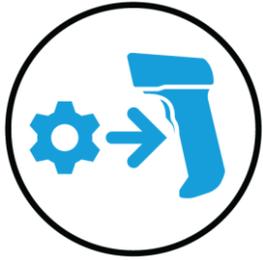
PowerPrecision+ Batteries

Remote Diagnostics

ScanSpeed Analytics

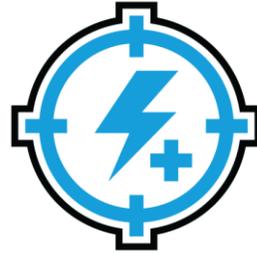
123Scan

Virtual Tether



Remote Management (SMS/WMI)

Automate configuration at the point of use; update firmware without losing settings and access critical asset data.



PowerPrecision and Battery Management

Gain easy access to fleetwide metrics, including battery state of health.



Remote Diagnostics

Troubleshoot without traveling to sites and resolve issues faster.



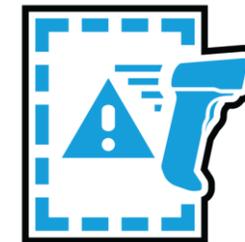
ScanSpeed Analytics

Identify patterns that slow down scanning.



123Scan

Create an SMS package to remotely manage your fleet of scanners.



Virtual Tether

Keep track of your cordless scanners. Virtual Tether alerts users when a scanner is moved too far from its base or is left off the charger for a predefined length of time.

ZEBRA Data Capture DNA – Remote Management

Automate configuration at the point of use; update firmware without losing settings and access critical asset data.

For more details see the [slide on page 17](#).

Deploy - Remote Management (SMS/WMI)

- Eliminate the need to pre-stage at a depot; configure at the point of use



ZEBRA Data Capture DNA – Power Precision+ Batteries

Gain easy access to fleetwide metrics, including battery state of health.

Your mobile workforce relies on mobile computers, cordless scanners and mobile printers. How well your mobile devices perform depends in great part on the batteries that charge them. When they're not working well, neither are your employees – impacting productivity, customer service and profitability. But how can you know the status of your batteries until it's too late?

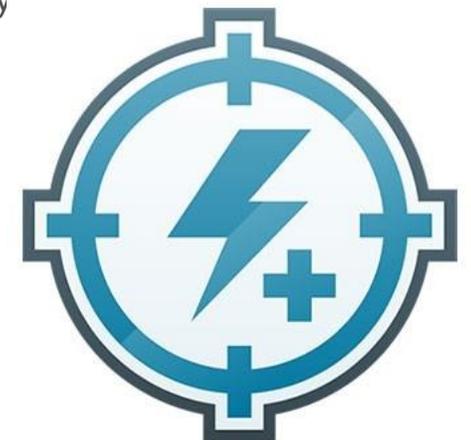
Zebra gives you smart ways to preempt problems. With PowerPrecision and PowerPrecision+ batteries, you have critical intelligence about their health, while the on-device Battery Management application gives you the visibility to anticipate and avoid issues. Now, you'll know when batteries need to be charged, replaced or retired before you go to work.

PowerPrecision+ Batteries deliver the ultimate in battery data. Electronically query battery asset information, plus a wealth of battery health-related information, including impedance tracking and battery status at the time of query. Use our State-of-Health meter to perform real-time modeling of the electrical characteristics of the battery pack to compare current performance with that of a new battery

Supported devices:

- PowerPrecision+ supports only the BCS3678^{ex}-NI (Zone 2/22 and Division 2) Bluetooth scanner. The functionality is not supported by use of BCS3678^{ex}-IS (Zone 1/21) Bluetooth scanner.

For further information to Power Precision+ Batteries [click here](#)



Battery Statistics Capabilities

The DS3678 Bluetooth scanner is equipped with Power Precision+ (only BCS3678^{ex}-NI) batteries. These intelligent batteries have the integrated technology required to collect the detailed real-time battery metrics needed to maximize useful battery life and ensure every battery is healthy and able to hold a full charge.

The Power Precision+ batteries support the following remote management functionality:

Battery Asset Information

- Manufacture Date of Battery
- Serial Number of Battery
- Model Number of Battery
- Firmware Version of Battery
- Design Capacity

Battery Life Statistics

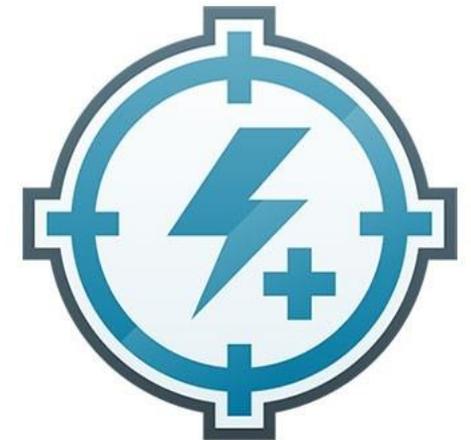
- State of Health Meter
- Charge Cycles Consumed

Battery Status (at Time of Poll)

- State of Charge
- Remaining Capacity
- Charge Status
- Remaining Time to Complete Charging
- Battery Voltage / Current

Battery Temperature

- Present / Highest / Lowest



Battery statistic data can be viewed in 123Scan² at www.zebra.com/123Scan, or by using a third party remote management console.

ZEBRA Data Capture DNA – Remote Diagnostics

Troubleshoot without traveling to sites and resolve issues faster.

For more details see the [slide on page 20](#).

Deploy - Remote Diagnostics

- Remotely verify that scanners are properly functioning and configured



Identify patterns that slow down scanning.

Identify Problematic Barcodes. Speed Up Your Process.

You may not even realize it, but problematic barcodes are hindering your profitability. With patented technology, Zebra's ScanSpeed Analytics software helps you visually identify barcodes that slow down your processes and impact your efficiency. Over time, you can use the collected data to eliminate poor performing barcodes from your inventory. When your scanners capture and read data faster, your processes run faster.

Supported devices:

- BCS3678^{ex} Bluetooth scanner with base station or direct connection to other Bluetooth devices.
Does not work in combination with Universal Supply module.
- BCS3608^{ex} corded scanner with USB programming cable or HMI USB limiting cable.
Does not work in combination with Universal Supply module.

For further information to Scan Speed Analytics [click here](#)



ZEBRA Data Capture DNA – 123 Scan Utility

Create an SMS package to remotely manage your fleet of scanners.

For more details see the [slide on page 18](#).

Deploy - 123Scan

- Simultaneously stage up to 10 scanners locally

For more details see the [slide on page 46](#).

Integrate - 123Scan

- Configure your scanner using a wizard with options to program electronically or via a printed 2D barcode

For more details see the [slide on page 52](#).

Available Programming Options

- 123 Scan Utility
- Zebra Guides with programming barcodes and instructions



Both the scanner and cradle alert user when the cordless scanner is moving out of range, misplaced or left unattended for an extended time

Maximize Cordless Scanner Availability

Easily keep track of your cordless scanners and prevent workflow interruptions caused by a misplaced device. With Virtual Tether, both the scanner and cradle will alert users when a scanner is taken beyond its Bluetooth range or left off the charger for a predefined length of time. As a result, your cordless scanners are always where they should be, fully charged and ready for the next task. This flexible solution can be easily configured to meet virtually any environment, from a noisy warehouse floor to a night shift in the ICU.

Benefits

- Maximize device availability
- Avoid workflow interruptions caused by a lost scanner
- Keep scanners charged and ready for use
- Minimize downtime from broken Bluetooth connections
- Lower device replacement costs
- Reduce the size of your spare device pool

Supported devices:

- BCS3678^{ex} Bluetooth scanner

For further information to Virtual Tether [click here](#)



Data Capture DNA – Optimization Tools

PRZM Intelligent Imaging

Preferred Symbol

Multi-Code Data Formatting

Scan-to-Connect

UDI Scan+

Label Parse+

Blood Bag Parse+

Intelligent Document Capture

Virtual Tether

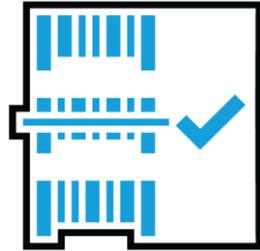
PowerPrecision+ Batteries

ZEBRA Data Capture DNA – Optimization Tools



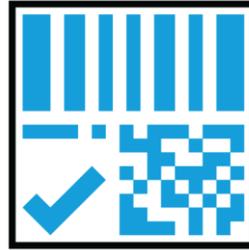
PRZM Intelligent Imaging

Capture any barcode in virtually any condition the first time.



Preferred Symbol

Prioritize one barcode while excluding others.



Multi-Code Data Formatting

Scan multiple barcodes with a single trigger pull.



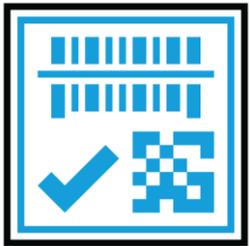
Scan-To-Connect

In one step, connect Bluetooth scanner to a phone, tablet or PC.



UDI Scan+

Capture and parse UDI data in the right order to the right fields, in one trigger pull.



Label Parse+

Instantly capture all the barcodes on a GS1 label and parse data in the right order to the right fields, in one trigger pull.



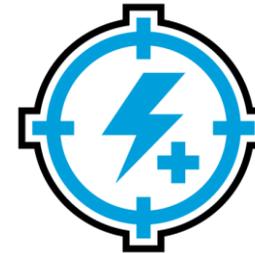
Intelligent Document Capture

Capture an image and automatically optimize its appearance.



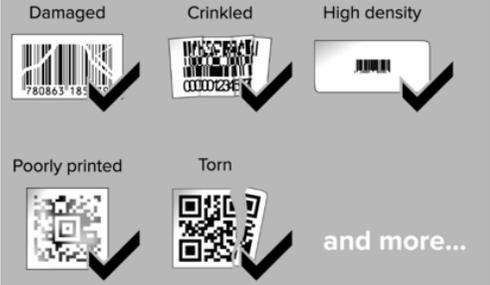
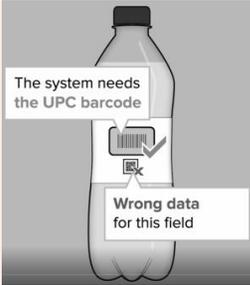
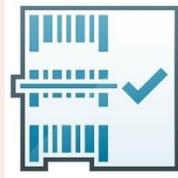
Virtual Tether

Alert workers when cordless scanners need recharging, are misplaced or left unattended.



PowerPrecision+ Batteries

Get visual feedback of charge status on demand.

	PRZM Intelligent Imaging*	Preferred Symbol*	Intelligent Document Capture*
	<p>Capture any barcode in virtually any condition the first time. PRZM sets the bar for 2D imaging by enhancing decode performance and snappiness, dramatically improving the</p> 	<p>Zebra's Preferred Symbol is a barcode prioritization technique that lets one barcode, scanned among other barcodes, to be singled out for decoding while excluding the others.</p> 	<p>Eliminate the cost and space required for a document scanner. Capture an image while processing barcode data and automatically optimize image appearance by de-skewing and brightening.</p> 
SE4750	Yes	Yes	Yes
SE4850	Yes	Yes	No
Zebra Software	<p>PRZM Intelligent Imaging</p>  <p>For further information click here</p>	<p>Preferred Symbol (via Zebra 123 Scan Utility or Programming manual)</p>  <p>For further information click here</p>	<p>Intelligent Document Capture</p>  <p>For further information click here</p>

* The performance of the zone 1 scanners may vary slightly compared to the zone 2 version due to the required ex-modifications

ZEBRA Data Capture DNA – UDI Scan+ & Blood Bag Parse+

UDI Scan+ and **Blood Bag Parse+** mainly defined tools and functions for health care applications.

Booth features are supported from functional side with the BCS36x8^{ex} series.

The setup can be done via Zebra 123 Scan Utility.

UDI Scan+

Unlock the benefits of UDI (Unique Device Identification) to improve efficiency and patient safety.

A single scan captures and parses UDI information, sending data in the right order to the right fields in your application.

For further information to UDI Scan+ [click here](#)

Blood Bag Parse+

Instantly capture, parse and transmit the data on blood bags right to your application, all with a single scan.

For further information to Blood Bag Parse+ [click here](#)

Note: latest Firmware required!



ZEBRA Data Capture DNA – Scan-to-Connect (STC)

In one step, connect Bluetooth scanners to a phone, tablet or PC.

For more details see the [slide on page 21](#).

Deploy – Scan-to-Connect

- In one step, connect Bluetooth® scanner to a phone, tablet or PC

For more details see the [slide on page 49](#).

Integrate - Scan-to-Connect

- Forego developing your own pairing solution; instead, use ours or integrate its code into your app



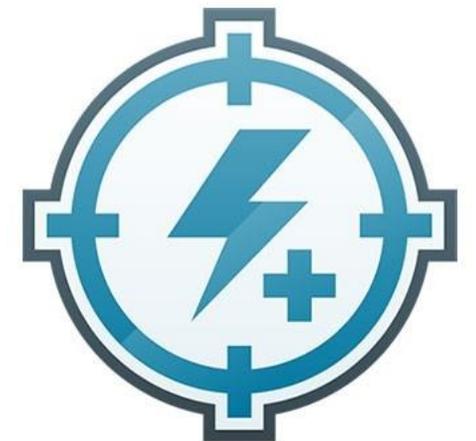
ZEBRA Data Capture DNA – Power Precision+ Batteries

Get visual feedback of charge status on demand.

For more details see the [slide on page 30](#).

Manage – Power Precision+ Batteries

- Gain easy access to fleetwide metrics, including battery state of health



ZEBRA Data Capture DNA – Virtual Tether

Alert workers when cordless scanners need recharging, are misplaced or left unattended.

For more details see the [slide on page 35](#).

Manage – Virtual Tether

- Both the scanner and cradle alert user when the cordless scanner is moving out of range, misplaced or left unattended for an extended time



Data Capture DNA – Integration Tools

123Scan

Scanner Software Development Kit (SDK)

Scanner Control Application

Scan-to-Connect



123Scan

Configure your scanner using a wizard with options to program electronically or via a printed 2D barcode.



Scanner Control Application

Connect and control Bluetooth scanners with a tablet or smartphone.



Scanner Software Development Kit (SDK)

Leverage our SDK, videos and source code to develop your own apps.



Scan-To-Connect

Forego developing your own pairing solution; instead, use ours or integrate its code into your app.

ZEBRA Data Capture DNA – 123 Scan Utility

Configure your scanner using a wizard with options to program electronically or via a printed 2D barcode

For more details see the [slide on page 18](#).

Deploy - 123Scan

- Simultaneously stage up to 10 scanners locally

For more details see the [slide on page 34](#).

Integrate - 123Scan

- Create an SMS package to remotely manage your fleet of scanners

For more details see the [slide on page 52](#).

Available Programming Options

- 123 Scan Utility
- Zebra Guides with programming barcodes and instructions



App Development As It Should Be

Zebra's Scanner Software Development Kits (SDKs) give you everything you need to easily create fully featured applications. Capture and optimize images and control all aspects of your scanners and your data collection process. Upgrade firmware and enable multiple applications to simultaneously talk to one or more scanners. Keep enterprises ahead of the curve by solving tomorrow's challenges. With these SDKs, you ensure peak and continuous performance of Zebra scanners, now and in the future.

Important Note:

The Universal Supply Module (USM) is an BARTEC own development to power the scanner and allow data transfer compliant to the Ex-standards inside of hazardous area.

The USM itself is not available as component in the SDK.

For further information to Software Development Kit [click here](#)



ZEBRA Data Capture DNA – Scanner Control Application (SCA)

You can easily control the beeper and LEDs, display scanned barcode data, access battery health metrics and so much more. Show SCA to your customers' IT teams, and they're sure to get excited by its demonstration of just how effortless our scanners are to pair and control via a tablet or phone.

Scanner Control Application Features and Benefits

- **Scanner settings**

Use SCA to set the beeper tone and volume, turn the LEDs on or off, and enable and disable symbologies—even remotely pull the trigger of the scanner.

- **Advanced capabilities**

From finding a lost imager to updating firmware, from querying asset data to accessing critical battery statistics, SCA's advanced capabilities gives invaluable control and actionable information to maximize uptime.

- **Apply it to Android and iOS**

SCA has been designed to work on any Android and iOS device.

Supports only the BCS3678^{ex} Bluetooth scanner

For further information to Scan Control Application [click here](#)

Download the Android or iOS App [here](#)



ZEBRA Data Capture DNA – Scan-to-Connect (STC)

In one step, connect Bluetooth scanners to a phone, tablet or PC.

For more details see the [slide on page 21](#).

Deploy – Scan-to-Connect

- In one step, connect Bluetooth® scanner to a phone, tablet or PC

For more details see the [slide on page 41](#).

Optimize – Scan-to-Connect

- In one step, connect Bluetooth® scanner to a phone, tablet or PC



Data Capture DNA – Security

While scanners pose a minimal security risk, you and your IT staff have additional options to protect sensitive data.

- Trust the highly secure cord that connects your Zebra/BARTEC scanner to a PC.

- Encrypt data using Bluetooth Secure and Simple Pairing.
Can be setup via scan of programming barcodes or via 123 Scan Utility.
Bluetooth Security (see Zebra Product Reference Guide for more details)
The digital scanner supports Bluetooth Authentication. Authentication can be requested by either the remote device or the digital scanner.
 - PIN Code
 - Variable PIN Code
 - Bluetooth Security Levels
 - Low Bluetooth Security (If connecting to Bluetooth 2.1 device and above)
 - Medium Bluetooth Security (If connecting to Bluetooth 2.1 device and above)
 - High Bluetooth Security (If connecting to Bluetooth 2.1 device and above)
 - Legacy Bluetooth Security (If connecting to Bluetooth 2.0 device and below)

- Count on Federal Information Processing Standards (FIPS) encryption on select models.
In general all Bluetooth Scanners support FIPS mode.
The Federal Information Processing Standard (FIPS) 140-2 is a U.S. government computer security standard used to accredit cryptographic modules. FIPS enabled BCS3678^{ex} scanners and cradles offer this secure mode of operation.
To enable the FIPS mode of operation (disabled by default), scan the Enable FIPS barcode in Zebra product reference guide or setup can be done via 123 scan utility.

Available programming options

Available programming and management options

Following methods and tools are available for programming and management of the scanner series.

- Zebra 123 Scan Utility (part of Data Capture DNA)
- Zebra Software Development Kits (part of Data Capture DNA)
- Zebra Scanner Management Service (SMS) – for more information [click here](#)
- Zebra Scanner Control Application (part of Data Capture DNA) with basic setup functions (supported only with BCS3678^{ex} Bluetooth version)
- Use of Zebra programming manuals
Download is available on BARTEC support & download page under section manuals and section programming - [click here](#)
Download available on Zebra support & download page - [click here](#)

Following programming manuals available:

Contains programming barcodes and instructions how to use it

- DS36X8 Product Reference Guide
- Advanced Data Formatting (ADF) Programmer Guide
- Multicode Data Formatting (MDF) and Preferred Symbol User Guide
- Simple Serial Interface Programmer's Guide
- Cordless SSI Programmer's Guide
- Zebra Scanner SDK for Android Developer Guide

Available programming options

Programming manual with programming barcodes

The available manuals for customizing the BCS36x8ex series consist of a variety of barcodes for programming.

For all functions and parameters the settings are made on the scanner by scanning the barcodes.

Barcodes for programming can also be generated using the 123 Scan Utility software.

The setting/parameterization is possible by scanning the barcodes in any environment.

Further product specific information can be found in the manuals.

The BARTEC user manual describes the intended connection, operation and handling of the device.

Available programming options

123Scan is an easy-to-use, PC-based software tool that enables the quick and easy set-up of Zebra scanners.

Cost: free software

Tool allows:

- Programming incl. ADF and MDF
- Firmware Update
- Data Viewer for test of barcodes and images
- Creation of programming barcodes
- Upload of configuration to scanner
- And more



The only limitations are:

- For battery management.
The BCS3678^{ex}-IS version does not use the original Zebra battery. It was necessary to use another battery to fulfill the requirements for hazardous location ATEX/IECEX Zone 1/21 → battery statistics and management operations can't be used with the zone 1 battery
- 123 Scan Utility can't be used with the “universal supply module” or the “Ex i supply module”.
A USB-HID connection is required.
The supply modules only support USB-SPP.

Available programming options

Category – Symbologies (bar code types):

You can activate/deactivate the different supported symbologies.

This menu allows:

- Symbology/barcode specific settings
- Other symbology/barcode specific options
- Symbology security level
- Digimarc (SE4850-ER only)
- Setup for “Preferred Symbol” function



Notes from BARTEC:

No notes.

Change your bar code settings

Your scanner is already set up to recognize the most common types of bar codes. To modify your decoding options, select a symbology (bar code type) from the drop-down below.

Select symbology (bar code type) to modify

- Aztec
- Chinese 2 of 5
- Codabar
- Code 11
- Code 128
- Code 39
- Code93
- Composite
- Data Matrix
- Discrete 2 of 5
- DotCode
- Gridmatrix
- GS1 Databar
- Han Xin
- Interleaved 2 of 5
- Korean 3 of 5
- Matrix 2 of 5
- MaxiCode
- MSI
- Other Options
- PDF-417
- Postal
- Preferred Symbol
- QR
- Symbology Security Level
- Digimarc
- UPC EAN

123Scan

Start | Data view | Untitled1

Actions | Save file to PC | Print bar code | Load to scanner | Email Bar Code to Phone | Print/Save

Model List
Plug-in Name
Release Notes
App Developer Report

DS3678-STANDARD SR
MODELS + CRADLE-027

1. Name and notes
Name: Untitled1
Notes:

2. Cable connection
USB (default)

3. Symbologies (bar code types)
Factory default settings

4. Modify Data
No rules

5. Wireless - Bluetooth
Factory default settings

6. Imaging
Factory default settings

7. General
Factory default settings

8. Printing Options

9. Load and print

Parameters changed from factory default

Change your bar code settings

Your scanner is already set up to recognize the most common types of bar codes. To modify your decoding options, select a symbology (bar code type) from the drop-down below.

Code 128

Select Code Types

- Code 128
- ISBT 128
- GS1-128 (UCC/EAN-128)

Options for Code 128

Code 128 Lengths

Range

Min.length: 1 Max.length: 55

Code 128 Reduced Quiet Zone

Code 128 Security Level: Level 1

Ignore Code 128 <FNC4>

Options for ISBT

ISBT Concatenation Redundancy: 10

ISBT Concatenation: Autodiscriminate

Check ISBT Table

Available programming options

Category – Modify Data:

You can create different kind of data formatting rules for your application.

This menu allows:

- Use of pre-define suffix (Tab or Enter)
- Create your own prefix and suffix values

Prefix / Suffix Simple Formatting

Select the layout for prefix & suffix value you want to use.

- <PREFIX> <DATA>
- <PREFIX> <DATA> <SUFFIX 1>
- <PREFIX> <DATA> <SUFFIX 2>
- <PREFIX> <DATA> <SUFFIX 1> <SUFFIX 2>
- <DATA> <SUFFIX 1>
- <DATA> <SUFFIX 2>
- <DATA> <SUFFIX 1> <SUFFIX 2>

Enter values for prefix and suffix.

PREFIX: [code list](#)

SUFFIX 1: [code list](#)

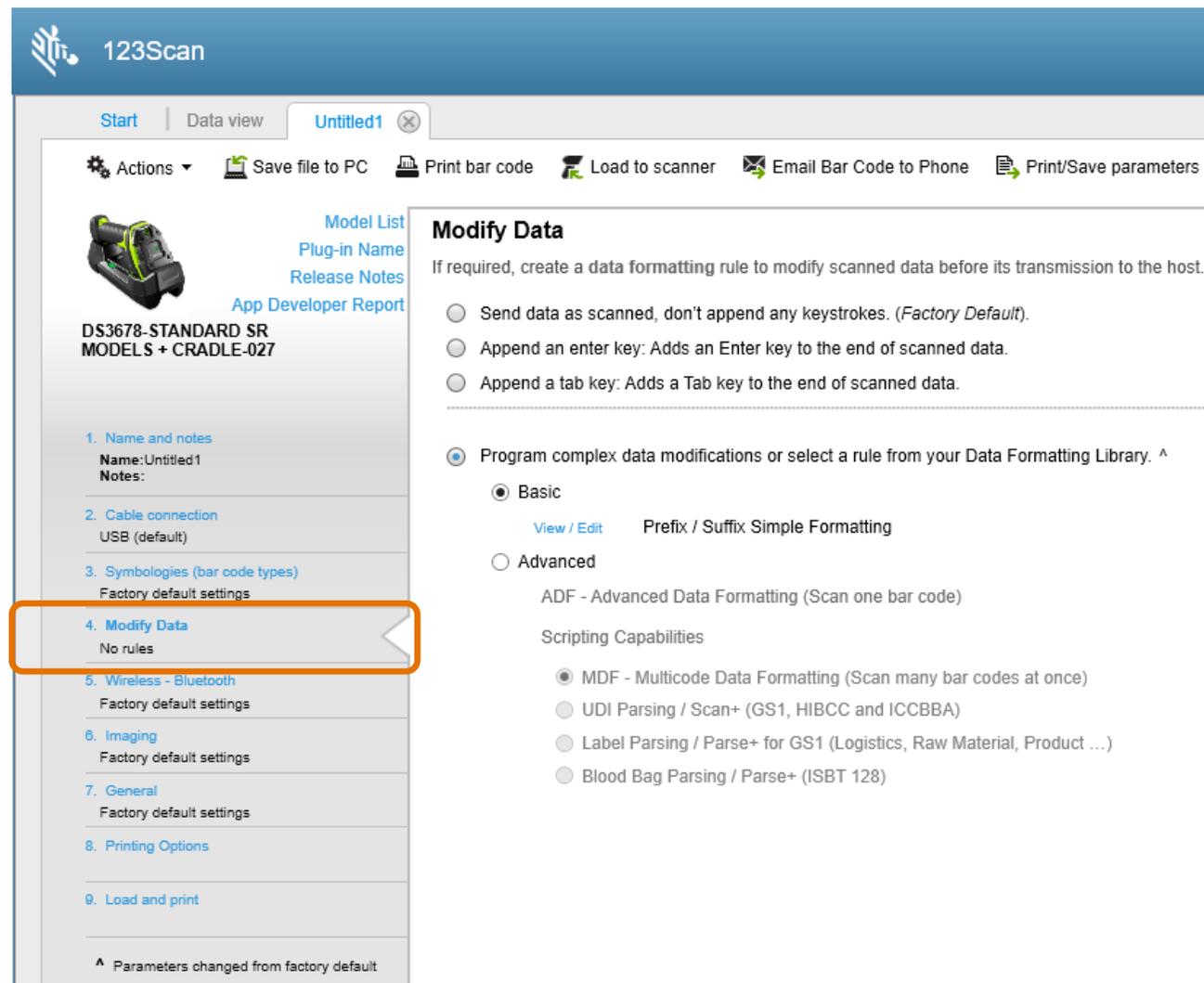
SUFFIX 2: [code list](#)

Create ADF (Advanced Data Formatting) rules.
You can watch “How to video“ for ADF)

- Create your own scripting based rules
You can watch “How to video“ for this options)
 - MDF (Multidata Formatting) rules (scan up to 20 barcodes)
 - UDI- or Label- or Blood Bag parsing rules

Notes from BARTEC:

The performance of the zone 1 scanners may vary slightly compared to the zone 2 version due to the required ex-modifications



Available programming options

Category – Wireless - Bluetooth:

You can do Bluetooth specific settings for your connections and application.

This menu allows:

- General Bluetooth parameters
- Scanner to Cradle (base station) options
- Cradle (base station) options
- Bluetooth HID options
- Security
- Wifi Friendly options

Notes from BARTEC:

- Read Zebra Product Reference Guide for more detailed information about the different options.
- Multipoint-to-point is only available with use of base station (Cradle)
- Pair on Contacts should be disabled if you use base station only for charging

The screenshot shows the 123Scan software interface. The top bar displays the '123Scan' logo and a 'Start' button. Below the bar, there are several icons for actions: 'Actions', 'Save file to PC', 'Print bar code', 'Load to scanner', 'Email Bar Code to Phone', and 'Print/Save'. The main content area is divided into two columns. The left column shows a list of settings for a device named 'DS3678-STANDARD SR MODELS + CRADLE-027'. The settings are numbered 1 through 9, with '5. Wireless - Bluetooth' highlighted by an orange box. The right column is titled 'Wireless' and contains 'General Bluetooth Parameters' with various settings like 'Discoverable Mode', 'Beep On Reconnect Attempt', 'Reconnect Attempt Interval', 'Sleep Between Attempts', 'Number of Retry Attempts', 'Auto-reconnect', 'Batch Mode', and 'Persistent Batch'.

Available programming options

Category – Imaging:

- You can do specific settings for capturing images.
The version with SE4750-HP supports IDC, signature, basic and advanced document & picture capture
- The version with SE4850-ER supports basic document & picture capture

This menu allows:

- Setup of general imaging parameters
- Setup of JPEG image optimization
- Setup of signature capture (SE4750-HP only)
- Setup of image cropping
- Use of IDC (Intelligent Document Capture) function (SE4750-HP only)

Notes from BARTEC:

- The performance of the zone 1 scanners may vary slightly compared to the zone 2 version due to the required ex-modifications
- The image quality of the zone 1 scanners may vary slightly compared to the zone 2 version due to the required ex-modifications

The screenshot displays the 123Scan software interface. The top navigation bar includes 'Start', 'Data view', and 'Untitled1'. Below this, there are icons for 'Actions', 'Save file to PC', 'Print bar code', 'Load to scanner', and 'Email Bar Code to Phone'. The main content area is divided into two columns. The left column shows a scanner icon and the model 'DS3678-STANDARD SR MODELS + CRADLE-027'. Below this is a list of settings categories: 1. Name and notes, 2. Cable connection, 3. Symbologies (bar code types), 4. Modify Data, 5. Wireless - Bluetooth, 6. Imaging (highlighted with an orange box), 7. General, 8. Printing Options, and 9. Load and print. The right column is titled 'Change image settings' and contains a list of 'Imaging Parameters' with their current values: Image Capture (checked), Fixed Exposure (100 us), Image Capture Illumination (checked), Image Brightness (TargetWhite) (180), Image Size (Number of Pixels) (Full), Image Enhancement (Low), and Image File Format Selector (JPEG). A note at the bottom of the right panel states 'Parameters changed from factory default'.

Available programming options

Category – General:

You can do specific general scanner settings in this menu.

For example you can setup your used keyboard country language that data correct send to your host system.

This menu allows:

- Power settings and your own preferred battery status threshold for the status LED
- System relevant settings as your keyboard country, used unicode output, trigger modes, picklist mode (enables the digital scanner to decode only barcodes that are aligned under the LED aiming dot), and other options.
- Beeper setup as tone, volume, duration, and others
- OCR settings (SE4750-HP only)
Allows activation and setup of OCR specific parameters.
- UID and UID parsing (Unique Item iDentification)

Notes from BARTEC:

- The OCR and UID performance of the zone 1 scanners may vary slightly compared to the zone 2 version due to the required ex-modifications.
- The volume of the Zone 1 scanners are little quiet in compared to the zone 2 version due to the required ex-modifications.

The screenshot displays the 123Scan software interface. The top navigation bar includes 'Start', 'Data view', and 'Untitled1'. Below the navigation bar, there are icons for 'Actions', 'Save file to PC', 'Print bar code', 'Load to scanner', and 'Email Bar Code to Phone'. The main content area is divided into two panels. The left panel shows the scanner model 'DS3678-STANDARD SR MODELS + CRADLE-027' and a list of settings categories: 1. Name and notes, 2. Cable connection, 3. Symbologies, 4. Modify Data, 5. Wireless - Bluetooth, 6. Imaging, 7. General (highlighted with an orange box), 8. Printing Options, and 9. Load and print. The right panel is titled 'General' and contains several settings: 'Power System', 'Beeper', 'OCR (HP models only)', 'Statistics', and 'UID'. Under the 'Power' section, there are five settings: 'Time Delay To Low Power' (100 mSec), 'Timeout To Low Power Mode From Auto AIM' (15 Seconds), 'Battery Status High Threshold' (50%), 'Battery Status Medium Threshold' (20%), and 'Battery Status Low Warning Threshold' (10%). At the bottom, there is a 'Battery Health Low Warning Threshold' (60%).