ZEBRA

SYMBOL DS3578 SERIES

RUGGED CORDLESS DIGITAL SCANNERS WITH INTEGRATED BLUETOOTH®

INSTANTLY CAPTURE VIRTUALLY ANY TYPE OF BAR CODE

Improve business efficiency in your harshest industrial environments with the DS3578 Series. Breakthrough digital imaging technology allows workers to capture virtually any bar code, with extreme speed and accuracy. Three models can meet any bar code capture requirement you have ' from 1-D and 2-D bar codes and Direct Part Marks (DPM) to Unique Identification (IUID)* support.

IMAGE CAPTURE ADDS VALUE

When a shipment arrives damaged, a picture is worth a thousand words. With the press of a trigger, workers can capture a photo and automatically append it to the shipment record. The image is wirelessly transferred to the cradle and on to your host PC, providing indisputable evidence of damage and streamlining returns processing.

CORDLESS FREEDOM IMPROVES PRODUCTIVITY

With integrated Bluetooth®, there is no cord between the scanner and the host, so your employees can move freely throughout your work environment. Productivity, efficiency and even worker safety is improved. Plus, downtime from cable breakdowns ' a common point of failure in handheld devices used in industrial environments ' is eliminated.

MAXIMUM PERFORMANCE FOR MAXIMUM PRODUCTIVITY

The DS3578 Series is designed specifically for fast-paced production environments. Complementary metal'oxide' semiconductor (CMOS) image sensors accurately capture and process bar codes much faster than the typical digital scanner. The powerful 624 MHz microprocessor decodes 1-D and 2-D bar codes within milliseconds, regardless of size or density. The patent pending fast-pulse illumination and fast sensor shutter speed deliver outstanding motion tolerance, eliminating the need for users to pause between scans. Omni-directional scanning functionality allows operators to quickly capture bar codes from any angle, so users never need to take the time to align bar codes with laser lines. Plus, the DS3578 Series offers the widest working range of any scanner in its class.

* Direct Part Marks (DPM) and IUID available only on the DS3578-DP (DPM-enabled model)

BUILT FOR INDUSTRIAL ENVIRONMENTS

As innovative as it is rugged, the DS3578 Series delivers the ergonomic and operational features required in scan-intensive industrial applications in the harshest environments. The device is built to handle the inevitable bumps and drops ' even on concrete. An IP65-rated seal makes it impervious to dust and water. The exit window is scratch-resistant and recessed for the highest level of durability. These features deliver a low total cost of ownership, minimizing employee and device downtime as well as equipment repair and replacement costs.

In addition, noisy machinery and poor lighting can make it difficult for operators to see or hear scanner feedback to ensure proper completion of scans. DS3578 Series addresses this challenge with bright LEDs, adjustable beeper volume and a vibrating pager motor placed in the handle. Decode feedback is clearly visible and audible, protecting productivity and task accuracy.

FEATURES

Reads both 1-D and 2-D bar codes

Increases productivity by providing one device that can read all industry standard bar codes

Powerful 624 MHz processor, fast sensor shutter speed and patent pending fastpulse illumination

Superior performance on 1-D and 2-D bar codes, improving productivity in a wide variety of applications

Government grade security: FIPS 140-2 validation

Meets the most stringent federal government and industry security regulations

IUID-enabled (DS3578-DP only)

Ability to understand IUID constructs, and automatically separate and send the required information to your application

Captures high density bar codes (DS3578-HD only)

Increases productivity by enabling users to read high density 2-D bar codes in addition to all industry standard bar codes

EZ-DPM software for Direct Part Mark capture (DS3578-DP only)

Enhance quality processes and improve lifetime product traceability with this highly advanced DPM software; captures hard to read DPM codes faster; captures the

GOVERNMENT GRADE-SECURITY

Achieving government grade security with the DS3578 Series is easy. All models are FIPS 140-2 compliant, right out of the box. Just scan the included Enable FIPS Encryption bar code to activate FIPS security.

THREE MODELS TO MEET MANY NEEDS

Three models meet a wide variety of application needs across a variety of industries:

DS3578-SR: Combination 1-D and 2-D bar code scanning

The flexible DS3578-SR meets the needs of a wide variety of applications and environments, offering 1-D and 2-D bar code scanning, as well as support for a wide variety of interfaces for easy integration with new and legacy systems. The DS3578-SR streamlines inventory management in the most scan intensive, fast-paced environments ' from the largest warehouse to the retail backroom ' where a quick scan enables the automatic and accurate capture of the information required to increase productivity and reduce errors. At the receiving dock, a scan of the bar code on the boxes, pallets or bill of lading can automatically reconcile incoming shipments for faster processing of incoming goods. In put-away and picking, a quick scan can determine where product should be stored and also verify that product was placed on the right shelf. False out-of-stocks due to misplaced materials are eliminated ' along with lost sales. In shipping, a quick scan verifies that the right shipment is addressed to the right person, preventing costly mis-ships.

DS3578-HD: Optimized for comprehensive 2-D bar code capture

The DS3578-HD offers the same capabilities as the DS3578-SR, but adds optimization for the very tiny and dense 1-D and 2-D bar codes frequently found in warehousing, transportation and logistics, and manufacturing environments. For manufacturers, the DS3578-HD allows scanning of bar codes on the smallest parts to verify that the right part is used at the right time. Product quality improves, increasing customer satisfaction and retention. Real-time inventory visibility allows manufacturers to lower standard stocking levels, reducing warehouse space requirements and increasing inventory turns ' and profitability. And in the event you are notified of a defective part, a quick scan can instantly reveal the location of the defective product, allowing rapid and targeted recalls that protect brand image, customer perception and recall costs. And companies involved in warehousing, shipping and delivery of little items can easily read the small, dense 2-D bar codes that may be utilized on smaller packages.

DS3578-DP: Comprehensive IUID-enabled scanner with support for 1-D, 2-D and DPM bar codes

This powerful scanner combines our highly advanced EZ-DPM software with the functionality of the DS3578- SR, the focusing capability of the DS3578-HD, plus integrated IUID parsing capability. Government agencies and industrial manufacturers ' including automotive, aerospace and medical ' can capture all 1-D and 2-D bar codes as well as every type of Direct Part Mark (DPM). EZ-DPM software allows easy reading of even the most challenging marks, including very low contrast marks on black plastic, 'noisy' marks on cast surfaces and marks on corroded steel and cast iron pipe that have been in the field for years. Comprehensive IUID support allows you to capture and process Unique Item Identifiers (UIIs) ' the scanner can validate, read, separate and transmit the right information to your application. And since construct tables are field upgradable, your IUID applications are future proof.

REDUCE HARDWARE AND MANAGEMENT COSTS

The DS3578 not only helps you save time, it helps you save money. Since this one device can capture any bar code, you no longer need to purchase, manage and maintain multiple devices to accommodate different bar code symbologies. You also no longer need a cradle for every device 'one FIPS validated cradle supports up to seven FIPS validated scanners. In addition, two Zebra-unique tools substantially reduce management time and cost. 123Scan[2] is a powerful PC-based software tool that enables rapid and easy scanner set-up and customization. And Remote Scanner Management (RSM) enables remote, network based device management from a central location.

END-TO-END SUPPORT

Service from the Start Advance Exchange Support provides next-business-day replacement of devices that require repair. Built-in Comprehensive Coverage protects your scanners from the unexpected, significantly reducing unforeseen repair expenses and delivering service peace of mind.

For more information on how you can put the DS3578 Series to work in your organization, please visit us on the Web at **www.zebra.com/ ds3578** or access our global contact directory at **www.zebra.com/ contact**

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widest range of sizes and densities on virtually any surface

Captures photos

A press of the trigger captures and transfers photographic information to the cradle and on to your host computer

Integrated Bluetooth® Class II, Version 2.1

Cable-free convenience; secure wireless transmissions; reduces repairs due to cable failure

Exceptional motion tolerance

Enables extraordinary scanning speed for all bar codes, increasing throughput and productivity' regardless of application

Unique aiming pattern

Bright central laser dot ensures quick, accurate scanning ' even in bright sunlight

Omni-directional scanning

Speeds reading time by eliminating the need to line up the bar code with the scan line

Rugged design: IP65 sealing and 6.5 ft./2 m drop specification

Ensures maximum reliability with less downtime resulting from accidental drops and exposure to water and dust

Bright LED, beeper with adjustable volume and vibrating pager motor

Multiple confirmation modes for positive user feedback in noisy environments

Advanced data formatting

Eliminates costly modifications to the host software

7-to-1 pairing

SPECIFICATIONS CHART

PHYSICAL CHARACTERISTICS

Dimensions	7.34 in. H x 4.82 in. W x 2.93 in. D 18.65 cm H x 12.25 cm W x 7.43 cm D
Weight	14.6 oz. (414 gm)
Battery	2200 mAh Lithium Ion Battery
Battery Charge Time	Fully charged (100%) within 4.5 hours using an external power supply and up to ten hours using a USB cable
Color	Twilight Black/Yellow
Scans	The DS3578 typically achieves 50,000 (fifty thousand) scans

PERFORMANCE CHARACTERISTICS

Light Source	Aiming pattern: 650nm visible laser diode Illumination: 630nm LED
Imager Field of View	Standard Range Focus: 39.6° H x 25.7°V High Density Focus: 38.4° H x 24.9° V
Roll/Pitch/Yaw	360°, ±65°, ±60°
Motion Tolerance	Up to 60 in./sec. (1.52m/sec.) for 100% 13 mil UPC. Motion tolerance will vary depending on code type, scan distance and print quality.

USER ENVIRONMENT

Operating Temp.	-4° F to 122° F/-20° C to 50° C
Storage Temp.	-40° F to 158° F/-40° C to 70° C
Humidity	5% to 95% relative humidity, non-condensing
Sealing	Sealed to IP65 specifications
Drop Specifications	Unit functions normally after repeated 6.5 ft. (2 m) drops to concrete
Cradle Insertions	250,000+ insertions
Ambient Light Immunity	Indoor: 450 Ft Candles (4,842 Lux) Outdoor: 8,000 Ft Candles (86,080 Lux)
Electrostatic discharge (ESD):	15 kV air discharge 8 kV contact discharge

RADIO SPECIFICATION

SYMBOLOGY DECODE CAPABILITY

1-D Codes	UPC/EAN and with supplementals, Code 39, Code 39 Full ASCII, Tri-optic Code 39, GS1 DataBar Variants, GS1-128, Code 128, Code 128 Full ASCII, Code 93, Codabar (NW1), Interleaved 2 of 5, Discrete 2 of 5 MSI, Codell, IATA, Bookland EAN, Code 32
PDF417 (and Variants)	PDF417 (Standard, Macro), MicroPDF417 (Standard, Macro), Composite Codes (CC-A, CC-B, CC-C)
2-D Codes	TLC-39, Aztec (Standard, Inverse), MaxiCode, DataMatrix/ECC 200 (Standard, Inverse), QR Code (Standard, Inverse, Micro)
Postal	U.S. Postnet, U.S. Planet, U.K. Postal, Japan Postal, Australian Postal, Dutch Postal, 4 State Postal
DPM Marks (DPM unit only)	Datamatrix marks applied by dot-peening. All supported barcode types listed above marked by laser etching, chemical etching, ink marking, molding, stamping or casting methods on surfaces such as including metal, plastic, rubber or glass
IUID Support	Supports IUID parsing. The ability to read and separate IUID fields per application requirements
Nominal Working Range	See chart on back

CRADLES - CHARGING ONLY(STB 3508 AND FLB 3508)

Power Reqs.	4.75-14 VDC
Typical current draw :	
Not charging	35 mA 45 mA @9V
Fast rate charge*	915 mA @5V 660 mA @9V
Slow rate charge**	480 mA @5V 345 mA @9V

CRADLES - BLUETOOTH® (STB 3578 AND FLB 3578)

Pair seven scanners to a single cradle, greatly reducing cradle costs (scanners and cradle must be FIPS validated)

Multiple on-board interfaces and universal cable set
Easy to connect to your existing host system as well as upgrade to new hosts of the future; protecting your investment

Supports 123Scan²
Enables rapid and easy customized set-up through a free, wizard-based PC software tool

Supports RSM (Remote Scanner Management)
Lowers IT expenses and TCO by enabling remote management from a central location

Radio	Bluetooth® Class II Version 2.1, Serial Port and HID Profiles
Frequency	2.402 to 2.480 GHz adaptive frequency hopping and co-existence with 802.11 wireless networks
Data Rate	Basic Data Rate is 720 kbps Enhanced Data Rate (EDR) for image transfer
Radio Range	Radio range: Up to 300 ft. (100m) direct line of sight in open air. Typical indoor cordless range is 100 ft. (33m), but range will vary depending upon environment; see Bluetooth® Radio Performance Technical Brief for more information

Power Reqs.	4.75-14 VDC

Typical current draw :

Not charging	105 mA @5V 110 mA @9V
Fast rate charge*	915 mA @5V 660 mA @9V
Slow rate charge**	480 mA @5V 345 mA @9V

INTERFACES

Interfaces Supported	USB, RS-232, RS-485 (IBM 46xx Protocols) and Keyboard Wedge

REGULATORY

Electrical Safety	UL60950-1, CSA C22.2 No. 60950-1, EN 60950-1 / IEC 60950-1
Laser Safety	EN 60825-1, IEC 60825-1, 21CFR1040.10, CDRH Class II, IEC Class 2
EMI/RFI	FCC Part 15 Class B, ICES-003 Class B, EN 55022, EN 55024, AS/NZS 4268:2008, Japan VCCI
Environmental	Compliant with RoHS directive 2002/95/EEC

OPTIONS

Accessories	Holster (mounts to pants or belt); Tool Balancer Pulley (tethered); Standard Cradle (Charge Only); Standard Cradle (Radio/Charge); Fork-Lift Cradle (Charge Only); Fork-Lift Cradle (Radio/Charge)

RECOMMENDED SERVICES

Service from the Start Advance Exchange Support

* Fast rate charge requires an external power supply.
** Cradle defaults to slow rate charge when an external supply is not used.

WARRANTY

The DS3578 Series is warranted against defects in workmanship and materials for a period of 3 years (36 months) from date of shipment, provided that the product remains unmodified and is operated under normal and proper conditions. See full warranty for details.

Depth of Field				
Label Density	**DS3578-SR**		**DS3578-HD/ DS3578-DP**	
Paper Label	**English**	**Metric**	**English**	**Metric**
Code 39 - 3 mil	N/A	N/A	1.10' - 1.60'	2.79 - 4.06 cm
Code 39 - 4 mil	2.60' - 4.50'	6.60 - 11.43 cm	Contact - 3.5'	Contact - 8.89 cm
Code 39 - 5 mil	1.00' - 6.30'	2.54 - 16.00 cm	Contact - 4.2'	Contact - 10.67 cm
Code 39 - 7.5 mil	Contact - 10.10'	Contact - 25.65 cm	Contact - 5.4'	Contact - 13.72 cm
Code 39 - 20 mil	1.00' - 20.90'	2.54 - 53.09 cm	1.10' - 9.20'	2.79 - 23.37 cm
100% UPC - 13 mil	0.90' - 15.10'	2.29 - 38.35 cm	0.80' - 6.20'	2.03 - 15.75 cm
PDF417 - 6.67 mil	2.70' - 6.10'	6.86 - 15.49 cm	Contact - 3.70'	Contact - 9.40 cm
PDF417 - 10 mil	0.40' - 9.30'	1.02 - 23.62 cm	Contact - 4.50'	Contact - 11.43 cm

PDF417 - 15 mil	3.30' - 14.80'	8.38 - 37.59 cm	3.20' - 5.60'	8.13 - 14.22 cm
Data Matrix - 4 mil	N/A	N/A	1.00' - 2.10'	2.54 - 5.33 cm
Data Matrix - 5 mil	N/A	N/A	0.40' - 2.70'	1.02 - 6.86 cm
Data Matrix - 7.5 mil	2.10'	- 5.50' 5.33 - 13.97 cm	Contact - 3.50'	Contact - 8.89 cm
Data Matrix - 10 mil	1.10'	- 7.10' 2.79 - 18.03 cm	Contact - 4.40'	Contact - 11.18 cm
QR Code - 4 mil	N/A	N/A	1.10 - 1.40'	2.79 - 3.56 cm
QR Code - 5 mil	N/A	N/A	0.50' - 2.20'	1.27 - 5.59 cm
QR Code - 7.5 mil	N/A	N/A	Contact - 3.30'	Contact - 8.38 cm
QR Code - 10 mil	1.50' - 6.10'	3.81 - 15.49 cm	Contact - 4.00'	Contact - 10.16 cm

For more information, including decode zone pictorial, see the Product Reference Guide located in the Support and Documents tab at **www.zebra.com/ds3578**

ZEBRA

ZEBRA TECHNOLOGIES

SYMBOL LS3578-ER

RUGGED, CORDLESS SCANNER WITH INTEGRATED BLUETOOTH

SCAN BAR CODES OVER A WIDE RANGE OF DISTANCES

The LS3578-ER rugged, cordless scanner provides the greatest working range of any available rugged scanner, allowing employees to scan items from as close as .25 inches /.64cm to as far away as 45 feet /13.7 m. It also allows employees to quickly switch from reading bar codes on inventory to capturing smaller symbologies on bar code menus and pick lists. In the yard, warehouse, distribution center, manufacturing plant or retail store, the LS3578-ER offers superior performance and reliability as well as a user-friendly form factor that helps ensure comfortable use over long shifts. Plus, integrated Bluetooth provides reliable and secure wireless data transmission between the scanner and host, including Zebra's rugged VC5090 Vehicle-Fixed Mount Mobile Computer.

CORDLESS FREEDOM FOR IMPROVED PRODUCTIVITY

With no cord between the scanner and host, employees can move freely throughout their work environment, increasing productivity and efficiency while keeping supply chain inventory up to date at all times. Plus, having no cord reduces downtime from cable breakdowns ' a common point of failure in handheld devices used in industrial facilities.

LOW TOTAL COST OF OWNERSHIP (TCO)

In addition to enhancing productivity, the LS3578-ER offers a low TCO. The industrial-strength construction maximizes the scanner's working life, and multiple on-board interfaces provide true plug-and-play simplicity with your host system today and tomorrow. Support for Remote Scanner Management (RSM) enables you to discover, provision and upgrade devices from a central remote location, dramatically reducing management time and costs. And since even the most rugged devices require a support plan, a full complement of Enterprise Mobility Services are available to help you protect your investment and maintain peak performance.

For more information on how the LS3578-ER can benefit your business, please visit us on the web at **www.zebra.com/ls3578er** or access our global contact directory at **www.zebra.com/contact**

SPECIFICATIONS CHART

PHYSICAL CHARACTERISTICS		CRADLES	
Dimensions	7.34 in. L x 4.82 in. W x 2.93 in. D (18.65 cm H x 12.25 cm W x 7.43 cm D)	Power requirements	4.75 ' 14 VDC (STB 3508 AND FLB 3508) 4.75 ' 14 VDC (STB 3578 AND FLB 3578)
Weight (including LiON battery)	14.8 oz. (420 gm)	Not charging	**STB 3508 AND FLB 3508** 10 mA **STB 3578 AND FLB 3578**
Battery	2200 mAh Lithium Ion Battery		

FEATURES

Wide working range: .25'/.64 cm to 45 ft./ 13.7 m
Allows workers to scan items at varying distance without having to move, reducing fatigue and speeding task completion

Integrated Bluetooth® Class 2 v1.2 (Serial Port and HID Profiles with authentication and security)
Cordless scanning with secure wireless data transmission

Cordless scanning
Enables real-time bar code data collection unrestricted by a cable, reducing repairs from cable failure

Batch mode operation
Increases application design flexibility to better meet your specific needs

Ergonomic, rugged industrial design withstands up to 50 drops to concrete from 6.5 ft. (2m) and 2,500 3 ft. (1m) tumbles (5,000 hits)
Ensures maximum reliability with less downtime resulting from accidental drops

IP65-rated seal (electronic enclosure)
Protects against water and dust for reliable performance in the harshest environments

Bright LED and beeper with adjustable volume

Battery charge time	Fully charged (100%) in 3 hours
Color	Twilight Black and Yellow

PERFORMANCE CHARACTERISTICS

Scanner type	Retrocollective
Light source	650 nm visible laser diode
Scan repetition	36 scans per second typical
Minimum element width	7.5 mil (0.191 mm)
Nominal working distance	See decode zone
Print contrast	25% minimum reflective difference
Roll (Tilt)[1]	+/- 10 degrees from normal
Pitch[2]	+/- 65 degrees from normal
Skew (Yaw)[3]	+/- 60 degrees from normal
Decode capability	UPC.EAN, UPC.EAN with Supplemental, GS1-128 (formerly UCC/EAN 128), JAN 8 & 13, Code 39,Code 39 Full ASCII, Code 39 Trioptic, Code 128 , Code 128 Full ASCII, Codabar (NW7), Interleaved 2 of 5, Discrete 2 of 5, Code 93, MSI, Code 11, Code 32, Bookland EAN, IATA, GS1DataBar (formerly RSS)
Interfaces supported	RS232, Keyboard Wedge, IBM 468X/469X, USB and Synapse

USER ENVIRONMENT

Operating Temp.	-4 to 122F (-20 to 50C)
Storage temperature	-40 to 140F (-40 to 60C)
Humidity	5% to 95% relative humidity, noncondensing
Sealing	Sealed to IP65 specifications
Drop specifications	Unit functions normally after 50 drops to concrete from 6.5 ft. (2m)
# of Cradle Insertions	250,000+ insertions
Ambient lighting tolerance	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED4: 450 Ft Candles (4,842 Lux) Sunlight: 4,000 Ft Candles (43,040 Lux)
Electrostatic discharge	Conforms to 20 kV air discharge and 8 kV of contact discharge

	105 mA @5V
	45 mA @9V
Fast rate charge	**STB 3508 AND FLB 3508**
	915 mA @5V
	660 mA @9V
	STB 3578 AND FLB 3578
	915 mA @5V
	660 mA @9V
Slow rate charge	**STB 3508 AND FLB 3508**
	480 mA @5V
	345 mA @9V
	STB 3578 AND FLB 3578
	480 mA @5V
	345 mA @9V

RADIO SPECIFICATION

Radio	Bluetooth, Class 2, Version 1.2, Serial port and HID Profiles
Frequency	2.402 to 2.480 GHz adaptive frequency hopping (co-existence with 802.11 wireless networks)
Data rate	720 kbps
Radio Range	Up to 300 ft. (100m) direct line of sight in open air; typical indoor cordless range is 100 ft. (33m), but will vary depending upon environment; see Bluetooth Radio Performance Technical Brief for more information

REGULATORY

Input transient protection	IEC 1000-4-(2,3,4,5,6,11)
EMI/RFI	FCC Part 15 Class B, ICES-003 Class B, European Union EMC Directive, Japan VCCI/MITI/Dentori
Laser safety	IEC825-1 Class 2

WARRANTY

The LS3578-ER is warranted against defects in workmanship and materials for a period of 3 years (36 months) from date of shipment, provided that the product remains unmodified and is operated under normal and proper conditions. See full warranty for details.

RECOMMENDED SERVICES

Support Services	Service from the Start - Bronze

1 - Roll (Tilt): Controlled by rotating the wrist clockwise or counterclockwise
2 - Pitch: Controlled by dropping or raising the wrist
3 - Skew (Yaw): Controlled by rotating the wrist from left to right or vice versa

Helps ensure that decode feedback is clearly visible and audible to users, even in noisy environments

Multi-point communication

Use up to three scanners with a single cradle, reducing capital expenditures and maintenance costs

Bright 650 nm laser aiming dot

Delivers clearly visible line for more accurate scanning

Supports GS1DataBar Symbologies (formerly RSS)

Ensures compatibility with emerging symbols to protect your hardware investment

Advanced data formatting

Eliminates costly modifications to the host software

Remote scanner management ready

Enables you to discover, provision and upgrade devices from a central remote location, reducing management time and costs

4 - LED lighting with high AC ripple content can impact scanning performance

DEPTH OF FIELD		
LABEL DENSITY	**LS3578-ER**	
Paper Label	**English**	**Metric**
Code 39 ' 7.5 mil	0.25' ' 20.00'	0.64 ' 50.80 cm
Code 39 ' 10 mil	2.00' ' 32.00'	5.08 ' 81.28 cm
Code 39 ' 15 mil	3.00' ' 69.00'	7.62 ' 175.26 cm
Code 39 ' 20 mil	3.00' ' 94.00'	7.62 ' 238.76 cm
Code 39 ' 55 mil	15.00' ' 180.00'	38.10 ' 457.20 cm
REFLECTIVE LABEL		
Code 39 ' 70 mil	Up to 30 ft.	Up to 9.27 m
Code 39 ' 100 mil	Up to 45 ft.	Up to 13.72 m

For more detailed information, please see the Product Reference Guide in the Resource tab at **www.zebra.com/ls3578er**

CN410 **CE** CAUTION

ZEBRA TECHNOLOGIES

Symbol LS3578-FZ

Rugged, cordless scanner with integrated Bluetooth

Accurately scan damaged or poorly printed bar codes

The LS3578-FZ cordless scanner provides fuzzy logic technology, enabling you to rapidly and accurately read damaged, dirty and poorly printed one-dimensional (1-D) bar codes often found in industrial environments. In the yard, warehouse, distribution center , manufacturing plant or retail store, the LS3578-FZ offers superior performance and reliability as well as a user-friendly form factor that helps ensure comfortable use over long shifts. Plus, integrated Bluetooth provides reliable and secure wireless data transmission between the scanner and host, including Zebra's rugged VC5090 Vehicle-Fixed Mount Mobile Computer.

Cordless freedom for improved productivity

With no cord between the scanner and host, employees can move freely throughout their work environment, increasing productivity and efficiency while keeping supply chain inventory up to date at all times. Plus, having no cord reduces downtime from cable breakdowns -- a common point of failure in handheld devices used in industrial facilities.

Rugged design to maximize uptime

As rugged as it is innovative, the LS3578-FZ is designed for scan-intensive industrial applications in the harshest operating conditions. Industry-leading impact tests ensure reliable performance in spite of the inevitable accidental drops. The device is impervious to dust and water, and its exit window is scratch-resistant and recessed for the highest level of durability. As a result, you avoid unnecessary equipment downtime or expensive equipment replacement costs.

Low total cost of ownership (TCO)

In addition to enhancing productivity, the LS3578-FZ offers a low TCO. The industrial-strength construction maximizes the scanner' s working life, and multiple on-board interfaces provide true plug-and-play simplicity with your host system today and tomorrow. Support for Remote Scanner Management (RSM) enables you to discover, provision and upgrade devices from a central remote location, dramatically reducing management time and costs. And since even the most rugged devices require a support plan, a full complement of Enterprise Mobility Services are available to help you protect your investment and maintain peak performance.

For more information, visit us at **www.zebra.com/ls3578fz**

LS3578-FZ Specifications

PHYSICAL CHARACTERISTICS

Dimensions:	7.34 in. L x 4.82 in. W x 2.93 in. D (18.65 cm H x 12.25 cm W x 7.43 cm D)
Weight: (including LiON battery)	14.6 oz. (414 gm)

CRADLES

Power requirements:	4.75 – 14 VDC (STB 3508 and FLB 3508) 4.75 – 14 VDC (STB 3578 and FLB 3578)
Typical current draw:	

FEATURES

High performance scanner with fuzzy logic decode capability

Quickly and accurately scans all 1-D bar codes on the first scan, including poorly printed, dirty, damaged or low-contrast bar codes

Integrated Bluetooth Class 2 v1.2 (Serial Port and HID Profiles with authentication and security)

Cordless scanning with secure wireless data transmission

Cordless scanning

Enables real-time bar code data collection unrestricted by a cable, reducing repairs from cable failure

Ergonomic, rugged industrial design withstands up to 50 drops to concrete from 6.5 ft. (2m) and 2,500 3 ft . (1m) tumbles (5,000 hits)

Ensures maximum reliability with less downtime resulting from accidental drops

IP65-rated seal (electronic enclosure)

Protects against water and dust for reliable performance in the harshest environments

Bright LED and beeper with adjustable volume

Helps ensure that decode feedback is clearly visible and audible to users, even in noisy environments

Multi-point communication

Battery:	2200 mAh Lithium Ion Battery	**Not charging**	**STB 3508 and FLB 3508** 10 mA **STB 3578 and FLB 3578** 105 mA @5V 45 mA @9V	Use up to three scanners with a single cradle, reducing capital expenditures and maintenance costs
Battery charge time:	Fully charged (100%) in 3 hours			
Color:	Twilight Black and Yellow			

PERFORMANCE CHARACTERISTICS

Scanner type:	Retrocollective	**Fast rate charge**	**STB 3508 and FLB 3508** 915 mA @5V 660 mA @9V **STB 3578 and FLB 3578** 915 mA @5V 660 mA @9V	**Bright 650 nm laser aiming dot** Delivers clearly visible line for more accurate scanning
Light source:	650 nm visible laser diode			
Scan repetition:	36 scans per second typical			
Minimum element width:	5 mil (0.127 mm	**Slow rate charge**	**STB 3508 and FLB 3508** 480 mA @5V 345 mA @9V **STB 3578 and FLB 3578** 480 mA @5V 345 mA @9V	**Supports GS1DataBar Symbologies (formerly RSS)** Ensures compatibility with emerging symbols to protect your hardware investment
Nominal working distance:	See decode zone			
Print contrast:	25% minimum reflective difference			
Roll (Tilt)[1]:	+/- 20 degrees from normal			**Advanced data formatting** Eliminates costly modifications to the host software
Pitch[2]:	+/- 65 degrees from normal			

RADIO SPECIFICATION

Skew (Yaw)[3]:	+/- 50 degrees from normal
Radio:	Bluetooth, Class 2, Version 1.2, Serial port and HID Profiles

Batch mode operation
Increases application design flexibility to better meet your specific needs

Decode capability:	UPC.EAN, UPC.EAN with Supplemental, GS1-128 (formerly UCC/EAN 128), JAN 8 & 13, Code 39,Code 39 Full ASCII, Code 39 Trioptic, Code 128, Code 128 Full ASCII, Codabar (NW7) , Interleaved 2 of 5, Discrete 2 of 5, Code 93, Code 11, Code 32, Bookland EAN, IATA, GS1DataBar (formerly RSS)
Frequency:	2.402 to 2.480 GHz adaptive frequency hopping (co-existence with 802.11 wireless networks)
Data rate:	720 kbps

Remote scanner management ready
Enables you to discover, provision and upgrade devices from a central remote location, reducing management time and costs

Radio Range:	Up to 300 ft. (100m) direct line of sight in open air; typical indoor cordless range is100 ft. (33m), but will vary depending upon environment; see Bluetooth Radio Performance Technical Brief for more information
Interfaces supported:	RS232, Keyboard Wedge, IBM 468X/ 469X, USB and Synapse

REGULATORY

Input transient protection:	IEC 1000-4-(2,3,4,5,6,11)

USER ENVIRONMENT

Operating temperature:	-4 to 122F (-20 to 50C)
EMI/RFI:	FCC Part 15 Class B, ICES-003 Class B, European Union EMC Directive, Japan VCCI/MITI/Dentori
Storage temperature:	-40 to 140F (-40 to 60C)
Humidity:	5% to 95% relative humidity, noncondensing
Laser safety:	IEC825-1 Class 2
Sealing:	Sealed to IP65 specifications

WARRANTY

Drop specifications: Unit functions normally after 50 drops to concrete from 6.5 ft. (2m)

The LS3578-FZ is warranted against defects in workmanship and materials for a period of 3 years (36 months) from date of shipment, provided that the product remains unmodified and is operated under normal and proper conditions. See full warranty for details.

# of Cradle Insertions: 250,000+ insertions

Ambient lighting tolerance:	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED4: 450 Ft Candles (4,844 Lux) Sunlight: 8000 Ft Candles (86,111 Lux)

RECOMMENDED SERVICE

Service from the Start - Bronze
1 - Roll (Tilt): Controlled by rotating the wrist clockwise or counterclockwise
2 - Pitch: Controlled by dropping or raising the wrist
3 - Skew (Yaw): Controlled by rotating the wrist from left to

Electrostatic discharge : Conforms to 20 kV air discharge and 8 kV of contact discharge

Depth of Field

LABEL DENSITY	LS3578-FZ	
Paper Label	**English**	**Metric**
Code 39 – 5 mil	2.50" – 7.25"	6.35 – 18.42 cm
Code 39 – 7.5 mil	2.00" – 15.75"	5.08 – 40.00 cm
100% UPC – 13 mil	1.00" – 24.00"	2.54 – 60.96 cm
Code 39 – 20 mil	0 – 39.50"	0 – 100.33 cm
Code 39 – 40 mil	2.00" – 67.00"	5.08 – 170.18 cm
Code 39 – 55 mil	4.00" – 84.00"	10.16 – 213.36 cm

For more detailed information, please see the Product Reference Guide in the Resource tab at **www.zebra.com/ls3578fz**

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