



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

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 with-stands 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

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 LiION 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		

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

105 mA @5V
45 mA @9V

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

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

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

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

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

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

USER ENVIRONMENT

Operating Temp.	-4° to 122°F (-20° to 50°C)
Storage temperature	-40° to 140°F (-40° to 60°C)
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

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

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



ZEBRA

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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

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

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)

CRADLES

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

Weight: (including LiON battery)	14.6 oz. (414 gm)
Battery:	2200 mAh Lithium Ion Battery
Battery charge time:	Fully charged (100%) in 3 hours
Color:	Twilight Black and Yellow

Typical current draw:

Not charging	STB 3508 and FLB 3508 10 mA STB 3578 and FLB 3578 105 mA @5V 45 mA @9V
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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
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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
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PERFORMANCE CHARACTERISTICS

Scanner type:	Retrocollective
Light source:	650 nm visible laser diode
Scan repetition:	36 scans per second typical
Minimum element width:	5 mil (0.127 mm)
Nominal working distance:	See decode zone
Print contrast:	25% minimum reflective difference
Roll (Tilt)¹:	+/- 20 degrees from normal
Pitch²:	+/- 65 degrees from normal
Skew (Yaw)³:	+/- 50 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, Code 11, Code 32, Bookland EAN, IATA, GS1DataBar (formerly RSS)
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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

USER ENVIRONMENT

Operating temperature:	-4° to 122°F (-20° to 50°C)
Storage temperature :	-40° to 140°F (-40° to 60°C)
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,

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-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.

RECOMMENDED SERVICE

Service from the Start - Bronze

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

Batch mode operation

Increases application design flexibility to better meet your specific needs

Remote scanner management ready

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

Sodium Vapor, LED4: 450 Ft
Candles (4,844 Lux) Sunlight:
8000 Ft Candles (86,111 Lux)

Electrostatic
discharge:

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

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

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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