

# Trade Scales Limited

## Symbol Scanning Solutions

### Symbol LS-4278

#### Features

- ◆ **Bluetooth Class 2 v1.2 (Serial Port & HID Profiles with authentication and security)** - Cordless scanning with secure wireless transmission of data
- ◆ **Multi-line rastering scan pattern** - Eliminates the need for exact aim and positioning for superior scanning accuracy
- ◆ **Remote scanner management (RSM) ready** - Discover, provision and upgrade devices from a central remote location; dramatically reduces management effort and costs
- ◆ **Long life industrial charging contacts** - Reliable performance, rated to 250,000+ insertions
- ◆ **Patented, single circuit-board** - Lowers TCO by eliminating a major source of vulnerability
- ◆ **Wide working range** - Reads good and poor quality bar codes at similar ranges, reducing the need for the user to move the scanner back and forth
- ◆ **Superior motion tolerance** - Eliminates the need to pause between scans
- ◆ **Withstands 5 ft./1.5 m drops to concrete** - Protects against downtime from breakage due to everyday drops
- ◆ **Powered through host cable** - Eliminates need for a power supply; simplifies installation
- ◆ **Plug-and-play; universal cable** - Rapid deployment; single cable connects to any computing environment
- ◆ **Multi point-to-point** - Use up to three scanners with a single cradle, reducing capital expenditures and maintenance costs
- ◆ **Batch mode operation** - Increases application design flexibility to better meet your specific needs
- ◆ **Vertical or horizontal mounting** - Provides versatility to accommodate your unique environment



**Cordless freedom improves productivity and protects profitability** - Motorola's cordless Symbol LS4278 provides superior bar code scanning in a durable future-proof device that delivers an outstanding total cost of ownership. Workers can move within a 50 ft./15 m radius to scan items — and the elimination of hazardous cables creates a safer work environment. From cashiers moving around the register to scan large, heavy items and check for missed items to healthcare workers double checking that the right patient is receiving the right medication, integrated Bluetooth wireless personal area networking (WPAN) provides reliable and secure wireless transmission of data between the scanner and your host. Productivity is improved, revenues are protected and potential liability due to injury from lifting heavy objects is reduced.

**Outstanding scanning performance** - The Symbol LS4278 is designed to deliver exceptional scanning performance. Users can scan objects at any angle — the innovative multi-line rastering scan pattern eliminates the need for exact aim and positioning of the scanner. The laser line moves vertically during scanning, allowing accurate capture of even the smallest, stacked and poorly printed bar codes on the first scan. And with superior motion tolerance, users no longer need pause between scans, further increasing productivity.

**A new level of durability — and a lower TCO** - The Symbol LS4278 scanner and cradle are designed to withstand all day every day use, from drops to spills, with features that deliver maximum uptime and investment protection. The scanner's patented single board construction eliminates the most common point of failure — the interconnection between multiple boards. Even if the scanner is accidentally dropped, a five-foot (1.5m) drop specification ensures continuous reliable operation. The scanner and cradle offer industrial charging contacts that eliminate wear when cradling the device, providing a reliable charging connection through hundreds of thousands of insertions — other common charging techniques show wear between 5,000 to 10,000 insertions. Drain points are designed into the cradle to protect sensitive internal electronics from accidental liquid spills.

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## Specifications

<b>PHYSICAL CHARACTERISTICS</b>	
Dimensions: Scanner	7.3 in. H x 3.85 in. L x 2.7 in. W/ 18.5 cm H x 9.7 cm L x 6.9 cm W
Dimensions: Cradle	2.0 in. H x 8.35 in. L x 3.4 in./ 5 cm H x 21.1 cm L x 8.6 cm W
Weight: Scanner	~8.4 oz./238 g
Weight: Cradle	~6.4 oz./183 g
Mounting Options	Cradle supports vertical or horizontal positions
Voltage & Current	Voltage Current (Charging / Non Charging) (Cradle) 5 +/-10% VDC 620 mA / 70mA with external power; 5 +/-10% VDC 450 mA / 70mA with host power through cable; 12 +/-10% VDC 270 mA / 50mA with external power; 12 +/-10% VDC 230 mA / 50mA with host power through cable
Colour	Cash Register White (shown) or Twilight Black
<b>PERFORMANCE CHARACTERISTICS</b>	
Light Source	650 nm laser diode
Scan Element Frequency	50Hz
Decode Rate	200 decodes per second
Radio Range	Minimum 33 ft./10 m; typical warehouse environment 50 ft./15 m
Battery Specifications	720 maH NiMH - (3) AAA
Number Of Scans Per Full Charge	32,000+ @ 1 scan/second
Charge Time	Fully discharged battery: < 3 hours via external power / ~4.5 hours via host power through cable (Note: Typical daily scans are less than 4,000, which fully charges within 1 hour)
Roll/Pitch/Yaw	+/- 35° / 60° / 60°
Nominal Working Distance	See chart below
Print Contrast	25% minimum reflectance
Multi-Line Aiming At 5 in. /12.7 cm reading distance	~ 0.5 in./1.3 cm
Coverage	At 10 in./25.4 cm reading distance: ~ 1 in./2.5 cm
Motion Tolerances	Horizontal velocity: 200 in./508 cm per seco
Vertical Velocity	200 in./508 cm per second
Angular Velocity	200 in./508 cm per second
Decode Capability	UPC/EAN and with supplementals, Code 39, Code 39 Full ASCII, Tri-optic Code 39, GS1 DataBar (formerly RSS) variants,, UCC/EAN 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
Interfaces Supported	LS4278 cradle features on-board multiple interface with: RS-232C (Standard, Nixdorf, ICL and Fujitsu); IBM 468x/469x; keyboard wedge; USB (Standard, IBM SurePOS, Macintosh); laser/wand emulation. In addition, Synapse adaptive connectivity allows for connectivity to all of the above plus many non-standard interfaces.
<b>USER ENVIRONMENT</b>	
Operating Temperature	32° to 122° F/0° to 50° C
Storage Temperature	-40° to 158° F/-40° to 70° C
Humidity	5% to 95% non-condensing
Drop Specifications	Withstands multiple 5 ft./1.5 m drops to concrete
# of Cradle Insertions	250,000+ insertions
Ambient Light Immunity	Immune to normal artificial indoor and natural outdoor (direct sunlight) lighting conditions
<b>REGULATORY</b>	
Electrical Safety	UL1950, CSA C22.2 No. 950, EN60950/IEC950
Laser Safety	CDRH Class II, IEC Class 2
EMI/RFI	FCC Part 15 Class B, ICES-003 Class B, European Union EMC Directive, Australian SMA
Radio	Bluetooth, Class 2, Version 1.2, Serial Port & HID Profiles 2.402 to 2.480 GHz Adaptive Frequency Hopping (co-existence with 802.11 wireless networks). Data rate: 720 kbps
<b>ACCESSORIES</b>	
Brackets	Desktop/wall-mount bracket
Power Supplies	Power supplies are available for applications that do not supply power over the host cable

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## Specifications (Cont'd)

### WARRANTY

Subject to the terms of Motorola's hardware warranty statement, the Symbol LS4278 handheld scanner products are warranted against defects in workmanship and materials for a period of three years from the date of shipment. The Liquid Polymer Scan Element includes an unprecedented limited lifetime warranty.

Label Density	Depth of Field	
	Imperial	Metric
	LS4208	
<b>Paper Label</b>		
Code 39 - 5 mil	1.5 - 5.5"	3.81 - 13.97 cm
Code 39 - 10 mil	0.0 - 14"	0.00 - 35.56 cm
100% UPC /EAN - 13 mil	0.0 - 19.0"	0.00 - 48.25 cm
Code 39 - 20 mil	0.0 - 29.0"	0.00 - 73.66 cm