

DENSO
DENSO WAVE

HIGH-SPEED UHF RFID SCANNER

SP1
SERIES

Driven by quality.



Knows no

Limits.



0 - 700 Scans. in one Second!

The SP1 RFID scanner offers a reading speed of up to 700 tags/s and a reading range of up to 13 metres, exceeding its scanner category with a never seen before best-of-class performance, as well as offering an enormous increase in data capture efficiency. This IP54-certified high-tech device integrates seamlessly in existing environments, because the SP1 can be connected to virtually any smart device via Bluetooth by simply reading a QR code® printed on the side of the unit.



ERGONOMIC:

The ergonomically designed grip ensures a comfortable and easy handling.



SMART CONNECTIVITY:

Android™ or iOS – the SP1 connects quickly and easily to any smart device.



CHARGED WITH IDEAS:

While the SP1 is sitting in its cradle and charging, you can simultaneously recharge another smart device via the integrated USB port on the cradle.



Welcome to efficiency overdrive.

The new SP1 speeds up processes by up to 50%. We have achieved an increase in efficiency in endurance tests based on ongoing optimisations, this was done in our 20 sqm EMV chamber with a demo shop encompassing over 2000 items. This is where we conduct soundproof absolute measurements under realistic conditions with a clear objective in mind: to pave the way for our customers to pass into the overtaking lane.

Three examples
for countless
possibilities to
work more efficiently

ORGANIZE LOGISTICS

Scan and locate your deliveries in real time using 4G LTE* and A-GPS – for tracking and tracing and improved route planning

SPEEDING UP PROCESS DOCUMENTATION

Capture each step of the production process at top speed.

PROFESSIONALISE RETAIL

Whether it's for warehousing, ordering or sales management, collect data with precision – even if codes are damaged.

Faster, easier, further.

All performance values at a glance.



Reads 1D, 2D codes and
RFID tags

even if codes are damaged.



Easy Bluetooth pairing

1. Use the host unit to read the QR Code® to the SP1.
2. The devices are paired via Bluetooth.



13m* x 360°
= ca. 530m²

SP1 allows high-speed scanning at distances up to 13 m*, covering an area of up to 530m².



Cross-dipole antenna
reads RFID tags with any
directionality.



Internal memory

Allows the caching of 80,000 RFID tags and 1,000 barcodes to bridge connection interruptions between the host device and the SP1 cradle.

Top marks for reliability.



Warranty



Battery life

extended for long
operating hours.



Most reliable
performance
under extreme
conditions
between

**-20° and
+50° degrees
Celsius.**

**1,50
Metres**

Exhaustively crash-tested

At heights up to
1.5 m.



Ultra-lightweight:

only 298 g (with standard battery);
max. 450 g (with high capacity battery).



IP54- certified

watertight and
dustproof.

RFID TUNING FOR SMART DEVICES.

The SP1 attachments now bring all the advantages of RFID and makes them available for your existing smart devices. With BHT-1800 or Quad Lock rotary attachment for Android™ and iOS devices - SP1 is always ready to connect for an uncomplicated top performance.



For BHT-1800:
EA-SP1-A1800



Versatile fixator:
EA-SP1-AS

SP1 SERIES

Model		SP1-QUBI		
Scanning Unit	RFID	Supported RF tags	ISO/IEC 1800-63 Type C (EPCglobal Class 1 Gen 2 compatible tags)	
		Frequency	865.7 ~ 867.5 MHz	
		Channel separation / Number of channels	200 KHz 6 ch	
		Transmission output	Up to 1 W	
		Modulation	PR-ASK	
		Scanning speed ^{*1}	700 Tags per second	
		Scanning distance ^{*2}	Approx. 8 m	
		Output adjustment	10dBm ~30dBm	
	Scanner	Reading system		Area sensor
		Readable codes	2D Codes	QR Code, Micro QR Code, SQRC, PDF417, Micro PDF417, MaxiCode, DataMatrix (ECC200), GS1 DataBar Composite (EAN, UCC Composite)
			1D Codes	EAN-13/-8 (Jan-13/-8), UPC-A/-E, UPC/EAN (with add-on), Interleaved 2 of 5, CODABAR (NW-7), CODE39, CODE93, CODE128, GS1-128 (EAN-128), GS1 Databar (RSS)
		Minimum resolution	2D Codes	0.167 mm
			1D Codes	0.125 mm
		PCS value	0.3 or more	
Elevation / tilt angle		± 50°		
Scan confirmation	Blue/Red 2-colour LED, buzzer			
Transmitter	Bluetooth [®]	V2.1 + EDR Standard Class 2		
	Profile	SPP		
	Cradle	USB		
Power supply	Main battery		Lithium-ion battery 2900 mAh (BT-SP1LA) / 5800 mAh (BT-SP1L)	
	Operating time ^{*3}	Standard battery	Approx. 3 hours	
		High capacity battery	Approx. 6 hours	
Internal memory		80,000 RFID tags, 1,000 barcodes		
Environmental requirements	Operating temperature ^{*4}		-20°C to 55°C	
	Protection rating		IP54	
	Drop resistance ^{*5}		30 drops from 1.2 m onto concrete (5x on each of 6 faces), 1.5 m	
EMC standard		VCCI ClassA		
Weight		Approx. 400 g (with standard battery) Approx. 450 g (with high capacity battery)		

*1: Scanning speed is a reference value and varies depending on the actual operating environment. *2: Scanning distance is a reference value and varies depending on the actual operation environment. Communication distance varies depending on the actual tags. Evaluations are based on the Avery Dennison AD-229r6. *3: Reference values using DENSO Wave conditions at room temperature. May vary depending on the actual operating conditions. *4: 0°C to 40°C for charging. Operation between -10°C and -20°C possible only using high capacity battery. Operating restrictions apply between -10°C and -20°C and between 40°C and 55°C. *5: Test figures at room temperature. Do not constitute guaranteed values. *6: For use with both batteries *7: Does not include smart device charging function. *8: Does not support USB interface *9: Attachments cannot be attached/detached from SP1 with shoulder strap.

ACCESSORIES (sold separately)

Communication / Charger

- CU-SP1A (USB 2.1 Full Speed communication unit)
- CH-1804 (4 slot battery charger)^{*6}
- CH-SP1L (4 slot unit charger)^{*7}
- CBSP-US2000/4 (USB 2.1 Full Speed Direct cable)
- CBBHTUS500/C18-4A (BHT-1800 charging cable)^{*8}

Others

- Waist case
- Shoulder strap^{*9}

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TO USE THIS PRODUCT SAFELY

Before using this product, read its User's Manual thoroughly.

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COMPONENTS

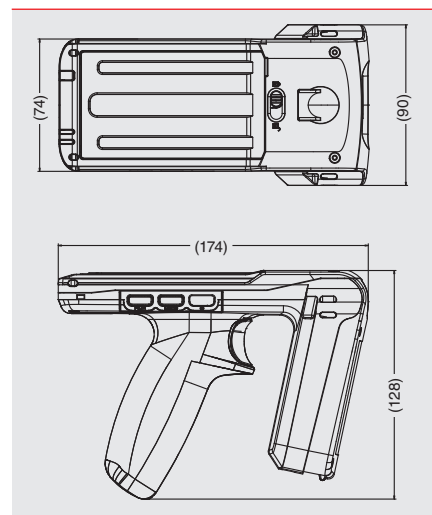
- Main unit
- Hand strap
- Operating guide

SOFTWARE

Software

- Google Android™ Studio
- Microsoft Visual Studio 2017
- Android SDK, including sample code and Demo Application [PDF](#)
- Development in: C# C++, Java and Xamarin

DIMENSIONS



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