

evolve+



Bluetooth® high performance UHF RFID & barcode hand-held reader

Made for



Data Collection Performance Like No Other
 Nordic plus brings you Evolve+ a powerful Bluetooth® UHF RFID & barcode handheld reader which provides new levels of RFID performance. With its R2000 core and range of interchangeable antennas the Evolve+ performs like no other reader giving the user the high levels of flexibility currently available in today's market. Designed to read and write to EPC Class 1 Gen 2 (ISO18000-6C) tags, the Evolve+ can also be configured with class leading high performance 2D data scanning to bring unparalleled data collection compatibilities to any host it is connected to. The Motorola SE4500 engine incorporates fast-pulse illumination and fast sensor shutter speeds, delivering outstanding motion tolerance and class leading 1D and 2D data capture.

As Easy As ABC...
 The new Evolve+ Bluetooth® UHF RFID reader incorporates TSL's unique ASCII protocol for faster and easier application development. This sophisticated parameterised ASCII protocol provides the developer a powerful set of commands that carry out multiple actions locally within the reader. This approach enables multiple tag operations executed using simple pre-configured ASCII commands which not only speeds integration of the reader into applications but also abstracts the developer from some of the complexities of the underlying Native API and ultimately results in un-paralleled levels of performance.

A Configuration To Suit Your Application
 The choice of host device is yours - from low cost touchscreen MP3 players through to fully featured Enterprise Handheld Terminals. The choice of ergonomic style includes a compact slimline grip through to a comfortable trigger handle for scan intensive RFID and 2D barcode data collection applications. EPC data can be stored on an optional MicroSD memory card (at least 25 million Transponder EPCs on a typical 2GB card). This allows logging of all transponder EPC readings and provides the ability to collect data even if USB or Bluetooth® communication channels are not available.

Features:

High Performance Bluetooth® Multi-modal Data Capture

UHF RFID and 2D barcode data capture in one integrated Bluetooth® device.

Hardware Platform Independence

Operates with wide variety of Bluetooth® wireless technology enabled host devices including touchscreen MP3 players, phones, tablets, Enterprise Handhelds and PC's.

OS Independence

Operates with the broadest range of mobile computer operating systems.

Batch Data Collection

Removable high capacity Micro SD data card and real time clock for extended batch data collection with time stamp independent of the host connection.

High Performance barcode scanning

Integrated Motorola SE4500 imaging engine provides class leading barcode scan performance via its unique patent pending fast pulse illumination which delivers outstanding motion tolerance and class leading 1D and 2D data capture.

Platform Independent UHF RFID Reader

Use existing Bluetooth® wireless technology enabled host devices including Enterprise Handhelds, Consumer Phones, Touchscreen MP3 players, Tablets and PC's - the Evolve+ will bring high performance RFID and 2D scanning to all these devices running a wide range of Operating Systems. The Evolve+ Bluetooth® UHF RFID reader can also be tethered to a PC using a USB cable.

Extensive software support is available for a wide range of platforms including code samples, demonstration applications and source code.

Evolve+ Specifications

PHYSICAL and ENVIRONMENTAL CHARACTERISTICS:

Dimensions (LxWxH): 16.20x 7.7 cm x 16.9 cm
Weight: 380 g / 13.4 oz (including battery & trigger handle)
User Input: trigger button
User feedback: Speaker, vibration motor, LED
Power: Removable, rechargeable 4.2 volt Lithium Polymer 2200 mAh battery pack, 8.4 watt hrs
Enclosure Materials: Black Lexan EXL9330 PC
 Yellow Lexan 943A PC

PERFORMANCE CHARACTERISTICS:

RFID Engine: Nordic+ custom module with embedded impinj R2000
Communication Protocols: Nordic+ ABC (Parameterised ASCII command set) Impinj binary
Memory: Supports up to 2 GB Micro SD card
Compatible Host devices (Bluetooth®): Android, iOS, Windows CE, Windows Mobile 5/6.1/6.5 or Windows XP/Vista/7. Host device must have Bluetooth® wireless technology functionality.
Compatible Host devices (USB): Any USB host with FTDI VCP driver support (Windows, Linux, Mac, Android)

ENVIRONMENTAL:

Operating Temp: -4°F to 140°F / -20°C to 60°C
Charging Temp: 41°F to 104°F / 5°C to 40°C
Storage Temp: -40°F to 158°F / -40°C to 70°C
Humidity: 5% to 95% non-condensing
Drop Spec: Multiple drops to concrete: 4 ft./1.2 m ambient, 3ft / 0.9m across the operating temperature range
Tumble: 500 0.5 metre tumbles at room temperature (1,000 cycles)
Environmental Sealing: IP54
Electrostatic Discharge (ESD): ± 15kVdc air discharge; ± 8kVdc contact discharge
MIL-STD 810F: Meets and exceeds applicable MIL-STD 810F for drop, tumble and sealing

RFID PERFORMANCE:

Standards supported: EPC Class 1 Gen 2
Nominal read range2: up to 13 ft./up to 4 m.
Nominal write range2: up to 4 ft./up to 1.22 m.
Field: 150-degree forward facing (approx.) measured from front of device
Antenna: Detachable, Circularly Polarized with optional 2D scanner
Frequency Range: EU: 865-868MHz; US: 902-928MHz
Output Power: 10mW to 800mW
Antenna Options: High Performance CP
 High Performance CP with 2D Imager
 Custom antennas available

BARCODE SCANNING:

Imager: Motorola SE4500 2D imager
Sensor Resolution: 752 x 480 pixels
Field of View: Horizontal: 40°, Vertical: 25°
Focal Distance: SR: 8 in. DL: 5.3 in. HD: 2.9 in.
Aiming LED (VLD): 655 ±10 nm Laser
Illumination Element:
 625 ±5 nm LEDs (2x)
 Min. Print Contrast: Minimum 25%

Symbologies Supported:

1D: All major codes
2D: PDF417, MicroPDF417, Composite, RSS, TLC-39, Datamatrix, QR code, Micro QR code, Aztec, MaxiCode
Postal Codes: US PostNet, US Planet, UK Postal, Australian Postal, Japan Postal Dutch Postal (KIX)

RANGES3:

DL Focus: 5 mil Code 39 100% UPC 5 mil PDF417
Near: 1.4 in./36 mm 1.6 in./41 mm 2.8 in./71 mm
Far: 7.3 in./185 mm 12 in./305 mm 4.5 in./114 mm

BLUETOOTH® WIRELESS TECHNOLOGY:

Bluetooth®: Bluetooth® Version 2.1 SPP profile HID Profile (future) Apple iAP
Bluetooth® Class: Class 2
Bluetooth® Range4: 10m
Bluetooth® pairing: PIN, Simple Secure Pairing, NFC OOB Pairing (TBA)

PERIPHERALS and ACCESSORIES:

External interface: MicroUSB connector for battery charging, and USB connectivity.
USB operating modes: Tethered for real time data capture in conjunction with SmartWedge software. Download of stored scan data.
Optional desktop charger: Nordic Plus Evolve (1136) + 4-Slot Desktop Battery
Other Accessories: Adapter mounts for a variety of smartphones, handheld terminals and touchscreen MP3 players
 Slimline Grip, Trigger Handle

REGULATORY:

General: Approved for use in the US, Canada, Europe
Electrical Safety: Certified to UL60950-1, CSA C22.2 No. 60950-1, IEC 60950-1, EN 60950-1
EMI/RFI: USA: FCC Part 15
Canada: ICES 003 Class B
 EU: EN 301 489-3, EN 301 489-1, EN 301 489-17, EN 302-208, EN55022 Class B, EN55024
Laser Safety: IEC Class2/FDA Class II in accordance with IEC60825-1/EN60825-1, 21CFR1040.10

RFID Reader Options:

Evolve+-EU-BT-UHF-A1 (ETSI)
Evolve+-US-BT-UHF-A1 (FCC)
Evolve+-EU-BT-UHF-IMG (ETSI)
Evolve+-US-BT-UHF-IMG (FCC)

Evolve+ Bluetooth® Wearable UHF RFID
reader – no barcode engine
Evolve+ Bluetooth® Wearable UHF RFID
reader with 2D Barcode Imager

Warranty:

The Evolve+ reader is warranted against defects in workmanship and materials for a period of one year (12 months) from date of shipment, provided the product remains unmodified and is operated under normal and proper conditions.

Terms:

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Technology Solutions UK Ltd is under license. Other trademarks and trade names are those of their respective owners.

- 1 Compatible Bluetooth® stack required in the Host device
- 2 Tag Read/Write performance is dependent on tag type, items tagged, number of tags in the field and other radio and environmental factors
- 3 Artificial lighting can affect scanning performance
- 4 Open field

Nordic Plus designs and manufactures both standard and custom embedded, snap on and standalone peripherals for handheld computer terminals.

Embedded technologies include:

- RFID – Low Frequency, High Frequency & UHF
- Bluetooth® wireless technology
- Contact Smartcard
- Fingerprint biometrics
- 1D and 2D barcode scanning
- Magnetic Card Readers
- OCR-B and ePassport

Utilizing class leading Industrial design, Nordic+ develops products from concept through to high volume manufacture for Blue Chip companies around the world. Using the above technologies Nordic+ develops innovative products in a timely and cost effective manner for a broad range of handheld devices.

Telephone: +44 (0)1789 294 799

Fax: +44 (0)1789 294 739


Address: Nordic Plus, Clifford Chambers, Stratford upon Avon, Warwickshire CV37 8HW. United Kingdom

Email: infor@nordicplus.co.uk

Website: www.nordicplus.co.uk

 Follow us on Twitter: @nordic_plus

 Connect with us on Facebook: facebook.com/nordicplusRFID

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