Data Collection Performance Like No Other

The TSL® 1128 Bluetooth® UHF RFID reader provides new levels of RFID performance. With its R2000 core and range of interchangeable high performance antennas, the 1128 performs like no other reader giving the user the highest levels of flexibility currently available in today’s market. Designed to read and write to EPC Class 1 Gen 2 (ISO18000-6C) tags, the 1128 can also be configured with class leading high performance 2D barcode data scanning to bring unparalleled data collection capabilities 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.

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 1128 will bring high performance RFID and 2D scanning to all these devices running a wide range of Operating Systems. The 1128 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.

As Easy As ABC….

The new 1128 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 bar code data collection applications.

EPC data can be stored on an optional Micro SD memory card (up to 500 million transponder EPCs on a 32GB card - separate purchase from alternative supplier). This provides the ability to collect and log 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 Android, iOS, Windows 10, 8, 7, Vista, XP, Windows Mobile, Windows CE, and Windows Phone.

Batch Data Collection
Removable high capacity Micro SD data card and real time clock for extended batch data collection independent of host connection.

Flexible Configuration
Unique interchangeable high performance antennas including optional 2D scanning and trigger handle with a range of device specific mounts for holding phones and MP3 players.

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.
### Physical and Environmental Characteristics

<table>
<thead>
<tr>
<th>Dimension (LxWxH):</th>
<th>16.0 cm x 7.7 cm x 16.9 cm – Trigger handle</th>
<th>16.0 cm x 7.7 cm x 9.7 cm – Slimline grip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight:</td>
<td>380 g / 13.4 oz (including battery &amp; trigger handle)</td>
<td></td>
</tr>
<tr>
<td>User input:</td>
<td>Trigger button</td>
<td></td>
</tr>
<tr>
<td>User feedback:</td>
<td>Speaker, vibration motor, LED</td>
<td></td>
</tr>
<tr>
<td>Power:</td>
<td>Removable, rechargeable 4.2 volt Lithium Polymer 2400 mAh battery pack, 8.9 watt hrs</td>
<td></td>
</tr>
<tr>
<td>Enclosure materials:</td>
<td>Polycarbonate</td>
<td></td>
</tr>
</tbody>
</table>

### Performance Characteristics

<table>
<thead>
<tr>
<th>RFID engine:</th>
<th>TSL® custom module with embedded Impinj R2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication protocols:</td>
<td>TSL® ASCII 2.0 parameterised command set Impinj binary</td>
</tr>
<tr>
<td>Memory:</td>
<td>Optional Micro SD card (maximum 32GB capacity supported). Up to 500 million date and time stamped EPCs can be stored on a 32GB Micro SD card (separate purchase from alternative supplier).</td>
</tr>
</tbody>
</table>

### 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):** 665 ±10 nm Laser
- **Illumination:** 625 ±5 nm LEDs (2x)
- **Min. Print Contrast:** Minimum 25%

### Environmental

- **Operating Temp.:** -10°C to 40°C (14°F to 104°F)
- **Charging Temp.:** 5°C to 40°C (41°F to 104°F)
- **Storage Temp.:** Less than 1 month at -20°C to +45°C (-4°F to 113°F). Less than 6 months at -20°C to +35°C (-4°F to 95°F)
- **Humidity:** 5% to 85% non-condensing
- **Drop Spec:** Multiple drops to concrete: 4 ft./1.2 m ambient, 3ft (0.9m) across the operating temperature range
- **Tumble:** 600 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

### RFIDs Performance

- **Standards supported:** EPC Class 1 Gen 2
- **Nominal read range:** Up to 7m (23ft)
- **Nominal write range:** Up to 2m (6.5ft)
- **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
- **Maximum Output Power:** 32dBm EIRP or maximum for regulatory region
- **Antenna options:** High Performance CP High Performance CP with 2D Imager Custom antennas available

### Barcode Scanning

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

### Communication

- **Bluetooth®:** Bluetooth® Version 2.1
- **Bluetooth® Profiles:** SPP Profile, HID Profile, Apple iAP
- **Bluetooth® Power:** Class 2
- **Bluetooth® Range:** 30m
- **Bluetooth® Pairing:** PIN, Simple Secure Pairing, NFC OOB Pairing

### 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 charger:** TSL® 1136 4-Slot desktop charger
- **Other Accessories:** Adapter mounts are available for a variety of smartphones handheld terminals. Slimline Grip, Trigger Handle

### Regulatory

- **General:** Approved for use in the US, Canada, Europe, Australia, Brazil, China, Hong Kong, Japan, Malaysia, Singapore, South Korea, Taiwan, Thailand and UAE.
- **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, RSS-Gen, RSS-102, RSS-247 EU: EN 301 489-3, EN 301 489-1, EN 301 489-17, EN 302-208, EN50522 Class B, EN50024
- **Laser Safety:** IEC Class2/FDA Class II in accordance with IEC60825-1/EN60825-1, 21CFR1040.10
EXAMPLE CONFIGURATIONS

With Honeywell Dolphin D75e

With Motorola ES400

With Apple iPod touch® (4th & 5th gen)

With Bluetooth® wireless technology enabled computer

With Samsung Galaxy Tab S

With iPhone 6 Plus