Key Features and Benefits

- Captures data concurrently from multiple Bluetooth low energy devices for focused Internet of Things debugging
- Software defined radio architecture
- Intuitive analysis of multiple wireless devices and connections
- Small footprint for portability or field applications
- Frontline software and familiar data views
- Built-in attenuation for conducted (wired) sniffing in noisy environments
- Automatic gain control and user configurable gain settings
- Support for CSRMesh and Bluetooth mesh technology
- Support for latest important LE features like 2Mbps, advertising extensions, long range and other key updates
- Decoding support for Bluetooth 4.0, 4.1 4.2 and 5 specifications
- Wideband radio captures the entire 2.4 GHz ISM band simultaneously
- Software-defined radio architecture ready for the constantly evolving and changing Bluetooth specifications

The Frontline Sodera LE Protocol Analyzer is designed to help developers debug Bluetooth low energy data communications problems, e.g. insufficient throughput, power consumption, and timing issues.

Bluetooth low energy is the wireless technology of choice for engineers and developers creating "Internet of Things" devices. But since changes to the Bluetooth specification, particularly relating to low energy, are coming practically every day, it is critical to be able to debug the latest adopted and emerging profiles and protocols to take advantage of the ongoing advances in wireless communications.

The Frontline Sodera LE Wideband Bluetooth Low Energy Protocol Analyzer is designed with these users in mind. It is tuned to capture Bluetooth low energy packets in the 2.4GHz band, which allows Internet of Things developers to focus only on the data they need.

View data captured by the Frontline Sodera LE in the Frontline software you already use for Bluetooth protocol analysis. Sort, search and drill down to decode each low energy frame.
**Ordering Information**

**Product Description**
Sodera LE Protocol Analyzer

**Product Code**
2014-24000-000

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**Specifications**

**Supported Systems**
- Operating System: Windows 7/8/10
- USB / USB 2 and 3.0 High Speed

**Minimum Requirements**
- Processor: Core i5 at 2.7 GHz
- RAM: 4GB
- Free Hard Disk Space: 20 GB

**Hardware Specifications**
- Dimensions: 160 mm W x 47 mm H x 159 mm L
  
  \((6.3’’ \times 1.9’’ \times 6.3’’\))
- Weight: 1.3 kg (2.87 lb)
- Humidity: Operating: 0% - 90% (0 °C – 35 °C), non-condensing
- Temperature: 0 °C to +40 °C (32 °F to +104 °F)
- Power Input: 9 VDC (tip positive)
- Max Power: 12 W
- Timestamp resolution: 250ns

**Gain Control**
- AGC or programmable from 0 to 31.5dB in 0.5dB steps

**Core Specifications Supported**
- 4.0; 4.1; 4.2; 5

**Supported LE Protocols (above core spec)**
- ATT

**Supported LE Protocols (above core spec)**
- Alert Notification
- Automation IO
- Battery
- Blood Pressure
- Monitor
-Current Time
- Cycling Speed and Cadence
- Device Information
- DST Change
- Find Me
- Generic Access Profile
- Generic Attribute Profile
- Glucose
- Health Thermometer
- Heart Rate Monitor
- HID over GATT
- Immediate Alert
- Link Loss Alert
- Network Availability
- Notification
- Phone Alert Status
- Proximity
- Pulse Oximeter
- Reference Time Update
- Runners Speed and Cadence
- Scan Parameters
- Time
- Tx Power
- Watchdog

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**Bluetooth Protocol Analyzer Comparison**

<table>
<thead>
<tr>
<th>Bluetooth LE-Only Options</th>
<th>Sodera Single-Mode LE Advanced</th>
<th>Sodera Single-Mode LE Base</th>
<th>Sodera LE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (W x H x L)</td>
<td>6.25 x 2.125 x 6.5 inches</td>
<td>6.25 x 2.125 x 6.5 inches</td>
<td>6.3 x 1.9 x 6.3 inches</td>
</tr>
<tr>
<td>Decode all application layers</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Wideband for easy device selection and data capture</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Capture and decode unlimited complex topologies</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
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<tr>
<td>Post-capture decryption</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
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<tr>
<td>Full Mesh Support</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Optional Bluetooth Protocol Expert System</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Supports capture and decode of all BT Low Energy technologies</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Supports Bluetooth 5</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
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<tr>
<td>Software defined radio that evolves beyond Bluetooth 5</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Upgradable to Dual-Mode (Low Energy and BR/EDR)</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Simultaneous capture of all Bluetooth 5 PHYs</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Includes Bluetooth Audio Expert System</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>On-board battery</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
</tbody>
</table>

**Advanced Feature Set**
- Sync with Frontline 802.11 for Wi-Fi coexistence analysis
- Excursion mode for captures without attached PC
- UART and USB HCI support
- Spectrum analysis
- Logic analysis

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**Bluetooth Timeline** gives details on packet size, frequency and interframe spacing to help resolve throughput, power consumption and timing issues that may be impacting Bluetooth communications.

**Message Sequence Charts** tell the complete story of the Bluetooth connection in clear and descriptive linear terms that help to bring clarity to what can be an otherwise overwhelming flood of granular data.

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**PREMIUM MAINTENANCE - Frontline Sodera**

Premium Maintenance for Frontline Sodera LE Bluetooth Protocol Analyzer ensures that your product is up to date with the latest software updates and features, Your Frontline Sodera LE product comes with one year of Premium Maintenance and includes:

- Updates addressing changes to the supported Bluetooth Specifications
- New software features
- New decodes
- Product bug fixes