FEATURES AND BENEFITS

- Delivers IEEE 802.11 b/g/n, BT v4.2 BR/EDR/LE wireless connectivity
- Based on next-generation silicon from Cypress (CYW4343W)
- Three versions of the module available:
  - SiP without antenna (10 mm x 10 mm x 1.2 mm)
  - With chip antenna (15.5 mm x 21 mm x 2 mm)
  - With external U.FL antenna port (15.5 mm x 21 mm x 2 mm)
- Enhanced collaborative co-existence algorithms
- Nearly 60% lower Active Rx Power Consumption (vs TiWi-BLE)
- Latest Linux and Android drivers supported directly by LSR
- NEW: Sterling-LWB for WICED™ reference platform available for embedded MCU applications
- SIG certified Bluetooth driver (QDID: 64781)
- Multiple certified 2.4 GHz antenna options
  - Chip, Dipole, FlexPIFA™, mFlexPIFA™ & FlexNotch™
  - LSR offers in-house certification of additional antennas at little to no cost

Sterling-LWB™
2.4 GHz Wi-Fi® and Bluetooth® Multi-Standard Module

Practical Applications:
Security & Building Automation, Internet of Things / M2M Connectivity, Smart Gateways

www.lsr.com  |  262.375.4400
STERLING-LWB MODULE PERFORMANCE

<table>
<thead>
<tr>
<th>SPECIFICATION</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temp</td>
<td>-40 to +85° C</td>
</tr>
<tr>
<td>Operating Voltage</td>
<td>3.0 V to 3.6 V</td>
</tr>
<tr>
<td>WLAN Transmit Power</td>
<td>802.11b, 11 Mbps CCK: 17.5 dBm</td>
</tr>
<tr>
<td></td>
<td>802.11g, 54 Mbps rate: 14.0 dBm</td>
</tr>
<tr>
<td></td>
<td>802.11n, 65 Mbps MCS7: 12.5 dBm</td>
</tr>
<tr>
<td>WLAN Rx Sensitivity</td>
<td>802.11b, 11 Mbps CCK: -88 dBm</td>
</tr>
<tr>
<td></td>
<td>802.11g, 54 Mbps rate: -75 dBm</td>
</tr>
<tr>
<td></td>
<td>802.11n, 65 Mbps MCS7: -72 dBm</td>
</tr>
<tr>
<td>Bluetooth Transmit</td>
<td>8.5 dBm (GFSK)</td>
</tr>
<tr>
<td>Bluetooth Rx Sensitivity</td>
<td>-90 dBm (GFSK)</td>
</tr>
</tbody>
</table>

All specifications are preliminary and subject to change.

ORDER INFORMATION

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>450-0152</td>
<td>Sterling-LWB Chip Antenna Module</td>
</tr>
<tr>
<td>450-0148</td>
<td>Sterling-LWB U.FL Module</td>
</tr>
<tr>
<td>450-0159</td>
<td>Sterling-LWB Base Module (SiP)</td>
</tr>
<tr>
<td>450-0155</td>
<td>Sterling-LWB Development Board w/ U.FL</td>
</tr>
<tr>
<td>450-0156</td>
<td>Sterling-LWB Development Board w/ Chip Antenna</td>
</tr>
<tr>
<td>450-0173</td>
<td>Sterling-LWB for WICED™ Carrier Board</td>
</tr>
</tbody>
</table>

LSR is the leader in Wireless Product Development, offering true end-to-end solutions through its array of services and technical expertise.

Design Services
LSR delivers complete system solutions from concept to manufacturing. We are your wireless M2M solutions partner, providing complete turnkey services and solutions.

- RF Design/Engineering
- Software/Firmware Design
- Antenna Design
- Industrial Design
- Mechanical Engineering

EMC Testing & Certification
At LSR, we understand it is critical for your company to have a compliant product supported by the appropriate documentation, ready for deployment into the market. LSR provides the experience and knowledge to provide quality test services that meet your timeline and budget.

- On-Site FCC / IC /CE EMC Certification
- Wireless & Antenna Testing
- EMC Testing
- International Testing Services

Wireless Products
LSR offers the fastest, lowest cost way to add wireless capabilities to your product concept. LSR’s fully-certified modules and antennas accelerate your time-to-market and support the full breadth of communication technologies, including:

- Wi-Fi®
- Bluetooth®
- 802.15.4 & proprietary protocols
Introducing the **STERLING-LWB for WICED™** Reference Platform

You can now leverage the high-performance Sterling-LWB™ module for embedded MCU applications as well! The Sterling-LWB for WICED™ reference platform provides a very simple and fast way to add both Wi-Fi and BLE v4.2 connectivity to your microcontroller-based design utilizing the power of Cypress’ robust WICED™ software development kit. The low cost, pre-certified Sterling-LWB is now validated with the STM32F411 MCU and can be migrated to other popular MCU’s, giving you unmatched speed in adding Wi-Fi and BLE to your application. This comprehensive reference platform features a carrier board for easy connectivity with the STM32F411 Discovery Kit, extensive documentation and software examples, TiWiConnect™ cloud connectivity and ModuleLink™ mobile app for easy development and integration.

**Utilize the Popular WICED™ SDK by Cypress**

Accelerate your WICED™ application development with extensive software examples and source code, including BLE profiles, BLE for Wi-Fi commissioning, Power Management, and more.

**ModuleLink™ Mobile App for Easy Evaluation**

The ModuleLink™ Mobile App for Android lets you connect immediately to the Sterling-LWB from your mobile for easy evaluation and testing.

**Cloud-Ready with LSR’s TiWiConnect™**

With a free TiWiConnect™ developer account and web portal, you can quickly demonstrate full Wi-Fi-to-Cloud functionality.

Take advantage of the platform’s many Wi-Fi-to-Cloud sample applications, including:

- 3-AXIS GYROSCOPE AND ACCELEROMETER
- LED CONTROL AND STATUS

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**Sterling-LWB for WICED™ Carrier Board (450-0173)**

**Sterling-LWB for WICED™ Carrier Board Block Diagram**