LSR
a Laird Business

Industrial Temperature Rating
-40° to +85° C

Broad Certifications with Multiple Antennas
FCC (USA), IC (Canada), ETSI (Europe),
Giteki (Japan), and RCM (AU/NZ)

On-Module Chip Antenna Available

- Offers greater resistance to de-tuning vs. trace or standard chip antennas
- Larger pin outs simplify manufacturing assembly

Sterling-LWB™

2.4 GHz Wi-Fi® and Bluetooth® Smart Ready Multi-Standard Module

Actual Size (15.5mm x 21mm)

FEATURES AND BENEFITS

- Delivers IEEE 802.11 b/g/n, BT 2.1+EDR, and BLE 4.1 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™ & FlexNotch™
    LSR offers in-house certification of additional antennas at little to no cost

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Practical Applications:

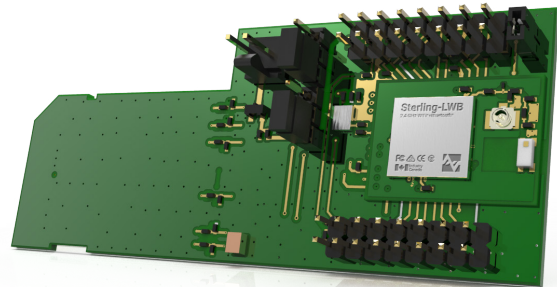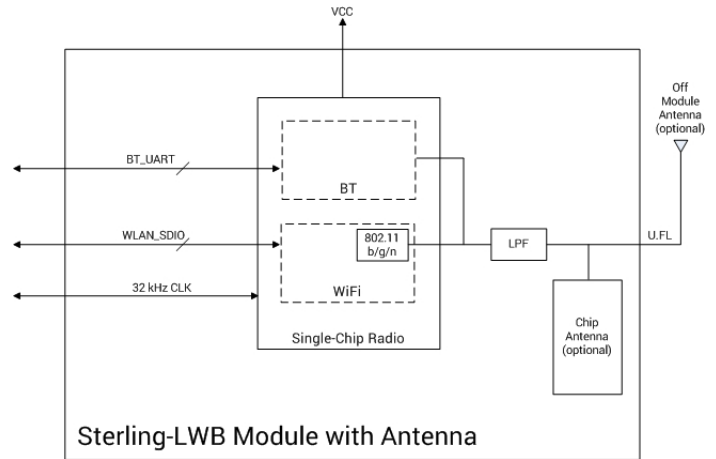Security & Building Automation, Internet of Things / M2M Connectivity, Smart Gateways

STERLING-LWB MODULE PERFORMANCE

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

All specifications are preliminary and subject to change.

ORDER INFORMATION

PART NUMBER	DESCRIPTION
450-0152	Sterling-LWB Chip Antenna Module
450-0148	Sterling-LWB U.FL Module
450-0159	Sterling-LWB Base Module (SiP)
450-0155	Sterling-LWB Development Board w/ U.FL
450-0156	Sterling-LWB Development Board w/ Chip Antenna
450-0173	Sterling-LWB for WICED™ Carrier Board

Sterling-LWB Module with Antenna

Dev Board with SD card form factor (Part # 450-0155 & 450-0156) for simple connectivity w/ NXP i.MX 6 and other platforms

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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:
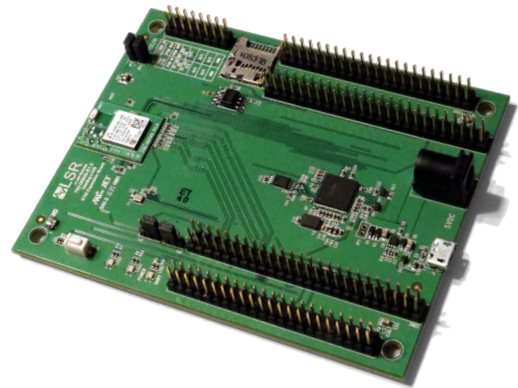
- Wi-Fi®
- Bluetooth®
- Bluetooth® Smart
- ZigBee®
- 802.15.4 & proprietary protocols

Sterling-LWB NB_v2_1

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HARNESS THE STERLING-LWB™ FOR EMBEDDED WI-FI® AND BLUETOOTH® LOW ENERGY APPLICATIONS

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 v4.1 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.

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

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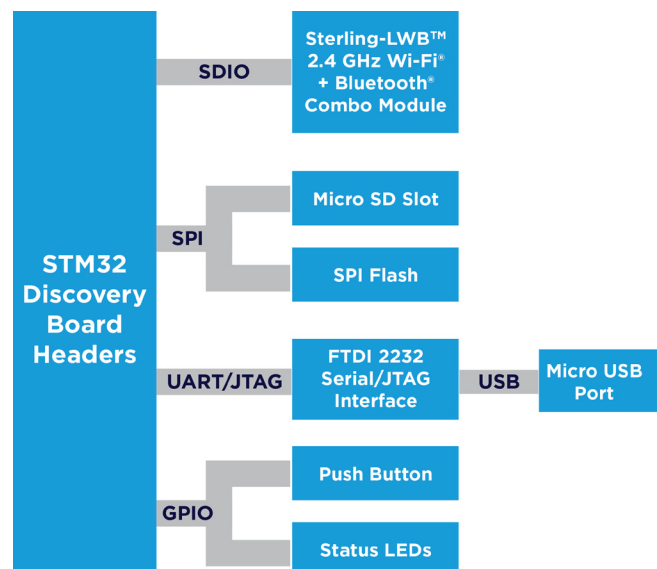
Take advantage of the platform's many Wi-Fi-to-Cloud sample applications, including:

3-AXIS GYROSCOPE AND ACCELEROMETER

LED CONTROL AND STATUS

Sterling-LWB for WICED™ Carrier Board Block Diagram

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