



Features **802.11ac** for high-speed 5 GHz applications

**Industrial Temperature Rating**  
-40° to +85° C

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

**On-Module Chip Antenna Option Available**

- Offers greater resistance to de-tuning vs. trace or standard chip antennas
- Larger pin-outs simplify manufacturing assembly
- Footprint and pin compatible with Sterling-LWB for most applications

COMING SOON!

## Sterling-LWB5™

Dual-Band 802.11ac Wi-Fi® and Bluetooth® Smart Ready Module



Actual Size (15.5mm x 21mm)

### FEATURES AND BENEFITS

- Delivers a/b/g/n/ac, BT 2.1+EDR, and BLE 4.1 wireless connectivity
- Provides 802.11ac for high-speed data applications in the 5 GHz band
- 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 port (15.5 mm x 21 mm x 2 mm)
- Chip and U.FL versions are footprint and pin compatible with Sterling-LWB for most applications
- Enhanced collaborative co-existence algorithms
- Industrial Temperature Rating (-40° to +85° C)

- FCC (USA), IC (Canada), ETSI (Europe), Giteki (Japan), RCM (AU/NZ) Module Certification (all pending)
- Multiple certified 2.4 & 5 GHz antenna options  
Chip, Dipole, & FlexPIFA™  
LSR offers in-house certification of additional antennas at little to no cost  
LSR provides complimentary 3D antenna scans of products utilizing Sterling-LWB5

**Practical Applications:**  
Security & Building Automation,  
Internet of Things / M2M Connectivity,  
High-Traffic Wi-Fi Applications  
(Hospitals, e.g.)

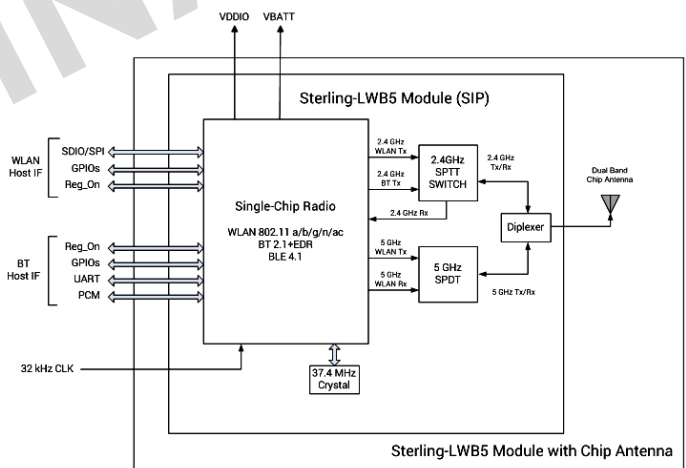
## STERLING-LWB5 MODULE PERFORMANCE

SPECIFICATION	VALUE
Operating Temp	-40° to +85° C
Operating Voltage	3.2 V to 4.3 V
2.4 GHz WLAN Transmit Power	802.11b, 11 Mbps: 14 dBm (20 MHz) 802.11g, 54 Mbps: 14 dBm (20 MHz) 802.11n, 65 Mbps MCS7: 13 dBm (20 MHz) 802.11n, 65 Mbps, MCS7: 13 dBm (40 MHz)
2.4 GHz WLAN Rx Sensitivity	802.11b, 11 Mbps: -88 dBm @8% PER (20 MHz) 802.11g, 54 Mbps: -74 dBm (20 MHz) 802.11n, 65 Mbps, MCS7: -72 dBm @10% PER (20 MHz) 802.11n, 65 Mbps, MCS7: -66 dBm @10% PER (40 MHz)
5 GHz WLAN Transmit Power	802.11g, 54 Mbps: 13 dBm (20 MHz) 802.11n, 65 Mbps, MCS7: 12 dBm (20 MHz) 802.11n, 65 Mbps, MCS7: 13 dBm (40 MHz) 802.11ac, 200 Mbps, MCS9, 9 dBm (40 MHz) 802.11ac, 433 Mbps, MCS9, 9 dBm (80 MHz)
5 GHz WLAN Rx Sensitivity	802.11g, 54 Mbps: -74 dBm @10% PER (20 MHz) 802.11n, 65 Mbps, MCS7: -73 dBm @10% PER (20 MHz) 802.11n, 65 Mbps, MCS7: -68 dBm @10% PER (40 MHz) 802.11ac, 200Mbps, MCS9, -64 dBm (40 MHz) 802.11ac, 433 Mbps, MCS9, -58 dBm (80 MHz)
Bluetooth Tx Power	BLE, 1 Mbps: 6 dBm
Bluetooth Rx Sensitivity	BLE, 1 Mbps: -91 dBm @30.8% PER

All specifications are preliminary and subject to change.

## ORDER INFORMATION

PART NUMBER	DESCRIPTION
450-0162	Sterling-LWB5 Base Module (SiP)
450-0169	Sterling-LWB5 Chip Antenna Module
450-0168	Sterling-LWB5 U.FL Module
450-0171	Sterling-LWB5 Development Board with U.FL
450-0172	Sterling-LWB5 Development Board with Chip Antenna



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