

DUAL-BAND 802.11AC WI-FI® AND BLUETOOTH® LE MODULE



The Sterling-LWB5 dual-band Wi-Fi, Bluetooth® LE module offers significant value to developers by providing an unmatched breadth of options, certifications, and antenna options, which altogether provide greater flexibility to meet the challenging requirements of many wireless designs.

This certified module is based on the Infineon CYW43353 chipset to create one of the very first commercially available solutions that offers IEEE 802.11ac capabilities for ultra-high data rate 5 GHz Wi-Fi connectivity, while also featuring classic Bluetooth and BLE connectivity as well. The module comes in three configurations to best address specific applications, each boasting an industrial temperature rating (-40° to +85° C) and an industry-leading range of certifications and antenna options.

- Delivers a/b/g/n/ac, BT 2.1+EDR, and BLE 5.2 wireless connectivity
- Provides 802.11ac for high-speed data in the 5 GHz band
- Large pinouts that are footprint and pin compatible with our previous generation of Sterling-LWB modules
- Three versions of the module available:
 - SiP without antenna (10 mm x 10 mm x 1.6 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)

FEATURES AT A GLANCE

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EASY UPGRADE FROM STERLING-LWB MODULE
Large pinouts that are footprint and pin compatible with the Sterling-LWB create an easy upgrade path for OEMs
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MODULE OPTIONS FOR DESIGN FLEXIBILITY
SiP module, chip antenna, and external U.FL options for antenna choice, as well as better de-tuning resistance with chip antenna
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INDUSTRIAL OPERATING RANGE
Designed and certified to the industrial temperature range of -40 °C to +85 °C for reliability in challenging environments.
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GLOBAL APPROVALS – MAKE YOURSELF AT HOME
Carries several modular FCC, ISED, EU, and Bluetooth SIG approvals.
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PERSONAL SUPPORT FROM DESIGN TO MANUFACTURE
Our industry-renowned support is passionate about helping you speed your design to market.

APPLICATION AREAS

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Security
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Building Automation
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Internet of Things / M2M Connectivity
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High-Traffic Wi-Fi (i.e. Hospitals)

KEY SPECIFICATIONS

CATEGORY	FEATURE	SPECIFICATION
Chipset	Wireless	Infineon CYW43353
Wireless Specification	Bluetooth®	Bluetooth 5.2
	Wi-Fi	802.11 a/b/g/n/ac
	Frequency	2.4 / 5 GHz
	Transmit Power	Up to 14 dBm (2.4 GHz WLAN) Up to 13 dBm (5 GHz WLAN) 6 dBm (BLE)
	Receive Sensitivity	-88 dBm to -66 dB, (2.4 GHz WLAN) -74 dBm to -58 dBm (5 GHz WLAN) -91 dBm (BLE)
Host Interface and Peripherals	Antenna Options	Trace Pin, Chip Antenna, or external U.FL connector
	Bluetooth	HCI via High speed UART PCM/I2S GPIO
	WLAN	SDIO version 3.0 GPIO
Physical	Dimensions	SiP without antenna - 10 mm x 10 mm x 1.6 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
Environmental	Temp Range	-40°C to +85°C
Miscellaneous	Lead Free	Lead-free and RoHS-compliant
	Development Kit	Development board and free software tools
Development Tools	Utilities	Infineon WICED SDK
Qualifications	Bluetooth®	Complete Declaration ID
Regulatory	Approvals	FCC/ISED/EU

For full specifications on the Sterling-LWB5 modules, please see the appropriate datasheet.

PART #	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