Features at a Glance

ezurio

Bluetooth v5 Long Range IP67 Multi Sensor

Rugged, multi-function Bluetooth 5 Open Development Device for your IoT application

Bluetooth 5

Contact | Temperature | Proximity | Acceleration

The Sentrius™ BT510 Sensor is a battery powered, Bluetooth v5 Long Range integrated open development device enabling application development for robust, reliable sensor data transfer in the harshest of environments.

The Sentrius™ BT510 packs in more than just a IP67 temperature sensor, also seamlessly integrating open / close contact and motion / impact detection and Bluetooth LE beaconing capabilities.

The BT510 is powered by Ezurio's field proven BL654 Bluetooth LE module that integrates Nordic Semiconductor's nRF52840 silicon for feature rich application development in the Cortex M4F with 1 MB Flash memory, which also enables integrated sensor data logging and storage. The ultra-low power sensor uses a single replaceable CR2477 coin cell battery, for a multi-year life and hassle-free, long-term maintenance.

The BT510 is a multi-sensor platform, with a magnetic reed switch sensor, temperature sensor, proximity sensor, and accelerometer. These multiple sensing capabilities support a massive array of use cases and applications, and its IP67 enclosure ensures robust protection for even the harshest of environments

- **Multi Sensor Platform** – Integrated temperature, accelerometer and magnetic reed switch sensors
- **Best-in-Class BTv5 Performance** – Bluetooth LE long range, secure connections and Bluetooth LE beaconing
- **Application Environment**
  - Utilize the Open-source Zephyr RTOS to build your application using the Ezurio BT510 Zephyr board file and sample applications.
  - Alternatively use legacy FreeRTOS binary application with supporting mobile apps (Note: No future firmware updates planned)
- **IP67 Enclosure** – A rugged IP67 certified enclosure with simple twist / lock design for hassle free maintenance
- **Replaceable Battery** – Ultra low power capabilities and replaceable CR2477 coin cell
- **Worldwide Approvals** – Device certified for FCC, ISED, CE, UKCA, MIC, RCM, and Bluetooth SIG
- **Customization** – Custom branding, packaging, application development all available!

Cold Chain Management and Food Safety

Agricultural Humidity and Environment Monitoring

Industrial Heating and Cooling

Category	Feature	Specification
Wireless	Bluetooth® 5	Ezurio - BL654 Module with Nordic nRF52840
	Processor	Cortex M4F – 1MB Flash and 256k RAM
Sensors	Temperature IC - Range	-40° to +125°C
	Temperature - Accuracy	+/-0.5°C
	Accelerometer	3-axis MEMS – Programable motion and contact detection
	Open/Close Contact	Omni polar magneto-resistive sensor
Antenna	Integrated	Onboard PCB antenna
Power	Battery	CR2477 coin cell - replaceable
Software	Zephyr Open-source Firmware	Zephyr RTOS board file available to help developers to build their own application
Storage	Data Logging	Up to 7 days of data at 15-minute read intervals (Temperature)
LED	Status	1 – multi state
Button	User Input	Multi-use
Mounting	Placement	Zip tie, industrial Velcro or screw
Physical	Dimensions	80 mm x 51 mm x 19 mm
Environmental	Operating Temp.	-20° to +60°C (coin cell battery is limiting factor)
	Storage Temp	-40° to +85°C
Regulatory	Approvals	FCC, ISED, CE, UKCA, MIC, RCM, and Bluetooth SIG
Warranty		One-year warranty
Customization	Options **	Branding on front label, packaging or mobile app
		Enclosure colors
		Pre-configuration options
		Custom firmware

** Dependent on commercial case

For full specifications on the BT510, please see the appropriate datasheet.

Ordering Information

Part	Description	Packaging
455-00083	SentriusTM BT510 Sensor, Single	Single (1)
450-00048B	SentriusTM BT510 Sensor, Bulk Packaged	Bulk (100)
455-00058B	Magnet Kit (Open/Close) for Sentrius™ BT510, Bulk	Bulk (100)

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