

## BDE-BLEM301 Bluetooth 5.1 Low Energy Module

BDE-BLEM301 is one of the most cost-efficient Bluetooth 5.1 Low Energy Module in the field. Based on Dialog ultra-low power DA14531 SoC, it comprises a Cortex® M0+ MCU, 1Mbit on board Flash memory, a Bluetooth 5.1 Low Energy radio and a high efficiency PCB antenna in a single module. The module can be used with or without an external MCU. It also offers flexible hardware interfaces for sensor applications.



BDE-BLEM301 is compatible with Dialog DA14531 TINY™ Bluetooth Module - DA14531MOD. The same software tools and hardware kits can be used for BDE-BLEM301. It is empowered with Dialog BT5.1 qualified BLE stack and SDK with a rich set of software functions & examples to kickstart your development.

### Key Features

- Bluetooth 5.1 qualified (Bluetooth DID: D050903)
- FCC/CE/RoHS certification
- Integrated high efficiency Antenna
- Supports up to 3 BLE connections
- 16 MHz 32-bit Arm® Cortex® M0+
- Memories: 1Mbit Flash, 48KB RAM, 144KB ROM, 32KB OTP
- Rx current 2mA at 3V
- Tx current 4mA at 3V at 0dBm
- 1.8 uA at sleep with all RAM retained
- Programmable Tx power -19 to +2.2 dBm
- -93 dBm receiver sensitivity
- Quadrature decoder with 3 channels
- 4 channel 11-bit ENOB ADC
- 2 timers with PWM capabilities
- Real Time Clock
- Built in temperature sensor
- Interfaces: 9 GPIOs, SPI, 2xUART, I2C
- Operation: 1.8V - 3.3V, -40°C to +85°C
- Dimensions: 12.5x14.5x2.1 mm
- Compatible with Dialog DA14531MOD

### Applications

- Beacons
- Remote Controls
- Proximity tags
- Low Power Sensors
- Commissioning/Provisioning
- Toys
- Serial port transmission
- Smart home
- Smart meters
- Smart medical devices

### Ordering Information

| Part Number | Size (mm)         | Shipping Form | MOQ  |
|-------------|-------------------|---------------|------|
| BDE-BLEM301 | 12.5 x 14.5 x 2.1 | Tape & Reel   | 1000 |

### BDE Technology, Inc.

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