

## **Bluetooth® 4.0 Low Energy Embedded Dual Mode Module from Stonestreet One and BlueRadio - BR-LE4.0-D2**

### **FEATURES**

- Three Types of Models: With or Without RF Chip Antenna, or U.FL Connector
- FCC, IC, CE, RoHS, and *Bluetooth®* Ver 4.0 Compliant ISM 2.4GHz Band Module. Code Space in Texas Instruments MSP430 for Client Applications (100 kB Flash, 4 kB RAM)
- Baseband is TI Dual Mode CC2564
- UART, SPI Data Interface (2-wire or 4-wire with CTS, RTS)
- Analog, RTC, Battery Monitor, Temperature Sensor, Watchdog Timer
- Includes Integrated Software Stack, Profiles, and AT Modem Like Commands
- Embedded Bluetopia® *Bluetooth* Stack Protocols and Profiles Include: SPP, GAP, GATT, SMP, ATT, L2CAP, BATT, and so on
- Combines the Standard BR, EDR Offering with Additional Support for *Bluetooth* Low Energy
- UART Baud Rate Speeds: 9600 bps up to 1 Mbps
- +500 Meter (1640 Feet) Est. Distance Line of Sight (LOS) with Chip Antenna Running SPP
- Software Adjustable Transmit Power from Short to Long Range Applications (Class1, 2, and 3)
- Low Power Consumption (24 mA TX, 18 mA RX, 0.1 mA Idle Mode, and 0.2 µA Deep Sleep Timer)
- Small-form Factor SMT Radio Modem that Requires NO External Components
- Operating Temperature Range: -40°C to approximately 85°C.
- Secure and Robust Communication Link with Billions of Unique Codes
  - FHSS (Frequency Hopping Spread Spectrum)
  - 24 bit CRC Error Correction for Ensured Packet Delivery
  - AES-128 Bit Encryption Using CCM for Encryption and Authentication of Packets

### **APPLICATIONS**

- Human Interface Devices
  - Keyboard, Mouse, Remote Control
- Sports and Leisure Equipment
- Mobile Phone Accessories
- Remote Control for Computers, MP3 Player
- Consumer Electronics
- Remote Monitoring and Control
- Health Care and Medical
- Smart Grid
- Automated Meter Reading (AMR)
- Home, Building Automation
- Machine-to-Machine (M2M)
- Wireless Sensor Networks
- Wireless Alarms and Security
- Lighting and HVAC Control
- Proximity and out of Range Detection

### **DESCRIPTION**

BlueBridge BR-LE4.0-D2 is a standalone Dual mode intelligent module solution and requires no external stack or external components. Custom client applications can be written directly onto the BlueBridge smart ready module, which supports both analog and digital peripherals, eliminating the need for a second costly microprocessor. It comes in three types of models with/without RF chip antenna, or U.FL connector and is an FCC, IC, CE, RoHS, and *Bluetooth®* Ver 4.0 compliant ISM 2.4 GHz band module.



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These devices have limited built-in ESD protection. The leads should be shorted together or the device placed in conductive foam during storage or handling to prevent electrostatic damage to the MOS gates.

## DESCRIPTION CONTINUED

More information on the product can be found on BlueRadio's website:

- Product Overview:
  - [http://www.blueradios.com/hardware\\_LE4.0-D2.htm](http://www.blueradios.com/hardware_LE4.0-D2.htm)
  - <http://www.stonestreetone.com/dualmodemodule.cfm>
- Data sheet: <http://www.stonestreetone.com/pdf/BR-LE4.0-D2A.pdf>

More information on TI's wireless platform solutions for *Bluetooth* can be found on TI's Wireless Connectivity Wiki ([www.ti.com/connectivitywiki](http://www.ti.com/connectivitywiki)).

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