

## **Description of Operation**

CEL's B1010SP0 module is a low power Bluetooth Energy Module (BLE) targeted for the Bluetooth smart market. The BS1010SP0 enables ultra lower power connectivity and basic data transfer for applications targeted for sensors, watches, computer, mobile accessories, lighting and smart home applications.

The BS1010SP0 is based on the CSR1010 single chip IC. It consists of RF transceiver, baseband modem with RAM (128kB) of internal memory. The module includes 16 MHz and 32.768 kHz crystals with additional Flash (512kB) of external memory. It also include integrated 50 $\Omega$  printed circuit board (PCB) trace antenna with RF filtering. Data I/O include 12 digital and 3 Analog IOs. The module is also capable of doing 10-bit Analog to digital conversion (ADC). The module is also complaint with the Bluetooth Special Interest group (SIG) certification.

It is a single chip solution with CSR uEnergy® BLE stack. The device operates on the ISM frequency band (2402-2480)MHz. Firmware controlling the operation of the B1010SP0 is requires specialized accessories to program it. The crystal frequency is trimmed at production factory.