

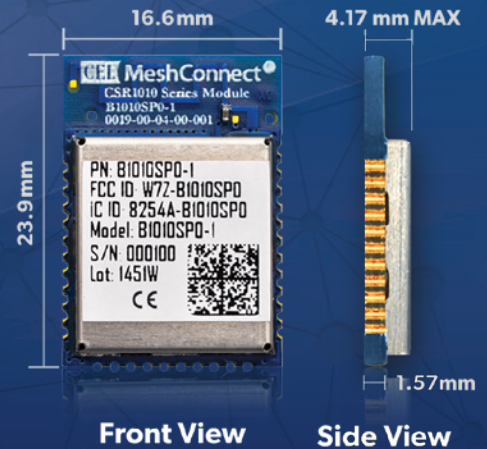


## Bluetooth® Smart Mini Modules

**Part Number: B1010SP0-1x**

CEL's MeshConnect Bluetooth® Smart Modules eliminate design risk and significantly reduce time-to-market for Bluetooth Low Energy wireless solutions, including programs which utilize the innovative CSRmesh™ protocol.

These devices are footprint-compatible with CEL's existing line of ZigBee and Thread-based Modules, allowing designers to easily transition between multiple wireless networking standards via drop-in compatible module hardware.



### KEY FEATURES:



Supports CSRmesh™



Available with Avi-on Software



15 Analog/Digital Pins



Supports UART, I2C, SPI



+8 dBm Transmit Power (Pout)



Best-In-Class RF Range of 50m - 100m

# Drop-in Compatibility

With CEL's Extensive Line of ZigBee, Thread and WiFi MeshConnect Modules



**Supports Bluetooth® Smart v4.x**  
Including ATT, GATT, SMP, L2CAP, GAP



**Based on the CSR1010**  
• Supports the CSRMesh™ protocol  
• Full access to the CSR μEnergy SDK



**Advanced Power Management Scheme**  
Optimized for battery-powered applications



### Dual RF Connectivity Options

- Integrated PCB antenna
- External RF output via castellation



### Surface-Mountable Package

Castellation edge connectors at 0.050" pitch for ease of assembly



### Over-the-Air Programming

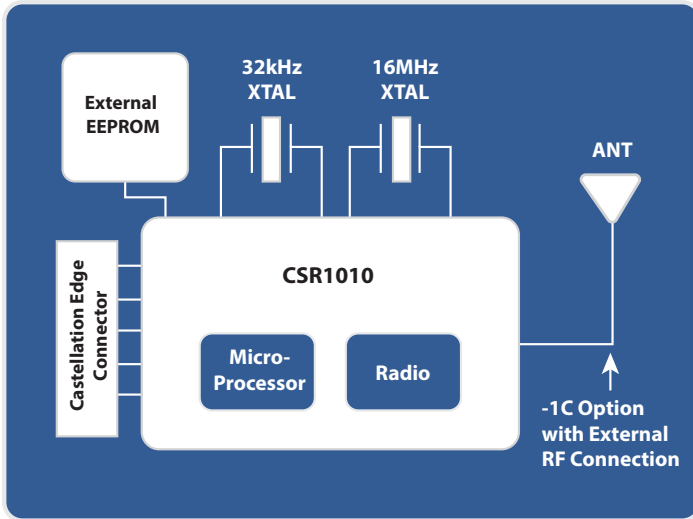
Supports OTA programming updates



Modules are 100% RF tested and pre-certified for compliance.



BLOCK DIAGRAM (B1010SP0-1)



**SPECIFICATIONS**

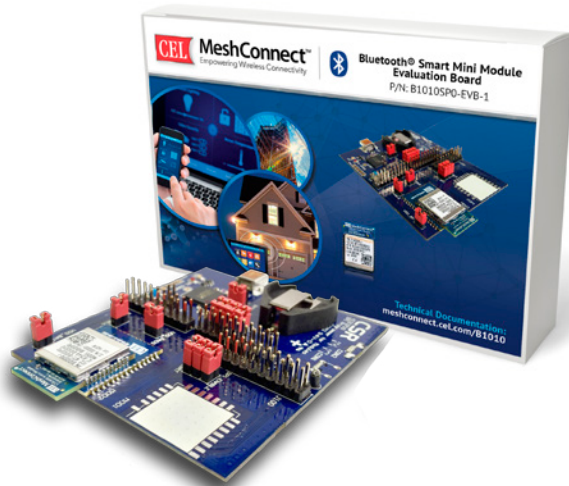
- ▶ **MCU:** 16-bit XAP RISC with 64kB RAM + 64kB ROM
- ▶ **External EEPROM:** 512kb
- ▶ **Frequency:** 2402 to 2480 MHz
- ▶ **Operating Voltage:** 1.8 to 3.6V
- ▶ **Output Power:** +8dBm
- ▶ **RX Sensitivity:** -94dBm
- ▶ **Operating Temp:** -30°C to +85°C
- ▶ **Over-the-Air Data Rate:** 1Mbps
- ▶ **Number of channels:** 40
- ▶ **RoHS Compliant**

**APPLICATIONS**

- ▶ Connected Home
- ▶ Building Automation
- ▶ Lighting Controls
- ▶ Sports and fitness sensors
- ▶ Health sensors
- ▶ Mobile accessories
- ▶ General Bluetooth Wireless Sensor Networking

**MESHCONNECT™ BLUETOOTH® PART NUMBERS**

MeshConnect™ Bluetooth® Smart Mini Modules	
<b>B1010SP0-1</b>	CSR1010 IC, +8dBm Output Power, Integrated Antenna
<b>B1010SP0-1C</b>	CSR1010 IC, +8dBm Output Power, Castellation RF Output Pin for External Antenna
MeshConnect™ B1010 Bluetooth® Smart μEnergy Starter Development Kit	
<b>B1010SP0-EVB-1</b>	Bluetooth® Smart Mini Module Evaluation Kit



**CEL** MeshConnect™

Bluetooth® Smart Mini Module Evaluation Kit (B1010SP0-EVB-1)

CEL offers a variant of CSR's μEnergy® Starter Development Kit which has been outfitted to support the B1010SP0-1 module. This kit enables the rapid development of Bluetooth Smart applications and includes:

- CSR's xIDE for μEnergy (includes compiler)
- CSR's reference software for Bluetooth Smart profiles
- CSR's example applications for iOS and Android smartphones

Visit [meshconnect.cel.com/B1010](http://meshconnect.cel.com/B1010) for more information.