



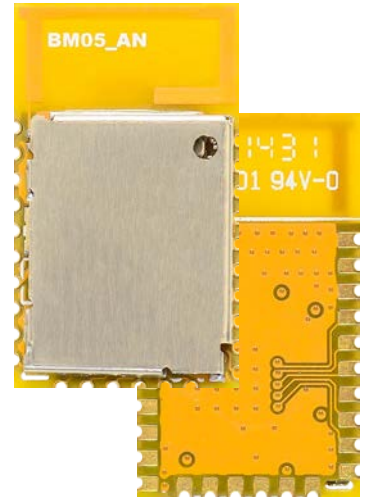
## BM05: Bluetooth Low Energy LGA Module

### Product Description:

BM05 series built in the latest Bluetooth 4.0 Low Energy technology inside together with Texas Instrument® CC2541 as the core. The CC2541 combines the leading edge RF transceiver with an industry-standard enhanced MCU, which does not require an external micro controller. BM05 series is a single-mode module designed especially for applications communicate with other Bluetooth devices and requested for ultralow power consumption performance.

### Key Features:

- Pin-to-pin compatible with InnoComm CC2530 ZigBee Module
- Compact LGA module size with antenna
- Extra low power RF
- Up to date certificated BLE software stack



### Specifications

- **RF**
  - 2.4-GHz Bluetooth low energy compliance
  - Supports 250-kbps, 500-kbps, 1-Mbps, 2- Mbps Data Rates
  - Output power: 0dBm(conductive mode)
  - Receiver sensitivity: -94dBm at 1Mbps(conductive mode)
  - Suitable for system targeting compliance with worldwide radio frequency regulations:
    - ETSI EN 300 328 and EN 300 440 Class 2(Europe)
    - FCC CFR47 Part 15(US)
    - ARIB STD-T66 (Japan)
- **Memory**
  - In-System-Programmable 256KB Flash
  - 8-KB RAM With Retention in All Power Modes
- **Operating Temperature**
  - -40°C to +85°C
- **Mounting Method**
  - SMD
- **Power Supply**
  - Voltage Range: 2V ~ 3.6V
- **Power Consumption**
  - Active-Mode RX: 17.9 mA
  - Active-Mode TX (0 dBm): 18.2 mA
  - Power Mode 1(4-µs Wake-Up): 270 µA
  - Power Mode 2 (Sleep Timer On): 1 µA
  - Power Mode 3 (External Interrupts): 0.5 µA

### Target Applications

- Health & Fitness
- Toys
- Mobile Phone Accessories
- Home Automation
- Cable Replacement
- ...

### Software Features

- Bluetooth v4.0 Compliant Protocol Stack
- Complete Power-Optimized Stack, including controller and host
  - GAP - Central, Peripheral, Observer, or Broadcaster (Including Combination Roles)
  - ATT/GATT - Client and Server
  - SMP - AES-128 Encryption and Decryption
  - L2CAP
- Sample Applications and Profiles supported

### Support & Service

- Evaluation board
- Upper layer protocol and application development tool can be downloaded from TI’s website <http://www.ti.com/product/cc2541>
- BLE stack can be download from <http://www.ti.com/tool/ble-stack>



### Product List

	BM05_AN	BM05_AN_PA
Description	BLE module with on board chip antenna	BLE module with on board chip antenna and PA
Size (mm)	18.0 x10.5x1.9	22.0 x10.5x1.9
Pin count	26	26
I/O	I2C x1, GPIO x20 (Can be configured to Max. 4x UART)	I2C x1, GPIO x15 (Can be configured to Max. 4x UART)
Power (dBm)	-2.5 dBm	14 dBm

### Ordering information

Please email to [innocomm@innocomm.com](mailto:innocomm@innocomm.com) or call +886-3-5781868 for more information.

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