



New PAN1326B/1316B Series Bluetooth® Low Energy RF Module



Improved Dual-Mode *Bluetooth* Smart Ready Module

Introducing the NEW PAN1326B/1316B Series *Bluetooth* RF Modules from Panasonic, featuring both *Bluetooth* Low Energy and *Bluetooth* connectivity, based on Texas Instruments' NEW CC2564B controller, in an easy-to-use RF Module format with *Bluetooth*, FCC, IC and CE certifications. A ROM update from Texas Instruments to the already popular CC2564 IC has allowed Panasonic to improve its top selling PAN1326/1316 Series. The NEW PAN1326B/1316B Series Modules has increased system and power efficiency resulting from reduced initialization script size, start-up time and decreased system memory requirements; supports ten simultaneous BLE connections -- increased from six -- and integrated SBC encoding and decoding for A2DP implementations, eliminating the requirement for an external CODEC.

Panasonic's tiny footprint technology offers a module of only 85.5 mm² including antenna. The modules are designed to accommodate PCBs pad pitch of 1.3mm and as little as two layers for easy implementation and manufacture.

The *Bluetooth* Low Energy (BLE) standard is designed to reduce power consumption by establishing very fast connections (few ms) and transferring small amounts of data. Using these techniques, energy consumption is reduced to a tenth of a Classic *Bluetooth* device. *Bluetooth* Smart Ready devices can communicate with both *Bluetooth* Classic and *Bluetooth* Low Energy devices. Smart Ready devices take advantage of the data rate of *Bluetooth* Classic (3Mb/s) and ultra fast connection time of *Bluetooth* Low Energy (3mS).

Features

- *Bluetooth* Version 4.0 EDR
- Operating Temperature Range: -40 to +85°C
- High Sensitivity: -93dbm
- V_{CC} Supply: 1.7 to 4.8 V
- Based on TI's CC2564B
- Integrates with TI's Ultra Low-Power MSP430 Microprocessor
- Very Fast Algorithm for Both ACL and eSCO
- Supports Extended Range Tx Power with 10dBm (Typ.)

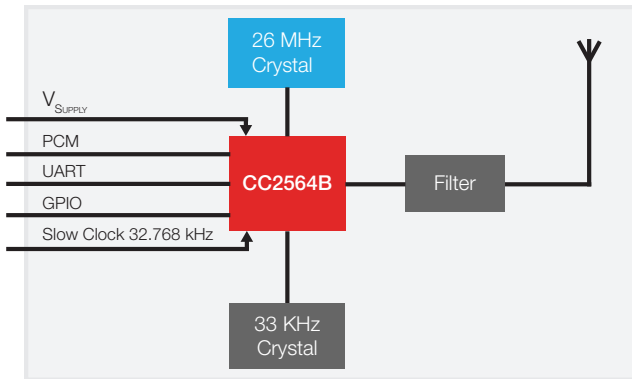
Applications

- Heart Rate Monitors
- Blood Glucose Meters
- Industrial Sensors
- Entertainment Devices
- Mobile Accessories
- Toys

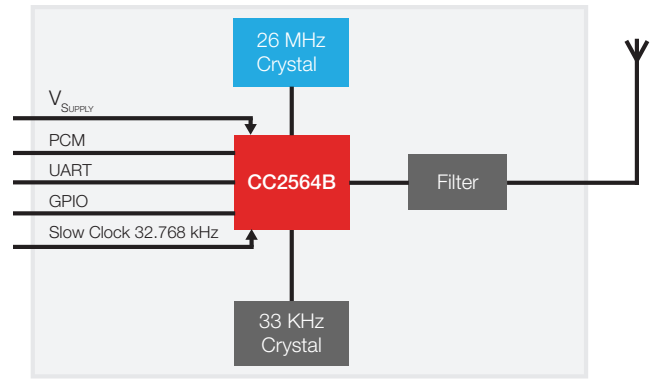
Technical Characteristics

| Parameter | Value | Condition |
|-----------------------|--------------|----------------------------|
| Receiver Sensitivity | -93 dBm typ. | GFSK, Typical, Dirty TX On |
| Output Power | 10 dBm typ. | VDD_In = VBAT |
| Power Supply | 1.7 to 4.8 V | Battery or DC/DC |
| Ultra-Low Power Scan | 135 µA | 1.28s Interval |
| GFSK DH1/DH5 | 33 mA | Full Throughput |
| Operating Temperature | -40 to +85°C | |

Block Diagram (PAN1326B)



Block Diagram (PAN1316B)



PAN1316B Part Numbers

| Part Number | Description |
|---------------|--|
| ENW-89823C3KF | PAN1316B <i>Bluetooth</i> HCI Module, CC2560B, Without Antenna |

PAN1326B Part Numbers

| Part Number | Description |
|---------------|---|
| ENW-89823A3KF | PAN1326B <i>Bluetooth</i> HCI Module, CC2560B, Integrated Antenna |

Additional Information

For detailed specification information on the **PAN1316B/PAN1326B** HCI *Bluetooth* Modules, visit our website at:

na.industrial.panasonic.com/products/wireless-connectivity/bluetooth/