

ANT and *Bluetooth*® Health & Fitness Aggregator Platform



Platform features

- Dual-mode ANT and *Bluetooth* in a single-chip
- *Bluetooth* 2.1 + Enhanced Data Rate (EDR) with best-in-class *Bluetooth* RF performance
- Complete, validated, certified, production-ready modules offered by Panasonic: CC2567-PAN1327, CC2567-PAN1317
- MSP430BT5190 pre-integrated with *Bluetooth* software stack and Panasonic module
- Full-featured evaluation boards for hardware and software prototyping
- Software development kit (SDK) including *Bluetooth* software stack and serial port profile (SPP)
- Sample applications and demos provided in source code showing API usage
- Getting started guides, documentation and support: www.ti.com/connectivitywiki

Platform benefits

- First wireless, single-chip solution that enables communication between installed base of ultra-low power ANT sensors (13 million units) and *Bluetooth*-enabled devices (3 billion units install base)
- TI's proven 7th generation *Bluetooth* technology enables a robust, high-throughput wireless connection with extended range and power efficiency
- CC2567-PAN1327/17 modules lower manufacturing and operating costs, save board space, ease certification, and minimize RF expertise required
- Pre-integration of host controller and *Bluetooth* module simplifies and reduces hardware and software development, allowing faster time-to-market
- Evaluation tools allow for extensive prototyping and development of applications that require ANT and *Bluetooth* connectivity

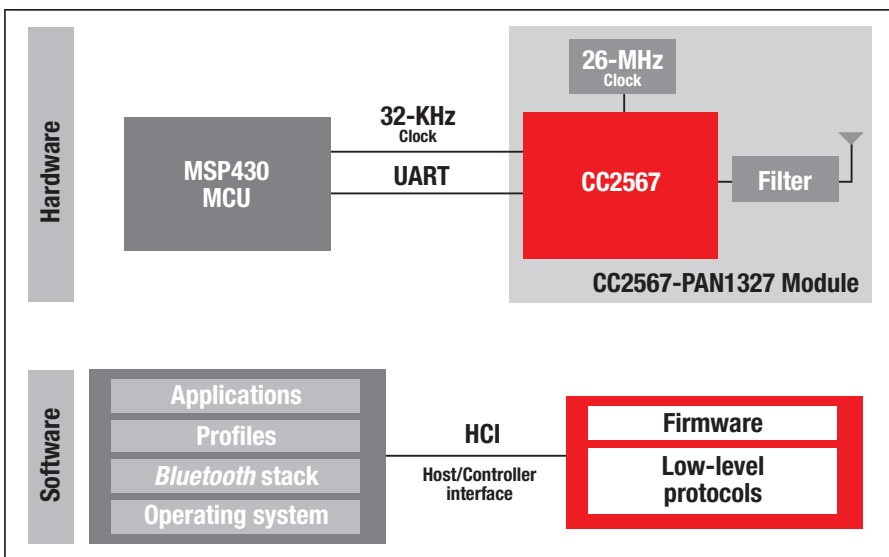
Key features:

CC2567-PAN1327/17

- Fully qualified *Bluetooth* v2.1 + EDR
- ANT and *Bluetooth* smart priority mechanism allows flexible coexistence and simultaneous operation
- Best-in-class *Bluetooth* RF performance (Tx power, Rx sensitivity, blocking)
- +10 dBm typical Tx power with transmit power control
- -93 dBm typical receiver sensitivity
- Support for *Bluetooth* power saving modes (sniff, hold)
- *Bluetooth*, FCC, CE, IC certified
- Dimensions: 9 mm x 9.5 mm x 1.8 mm (CC2567-PAN1327, integrated antenna); 6.5 mm x 9.5 mm x 1.8 mm (CC2567-PAN1317, without antenna)
- Integrates with TI's ultra-low power MSP430 microcontroller

MSP430BT5190

- Up to 25 MIPS operation
- 256-KB Flash, 16-KB RAM
- 1.8 V to 3.6 V supply
- Ultra-low power consumption
- Wake-up from standby mode in less than 5µs
- 16-Bit RISC architecture
- Fully integrated LDO
- Three 16-bit timers
- 12-bit A/D converter
- Up to four universal serial communication interfaces (SPI/I²C/UART)
- 32-bit hardware multiplier
- Real-time clock module
- Up to 87 I/O pins

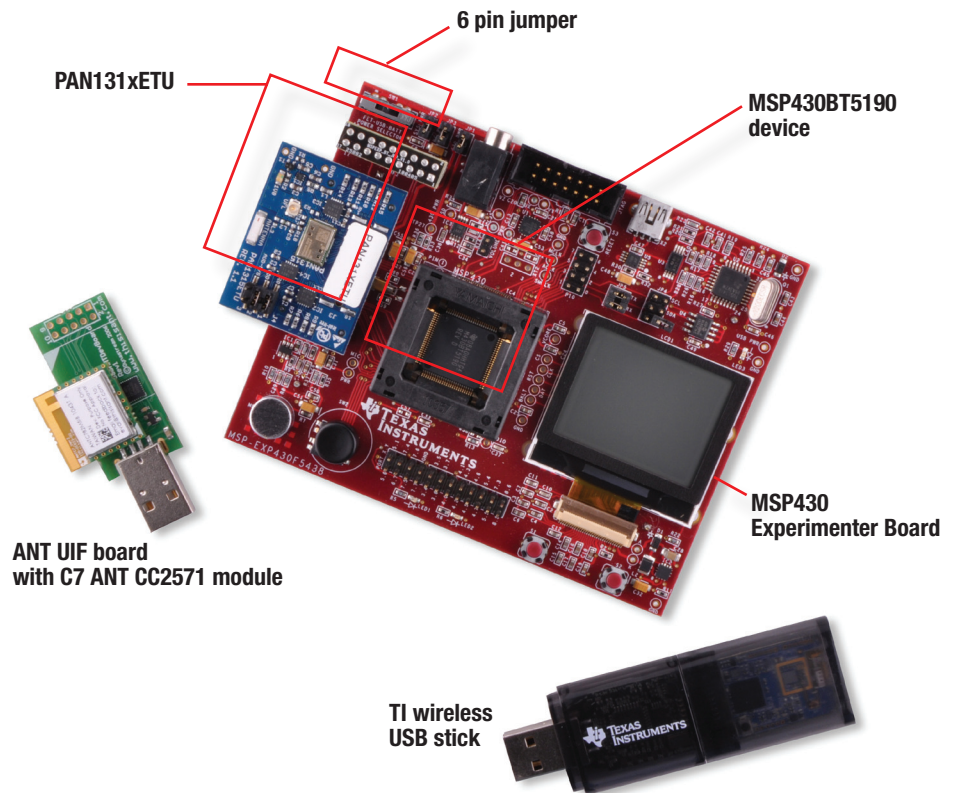
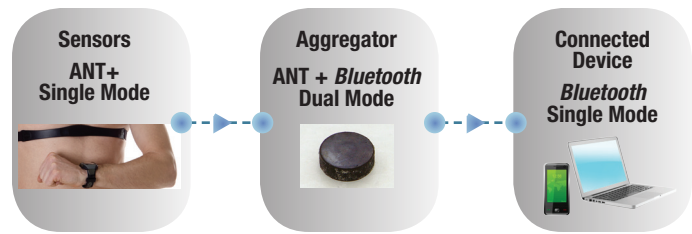


Hardware and software development

CC2567-PAN1327ANT-BTKIT

ANT and Bluetooth Health & Fitness Aggregator Kit

- The kit allows customers to develop with ANT and *Bluetooth* systems
- The tool includes:
 - Sensor simulation
 - ANT UIF board - USB stick
 - C7 ANT Module - based on CC2571
 - Aggregator
 - PAN131xETU
 - MSP430 Experimenter Board
 - MSP430BT5190 device
 - 6 pin jumper
 - *Bluetooth* connection to PC
 - TI wireless USB stick
- Customers will also need to have MSP-FET430UIF MSP430 USB Debugging Interface
- Users may download the MindTree EtherMind *Bluetooth* stack with SPP and the ANT+ software with sample applications running on FreeRTOS
- The combination of sample applications in source format and the peripheral rich experimenter board makes this platform a versatile tool for extensive prototyping and easy development of applications that require *Bluetooth* and ANT connectivity



MindTree EtherMind™ Bluetooth Stack

- EtherMind *Bluetooth* SDK is supported on the CC2567-PAN1327ANT-BTKIT
- Quickly evaluate EtherMind *Bluetooth* software protocol stack and SPP and implement applications using it
- SPP allows for reception and transmission of generic data streams enabling cable replacement
- Pre-integrated into MSP430BT5190 with FreeRTOS
- Sample applications show turning *Bluetooth* on, discovery, inquiry, pairing, receive/transmit data over SPP, get and transmit RF parameters
- Compact stack enabling sufficient RAM and Flash headroom for custom application development over *Bluetooth* SPP

Platform partners

- Panasonic - RF modules and design services

www.panasonic.com/ti

Panasonic

- MindTree - Software and design services

www.mindtree.com



- ANT – Leading ULP ANT Protocol and ANT+ Interoperable Standard

www.thisisant.com



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