

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

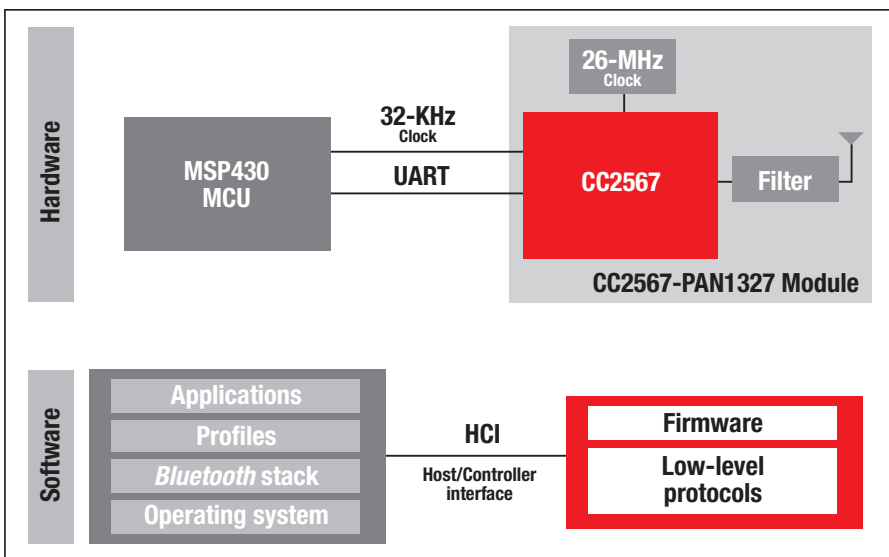
Key features:

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



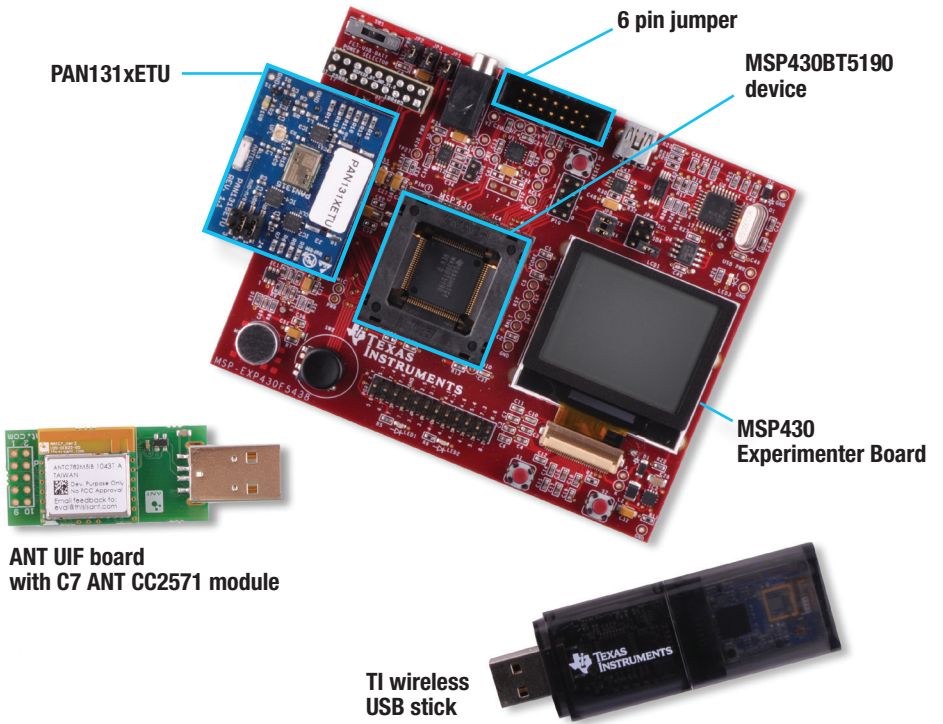
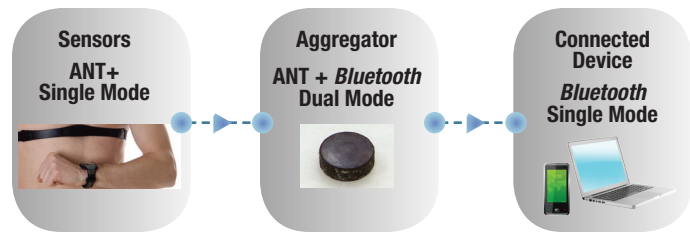
▲ CC2567-PAN1327 *Bluetooth* + ANT system

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

Important Notice: The products and services of Texas Instruments Incorporated and its subsidiaries described herein are sold subject to TI's standard terms and conditions of sale. Customers are advised to obtain the most current and complete information about TI products and services before placing orders. TI assumes no liability for applications assistance, customer's applications or product designs, software performance, or infringement of patents. The publication of information regarding any other company's products or services does not constitute TI's approval, warranty or endorsement thereof.

The platform bar and MSP430 are trademarks of Texas Instruments. The *Bluetooth* word mark and logos are owned by the *Bluetooth* SIG, Inc., and any use of such marks by Texas Instruments is under license. All other trademarks are the property of their respective owners.

A042210

