

## NEW! PAN1327/1317 SERIES BLUETOOTH® HIGH TEMPERATURE MODULES

### Dual-Mode ANT™ and Wireless Bluetooth® Connectivity

Introducing Panasonic's newest breakthrough in wireless networking, the PAN1327/1317 Series RF Modules featuring both Dynastream's ANT wireless protocol and Bluetooth connectivity. This powerful new technology combination creates a low cost, ultra-low power wireless networking solution for short range applications.

The ANT protocol is perfectly suited for low data rate sensor network topologies in personal area networks (PANs) and practical wireless sensor networks (WSN's). The PAN1327/1317 provides a building block for ANT+™ devices, allowing the creation of interoperable products through implementation of ANT+ device profiles. ANT+ managed network software facilitates the collection, automatic transfer and tracking of sensor data for monitoring personal wellness information. ANT applications are most commonly found in sports and low power medical devices.

The PAN1327/1317 Host Controlled Interface (HCI) Series also brings Texas Instrument's CC2567, to an easy-to-use module format. Panasonic's tiny footprint technology offers a module of only 85.5 mm<sup>2</sup> 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.



### Product Performance:

- Best-in-class Bluetooth RF performance (Tx power, Rx sensitivity, blocking)
- Fully Qualified Bluetooth v4.0 EDR
- Dimensions PAN1327: 9mm x 9.5mm x 1.8mm} (width x length x height)
- Dimensions PAN1317: 6.5mm x 9mm x 1.7mm (width x length x height)
- Certifications: Bluetooth, FCC, IC and CE
- Operating Temperature Range: -40°C to +85°C
- Supply Voltage Range: 1.7 - 4.8V
- Profiles: SPP, A2DP and AVRCP
- Based upon TI's CC2567
- Integrates with TI's ultra low-power MSP430 microprocessor
- Very fast algorithm for both ACL and eSCO
- Supports Extended Range Tx power with 10dBm typical output
- Low power scan method for page and inquiry scans at 1/3rd normal power

### PAN1327 and 1317 Part Numbers:

Part Numbers	Description
ENW-89827A2KF	PAN1327, CC2567, Bluetooth & ANT, HCI module, antenna
ENW-89827C2KF	PAN1317, CC2567, Bluetooth & ANT, HCI module, no antenna

### Development and Evaluation Part Numbers:

Part Numbers	Description
ENW-89825A2JF	PAN1323ETU, Development Module for PAN1315, PAN1316, PAN1317, PAN1325, PAN1326, PAN1327
EVAL_PAN1323	EVAL_PAN1323, Development Kit for PAN1315, PAN1316, PAN1317, PAN1325, PAN1326, PAN1327

## Interfaces:

The PAN1327/PAN1317 Host Controlled Interface supports several transport layers with the following features:

- UART Rates of up to 4Mbps
- Three and Four Wire UART Transport

## Applications:

- Sports and Fitness
  - Heart Rate Monitor
  - Blood Pressure Sensor
  - Blood Glucose Meter
  - Thermometer
- Industrial Sensors
- Toys
- Entertainment Devices
- Mobile Accessories
- All Bluetooth Wireless Applications
- Assisted Living
  - Flood Alarm
  - Heating Control
  - Automatic Key Control

## Bluetooth Module Pin Compatibility:

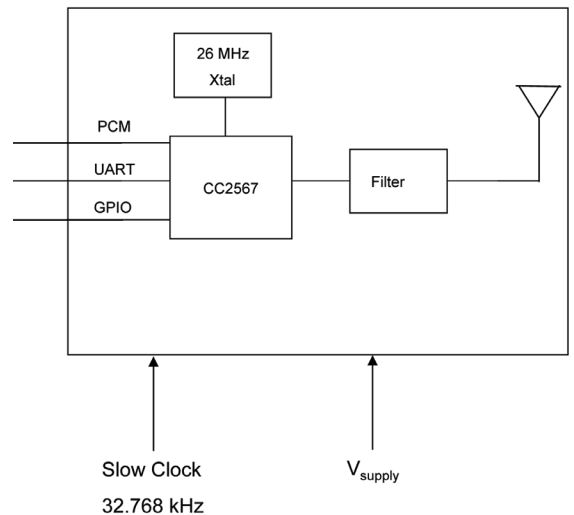
Series	Description	Compatibility
PAN1315A	BT Classic	100% Pin Compatible
PAN1316	BT and BLE	
PAN1317	Dual Mode BT and ANT	
PAN1325A	BT Classic with antenna	100% Pin Compatible
PAN1326	BT and BLE with antenna	
PAN1327	Dual Mode BT and ANT with antenna	

All Panasonic Bluetooth RF Modules are 100% pin compatible with the next generation of Bluetooth Classic and Low Energy devices. This unique design feature enables designers to seamlessly transition between Bluetooth Classic, Low Energy and ANT enabled modules, addressing larger markets and providing migration paths to circumvent obsolescence.

## Technical Specifications for PAN1327 and PAN1317:

Parameter	Value	Condition / Notes
Receiver Sensitivity (BER=10 <sup>-3</sup> )	-93 dBm	GFSK, Typical, Dirty TX On
Output Power	10 dBm	VDD_In = VBAT
Power Supply	1.7 - 4.8 V	Battery or DC/DC
Ultra Low Power Scan	135 uA	1.28s Interval
GFSK DH1\DH5	33 mA	Full Throughput
Operating Temperature Range	-40°C to + 85°C	

## Block Diagram PAN1327:



## Block Diagram PAN1317:

