

# Panasonic

## NEW! PAN1323 SERIES **BLUETOOTH**<sup>®</sup> HIGH TEMPERATURE MODULES

### Three Standards, One Small Module!

One highly flexible RF Module, three popular standards: Bluetooth Classic, Bluetooth Low Energy and ANT<sup>™</sup>. Panasonic introduces the **NEW PAN1323 Series Triple Mode RF Module** with embedded antenna. The **PAN1323 Series** provides easily integrated Bluetooth Version 4.0 and ANT connectivity into new and current designs by removing RF design and certification barriers from the development of the application. **Gain unprecedented access using this three mode gateway module that can connect 14 Million ANT nodes to over 3 Billion Bluetooth nodes.** Use Bluetooth EDR to manage large data requirements while taking advantage of extraordinary battery life using ultra lower network technology found in Bluetooth Low Energy and ANT for small data loads.

Designers can reduce the size and cost of applications using Panasonic's unique, tiny footprint technology. Just 85.5 mm<sup>2</sup>, this family of modules are designed to accommodate PCBs with pad pitch of 1.3mm with as little as two layers for easy implementation and manufacturing. **PAN1323 Series** Modules have a Bluetooth subsystem, FCC, CE, (ETSI) and IC certifications.

The **NEW PAN1323 Series** is based upon Texas Instrument's CC256x integrated circuits and uses a host controlled interface (HCI), a cost effective and flexible means to implement a Bluetooth network. HCI reduces BOM cost by eliminating redundant processing capacity and giving designers the flexibility to work with a controller of their choosing, as the stacks reside and execute on the application's host processor. The **PAN1323 Series** is pad compatible with Panasonic's PAN1325A, PAN1326 and PAN1327 Series. A single PCB layout allows the flexibility of different protocol functionality implemented with only firmware.

### Product Performance:

- A Single Module for Three Standards: Bluetooth Classic, Bluetooth Low Energy and ANT<sup>™</sup>.
  - Bluetooth Version 4.0
  - ANT<sup>™</sup> is a wireless sensor network protocol designed for ultra-low power applications
  - Bluetooth Low Energy average power consumption is about 1 uA.
- Cost Effective and Flexible HCI Interface
- Extraordinary Range with 10 dbm of Tx Power
- Easily Integrates to Texas Instruments' MSP430 and Stellaris ARM7 Controllers
- Small Footprint: 9mm x 9.5mm x 1.8mm
- Fully Certified, Bluetooth v4.0, FCC, CE and IC
- Complete Development Environment
- 100% Footprint Compatible with PAN13xx Series
- Industrial Temperature Rating -40°C to +85 °C
- Supports All Bluetooth Profiles
- Compatible with 14 Million Deployed ANT Nodes

### PAN1323 Part Number:

Part Numbers	Description
ENW-89842A2KF	Bluetooth, PAN1323, Triple Mode with 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

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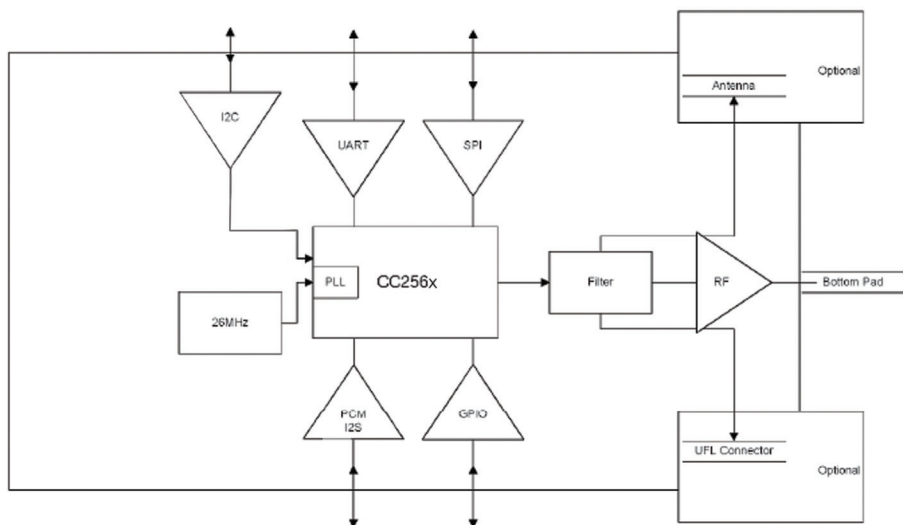


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## Applications:

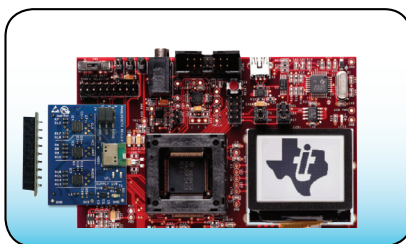
- Health and Wellness
  - Heart Rate Monitor
  - Blood Pressure Sensor
  - Blood Glucose Monitor
  - Thermometer
- Sports and Fitness
  - Fitness Equipment
  - Bicycle Computer
  - Cadence
  - Power Meter
  - Pedometer
- Home Automation
  - Flood Alarm
  - Lighting Control
  - HVAC Monitoring and Control
- Gateways
- Industrial Sensors
- Mobile Accessories
- Irrigation

## Block Diagram PAN1323:

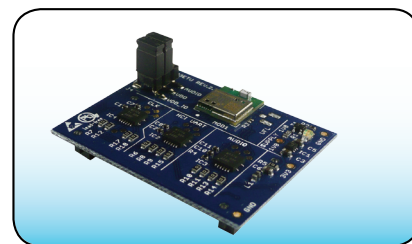


## Evaluation Kits:

### EVAL\_PAN1323



### EVAL\_PAN1323\_ETU



## Technical Specifications for PAN1323:

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	

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