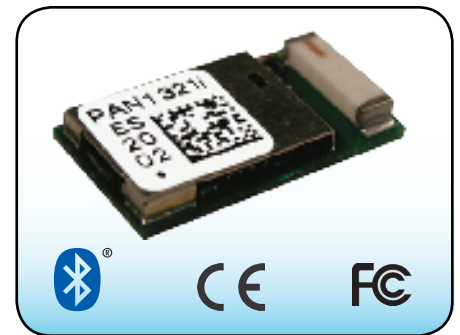


NEW! PAN1321i SERIES BLUETOOTH® RF MODULE

Wireless Bluetooth Connectivity Compatible with Apple® and Android™ Devices

Introducing the **NEW PAN1321i Series Bluetooth** RF Module compatible with Apple devices such as the iPod®, iPhone® and iPad®. The **PAN1321i Series** interfaces with the Apple authentication coprocessor and supports iPod Accessory Protocol (iAP) to enable *Bluetooth* Serial Port data communication¹ with *Bluetooth* enabled Apple devices. The **PAN1321i Series** wireless *Bluetooth* connectivity also includes compatibility with Android, smart phones and most *Bluetooth* enabled devices².

This New Series of *Bluetooth* RF Modules is a highly integrated, cost engineered solution for *Bluetooth* applications using Serial Port Profile (SPP). The **PAN1321i Series** is a comprehensive *Bluetooth* system solution, with an integrated controller, GPIO, AT Command Set Application Program Interface (API), antenna, *Bluetooth* transceiver, SPP Profile, FCC and IC certifications and *Bluetooth* end product listing. Using Panasonic's exclusive "tiny footprint" technology, incorporating a Surface Mount Device (SMD) Land Grid Array (LGA) package, the **PAN1321i Series** is just 15.6 mm by 8.7 mm! A fully shielded case protects the transceiver from nearby RF emitters, simplifying PCB layout. The **PAN1321i** is qualified to the *Bluetooth* 2.0 standard.



The **NEW PAN1321i** is ideal for all applications migrating from USB or RS232 to wireless. The integrated *Bluetooth* SPP is easily accessed using a simple AT command set. Evaluation and Development Kits are available.

Product Performance:

- Supports iPod Accessory Protocol (iAP)
- Supported Profiles: RFCOMM, SPP device A and B
- Complete *Bluetooth* 2.0 + EDR solution
- Dimensions: 15.6 x 8.7 x 2.8 mm³
- Ultra low power design
- Certifications: *Bluetooth*, FCC, CE and IC
- No external components needed
- Operating Temperature Range: -40°C to +85°C
- On-module voltage regulator. External supply 2.7-3.6V
- Integrates ARM7TDMI, RAM and patchable 256k EEPROM (for device configuration data and application)
- Based upon Infineon's PMB8753/2
- Reference clock included
- Low power clock from internal oscillator or external low power clock

PAN1321i Part Number:

Part Numbers	Description
ENW-89811A6KF	PAN1321i, <i>Bluetooth</i> Module v 2.0, EDR, SPP, with antenna
EVAL_PAN1321i	PAN1321i Evaluation Kit

1. Apple authentication coprocessor and MFI certification is required.
2. Connectivity requires that devices support Bluetooth Serial Port Profile.

Apple, iPod, iPhone and iPad are registered trademarks of Apple Inc.
Android is trademark of Google Inc.

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Interfaces:

The PAN1321i Serial Port Profile Interface supports:

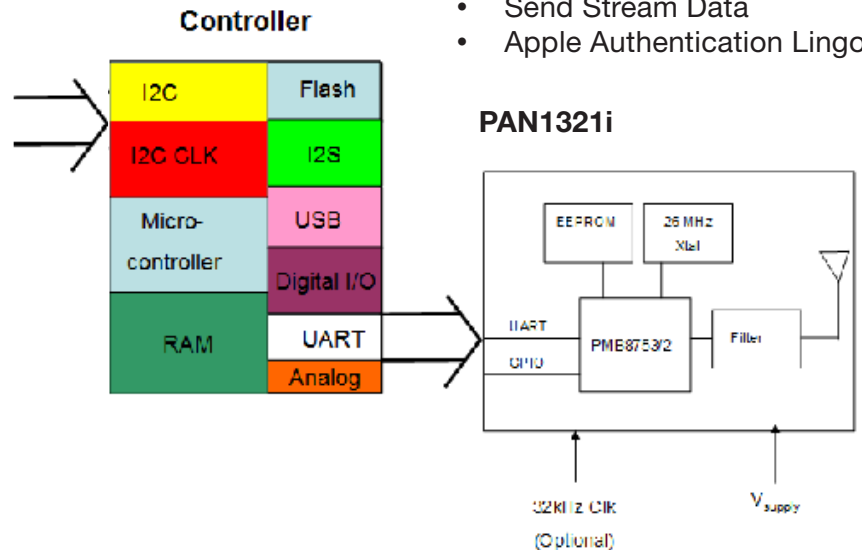
- 3.25 MBuad UART
- General purpose I/Os with interrupt and wake-up capabilities
- JTAG for boundary scan and debug

Applications:

- Most Wireless Applications
- Smart Phones
- Proximity
- Find Me
- Heart Rate Monitor
- Generic I/O
- HVAC
- Battery Monitor

Block Diagram PAN1321i:

Apple Authentication Coprocessor



PAN1321i Init Commands

- Make Discoverable
- Register Local Service
- Auto Accept Requests
- Connect Request
- Send Stream Data
- Apple Authentication Lingo

Compatibility Comparison:

Bluetooth RF Module Series	Compatibility with Apple devices	Compatibility with Android devices
PAN1321i	•	•
PAN1321		•

Technical Specifications for PAN1321i:

Parameter	Value	Condition / Notes
Receiver Sensitivity (BER=10 ⁻³)	-86 dBm	Ideal signal
Output Power	+3 dBm	@ 50 Ohm antenna pin
Power Supply	2.7 - 3.6 V	Single operation voltage
Ultra Low Power Scan	80 uA	T = 25°C
ACL (Transmit 3-DH1)	40 mA	Enhanced Data Rate, 531.2 kb/s ⁽¹⁾
ACL (Receive 3-DH1)	37 mA	Enhanced Data Rate, 531.2 kb/s ⁽¹⁾
Operating Temperature Range	-40°C to + 85°C	

(1) Figure indicates maximum possible data rate with this packet type. Total throughput depends on application and interface setting.

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