Embedded Bluetooth Low Energy & NFC Combo Module PAN1761

Panasonic

OUTLINES

The PAN1761 supports both Bluetooth Low Energy (LE) 4.1 and NFC – NFC Forum Type 3 compliant tag – based on leading edge Toshiba SOC. The unique configuration of the PAN1761 allows NFC to wake up BLE from standby using an NFC field and automatically initiate a Bluetooth connection. Highly secure Bluetooth connections are created using NFC to exchange link keys. Bluetooth LE applications with extended battery life are possible as a result of zero power consumption in standby mode. A remote device may independently create a wake up signal with neither host control nor local battery consumption. Embedded microcontroller access and 32KB EEPROM is available for autonomous stand-alone operation.

Unique combination of Bluetooth LE and NFC

- NFC wakeup for products with zero standy power consumption
- Added security with BT pairing via NFC “Out-of-band pairing”
- Android APK available for NFC pairing
- Select Bluetooth nodes individually via NFC
- Start mobile apps automatically

Evaluation Kits

- PAN1761 EMK Starter Kit with NFC Antenna available
- SDK Demo project with NFC example
- SDK Library for “Out-of-band pairing”
- Android App as example application and source code

General Features

- Same form factor and footprint as PAN1026 and PAN1760
- Integrated 2.4GHz Antenna, NFC Antenna external (Antenna Pin)
- Compliant with NFC Forum Tag Type 3 for easy pairing initialization and transfer of small amounts of data (ISO/IEC18092)
- Bluetooth 4.1 (LE) embedded GATT profile with high level API commands, compatible to Toshiba reference BLE profiles
- Small 15.6 x 8.7 x 1.8 mm³ SMD package
- Operation as host-less, stand alone with 32KB available for applications
- Standard SIG BLE and “SPP over BLE” profiles available
- Plug-in for Bluetooth Developer Studio available

Bluetooth 4.1

- Support for Over the Air Update (OTA) and Scatternet
- GAP central and peripheral support for LE

MODULES WIRELESS
Panasonic Industrial Devices Europe GmbH

Design and Specifications are subject to change without notice. Ask the factory for technical specifications before purchase and/or use. If there is any doubt regarding the safety of this product, kindly inform us immediately for technical consultation.

Hardware Status:
Engineering Samples

APPLICATIONS

- Diagnostic and maintenance systems with requirement for zero standby power consumption
- Healthcare and medical diagnostic systems without human control interface
- Bluetooth Low Energy sensor applications, which need to send data on request
- Automotive Aftermarket Products
- Industrial sensors and measurement devices

BLOCK DIAGRAM

TECHNICAL CHARACTERISTICS

Parameter 0,1% BER	Value	Condition / Note
Receiver Sensitivity (30.8% PER)	- 90 dBm	@ 500 kpbs / MSK (high-gain mode)
Output Power	0 dBm	Maximum setting
Power Supply	1.8V - 3.6V	Single operation voltage
Transmit and Receive Mode	5,5 mA	typ. Bluetooth Tx mode
Low Power Mode	<1 µA	
Operating Temperature Range	-40C / +85C	Industrial Range