

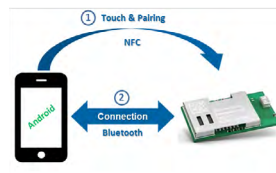
Embedded Bluetooth Low Energy & NFC Combo Module PAN1761

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 standby 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
- PAN1761 ETU and EasyNFC planned for Q3/2016
- SDK Demo project with NFC example
- SDK Library for “Out-of-band pairing”
- Android App as example application and source code

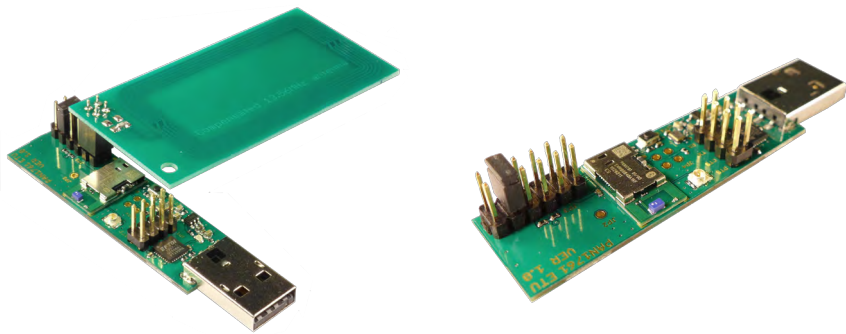
General Features

- 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 1.9 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

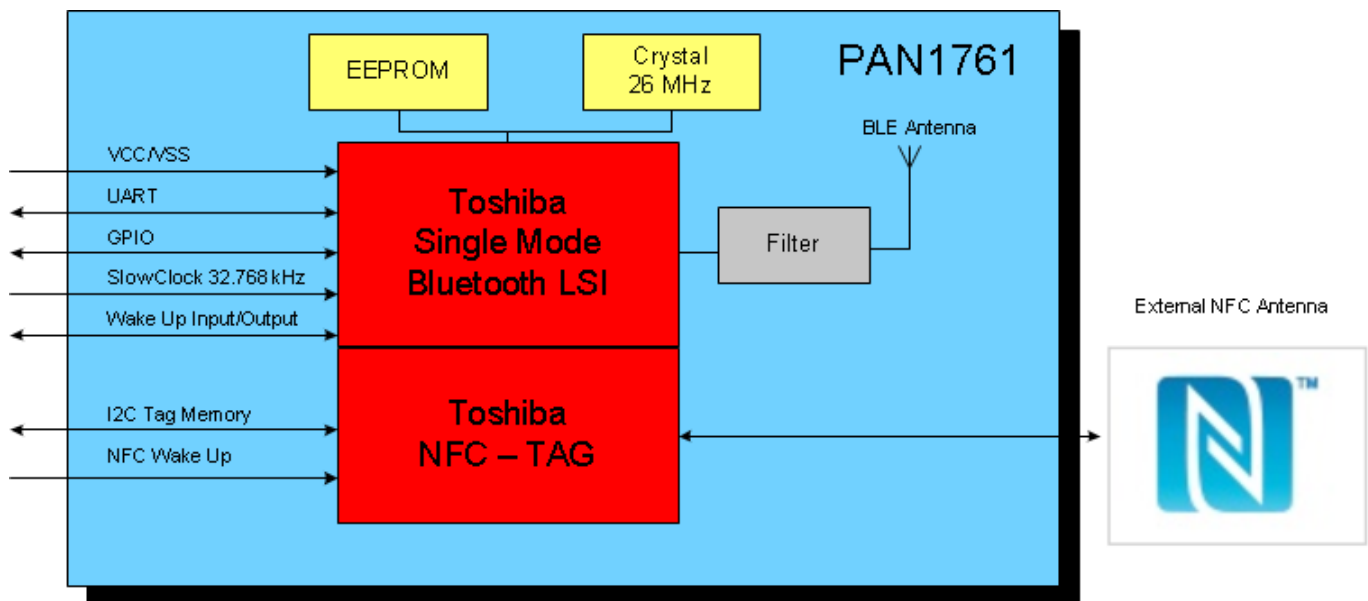
MODULES
Panasonic Industrial Devices Europe GmbH
WIRELESS



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 (1% PER)		- 91 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		5,4mA	peak Bluetooth Tx mode
Low Power Mode		<1 μ A	
Operating Temperature Range		-40C / +85C	Industrial Range