

PAN 1761 Bluetooth Low Energy & NFC Combo Module

Panasonic



[SUMMARY]

The PAN1761 is based on Toshiba's single chip TC35670 Bluetooth semiconductor device with embedded Toshiba Bluetooth 4.1 LE stack, GATT profile and a NFC Forum Type 3 compliant NFC tag. Peak power consumption of only 5.8 mA in Tx mode allows advanced wireless functionalities in IoT, medical, and industrial applications without compromising battery life. Additionally NFC allows products to wake up from zero standby power consumption to full Bluetooth operation. Furthermore NFC allows the exchange of Bluetooth security credentials enabling highly secure Bluetooth connections.

The PAN1761 can either be operated in Hosted mode for very simple integration of Bluetooth connectivity into existing products, or in Stand-Alone mode, where 24 kB RAM is available for the user application. The PAN1761 and the PAN1026 share the same footprint.

When migrating from PAN1026 only minor code changes are required. Previously developed software (Bluetooth Low Energy profiles and applications) can be easily migrated with a minimal effort.

FCC, IC, and CE approval are available.

[FEATURES]

- Small 15.6 mm x 8.7 mm x 1.9 mm SMD module
- Same form factor and pinout as PAN1026, PAN1760, and PAN1760A
- Bluetooth Low Energy (BLE) 4.1 compliant
- 32 kB EEPROM memory and 24 kB internal RAM
- Host mode, Stand-Alone mode
- Standard SIG BLE profiles as well as *SPPoverBLE* profile
- UART, I2C & SPI interface

[BLUETOOTH]

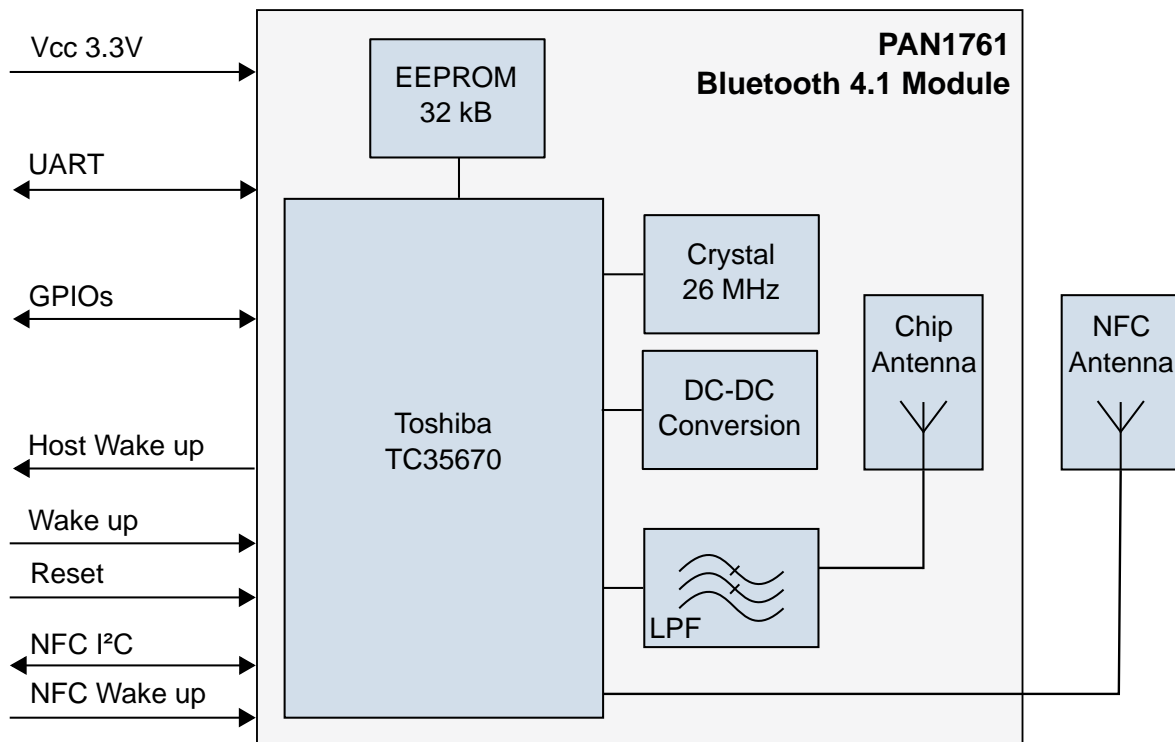
- GAP central and peripheral support for LE
- GATT, SMP, and SDB support for LE
- Support for Over-the-Air update
- Support for Scatternet/Mesh network
- Frequent changing of device address (improved privacy)
- Larger packet sizes (more efficient application, network layer security)

[NFC]

- Almost zero power consumption in standby mode, using NFC wake up
- Dedicated Bluetooth partner selection by simple device approximation
- Support for true out-of-band Bluetooth pairing

WIRELESS MODULES
Panasonic Industrial Devices Europe GmbH

[BLOCK DIAGRAM]



[CHARACTERISTICS]

- Receiver sensitivity -91 dBm typ.
- Output power 0 dBm maximum setting
- Power supply 1.8 V to 3.6 V single operation voltage
- Transmit power consumption @0dBm 5.8 mA
- Low Power 5 μ A Sleep mode
- 32 kB EEPROM memory
- NFC Forum Type 3 compliant NFC tag (external antenna)
- Operating temperature range -30 °C to +85 °C