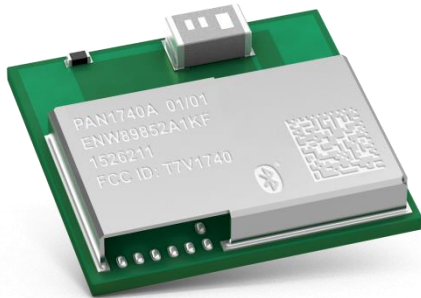# PAN1740A
Bluetooth® 5.0 Low Energy Module

Panasonic

[OVERVIEW]

The PAN1740A is an optimized version of the PAN1740, offering a reduced boot time and supporting up to 8 connections to allow greater flexibility to create more advanced applications. It has a fully integrated radio transceiver and baseband processor for Bluetooth® 5.0 Low Energy.

It can be used as a standalone application processor or as a data pump in hosted systems. The device is optimized for remote control units (RCU) requiring support for voice commands and motion/gesture recognition. Its integrated Audio Unit (AU) offers easy interface for MEMS microphones over PDM, external codecs over PCM/I2S and a Sample Rate Converter unit.

The Bluetooth Low Energy firmware includes the L2CAP service layer protocols, Security Manager (SM), Attribute Protocol (ATT), the Generic Attribute Profile (GATT) and the Generic Access Profile (GAP). All profiles published by the Bluetooth SIG as well as custom profiles are supported. The transceiver interfaces directly to the antenna and is fully compliant with the Bluetooth 5.0 standard. The PAN1740A has dedicated hardware for the Link Layer implementation of Bluetooth Low Energy and interface controllers for enhanced connectivity capabilities.

The predecessor PAN1740 shares the same small form factor footprint and is compatible in the SDK.

FCC, IC and CE approval are under preparation.

[FEATURES]

- Pre-programmed BT/MAC address
- Includes 16 MHz and 32 768 kHz crystal calibrated up to 1 ppm
- Single-mode Bluetooth 5.0 System-on-Chip
- Programmable ARM CORTEX M0 CPU
- Autonomous BTLE stand-alone operation
- Bluetooth v5.0 embedded GATT– Low Energy single mode
- Small 9.0 mm x 9.5 mm x 1.8 mm SMD package with antenna
- Less than a few µA in low power modes
- Integrated shielding to resist EMI
- No external components needed

WIRELESS MODULES
Panasonic Industrial Devices Europe GmbH

[BLOCK DIAGRAM]
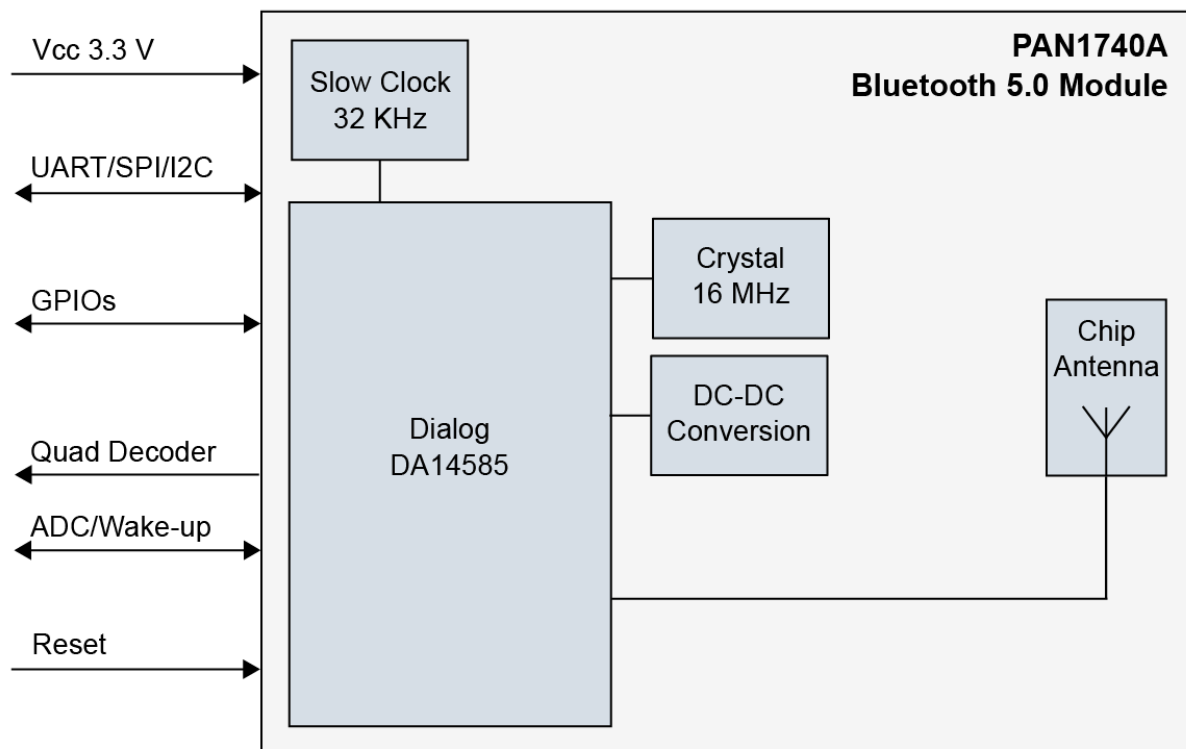
[BLUETOOTH]

- Complies to the Bluetooth 5 core specification
- Suitable for Bluetooth Mesh
- Dialog Serial Port Service (DSPS) for easy UART communication

[TECHNICAL CHARACTERISTICS]

- Peak power consumption 4.9 mA Rx and Tx
- Link budget 93 dBm (Rx sensitivity -93, Tx 0 dBm)
- Operating temperature range -40 °C to +85 °C
- Integrated One-Time-Programmable memory 64 kB
- Extended user RAM (96 kB)