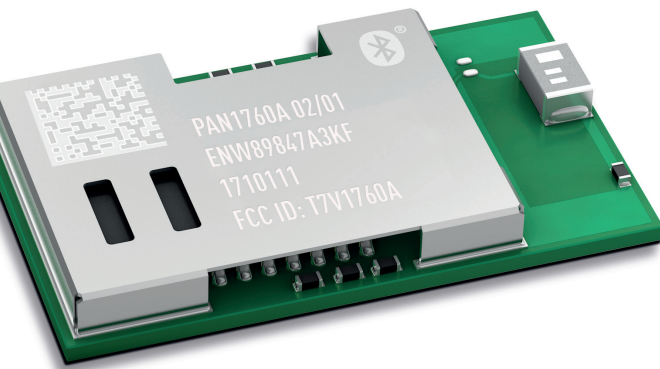


## PAN1760A – THE LOWEST POWER CONSUMPTION ON THE MARKET



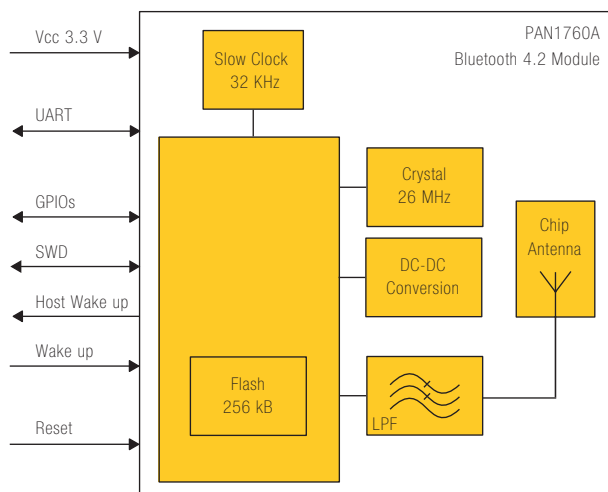
Bluetooth Low Energy Module  
PAN1760A

PAN1760A is Panasonic's next generation Bluetooth module which is based on industry's lowest power Bluetooth Low Energy SoC from Toshiba.

The peak power consumption in Tx and Rx mode is only 3.3 mA, in Deep Sleep mode even only 50 nA. Therefore the module is recommended for applications where low power consumption is essential, like diagnostics and maintenance systems, medical healthcare and sensor applications, or automotive aftermarket products.

The module embeds a 256 kB flash memory and a 192 kB RAM. 83 kB RAM are free configurable for user application. In Stand-Alone mode, the PAN1760A can be used for many applications without the need for an external processor, saving cost, complexity, and space.

As a small SMD module (15.6 x 8.7 mm) with integrated Bluetooth antenna, PAN1760A supports all features of Bluetooth v.4.2, and even the mandatory features of Bluetooth v.5.0. Solutions for mesh networks and extended security features are given.



### FEATURES

- Small 15.6 x 8.7 x 1.9 mm SMD module
- Same form factor and pinout as PAN1026, PAN1760, and PAN1761
- Bluetooth Low Energy 4.2 compliant
- Embedded 256 kB flash memory and 192 kB internal RAM
- 83 kB RAM available for user application
- AT Command mode, Host mode, Stand-Alone mode
- Standard SIG BLE profiles as well as SPPoverBLE profile
- UART (2x), SPI & I2C interface, PWM output (4x), ADC (5 ext, 1 int), 17 programmable I/O
- ARM Cortex-M0 processor with Single Wire Debug (SWD) interface

### BLUETOOTH

- GAP central and peripheral support for LE
- GATT, SMP, and SDB support for LE
- Over-the-Air firmware update
- Support for Scatternet/Mesh network
- BT 4.2 secure connections support through Elliptic-Curve-DH Cryptography
- AES-128 hardware encryption (FIPS-approved)
- Frequent changing of device address (improved privacy, reduced tracking ability)
- Larger packet sizes (more efficient application and network layer security)

### CHARACTERISTICS

- Receiver sensitivity -93 dBm typ
- Output power 0 dBm maximum setting
- Power supply 1.8 V to 3.6 V single operation voltage
- Transmit and receive 3.3 mA Tx/Rx peak power consumption
- Low Power 50 nA Deep Sleep mode
- Operating temperature range -40 °C to +85 °C