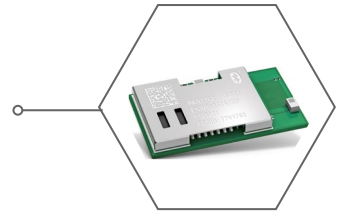


## New Product Introduction

# PAN1762 Series *Bluetooth*<sup>®</sup> 5.0 Low Energy RF Module

## Panasonic's New Bluetooth 5.0 Low Energy RF Module Based On The Toshiba TC35680 Single-Chip Controller



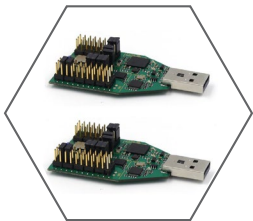
Introducing Panasonic's **NEW PAN1762 Series RF Module!** The **PAN1762 Series** is Panasonic's Bluetooth 5.0 Low Energy RF Module based on the Toshiba TC35680 single-chip controller.

The new Bluetooth 5.0 features with the **NEW PAN1762** enable a higher symbol rate of 2 Mbps using the high-speed 2M PHY or a significantly longer range using the LE coded PHY at 500 kb/s or 125 kb/s. The new channel selection algorithm improves the performance in environments which are busy at 2.4 GHz. Furthermore, the new LE advertising extensions allow for much larger amounts of data to be broadcast in connectionless scenarios and are therefore favorable for beacon and mesh applications.

A high output power of up to 8 dBm (target value) and the industry leading sensitivity of the TC35680 in combination with the LE coded PHY make the module very attractive in applications, where a long range is required.

In addition, the ultra-low current consumption of the **NEW PAN1762 Series** makes this RF Module an ideal choice for Battery powered devices. Additionally, various sleep modes can be used to minimize power consumption and prolong Battery life time.

To provide maximum flexibility, the **NEW PAN1762 Series RF Module** can be operated in hosted as well as stand-alone mode. With the build-in 128 kB flash memory, the **NEW PAN1762 Series RF Module** can easily be used in user-app mode, thereby eliminating the need for an external processor, saving complexity, space, and cost. FCC, IC, and CE approval are in preparation.



The **New PAN1762 Evaluation Kit** is an all-inclusive and comprehensive Evaluation Kit consisting of two USB dongles. Each dongle allows design engineers to develop, run and debug code. The break-out headers, provide an easy way to connect Sensors, as well as other devices for a rapid prototyping.

## General Features and Benefits

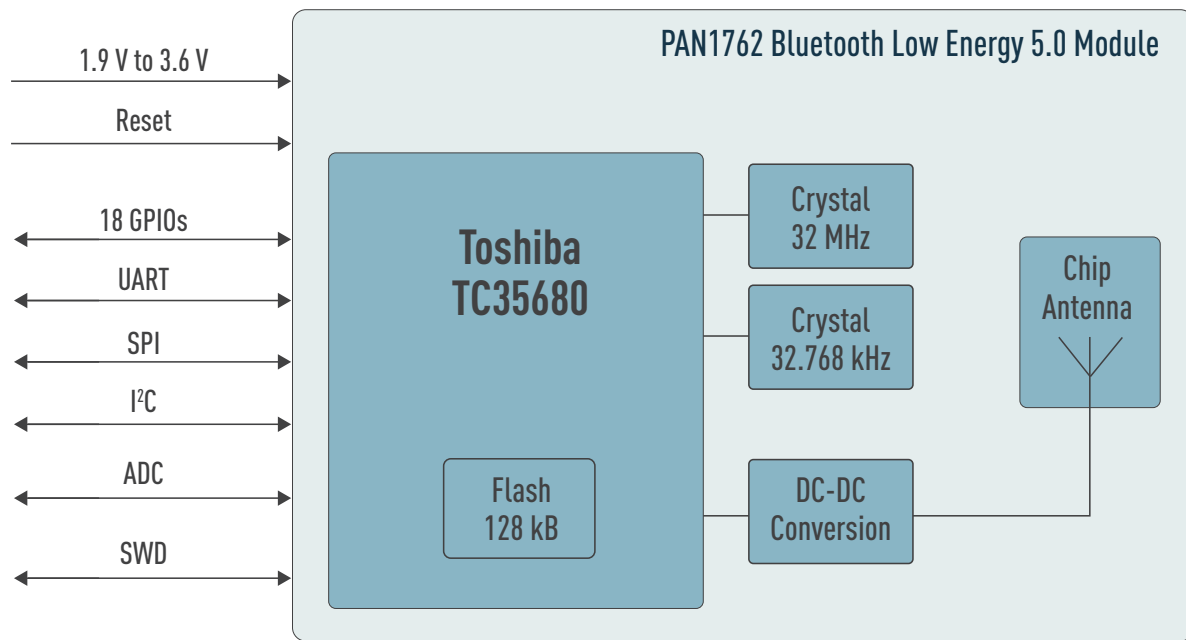
- Surface Mount Type Dimensions: 15.6 mm x 8.7 mm x 1.9 mm
- Host Mode, AT Command Mode or Stand-Alone Operation Mode
- 18 General Purpose IOs
- 2•SPI, 2•I<sup>2</sup>C, UART, PWM, Wake-Up Inputs, General Purpose ADC
- Toshiba TC35680 Featuring ARM<sup>®</sup> Cortex<sup>®</sup>-M0 (Selectable 16 MHz or 32 MHz Operation Frequency) with SWD Interface
- 128 kB Flash Memory and 128 kB Internal RAM For Application Code And Data Patches
- Bluetooth Stack In ROM, Flash Memory Available For Application



## Part Numbers

Part Number	Description	Series Number
ENW-89853A1KF	Bluetooth Low Energy 5.0 RF Module	PAN1762
ENW89853AWKF	2x USB Sticks In ESD Bag	PAN1762 Evaluation Kit

## Block Diagram



## Bluetooth®

- 2Mbps High-Speed PHY, LE Long Range Coded PHY
- LE Advertising Extensions (Advertising On 40 Channels Total)
- Channel Selection Algorithm #2
- LE Secure Connections
- Over-The-Air Update Of System Software
- Advertising Function Without CPU Wake-Up And Interaction
- Bluetooth SIG Certified Mesh Stack

## Technical Characteristics

- Target Sensitivity -94 dBm @ 1 Mb/s and -105 dBm @ 125 kb/s
- Target Max. Output Power 8 dBm
- Target Typical Current Consumption Of 11 mA in TX (@ 8 dBm) And 5.1 mA In RX Mode
- Voltage Range: 1.9 V to 3.6 V
- Temperature Range: -40°C to 85°C