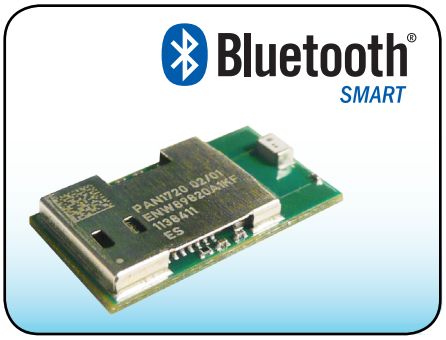
Panasonic
Electronic Components

New
Product
Introduction

NEW! PAN1720 SERIES *BLUETOOTH*® LOW ENERGY

Bluetooth Smart Low Energy RF Module with Antenna



Certifications Pending

Introducing the **NEW PAN1720 Series,** a complete *Bluetooth* 4.0 Low Energy solution. Modules in this Series include an embedded processor, antenna and *Bluetooth* Low Energy stack.

The **NEW PAN1720 Series** is a cost-effective, low-power, true system-on-chip (SoC) for *Bluetooth* Low Energy applications. The module includes an eight channel, twelve bit analog-to-digital converter, 19 GPIOs plus battery and temperature sensors. A single device for both *Bluetooth* Low Energy master or slave nodes. The **PAN1720 Series** combines an excellent RF transceiver with a high performance low power 8051 microcontroller, in-system programmable flash memory, 8-KB RAM, and many other powerful supporting features and peripherals.

The **PAN1720 Series** is an ideal choice for applications where battery life is a critical application requirement, using only 500 nA in sleep mode. Short transition times between operating modes – 3uS Wake-Up – and power efficient hardware further reduce current consumption.

Applications and *Bluetooth* Low Energy protocol stack from Texas Instruments, run on the **PAN1720 Series** to form a very flexible and cost-effective single-mode *Bluetooth* Low Energy solution.

Product Performance:

- *Bluetooth* 4.0 Compliant and *Bluetooth* Low Energy
- Dimensions: 14.5x 8.2 x 3 mm
- Supports User Developed Applications
- Texas Instruments' Stack or Optional *Blue*Radios™ Stack
- 256K Flash, 8K RAM
- Certifications: Bluetooth, FCC, IC and CE (Pending)
- 1Mbps Datarate
- Temperature Range -40°C to + 85°C
- Eight Channel 12-Bit ADC
- 19 GPIOs
- Battery Monitor and Temperature Sensor

PAN1720 Part Numbers:

Part Numbers	Description
ENW-89820A1KF	PAN1720, CC2540 *Bluetooth* Low Energy with 8051 Controller, Texas Instruments' Stack
ENW-89820A3KF	PAN1720, CC2540 *Bluetooth* Low Energy with 8051 Controller, *Blue*Radios™ Stack
EVAL_PAN1720	*Bluetooth*, PAN1720, Evaluation Kit, Includes Two PAN1720 USB Development Modules
EVAL_PAN1720-BR	*Bluetooth*, PAN1720, Evaluation Kit, Includes Two PAN1720 USB Development Modules, *Blue*Radios™ FW

Compatible Part Number:

Part Numbers	Description
ENW-89823A2JF	PAN1326, CC2564, *Bluetooth* & *Bluetooth* Low Energy, HCI module, antenna

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1-800-344-2112

Rev 1.0 PAN1720NPI, FY11-098-XXX

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Interfaces:

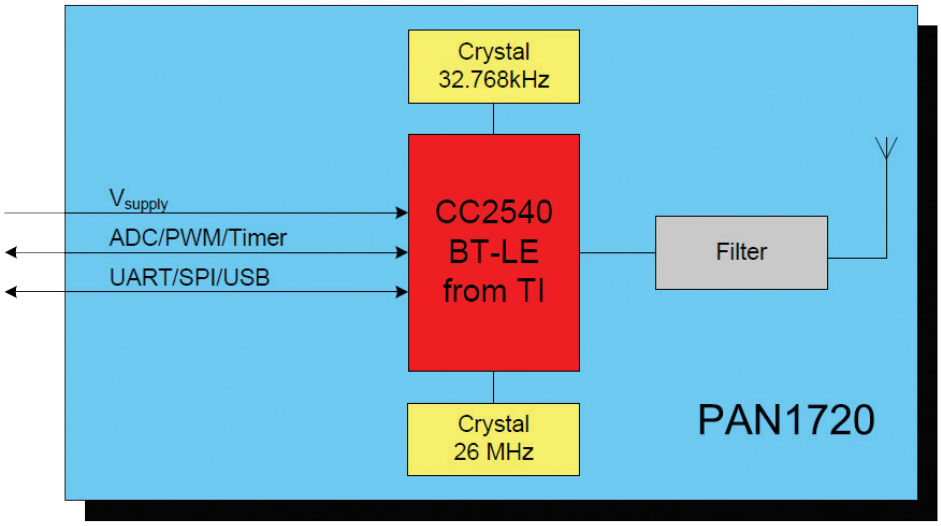
The PAN1720 Interface supports:

- Two Powerful USARTs with Support for Serveral Serial Protocols
- Full Speed USB 2.0 Interface
- 19 General-Purpose I/O Pins (17x4mA, 2x20mA)
- 12-Bit ADC with Eight Channels and Configurable Resolution

Applications:

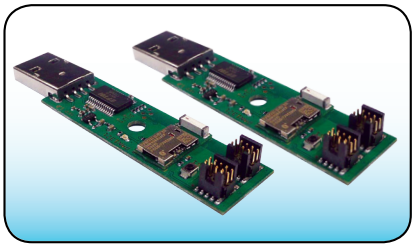
- 2.4 GHz *Bluetooth* Low Energy Systems
- Proprietary 2.4 GHz Systems
- Human Interface Devices
- Sports and Leisure Equipment
- Mobile Phone Accessories
- Consumer Electronics
- USB Dongles
- Health Care and Medical

Block Diagram PAN1720:



Evaluation Kits:

EVAL_PAN1720



EVAL_PAN1720-BR

Technical Specifications for PAN1720:

Parameter	Value	Condition / Notes
Receiver Sensitivity (1% PER)	-96 dBm	@ 500 kpbs / MSK (High-Gain Mode)
Output Power	+4 dBm typ.	Maximum Setting
Power Supply	2.0 - 3.6 V	Single Operation Voltage
Sleep Mode	0.5 uA	Power Mode 3 (Lowest)
Transmit Mode	40 mA	@ 0dBm (Peak Current)
Receive Mode	37 mA	Standard Mode
Operating Temperature Range	-40°C to + 85°C	Industrial Range

Panasonic ideas for life

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