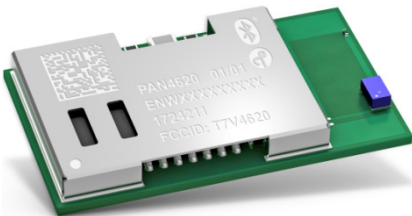


# PAN4620

## IEEE<sup>®</sup> 802.15.4 and Bluetooth<sup>®</sup> Low Energy Module

**Panasonic**



### OVERVIEW

The PAN4620 is Panasonic's Internet of Things dual mode module comprising NXP's Kinetis KW41Z SoC - a 2.4 GHz 802.15.4 and Bluetooth<sup>®</sup> Low Energy wireless radio microcontroller based on an ARM<sup>®</sup> Cortex-M0+ core.

To provide maximum flexibility, the module can be operated in standalone and hosted mode. With 512 kB flash memory and 128 kB SRAM the PAN4620 can easily be used as a standalone controller in very small and low power applications eliminating the need for an external processor, saving complexity, space and cost. But also the integration of 802.15.4 and/or BLE connectivity into existing applications can easily be achieved when using the PAN4620 in hosted mode.

Using the PAN4620 with a TX power consumption of 6.8 mA and an RX power consumption of 6.1 mA in combination with NXP's certified Thread<sup>®</sup> stack, BLE stack or a combination of both for concurrent operation allows to meet IoT application requirements without the need for a gateway.

Since Thread<sup>®</sup> does not define an application layer, various application layers can be used, such as dotdot, IoTivity, OpenDOF and others.

FCC, IC, CE and Thread<sup>®</sup> approval are under way.

### FEATURES

- Same form factor and compatible pinout for VCC, GND, Reset, UART, I<sup>2</sup>C and SWD as PAN1026, PAN1760, PAN1760A and PAN1761
- Single and concurrent operation of Thread<sup>®</sup> and BLE
- Open to various known application layers or proprietary solutions

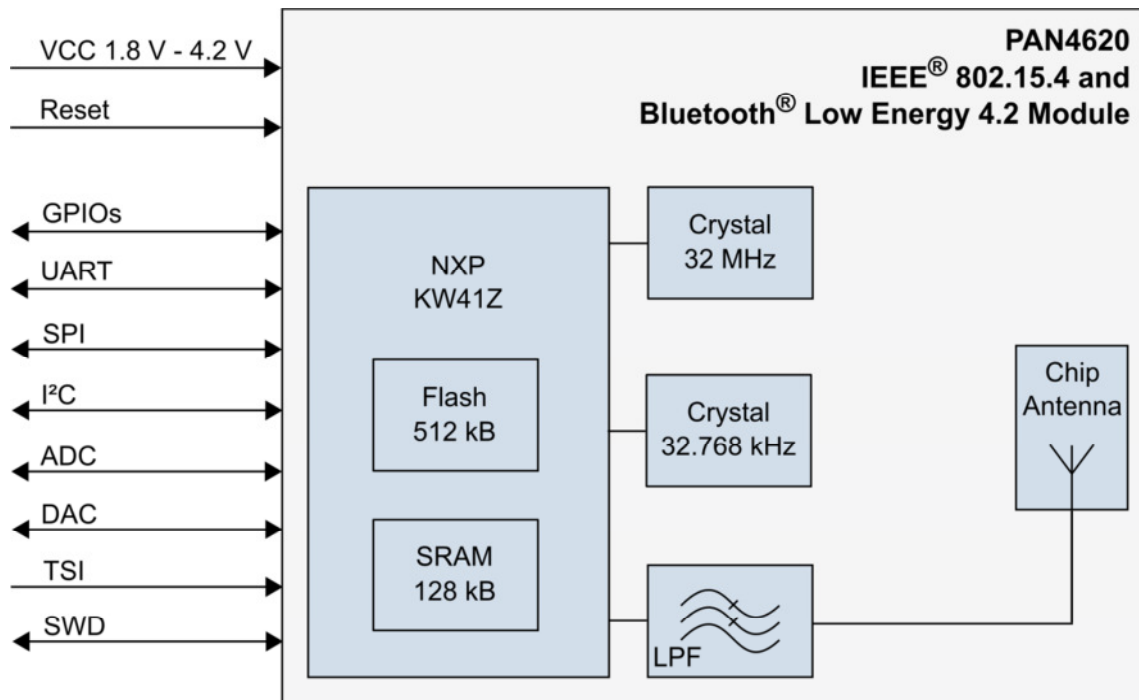
### 802.15.4

- IEEE<sup>®</sup> standard 802.15.4 compliant
- Supporting software consisting of 802.15.4 MAC/PHY implementation, Simple Media Access Controller (SMAC) and certified Thread<sup>®</sup> stack

### Bluetooth Low Energy

- Bluetooth<sup>®</sup> LE 4.2 compliant implementation certified by BT SIG
- Supporting software consisting of BLE host stack and profiles, BLE Mesh and IPv6 6LoBLE
- Bluetooth Developer Studio Plug-In

## BLOCK DIAGRAM



## CHARACTERISTICS

- Surface Mount Type (SMT) dimensions: 15.6 mm x 8.7 mm x 1.9 mm
- SoC: NXP<sup>®</sup> Kinetis<sup>®</sup> KW41Z – 2.4 GHz 802.15.4 and BLE 4.2 Wireless Radio Microcontroller
- Core: Up to 48 MHz 32 bit ARM<sup>®</sup> Cortex-M0+
- Memory: 512 kB of flash and 128 kB of SRAM
- Voltage range: 1.8 V to 4.2 V
- Temperature range: -40 °C to 85 °C
- Programmable transmitter output power: -30 dBm to 3.5 dBm
- Receiver sensitivity (BLE): -95 dBm
- Receiver sensitivity (802.15.4): -100 dBm
- Receiver current consumption (3.6 V supply): 6.8 mA
- Transmitter current consumption (3.6 V supply, 0dBm): 6.1 mA

## DEVELOPMENT TOOLS

A wide range of evaluation kits is available for all wireless modules. Please contact us for more information.

For more information about wireless connectivity products, software and documentation, please visit <https://eu.industrial.panasonic.com/products/wireless-connectivity>