Panasonic

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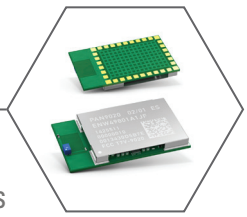
New Product Introduction

PAN9020/9010 Module

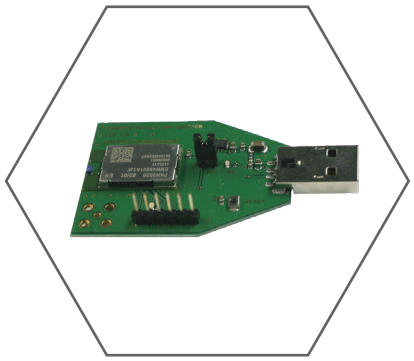
Wi-Fi Radio 802.11 b/g/n



PAN9020/9010 is a series of 2.4GHz ISM band wireless radio modules for implementing WLAN functionality into various electronic devices. The cost-effective, low-power operation, system-on-chip (SoC) solutions enable wireless network applications to be built with low total bill-of-material costs. The radio modules combine an excellent 802.11 wireless radio, baseband processor, medium access controller, encryption unit, boot ROM with patching capability, internal SRAM, in-system programmable flash memory and many other powerful supporting features and peripherals. The low-power operation is supporting deep sleep and standby modes by using the on-board power management unit. Layout design, calibration, and test efforts in production are reduced compared to discrete solutions, resulting in a precious advantage in terms of time-to-market. Panasonic offers a software package supporting various Fedora Core Kernel versions. The Hardware Interface Driver controls the hardware interface on the HOST side. Furthermore, the software package from Marvell® consists of various applications, demonstrations and utilities.

Features

- Surface Mount Type 22.75 x 13.5 x 2.4 mm³
- Wireless Local Area Network (WiFi) Technology
- Supports IEEE 802.11
  IEEE 802.11b/g Payload Data Rates
  IEEE 802.11n High-Throughput Data Rates
  IEEE 802.11i Security Standards AES-CCMP, WEP, TKIP, AES-CMAC and WAPI
  IEEE 802.11e Quality of Service (QoS)
- Coexistence Interface for External Co-Located 2.4GHz Radios (e.g. Bluetooth)
- Tx Power up to +18 dBm (IEEE 802.11b CCK) and 14dBm (IEEE 802.11g ODFM)
- High Rx sensitivity -98dBm (IEEE 802.11b DSSS 1Mbps)
- Integrated Marvell® 88W8782 WLAN System-on-Chip (SoC) Solution
- High-Performance, Low-Power CPU Core
- Two Powerful, Independent DMA Channels
- Power Management Unit Sleep Clock (for Power Save Mode)
- Internal Crystal Oscillator (40MHz)
- USB2.0 or SDIO Interface
- Integrated Shielding to Resist EMI



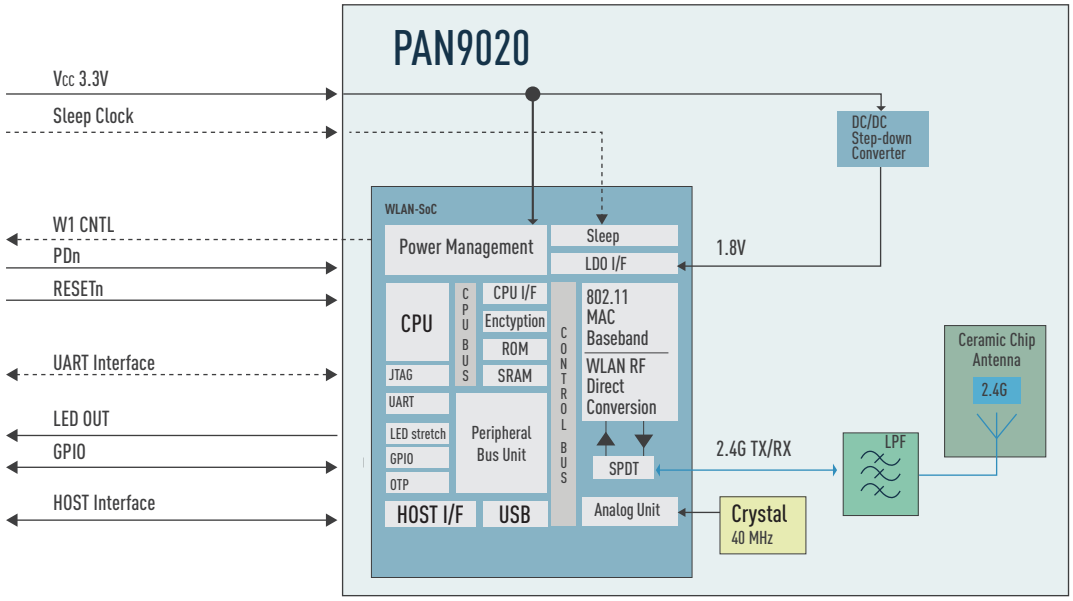
Development Kits

Panasonic's designer friendly ETU – Easy to Use – development kits reduce design efforts and critical time to market by providing the target module on USB stick, free development-ware, reference designs and PCB layout.

Applications

- Imaging Platform
- Digital Picture Frame
- Gaming Platform
- Consumer Electronic
- Portable Application
- Smart Energy
- Thermostat, Control panels
- Printer
- Game Console
- Media Player
- Tablet, eBook
- Health & Fitness
- Home Gateways

Block Diagram



Part Number

Part Number	Description
ENW49801A1JF	PAN9020-USB USB Interface, chip antenna
ENW49802A1JF	PAN9020-SDIO SDIO Interface, chip antenna
ENW49801C1JF	PAN9010-USB USB Interface, 50 ohm pad
ENW49802C1JF	PAN9010-SDIO SDIO Interface, 50 ohm pad

Technical Characteristics

Parameter	Value	Condition / Note
Software		Linux / Android Driver
Receiver Sensitivity	-98 dBm	@1M-DSSS (Details see Datasheet)
Tx Power	+18 dBm	@ 11b
Power Supply	3.0 to 3.6 V	
Current Consumption	430 mA	@ 11Mbps
Centre Frequency	2.4 GHz	802.11 b/g/n
Operating Temperature Range	0 C / +70C	
Size	22.75x13.5x2.42	mm

For detailed specification information on the PAN9020/9010 Series, visit our website at:
na.industrial.panasonic.com/products/wireless-connectivity/wi-fi