WSN802G APP FACTS

Automation systems can provide important data related to building performance that help facility managers make better decisions. If buildings are green, a building automation system can contribute greatly to earning EPA ENERGY STAR or LEED certifications. Wireless technology has rapidly begun to replace traditionally wired building automation infrastructure to provide more data and in real-time.

Commercial:

Building Automation and Control

The WSN802G overcomes many of the obstacles that wireless-enabled BAS systems previously faced. It is a standards-based radio that easily interfaces to existing WLAN infrastructure, has long-battery life and overcomes variety of other communications transmission challenges.

Wireless is... www.RFM.com

OTHER TOP WSN802G APPLICATIONS

Industrial automation

Cold chain and food safety

Energy management and control

Machine health monitoring

APPLICATION OVERVIEW

Manufacturers have started to build Home and Industrial Building Automation based on Wi-Fi due to the ubiquitous nature of these networks. Building automation involves monitoring of environmental conditions within the building such as temperature, humidity, ambient lighting and then using intelligent algorithms to make decisions on control of these ambient conditions such as increase or decrease in temperature of the floor by regulating the HVAC unit or by dimming or turning off the lighting.

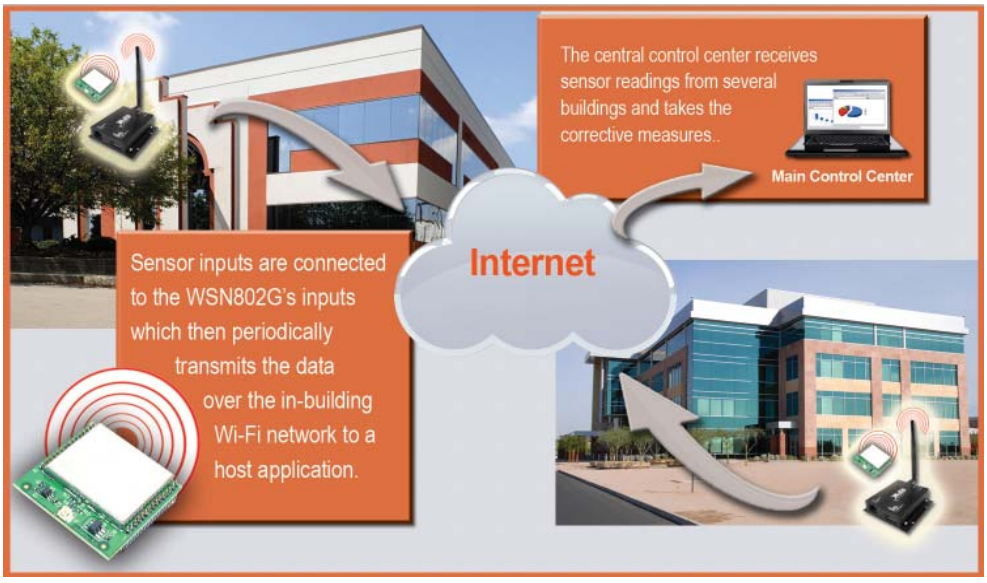
Sensor inputs are connected to the battery powered WSN802G radio modules via the multiple analog and digital I/O at various points in the buildings. These sensor nodes then periodically transmit the sensor readings to a host application over the in-building Wi-Fi network. The host application then determines what course of action to take based on these readings.

APPLICABLE PRODUCT FEATURES

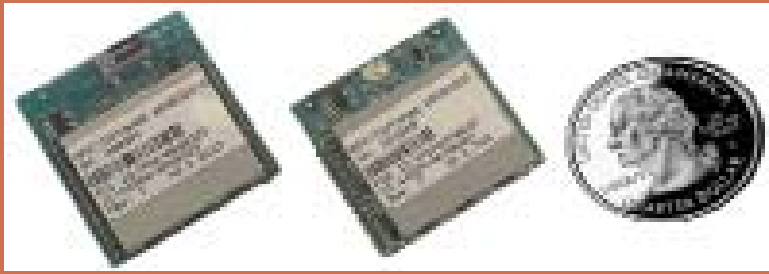
The WSN802G low power Wi-Fi module is well suited for such an application due to it's sleep mode, multiple analog and Digital I/O, auto-reporting, battery powered operation, direct sensor input connections and full TCP /IP data transfer capabilities.

Sleep mode enables long-battery life for building automation applications

HOW IT WORKS

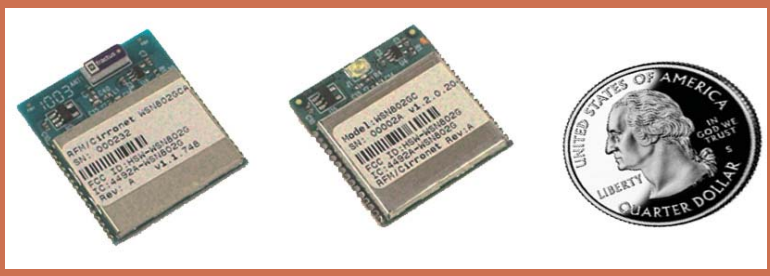


Very small footprint, the WSN802G module is about the size of a quarter



Pinned Version

Surface Mount Version



SPECIFICATIONS

The WSN802G has the same form factor and pin out as the DNT90 / DNT24 and LPR2430ER

Radio Characteristics:	IEEE 802.11b/g
Frequency:	2.4 - 2.474 GHz
Transmit Power:	10 mW
RF Data Rates:	1, 2, 5.5, 11 Mb/s
Receiver Sensitivity:	-92 dBm at 1 Mb/s -81 dBm at 11 Mb/s
Data Encryptions:	AES-128, Full Enterprise Security available
Network:	UDP, DHCP, DNS, ARP, TCP, SNMP
Environmental:	-40 °C to + 85 °C 10 - 90% humidity, non-condensing
Power Supply:	3.3 to 5 VDC
Dimensions:	1.05 x 1.04 inches (2.67 x 2.50 mm) for WSN802GC 1.05 x 1.10 inches (2.67 x 2.89 mm) for WSN802GP
Mounting Option:	Pinned and Surface Mount Versions
RF Connection:	U.FL Coaxial Connector, Chip Antenna
Input / Outputs:	4 GPIO, 3 ADC and 1 DAC outputs
Interface:	UART, SPI
Certification:	FCC and Canadian IC, and ETSI certified

PART NUMBERS

Part Number	Description
WSN802GP	Wi-Fi Module - Pinned Version
WSN802GPA	Wi-Fi Module - Pinned Version, Chip Antenna
WSN802GC	Wi-Fi Module - Surface Mount Version
WSN802GCA	Wi-Fi Module - Surface Mount Version, Chip Antenna
WSN802GADK, WSN802GASK-A	Developer's Kit, Chip Antenna, option with pre-configured AP
WSN802GDK, WSN802GDK-A	Developer's Kit, option with pre-configured access point

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