



WSN802G APP FACTS

Equipment monitoring plays a vital role in many industries. Effective monitoring systems enable manufacturing companies to avoid surprises by eliminating critical equipment failure while extending life and reducing maintenance costs. With the proliferation of WLAN networking, manufacturers are looking to Wi-Fi enabled equipment to leverage existing WLAN infrastructure in their maintenance management solutions.

Industrial: *Equipment Monitoring System*

Design engineers look to RFM's 802.11b/g certified radio module - the WSN802G - for their standards-based wireless connectivity. Its multiple input / outputs, API and small footprint help OEMs reduce their design time while offering flexible products to fit in a variety of manufacturing environments.



OTHER TOP WSN802G APPLICATIONS

Industrial automation

Cold chain and food safety

Energy management and control

Machine health monitoring

APPLICATION OVERVIEW

Industrial equipment monitoring systems have some very unique requirements:

- Operation and integration into existing Wi-Fi 802.11b/g/n networks.
- Secured data transmission using 128-bit AES encryption.
- Continuous monitoring and fast transmission of readings of variables such as vibration, speed of rotation, temperature, current, voltages and other such variables.

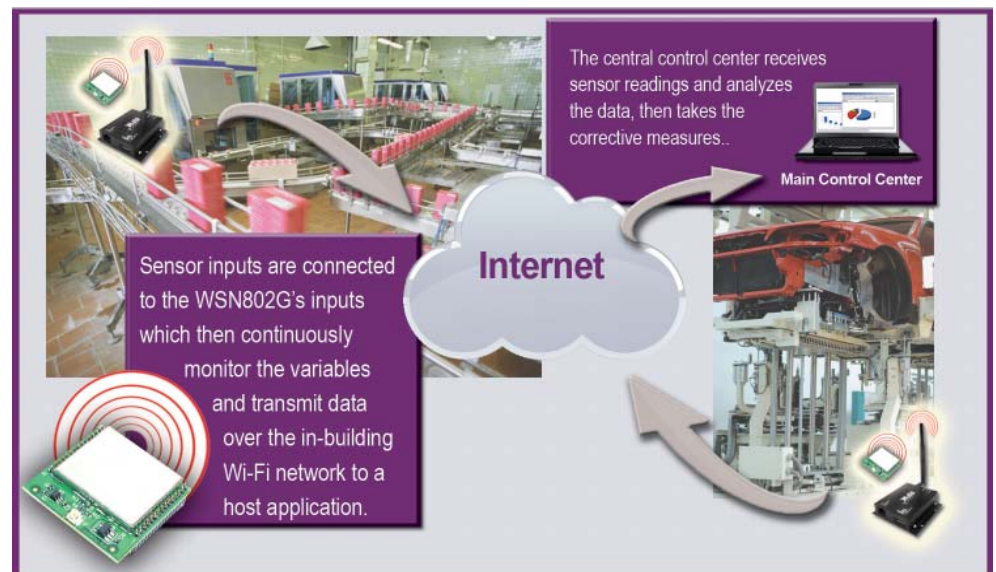
The readings from the various sensors are continuously monitored and then sent over the high speed Wi-Fi network to a central location for analysis and control decisions. The host application then determines what course of action to take based on these readings.

APPLICABLE PRODUCT FEATURES

The WSN802G Wi-Fi module is well-suited for such an application due to its multiple direct analog and digital sensor inputs, full TCP / IP high speed data transfer capabilities, and an API designed for easy integration into existing designs. The 2.4 GHz operations allow for global deployment of the system.

API designed for
easy integration
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designs

HOW IT WORKS



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



Pinned
Version

SPECIFICATIONS

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

Surface
Mount
Version



| | |
|------------------------|--|
| 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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