

DNT2400 APP FACTS

A growing number of process industries recognize the value of wireless measurement and equipment monitoring. Wireless field devices allow operators to be more efficient, collecting data from one central point -- continuously -- as opposed to walking around the tank farm and recording all the values using a variety of manual devices at a single point in time.

Industrial Process

Control: *Remote Tank*

Farm Monitoring



OTHER TOP DNT2400 APPLICATIONS

Petrochemical industries
Power, gas and water utilities
Agricultural ventures
Industrial automation

Sleep and auto-report mode capabilities extend the battery-life of the DNT2400 to make it feasible for sensor monitoring

APPLICATION OVERVIEW

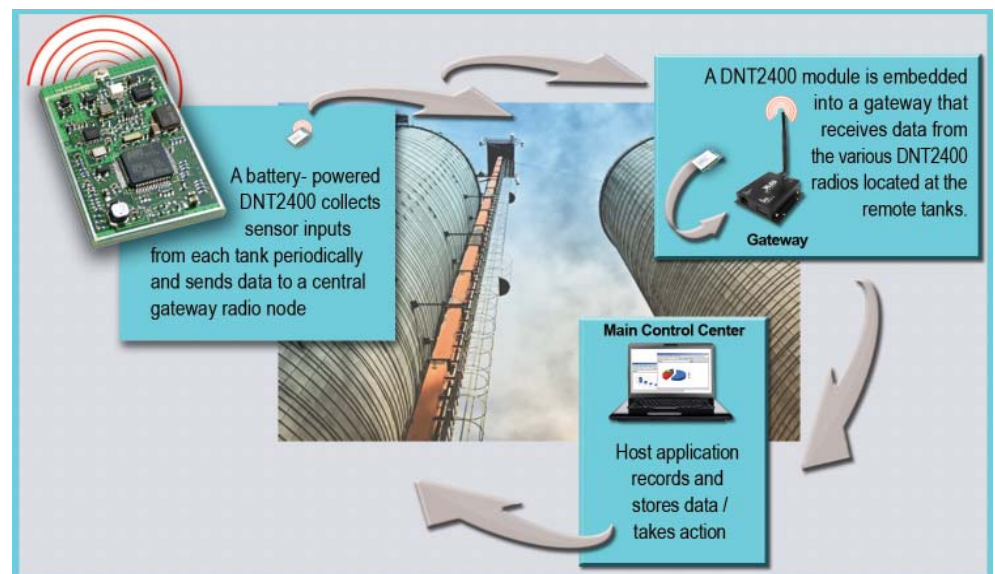
Remote monitoring and management of storage tanks finds wide applications in such areas as agriculture, oil and gas and other industrial storage facilities. The ability to remotely monitor tank levels, flow rates, and temperatures then distribute this data to a central location has been difficult and costly in the past. In many instances it has been impossible to monitor tanks because no wired solution was possible due to the remoteness of the tank facilities.

A DNT2400 radio module was designed for battery operation and was located at each tank. Various sensors located on the tank were connected to the DNT2400 radio module. The radio module was programmed to wake up several times a day and collect sensor inputs and relay this data to a central gateway housing another DNT2400 radio module located a few km away.

APPLICABLE PRODUCT FEATURES

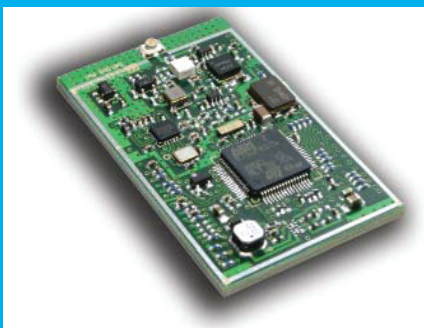
The DNT2400's ability to transmit data reliably in a harsh environment over long distances (FHSS), sleep and auto-report mode capabilities, battery operation, and global deployment in the 2.4 GHz band were some of the key reasons for the choice of this radio module.

HOW IT WORKS



The DNT900 has the same form factor and pin-out as the DNT2400 and can be used for this application in the 900 MHz band

SPECIFICATIONS




Radio Characteristics:	FHSS (Frequency Hopping Spread Spectrum)
Frequency:	2.4093 - 2.467 GHz
Transmit Power:	1 mW up to 100 mW
RF Data Rates:	38.4, 115.2, 200, 500 kb/s
Receiver Sensitivity:	-104 dBm 10-5 BER at 38 kb/s
Data Encryptions:	AES-128
Network:	Point-to-Point, Point-to-Multipoint, Peer-to-Peer, Tree Routing
Environmental:	-40 °C to +85 °C 10 - 90% humidity, non-condensing
Power Supply:	3.3 to 5 VDC
Dimensions:	2.01 X 1.26 inches (51.05 X 32.00 mm) for DNT2400C 2.05 X 1.36 inches (52.07 X 34.54 mm) for DNT2400P
Mounting Option:	Pinned and Surface Mount Versions
RF Connection:	U.FL Coaxial
Input / Outputs:	6 GPIO, 3 ADC and 2 DAC outputs
Interface:	UART, SPI
Certification:	FCC, Canadian IC, ETSI certified

PART NUMBERS

Part Number	Description
DNT2400P	DNT2400 FHSS Module - Pinned Version
DNT2400C	DNT2400 - Surface Mount Version
DNT2400DK	DNT2400P FHSS Module Developer Kit

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