

DNT24 APP FACTS

Design engineers of heavy duty industrial remote control equipment face complex software and hardware design challenges due to a myriad of system input / out requirements. Additionally, these heavy duty remote control applications require long-battery life and reliable transmission while operating machinery generating noise that interferes with radio transmission.

Commercial / Industrial:
Remote Control with Multiple Inputs and Outputs



OTHER TOP DNT24 APPLICATIONS

Home and building automation

Healthcare

Industrial automation and control

APPLICATION OVERVIEW

Remote On/Off of heavy duty industrial equipment such as blowers, crusher plants, remote gate openers, hoists and other equipment with motors has become very important due to safety concerns. Remote control of these equipment also allows for freedom and mobility to operate the machinery in locations where direct wired connections are not possible.

The key requirements for this application required a radio module with multiple analog / digital inputs / outputs. The other key requirement was battery operation. The machinery also generated lots of noise and hence a reliable transmission protocol was necessary. The DNT24 radio module fully satisfied all the requirements of this application

The Input / Output APPLICABLE PRODUCT FEATURES

binding feature

simplified design

effort by not having

to add additional

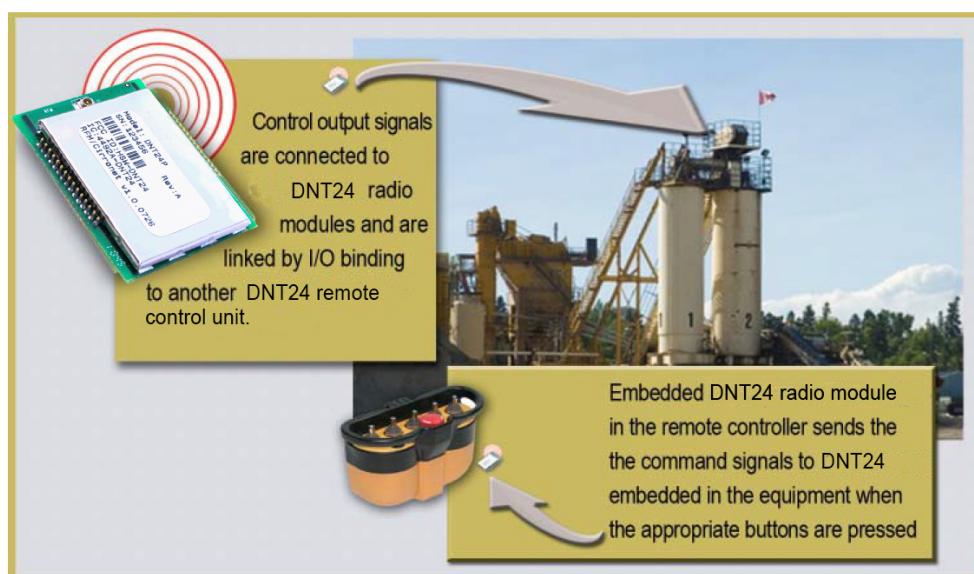
hardware

or software

intelligence

The DNT24 radio module's Sleep and Interrupt-awake capability allowed for battery operation. The Input/Output binding feature simplified the design effort significantly by not having to add additional software or hardware intelligence. The low cost allows systems to be economically priced and finally the 2.4 GHz allows world-wide deployment.

HOW IT WORKS



The DNT24 has the same form factor and pin-out as the DNT90



SPECIFICATIONS

Radio Characteristics:	FHSS (Frequency Hopping Spread Spectrum)
Frequency:	2.406 - 2.475 GHz
Transmit Power:	10 or 100 mW
RF Data Rates:	250 kb/s
Receiver Sensitivity:	-100 dBm 10-5 BER
Data Encryptions:	AES-128
Network:	Point-to-Point, Point-to-Multipoint, Peer-to-Peer, Store-&-Forward Repeating
Environmental:	-40 °C to + 85 °C 10 - 90% humidity, non-condensing
Power Supply:	3.3 to 5 VDC
Dimensions:	1.45 X 0.98 inches (36.8 X 24.9 mm) for DNT24C 1.45 X 1.10 inches (36.8 X 27.9 mm) for DNT24P
Mounting Option:	Pinned and Surface Mount Versions
RF Connection:	U.FL Coaxial, Chip Antenna
Input / Outputs:	6 GPIO, 3 ADC and 2 DAC outputs
Interface:	UART, SPI
Certification:	FCC, Canadian IC and ETSI certified

PART NUMBERS

Part Number	Description
DNT24P	DNT24 FHSS Module - Pinned Version
DNT24PA	DNT24 FHSS Module - Pinned Version, Chip Antenna
DNT24C	DNT24 FHSS Module - Surface Mount Version
DNT24CA	DNT24 FHSS Module - Surface Mount Version, Chip Antenna
DNT24DK	DNT24 FHSS Module Developer Kit
DNT24ADK	DNT24 FHSS Module Developer Kit with DNT24PA

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