LPR2430ER 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

The extended range and low-power battery operation of RFM's LPR2430ER IEEE 802.15.4 modules make for an efficient, low-cost solution for commercial and industrial remote control applications with multiple input and outputs.

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OTHER TOP LPR2430ER 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.

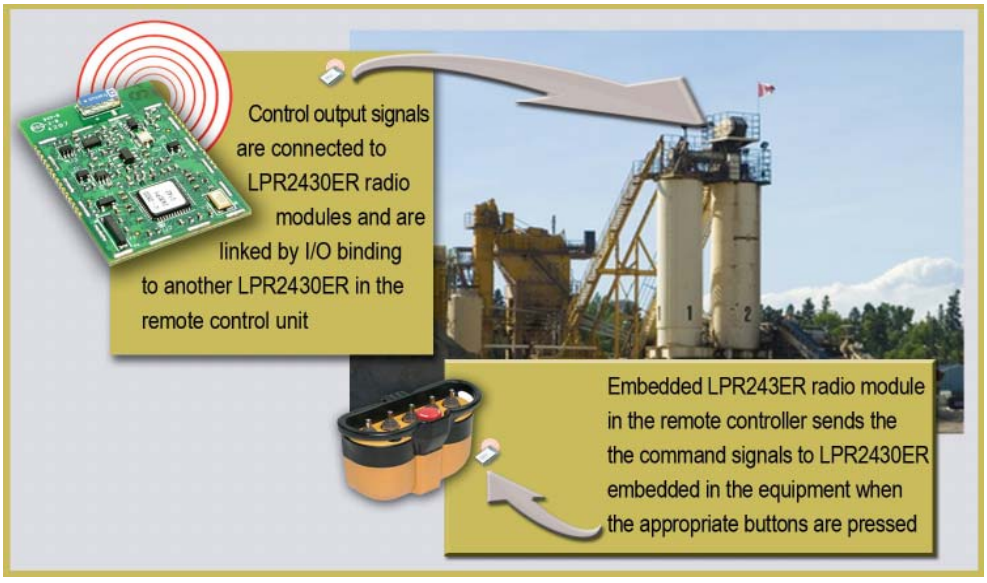
The key requirements for this application required a radio module with multiple analog / digital inputs / outputs. The other key requirement was battery operation. The machinery also generated lots of noise and hence a reliable transmission protocol was necessary. The LPR2430ER radio module fully satisfied all the requirements of this application

The Input / Output binding feature simplified design effort by not having to add additional hardware or software intelligence

APPLICABLE PRODUCT FEATURES

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

SPECIFICATIONS

Radio Characteristics:	IEEE 802.15.4 standards-based
Frequency:	2.405 - 2.475 GHz
Transmit Power:	100 mW
RF Data Rates:	250 kb/s
Receiver Sensitivity:	-95 dBm 10-5 BER
Data Encryptions:	AES-128
Network:	Point-to-Point, Point-to-Multipoint, Peer-to-Peer
Environmental:	-40 °C to + 85 °C 10 - 90% humidity, non-condensing
Power Supply:	3.3 to 5.5 VDC
Dimensions:	1.2 X 0.985 inches (30.48 X 25.02 mm)
Mounting Option:	Surface Mount
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
LPR2430ER	LPR2430ER 802.15.4 Surface Mount Module
LPR2430ERA	LPR2430ERA 802.15.4 Surface Mount Module, Chip Antenna
LPR2430ERDK	LPR2430ER 802.15.4 Module Developer Kit
LPR2430ERADK	LPR2430ERA 802.15.4 Module Developer Kit, with LPR2430ERA

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