DNT900 APP FACTS

Compared to prior methods of collecting, recording and communicating information on the status and condition of street lights, wireless-enabled lighting systems continuously monitor, diagnose and then communicate data over the Internet. As a result, street lighting managers deliver improvements in maintenance productivity, asset life extension, and reduced energy consumption.

Commercial:

Remote Street Lighting Management

Murata's DNT900 is an ideal certified module that provides maintenance-free, ultra-reliable, ultra-long battery life for wireless-enable street lighting systems.

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OTHER TOP DNT900 APPLICATIONS

Monitor and control applications

Industrial automation and control applications

Applications requiring reporting of sensor data

APPLICATION OVERVIEW

Municipalities are constantly looking to save money by deploying efficient and intelligent systems to control individual street lights and manage when they should be dimmed, turned off/on and detecting failed lamps while maintaining safety and security. Such a system requires high transmission reliability, dynamic network optimization and built in path redundancy.

A DNT900 radio module based on time synchronized mesh technology was integrated into the circuitry at each node (lamp pole). The individual nodes monitor the lighting parameters and pass information to a gateway radio node. Each node containing DNT900 radio module also executes commands based on predetermined schedules and from commands received from the gateway such as turning the lamps on/off.

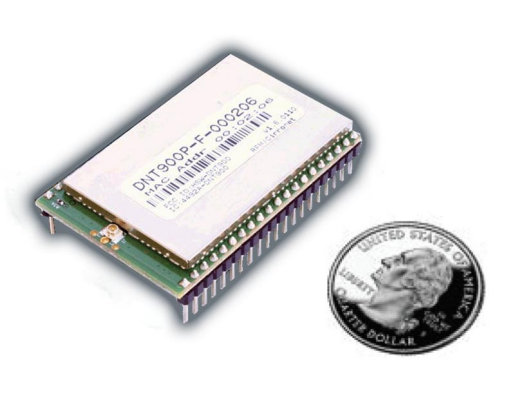
APPLICABLE PRODUCT FEATURES

The DNT900 radio module's was the radio module of choice in this case due to it's robust network reliability, self organizing mesh networking capabilities, and easy integration with well-defined, easy-to-program interfaces.

Robust network reliability is a must-have when it comes to remote street lighting management

HOW IT WORKS

Very small footprint, the DNT900 module is about the size of a quarter



SPECIFICATIONS

Radio Characteristics:	FHSS (Frequency Hopping Spread Spectrum)
Frequency:	902.75 - 927.25 MHz
Transmit Power:	up to 1 W selectable
RF Data Rates:	38.4, 115.2, 200, 500 kb/s
Receiver Sensitivity:	-108 dBm 10-5 BER at 38.4 kb/s -94 dBm 10-5 BER at 500 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 (52.07 X 32.00 mm) for DNT900C 2.05 X 1.36 inches (52.07 X 34.54 mm) for DNT900P
Mounting Option:	Pinned and Surface Mount Versions
RF Connection:	U.FL Coaxial Connector
Input / Outputs:	6 GPIO, 3 ADC and 2 DAC outputs
Interface:	UART, SPI
Certification:	FCC and Canadian IC certified

PART NUMBERS

Part Number	Description
DNT900P	DNT900 FHSS Module - Pinned Version
DNT900C	DNT900 FHSS Module - Surface Mount Version
DNT900DK	DNT900P FHSS Module Developer Kit

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Murata products are sold through a world-wide network of manufacturer's reps and distributors.

For more information, visit the Murata website:
wireless.murata.com/eng/products/applications.html

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