# XDM2510H 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*

RFM's XDM2510H is an ideal certified module that provides maintenance-free, ultra-reliable, ultra-long battery life for wireless-enable street lighting systems.

## 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.

An XDM2510H 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 XDM2510H radio module also executes commands based on predetermined schedules and from commands received from the gateway such as turning the lamps on/off.
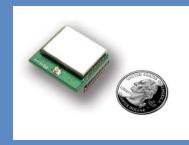
## APPLICABLE PRODUCT FEATURES

The XDM2510H 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



An XDM2510H radio module was embedded on each lamp post and relayed lighting parameters and receive commands from the control center via the gateway radio node.

Main Control Center

Host application determines the appropriate action to take.

Very small footprint, the

XDM2510H module is about

the size of a quarter

## SPECIFICATIONS

The XDM2510H features

DUST Networks' IA-510(H)

WirelessHART System

| | |
|---|---|
| Radio Characteristics: | Frequency Hopping based on IEEE 802.15.4 |
| Frequency: | 2.4 – 2.4835 GHz |
| Transmit Power: | 10 mW |
| RF Data Rates: | 250 kb/s |
| Receiver Sensitivity: | -92.5 dBm @ 50% PER <br> -90 dBm @1% PER |
| Data Encryptions: | AES-128 |
| Network: | UDP, DHCP, DNS, ARP, TCP, SNMP |
| Environmental: | -40 º C to + 85 º C <br> 10 - 90% humidity, non-condensing |
| Power Supply: | 3.3 to 5 VDC |
| Dimensions: | 1.05 x 0.99  inches (2.67 x 2.50 mm) for XDM2510HC <br> 1.05 x 1.14  inches (2.67 x 2.89 mm) for XDM2510HP |
| Mounting Option: | Pinned and Surface Mount Versions |
| RF Connection: | U.FL Coaxial Connector |
| Input / Outputs: | 4 GPIO, 3 ADC and 1 DAC outputs |
| Interface: | Serial |
| Certification: | FCC, Canadian IC, and ETSI certified |

## PART NUMBERS

| Part Number | Description |
|---|---|
| XDM2510HP | XDM2510HP Module - Pinned Version |
| XDM2510HC | XDM2510HC Module - Pinned Version |
| XDM2510HDK | XDM2510HP Developer's Kit |

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