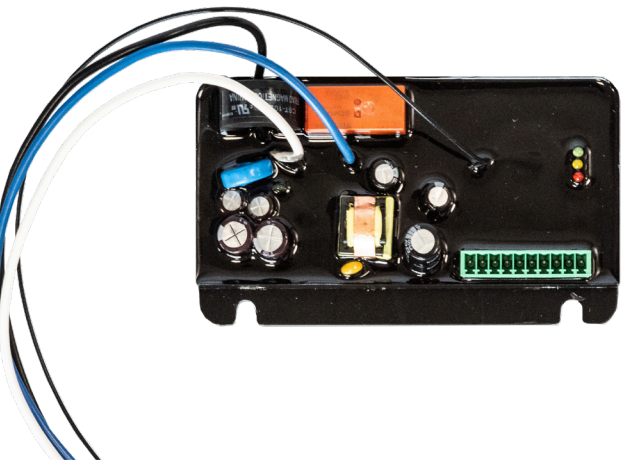


# RTM-H2 Wireless Smart Lighting Node



## PRODUCT OVERVIEW

Dimonoff's RTM is a compact, addressable internal module that facilitates the creation of smart lighting control systems. The RTM enables wireless control, monitoring and metering, as well as integration of sensors. It suits both small and large networks that use state-of-the-art features.

No wires to run means simpler control and automation projects, especially retrofit lighting applications and decorative lights.

## AT A GLANCE

- Complete integration with Dimonoff's Gateways and Smart Central Management System including Dimonoff I SCMS and DOO Express software platform.
- On/off switching and flexible dimming, adjustable minimum and maximum levels with 1 % steps.
- Complete revenue-grade power metering (+/- 0.5 % accuracy) with multiple user-configurable alarms.
- Compatible with BACnet via Dimonoff gateways G3 and G3+.
- Dynamic level adjustment for daylight harvesting, RP-8 optimal roadway lighting design and similar applications.
- Programmable delay and dimming level after blackout for peak shaving.
- Built-in demand response (load shedding) feature.
- Lumen depreciation compensation over time available with Dimonoff I SCMS upon request.
- Compatible with Dimonoff low-voltage occupancy and lux sensors (daylight harvesting), photocells and switches enabling energy conservation.
- Secondary low-voltage outputs for driving another external load.
- Any node with a sensor can be set as a master and control several nodes.
- Each node can be part of 14 different groups and 30 separate scenarios.
- Generic timer features available enabling execution of a series of instructions at set intervals.
- Energy consumption reporting with Dimonoff I SCMS.
- Node programmable for autonomous time-based scheduling.

## INSTALLATION

RTM nodes fit conveniently inside fixtures. They typically reside inside a luminaire with the antenna made accessible outside the luminaire to establish the RF mesh network. They can also be fitted in NEMA4 enclosures for mounting outside fixtures. In either case, color-coded wiring simplifies the installation process. The mobile scanning app compatible with Dimonoff I SCMS enables quick, simple and economical commissioning. Upon installation, it performs both an instant functional test and geolocation.

## LUMINAIRES

RTM nodes feature high-capacity long-life nodes. One node works with voltages ranging from 110 to 480 Vac and 50/60 Hz. The adaptable sink and source 0-10 V output is compatible with most dimming drivers. One RTM node can control 6 drivers maximum.

## COMMUNICATION

The RTM node, when combined with a Digi radio, is built for low-latency communication, even in large networks. The fully bidirectional long-range RF mesh system, suitable for both rural and urban areas, works wirelessly over a robust 2.4 GHz (900 MHz option) ISM (Industrial, Scientific and Medical certified) meshed radio signal.

Clients can choose from two radio options: Digi XBee PRO 2.4 GHz or Digi XBee PRO 900 MHz.

## SECURITY AND MAINTENANCE

Communication between devices flows through a private radio network and is protected using 128-bit AES encryption. Each node is uniquely serialized with an individual address. Additional security automatically forms when defining groups and scenarios.

Devices also feature extensive network and system health monitoring, plus a fall-back safety feature. Comprehensive reporting includes alarm data that can be used to optimize maintenance. The node firmware can be upgraded over-the-air.

## SPECIFICATIONS

### ELECTRICAL

- Operating voltage: 120 to 480 Vac (+/- 10 %) -50 and 60 Hz.
- Less than 1-Watt node consumption (may vary according to specific configuration).
- Maximum load amperage: 7 Amps (7 A at 120-240 Vac, 5 A at 277-347 Vac and 2 A at 480 Vac).
- Power metering: amperage, voltage, power (+/-0.5 % accuracy), power factor, energy, burn-time and cycles counters - C12.20 metering protocol compliance.
- Meets standards IEC61000-4-3 and EN61000-4-3: immunity to radiated electromagnetic fields.
- Surge protection.

### ELECTRONIC

- 0-10 V: for all types of 0 - 10 V drivers and ballasts requiring either sourced (up to 20 mA) or sunk (up to 5 mA).
- 3 digital inputs: dry contacts, 0-30 V / 3 mA max at 30 Vdc, example: photocell and/or motion sensor and/or switches.
- 2 analog inputs: 0-30 V / 3 mA max at 30 Vdc, example: luxmeter.
- 2 digital outputs: sink (max: 100 mA total) or source 2.4 mA (10 K pull-up).
- Aux power supply: 24 Vdc - 50 mA.

### OPTION

- NEMA4 enclosure (model: 1554k2GY / 6.3 x 3.5 x 3.5 in)

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## RADIO

	Digi XBee PRO 2.4 GHz	Digi XBee PRO 900 MHz
Recommended range	<ul style="list-style-type: none"><li>Up to 300 meters/1000 ft between modules.</li><li>Communication range may vary widely depending on environmental factors.</li></ul>	
Transmit power	63 mW (+18 dBm)	up to 250 mW (+24 dBm)
Receiver sensitivity	101 dBm	101 dBm

## ENVIRONMENTAL

- Ambient temperature range: -40 °C to +70 °C (-40 °F to 158°F)  
*\*Note: integrator to verify actual internal maximum fixture temperature*
- Relative humidity: up to 99 % non-condensing
- Manual on/auto-off, auto-on/auto-off and grace period compliant (complies with N.Y. LL48 and many other energy regulations)

## LISTINGS

- U.S. FCC (Digi XBee PRO 2.4 GHz): MCQ-PS2CTH, Canada IC: 1846A-PS2CTH, Europe CE: ETSI, Australia: C-TICK, Japan: TELEC
- U.S. FCC (Digi XBee PRO 900 MHz) Part 15.247 Class A: MCQ-XB900HP
- UL94 V-0 flame retardant ABS with epoxy molding
- ANSI/UL 8750, CSA 22.2 No. 250.13-14 (Dimonoff file ID E481666)

## WARRANTY

- Limited 5-year warranty (Up to 10-year extended available)

## DIMENSIONS (LENGTH X WIDTH X MAX HEIGHT) (IN/MM)

4.75 x 2.65 x 1.53 in / 120.65 x 67.31 x 38.9 mm

## WIRING DIAGRAM

Please refer to the wiring diagram's documents.

## ORDERING INFORMATION

RTM	Radio type	Option
	XBP-IO = Digi XBee PRO 2.4 GHz	N4 = NEMA4 enclosure
	9HP-IO = Digi XBee PRO 900 MHz	