



PRODUCT OVERVIEW

Dimonoff's Fourth Generation (H4) RME Node is a complete and scalable all-in-one lighting control system. It is a compact addressable modules that offer advanced wireless control, monitoring and metering for each fixture. It includes a future-proof firmware architecture that adapts to developments in radio technologies (including Wi-SUN, LTE-M and others). It is suitable for both small and large networks that use groups, zones, adaptive lighting, scheduling functions, and many other cutting-edge features.

The RME is compatible with both 7-pin ANSI C136.41 and Zhaga Book 18 receptacles. By installing multiple H4s on lights in streets, parks and parking lots (such as in car dealerships and malls), you create a seamless wireless mesh network that allows to connect other types of sensors and smart devices.

AT A GLANCE

- Voltage on the H4 is auto calibrated. This results in both more precise metering and fewer false alarms.
- Enhanced revenue-grade power metering (+/- 0.5% accuracy) with multiple user-configurable alarms.
- A tilt sensor measuring the earth's gravity angles changes is included.
- Includes real-time operating system (RTOS) that can run multiple simultaneous tasks with minimal latency.
- Complete integration with Dimonoff's Gateways and Dimonoff Smart Central Management System (SCMS) and DOO Express software platform.
- On/Off switching and flexible dimming, adjustable minimum and maximum levels with 1 % steps.
- Integrated photocell. In its default configuration, the photocell operates immediately upon installation (no need for a network connection).
- Compatible with BACnet via Dimonoff gateways.
- Programmable delay and dimming level when power is restored following a power outage for peak shaving.
- Built-in demand response (load shedding) feature.
- Lumen depreciation compensation over time available with Dimonoff | SCMS.
- Dynamic level adjustment for daylight harvesting, RP-8 optimal roadway.
- 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.

LUMINAIRES

Including a 7-pin ANSI C136.41 or Zhaga Book 18 receptacle and an internal photocell, the node allows optional support of digital and analog sensors (e.g. motion sensor, switches, lux meter, generic sensor, etc.) through pins 6 and 7.

It is also compatible with ANSI C136.41 5-pin and ANSI C136.10 3-pin standard receptacles with no light level control.

- Dimming driver of your choice between 0-10 V or the DALI interface (DALI standard IEC 62386 including SR and Dexal, DALI Part 252 - Energy reports and DALI Part 253 - Diagnostics and maintenance)
- Adaptive DALI with or without DALI bus power supply (with 24 V power supply option).
- Adaptable Sink & Source 0-10 V output compatible with most dimming drivers (refer to luminaire spec sheet for capacity)

Dimonoff's RME is designed for LED fixtures, but is also compatible with other technologies including HPS (high pressure sodium), MH (metal halide) and MV (mercury vapor). This module works with voltages between 110 and 480 Vac and 50/60 Hz, or with a 24 V auxiliary power supply.

INSTALLATION

The Dimonoff mobile scanning app enables quick, simple and economical commissioning. Upon installation, it performs both an instant functional test and geolocation. As an option, you can add GPS hardware directly in the RME for enhanced GPS-based geolocation.

COMMUNICATION

The RTM node 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 or 900 MHz ISM (Industrial, Scientific and Medical certified) meshed radio signal.

- **Digi XBee PRO 2.4 GHz**
- **Digi XBee PRO 900 MHz**
- **Wi-SUN FAN 1.1 900 MHz**
- Honeywell / Elster, Energy Axis EA900, SynergyNet (in development)
- LTE-M

SECURITY AND MAINTENANCE

Communication between devices occurs over a private radio network and is encrypted using 128-bit AES protocol (AES 256-bit encryption available with Digi XBee PRO radio option). Each node is uniquely serialized with an individual address. The node firmware can be upgraded over-the-air.

Wi-SUN FAN adds certificate-based mutual authentication (802.1X/EAP-TLS) and network-wide key rotation.

SPECIFICATIONS

ELECTRICAL

- Operating voltage: **110 to 480 Vac** (-13 % / +6 %), 50 & 60 Hz. Optional 24 V auxiliary power supply.
- **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: power (**+/- 0.5% accuracy**), amperage, voltage, Power factor, energy, burn-time and cycles counters - C12.20 (ANSI C136.50) metering protocol compliance
- Meets the standard IEC61000-4-5 and EN61000-4-5: immunity to radiated electromagnetic fields.
- Surge protection (6 kV / 3 kA)

ELECTRONIC

- **Sensor multipurpose Input/Output:** Analog input 0-30V or digital output 24 Vdc (max: 50 mA total), e.g. motion sensor, switches, lux meter, generic sensor, etc.
- **0-10V:** for all types of 0-10V drivers & ballasts requiring either sourced (up to 20 mA) or sunk (up to 5 mA)
- **DALI:** Bus Power supply: 24 mA / DALI load: 2 mA (with optional 24 V auxiliary power supply)

OPTIONS

- Internal GPS
- 110-480 Vac or 24V auxiliary power supply
- NEMA 7-pin or Zhaga Book 18 receptacle
- 0-10 V or DALI lamp driver
- Different dome colours (standard: smoked)

ENVIRONMENTAL

- Ambient temperature range: -40 °C to +70 °C (-40 °F to 158 °F)
- Relative Humidity: up to 99% non-condensing
- IP66
- IK09

LISTINGS

- ANSI/UL 773, CSA 22.2 No. 182.2 (Dimonoff file ID E476540)
- UL 94 V-0
- U.S. FCC (Digi XBee PRO 2.4 GHz) Part 15.247: MCQ-XBPRR, ISSED IC: 1846A-XBPRR
- U.S. FCC (Digi XBee PRO 900 MHz) Part 15.247 Class A: MCQ-XB900HP
- U.S. FCC (Wi-SUN 900 MHz) Part 15.247
- U.S. FCC (Honeywell / Elster): QZC-ELIR1
- DLC & RoHS compliant

WARRANTY

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

DIMENSIONS (Diameter X Height) (IN/MM)

- 3.154 x 2.960 in / 80.1 x 75.2 mm

WEIGHT

- RME-XBP / RME-9HP: 0.35 lbs / 157 g
- RME-WiSUN: 0.35 lbs / 157 g
- RME-ELS: 0.54 lbs / 246 g

All Dimonoff packaging is fully recyclable. Please contact Dimonoff to organize return of packing materials (e.g. foam) for reuse. The protective foam is recyclable, please throw it away for recycling if it is not returned to us.

RADIO COMMUNICATIONS

RME	Digi XBee PRO 2.4 GHz	Digi XBee PRO 900 MHz	Wi-SUN FAN 1.1 900 MHz	Honeywell / Elster
Recommended Range	○ Up to 300 meters/1000 ft between nodes ○ Communication range may vary widely depending on environmental factors.			
Transmit Power	63 mW (+19 dBm)	250 mW (+24 dBm)	40 mW (+16 dBm)	250 mW (+24 dBm)
Receiver Sensitivity	- 95 dBm	- 103 dBm	- 111 dBm	- 105 dBm

WIRING DIAGRAM

Please refer to the wiring diagram if you want to install another device (e.g. motion sensor, switch, luxmeter) to be wired directly with a third-party C136.41 socket.

ORDERING INFORMATION

	Radio type	Driver (0-10 V by default)	Power supply (110-480 V by default)	Receptacle (ANSI C136.41 by default)	Options	Dome colour (smoked by default)
RME	XBP: Digi XBee PRO 2.4 GHz 9HP: Digi XBee PRO 900 MHz ELS: 900 MHz Honeywell / Elster WiSUN: SiLabs EFR32FG25n 900 MHz	DALI: DALI	D4i: Auxiliary 24V	ZB18: Zhaga Book 18	GPS: Internal GPS module	BLK: Black WH: White