

PRODUCT OVERVIEW

The Low Voltage Wireless Smart Lighting Node (LNLV) is a compact, addressable node that enables wireless control and monitoring. The LNLV's wireless capabilities help installers create smart lighting control systems faster and more easily than ever. The LNLV also features digital and analog inputs and outputs that enable installers to connect it to sensors and display/text banners.

With no wires to run, control and automation projects become simpler, especially in outdoor and retrofit environments. Dimonoff wireless control technology perfectly adapts to complex automation situations for quick, simple and economical commissioning.



AT A GLANCE

- Complete integration with Dimonoff's Gateways and Smart Central Management System, including the Dimonoff I SCMS and DOO Express software platforms.
- Ideal for solar (photovoltaic) and battery-powered devices.
- Any node with a sensor can be set as a master and control a group of nodes.
- Designed to create flexible, smart automation systems for institutional, commercial, municipal, industrial and general-purpose lighting control environments of any size, from single office to city-wide street lighting network.
- Adds intelligent functions and networkability to any low-voltage motion sensors, display/text banners via RS-232 communication, lux sensors and other types of sensors.
- Perfect for retrofit and new construction: no central panel or communication wiring required; can function as a self-managing autonomous system or can be managed from a central system.
- Enables energy conservation by automatically adjusting lamp saver functions, as well as switching between "occupied" and "unoccupied" light levels, according to readings from daylight and motion sensors. A single set of sensors can control several hundred nodes to create zoning patterns (complies with N.Y. LL48 and many other energy requirements and incentives).
- Built-in demand response (load shedding) feature.
- Emergency-mode ready.
- Compatible with most low-voltage occupancy and lux sensors (daylight harvesting) and switches.
- High-side driver (source) 1A main output load.
- 3x Auxiliary open-collector outputs for driving digital signals.
- Compatible with BACnet via Dimonoff gateways G3 and G3+.
- Multi-level grouping and multiples scenarios.
- Programmable delay and dimming level after blackout for peak shaving.
- Generic timer feature available enabling execution of a series of instructions at set intervals (example of indoor application: flick warning and override before scheduled lights off).
- Both locally and remotely controllable with status.
- Serial communications via bidirectional RS-232 serial port passthrough.

LUMINAIRES

The LNLV is ideal for use with “dim to off” 0-10V drivers. It features Solid state output up to 1 ampere with short-circuit protection and open-load detection.

INSTALLATION

The LNLV is small enough to be installed inside your products. It is suitable for both indoor and outdoor (with proper enclosure) installation. 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.

COMMUNICATION

The LNLV 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 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.

SPECIFICATIONS

ELECTRICAL

- Operating Voltage: 12 Vdc to 24 Vdc
- Node consumption: 0.06 mA (12 V) and 0.04 mA (24 V)
- Maximum Load: 1 A
- Output Status Monitoring: Standard feature
- Power Monitoring: Voltage and Burn-time

ELECTRONIC

- 3 digital inputs: 0-30 V, example: motion sensor and/or switches.
- 1 analog input: 0-30 V
- 1 digital output: sink to ground 0 (max: 20 mA) or source (supply voltage 12 or 24 V)
- RS-232 serial interface

RADIO

	Digi XBee PRO 2.4 GHz	Digi XBee PRO 900 MHz
Recommended range	- Up to 300 meters/1000 ft between modules - Communication range may vary widely depending on environmental factors.	
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

LISTINGS

- U.S. FCC (Digi XBee PRO 2.4 GHz): MCQ-PS2CTH, Canada IC: 1846A-PS2CTH, Europe CE: ETSI, Australia: C-TICK, Japan: TELEC
- UL94V-0 flame retardant ABS with epoxy molding
- U.S. FCC (Digi XBee PRO 900 MHz) Part 15.247 Classe A: MCQ-XB900HP

WARRANTY

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

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

- 3.876 x 2.085 x 1.59 in / 101.6 x 50.8 x 25.4 mm

WIRING DIAGRAM

Please refer to the wiring diagram.

ORDERING INFORMATION

LNLV	Radio type
	XBP = Digi XBee PRO 2.4 GHz
	9HP = Digi XBee PRO 900 MHz