



PRODUCT OVERVIEW

The Gateway G4 enables communications between the Smart Wireless Lighting Nodes and Dimonoff | SCMS and DOO Express software platform. It Part of the Dimonoff wireless lighting control technology suite.

Each gateway autonomously manages a group of nodes (up to 1,000), removing any dependency on a central server for normal operation and making the system redundant and robust.

Standard Gateway

AT A GLANCE

- Gateway / node ratio: Up to 1 000 smart wireless lighting nodes per Gateway (500 recommended).
- Gateways reside in NEMA4X (IP66) cabinets and are therefore convenient for both indoor and outdoor applications.
- Each gateway has a GPS for time based on its location as well as a real-time clock (RTC) powered by a battery.

BACKHAUL NETWORK

- Each Gateway can manage and communicate with Dimonoff's software platforms via Ethernet (LAN) or cellular
 - Ethernet: A static IP address reserved on your network or use of DHCP protocol by reserving an IP address on your network is required.
 - Cellular: A nano size SIM card with no options is required with at least 500MB / month (may vary by number of nodes) for data only. The Access Point Name (APN) and service provider are required. Dimonoff does not provide neither the SIM card or the data plan by default (price on request)
 - Static / dynamic public IP or static private IP with Dimonoff | SCMS.
 - Static private or public IP with DOO Express;
 - Communication network security: Each gateway has its own passwords, certificates and keys securely stored by Dimonoff with restricted access.
 - Server API access is protected and encrypted with X.509 certificates with proof of possession.

COMMUNICATION BETWEEN NODES AND GATEWAYS

- Can be used with different radio types: **Digi XBee PRO 2.4 GHz**, **DIGI XBee PRO 900 MHz** or **Wi-SUN**.
- Military grade 128-bit AES communication encryption on Digi XBee radios (AES 256-bit encryption option available).
- **Wi-SUN FAN** (the profile this chip targets) mandates AES-128 (CCM) at the link layer for frame encryption/authentication, combined with 802.1X/EAP-TLS for network-level device authentication and key management (certificate-based mutual authentication, with keys rotated periodically by the border router). This is a standardized, mesh-wide security architecture rather than a single point-to-point key.

SPECIFICATIONS**ELECTRICAL**

- Voltage: 120 to 240 Vac - 50 and 60 Hz
 - 277 and 347 Vac requires a stepdown transformer (STPDN XFMR-277 or 347) which can be provided by Dimonoff
- Gateway consumption: 2.5 W max
 - Cellular modem (LTE-Cube) option: 7.5 W
 - Heater option: 70 W when in function, i.e. the temperature is lower than 0°C / 32°F at the location of the gateway
 - UPS option: 340 W when recharging the UPS battery
- Fuse: 5 A
- Surge protection: 190 Joules (10 000 surge current rating measured using industry standard 8/20 µSec wave)
- UPS option/LiFePO4: The battery has an autonomy of 1 hour with fast recharge

RADIO COMMUNICATIONS

	Digi XBEE PRO 2.4 GHz	Digi XBEE PRO 900 MHz	Wi-SUN FAN 1.1 900 MHz
Recommended range	○ Up to 300 meters / 1 000 ft between modules. ○ Communication range may vary widely depending on environmental factors.		
Transmit power	63 mW (+18 dBm)	250 mW (+24 dBm)	40 mW (+16 dBm)
Receiver sensitivity	- 95 dBm	- 103 dBm	- 111 dBm

OPTIONS

- Heat option: 70 W in total when it is activated, i.e. when the temperature is below 0 °C / 32 °F at the gateway's location
- Cellular modem option (when a local Internet network is not available)
- Data plan and sim card
- UPS / LiFePO4: The battery has an autonomy of 1 hour with a lifespan of 10 years by maintaining the maintenance charge

ENVIRONMENTAL

- Ambient temperature range: 0 °C to +70 °C (32 °F to 158°F)
 - With Heat option: -40 °C to +70 °C (-40 °F to 158°F)
- Relative humidity: up to 99 % non-condensing

LISTINGS

- UL-508A
- U.S. FCC (Digi XBee PRO 2.4 GHz) Part 15.247: MCQ-XBPRR, ISED IC: 1846A-XBPRR
- U.S. FCC (Digi XBee PRO 900 MHz) Part 15.247 Classe A: MCQ-XB900HP
- U.S. FCC (Wi-SUN 900 MHz) Part 15.247

WARRANTY

- Limited 3-year warranty (Up to 10-year extended available)

DIMENSIONS (Diameter X Height) (IN/MM)

- NEMA4 Enclosure (Hammond Model PJ1084L or equivalent): 10 x 8 x 6 in / 254 x 203.2 x 152.4 mm
 - Enclosure dimensions are different with UPS option (Hammond Model PJ14126L): 14.13 x 12.26 x 6.13 in / 359 mm x 311 mm x 156 mm
- Stainless steel hinges and locking snap latches
- Enclosure comes with mounting hardware (including pole and wall bracket)

WIRING DIAGRAM

- Please refer to the Gateway wiring diagram.

ORDERING INFORMATION

CAB-GTW-G4	Radio type	Options	Network (LAN by default)
	2.4G : Digi XBee PRO 2.4 GHz	H : Heat	CM : Cellular Modem
	9HP : Digi XBee PRO 900 MHz	UPS : back-up battery (special order)	
	WISUN : SiLabs EFR32FG25 - 900 MHz		