

**Standard**

## PRODUCT OVERVIEW

Part of the Dimonoff wireless lighting control technology suite, the third-generation Gateway G3+ enables communications between the Smart Wireless Lighting Nodes and Dimonoff | SCMS and DOO Express software platform.

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

## AT A GLANCE

- Gateway / node ratio: maximum 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.
    - Static private or public IP with DOO Express;
    - Static / dynamic public IP or static private IP with Dimonoff | SCMS.
- 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.
- Security: Military grade 128-bit AES communication encryption on Digi XBee radios (AES 256-bit encryption option available).

\* The ratio of 1 gateway per 1 000 nodes is possible with a polling interval of one hour.

**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  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| <b>Recommended range</b>    | <ul style="list-style-type: none"><li>○ Up to 300 meters / 1 000 ft between modules.</li><li>○ Communication range may vary widely depending on environmental factors.</li></ul> |                        |
| <b>Transmit power</b>       | 63 mW (+18 dBm)                                                                                                                                                                  | Up to 250 mW (+24 dBm) |
| <b>Receiver sensitivity</b> | - 101 dBm                                                                                                                                                                        | - 101 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)
- 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

## WARRANTY

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

## DIMENSIONS (DIAMETRE 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-G3 | Radio type                          | Options                                      | Network (LAN by default)   |
|------------|-------------------------------------|----------------------------------------------|----------------------------|
|            | <b>2.4G</b> : Digi XBee PRO 2.4 GHz | <b>H</b> : Heat                              | <b>CM</b> : Cellular Modem |
|            | <b>9HP</b> : Digi XBee PRO 900 MHz  | <b>UPS</b> : back-up battery (special order) |                            |