

# Nexgrid® Technology Solutions

## ecoNet™ SL Smart Grid Gateway

The ecoNet Street Light Communication Gateway provides the central link between intelligent endpoint devices and your Utility's mission-critical systems, enabling intelligent network control and monitoring. Simple no-tool-required twist and lock installation replacing the existing photocell sensor greatly simplifies the installation process. A sophisticated Dual MESH communication technology utilizing Nexgrid's patent pending algorithm provides ubiquitous coverage throughout the network at a low cost. ecoNet SL smart grid gateways support 3 standards-based communication technologies, Ethernet (RJ45), ZigBee(802.15.4) and Wi-Fi (802.11N). ecoNet SL's management software provides the ability to mix and match the different systems to achieve maximum efficiency in the network while also providing maximum redundancy. ecoNet SL provides a scalable broadband infrastructure that supports the advanced metering of electric, water and gas and real time management and control of intelligent end devices like load control switches, capacitor bank controllers and thermostats. It features robust security to ensure full regulatory compliance and network safety and an internal power source for outage management. ecoNet SL gateways communicate with third party devices to create a platform for Demand Side Management, Smart Home, and other Utility asset devices that require communication.

Additionally, the ecoNet SL monitors the streetlight for energy consumption usage, outage detection and allows for custom on/off programming. Lights can be controlled in a more intelligent and efficient manner than provided by the standard photocell, and monitoring in real-time reduces truck rolls and overall maintenance.



### KEY FEATURES

- Streetlight photocell mount
- Standards-based communication
- Dynamic provisioning & self healing MESH network
- Provides full security including AES , DES support
- Easy installation. No tools required
- Over-the-air (OTA) enabled firmware update support
- MESH Wireless technology provides ubiquitous coverage
- Real-time monitoring and control of lamp on/off schedule and voltage/ current monitoring

### Technical Specifications

|                            |                                                                                                                                                     |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Nexgrid Part Number        | ecoNet SL                                                                                                                                           |
| Interface                  | 10/100 Base t, half/full duplex. Rate auto negotiated (IEEE 802.3 compliant)<br>Wi-Fi (IEEE 802.11N compliant) and ZigBee (IEEE 802.15.4 compliant) |
| Input Power                | 95 – 264 VAC 50/60 Hz                                                                                                                               |
| Wireless Signal Rate       | Wi-Fi 2 GHz or 5 GHz, 100Mb & ZigBee 240 Kbps                                                                                                       |
| Channel Width              | Wi-Fi 20 and 40 MHZ, 802.15.4 5 MHZ                                                                                                                 |
| Wind Survival              | 118 miles/hr. (190 lm/hr.)                                                                                                                          |
| Power Consumption          | 7.5 Watts maximum                                                                                                                                   |
| Mechanical Dimensions      | 170 x 54.8 x 170 mm (6.69" x 2.16" x 6.69")                                                                                                         |
| Weight                     | .69 Kg                                                                                                                                              |
| Encryption                 | AES , DES support *NIST FIPS 140-2                                                                                                                  |
| Mesh Routing               | ZigBee                                                                                                                                              |
| FCC IDs                    | SWX-M5B, SWX-M2B,                                                                                                                                   |
| Modulation Type            | Wi-Fi OFDM, ZigBee OQPSK                                                                                                                            |
| Safety Standard Compliance | EN50178, Category III                                                                                                                               |
| Temperature                | -25 C to +70 C                                                                                                                                      |
| Humidity                   | 5% - 85%                                                                                                                                            |
| Casing                     | Polycarbonate UL 94-V0                                                                                                                              |
| Mounting Type              | NEMA twist lock plug connection ANSI C136.10                                                                                                        |
| Internal Power             | Internal super capacitors provide one minute of sustained power during outages                                                                      |
| EIRP                       | Adjustable from 10 dB to 28 dB                                                                                                                      |
| Antenna Connector          | SMA-TYPE Male                                                                                                                                       |

\*optional

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