Frequently Asked Questions

What is LightGRID+?

LightGRID+ is a wireless outdoor lighting management system that is designed to enhance safety and maximize energy savings for all outdoor lighting applications (e.g. smart cities, roadways, parking lots, parking decks, remote sites, airports, and parks).

What components make up the LightGRID+ System?

The system consists of internal and external fixture modules, gateways, and either an on-premise or hosted server that can be accessed via a web-browser based Graphical User Interface application.

What are LightGRID+ internal and external fixture modules?

The LightGRID+ internal and external fixture modules are bidirectional wireless RF devices that enable an individual luminaire to be managed, monitored and metered. The universal voltage modules (110 – 480VAC; 50/60Hz) can switch loads up to 7A@120-240VAC, 5A@277-347VAC, and 2A@480VAC. The modules also feature 0-10V dimming control for all types of 0-10V drivers and ballasts.

Can the LightGRID+ External Fixture Module connect to an ANSI C136-41 7-pin or 5-pin twist-lock receptacle?

Yes. When connected to a 7-pin receptacle, the External Fixture Module provides ON/OFF and dimming control with support for an input device. When connected to a 5-pin receptacle, the module provides ON/OFF and dimming control.

What type of input devices can I connect to a LightGRID+ module?

Any low voltage device that can provide an input signal (e.g. motion sensors, photocells, switches, security cameras, lux meters, etc.) can be connected to a module. The internal fixture module supports up to three (3) inputs and the external fixture module supports one (1) input.

Do the modules have outputs for controlling other devices like lighting contactors?

Yes. The internal fixture module has two (2) outputs that can be used to signal other devices or systems.

What are LightGRID+ Gateways?

LightGRID+ Gateways enable secure communications between the wireless internal and external fixture modules and the LightGRID+ Server software platform. Each gateway autonomously manages a group of modules, removing any dependency on the server for normal operation and making the system redundant and robust.

Can LightGRID+ be used indoors?

Yes. LightGRID+ is suitable for large open indoor areas such warehouses, gymnasiums and manufacturing floors. The LightGRID+ system is not suitable for offices, classrooms, breakrooms and other small areas.

What type of radios and what frequencies does LightGRID+ use?

The LightGRID+ devices use XBEE Pro radios and are available in either 2.4GHz or 900MHz ISM (Industrial, Scientific and Medical) versions.

What is the max distance between LightGRID+ Radio Modules?

Up to 1000 sq. ft. (300m) between modules. Communication range is based on clear line of site. Range may vary widely depending on environmental factors. NOTE: Internal fixture module antennas and external modules must be mounted vertically up or down.

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How many wireless message hops are supported by LightGRID+?

32 hops. The LightGRID+ System includes the capability to program specific nodes to reset the hop count to continue transmission of messages beyond the 32 hop count limit.

Are the LightGRID+ messages secure and encrypted?

Yes. The LightGRID+ devices use military-grade AES-128 (Advanced Encryption Standard) security. AES-256-bit encryption is also available. AES is a powerful encryption method used in many data security applications.

Can LightGRID+ Radio Modules be installed in areas where there are Wi-Fi or Cellular networks?

Yes. Although Wi-Fi and cellular network signals can overpower 802.15.4 signals on some channels, LightGRID+ radios can be adjusted to avoid these same channels and prevent interference.

Does LightGRID+ use wireless meshing technology?

LightGRID+ uses a robust and reliable IEEE 802.15.4 wireless mesh network radio protocols to provide a secure peer-to-peer, self-organizing and self-healing mesh network. All devices are peers and act as repeaters, forwarding messages to ensure message delivery.

Do the LightGRID+ External Fixture Modules have GPS?

Yes. LightGRID+ External Fixture Modules are available with GPS technology that enables auto-commissioning to the LightGRID+ Gateway.

Are LightGRID+ External Fixture Modules with cellular connectivity available today?

LightGRID+ External Fixtures Modules with CAT-M cellular support is currently under development and will be available at the end of the year.

What level of metering accuracy do the LightGRID+ nodes have?

Revenue-Grade Metering with +/- 0.5% accuracy. Voltage is auto-calibrated resulting in more precise metering and fewer false alarms.

How Scalable is a LightGRID+ System?

The LightGRID+ System can support up to two (2) billion unique node radio serial numbers nodes. Each LightGRID+ Gateway can support up to 1000 nodes.

What is the LightGRID+ Server and what does it do?

The LightGRID+ Server is designed to manage lighting applications that require support for managing multiple sites, individual and multi-site energy reports with graphs, customizable site/device alarms with SMS/Email notifications, and customizable security user roles. The LightGRID+ Server can be installed on-premise or hosted in the cloud. The LightGRID+ Server receives information from the Gateways and displays that information via its web-browser based application.

Can the LightGRID+ System alert me of issues with my luminaires?

Yes. LightGRID+ has a complete set of alarms that can be triggered with notifications sent via SMS or email to specific personnel based on a severity level. These alarms include fixture outages, fixtures on during the day, over/under voltage conditions, etc.

Can LightGRID+ generate energy usage reports?

Yes. Energy usage reports can be generated for a single luminaire, an entire site and for multiple sites. Reports can be automatically generated via a schedule and exported in many popular data formats - .pdf, .xls, .csv, .rtf, .jpg, etc. Energy reports can then be sent to identified personnel.

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Does the LightGRID+ Graphical User Interface have a dashboard that can summarize current status?

Yes. The LightGRID+ Server's web-browser based application features a dashboard showing the status of all of the nodes across the enterprise. The dashboard is configurable, enabling you to add additional information including individual fixture status, metering data, etc.

Can the LightGRID+ System be used to manage multiple sites?

Yes. The LightGRID+ System is specifically designed to manage multiple sites – either across a campus, or across a city, or across multiple cities.

Does the Graphical User Interface show maps of an area?

Yes. The LightGRID+ System's web-based application utilizes mapping services to display maps and satellite images of areas with node locations identified on the maps.

If mapping services are not available (e.g. parking deck levels), can the interface import plans/layouts?

Yes. The LightGRID+ System can import plans/layouts into the user interface.

Does LightGRID+ meet the requirements of the latest energy codes and standards?

Yes. The LightGRID+ System has been designed to meet the latest outdoor lighting codes and standards which include astronomical timeclock scheduling, dimming setbacks, daylighting, demand response and integration with Building Management Systems (BMS) integration.

Is the LightGRID+ System on the Design Lights Consortium (DLC) Qualified Products List (QPL)?

No. The LightGRID+ System is currently being evaluated internally to determine if it meets DLC V5 requirements.

Who programs/commissions a LightGRID+ System?

LightGRID+ systems are typically installed by a contractor using a mobile app commissioning tool. Installation and Programming/commissioning of the LightGRID+ Server is done remotely by a Support Technician.

Are LightGRID+ components upgradeable?

Yes. LightGRID+ components are field upgradable and continue to function during the upgrade process.

Can LightGRID+ be integrated into Building Automation Systems?

Yes. The LightGRID+ Gateway has an optional BACnet® IP interface for the connection of BACnet enabled BAS systems.

What Current luminaires are LightGRID+ enabled?

Many Current luminaires are already LightGRID+ enabled with more being added every day. Please visit the Current LightGRID+ website for the complete list.

Can LightGRID+ be used to control and manage non-Current luminaires?

Yes. Any luminaire with an ANSI C136-41 7-pin or 5-pin twist-lock receptacle can be managed by the LightGRID+ external fixture module. Please consult Technical Services for assistance with installation of the internal fixture module.