Lunera and Aruba Secure Wi-Fi

Commercial LED Lamps with Integrated Networked Lighting Controls
Use Wi-Fi to Connect to the Cloud for Energy Management Optimization

Retrofits of commercial and industrial real estate property are typically implemented to optimize energy management such as networked lighting controls or install an infrastructure that enables current and future high-value services within the facility. Selected approaches for each must be scalable, extensible and economical to deploy and operate. The Lunera Smart Lamp Platform accomplishes both.

The Lunera solution leverages Aruba, a Hewlett Packard Enterprise company’s secure Wi-Fi infrastructure to connect to the cloud to deliver energy and building management enabling high-value contextually-aware capabilities such as real time location-based services. Installation is minimally disruptive, simultaneously retrofitting and transforming the building’s existing lighting system and connecting it to the cloud. The lighting is retrofitted to energy-efficient, connected LED lamps with integrated networked lighting controls/sensors. The smart lamps are managed through cloud-based software which is accessed through Wi-Fi.

The Smart Lamps use an integrated Bluetooth radio to communicate with each other. This Bluetooth mesh is available as a contextually-aware IoT infrastructure, ready to enable a myriad of services through open APIs. The Wi-Fi connected cloud is home for the platform software used for control, management and reporting, data storage and an App Marketplace of software and APIs.

Features/Components/Benefits

The Smart Lamps seamlessly and securely connect to the Lunera Cloud over Wi-Fi through Aruba Access Points and Mobility Controller. The components of the Lunera Smart Lamp Platform work seamlessly with the Aruba secure Wi-Fi infrastructure to deliver a connected lighting and energy management solution and establish an extensible, open IoT infrastructure network.
Smart T8
The Lunera Smart T8 is a connected IoT device that integrates a Wi-Fi radio, Bluetooth Radio, micro-processor and ambient light sensor in a popular T8 4FT LED tube. The lamp simply installs and is software configured through Wi-Fi. Lamp-to-lamp and lamp-to-device connections are established using the integrated Bluetooth radio.

Smart Lamp - Wi-Fi Radio
The Smart T8 has an integrated 2.4GHZ Wi-Fi 802.11 b/g/n radio that connects the lamp to the cloud, eliminating the need for a dedicated lighting controls gateway. Wi-Fi is used to download policy updates, upload data, access Apps in the cloud, and control Wi-Fi connected devices.

Cloud Software – Dashboard
The Smart Lamps connect to cloud-based control center software via Wi-Fi. The Dashboard function provides the administrator with a system status report.

Cloud Software - Facility Map and Software Commissioning
A virtual facility map, resident in the cloud, maps all Smart Lamps and accessories in the facility. Lamp and accessory commissioning is setup and updated in software at anytime and communicated through secure Wi-Fi to the connected devices.

Smart Lamp - Bluetooth Radio
The Smart T8 has an integrated 2.4GHz BLE 4.1 for easy WiFi configuration of lamps, wayfinding, asset tracking, proximity messages and IoT gateway functionality. Standards including Apple iBeacon and Google Eddystone supported.

Cloud Software - Alerts
The cloud software presents alerts to the administrator, either when an event occurs within the Smart Lamp Platform that is out of policy, or if there is an external event, such as a peak power usage adjustment request or temperature forecast, that affects energy consumption.

Smart Lamp - Microprocessor
The microprocessor in the Smart T8 controls light levels based on events and policies communicated from the cloud via Wi-Fi and from sensor inputs. It also measures and verifies real-time energy usage, using Wi-Fi to send data to the cloud.

Cloud Software - Marketplace Access
Third-party apps and APIs services using the Smart Lamp Platform infrastructure can be found in the expanding, cloud-based Lunera Marketplace.

Smart Lamp - Ambient Light Sensor
The dimmable Smart T8 has an integrated ambient light sensor for daylight harvesting. The sensor distinguishes between artificial and natural ambient light.

About Lunera
Lunera is a lighting innovator focused on delivering simple, affordable and valuable networked command and control solutions for commercial and industrial buildings. Our Smart Lamp Platform of connected LED lamps and cloud based software applications delivers coordinated energy management of lighting, HVAC and plug loads and enables indoor GPS and real time location based services (RTLS) throughout a facility.

The Smart Lamp Platform architecture is built on open standard and is highly scalable. A robust set of applications are available in the expanding, cloud-based Lunera Marketplace.

The Smart Lamp is based around LED light bulbs due to its low cost of deployment, immediate energy savings, ubiquity, density and always-on power. Lunera is redefining traditional LED lighting to catalyze change and realize a vision for ambient computing.

About Aruba
Aruba, a Hewlett Packard Enterprise company, is a leading provider of next-generation networking solutions for enterprises of all sizes worldwide. The company delivers IT solutions that empower organizations to serve the latest generation of mobile-savvy users who rely on cloud-based business apps for every aspect of their work and personal lives.

www.arubanetworks.com

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