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Project	
Notes	
Type	Date
Cat. No.	

SGW-101 aleoBlue Gateway

DESCRIPTION

The aleoBlue Gateway connects Bluetooth mesh networks that have been commissioned using the aleoBlue Commissioning tools to the aleoBlue cloud, to allow the scheduling of events and delivery of services based on the data generated by these networks.

Please note:
- aleoBlue Gateways can only be added to projects commissioned using the aleoBlue Commissioning tools.
- One gateway can control multiple areas (an area as defined in the aleoBlue Commissioning tool)
- We recommend that each gateway serves around 200 Bluetooth mesh devices - there is no hard limit as there are many factors on site that can affect the effectiveness of transmission.

APPLICATIONS

Indoor: retail, education, hospitality, corporate, warehouse, self storage.

SGW-101

aleoBlue Gateway

Specification Features

Scheduling

Schedule-based lighting control and the recall of predefined scenes at specified times / on specified days. This service is available out-of-the-box as soon as the gateway is added to the project. One gateway is required per area in a project.

Energy & Occupancy Monitoring

Energy and occupancy monitoring services are available as beta services. Calculated energy consumption is based on the brightness and rated power consumption of a driver. It can be visualized in a heatmap in the aleoBlue Commissioning web app and accessed via an API. Occupancy monitoring based on PIR status. It can be visualized in a heatmap in the aleoBlue Commissioning web app and accessed via an API. These services are enabled per gateway.

Remote Monitoring & Control

API for low-latency control of mesh devices in one or multiple areas.

Remote Maintenance and Upgrades

Regular maintenance updates delivered remotely. Key performance metrics such as CPU load and connectivity status are displayed in the aleoBlue Commissioning web app.

Updates and Security

Linux Operating System. High level of hardware and software security (secure boot & encrypted file system that can only be accessed with the management platform). Secure provisioning with secure IDs and encrypted keys. Automatic security updates. Prompt releases of OS updates & fixes to vulnerabilities.

aleoBlue Gateway Network Requirements

The aleoBlue Gateway uses DHCP to configure the IP address and DNS servers. The aleoBlue Gateway requires whitelisting of several remote hosts & ports.

Ordering Information

Example: SGW-101

SGW-101

Model No.

SGW-101
aleoBlue Gateway

Specifications and Dimensions subject to change without notice.

Aleo Lighting, Inc. I www.aleolighting.com I Ph: 877-358-8825

Performance Summary

Features & Application	An IoT gateway for the connection, monitoring, and management of Bluetooth mesh networks in commercial building applications via the internet. Requires networks to have been commissioned using the aleoBlue Commissioning tools. Uses a RGB LED for status reporting.
Capacity & Performance	Full protection against power failure. The current hardware configuration allows the aleoBlue Gateway to process about 450 Bluetooth mesh network messages per second.
DC Power Supply	12V, 1-1.5A
Operating System	Ubuntu Core
Processor	NXP i.MX6 UltraLite
Communication Protocols	Bluetooth mesh, TCP/IP, IPv4
Security	Secure boot with encrypted operating system Secure communication with the aleoBlue Cloud over Internet (TLS) Secure communication with devices over qualified Bluetooth mesh
RF information	2.4 GHz BLE radio (IEEE 802.15.1) Tx/Rx Maximum radio frequency antenna power output: 10 mW (+10 dBm) Internal omni-directional trace antenna
Ports	1 x RJ45 10/100 Ethernet port (with PoE option)
Operating Temperature	0°C to +70°C 32 °F to 158 °F
Housing & Dimensions	Material: ABS, PC 120 x 120 x 25 mm (4.7 x 4.7 x 1 inches)
Weight	0.254 kg (0.56 lbs)
Mounting Position	Wall or surface mounted. As close to the geometrical centre of the lighting network as possible but as far as possible from potential sources of interference.

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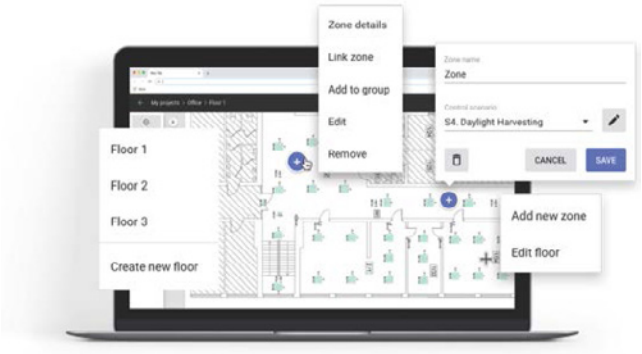
AleoBlue Wireless Bluetooth Controls

The AleoBlue is a complete solution for managing connected lighting systems using a Bluetooth Mesh lighting network. This enables seamless implementation of simple to complex lighting control scenarios without specialized training or lighting control engineering expertise.

DLC NLC Qualified.

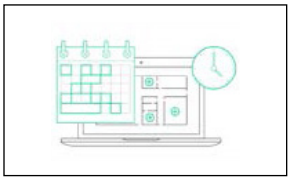
Features and Benefits

- Lighting Zones / Grouping
- Manual control of individual lights
- On Power up Behavior
- Zone Linking
- Vacancy Sensing
- Per fixture Daylight Control
- Per zone Daylight Control

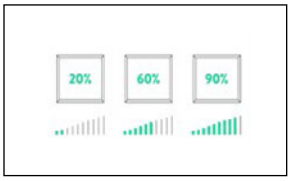


- Optimized Energy Consumption
- Less Hassle with On-Site Adjustments
- More Savings
- Increased Safety
- More Flexibility

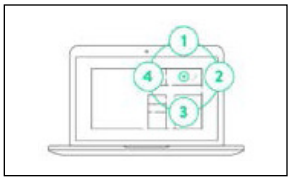
Scheduling



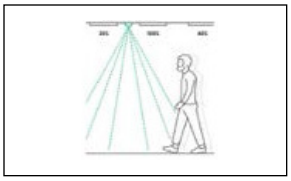
High and Low End Trim



Scenes



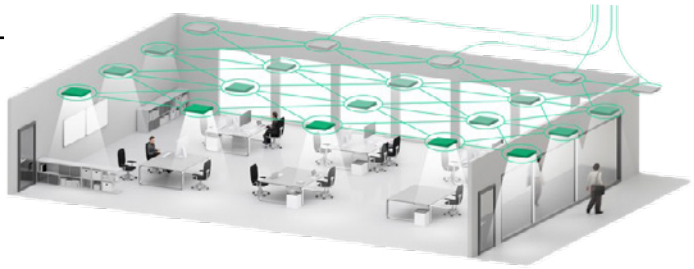
Occupancy Sensing



- Intuitive and user-friendly web and iOS apps
- No specialized training or lighting control expertize required
- Optimized for commercial spaces of any size
- No additional wiring or central control box
- Customizable lighting control parameters
- Future proof with Software Updates
- Multiple Zone Configurable
- Built-In Scenarios + Customization

Bluetooth Mesh Technology Advantages

- The fastest low-power communication
- Scalability to thousands of devices
- The most advanced encryption standards as well as the cutting-edge device authentication
- No single point of failure (no central device)
- Compatibility with a widely available devices (smart phones & tablets – both with Bluetooth 4.0 and Bluetooth 5)



Specifications and Dimensions subject to change without notice.

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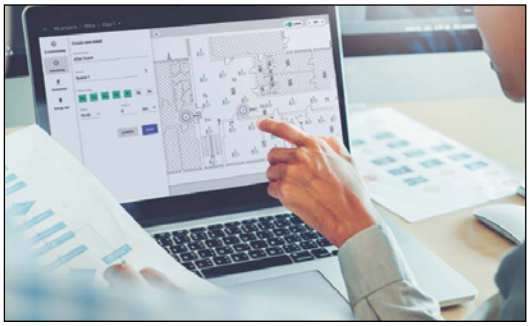
Planning

Remote preparation of a retrofit project with the use of our web app. Uploading floor plans, defining individual lighting zones and choosing lighting control scenarios.

1. Import Floor Plans
2. Define Individual Lighting Zones
3. Specify Desired Lighting Control Scenarios



Implementation

Adding lighting devices to the Bluetooth mesh network on-site with the use of an iOS app.

Customization and calibration of lighting control parameters during and after the commissioning process. Defining scenes for specific working activities.

1. Add Devices to Your Connected Lighting Network
2. Implement Predefined Zones and Scenarios
3. Optimize Configuration Settings if Needed

Provisioning / Configurations

The Bluetooth mesh Node is in the Unprovisioned Mode until it is provisioned by a “Provisioner”, which typically is a smart phone with a Bluetooth mesh compatible app.

Ordering Information

aleoBlue Gateway
Model: SGW-101

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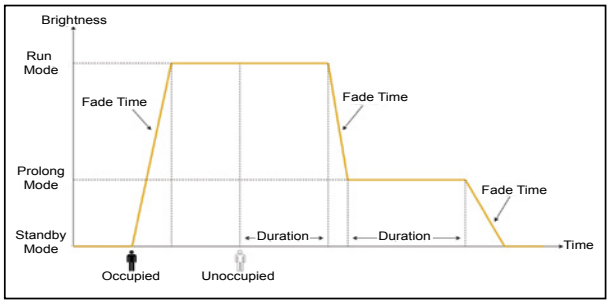
Lighting Control Scenarios

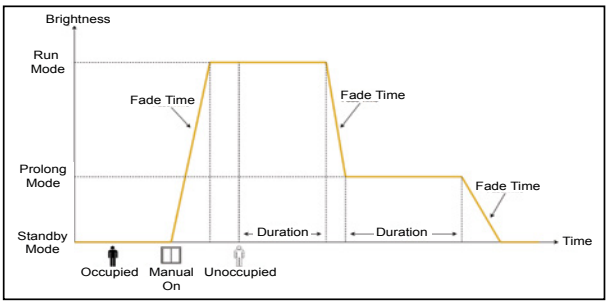
Multiple lighting control scenarios are available once the Bluetooth mesh Node is provisioned. At each scenario, duration, fade time and target brightness can be configured at any time with the iOS app.

Mode / Scenario	Wireless Switch	Occupancy Sensor	Ambient Light Sensor
Unprovisioned Mode	-	-	-
Switch	On / Off / Scenes	-	-
Occupancy	On / Off / Scenes	Auto On / Off	-
Vacancy	On / Off / Scenes	Auto Off	-
Occupancy with Daylight Harvesting	On / Off / Scenes	Auto On / Off	Enabled
Vacancy with Daylight Harvesting	On / Off / Scenes	Auto Off	Enabled

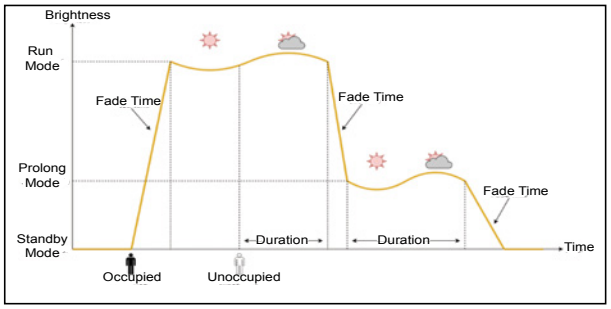
Occupancy Scenario



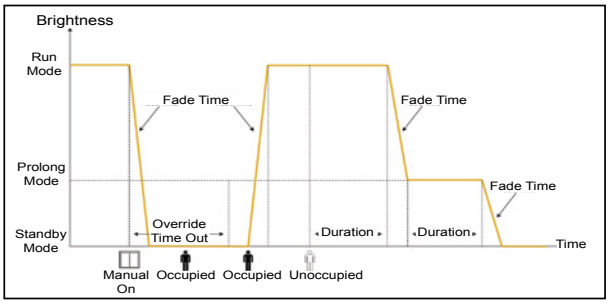
Vacancy Scenario



Occupancy Scenario - with Daylight Harvesting



Occupancy Scenario with Manual Override



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