amatis™

System specifications

Lighting controls with:

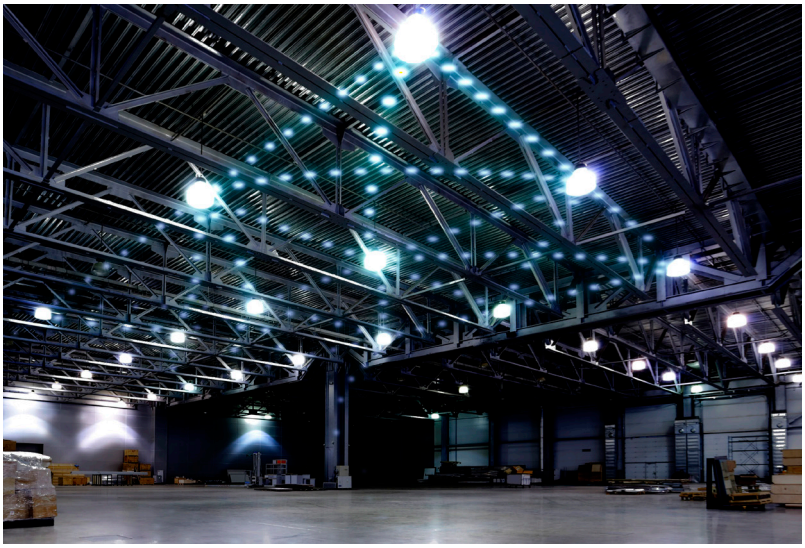
AMATIS 6loWIRELESS SYSTEM

Internet of Things wireless mesh network lighting controls system

SYSTEM OVERVIEW

6LoWPAN is a robust communication protocol used by all Amatis Controls devices to communicate commands and data across the building. Each device is in constant communication with other devices in the network thereby eliminating range limitation. This creates a self-healing system that is fault-tolerant should one of the devices lose communication and allows for a system that acts cohesively across zones.

The Amatis app communicates with the Amatis Border Router via an Internet connection. The AMBR then communicates messages with other devices in the network and then sends the data to the Internet using Ethernet or cellular connections. This aggregated data is available through the Amatis Dashboard.



FEATURES

SYSTEM FUNCTIONALITY	Wireless mesh network - the most flexible and scalable approach to networked lighting controls
	Devices communicate with one another, extending range and adapting the mesh to the shape of your building
	Significantly better fault tolerance - devices are not affected by one another failing, because each device has stateless programming
	Building Automation System integration - our system APIs integrate easily with building automation system using BACnet/IP
	The latest in cybersecurity with Internet-standardized protocols (IPv6)
LIGHTING CONTROLS STRATEGIES	Occupancy is detected with Amatis sensors - Normal Hours Occupancy feature allows you to choose how long the lights stay on once motion is detected by customizing the timeout - After hours Occupancy feature allows you to set Vacancy Timeout that programs the lights to shut off after a set time of no occupancy
	Daylight Harvesting is enabled with Amatis sensors. You can set ights to dim when there is enough ambient light coming in the windows
	High-end and low-end trim to define light levels of a fixture for energy savings and comfort
	Scheduling feature allows you to turn off lights based on a predetermined, customziable schedule
	Data collection is enabled when Amatis networks are connected to the Internet and aggregated so it can be monitored for energy and cost savings
COMMERCIAL, INTERIOR APPLICATIONS	RETROFITS: Design for Amatis Smart Drivers when retrofitting linear fluorescent fixtures to LED for maximum value at lowest investment level
	PER-FIXTURE CONTROL: Design Advanced Load Controllers per-fixture for more customization and ability to rezone digitally after installation without modifying electrical circuits
	GROUPS OF FIXTURES CONTROL: Design Advanced Load Controllers in groupings or zones for both installation and energy savings and maximum ROI, as fast as 2 years with an LED upgrade
SIMPLE, WIRELESS COMMISSIONING	Remotely configurable / upgradeable - Amatis app easily commissions the AMBR and all devices on the mesh network
	Real-time data uploaded to the Energy Dashboard
CODE COMPLIANCE	Amatis lighting controls meet Title 24 and Design Lights Consortium requirements
WARRANTY	All devices in the Amatis system have a 10-year limited warranty with uninterrupted connection of the Amatis Border Router device from a network

COMPLETE YOUR AMATIS SYSTEM

Connect with
AMATIS BORDER ROUTER (AMBR)

Retrofit with
SMART DRIVER

Enable smart fixtures with
ADVANCED LOAD CONTROLLER

Detect MLTH with
SENSORS

One-touch power with
BATTERY OR WIRED SWITCHES

TECHNICAL SPECIFICATIONS

COMMUNICATION	**Wireless transmit range***	Amatis Border Router (AMBR): Up to 200 feet to nearest mesh connected device Advanced Load Controller: Up to 200 feet to nearest mesh connected device Smart Driver: Up to 200 feet to nearest mesh connected device Sensor 1: Up to 200 feet to nearest mesh connected device Sensor 2: N/A; connects with Advanced Load Controller or Smart Driver for wireless communication Switches: Up to 75 feet to nearest mesh connected device
	Communication protocol	6loWPAN is built on the Internet-standardized protocol, IPv6. 6loWireless is the Amatis system that uses 6loWPAN to build a self-healing wireless mesh network, send messages between devices, transfer data and control lights.
	Encryption	AES 128-bit
CLOUD / NETWORK	**# of edge devices per cloud system**	Up to10,000 devices on a single app instance. Border Routers can be added modularly to support every 100 connected devices.
	Software updates (edge devices)	Updates to the Advanced Load Controller, Smart Driver and Sensor 1 are performed over the air via the app, as frequently as every two weeks. Updates to the AMBR are run directly via the LAN/VPN connection as frequently as monthly.
	Software updates (cloud server)	Frequently updated over the air
	Alert mechanisms	Power for Advanced Load Controllers and Smart Drivers is indicated via the illuminated blue LED button, when communicating to a nearby AMBR, and have a flashing blue when powered but not communicating with an AMBR. Power for sensors is indicated via a green LED light. Power and Internet connectivity for the AMBR are indicated through a successful lighting sequence ending in a flashing blue light. Offline devices are escalated in the Amatis app in the “Errors” section.
ENVIRONMENTAL	**Installation environment**	Commercial, Indoor/Covered
	Temperature ranges	Amatis Border Router (AMBR): 32-131°F (0-55°C); 5-95% RH, non-condensing Advanced Load Controller: 5°F (-15°C) to 130°F (+55°C) Smart Driver: -4°F to 104°F, -20°C to 40°C Sensor 1: -20°F to +100°F (-28°C to 37°C) Sensor 2: -20°F to +100°F (-28°C to 37°C) Switches: 4°F to 140°F (-20°C to 60°C)
GENERAL	**Standards / Ratings**	FCC, UL 508 and UL 2043 Device contributes to Amatis system compliance with ASHRAE 90.1-2016 and CA Title 24 requirements

*Based on clear line of sight. Interior obstructions may limit range.

Note: Actual performance may vary as a result of end-user environment and application.
Specifications subject to change without notice.