



Product specifications

Connect with:  
**AMBR**

Amatis Border Router



## PRODUCT OVERVIEW

The Amatis Controls Border Router (AMBR) is our wireless lighting control system communication gateway. AMBR communicates wirelessly with drivers, sensors, and controllers to form a robust mesh network.

Every Amatis device connects to AMBR via our 6LoWireless protocol. AMBR uses this wireless communication to configure each device automatically to create a secure 6LoWireless mesh network.

AMBR connects to the web using a secure, encrypted VPN connection. It also uploads real-time data from each device to our web-based user interface—the Amatis Energy Dashboard—via Ethernet or cellular network connections.

## FEATURES

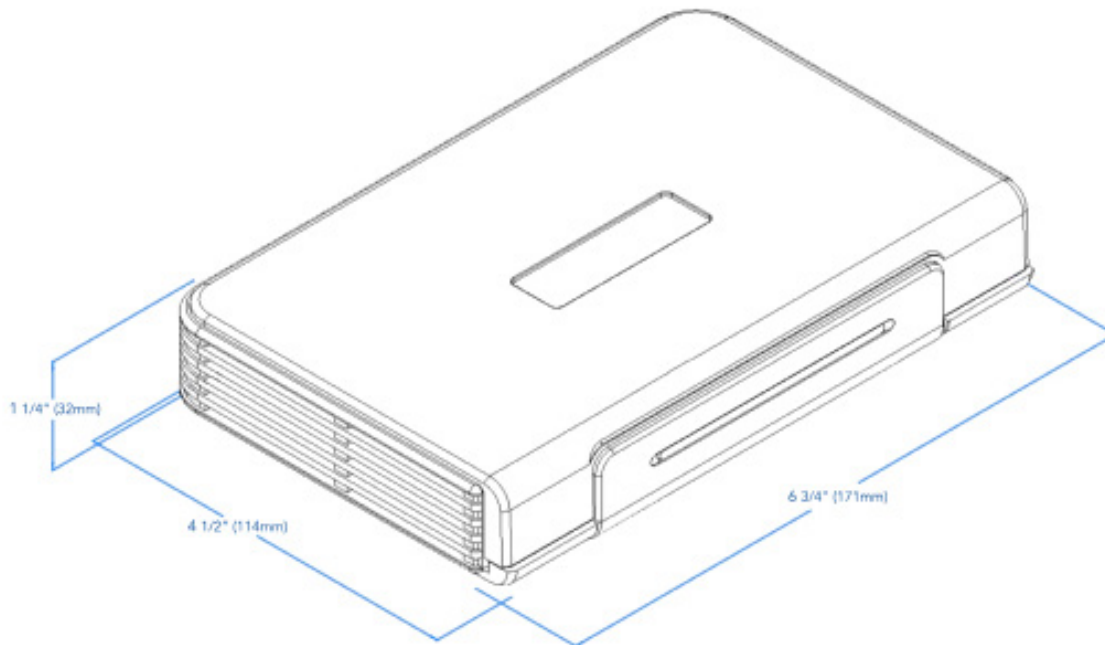
GATEWAY CAPABILITIES	Manages the creation and configuration of Amatis 6LoWireless mesh networks
	Digitally communicates with all connected Amatis devices
	Assigns programming tasks to sensors, drivers, controllers and switches during commissioning
	Hosts up to 100 wireless devices
	Can be removed from the network once programming tasks are assigned, as devices are fault-tolerant
	Integrates with Building Automation Systems via standard BACnet/IP protocol
	Includes AES 128-bit encryption and secure VPN connection to the Internet
EASY, PLUG-AND-PLAY INSTALLATION	Included CAT5 ethernet cable, DC Power adapter, and wall-mount adapter makes for quick mounting and installation.
	LEDs indicate power and network connection status
SIMPLE, WIRELESS COMMISSIONING	Remotely configurable / upgradeable
	Amatis app easily commissions the AMBR and all devices on the mesh network
	Unique IPv6 address
	With Internet connection, uploads real-time data from all devices the Energy Dashboard
CODE COMPLIANCE	Complies with ASHRAE 90.1-2016 and CA Title 24 requirements
WARRANTY	5-year limited warranty with uninterrupted connection of the Amatis Border Router device from a network

## TECHNICAL SPECIFICATIONS

COMMUNICATION	Wireless transmit range*	Up to 200 feet to nearest mesh connected device
	Communication protocol	Embedded 6LoWireless
	Encryption	AES 128-bit
	Mechanism	Dual internal antennas provide robust signal strength and dependable communication
MECHANICAL	Dimensions	6 ¾" (171mm) w 4 ½" (114mm) h ¼" (32mm) d
	Color	White with black faceplate
	Finish	High gloss
	Enclosure	Type 2, Plenum Rated
	External outputs	Single Ethernet port for LAN connectivity and management
ENVIRONMENTAL	Installation environment	Commercial, Indoor/Covered
	Temperature range	32-131°F (0-55°C); 5-95% RH, non-condensing
GENERAL	Standards / Ratings	FCC, UL-certified wall supply 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.

### Dimensioned isometric



## NETWORK FIREWALL REQUIREMENTS

TCP 443 outbound to mqtt.amatiscontrols.com  
 UDP 1195 outbound to vpn.amatiscontrols.com  
 TCP 3306 outbound to sql.amatiscontrols.com  
 TCP 443 outbound to api.amatiscontrols.com  
 TCP 443 outbound to dash.amatiscontrols.com

## EXTERNAL INPUTS

Button "A":

Press and hold this button for 2 seconds to hard reset the AMBR. This functionality is the same as unplugging and plugging in the AMBR. Note: Do not press this button repeatedly upon AMBR startup.

Button "B":

Allows user to select between DHCP (selected by default) and Static IP address or to reset their AMBR.

To adjust the following settings, first press the "B" button for 3 seconds. The white LED will begin to blink, indicating the AMBR is ready to receive the next inputs.

Press the "B" button...

One time to configure AMBR to DHCP. Blue LED will illuminate

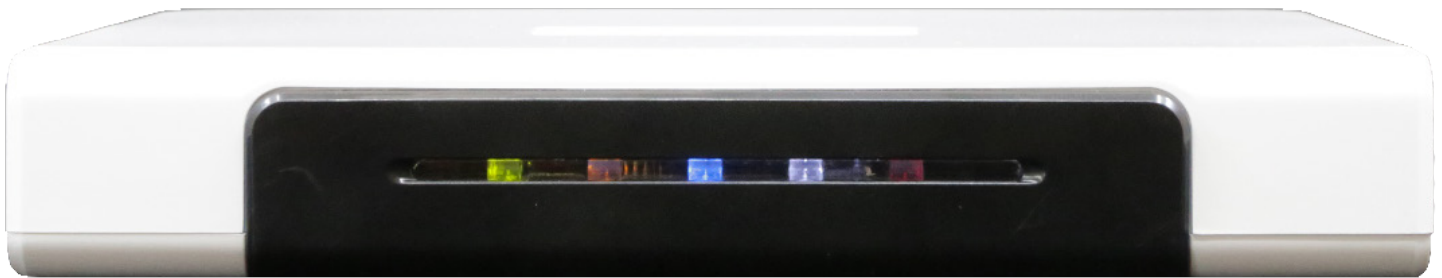
Two times to configure the AMBR to Static IP. Orange LED will illuminate

Three times to exit configuration mode. Green LED will illuminate.

Press and hold "B" button for 3 seconds to commit to selection.

The USB connection is disabled to the end user.

More information can be found in the AMBR manual at [amatiscontrols.com](http://amatiscontrols.com).



## LIGHT REFERENCE INDICATOR TABLE

LED	Flashing	Solid	Off
Green	Processor boot-up: LED indicator table invalid	Processor boot-up: LED indicator table valid	Processor boot-up: LED indicator table invalid
Orange	Not Applicable	Off Line data logging	Offline logging ERROR
Blue	Data logging and configuration	Data logging	Internet connection ERROR
White	Mesh Network	Not applicable	Normal Operation
Red	Not applicable	Power connection	Power connection ERROR

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

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