

HVAC Multi-Unit Gateway

Wireless gateway for multi-unit HVAC control

Product Overview

Lumos Controls HVAC Multi-Unit Gateway is designed to seamlessly integrate and control up to 32 HVAC devices such as Air Conditioners, Heaters, and Air Ventilation systems.

The gateway supports communication with HVAC systems via RS485 serial interface.

Currently, it supports major brands such as Daikin, Hitachi, Toshiba, Mitsubishi Electric, Hisense, Haier, Panasonic, York, Mitsubishi Heavy Industries, LG, Bosch, Samsung, Carrier, etc

It is a part of the Lumos Controls ecosystem, comprising controllers, sensors, switches, modules, drivers, gateways, and analytical dashboards.

The Lumos Controls ecosystem is listed by the Design Lights Consortium (DLC), qualifying it for energy conservation incentive programs and rebates by utility companies.

Specifications

Electrical

Specifications	Value
Input Power	DC 12V, 0.5A
Power Consumption	≤ 2.0W

Mechanical

Specifications	Value	Remarks
Size	108 x 87 x 60 mm (4.3 x 3.4 x 2.4 in)	L x W x H
Weight	188 g	

Features

- Supports up to 32 HVAC devices through RS-485 (Modbus RTU) network, including air conditioners, heaters, ventilators, or a combination of all three.
- Take instant control of power, temperature, and fan speed via the BLE mobile app or from anywhere in the world using the Enor E Gateway.
- Elevate your space with a smart 8-button HVAC panel, designed for effortless, tactile management of your indoor climate
- Integrate Cyrus motion sensor with control panel to automatically switch between Comfort, Away, and Power-Save modes to reduce energy based on real-time room occupancy.
- Create custom schedules and atmospheric scenes that align with your daily routine.

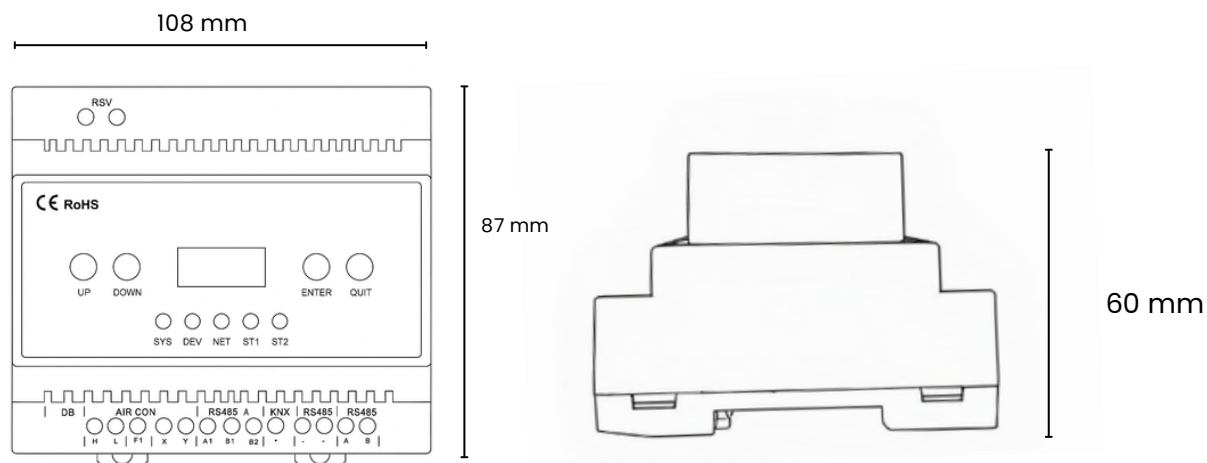
Bluetooth

Specifications	Value
Frequency range	2402-2480MHz
Transmit power	8dBm
Receive sensitivity	-95dBm

Environmental

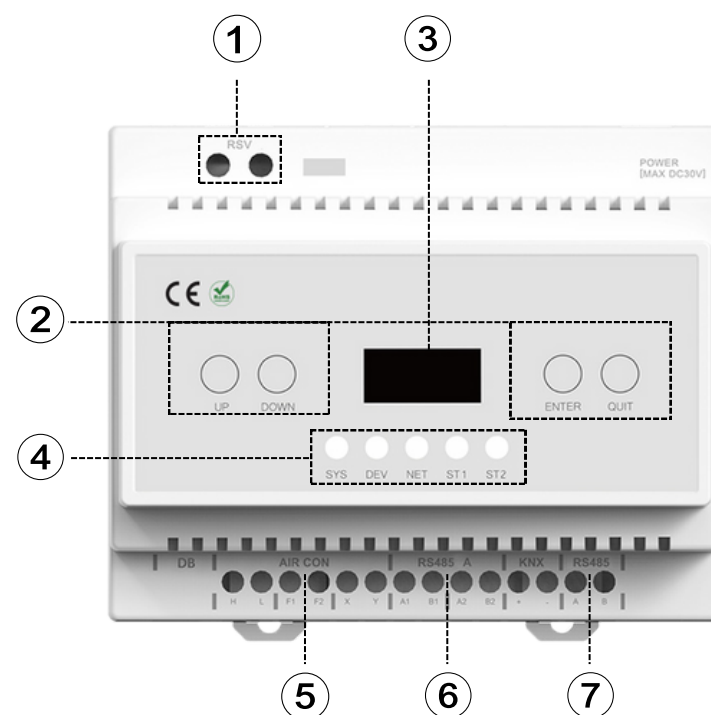
Specifications	Value
Operating environment	-20°C to 80°C, ≤85% RH

Product Dimensions



Interface Description

①	Power Interface	Supports plug and terminal connections DC 12V). Note: Using an incompatible power supply may damage the product
②	Buttons	Used for navigating the LCD screen and configuring settings. Buttons - Up, Down, Enter, Quit
③	LCD Screen	Displays communication status, air conditioning brand and quantity, detected fresh air or ventilation units, and device parameters.
④	LED Indicators	Indicate power and network connection status (refer LED indication details).
⑤	AIRCON Terminals	Provide wiring connections for power input, communication, and device interfaces.
⑥	RS485 A Interface	Connects to other systems such as ventilator/floor heater using RS485 protocol.
⑦	RS485 Interface	Connects to smart devices via RS485 communication.



Button Functions

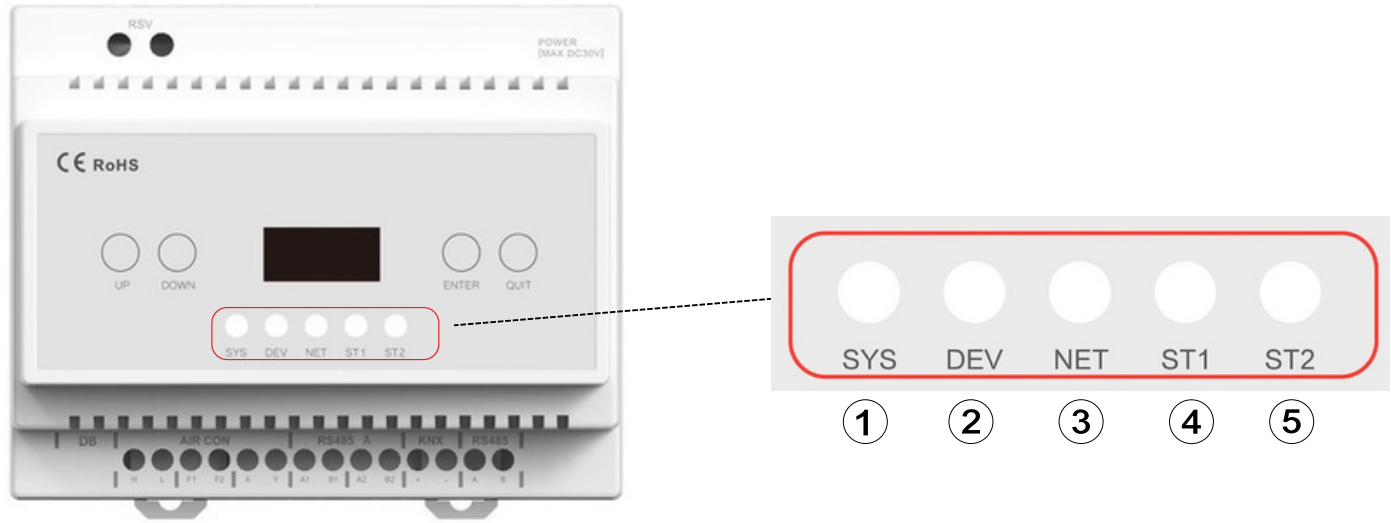
UP: Short press to scroll up; long press (5 sec) to switch between Chinese and English display.

DOWN: Short press to scroll down.

ENTER: Long press (5 sec) to enable wireless network access.

QUIT: Short press to return to the homepage; long press to disconnect from the wireless network.

LED Indication Details



Indicator	Device	Status	Description	
①	SYS	Gateway	Off	Power off or abnormal operation
			Blinking	Normal operation
②	DEV	Device	Off	Power off or searching for air conditioners
			Blinking	Successfully found air conditioners and connected devices
③	NET	Network	Off	Not connected
			Blinking	Connecting to the network
④	ST1	Bluetooth	On	Successfully connected
			Blinking	Connecting to the app (optional)
⑤	ST2	Reserved	Off	Idle
			Off	Unused

Terminal Selection and Communication Matching

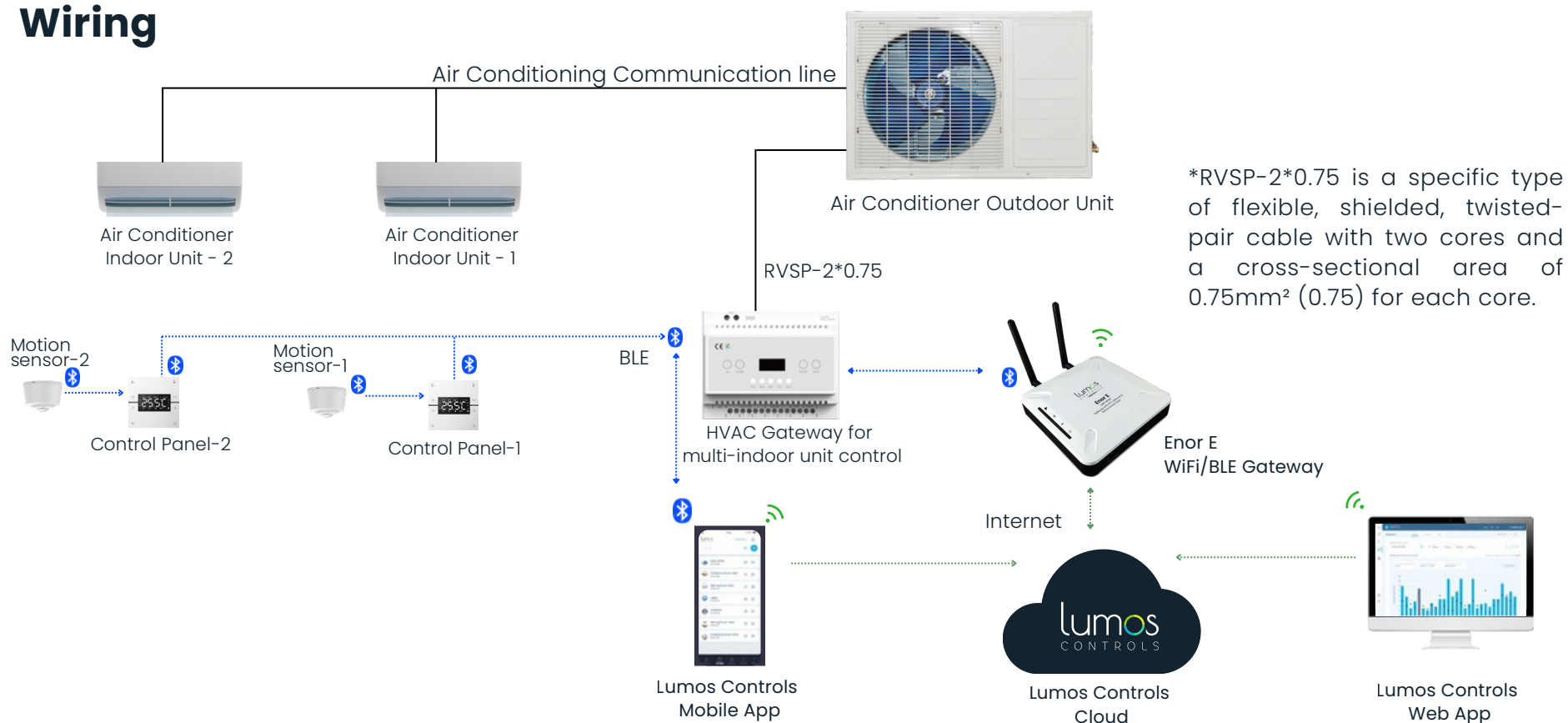
Follow the table below to connect the gateway to various air conditioner brands:

Brand	Gateway Side Connection Terminal	Air Conditioner Side Connection Terminal	Wiring Terminal Polarity	Is Connection to Outdoor Unit Required?
Daikin	F1, F2	F1, F2 (Indoor-Outdoor)	No	No
Mitsubishi Electric	F1, F2	M1, M2 (TB3)	No	No
Hitachi	F1, F2	1, 2	No	No
Hitachi Water System	F1, F2	Indoor-Outdoor Link Terminals	No	No
Toshiba	F1, F2	U1, U2	No	No
Panasonic	F1, F2	U1, U2	No	No
Hisense	F1, F2	1, 2	No	No
Haier	F1, F2	P, Q	No	No
York (Qingdao)	F1, F2	1, 2	No	No
Gree	H, L	G1, G2	Yes (H-G1, L-G2)	Yes
	H, L	D1, D2	Yes (H-D1, L-D2)	No
TCL	H, L	F1, F2	Yes (H-F1, L-F2)	No
Mitsubishi Heavy Industries	X, Y	A1, B1	No	No
	X, Y	A2, B2	No	No
Midea, Bosch, Carrier	X, Y	X, Y	Yes (X-X, Y-Y)	Yes
	X, Y	P, Q	Yes (X-P, Y-Q)	No
Midea (Cool Wind)	X, Y	A, B (Outdoor Unit)	Yes (X-A, Y-B)	Yes
AUX	X, Y	A, B	Yes (X-A, Y-B)	No
Samsung	X, Y	F1, F2	No	No

Brand	Gateway Side Connection Terminal	Air Conditioner Side Connection Terminal	Wiring Terminal Polarity	Is Connection to Outdoor Unit Required?
LG	X, Y	A, B (CEN)	Yes (X-A, Y-B)	Yes
McQuay	X, Y	Apc, Bpc	Yes (X-Apc, Y-Bpc)	Yes
TICA	X, Y	A1, B1	Yes (X-A1, Y-B1)	No
Chigo	X, Y	P, Q	Yes (X-P, Y-Q)	No
Trane	X, Y	A, B	Yes (X-A, Y-B)	Yes
York Household Water System	X, Y	A, B	Yes (X-A, Y-B)	No
	X, Y	A1, B1 or A3, B3 or A2, B2	Yes (X-A2, Y-B2)	Yes
McQuay Household Water System	X, Y	Apc, Bpc	Yes (X-Apc, Y-Bpc)	Yes
Carrier Household Water System	X, Y	A, B	Yes (X-A, Y-B)	No
Trane Household Water System	X, Y	CN29 (A, B); CN3 (A, B)	Yes (X-A, Y-B)	Yes
Emerson Water System	X, Y	A, B	Yes (X-A, Y-B)	No

Note: If "No" is marked under polarity, wiring polarity does not matter. If "Yes", follow the correct order.

Wiring



Note:

1. Refer to the terminal selection table to connect your brand's air conditioning indoor/outdoor unit terminals to the corresponding HVAC gateway terminals.

2. This product must be installed indoors, and can be placed in a smart home control box or an air conditioning maintenance port. When installing the product near an indoor unit, keep it away from the air outlet to prevent condensation damage.

Wiring Precautions

1. Wiring terminals vary by AC brand.
2. Use only the supplied or certified 12V DC adapter.
3. Incorrect wiring may damage the device or blow the fuse
 - contact the manufacturer if this occurs.
4. Do not disassemble or repair without authorization.
5. Turn off the air conditioner before wiring to avoid system faults.

6. Turn off power to the gateway and air conditioner before wiring to prevent system faults.
7. Keep signal cables separate from power and other signal cables.
 - Otherwise, signal interference may cause malfunction.
8. Maintain at least 15 cm spacing from AC communication lines and 30 cm from other cables. If not possible, use metal conduits with one end grounded.
9. Ensure the device casing is D-type grounded.

Note:


- The product uses a 2-core shielded twisted pair cable to connect to either the outdoor or indoor unit of the air conditioning system, thereby enabling communication with all indoor units in the system. (Note: Some air conditioning systems only allow connection to the outdoor unit.)
- The shielded twisted pair cable from the outdoor unit to this product should have a wire diameter of at least 0.75 mm².

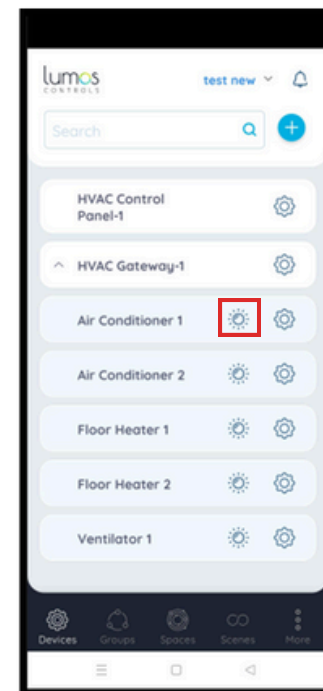
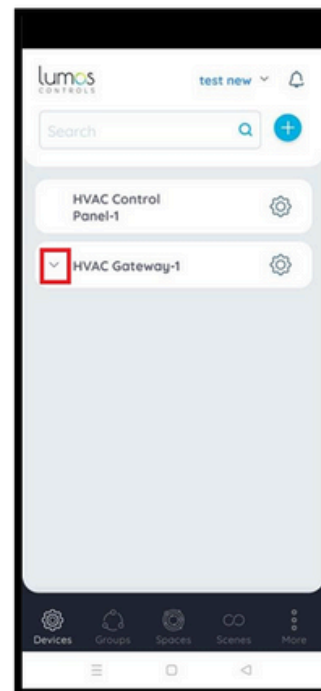
Mobile App Controls

To operate the HVAC system, commission the HVAC Gateway and Control Panel

Click the drop-down arrow next to the HVAC gateway in the app to view a list of connected devices, such as:

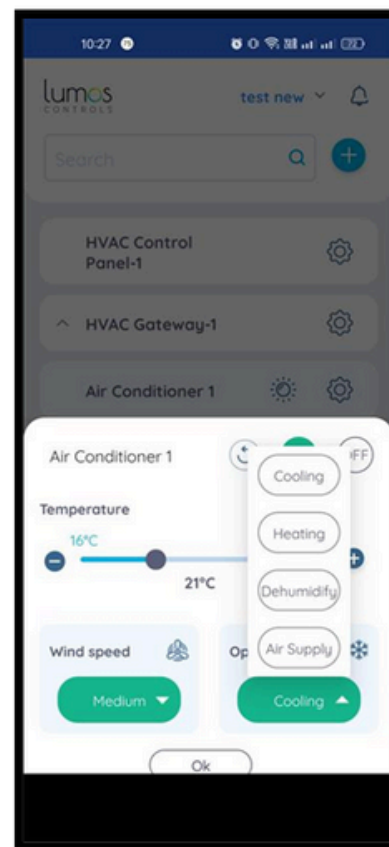
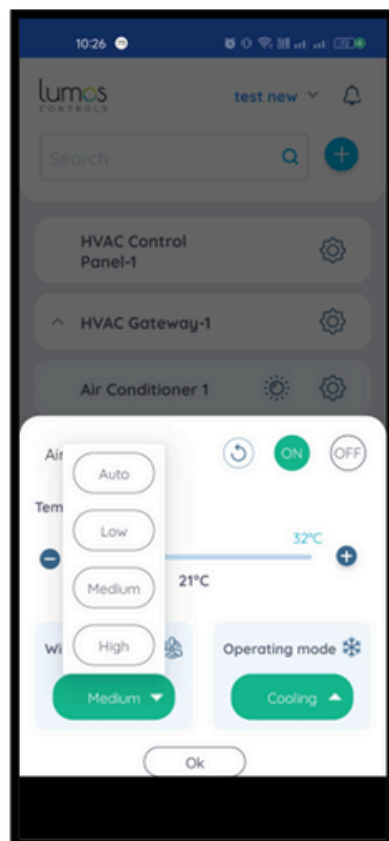
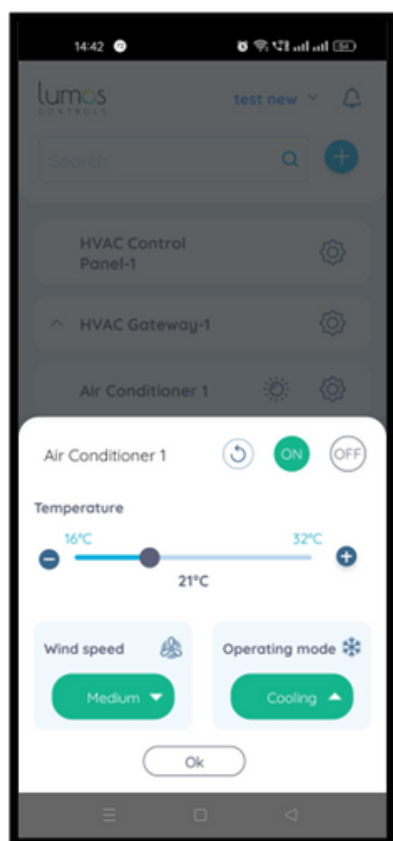
- Air Conditioners
- Floor Heaters
- Ventilators

Select the control icon  next to any specific device to open its control options to manage each device individually.



Air Conditioner Controls

- On/Off
- Temperature slider allows users to adjust the desired temperature from 16°C to 32°C.
- Wind Speed (Low / Medium / High / Auto)
- Operating Mode (Cooling / Heating / Dehumidification / Air Supply)



Cooling Mode: Lowers the room temperature

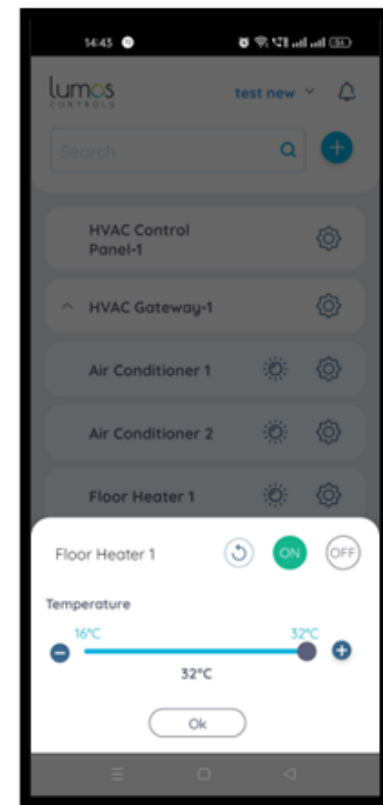
Heating Mode: Raises the room temperature

Dehumidification Mode: Reduces humidity in the air without significant cooling or heating

Air Supply Mode: Circulates air without heating or cooling

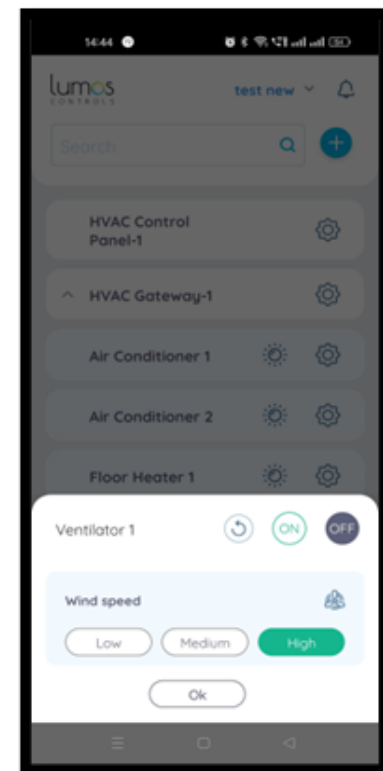
Floor Heater Controls

- On/Off
- Temperature slider allows users to adjust the desired temperature from 16°C to 32°C.

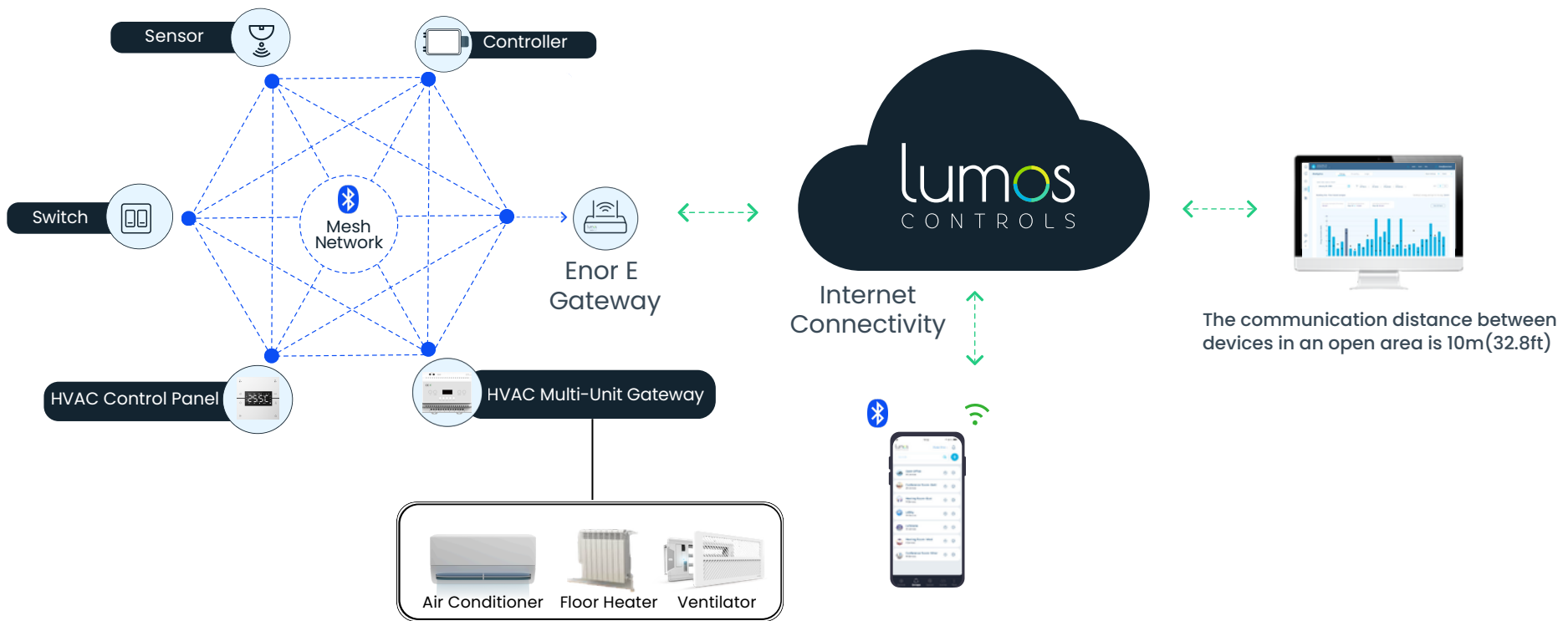


Ventilation Controls

- On/Off
- Wind Speed (Low/ Medium/ High)



Smart Ecosystem



Ordering Information

Product Code	Product Name	Product Description
M20	HVAC Multi-Unit Gateway	Wireless HVAC gateway to control up to 32 HVAC devices, including air conditioners, heaters, and ventilators, or a combination of all three

*Product details provided are subject to change without prior notice.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by WiSilica Inc. is under license. Other trademarks and trade names are those of their respective owners.



20321 Lake Forest Dr D6,
Lake Forest, CA 92630

www.lumoscontrols.com

+1 949-397-9330