PassiveLogic®

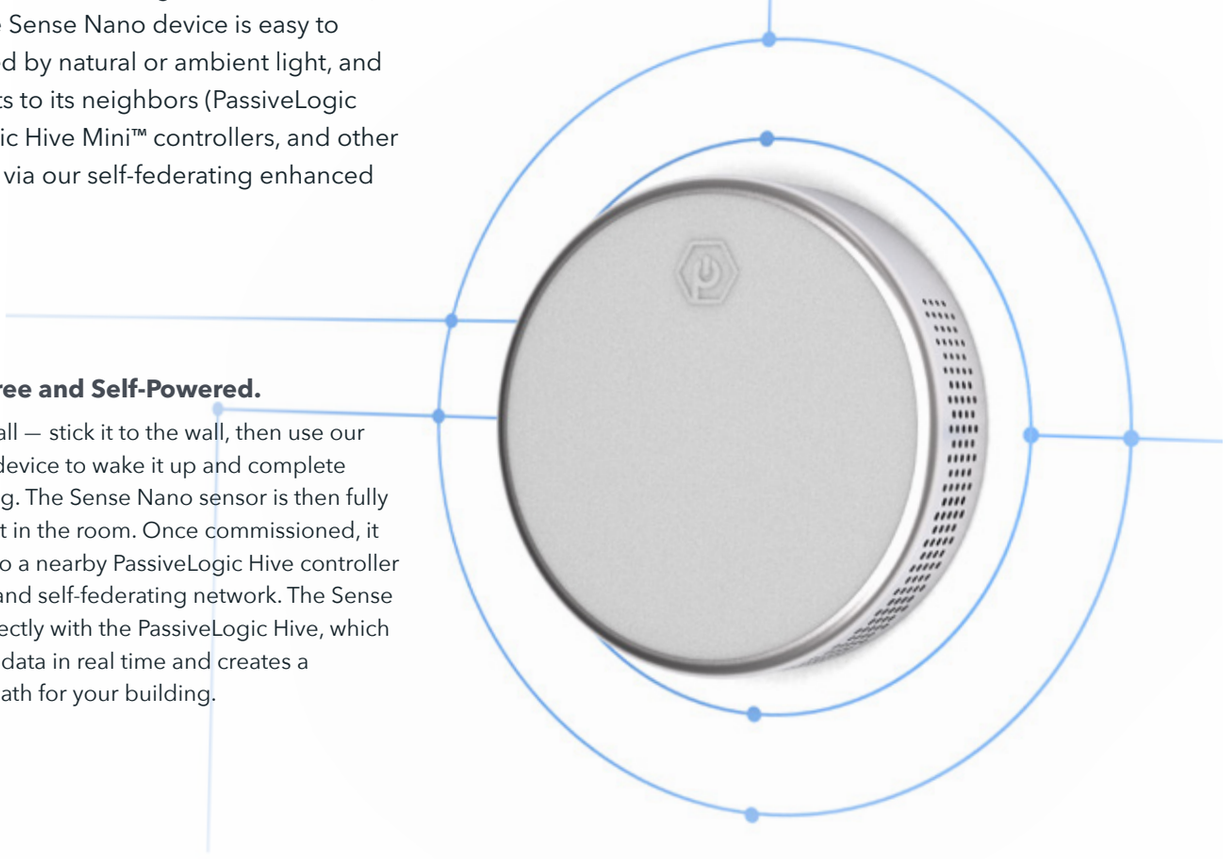
Small Hardware. **Sensing Big Things.**

Sense Nano

AHR 2025 INNOVATION AWARDS WINNER

reddot winner 2024

The PassiveLogic® Sense Nano™ sensor is a tiny yet mighty multi-sensor environmental monitoring device that gathers deep occupant and building data for accurate, adaptive comfort. The Sense Nano device is easy to install, can be powered by natural or ambient light, and automatically connects to its neighbors (PassiveLogic Hive™ and PassiveLogic Hive Mini™ controllers, and other PassiveLogic sensors) via our self-federating enhanced mesh network.



Quick Install. Wire Free and Self-Powered.

Toolless, 30-second install — stick it to the wall, then use our Lens™ app on your iOS device to wake it up and complete automatic commissioning. The Sense Nano sensor is then fully powered by just the light in the room. Once commissioned, it automatically connects to a nearby PassiveLogic Hive controller via our secure, reliable, and self-federating network. The Sense Nano communicates directly with the PassiveLogic Hive, which aggregates the sensor's data in real time and creates a comfort-based control path for your building.

Environmental Data. Signed, Sealed, Delivered.

Seven environmental parameters are measured in this elegant little lightweight package:

- Air temperature
- Radiant temperature
- Humidity
- Atmospheric pressure
- Light intensity
- Occupancy
- Indoor air quality, TVOC (when wired)

Go Wired. Enhance Performance.

There are multiple wired power and communication options for remote and low-light applications. Wiring the Sense Nano sensor expands your design options to

- Improve wireless network strength
- Allow for greater distance between devices
- Provide increased sample rate speeds
- Enable indoor air quality measurements

PassiveLogic®

The Perfect Data Devices. For Healthy Buildings.

PassiveLogic Sense Family

The PassiveLogic Ecosystem

The PassiveLogic® Sense Touch™ and Sense Nano devices capture full environmental and occupant data. The PassiveLogic Hive™ platform uses this data to compute the perfect comfort path for each space.

Installation

PassiveLogic Sense devices are incredibly easy to install and configure. They are quickly and simply commissioned using our Lens™ iOS mobile app and automatically incorporated into the PassiveLogic network with minimal expertise required.

Network

All Sense devices automatically connect with each other and the PassiveLogic Hive and PassiveLogic Hive Mini™ controllers on the same network. Our enhanced, mesh network is secure and provides for built-in redundancy via mesh hopping. Sense devices with wired power provide longer range coverage and low-light placement, plus a boost to the strength and reliability of the network.

Comfort

The PassiveLogic autonomous building platform is human comfort driven. Building managers can customize and enable controls for personalized comfort. Users can view local environmental conditions on the Sense Touch display. They can also access detailed settings and sensor history via Live™ on the Hive touch screen, a browser, or the Lens™ mobile app.

Sense Nano Specifications

Sensor Specifications	
Weight	Less than 1 oz (24.5 g)
Diameter | Height	1.77 in (45 mm) | 0.45 in (11.33 mm)
Surface mounting	Bracket with adhesive (included) or screws
Temperature	Accuracy: ±0.5°F at 77°F (±0.27°C at 25°C)
Radiant temperature	Accuracy: ±3.6°F at 77°F (±2°C at 25°C)*
Humidity	0 to 100% RH, ±3% RH (from 10 to 90% RH)
Indoor air quality, TVOC (wired only)	0 to 500 Index of Air Quality (IAQ), ±3 IAQ
Atmospheric pressure	300 to 1100 hPa, ±0.6 hPa
Light level	0 to 10,000 lux (±10%)
Occupancy detection	Wireless mesh trilateration
	*When the sensor is within 9°F (5°C) of the object.
Wire-Free Specifications	
Light powered (ambient light)	Light requirement 200 lux for 8 hours/day
Battery autonomy (no room light)	9–12 months battery life when fully charged
Environmental Operating Conditions	
Operating temperature	32 to 113°F (0 to 45°C)
Compensated temperature	32 to 113°F (0 to 45°C)
Storage temperature	-4 to 113°F (-20 to 45°C)
Humidity: Operating | Storage	10 to 90% RH | 0 to 99% RH (non-condensing)
Networking	
Enhanced mesh network	100 ft (30 m) maximum mesh hop
Wired Power Options	
Dedicated power (optional)	24VAC/0.2W or 12V–40VDC/0.2W • Allows device to act as an enhanced mesh network router w/more throughput • Enables IAQ measurement
1-Wire protocol (optional)	5V 1-Wire, standard speed, wired communication option Same as dedicated power plus: • 300m maximum wire length • Device can parasitically power itself (optionally) from this wire. Requires a PassiveLogic 1-Wire master such as a Multi-Cell.
Wire gauge	18–22 AWG