Onity

SensorStat®

Intelligent Energy
Management Solution

Carrier

Company Profile

For decades, Onity has been one of the world's leading manufacturers of electronic locks for hospitality, as well as other sectors such as education, marine, corporate and government. Through the years, as technologies became intertwined, we expanded our services and solutions and blossomed into much more than just a lock maker.

Today, Onity is a leading provider of a host of facility management technologies - from electronic locks, to in-room safes, minibars and energy management solutions. Today, we are recognized worldwide for our powerful combination of innovative thinking and intelligent systems.

Global Service Network

Since 1984, Onity has set the standard for electronic door locking with 5 million e-locks installed in approximately 30,000 hotels around the globe. At Onity, we are focused on building lasting client relationships and providing the solutions they need. Over 250 hotel chains around the world already rely on Onity for their electronic hotel solutions.

Headquartered in Salem, Oregon (USA), Onity has R&D and assembly operations in Spain, Mexico, China, and the U.S., as well as an extensive sales and service network that spans more than 125 countries around the globe. Whenever or wherever you need us, we are there to ensure that your systems perform beautifully.

Quality Products

With millions of systems installed worldwide, Onity is known around the globe for reliable products backed by superior support. Our products meet International standards, and are designed and built to uncompromising quality approval. From research and development to after-the-sale support, we cover all the stages to guarantee the finest quality in all our products and services.

Onity is a part of Carrier Global Corporation, a leading global provider of healthy, safe and sustainable building and cold chain solutions.

Carrier's Healthy Buildings Program provides an expanded suite of advanced solutions to help deliver healthier, safer, more efficient and productive indoor environments across key verticals including hospitality, education, commercial offices, healthcare and retail.
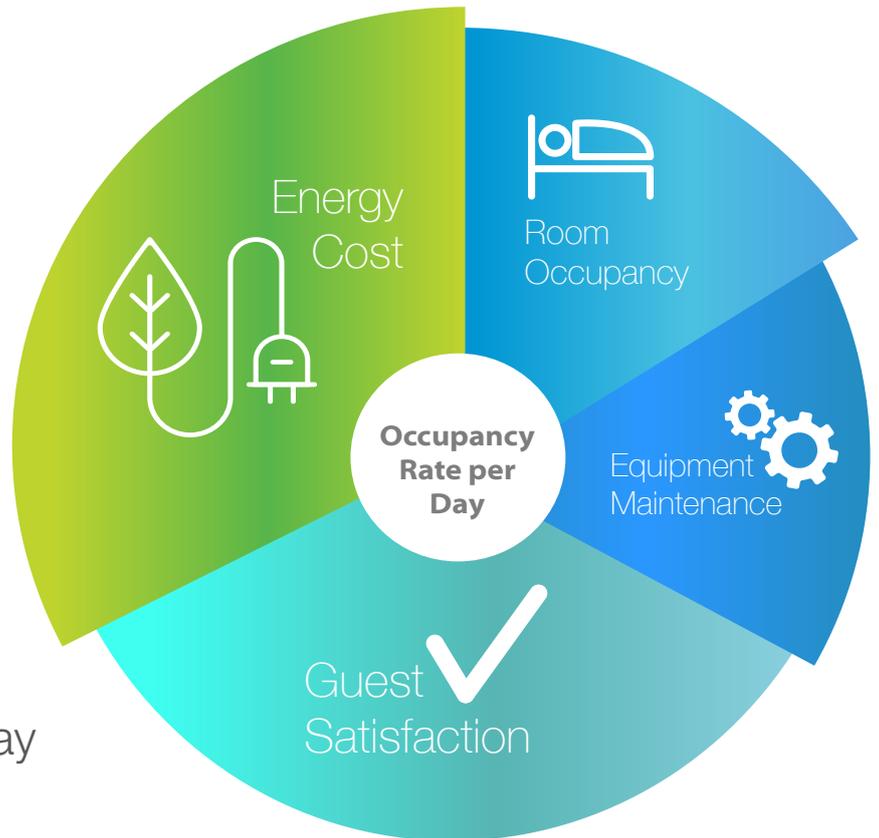
Intelligent Energy Management System (EMS)

Facility managers need to innovate ways to reduce operating expenses and satisfy guest expectations for comfort and sustainability. Energy costs represent one of the largest uncontrolled operating expenses for most properties.

Hoteliers' operative concerns

50% [1]

of all guest challenges and opportunities are HVAC related

A typical room is vacant **75%** of the day

Energy Cost

Room Occupancy

Equipment Maintenance

Guest Satisfaction

Occupancy Rate per Day

HVAC often works all day in a hotel room even when the guest is out.

- High cost for the hotel
- Low efficiency
- Energy waste

HVAC costs can total **45%** of a building´s utility expense

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The SensorStat® Solution

The SensorStat occupancy based system is proven to reduce energy consumption by 20%-45%[2] compared to traditional thermostats, while maintaining the same level of guest comfort.

By managing energy in spaces with unpredictable occupancy patterns, the SensorStat intelligent energy management system can help hospitality brands improve their RevPAR by:

✓ **Saving energy**

✓ **Improving climate comfort**

✓ **Reducing HVAC runtime**

✓ **Expanding the equipment's working life**

✓ **Reducing technical issues**

✓ **Decreasing maintenance costs**

✓ **Improving guest satisfaction**

Reduce energy consumption by

20% - 45%

System Features

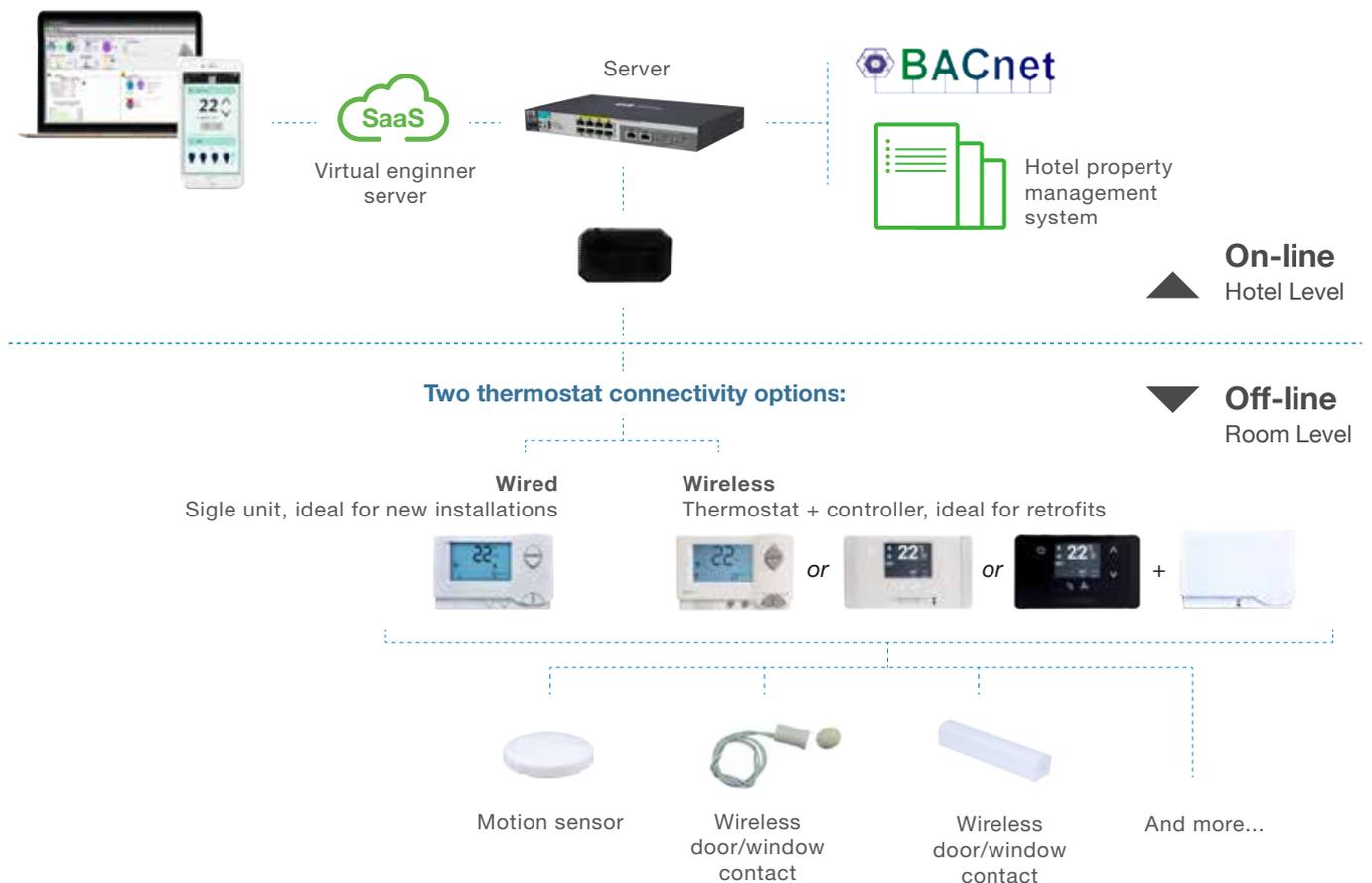## Balancing guest comfort and energy savings

SensorStat® thermostats detect motion and body heat, to ensure comfort is maintained for guests. They include:

- 💡 Light level sensor
- 💧 Humidity sensor
- ❋ Multiple inputs for remote sensors and contacts
- 📶 Internal passive infrared (PIR) sensor
- ≋ Motion sensor

SensorStat thermostats use a propietary Recovery Time™ algorithm that allows the room temperature to drift for energy savings, while rooms are not occupied, but returns to the occupant selected setpoint within a predefined number of minutes.

The Recovery Time algorithm continuously calculates how far the temperature can drift and still return to the setpoint within the property-determined recovery time. For example, a 5 minute recovery time for a 4-star hotel and a 20 minute recovery time for a budget hotel would align the balance of guest experience and operating costs.

System architecture

Server

BACnet

SaaS

Virtual enginner server

Hotel property management system

On-line
Hotel Level

Off-line
Room Level

Two thermostat connectivity options:

Wired
Sigle unit, ideal for new installations

Wireless
Thermostat + controller, ideal for retrofits

or   or   +

Motion sensor

Wireless door/window contact

Wireless door/window contact
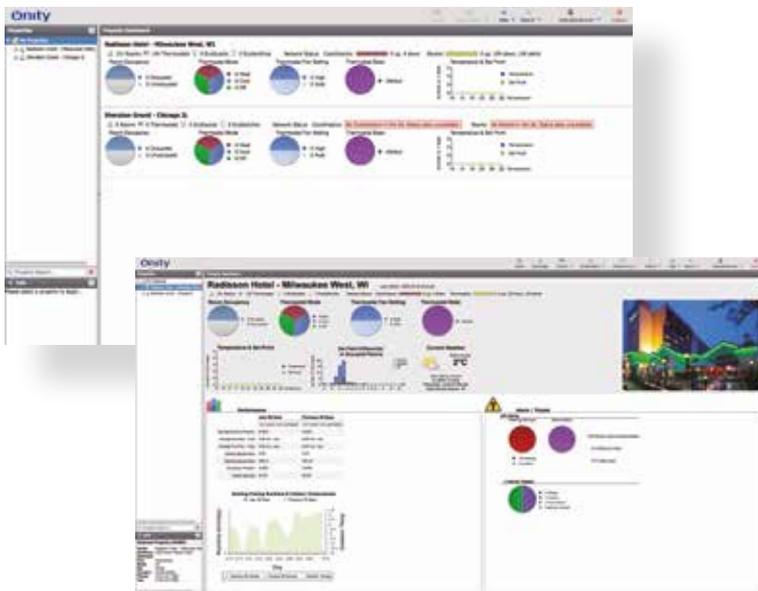
And more...

EcoCentral remote management system

The SensorStat® system offers remote facility management through the **EcoCentral** cloud-based command center that is accessible from any Internet-enabled mobile device. It not only improves energy efficiency and maintenance staff productivity, but also eliminates dedicated PC hardware and software that needs manual updating. Convenient features include:

- Proactive monitoring
- Remote control in real-time
- Identifying malfunctioning HVAC units
- Automatic load balance to improve response
- Logical profile shifting
- Cloud-based data backup
- Communication with PMS / BMS

The **EcoCentral** cloud-based command center also enables actionable reports, such as:

- In-room equipment performance
- Unit-by-unit / aggregated energy savings
- Standard and custom alerts

A wide variety of Cloud service plans can be configured to meet each property's specific requirements.

Upload
Data moved to servers/cloud

Analysis
Data is analysed to generate know/edge

Logging
Event data is captured

Action
A response event is triggered

Sensor
HVAC that detects the event

Report
Response is recorded

Event
Something happens in the physical world

System Features

A solution for new construction and renovation

The SensorStat® system is ideal for both new building projects as well as refurbishment ones:

Wired on-line solution (for new construction)

Zigbee® wireless connection

FCU valves, fan, power control

Coordinator

Up to 65 routers per coordinator

Wired door/window contact

Wired PIR sensor

Wireless on-line solution (for new construction or renovation)

Zigbee wireless connection

Zigbee wireless connection

FCU valves, fan, power control

Coordinator

Up to 65 routers per coordinator

EcoContact+ wireless door/window contact

EcoContact+ wireless motion sensor

Future proof and integration ready

The SensorStat® product line can be installed standalone, for hotels without a current budget for a networked system, and later be upgraded to a fully networked system for property-wide energy management and efficiency.

The SensorStat product line can be integrated with hotels' property management systems to determine sold or unsold room status, to pre-condition rooms at guest check-in, or to enable a deep setback mode in unsold rooms to maximize savings. The SensorStat line can also be integrated with many automated in-room systems for a total integrated guestroom solution.

The SensorStat intelligent solution can manage energy and room climate, also taking into account:
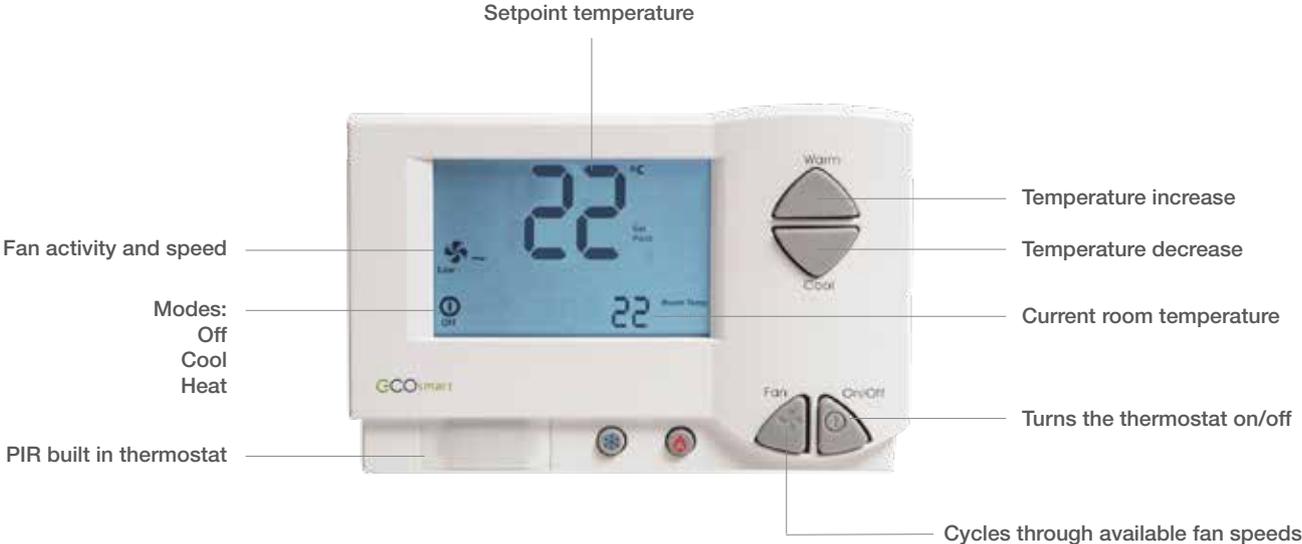
CLIMATE

PRIVACY   DOOR

PMS   BMS

LIGHTING

CONTROLS

WINDOW STATUS

OCCUPANCY

Thermostat Features

This device is a router in the system

Setpoint temperature

Fan activity and speed

Modes:
Off
Cool
Heat

PIR built in thermostat

Temperature increase

Temperature decrease

Current room temperature

Turns the thermostat on/off

Cycles through available fan speeds

Range of standard and special soft buttons available

Guest set point

Turns the thermostat on/off

°F/°C

PIR built in thermostat

Temperature increase

Current room temperature

Temperature decrease

Fan speed

Product Range

Off-line

SensorStat® EcoInsight+
Wired thermostat with on-board occupancy sensor and access to software tools. Externally powered.
Ref. BT100110

SensorStat EcoAir+
Wireless thermostat with on-board occupancy sensor. Communicates wirelessly or hardwired to SensorStat EcoSource+ controller. Battery powered.
Ref. BT100106

SensorStat EcoTouch+
Wireless thermostat with on-board occupancy sensor and ultra-thin capacitive touch flat screen. Communicates wirelessly or hardwired to SensorStat EcoSource+ controller. Battery powered.
Ref. BT100112 (White) / Ref. BT100101 (Black)

SensorStat EcoSouce+
Wireless controller, communicates with SensorStat wireless thermostats to form a wireless HVAC control package or directly with the SensorStat control software.
Ref. BT100107

SensorStat EcoSense+
Supplemental wireless PIR (passive infrared) occupancy sensor for large or multi-room spaces.
Ref. BT100201

PIR sensor
Supplemental wired passive infrared occupancy detection for large or multi-room spaces.
Ref. BF000364

SensorStat EcoContact+
Magnetic sensor for doors and windows, offering aditional occupancy detection. Equipped with a Zigbee® module for wireless operation.
Ref. BT100202 (White) / Ref. BT100206 (Black)

On-line

Off-line devices, plus:

SensorStat Gateway/Coordinator
Creates a Zigbee wireless area network.
Ref. BT100305

SensorStat EcoCommander
Network-edge gateway server which provides real-time data aggregation, reporting, and management.
Ref. BT100302 (Pro) / Ref. BT100307 (Standard)
Ref. BT100309 (Lite)

SensorStat EcoCentral
Cloud-based data storage, reporting and analytics interface that provides real-time monitoring and reporting to track progress towards efficiency goals. Accessible via desktop, tablet or smartphone.

Magnets for SensorStat EcoContact+ sensor:

Wireless, flush mount, in-door
(white or black colour option).
Ref. BT100205 (White) / Ref. BT100209 (Black)

Wireless, surface mount, cylinder
(white or black colour option).
Ref. BT100203 (White) / Ref. BT100207 (Black)

Wireless, surface mount, rectangular
(white or black colour option).
Ref. BT100204 (White) / Ref. BT100208 (Black)

Wired, flush mount (white).
Ref. BF000056

Wired, surface mount (white).
Ref. BF000034