TW780 EMS Kit

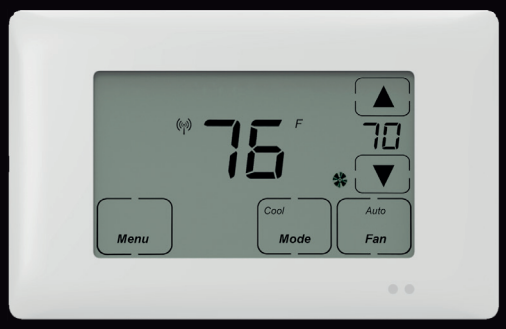
Energy Management System Kits

TW780 EMS Kit: Delivering seamless energy management and enabling personalized guestroom comfort to increase guest satisfaction, reduce energy costs and maximize profits.

Optimizing energy efficiency and sustainability objectives to save energy.

With multiple efforts being made by commercial businesses to reduce their energy usage and implement solutions and systems that are more energy efficient, the hotel industry is leading the way in deploying smart energy solutions and best practices. Research performed by the Sustainable Hospitality Alliance found that the hotel industry needs to reduce its carbon emissions by 66% per room by 2030, and by 90% per room by 2050. The entire industry, from large corporate hotels to small boutique chains, are identifying areas of their properties where they can reduce their energy usage without compromising guest comfort.

** Estimates only. Actual savings may vary due to variables such as room size, occupancy time, guest behavior, AC efficiency, etc.



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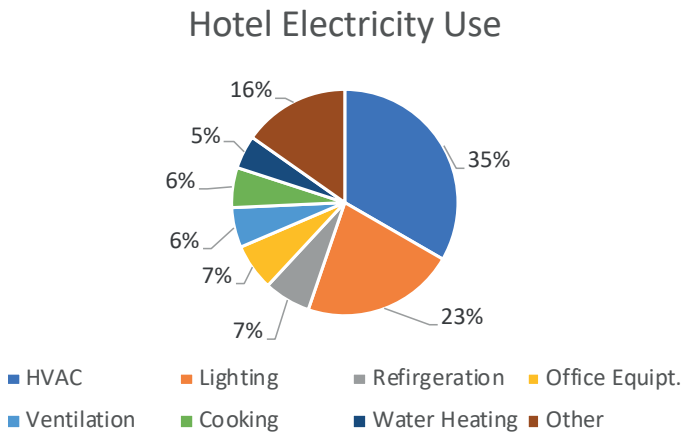

Source: US Energy Information Administration

Guest Experience

- When a room is occupied and the thermostat is in Heat/Cool/Auto mode, if a window or door is left open, the TW780 thermostat screen will display a warning message and turn the mode to Off after a specified amount of time. The time for the event to be triggered is configurable via the installer PC app.
- Advanced logic and separate motion and door/window sensors identify the room state and adjust the thermostat mode and/or setpoint to optimize energy usage.
- If the motion sensor does not detect motion within a set amount of time, then the thermostat will switch to the unoccupied state and either turn off or switch to the temperature setpoints for the away state.

Heating and cooling your hotel is a major energy guzzler and a typical hotel room can be unoccupied 70% of the time.

Hoteliers are paying for heating, cooling, lighting, and power in empty guest rooms. To reduce waste, many hoteliers are automating their guest rooms with smart outlets, smart light switches, motion sensors, smart door sensors, smart thermostats and system software for controlling guest rooms remotely.

Smart Hoteliers Choose Integrated Solutions to Improve Energy Efficiency & Reduce Energy Consumption

The TW780 EMS Kit includes a smart thermostat, and door/window and motion sensors.

Universal Electronics Inc.'s (UEI) new TW780 Energy Management System (EMS) Kit is designed to help optimize energy efficiency of every hotel room. The TW780 EMS Kit is a combination of hardware and software that provides a solution to reduce energy consumption when a hotel room is unoccupied.

While some energy management systems rely solely on motion sensors in the thermostat, the energy management system does not always get an accurate occupancy state (blind zone or guest is asleep in the bed), the TW780 energy management system looks for extra information (entry door open/close) in addition to the motion sensor and has an integration option to override the operation if needed.

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Installer Benefits

For convenient property deployment, the TW780 PC Installer App provides a step-by-step process for programming the TW780 via USB cable. The installer can create multiple profiles in the installer app that can be customized by per room type. The app allows for the installer to easily duplicate types and can pre-program each thermostat prior to on-property installation.

TW780 Energy Management Kit adds sensors to our Wi-Fi thermostat to reduce energy consumption in unoccupied hotel rooms While some energy management systems rely solely on motion sensors in the thermostat, the TW780 Energy Management Kit looks for information from the motion and the door/window sensor before adjusting the room temperature, such as if there is an open entry or patio door that should be closed. For convenient property deployment, the TW780 Thermostat and sensors can be paired by the installer using the PC installer app.

Ready to make your hotel more energy and cost efficient? It's easier than you think.

Make a Big Impact on Your Bottom Line

By Setting the thermostat temperature up/down by 6 to 7 degrees during different times in the year creates up to a~10% savings for Hotel Owners.

As an example, with TW780-independent hotels in the four states listed can save up to $89.86 per room, per year if the thermostat minimum set temperature is adjusted by ~6-7 degrees.

Energy Saving by Temperature Saving

LOCATION	CA	NY	GA	FL
KWH Cost	$0.26	$0.1660	$0.0882	$0.11
Estimated HVAC Wattage	**1200**	**1200**	**1200**	**1200**
Operation Hours Per Day	8	8	8	8
Estimate Rooms Per Hotel	100	90	100	90
Guest Room HVAC Cost				
Average Monthly HVAC Bill	$74.88	$47.81	$25.40	$31.68
Average Annual HVAC Bill	$898.56	$573.70	$304.82	$380.16
10% Annual Savings	**$89.86**	**$57.37**	**$30.48**	**$38.02**
Hotel HVAC Cost				
Average Monthly Bill	$7,488.00	$4,302.72	$2,540.16	$2,851.20
Average Annual Bill	$89,856.00	$51,632.64	$30,481.92	$34,214.40
10% Annual Savings	**$8,985.60**	**$5,163.26**	**$3,048.19**	**$3,421.44**

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Via Aruba Integration

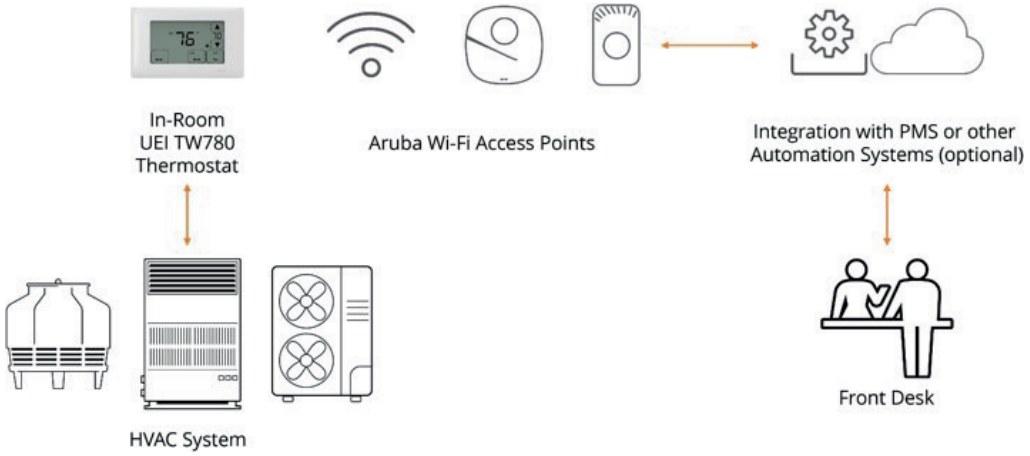
Once the Property Manage System is integrated with Aruba for the TW780 thermostat control, hoteliers can turn on the HVAC unit at guest check in and turn it back off or to Auto at check out.

Downtime to turn room around offers a basic saving of 4 hours of HVAC run time. Guests will still have full control of their comfort temperature during their stay.

Savings with a simple 4 hours off at a hotel in California can be up to **$449.28** per room per year.

Base HVAC Energy Cost Per Room by Location

LOCATION	CA	NY	GA	FL
KWH Cost	$0.26	$0.1660	$0.0882	$0.11
Estimated HVAC Wattage	1200	1200	1200	1200
Off Hours Per Day	**4**	**4**	**4**	**4**
Room HVAC Cost				
Average Monthly Savings	**$37.44**	**$23.90**	**$12.70**	**$15.84**
Average Annual Savings	**$449.28**	**$286.85**	**$152.41**	**$190.08**



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Energy Savings with Aruba/TW780, Via AP Integration:
With only 4 Hours of off time on the thermostat via Smart Integration between HMS, TW780, Aruba.
PTAC unit average 600-2,400 watts. The WATT Energy savings for Georgia will be over 140 thousand KWH
A hotelier in California can save over 175 thousand KWHs with just 4 hours of down time during room turn around!

Sample Energy Saving By Hotel/State

LOCATION	CA	NY	GA	FL
Estimated HVAC Wattage	1200	1200	1200	1200
Off Hours Per Day	4	4	4	4
Estimated Rooms	**100**	**90**	**80**	**75**

State Total Hotel Energy (KWH) Saved with Aruba Solution				
Daily Energy Savings	480	432	384	336
Monthly Energy Savings	14,400	12,960	11,520	10,080
Annual Energy Savings	175,200	157,680	140,160	122,640

KWH Costs

- California
- Florida
- Hawaii
- New York

Information Articles

- 10% savings with 6~7 degree difference
- Average kWH per Square ft
- Energy savings by 10%~15%

To accommodate different types and sizes of properties and hotel rooms we offer three kits:

- **Energy Management Kit**

- 1-TW780 thermostat
- 1 motion sensor
- 1 door/window sensors

Each of the products included can be sold separately to accommodate the needs of each hotelier.

Please note that the information provided herein is for informational purposes only, and does not constitute any representations or warranties by Universal Electronics Inc.

For samples and pricing please contact UEI's Senior Vice President of Global Sales for Home Automation, Security and Hospitality, Hrag Ohannessian,
at hohannessian@uei.com

About UEI

Founded in 1986, Universal Electronics Inc. (NASDAQ: UEIC) is the global leader in universal control and sensing technologies for the smart home. The company designs, develops, manufactures and ships over 500 innovative products that are used by the world's leading brands in the consumer electronics, subscription broadcast, security, home automation, hospitality and climate control markets. For more information, please visit www.uei.com.

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