



Connecting Conservation with Comfort



# Energate Pioneer Z100 Smart Energy Certified Thermostat

ZigBee compliance ensures that utilities and consumers benefit from seamless communications with other ZigBee enabled components within the Smart Grid. The Pioneer Z100 is a core component of Energate's home energy management solution that lets consumers and utilities manage energy use and reduce peak demand without sacrificing comfort or convenience.



**Energate's Home Energy Management Suite empowers consumers while enabling utilities and energy service providers.**

## Groundbreaking Technology

Energate's powerful Pioneer Series sets a new standard for smart thermostats. As one of the first products to receive ZigBee Smart Energy certification, Energate's Pioneer Z100 smart thermostats provide unparalleled performance and guarantee interoperability with other ZigBee enabled components used in the Advanced Metering Infrastructure (AMI) and the Home Area Network (HAN).

## Demand Response Enabled

As over 50% of the energy consumption in the home is associated with HVAC, the ability to extend the Smart Grid into the home to manage energy use is essential. Not only does the Z100 control most HVAC equipment, including heat pumps, it also communicates with the ZigBee enabled smart meters being deployed by leading utilities to more effectively manage energy consumption and costs, enabling new demand-side programs.

## Extending the Smart Grid

With its slim, sleek design, the Pioneer Series is a full-featured thermostat with a graphical display and an easy-to-use interface. Key features include:

- Advanced environmental control algorithms that accurately and precisely control the temperature
- Multiple load control categories and capabilities for Demand Response programs
- Flexible price control profiles to support a variety of dynamic rate plans
- Proprietary silent switching technology
- Menu-driven user interface with extensive help screens
- Fault/message notification for easier and more successful installations
- ZigBee wireless connectivity
- "Over the air" fully upgradeable firmware



## Connecting Conservation with Comfort

Building on our extensive experience in the HVAC industry, Energate has developed home energy management solutions that balance the needs of utilities with those of consumers - connecting conservation with comfort.

Like all Energate smart thermostats, the Z100 controls energy use inside the home by empowering consumers to respond to changing energy pricing, and opt-in or if needed override utility load control events.

The significant range of functionality incorporated in the Z100 gives utilities the flexibility to establish Demand Response programs that are tailored to their needs and the needs of their customers.

## ZigBee Smart Energy Profile

The Smart Energy Profile defines a series of standards designed to ensure interoperability between energy utilities and household devices such as smart thermostats and appliances. This results in a seamless wireless communications infrastructure which lets consumers manage their energy consumption more precisely, while allowing utilities to implement new advanced metering and Demand Response programs.



**ZigBee**  
Certified product



## General Specifications

<b>Equipment control capabilities</b>	Up to 2 Heat / 2 Cool (Conventional) Up to 3 Heat / 2 Cool (Heat Pumps)		
<b>Size</b>	4.5"H x 3.75"W x 0.6"D	<b>Operating range</b>	32°F to 122°F
<b>Power rating</b>	20-30 VAC Rated Voltage	<b>Control accuracy</b>	±0.9°F @ 68°F
<b>°F/°C scales</b>	Yes	<b>Timed filter warnings</b>	Yes
<b>Short circuit detection</b>	Automatic	<b>Plenum fan control</b>	Yes
<b>Wireless interface</b>	ZigBee Smart Energy Certified	<b>Heat pump fault input</b>	Yes

## Advanced User Interface

<b>Display</b>	2.58" x 1.45", 128 x 64 dot matrix LCD w/white LED backlighting
<b>Programmability</b>	7, 5/2 or 5/1/1 day with up to 6 setpoints
<b>Max./min. allowable setpoints</b>	Yes
<b>Clock</b>	12/24 hr display
<b>Auto changeover hysteresis setting</b>	Yes – Default 2°F, Option 0-6°F
<b>Hold settings</b>	Temporary, permanent, timed and vacation holds
<b>Password locking</b>	Yes – separate codes for installation settings and full lock-out
<b>Advanced control</b>	Yes – adjust how aggressively the thermostat controls to setpoint and when it begins anticipating recovery from setback
<b>Balance point settings</b>	Yes (only for a heat pump with an outdoor temperature sensor)
<b>Multi-lingual interface</b>	English and Spanish (user selectable)



## About Energate

Energate is a leading provider of advanced energy management solutions for residential and small business applications. Our products interface to the smart grid in support of demand response programs.

**To contact a sales representative, please call:**

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1-800-594-9871

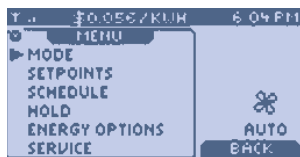
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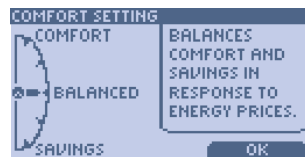
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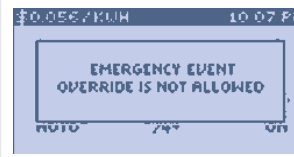
Menu-driven UI provides ready access



Pre-programmed price response profiles



Text message is displayed until user acknowledges it



## Demand Response Capability

<b>Direct load control</b>	Immediate or scheduled setback (setpoint offsets or specific temperatures) with the ability to allow/disallow user changes during events. Also provides event verification and user notification
<b>Event criticality</b>	Supports multiple levels of event participation in voluntary load control events. Also supports multiple mandatory load control events
<b>Price response</b>	Simple, intuitive user settings control how the thermostat responds to price changes. Supports Time-of-Use, Critical Peak, and Real Time Pricing programs
<b>Notification LEDs</b>	Color LEDs tied to Demand Response events
<b>Messaging</b>	Send and receive pre-defined and custom text messages of up to 240 characters