

# Energate Foundation™ Smart Thermostat and Home Energy Gateway

## Building a Foundation for the Future

The Foundation Smart Thermostat and Home Energy Gateway allows utilities to drive home energy management from the pilot stage to widespread deployment. Utilities now have a cost effective solution that provides consumers with a simple, easy to use device that provides utility-grade connectivity, security and interoperability and delivers information on their energy consumption and costs. Foundation will be of interest to utilities with established demand response programs as well as those looking introduce new demand side programs to reduce energy consumption and control peak load demand by providing devices that enable consumers to effectively manage their energy consumption.



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

The Foundation Smart Thermostat is a high performance smart thermostat based on Energate's industry leading Pioneer thermostat which has been deployed by over 25 leading utilities across North America. Like the Pioneer, the Foundation is easy to install and easy to use

- Is a full-featured thermostat with a graphical display.
- Has a menu driven user interface that controls the vast majority of HVAC equipment, including heat pumps.
- Supports AMI, broadband & FM RDS communications paths. Both single and/or dual radio configurations are available.
- An accessible USNAP-compatible radio module slot allows the Foundation to be upgraded to support Wi-Fi, cellular radio, ZWave and proprietary AMI radios.

### CONSUMERS OPTIONS

- Add a Companion dockable color touch-screen Home Energy Manager
- Provide a web-based Consumer Portal
- Anywhere, anytime access through smart phone apps
- Enable energy efficiency programs
- Connect to Home Automation

### UTILITIES OPTIONS

- Support Load Control programs with a variety of control features
- Offer dynamic pricing programs (TOU & CPP)
- Offer Peak Time Rebate programs
- Optimize electric vehicle charging
- Enable Distributed Generation (e.g., solar)
- Deploy new features using Over-The-Air (OTA) upgrades

**Simplicity, Performance, Proven-interoperability, with Consumer options**

**Standalone programmable communicating thermostat based on the Pioneer 2 platform with Energy Management features**

**Wall mounted unit with a backplate that acts as the base station for the Companion unit**

**External radio module slot (USnap compatible)**



**ZigBee®**

Certified product



## Key Features

- ZigBee On Board
- Advanced environmental control algorithms that accurately and precisely control the temperature.
- Proprietary silent switching technology.
- Menu-driven user interface with extensive help screens in English & Spanish.
- Multiple hold types: Temporary, Timed, Vacation, & Permanent.
- “Over the air” upgradeable firmware.
- Supports multiple levels of event participation in voluntary and mandatory load control events.
- 7, 5/2 or 5/1/1 day schedule with up to six setpoints per day
- Two levels of passwords (user & installer).
- Support for DR over Broadband using the ZIP Connect IP Gateway



## Advanced HVAC Control Capability

- Up to 2 Heat/2 Cool (Conventional)
- Up to 3 Heat/2 Cool (Heat Pumps)
- Control Accuracy  $\pm 0.9^\circ\text{F}$  @  $68^\circ\text{F}$
- Plenum Fan Control
- Heat Pump Fault Input
- Automatic Short Circuit Detection
- Auto changeover hysteresis (default  $2^\circ\text{F}$ , option  $0-6^\circ\text{F}$ )
- Anticipation time
- Maximum recovery time
- Max & min setpoint range
- Timed filter reminder
- Multiple reset options

## Technical Specifications

- Size - 4.5"H x 3.75"W x 0.6"D
- Display – 2.58" x 1.45", 128 x 64 dot matrix with white LED backlighting
- Operating Range -  $32^\circ\text{F}$  to  $122^\circ\text{F}$
- Power rating 20-30 VAC
- Integrated ZigBee Radio:
  - IEEE 802.15.4 compliant ZigBee radio
  - 2405-2483.5 MHz channels 11-26, 5MHz Spacing
  - -102 dBm receive sensitivity
  - +20 dBm output power (100 mW) typ



## 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.

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