

## Technical Data Sheet

# Edge<sup>®</sup> Controller

The Edge [i] Controller uses revolutionary technology to provide continuous benefits throughout the life cycle of a heating system including project/operating cost savings, simplified system design and startup, and optimized system performance and health monitoring.

Built into the Edge Controller are AERCO's Boiler Sequencing Technology (BST), Water Heater Management System (WHM), and connectivity to onAER Predictive Maintenance – ensuring peak performance, system efficiency and reliability, while reducing cost of ownership.

The Edge Controller makes boiler startup and operation effortless. Graphical unit and plant status, including system temperatures, firing rate and motorized isolation valve status, provide detailed information on faults and warnings to help technicians diagnose efficiently.

The Edge comes with integrated Modbus and BACnet protocols for full compatibility with building automation and energy management systems. Firmware upgrade, settings transfer/backup and data logging are conveniently accomplished via a USB port.

## Features

- Boiler Sequencing Technology on Benchmark boilers
- Water Heater Management on Innovation water heaters
- Precise temperature control
- Valve control
- Intuitive touchscreen, graphical interface
- Step-by-step diagnostic menus and system status reports
- Integrated Modbus and BACnet Communication protocols
- Transfer settings and upgrade firmware through USB port
- onAER Predictive Maintenance ready
- UL listed



## Future-Proof Software in a Hardware Enclosure that is Built to Last

An essential feature of any product manufactured in today's information age is its ability to network with related equipment. And not just the equipment and systems that are available today – but those that are still on the horizon. This indisputable fact was a guiding principle in the design of the Edge Controller. It pairs software flexibility with hardware durability to ensure that your AERCO equipment will be as current tomorrow as it is today.

## Startup Made Easy

Intuitive touchscreen and menu structure virtually eliminate programming errors. Settings can be uploaded without having to redo the same steps for each unit in the plant. Important unit and plant performance details are viewable without sifting through multiple screens.

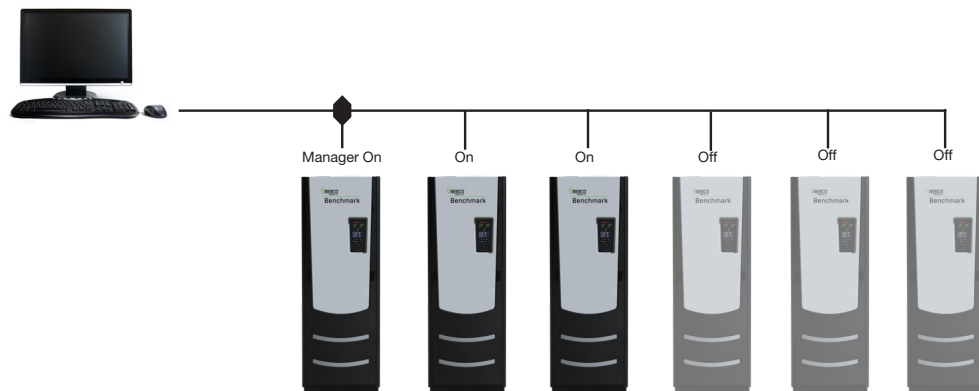
## Integrated Sequencing Technology Maximizes Energy Efficiency

The Edge Controller's integrated Boiler Sequencing Technology (BST) for Benchmark boilers and Water Heater Management (WHM) for Innovation Water Heaters is designed to maximize energy savings and uptime reliability in modular unit plants. The BST/WHM system can stage and coordinate operations for up to 16 units, utilizing AERCO's condensing equipments' unmatched modulation for utmost plant efficiency. The system offers sequential and parallel operation flexibility, and user programmable operation modes that can be easily adjusted.

Furthermore, the system automatically rotates the lead unit to help equalize runtime or number of cycles.

The WHM sequencing logic also incorporates a unique manager/client backup feature that provides automatic transfer of manager functions to the next unit on the chain, in case of designated manager unit shutdown.

NOTE: When utilizing either BST or WHM, a gateway is required for BAS or EMS integration via RS-485.



## Precise Temperature Control

A state-of-the-art PID (Proportional & Integral + Derivative) and Dynamic Up/Dynamic Down Modulation control algorithm provide a dynamic response to all changes in plant operation. System temperatures, as well as percentage of module input, are precisely controlled with virtually no overshoot or short cycling of equipment. A header temperature of  $\pm 4^{\circ}\text{F}$  is assured during continual plant operation.

## Integrated Modbus and BACnet Protocols for Full Compatibility with BAS

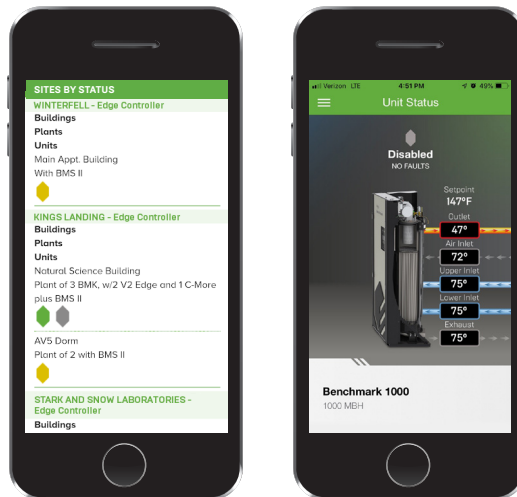
The Edge Controller can be easily integrated with a facility-wide Energy Management or Building Automation System through Modbus RTU via RS-485 and BACnet IP, Modbus TCP via Ethernet. Optional gateway for BACnet MSTP, Modbus RTU (when BST or WHM is employed), Lonworks and N2 Communication is available.

## onAER Predictive Maintenance Allows Access to Real-time System Performance

With onAER, users do not merely address faults, but predict when to take action/perform maintenance to prevent them. onAER allows users to see exactly how efficient their units and plants are, how many cycles per hour, and more. Customers will be able to pro-actively review data and trends to ensure units are operating optimally. Instant alerts are received if a unit is down allowing customers to see which ones need attention - view possible causes and suggested actions.

## Simplified Software Upgrade

Once an Edge Controller is in place, all new versions of the system's operating software can be uploaded via a USB port. The ability to upgrade the controller – without replacing hardware, circuit cards or boiler equipment – makes it faster, easier and less expensive to take advantage of new features and management controls that become available in the future.



## Mobile App

Experience full unit control and enhanced graphics with our Edge mobile app, which functions as a high definition, large screen controller. The Edge mobile app gives you full control functionality and freedom to move around the unit when configuring, diagnosing and troubleshooting. The mobile app allows users to conveniently submit service forms directly to AERCO tech support. Available on iOS and Android.

## Easy Retrofits

The Edge [i] Controller can be easily integrated into existing C-More controlled units. Retrofit requires a simple substitution of entire controller. Field wiring interfaces are identical, making retrofit ideal for expansion projects. Contact your local AERCO representative regarding retrofit availability by equipment model.



Heating and Hot Water Solutions

AERCO International, Inc. • 100 Oritani Drive • Blauvelt, NY 10913  
USA: T: (845) 580-8000 • Toll Free: (800) 526-0288 • AERCO.com