



## The Bert® 110 M

### Plug Load Management with Measurement

If you're like most facility managers, you suspect that there are large potential savings from plug based loads. Unfortunately you lack an easy way to document actual energy usage and savings. The Bert® Plug Load Management System, with measurement-enabled Bert® 110M units, is a brilliant solution.



- **Measure** energy use with Bert's real-time measurement features.
- **Analyze** energy use, establishing optimal schedules and documenting savings.
- **Control** plug based devices throughout your facility.

### The Plug Load Problem

Studies show that plug based load is a large and growing source of energy use- estimated at 20% of energy use for offices and 25% of electricity for schools. Yet many schools, offices and retail locations are closed for nearly as many hours per year as they are open. Bert® provides the simple, sophisticated tools to turn equipment on when buildings are occupied and off when they're not.

### How Bert® Works



Each Bert® contains a microprocessor that can communicate with the Bertbrain 1000 control software across your wireless network. Bert® can store 7-day on/off schedules with multiple on/off commands each day. This allows you to set schedules that mirror the actual operating hours of your facility and easily modify schedules throughout the year.

### Measure, Analyze and Control:

The Bert® 110M features an energy measurement chip that monitors the amount of power flowing through the plug and reports this information back to the Bertbrain 1000M software program. The measurement feature allows you to know the actual energy consumption of your equipment, as used in your facility, rather than rely on estimates from manufacturer spec sheets or industry studies.



### Load Shedding

Many utilities offer demand management or load shedding programs. While you may already have programs to reduce larger centralized loads such as air conditioning, you never had a cost effective way to add smaller distributed loads until now. The Bert® plug load management systems makes controlling distributed loads both simple and cost effective. Just hook your water heaters, air conditioners and vending machines up to Bert. Using our Bertbrain application you can set up a load shedding group and schedule. Now when you have a load shedding event, with the click of a mouse you can easily turn off some or all of your plug load devices. Schedules can be created by groups of devices or type of building, you can even cycle specific buildings or devices for a preset time.

### ASHRAE 90.1 and California Title 24 Code Compliance

Since, Bert® provides both measurement and control capabilities in one system, the Bert® Plug Load Management System helps commercial buildings comply with changes in the CA Title 24 2013 and the ASHRAE 90.1 2010 and 2013 Energy Codes. Did you know the 2010 ASHRAE Code requires "Automatic Receptacle Control" for 50% of a building's receptacles? The 2013 ASHRAE Code requires "Electrical Energy Monitoring" meaning the receptacle circuit's power must be recorded at least every 15 minutes and reported hourly, daily and monthly. Similar requirements are also included in the California Title 24 2013 section titled "Electrical Power Distribution Systems". Not only do these code changes apply to new buildings and additions, but alterations to existing buildings such as changing 10% or your lighting load. Whether you are trying to control individual outlets with the Bert® Smart Plugs or entire circuits with the Bert® Inline Series, Bert makes ASHRAE 90.1 and CA Title 24 code compliance both affordable and efficient.

## The Bert® Advantage

Bert® has many advantages over products such as timers or occupancy sensors. Most timers only hold a single schedule. Bert® can use multiple on/off times that will accurately reflect your facility's true operational hours. When holidays or summer breaks dictate schedule changes, new schedules are sent to Bert® with the click of a mouse. Since Bert® is on your network, Bert® does not have to be reset manually like timers after a power outage. Occupancy sensors may turn vending machines on when your building is unoccupied. Your drinks don't need to be chilled when the cleaning crew or security guard walks by your vending machine at night. Thanks to the simple mass remote control with Bert®, your plug loads can easily be part of a load shedding or demand curtailment program.

## The Bert® Plug Load Management System

The Bert® Plug Load Management System consists of the Bertbrain 1000 software application, your Wi-Fi network, and a virtually unlimited number of Berts®. By simply plugging water coolers, coffee machines, printers, copiers, etc. into the Bert® Smart Plug Series (Bert® 110, Bert® 110M and Bert® Vend) or wiring circuits with the Bert® Inline Series (Bert® 110I, Bert® 110IR and Bert® 220I) you can remotely measure, analyze and control all of your receptacles and circuits. Bert® runs on the existing Wi-Fi network so all devices can be remotely controlled in mass. Each building can have a unique schedule, thus turning equipment off during nights, weekends and holidays when buildings are unoccupied. The Bert® Plug Load Management System installs quickly so energy savings are immediate and payback is 1 to 2 years.



Learn more about how K-12 schools, colleges, offices, hospitals, state/local governments and retailers are managing plug load with the Bert® Plug Load Management System by visiting <http://www.bertbrain.com>.

**Measure - Analyze - Control**