

# FREQUENTLY ASKED QUESTIONS ABOUT BERT®



## Who is BERT?

BERT (Best Energy Reduction Technologies) is the leading plug load management system provider, helping commercial, industrial, and institutional facilities save more than 20 million kWh annually. We specialize in Wi-Fi based energy control solutions for schools, local governments, building owners, and long-term commercial tenants.

## What is plug load management?

Plug load management, sometimes called “plug and process load management” or PPL, refers to the intelligent control and monitoring of energy consumed at the device level. This includes office equipment, classroom technologies, and various hardware and building systems that traditionally operate without centralized monitoring and control.

## What does BERT do?

BERT saves energy by automating devices that are not currently being controlled by a Building Automation System (BAS). Our system provides intelligent control over plug load and hardwired devices, saving energy, increasing the lifespan of most equipment, and enabling smart buildings.

## What is overnight standby load?

Plug load and hardwired devices use energy even when idle or in standby mode. Overnight standby load refers to the energy consumed by these devices during times when the building is unoccupied, creating unnecessary energy waste.

## What kinds of devices does BERT typically control?

We can control anything that is plugged into an outlet, and most hardwired devices that are found in our customer environments (up to 240VAC/30A).

- Printers & Copiers
- Vending Machines
- Large Coffee Makers
- Water Dispensers
- TVs
- Space Heaters
- Window AC Units
- Electric Hot Water Heaters
- PTAC Units
- Exhaust Fans
- Commercial Refrigeration Equipment
- Charging Equipment
- Workstations
- Indoor & Outdoor Lighting
- Devices not currently controlled by existing building automation systems

## Which devices are generally not controlled by BERT?

BERT does not typically control servers, networking equipment, refrigeration equipment with perishable products, fax machines, or Critical Loads. Additionally, BERT devices are not typically installed on equipment with standby loads less than 1 watt, like paper shredders, single-serve coffee machines, staplers, etc.

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## What is a Critical Load?

Critical loads are electrical systems and equipment that must always remain operational to prevent immediate danger to life, safety, or mission-critical functions. These loads cannot tolerate any interruption, even briefly, without catastrophic consequences.

## Does BERT change the way devices operate by limiting voltage or current?

No. Each BERT device provides a means to remove power. When on, the full power that is normally available is passed through to your device.

## So, BERT is just a switch?

Not exactly. Your BERT device is a smart controller. It operates independently but communicates with a powerful software suite called BERTBrain.

BERTBrain ensures that devices are shut down safely and allows for intuitive automation, control, scheduling, and measurement of savings. In many cases, it can even let your facilities team know if your office equipment or device is failing or acting abnormally.

## How does BERT communicate?

Securely through your organization's existing Wi-Fi infrastructure.

## What happens if our Wi-Fi is down?

Your BERT will continue to operate normally. All settings are stored locally on each device.

## Is it really ok to just remove power from our devices?

With the devices we typically control, and 99.9% of the time with other devices we find, yes. Our software analyzes the way your devices operate under normal conditions. BERTBrain can then set 'threshold' limits to ensure equipment like vending machines, projectors, and the like can cycle normally before shutting down.

## What happens if I need to use my device randomly at 2 a.m.?

Every BERT has an override button that restores power to your devices.

## Seasons change, schedules change, and we have special events. How does BERT handle this?

No problem. Our software is smart and gets smarter all the time. Special events, seasonal schedules, and special circumstances can all be accommodated. It is also typical for your IT and Facilities teams to have access to BERTBrain. Contact them, or us directly at [support@bertbrain.com](mailto:support@bertbrain.com) so we can point you in the right direction.

## This all sounds complicated. Is it?

We've done this longer than anyone else and deliver a white-glove experience.

# HARDWARE QUESTIONS

## Is BERT UL approved?

Yes, all BERT devices are UL listed in the US and Canada. BERT is also FCC approved and meets all applicable safety and regulatory standards.

## Is BERT patented?

Yes, BERT maintains an extensive patent portfolio with multiple issued patents and additional patents pending, protecting our innovative energy management technologies.

## What size loads does BERT control?

BERT controls devices ranging from 120VAC to 240VAC and up to 30A.

## How much energy does BERT use?

BERT devices use between 0.5W and 0.7W during operation, ensuring that the energy saved far exceeds the energy consumed by the control system itself.

## How does BERT differ from basic timers?

BERT measures, analyzes, and controls loads remotely through the BERTBrain Gateway, enabling intelligent mass control over devices using a centralized management system. Unlike basic timers, BERT devices automatically synchronize with the gateway, handle network outages gracefully, and provide detailed energy monitoring and reporting. They are also built to perform and last.

## How does BERT differ from a “smart outlet?”

See the previous answer. Also, a BERT control is self-contained and operates independently. This ensures a Wi-Fi or internet outage does not impact the operation of your devices.

## What is the BERTBrain gateway?

The BERTBrain Gateway is the central hub for managing BERT plug load and hardwired device controls. It contains our embedded BERTBrain software and supports both cloud-connected and on-premises deployments, providing secure and scalable infrastructure for energy management needs.

## Why does BERT use the existing network?

We technically use the existing network hardware. Most of our customers already have, or set up, an insulated Internet of Things (IoT) SSID. This is not only cost-effective, it ensures we do not conflict with existing frequencies, provides the most reliable communication, and helps us integrate with your IT department.

## Does each BERT have a unique identifier?

Yes, each device is assigned and labeled with a MAC address.

## Are BERTs secure?

Yes, very. And we can provide a list of the MAC addresses prior to installation.

# HARDWARE QUESTIONS

## Can I use BERTs for data logging?

Yes, BERT devices store measurement data locally with multi-year data retention capabilities.

## Can I use BERT for my microgrid or grid interactive building?

Yes. In addition to being identified by location, devices can be grouped by Critical, Priority, Discretionary, etc.

## Can I use BERT to incorporate my devices into my demand response program?

Please contact us for more information. We are currently working with multiple demand response providers to bring you this capability.

## How long will my BERT last?

BERT is engineered for the commercial and industrial environment and has an expected lifespan of at least 20 years. In extremely rare cases, when the device that BERT is controlling has a catastrophic failure, your BERT may nobly sacrifice itself. This happens so infrequently that when we receive a return to our HQ and Lab in Philadelphia there are many gawkers. It's a sight to behold.

## Does BERT install our devices or set up our control environment?

Absolutely! We provision and install all plug-in devices, naming and grouping them as we go. We typically run a baseline analysis, then suggest schedules by location for you to approve. These can be modified at any time.

Inline (hardwired) devices must be installed by a licensed electrician, but we preprogram them and set them up in the system as well.

## Can BERT devices be secured?

Yes. Plug in devices can be secured to the outlet. Devices can also be secured to cords for equipment that moves.

## My devices are already smart, Energy Star certified, etc. Why do I need BERT?

Unfortunately, that doesn't always mean what we think. Many devices still consume considerable energy, and many energy settings can be overridden at the device level. BERT can only be overridden intentionally, and typically for one energy cycle (until the next smart event).

## I have another question.

Please contact us at [support@bertbrain.com](mailto:support@bertbrain.com) or call 484.690.3820 to connect with our Philadelphia office.