

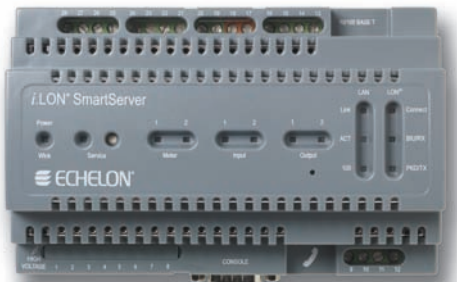


**The i.LON®  
SmartServer 2.0**

**Automate Your  
Data Center and  
Save Energy**



## Automate Your Data Center and Save Energy with the i.LON SmartServer 2.0



Whether your data center is critical to your business or it's your entire business, energy use is a huge operating cost. As energy costs rise and new legislation around the world restricts energy use, data center managers must find innovative ways to operate more efficiently, lower energy costs, and limit carbon emissions.

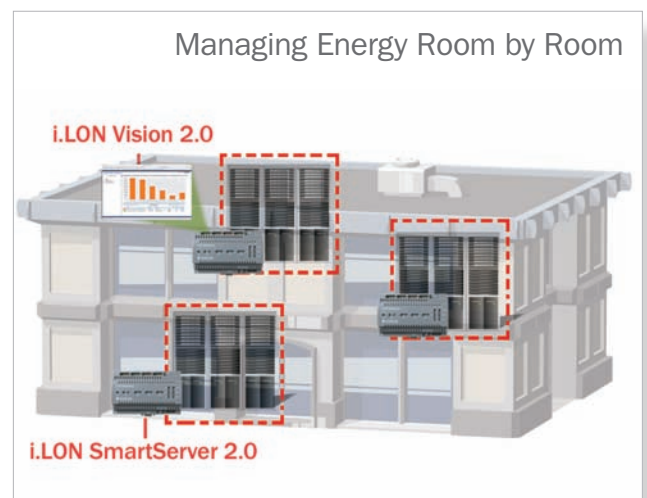
The i.LON SmartServer 2.0 is the answer. Our versatile smart energy manager connects environmental controls and sensors to your IT operation to let you measure, monitor, and control the environment in all your facilities. It also lets you synchronize operations between the data centers and the buildings that hold them, and across all your sites. With remote, round-the-clock access to your operations, and

the ability to gather and report data on energy use, you can track consumption site by site, improve forecasting, and report on corporate social responsibility. As a result, you can lower energy use, improve maintenance procedures, identify trends, and generate a faster return on investment.

Easy to deploy and manage, and capable of both local and remote control, the SmartServer offers unparalleled flexibility. Use it as a standalone server or integrate it with the control system of your choice. With built-in drivers for industry-standard protocols like Echelon's LONWORKS® technology, SOAP/XML, Modbus, M-Bus, digital I/O, and pulsecount input, and custom driver support for everything else, the SmartServer offers unprecedented connectivity at no extra cost.

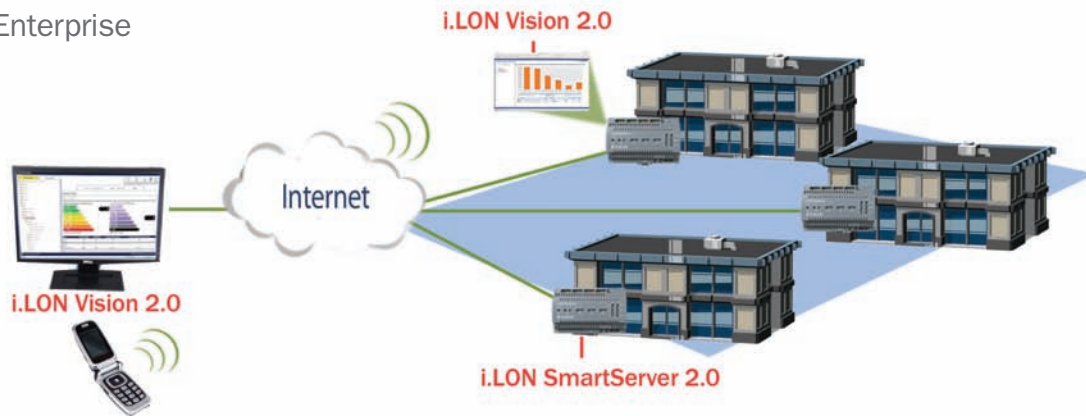
### Benefits

**Automate your server environment.** The SmartServer resides in your IT network (or over any IP connection) and communicates with site management software using standard Web services. It allows both enterprise and local energy management applications to gain visibility into the devices in the server room and control them. It also supplies critical energy usage data and system health information to your management software — locally, or across the globe.



Low-cost temperature and humidity sensors, mounted in your server racks, communicate with the SmartServer and let you poll heating and cooling data automatically. If the temperature or humidity goes above or below a certain level, the SmartServer can

## Managing the Enterprise



generate an alarm and e-mail the facility manager. Rack-mounted sensors also let you eliminate hot spots by identifying which racks generate more or less heat, so you can optimize the server layout. The built-in Web interface makes it easy to configure and monitor the setup — from anywhere, at any time.

**Make use of winter weather.** When seasons change and temperatures drop, use outside air to cool the server room and reduce your energy use further. Because the SmartServer is a standard component in the world's leading building automation designs, it works with off-the-shelf sensors, letting you compare inside and outside temperatures, control venting and air-handling equipment, and monitor humidity levels to ensure optimized server room conditions.

**Go green without sacrificing comfort.** The SmartServer lets you integrate all your building control systems, so your energy savings extend beyond the server room. Add it to a LONWORKS based building automation system to let any visualization or energy management software interact with your server rooms. Combining the server room and building gives you a more holistic and beneficial view of your enterprise's energy footprint.

**Increase your options.** Need to scale rack-monitoring systems into the local data center environment? In rooms with existing LONWORKS equipment, it's easy to change or enhance your center's energy responsiveness since the LONWORKS network is based on open, global control standards. More than 600 end-user

and developer companies around the world — including every major supplier of building automation equipment — support the LONWORKS platform, and their products are certified to work together, no matter who installed the original equipment.

If you're connecting to other types of legacy equipment, the SmartServer's built-in interfaces let you integrate devices like backup generators, electricity or heat meters, or lighting systems over Modbus, M-Bus, or digital connectors, or through a programmable interface.

**Operate at a higher level.** The SmartServer's built-in Web server and simplified SOAP/XML Web services interface make it easy to link to other applications. Use data onsite to monitor energy use, create site-specific programs, and schedule maintenance. At the enterprise level, the SmartServer can help you better manage operations across data centers, monitor the performance and health of equipment like uninterruptable power supplies (UPS), and make remote diagnostics or schedule repairs.

**Manage your system, your way.** Two network installation modes — managed and standalone — offer the choice of centralized or localized management, giving you maximum flexibility to leverage corporate resources as well as local/regional relationships.

## Real-world Savings



Data centers around the world are using the SmartServer to lower their energy costs and improve their operating efficiency. In one example, a leading Japanese company has used the SmartServer

as part of a comprehensive building automation system that includes the server rooms and employee offices.

In the past, two air conditioners, operating for 30 minutes per hour, kept the humidity and temperature levels in the server room constant. Now, the levels are allowed to vary more widely within the acceptable range defined by the new JEITA standard. SmartServers connect multiple LonWorks networks across the facility's LAN, creating a complete enterprise energy management system: One SmartServer is used for the computer room equipment including sensors, UPS equipment, and power equipment; another is used for the office environment; and another, for monitoring backup power generation and fire detection

equipment. The result is a 50-percent drop in energy use, with only one air conditioner operating for 10 to 15 minutes each hour, and a 40-percent extension in equipment life. Use of outside air in winter saves another 10 percent in cooling costs.

In the employee offices, automatic operating schedules, controlled by the building management SCADA system, save energy by cutting power during non-working hours. Sensors mounted inside and outside the building control the air conditioning when it's on, so rooms stay comfortable while using less energy. The new approach has lowered office energy use by 20 percent.

Overall, the entire building automation system is expected to pay for itself in two to three years.

## Learn More

Automate your data center and save energy today. To find out how the SmartServer can help you meet your operating and energy-efficiency goals, contact your local sales representative.

### About Echelon

Echelon Corporation is leading the worldwide transformation of the electricity grid into a smart, communicating energy network — one that connects utilities to their customers, and creates energy-aware homes and businesses that react to conditions on the grid.

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