Energy Saving Oppertunities and Improving Power Quality for Data Centres

E-SINE
Engineering Solutions

Lower Energy Usage Costs, Reduce Energy Consumption, and Increase Reliability with Advanced Metering

➤ **Identify Areas Where Energy Savings Can Be Attained**

➤ **Implement Energy Reduction Programs and Monitor Their Progress**

➤ **Assure the Reliability of Power to Avoid Downtime and Lost Revenue**

➤ **Analyze Power Quality to Pinpoint Problems Before They Become Critical**

Contact E-Sine at:
Email: info@e-sine.com Tel: 0208 242 4936

➤Identify Areas Where Energy Savings Can Be Attained

E-Sine's advanced and highly accurate meters and submeters let you identify energy used by specific loads or parts of the data center. You can use this information to see where energy can be saved, and to compare your energy performance against other data centers.

# ➤Implement Energy Reduction Programs and Monitor Progress

For several years, the U.S. Federal Energy Management Program (FEMP) has issued energy savings guidelines that include the implementation of submetering with energy tracking and reporting, and the formalization of energy goals and processes. Every data center must be engaged to take advantage of energy management and energy efficiency initiatives.

Installing E-Sine's meters, submeters, and metering software is one of the most cost-effective ways to implement an energy management program. Armed with the knowledge they get from E-Sine's meters and submeters, energy and facility managers are able to gain the support of management to make decisions that will realize energy savings for everyone.

# ➤Assure the Reliability of Power to Avoid Downtime and Lost Revenue

E-Sine meters let you set alarms or email notification (to multiple users) for many conditions – drop in voltage or current, change in phase angles, change in I/O status, flicker, etc. SNMP is supported by the Nexus® 1500+ meter, which lets you add meter alarms into your existing SNMP network. Having access to this information at the point a problem occurs lets you be proactive in fixing it. And E-Sine's meters have generous amounts of memory for logging measurements and recording waveforms, which let you perform detailed forensic analysis of any problems that occur.
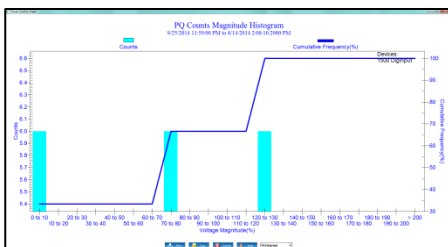
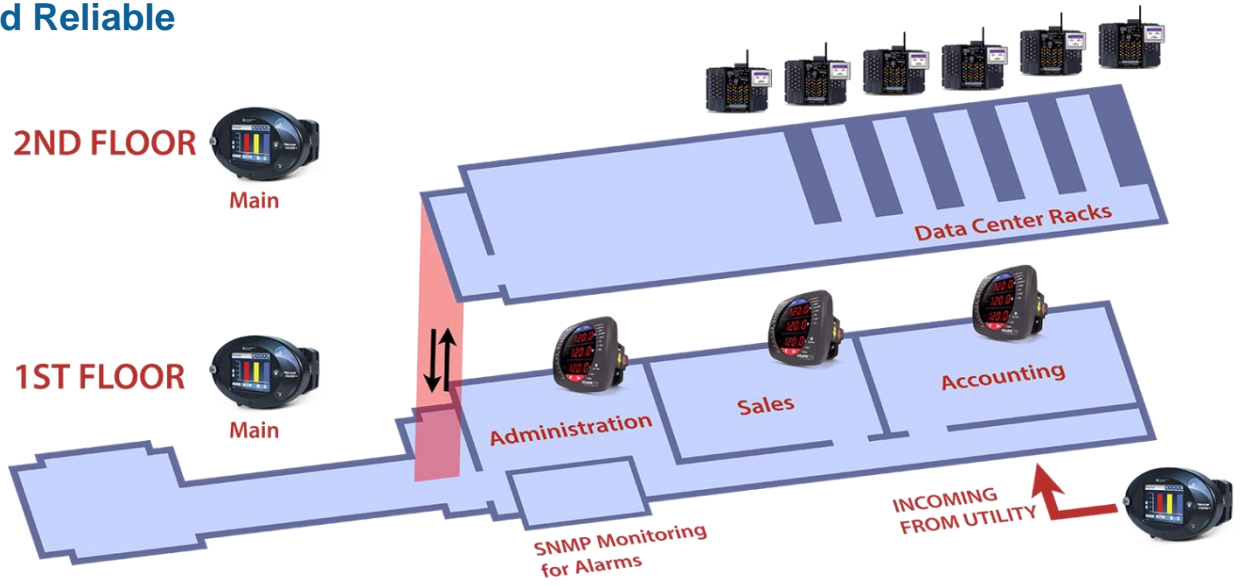**Record Power Quality Events**
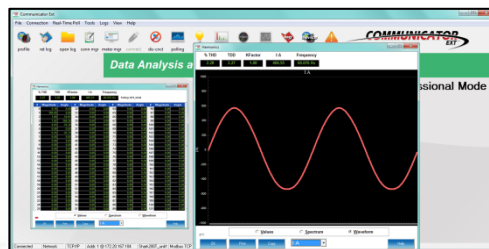
View Waveform Graphs
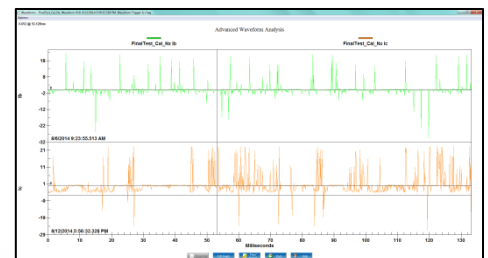
Trend Voltage Reliability

Helping Data Centers' Energy Usage Become More Efficient, Cost-Effective, and Reliable


TYPICAL DATA CENTER LAYOUT

According to the Federal Energy Management Program (FEMP), data centers can use up to 200% more energy than regular office spaces. Since this means that their costs are also up to 200% higher, data centers can benefit from energy reduction programs in order to save money and increase profitability. How to address the high cost of energy and the need to save money? Use advanced power metering to monitor loads throughout the data center to see and address problems before they grow, and to implement a demand reduction plan, reducing load during times of Peak demand.

The primary uses of energy in data centers are for cooling equipment, for server load, and for computing operations. These are critical to the functioning of the data center. Insuring the reliability of the power running these systems is essential in preventing costly downtime. Metering can alert you to power quality problems, such as voltage sags or other less than optimal conditions. Then you can take corrective action to insure continuous uptime.
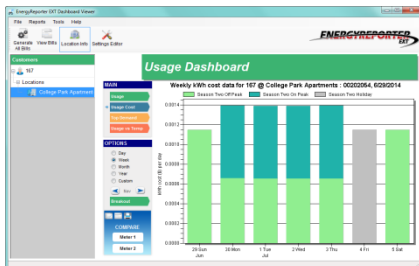
Real Energy Cost by Day
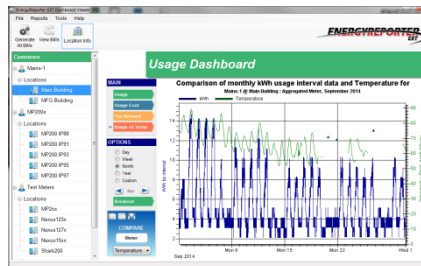
Energy Usage Over Time
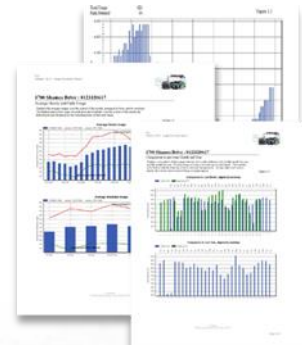
Executive Summary Energy Usage Reports

Reduce Costs by Having Usage Information at Your Fingertips

TYPICAL BILL OF MATERIALS:

Critical Load Point

Nexus® 1500+ - Advanced Power Quality Analyzer and Energy Meter with SNMP for Network Monitoring of Alarms

Example Installation: Utility Entry Points, Critical Loads, High Power Sensitivity Points

Ordering Part #: Nexus1500+-D2-60Hz-20-V3-X-X-X-X

Large Loads (400 Amps or more)

Shark® 200 - Data-Logging Energy Meter for Load Profiling

Example Installation: Typical Building Loads, Substations, Control Panels

Ordering Part #: Shark200-60-10-V2-D2-INP100S-X-X

Smaller Loads (200 Amps or less, high-density)

MP200 Metering System - 8 Three Phase Input Meters

Example Installation: Smaller Panel Boards, High-density Circuits

Ordering Part #: MP200-Y-60-10-V2-WIFI-MDSN

Base Data Collection Software

Communicator EXT™ 4.0 Software for configuring meters, automatically collecting data, and studying power quality

Ordering Part #: COMEXT4P

Energy Dashboard and Billing Software

EnergyReporter EXT 4.0 Software for energy dashboarding, generating usage reports and automated submeter billing

Ordering Part #: EREXT4

ENGINEERING ASSISTANCE:

Contact us for conformance specifications and engineering design assistance. E-Sine has on-staff dedicated application engineers to provide comprehensive support and make your project a success.

Contact E-Sine at:

Email: info@e-sine.com
Telephone: 0208 242 4936
Website: www.e-sine.com

E-SINE
Engineering Solutions

E300734 050818 REV 5