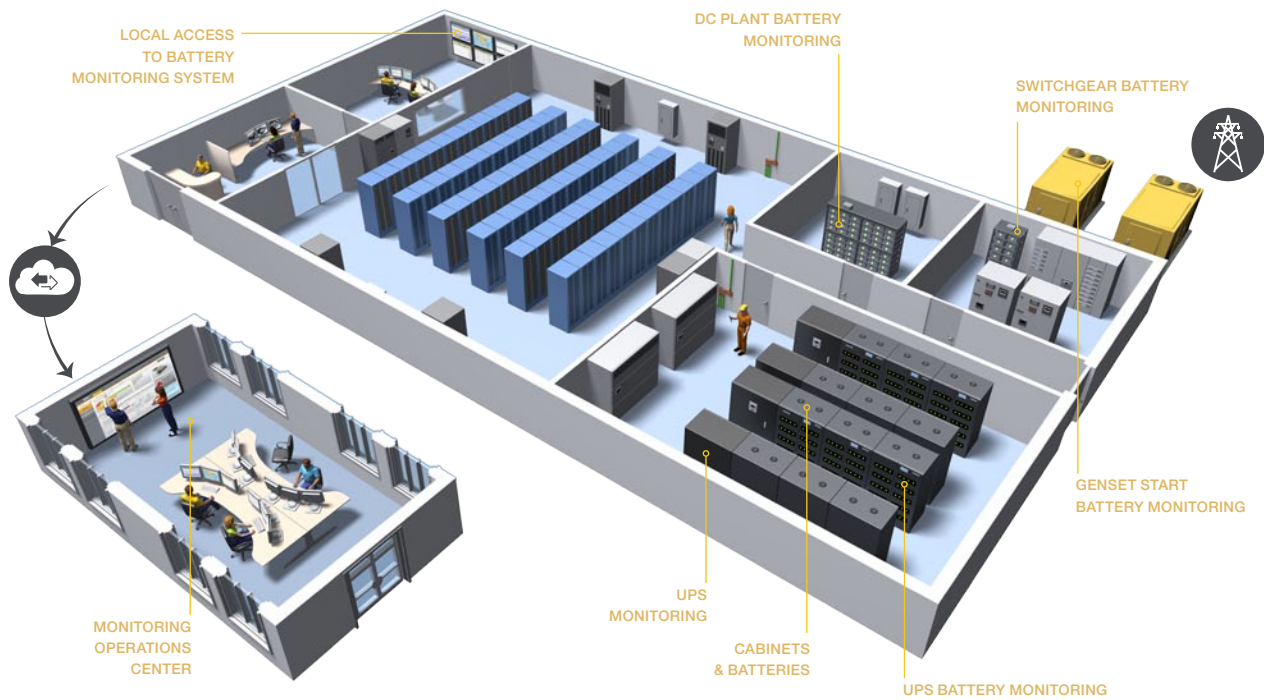


Canara UPS & Battery Monitoring System

THE MOST COMPREHENSIVE, COST EFFECTIVE AND EASY TO INSTALL SYSTEM ON THE MARKET TODAY



Canara's patented Battery Monitoring System continuously captures and securely transmits battery performance data. Suited for both VRLA and wet cell batteries, the system is cost effective and can be easily installed on UPS, generator, DC plant and switchgear battery systems. Canara ensures that your critical backup power systems are ready when needed.

Are your systems ready?

CANARA BATTERY MONITORING PLATFORM

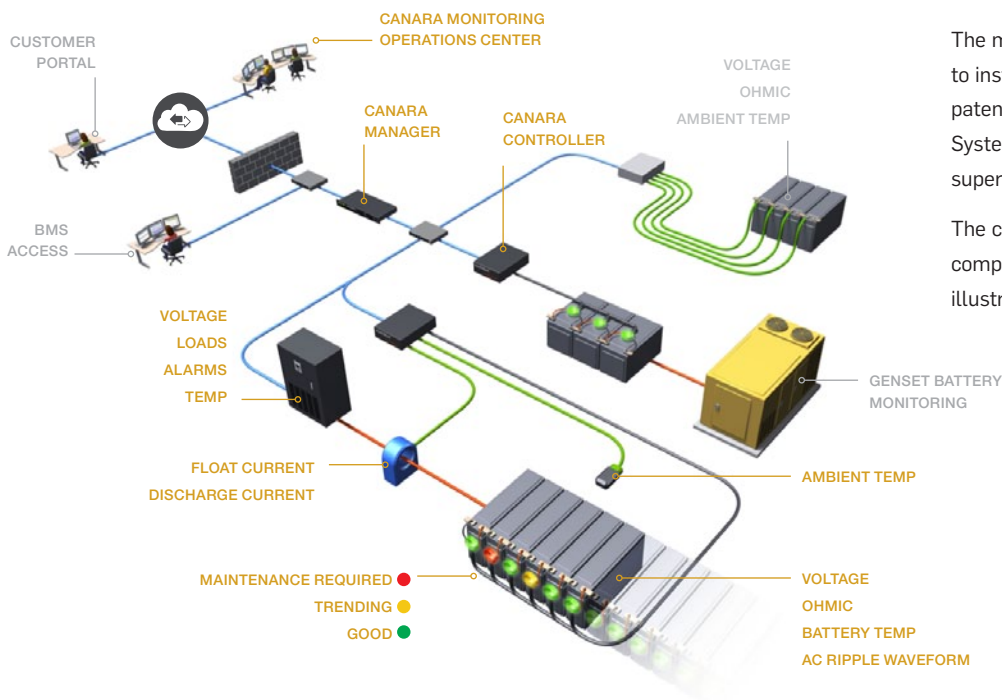
Flexible, Extensible, Easy-to-Use

When it comes to monitoring your power infrastructure we have you covered. Whether it is UPS backup power, DC plant, generator or even switchgear batteries, we continuously monitor the integrity of your power assets. All information is accessible via Canara

Connect, local software for facility managers or operators to log in to see reports and administer the monitoring system.

The Canara platform is an extensible, modern framework that allows for





maximum flexibility—not only can we monitor our own Canara nodes, we can interface with any existing third party solution on the market today. This allows you to synchronize data from multiple systems into one online dashboard and generate consolidated reports.



CANARA UPS & BATTERY MONITORING SYSTEM

The most comprehensive, cost effective and easy to install system on the market today, Canara's patented high performance Battery Monitoring System continuously and securely collects a superset of data on battery performance.

The complete Canara Battery Monitoring System components are listed in the table below and illustrated on the left.

<p>CANARA NODE</p>	 <p>1 per battery. Canara patented visual indicator nodes monitor the most data parameters more often per battery</p>
<p>CANARA CONTROLLER</p>	 <p>1 per UPS or string(s). Collects data from the nodes and provides the central logic for each UPS battery monitoring system</p>
<p>CANARA MANAGER</p>	 <p>1 per site(s) that collects and presents the data locally and optionally synchronizes with Canara's Monitoring Operations Center</p>
<p>CANARA CONNECT</p>	 <p>Local software for facility managers or operators to log in to see reports and administer the monitoring system</p>

“ Our battery monitoring service is a cost effective insurance plan to protect the weakest link in our UPS system. You cannot put a price on losing a customer application; the loss of business is only the beginning of the true damages you suffer.”

— OPERATIONS DIRECTOR, SAVVIS



MONITORING MORE DATA MORE OFTEN

Canara captures more data more often and provides more analysis than other solutions on the market today. Parameters include; individual battery voltage and ohmic values, ambient and internal battery temperatures, and float current.

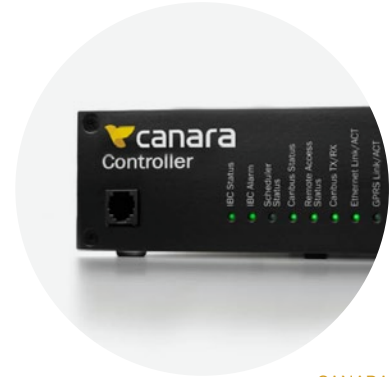
AC RIPPLE WAVEFORM — UPS HEARTBEAT

Unlike any other monitoring solution, Canara measures and trends AC ripple current. This unique capability enables quick identification of potential UPS problems such as faulty capacitors or defective inverter boards before the UPS even detects it. Ripple current also reduces the life of your battery assets and can even void manufacturer warranties.

CANARA CONTROLLER

The Canara Controller consolidates data from various devices. Examples include Canara Nodes, current transducers and temperature sensors. The controller supports up to 240 Canara Nodes via the CANbus2 protocol and connects to the network via Ethernet, WiFi or GPRS.

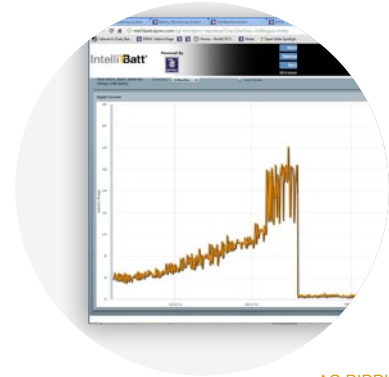
The sleek, low profile packaging of the Canara Controller allows you to simply place it on a shelf or mount it securely using its mounting bracket. The Canara Controller is flexibly designed to be powered by a 15V, 5A AC power supply or a 48V DC power supply.



CANARA CONTROLLER

CANARA MANAGER

The Canara Manager is available in either a rack-mounted or portable version. It can operate in one of two modes. The first mode is the “onsite” or local mode in which data is captured and stored locally. In the second operational mode, which is optional, the Canara Manager synchronizes captured data with the cloud-based Canara Monitoring Operations Center. With this hosted solution, expert Canara analysts remotely monitor the health of all systems, provide notifications of anomalies and provide accurate reporting.



AC RIPPLE WAVEFORM

MEASUREMENT PARAMETER	CANARA	OTHER BATTERY MONITORS
INDIVIDUAL BATTERY VOLTAGE	Yes.	Yes
INDIVIDUAL BATTERY OHMIC	Yes	Partial
INTERVAL OF KEY OHMIC MEASUREMENT	4X per day	daily, weekly, monthly
AMBIENT TEMPERATURE PROBES	Yes	Yes
INTERNAL TEMPERATURE OF EACH BATTERY	Yes	No
FLOAT CURRENT	Yes	Partial
VISUAL INDICATOR OF STATE OF HEALTH	Yes	No
AC RIPPLE	Yes	No
INTEGRATES WITH CLOUD-BASED MONITORING SERVICE	Yes	Yes

CANARA MONITORING & REPORTING PROVIDES

- Dedicated analysts that focus on predictive analytics
- Weekly trending & corrective action reports
- Aging analysis
- Asset management
- Critical system reports

CANARA CONNECT

Canara Connect runs on the Canara Manager and provides an easy-to-use interface for installation, configuration and data analysis. Users remotely access the application via any browser and login to review historical trends in system health. Canara Connect provides visibility and intuitive management of critical alarms in the system. This robust software system allows users to remotely access to critical alarms from their Building Management Systems via SNMP or Modbus over TCP protocols.

Benefits of the Canara Monitoring Solution

- Eliminate the risk of downtime
- Extend battery life by up to 35%
- Save money on warranty replacements
- Avoid thermal runaway and comply with IFC608.3 2009
- Reduce maintenance costs by 75%
- Gain consistent system visibility
- Avoid unexpected UPS load loss
- Reduce battery waste
- Migrate from emergency to preventative maintenance

CANARA MONITORING OPERATIONS CENTER

Superior Hardware Performance Complemented by Web-Based Reporting & Predictive Analytics

Canara also offers continuous monitoring and risk mitigation processes for UPS and battery systems that provide the peace of mind that data center manager's need. The Monitoring Operations Center comprises of a cloud-based system and hands on analysis by Canara industry experts. When combined, these elements form a monitoring service for assessing and maintaining the health of thousands of critical UPS systems around the world. With a 20-year history, Canara has an astonishing 100% up-time track record that is rooted in early detection, preventative maintenance and immediate notification of impending issues.

Canara offers the continuous monitoring and risk mitigation that provide the peace of mind you need!

HIGHLIGHTED CUSTOMERS

Here are just a few of the our customers that depend on the Canara Monitoring Operations Center to ensure 100% up-time.

charles SCHWAB



cologix
where networks connect


DIGITAL REALTY
Data Center Solutions


EQUINIX

 **Fidelity**
INVESTMENTS

 **FORTUNE**
DATA CENTERS

 PG&E

 **RagingWire**
DATA CENTERS

 SAVVIS

 NBC

 **serverform**
REALTY



NORTH AMERICA
181 Third Street, Suite 150
San Rafael, CA 94901
+1 415 462 8950 **TEL**
+1 877 422 8874 **TOLL FREE**
+1 415 532 2384 **FAX**

EMEA
Festival House, Jessop Avenue
Cheltenham, Gloucestershire
GL50 3SH
+44 (0) 208 819 7047 **TEL**

ONLINE
www.canara.com
sales@canara.com