

## BQMS Battery Monitoring System



**BQMS Communication Control Unit (CCU)**

### Product Description

The **BQMS Battery Monitoring System** is a modular system that allows for complete monitoring of a single or multiple battery systems. Parameters monitored include string voltage, DC current, cell voltage, cell / connection resistance, cell temperature, & ambient temperature. The BQMS is designed for use on vented lead acid, valve regulated lead acid, and nickel-cadmium battery systems.

Included with the BQMS is Eagle Eye's proprietary battery management software Centroid 2. This software package allows for remote viewing and data management of all connected Eagle Eye battery monitoring systems. Report generation, trending analysis, & detailed alarming can all be viewed on a single or multiple PC's on the same network as the BQMS. Alternatively, the BQMS can be configured to communicate via Modbus to a building management system, SCADA, or other custom fit management system. All BQMS systems have the option to include up to (8) Form C relays for additional external alarming.

### Product Advantages

- 24/7/365 battery monitoring
- Included battery management software Centroid 2
- Scalable design with expansive communication & alarming options
- Meets IEEE & NERC standard recommendations for battery monitoring
- Injects minimal current to the battery system for measurement
- Patented ripple-removing algorithm



**BQMS Installation**



**Centroid 2 Battery Management Software**

### Battery Management Software

- Displays and records string voltage, string DC current, cell voltage, cell I.R., & cell temperature for all battery systems
- Trending analysis of measured parameters on a string or jar/cell level
- Report generation & ability to export measured data to Excel
- Detailed log of alarm outbreaks with high, high, & low, low thresholds
- Automatically record, save, & playback discharge & recharge events

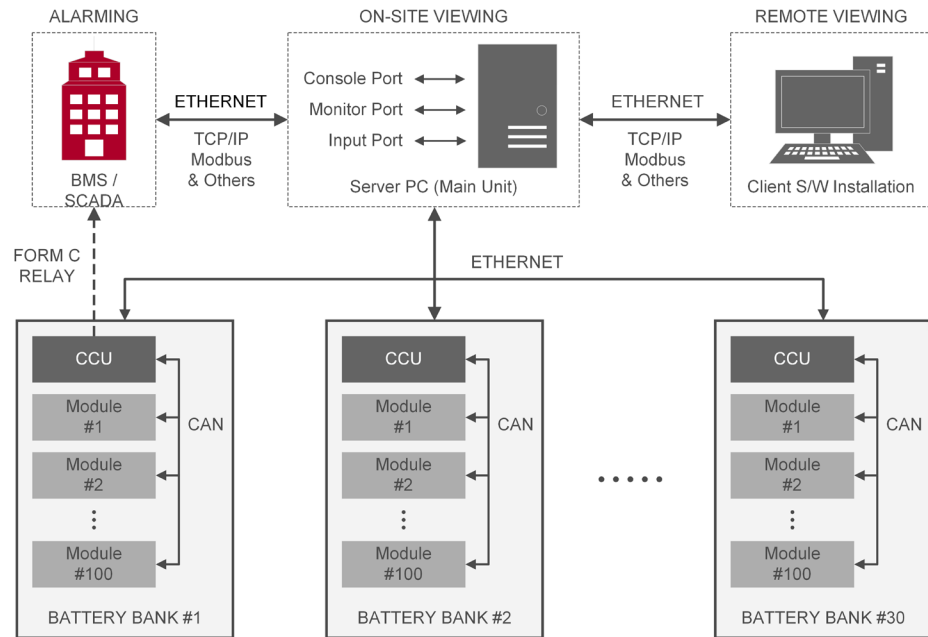
### System Composition:

**Modules** - Measure cell data via clamps attached to battery connections.

**CCU** - Collects measured data from Modules and relays to Server, also alarms via Form C relay to BMS / SCADA.

**Server PC** - (Not included) PC server which regulates all measurement data between the each BQMS system (CCU) and client software installations. Also used for Modbus communication.

**Client Software** - Centroid 2 software installed on any PC on the same network as the Server PC. Allows remote monitoring of all measured data.



**BQMS System Composition**

Technical Specifications	
<b>Measurement Range:</b>	Jar/Cell Voltage: 0.0 – 16.0 VDC Jar/Cell Temperature: -20 – 80°C (-4 – 176°F) DC Voltage: -1000 – 1000A DC Current: 999.9 VDC / 999.9 A
<b>Accuracy:</b>	DC Voltage / Current: ±0.5% / ±1% Temperature: ±2% Internal Resistance: ±2% Cell Voltage: ±0.5%
<b>Resolution:</b>	DC Voltage / Current: 0.1 V / 0.1 A Cell Voltage: 0.001 V Internal Resistance: 0.001 mΩ Temperature: 0.1°C
<b>Test Speed / Test Load:</b>	30/seconds per bank
<b>Measuring Interval:</b>	Adjustable from 10 min to 160 hours (voltage & I.R.)
<b>Data Transfer:</b>	TCP/IP, Modbus, SNMP & others
<b>Alarm Relays</b>	Up to 8 optional Form C relays
<b>Operating Environment:</b>	Temperature: 0 – 65 °C (32 – 150 °F) Relative Humidity: Under 80%
<b>Power Requirements:<sup>(1)</sup></b>	CCU: 48V (36 – 72 VDC) / 125V (120 – 370 VDC) Module: 2V (26 – 18 VDC) / 12V (18 – 36 VDC)
<b>Power Consumption:</b>	CCU: under 3W Module: under 10W
<b>Dimensions: L x D x H</b>	CCU: 210 x 76 x 200 mm (8.25 x 3 x 7.9 in) Module: 114 x 70 x 39 mm (4.5 x 2.75 x 1.5 in)

### Applications

- UPS Systems
- Power Utilities and Distribution
- Telecom/Communications
- Oil, Gas & Fuel
- Mining
- Government/Defense
- Transportation Operations
- Battery Suppliers and Manufacturers
- Generators

### System Includes

- Centroid 2 Battery Management Software
- BQMS CCU
- Measuring Module(s)
- O-Clamps for inter-cell cable connections
- C-Clamps for inter-cell busbar connections
- Cabling for all measurement connections
- CT clamp for DC current measurement
- **Optional:** Spare parts kit

### Ordering Information

No.	Model #	Description
1	BQMS	Modular Battery Monitoring Solution