Joule™ EMS with OptimaEngine

Energy Intelligence, Beautifully Orchestrated.

Take control of your energy costs with Ampra Joule™, the edge controller that transforms basic battery systems into intelligent energy management platforms. Purpose-built for commercial applications where reliability and performance matter most.

What Sets Joule™ Apart:

- **Vendor Agnostic -** Works with your existing renewable equipment, no costly upgrades required
- **Real-Time Optimization** - Advanced control algorithms automatically adjust to changing load profiles and utility rates
- **Local Intelligence -** Makes decisions at the edge for faster response times and improved reliability

Joule™ comes pre-configured for your specific utility rates and usage patterns. Installation requires minimal field configuration, with remote commissioning and ongoing optimization included.

Maximize energy cost savings, extend equipment life through intelligent control, reduce peak demand charges, and ensure reliable backup power operation with minimal operator intervention.

Intelligent

➔ Provides real-time energy optimization with OptimaEngine
➔ Dynamically adapts to building load profiles and utility rates
➔ Delivers advanced demand charge management

Versatile

➔ Operates in a wide temperature range from -13°F to 158°F
➔ Includes 2x digital outputs and 2x digital inputs for load control/signaling
➔ Supports multiple connectivity options with 3yrs of 4G/LTE included by default (Ethernet or WiFi)

Reliable

➔ Ruggedized design for industrial environments
➔ Stores up to one month of offline data

Product Specifications

Product Name	Joule™ EMS
Model Number	800-1001

Mechanical

Enclosure Dimensions	406×356×203mm (16×14×8in)
Weight	11kg (24.2lbs)
Mounting	Screw hole mounting tabs

Environmental

Operating Temperature	-25 to 70°C (-13°F to 158°F)
Storage Temperature	-40° to 85°C (-40°F to 185°F)
Altitude Rating	Up to 2000m (6561ft)
Relative Humidity	10% to 90% (non-condensing)

Power Supply

Operating Voltage	12V-24V DC (-20%/+20%), reverse polarity protected
Power Consumption	3W Nom. / 8W Max.

Asset Communication

Physical Interfaces	1x **RS485**, Isolated half-duplex. 1x **RS232**, Isolated Rx/Tx 1x **CAN 2.0**, Isolated H/L
Device Limits	**RS485/RTU** - 15 devices **RS485/TCP** - 120 devices **CAN 2.0** - 15 devices
Digital Input/Output	2x **DO** + 2x **DI** Isolated
Supported Device Vendors	Sol-Ark HV & LV, Sinexcel, AccuEnergy, eGauge, and more *Contact sales@ampragrid.com*

Networking

LAN	2x Gbit Ethernet, RJ45 connectors
Wireless	802.11ac WiFi and Bluetooth 5.3 BLE
4G/LTE Modem	LTE CAT1 cellular module with multi-carrier support

Storage

Physical Storage	32GB onboard eMMC flash
Data Capacity	Up to 1 month of offline data storage capacity