Maestro Power Management System (PMS)

Smart Power Management System for the energy revolution!

Innovative Power Management:

The Maestro power management system intelligently manages Stabiliti power converters paired with PV and energy storage, delivering considerable energy cost savings. Our Solar + Storage management solution can also provide resilient power to support critical loads during grid outages, minimizing or even eliminating the need for backup generators.

Maestro controls all power flows in real-time, prioritizing PV use over battery when available, combining PV and battery as necessary to offset facility energy costs, while also intelligently charging batteries from PV or grid as necessary to further optimize savings. These charging algorithms also tailored to specific battery state of charge (SoC) requirements, as dictated by a Battery Management System (BMS). The result is a battery protected from abuse, which enhances system safety, and extends useful battery life.

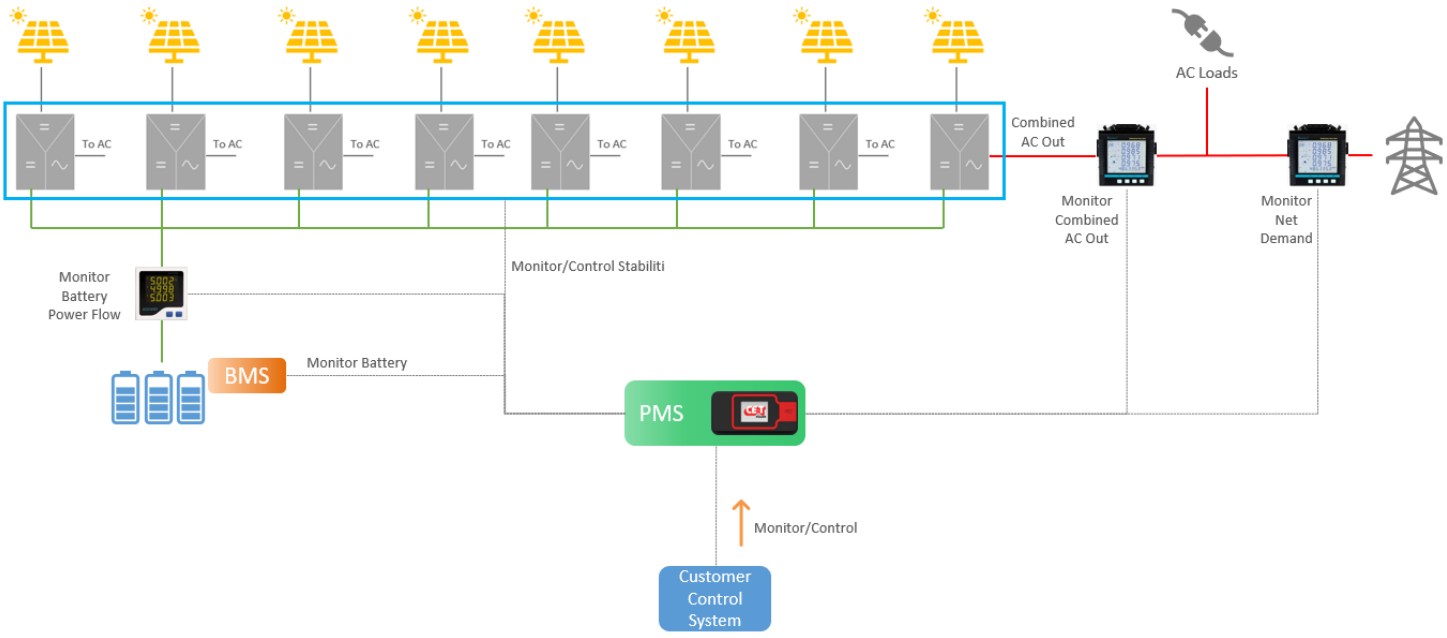
Lastly, Maestro also supports stand-alone/remote microgrids, where no grid is available, dramatically reducing fuel use of diesel gensets, which are today's primary power source for off-grid sites.

Applications:

Maestro is a robust 3-phase power management system targeting high-energy users where solar alone cannot deliver optimal savings due to complex and punitive peak demand, time-of-day, and/or seasonal energy cost rates.

- Commercial and Industrial (C&I) facilities:
  - Deliver superior cost savings by using intelligent algorithms such as peak shaving and energy arbitrage
  - Operates in an autonomous stand-alone mode; or can follow dispatch commands from another controller
  - Provides backup power to critical load panel when the grid goes down

- Microgrids:
  - Off-grid systems also utilize a PV "first" algorithm, minimizing battery use when the sun is shining
  - Load support is priority 1, up to 8 30kW systems may be paralleled (240 kW), which in microgrid mode



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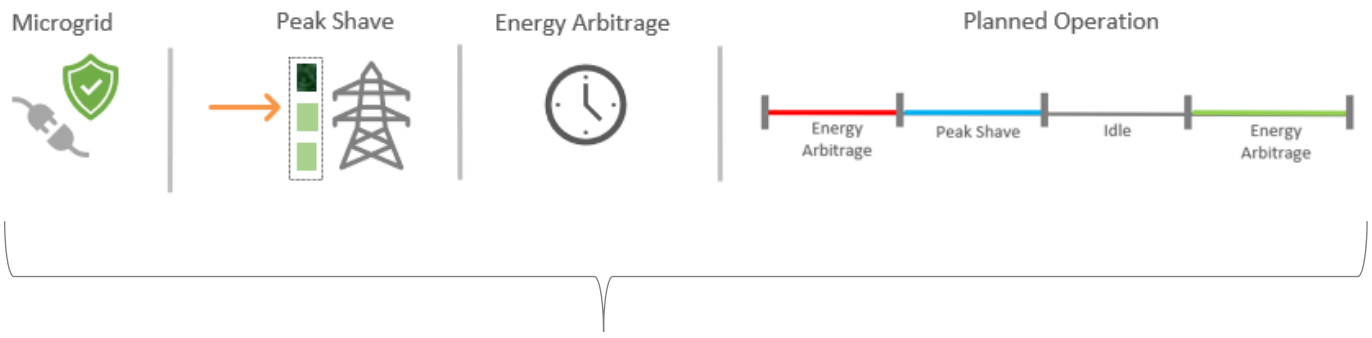

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Support Features/Systems	
Converter Support	
Supported Converter type	Stabiliti 30C3 (30 kW), Stabiliti 30C
Number of Converters	8 Stabiliti (Use two PMS for more than 8 stabiliti)
Meter Support	
Power/Energy Meter	Acuvim IIE, AccuDC240 (can connect to up to 3 meters, 2 are already integrated into PMS panel)
Energy Storage/ BMS Support	
Storage/BMS	eON and Kore Power*
Battery Management	1. Charging will be limited to charge limit dictated by the BMS. 2. Charge/discharge pause at predefined state of charge (SoC), volts limits to prevent over charging/discharging.
Control/Operational Modes	
Supported Control/Operational Modes	1. Manual Charge/Discharge -> used for battery commissioning 2. Manual Peak Shave** 3. Planned Operation: ▪ Includes energy arbitrage and scheduled peak shave algorithm ▪ Configurable four time slots to schedule charge, discharge, or peak shave. ▪ Separate windows for summer, winter, weekday, and weekend. 4. Microgrid support – Manages battery over/under charge while in microgrid mode.
Communication	
Supported protocols	Modbus TCP (supports function code 2, 3, 4, 6 and 16)
Webserver	yes
External control/Monitoring	External control or monitoring system can read data and write setpoint via webpage or over Modbus TCP
Field upgradable	yes
Additional Specs	
Supply Power	120 – 230 Vac
Wall mountable	yes
Environmental	Indoor application (must be used in a room with HVAC)

*Lithium-ion battery integration would take roughly 2 weeks. Flow batteries and other chemistries can take up to 1 month. Battery integration cost is not included in PMS cost.

**Separately purchased Net/Demand meter required for peak shaving applications.