

PowerManager 2000 Advanced Data Controller

Ideal for utility scale PV projects with unmanned operation, typically 5 - 45MW.

PowerServer 3000 Supervisory Control Server

For utility scale PV projects of any size; ideal for stand-alone systems with local historical data charting and analysis; requires indoor shelter.

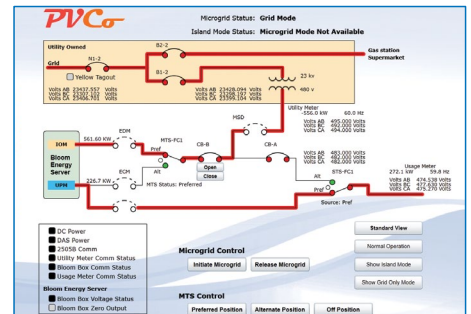
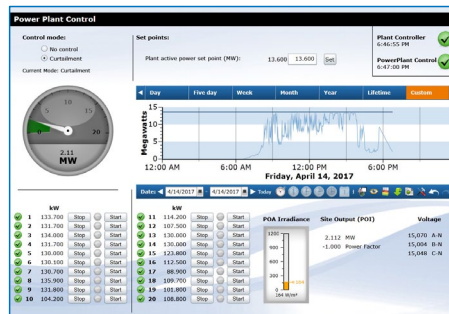
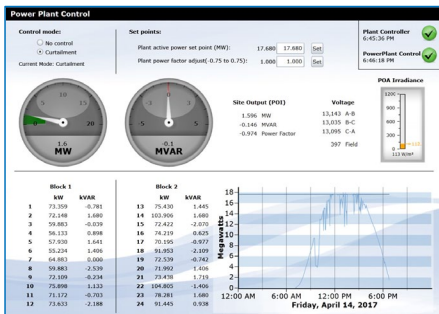
Utility grade SCADA server solutions provide an end-to-end, cost-effective, and reliable solution for data acquisition, grid integration, and power plant control. The **PowerManager 2000** and **PowerServer 3000** each combine proven third party hardware with AlsoEnergy's SCADA server software solution, providing high-speed data acquisition, closed loop control, local real-time HMI, and automated site configuration via **PowerTrack**. The PowerManager 2000 is typically mounted in a NEMA4 enclosure, whereas the PowerServer 3000 is mounted into a 19" rack for indoor environments. Both packages may include additional components (mounted and wired into enclosures where applicable) and shipped to your jobsite as turnkey SCADA system solutions. Alternatively, these devices may be utilized as a data acquisition overlay for existing SCADA systems, enabling PowerTrack control room solutions. AlsoEnergy hardware solutions are extensively tested, listed to UL standards, and come with our standard 5-year warranty.

System Capabilities

- Full SCADA functionality
- Closed-loop control functions such as zero-net export control and fixed power factor operation
- Utility telemetry solutions including DNP3, Modbus, or OSI PI interfaces; and CAISO-compliant RIG telemetry
- Local or remote real-time HMI
- Seamless integration with Schweitzer Real-Time Automation Controller (RTAC) based power plant controller
- User-adjustable sampling rates down to one second

Integration with PowerTrack Software

- Intuitive solar-specific SCADA system interface including local real-time HMI
- PowerManager 2000 is designed for use with our cloud-based software
- PowerServer 3000 supports optional standalone PowerTrack local historian
- AlsoEnergy clients use PowerTrack software to increase yield, reduce maintenance costs, and save time and money on asset management workload



Specifications

General	PowerManager 2000	PowerServer 3000
Devices supported	Up to 200 devices	Up to 1000 devices
Logging interval	Configurable down to 1 second	
Offline storage	More than 4 months offline storage with 200 field devices logging at 1 minute intervals	More than 4 months offline storage with 1000 field devices logging at 1 minute intervals
Configuration	Remote automated configuration; local network setup	
Software management	Remote software update capability	
Tools support	Ability to use third party Windows-based tools through secure remote desktop connection	
Local display	Supports local HMI and remote desktop access	
Real-time HMIs	Supports configurable PowerTrack real time HMIs	
Native control capabilities	External command input (Modbus or DNP3) for real-time or scheduled set points; zero net export restriction; maximum export limit; closed loop reactive power control; closed loop ramp rate control; closed loop grid voltage control	
External plant controller integration	Seamless integration with SEL RTAC as independent power plant controller	
Telemetry	Customizable DNP3 or Modbus TCP upstream interface; supports CAISO compliant RIG functionality	

Interfaces

Ethernet	2 x 10/100/1000 ports	
Primary protocols	Modbus TCP, Modbus RTU, DNP3, HTTP, HTTPS, Telnet, FTP, SNMP, proprietary inverter protocols, RDP, VPN	
Discrete I/O	Available with accessory	Available with accessory
Display	VGA and HDMI ports for local display	
Peripheral support	USB ports for keyboard and mouse	

Mechanical

Mounting configuration	Outdoor enclosure mount	Indoor rack mount
Dimensions	10.4" x 2.96" x 5.2"	19" rack mount - 1U x 29" D

Environmental Rating

Operating Temperature	-20°C to 60°C (-40°C to 75°C available)	Indoor temperature controlled 10°C to 35°C
Storage Temperature	-40°C to 85°C	

Electrical

Input Voltage	12-24 VDC	90-264 VAC
Power Consumption	26W maximum, 10W typical	Redundant power supplies; 495W max
Surge protection	Designed with protection against transients and ESD for use in harsh environments	n/a

Regulatory

Warranty	Standard 5 year warranty	Standard 5 year warranty; next business day on site support
Listings	Listed to applicable UL Standards; FCC Part 15 Subpart B Class A	

