



SOLAR ENERGY

Systems for Solar Resource Assessment, Power Performance, and Advanced Monitoring



Campbell Scientific offers automated data-acquisition systems specifically designed for solar monitoring applications. Preconfigured systems, designed to meet CAISO standards for solar telemetry, are available for photovoltaic and concentrated solar technology projects of all

sizes. Our engineers work closely with the customer to design highly customized stations, advanced research and development stations, and custom application programming interfaces (API) for data collection.

MAJOR SYSTEMS

	Measurements		Datalogger	Power	Communications
	Typical	Optional			
SOLAR800 MET Station for General Purpose Solar Resource Assessment Measurements 	Global Horizontal Irradiance (GHI), Plane-of-Array Irradiance (POA), air temperature, wind speed, wind direction, precipitation, solar position	relative humidity, barometric pressure	CR800	AC, DC, or Solar	Modbus, cellular, email, DNP3, FTP
SOLAR1000 Operational MET Station for Solar Energy Producing Utilities 	Global Horizontal Irradiance (GHI), Plane-of-Array Irradiance (POA), back-of-solar panel temperature, wind speed, wind direction, air temperature, relative humidity, barometric pressure, precipitation, solar position	DC current and voltage (string and/or module), visibility, electric field, cloud height, short circuit current, module soiling, surface moisture	CR1000, CR800, CR3000	AC, DC, or Solar	Modbus, cellular, email, DNP3, FTP, TCP/IP, fiber optic, radio, serial, field display, satellite, Wi-Fi
CSP100 Concentrated-Solar-Technology Monitoring Package with 2-axis Sun Tracker 	Direct Normal Irradiance (DNI), Diffuse Horizontal Irradiance (DIFF), Global Horizontal Irradiance (GHI), wind speed, wind direction, air temperature, relative humidity, barometric pressure, precipitation, solar position	visibility, cloud height, spectral irradiance	CR1000, CR3000	AC, DC, or Solar	Modbus, cellular, email, DNP3, FTP, TCP/IP, fiber optic, radio, serial, field display, satellite, Wi-Fi
RSR100 Rotating Shadow-band Radiometer 	Global Horizontal Irradiance (GHI), Diffuse Horizontal Irradiance (DIFF), Plane-of-Array Irradiance (POA), Direct Normal Irradiance (DNI), Back-of-Module temperature (BOM), solar position/air mass, wind speed, wind direction, air temperature, relative humidity, barometric pressure, precipitation	string current and voltage	CR1000, CR800	AC, DC, or Solar	Modbus, cellular, email, DNP3, FTP, TCP/IP, fiber optic, radio, serial, field display, satellite, Wi-Fi
SMP100 Solar-Module Performance Monitoring System 	module current, module voltage, back-of-panel temperature, short-circuit current, wind speed, irradiance, solar position	string current and voltage, spectral irradiance	CR1000, CR800	AC, DC, or Solar	Modbus, cellular, email, DNP3, FTP, TCP/IP, fiber optic, radio, serial, field display, satellite, Wi-Fi

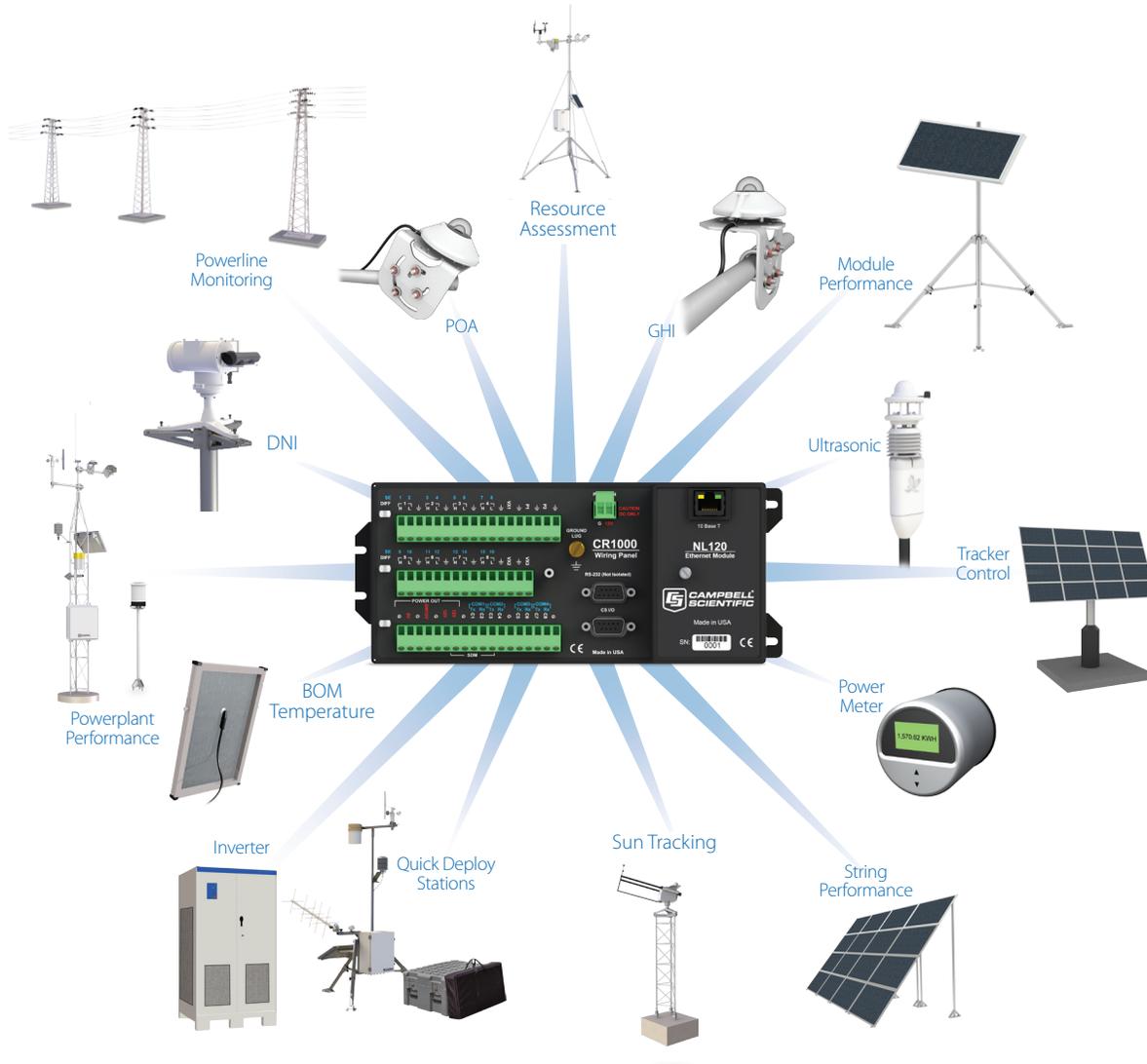
More info: 435.227.9120
campbellsci.com/solar-energy



Custom Systems

Most of the systems we sell are customized. Tell us what you need and we'll help you configure a system that meets your exact needs.

Solar Energy Applications



Solar Energy Case Studies

Our solar energy systems have helped a variety of organizations reach their goals. The following are just a few of these:

Draker Laboratories used Campbell Scientific's CR1000 dataloggers to monitor power flow in rooftop solar array systems atop REI retail stores. Our dataloggers were chosen because of their field robustness, measurement accuracy, number of channels, and ability to communicate with power equipment in the field.

www.campbellsci.com/draker-solar

Campbell gear evaluated energy efficiency of experimental solar-powered houses. These houses were designed and built by teams of college and university students as part of the Solar Decathlon held in Washington DC.

www.campbellsci.com/solar-decathlon

Campbell products assist sustainability practices of the Proximity Hotel in Greensboro, North Carolina. Part of this hotel's sustainability practices is a roof-top solar panel system that provides hot water for bathing, cooking, and laundry.

www.campbellsci.com/green-hotel

