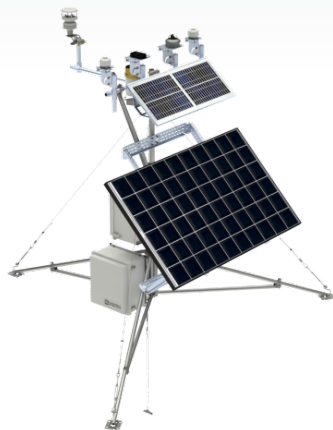




SunScout

Class A Solar Resource Assessment System



Reliable, Quality Measurements

Irradiance, soiling, and MET

Overview

SunScout is a reliable, high-quality solar resource assessment system designed to the highest industry standard that delivers accurate data measurements, including the following options:

- › Irradiance
 - › Global horizontal irradiance (GHI)
 - › Fixed plane of array (POA)
 - › Calculated direct normal irradiance (DNI)
 - › Albedo
- › Soiling
- › Meteorological
 - › Air temperature
 - › Barometric pressure
 - › Relative humidity
 - › Precipitation
 - › Wind direction
 - › Wind speed

Campbell Scientific's SunScout is a complete monitoring system designed by industry professionals with decades of experience. Created to support user preferences, SunScout offers a range of options for sensors, cellular modems, and data management. This system employs industry-standard sensors from leading manufacturers to provide our customary, reliable data acquisition backed by the [CR1000X Measurement and Control Datalogger](#), a proven field data logger.

Benefits and Features

- › Sensors chosen to meet IEC 61724 standards, minimizing differences between SRA and operational data from a Class A system
- › Factory fabrication, programming, and testing to minimize field wiring errors, reduce deployment time, and eliminate system programming
- › Battery-backed system for continuous data collection—even during power outages and network failure
- › Flexible data retrieval options for easy and reliable data collection and storage
- › Customizable to meet your project's needs
- › System data available over a cellular network through a project database with LoggerNet options
- › Maintenance button to mark system checks and maintenance



Detailed Description

The SunScout is a turnkey, Class A meteorological station specifically designed for solar-resource assessment. The SunScout provides the onsite data essential for a thorough understanding of a project site's solar resources and variability. The system is designed with fast-to-field features that simplify and expedite installation. No system coding is required. Data retrieval is easy and flexible. Various options and components are listed below.

Data Logger

The [CR1000X](#) is our flagship data logger that provides measurements and control for a wide variety of applications. Designed to perform at extremely low power consumption, this reliable and rugged data logger is an excellent choice for solar resource assessment application.

The electronics are shielded from radio frequency (RF) by a unique, sealed, stainless-steel canister. A battery-backed clock assures accurate timekeeping. Common to all contemporary Campbell Scientific data loggers, the onboard BASIC-like programming language supports data processing and analysis routines.

Sensors

Irradiance

Select irradiance sensors from the following:

- ▶ [SR30-L Class A Pyranometer with RS-485 Modbus Communications and Integrated Heating and Ventilation](#)
- ▶ [SMP10-L Radiation Sensor with Digital RS-485 Output \(external vent/heat unit required\)](#)
- ▶ [MS-805-L Class A Pyranometer with Digital RS-485 Output \(external vent/heat unit required\)](#)
- ▶ [CS325DM-L Silicon Irradiance Reference Sensor](#)

All sensors include appropriate cable length, mounting equipment, and accessories for easy in-field setup.

Meteorological

Select a meteorological sensor package from the following:

- ▶ All-in-one: [MetSENS500 Compact Weather Sensor for Temperature, RH, Barometric Pressure, and Wind with Compass](#)
- ▶ MetVUE: [HygroVUE™10 Digital Temperature and Relative Humidity Sensor](#), [05103-L R. M. Young Wind Monitor](#), [barometer](#), and [TE525-L Rain Gage](#)

Kits

Select appropriate kits to match your project needs:

Soiling Monitoring Kit

Our soiling monitoring kits analyze effective irradiance loss in module soiling that causes project energy production loss. This kit optimizes measurement accuracy and uses data filtering to ensure the highest quality soiling data in solar resource assessment applications.

Diffuse Radiation Monitoring Kit

Campbell Scientific integrates the SPN1 to provide a measurement of diffuse irradiance and a calculated Direct Normal Irradiance (DNI). This data set is valuable when doing an analysis for tracker use on the project.

Albedo Kits

Monitoring site albedo uses bifacial modules to provide a data set for you to assess your project site. Select an albedo sensor package from the following:

- ▶ Class A Albedo: An upward- and downward-facing pair of [SR30-L Class A Pyranometers](#) mounted with a [CM275 Albedometer Mounting Kit](#) on a separate tripod that has been powder-coated to a matte-black finish to minimize reflections.
- ▶ Class C Albedo: An upward- and downward-facing pair of [SR05-L Class C Pyranometers](#) mounted with a [CM275 Albedometer Mounting Kit](#) on a separate tripod that has been powder-coated to a matte-black finish to minimize reflections.

Communication Devices

Select a communication device from the following:

- ▶ [CELL210 4G LTE CAT1 Cellular Module for Verizon](#)
- ▶ [CELL205 4G LTE CAT1 Cellular Module for AT&T and T-Mobile USA](#)
- ▶ [RV50X Industrial 4G LTE Cellular Gateway](#)

Software

[LoggerNet Datalogger Support Software](#) supports programming, communication, and data retrieval between the [CR1000X Measurement and Control Datalogger](#) and your PC. [Konect Global Data Services \(GDS\)](#) are available for cloud-based data collection, display, and archive. Contact your Campbell Scientific Sales Engineer for more data service options.

Power Supply

An appropriately sized power supply consisting of solar PV panels and a battery bank with a state-of-the-art charge controller will be included with your order based on your

specific configuration and needs. If you require special considerations or power requirements, notify your Campbell Scientific Sales Engineer for these to be reviewed.

Mounting Equipment

For mounting the SunScout system, its design is based on the Campbell Scientific [CM106B Galvanized-Steel-Tubing Tripod](#). Contact your Campbell Scientific Sales Engineer if you have custom mounting needs.

For comprehensive details, visit: www.campbellsci.com/sunscout 



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