CAMPBELL SCIENTIFIC®
WHEN MEASUREMENTS MATTER

WEATHER AND CLIMATE

Automatic Weather Stations (AWS) and Meteorologic Instruments

From single research weather stations to mesoscale weather networks (mesonets), Campbell Scientific AWSs have become the worldwide standard for climate and boundary-layer meteorology. They are integral parts of forecasting and monitoring systems world wide. Accurate measurements, low power requirements, and proven reliability in extreme weather conditions make our weather stations ideal for all types of meteorological and climatological monitoring anywhere on earth.

MAJOR SYSTEMS

		Measurements	*Control*	*Datalogger*	*Power*	*Communications*
GRWS100 General Research-Grade Weather Station		Wind speed Wind direction Air temperature Relative humidity Barometric pressure Precipitation Solar radiation (sun-plus-sky radiation)	Yes	CR1000	Rechargeable Battery	Variety of tele-communication methods
ET107 Evapotranspiration Monitoring Station		Wind speed Wind direction Air temperature Relative humidity Barometric pressure Precipitation Soil temperature Soil water content	Yes	CR1000	Rechargeable Battery	Variety of tele-communication methods
RAWS-F Remote Automated Weather Station, Fire Weather		Wind speed Wind direction Air temperature Relative humidity Barometric pressure Precipitation Solar radiation Fuel temperature/moisture	Yes	CR1000	Rechargeable Battery	Satellite transmitter

Custom Systems

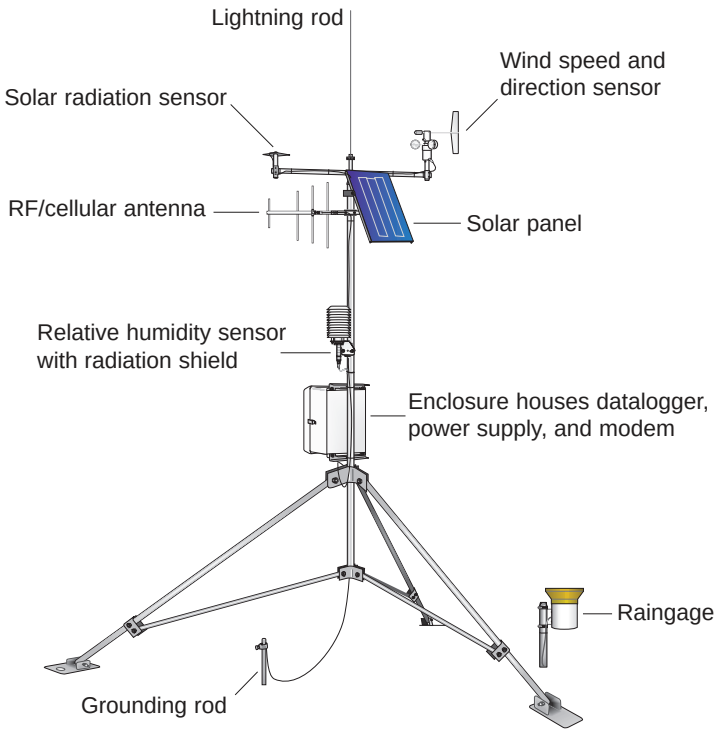
Most of the systems we sell are customized. Tell us what you need and we'll help you configure a system that meets your exact needs.

Dataloggers for weather monitoring

Our weather stations are based around a programmable datalogger (typically a CR1000 or CR3000) that measures the sensors, then processes, stores, and transmits the data. Our dataloggers have wide operating temperature ranges, on-board instructions, programmable execution intervals, and ample input channels for commonly used sensors. Wind vector, wet bulb, histogram, and sample on maxima or minima are standard in the datalogger instruction sets. Most sensors can be measured directly—without external signal conditioning.

Data are typically viewed and stored in the units of your choice (e.g., wind speed in mph, m/s, knots). Measurement rates and data recording intervals are independently programmable, allowing calculation of 15 minute, hourly, and daily data values from 1 minute or 1 second measurements, for example. Conditional outputs, such as rainfall intensity and wind gusts, can also be recorded. The program can be modified at any time to accommodate different sensor configurations or new data processing requirements. If needed, channel capacity can be expanded using multiplexers, including a model designed specifically for thermocouples.

Example Weather Stations



Weather Sensors

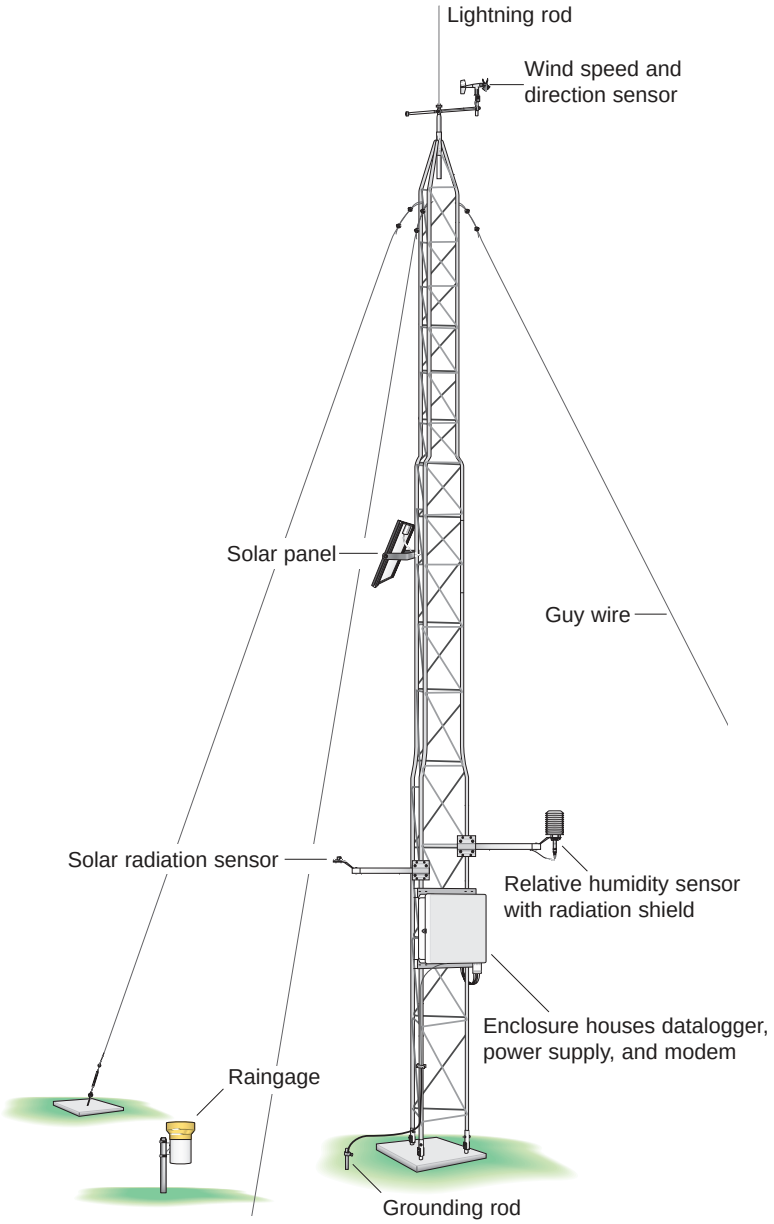
Almost any meteorological sensor can be measured by our dataloggers, allowing stations to be customized for each site. In some locations, hydrological sensors provide additional measurements, such as water level of a nearby stream.

Data Retrieval

We offer multiple communications options for data retrieval, which can be mixed within the same network. Telecommunications options include short-haul, telephone (land line, voice-synthesized, cellular), radio frequency, multidrop, and satellite. On-site options include storage module and laptop computer.

Software

Our PC-based support software simplifies the entire weather monitoring process, from programming to data retrieval to data display and analysis. Our software automatically manages data retrieval from networks or single stations. Robust error-checking ensures data integrity. We can even help you post your data to the Internet.



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