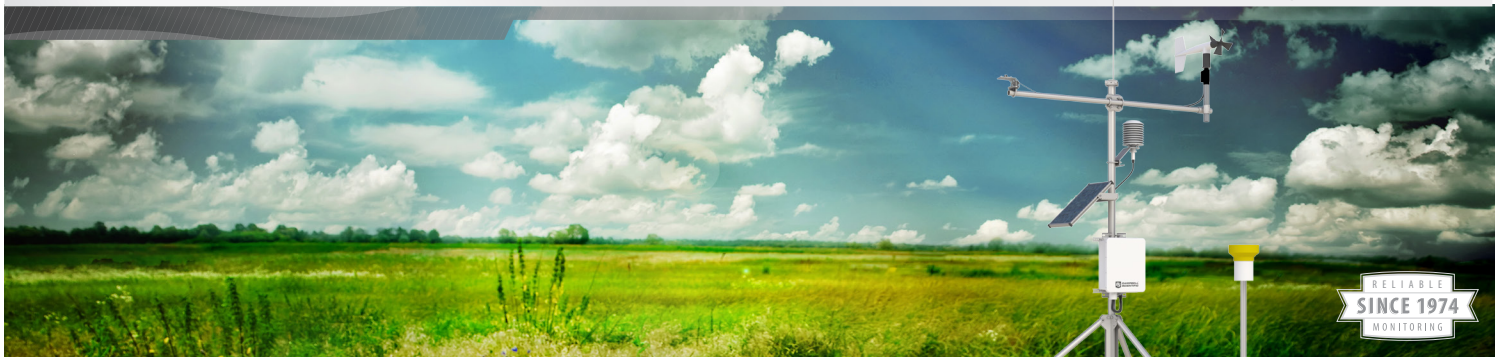
CAMPBELL SCIENTIFIC®
WHEN MEASUREMENTS MATTER

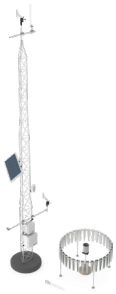
Weather and Climate

Automated 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	*Datalogger*	*Power*	*Communications*
WxPRO | Entry-Level, Research-Grade Weather Station For budget-conscious researchers		wind speed, wind direction, air temperature, precipitation, relative humidity, barometric pressure, solar radiation, soil water content	CR300, CR310	BP7 12 Vdc, 7 Ah battery recharged with 10 W solar panel	Wi-Fi, Ethernet
MetPRO | Research-Grade Meteorological Station Reliable Weather Monitoring		wind speed, wind direction, air temperature, precipitation, relative humidity, barometric pressure, solar radiation, soil water content	CR6	BP12 12 Vdc, 12 Ah battery recharged with 20 W solar panel	Wi-Fi, radio
MesoPRO | Research-Grade Mesonet Station Reliable Weather Monitoring		wind speed (2 heights), wind direction (2 heights), air temperature, precipitation, relative humidity, barometric pressure, solar radiation, soil water content	CR6	BP84 12 Vdc, 84 Ah battery recharged with 50 W solar panel	cellular, Wi-Fi, radio
LW110 | Lightning Warning System Lifesaving warning before lightning strikes		Standard electric field Optional lightning strikes, temperature, relative humidity, wind speed, wind direction, solar radiation, GPS time sync, barometric pressure, precipitation	CR1000	Options 90-265 Vac/24 Vdc with 12 Ah battery 110-240 Vac/24 Vdc with 12 Ah battery 20 W solar panel with 24 Ah battery 50 W solar panel with 84 Ah battery	Ethernet, Wi-Fi, fiber optic, spread spectrum radio, UHF radio

Custom Systems

Dataloggers for weather monitoring

Our weather stations are based around a programmable datalogger 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.

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.

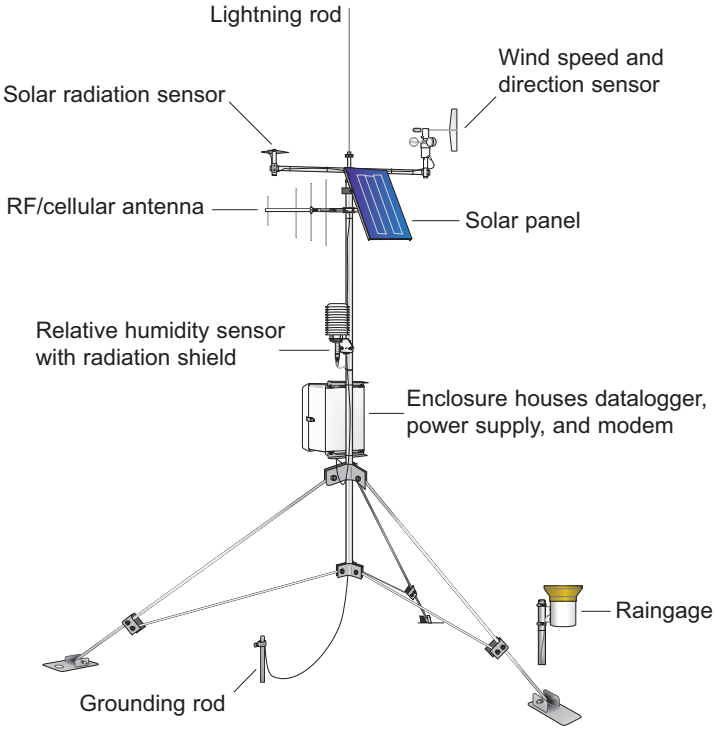
Data Retrieval

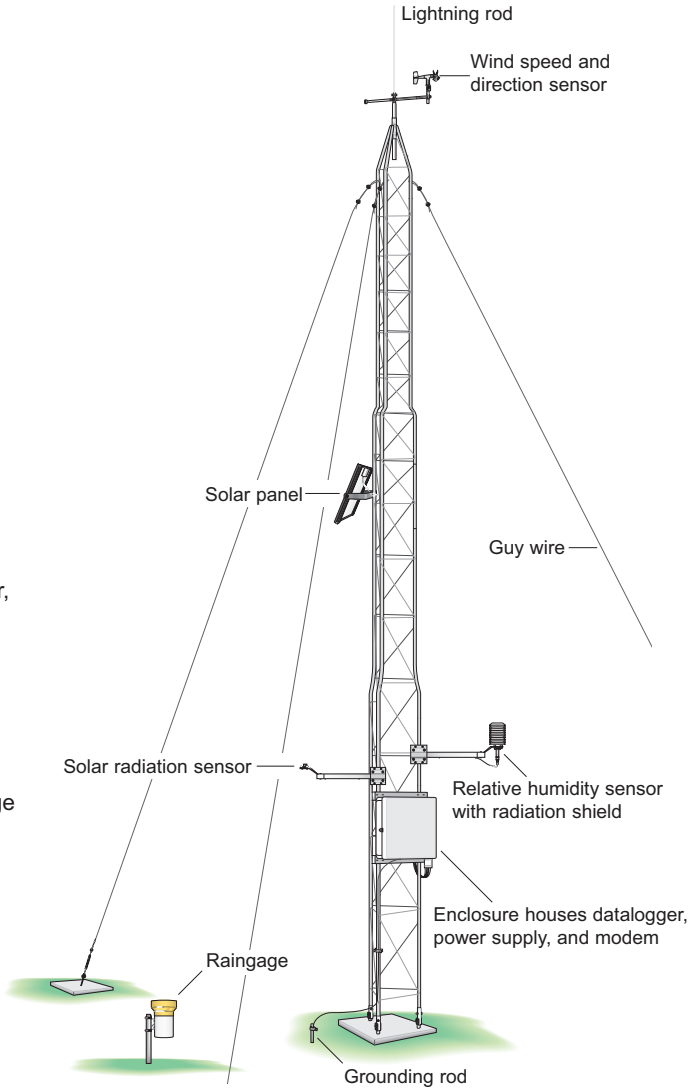
We offer multiple communications options for data retrieval, which can be mixed within the same network. Telecommunications options include short-haul, telephone (land line, voice-synthesized, cellular), radio frequency, multidrop, and satellite. On-site options include storage module and laptop computer.

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.

Example Weather Stations





CAMPBELL SCIENTIFIC®
815 W 1800 N | Logan, UT 84321-1784 | 435.227.9120 | www.campbellsci.com
USA | AUSTRALIA | BRAZIL | CANADA | CHINA | COSTA RICA | FRANCE | GERMANY | SE ASIA | SOUTH AFRICA | SPAIN | UK