

# Reliable Weather Monitoring

## General-Purpose Weather Station



### Measurements

- Wind speed
- Wind direction
- Air temperature
- Relative humidity
- Barometric pressure
- Precipitation
- Solar radiation—sun plus sky radiation

## Overview

The GRWS100 is a mid level, low-power, portable weather station with a tiltable mast. It makes general meteorological measurements but is flexible enough to be adapted to a wide variety of weather-based applications.

The GRWS100 can calculate many related weather parameters such as evapotranspiration, growing degree days, wind chill, dew point, and more. You can enhance an existing research project or meet the needs of a new project by adding sensors, control devices, and telecommunication devices to the standard GRWS100.

## Benefits and Features

- › Campbell Scientific CR1000 Measurement and Control Datalogger
- › Industry-proven, high-accuracy sensors
- › Modular, programmable, and customizable system
- › Battery backed system that allows data collection during power outages and network failure
- › Modbus and PakBus protocols supported
- › Nearly all communication technologies supported including RS-485, fiber, TCP/IP, cellular, or satellite
- › Portable weather station with tiltable mast

## Components

- 1 CR1000 Measurement and Control Datalogger
- 2 PS150 Rechargeable Power Supply
- 3 SP10 10 W Solar Panel
- 4 CM204 4 ft Crossarm
- 5 05103 RM Young Wind Monitor
- 6 TE525WS Tipping Bucket with CM300 Pedestal Mount
- 7 CS300 Pyranometer with 18356 Leveling Base
- 8 CM225 Solar Sensor Mounting Stand
- 9 HC2S3 Temperature and Relative Humidity Probe
- 10 RAD10 10-Plate Radiation Shield
- 11 CS100 Barometric Pressure Sensor
- 12 CM110 10 ft Stainless Steel Tripod
- 13 ENC12/14 Enclosure, 12 inch by 14 inch



## Customizations

The GRWS100 weather station is completely customizable, allowing you to configure the station to your projects specifications, while retaining turn-key functionality. The following outlines a few of the changes that can be made and other components that are available:

### Sensors

Sensors can be removed, added, or swapped out with models that meet your project's requirements.

- › CS215 Temperature and Relative Humidity Probe
- › CS700 Hydrological Service Rain Gage
- › 03002 R. M. Young Wind Sentry

### Communications

Communication options include Ethernet, cellular, fiber, RS-485, satellite, and telephone.

- › RavenXTV Cellular Modem for Verizon
- › RV50 4G LTE Cellular Gateway
- › NL201 Network Link Interface

### Power

The station can be powered by AC and/or DC power sources. Solar panels can provide a charging source. Batteries are sized according to power drain and location.

- › SP20 20 W Solar Panel
- › PS200 Smart Power Supply and Controller

### Mounting

In addition to 10 ft instrumentation tripod, we offer a variety of tower and tripod sizes. Several sensor mounting options are available to change the default mounting configuration.

- › UT10/20/30 10/20/30 ft instrumentation tower for permanent installations
- › CM115/CM120 15/20 ft Stainless-Steel Instrument Tripod
- › CM206 6 ft crossarm with mounting bracket

