

# Aspen 10

Edge Device for a Single Sensor



## Easily Connect Nature's Data to the Cloud

### I Overview

The revolutionary Aspen™10 Internet of Things (IoT) Edge Device allows users to easily connect their environmental sensor to the cloud. It is rugged and durable and may be mounted outdoors without the need for a second enclosure. It has an integrated solar panel and internal rechargeable battery, making the Aspen 10 a truly self-sustaining device.


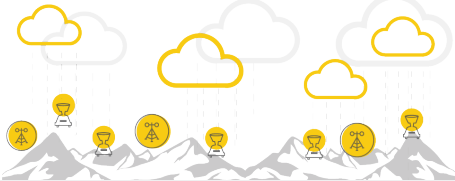

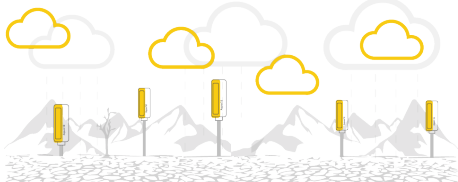
The Aspen 10 is also small and compact, which makes it easy to install in a variety of locations without disturbing the environment it is monitoring. An integrated IoT cellular modem allows the Aspen 10 to transmit data to the cloud, and a global positioning system (GPS) receiver identifies automated installation locations.

### I Benefits and Features

- Near field communication (NFC)/Bluetooth for operation with a smartphone to allow on-site analysis through the CampbellGo™ app
- Cloud-ready out of the box
- Compact, all-in-one device with integrated data logging, power, communications, and solar charging
- IoT device using local cellular networks as the low-power wide-area network (LPWAN)
- Optimal security using Message Queuing Telemetry Transport (MQTT)
- Smart sensor detection and identification
- Automatic power optimization for the attached sensor
- Solar charging to keep the Aspen 10 and connected sensor operational indefinitely using just a few hours of daily sunlight



# Solutions

Solutions	Description
<b>Weather Network Densification</b> 	<p>Easily densify existing automatic weather station (AWS) networks by deploying a network of Aspen-enabled <b>ClimaVue™50</b> stations. Provide supplementary ground observations that can assist with real-time operations during extreme weather events and additional data for validating and fine-tuning forecast models.</p>
<b>Smart Rainfall Monitoring Stations</b> 	<p>Capture localized variations in rainfall using Aspen-enabled <b>RainVue™</b> stations to provide emergency management personnel with better information to encourage proactive resource deployment for needed areas during storm events.</p>
<b>More Data, Better Treatment Decisions</b> 	<p>Increase your road sensing capacity with an Aspen-enabled <b>Wintersense</b> smart sensor, and be confident in your route-based winter maintenance decisions.</p>
<b>Research-Grade Soil Profiles</b> 	<p>Precisely locate your soil profile with minimal site disturbance using an Aspen-enabled <b>SoilVue™10</b> station. With no long cable runs or batteries to replace, SoilVue stations become virtually maintenance free using the Aspen 10.</p>



WESTERN  
ASPEN  
ALLIANCE

The quaking aspen communities of the west are the inspiration for our Aspen 10. We are partnering with the Western Aspen Alliance, a leader in aspen conservation science, to preserve the biodiversity and beauty that aspen ecosystems nurture. We proudly support these efforts with regular shareholder contributions. For more information, visit the Western Aspen Alliance website at [qcnr.usu.edu/western-aspen-alliance](http://qcnr.usu.edu/western-aspen-alliance).

To view a detailed description of the Aspen 10 and its specifications, visit [www.campbellsci.com/aspen10](http://www.campbellsci.com/aspen10) or scan this QR code.



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