Weather Stations

FOR VEHICLE-MOUNT APPLICATIONS

Columbia
Weather Systems

Vehicle-Mount Weather Stations provide meteorological data monitoring for mobile operations such as Incident Response, Command and Control, and Mobile Air Traffic Control. Internal system components can be permanently mounted in the vehicle, while exterior sensor components are stored in a compartment or optional protective case.

Quick Deploy • Interoperability • Automation

Our mobile weather stations are quick to set up and within minutes can be automatically recording data for incident decision-making and reporting, as well as, transmitting data to programs such as CAMEO/ALOHA for plume modeling.

The 9-ft telescoping mast is detachable for transportation storage, then quickly clicks into place for rapid deployment. The entire system is operational within minutes to provide critical weather information where and when it is needed.

The bottom line is that the conditions at an incident may not be exactly as forecast or reported elsewhere. There's no substitute for immediate, accurate, on-site weather data.

Experience

We've been in the business of weather monitoring for over 40 years. Our mobile weather stations were developed by a former Air Force meteorologist specifically for the public safety market. Columbia Weather Systems makes weather monitoring easy so you can do your job better.

"We can deploy within minutes after arriving on scene… There are no moving parts which make the system virtually 'Fire Fighter Proof' … Having 'Live' weather data is vital to our operation."
~Tualatin Valley Fire and Rescue, HazMat Team

VM Weather Stations Include:

– Selected Weather Sensor(s) (see below) with 15-foot cable
– Bulkhead Connector mounts on truck for exterior sensor cable
– 50-foot Interior Cable
– Telescoping Mast (9-foot) and Truck-Mount Brackets
– Optional Sensor Protective Case (suggested if no built-in storage)

Choose Weather Data Monitoring Options:

– CWS's proprietary Weather Display Console AND/OR
– Weather Master Software AND/OR
– Weather MicroServer for network and Internet interfaces

Magellan MX™ VM

– Compass / GPS
– All-in-one sensor with multiple configurations
– Ultrasonic wind sensor
– Optical rain sensor
– Temperature, humidity, and pressure

Orion™ VM

– All-in-one sensor head
– No moving parts
– Ultrasonic wind sensor
– Impact rain sensor
– Temperature, humidity, and pressure

Monitoring Options

Weather MicroServer™

Self-contained, proprietary weather data logger and powerful communication device. Compatible with all CWS weather stations and offers:

– Browser interface
– Data logging with 1-year capacity at 1-min interval
– "Internet-ready" weather monitoring with FTP output, XML, and Internet interfaces
– Industrial communication protocols (Modbus, DNP3, BACnet, and SNMP)

Four serial ports offer interface to the weather station and additional sensors such as visibility and ultrasonic wind sensors. Analog and digital channels available for additional sensor such as temperature, solar radiation, and rain gauge. The MicroServer provides real-time weather data to WeatherMaster software and the Display Console over the network. This allows users to simultaneously monitor the weather over the network.

Cloud Weather Server™

Free with the Weather MicroServer, this service offers real-time weather data monitoring on the Internet.

– View display screen remotely from any device using a web browser
– Data uploaded every five seconds
– Be alerted to critical weather conditions with alarm feature that generates email and push notifications
– For one or more weather stations

CWS Weather Monitor App™

Check current conditions quickly from a hand-held mobile device for decision-making in the field. The CWS Weather Monitor App is compatible with all CWS weather stations that include the Weather MicroServer.
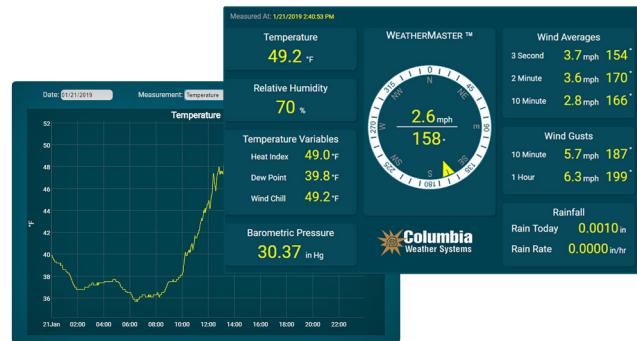
The app includes real-time weather monitoring screens, NWS forecasts, and custom alarm notifications. Access to a Cloud Weather Server account is required.

Weather Display Console™

This touchscreen weather monitoring device displays real-time meteorological data, plus computations for wind chill, heat index and other calculated parameters. Measurements are designed to be viewed clearly from a distance even in a darkened control room.

– Seven-inch, TFT color LCD panel with 800 x 480 pixels resolution
– Connect directly to the weather station with a serial port or to the Weather MicroServer utilizing existing Ethernet
– Three mounting options: Desktop/Wall-Mount, Panel Mount/Flush Mount, 19" Rack Mount

WeatherMaster™ Software

Professional-grade software providing real-time computer weather monitoring with display and automatic logging of all measured and calculated parameters.
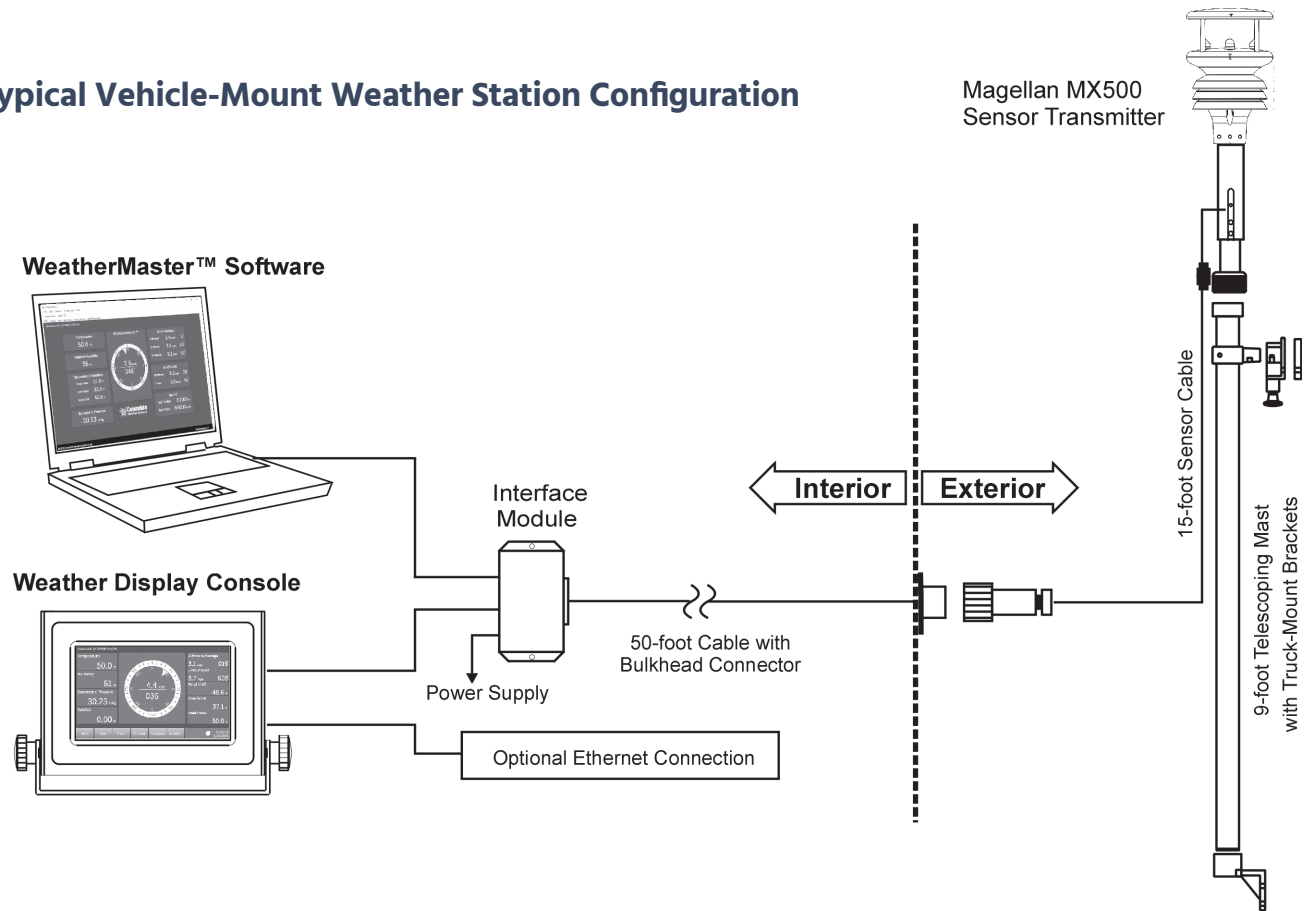
– Expandable SQL database to archive measured and calculated parameters
– Graphing and trend display of all parameters
– Alarm notification via computer, email, and/or text
– Multi-station monitoring and data acquisition
– Interface with CAMEO/ALOHA software for plume modeling and evacuation corridor predictions
– Interface with Weather Underground

4-20 mA Signal Output

For industrial PLC interface, the Orion 420™ offers 4-20mA signal output to interface to PLC, DCS, and SCADA systems.

System Diagram

Typical Vehicle-Mount Weather Station Configuration

Magellan MX500
Sensor Transmitter

WeatherMaster™ Software

Weather Display Console

Interface Module

Power Supply

50-foot Cable with Bulkhead Connector

Optional Ethernet Connection

◁ Interior | Exterior ▷

15-foot Sensor Cable

9-foot Telescoping Mast with Truck-Mount Brackets

Orion VM for DC Homeland Security and Emergency Management Agency

(Right) Magellan MX500 VM with GPS for Avondale Police/Fire and Medical Incident Command

(Photos courtesy of LDV)

Call or email today for a quote.

Columbia Weather Systems