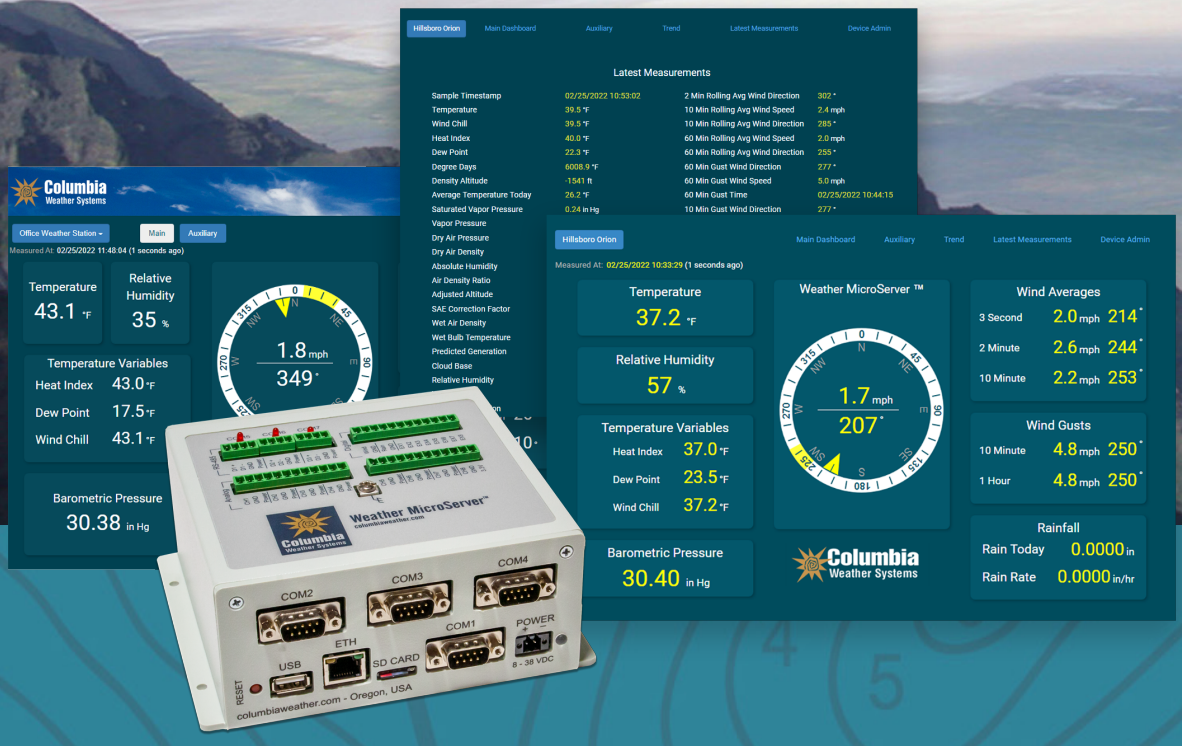
Weather MicroServer™

NETWORK-READY WEATHER DATA

Internet-Ready | Modbus | BACnet | DNP3 | SNMP | FTP | XML | Data Logging



Columbia
Weather Systems

Weather MicroServer™

User Interface

The Weather MicroServer is accessed through a web-based user interface using any browser such as Chrome MicroSoft Edge® or Mozilla Firefox®. Through the user interface, the MicroServer can be set up and fully configured. The user can:

- View Main + Aux Dashboards
- Trend Graphs for the day
- View the latest measurements
- Configure the network setup: IP Address, Subnet Mask, Gateway and DNS Server
- Change the password
- Set the date and time
- Set up and configure FTP output
- Enable Modbus, BACnet, and DNP3 interfaces
- Enable SNMP interface
- Enable CWS Cloud Weather Server, Wunderground, and CWOP interfaces
- View and download data logs
- Select the weather parameter measurements
- Configure the weather station settings: Altitude, pressure offset, temperature offset, and degree day parameters
- Update the firmware as new versions become available
- View diagnostics information

Network-Ready Weather Data for Integrated Environmental Monitoring

The Weather MicroServer is a data logger and **powerful communication device**. It includes a web browser user interface with real-time dashboards, configuration, and data export; available to any computer or device on the network.

The MicroServer comes standard with several industrial automation interfaces to SCADA, web interfaces to our Cloud Weather Server, Weather Underground, and data export via FTP.

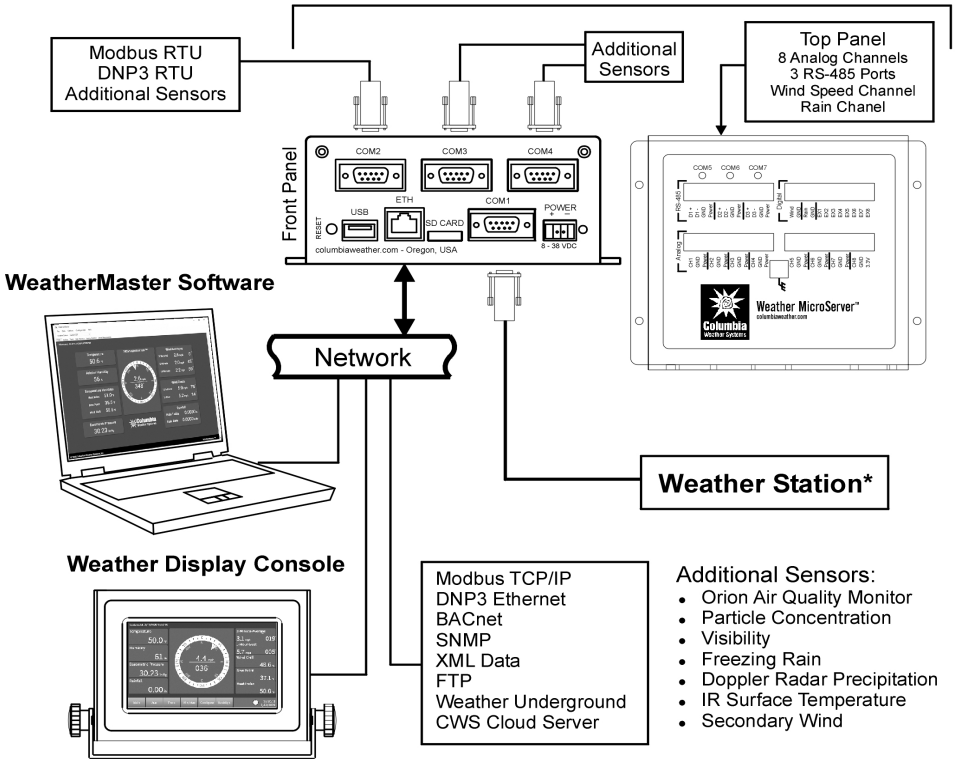
It can communicate with WeatherMaster software over the network, allowing for **long-term data storage on a computer and providing trend charts for historical data**.

Compatible with CWOP (Citizen Weather Observer Program) and Weather Underground, the MicroServer can automatically post data from your weather station to these **network websites**.

Three additional serial ports offer interface to additional peripheral devices or sensors.

Popular **additional sensors** include visibility, solar radiation, snow level, secondary wind, Air Quality Monitor, and particle concentration. See the website for a current list of available sensors.

The Weather MicroServer interfaces with any CWS weather station model to provide a range of weather parameters and monitoring options, inlcuding portable and vehicle-mount configurations.



Communication Protocols

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.

Cloud-based Weather Server

Real-time weather data monitoring that is easily accessible from any device using a web browser. A secure, no-hassle weather website. Data is automatically uploaded every 5 seconds.

Multiple weather stations can be networked, with the display including an overview option to view key data points from weather stations simultaneously.

XML

The Weather MicroServer serves an XML page that contains current weather parameter values. It can also FTP the XML page to a web or FTP server on the Internet.

The XML page contains tags for all the selected parameters and current values.

FTP

The Weather MicroServer can use FTP to upload XML and CSV files to a website at 15-second intervals with current weather parameter values and daily datalog files.

SNMP - Simple Network Management Protocol

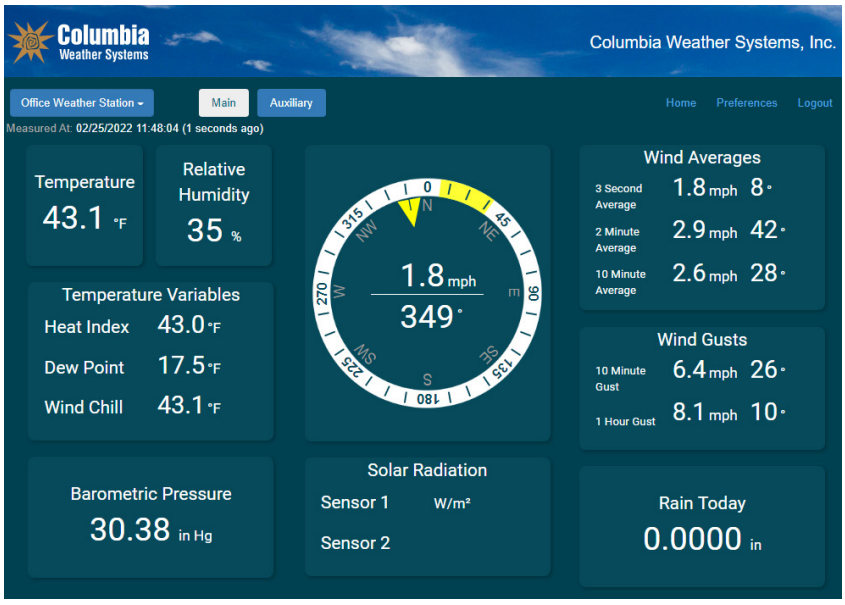
The Weather MicroServer has a built-in SNMPv3 interface with SHA1 authentication and AES or DES encryption options for communication with network management systems. A MIB file is provided on our website and in the MicroServer user interface.

Modbus

The Weather MicroServer has built-in Modbus/TCP and RTU interfaces for communication with industrial automation systems, SCADA, and DCS. The Weather MicroServer uses Modbus/TCP for connections over Ethernet (TCP/IP). Using a Modbus OPC Server, the MicroServer can provide OPC data access. We offer the KEPServerEX Modbus OPC Server Suite. The Modbus Point List is available on our website.

Additional Protocols

DNP3 (Ethernet and RS485) and BACnet Ethernet protocols are also standard for interface to common automation controls.



The Cloud-based Weather Server offers a security solution for customers who are unable to upload data (via FTP) to their website or implement port forwarding.

Specifications

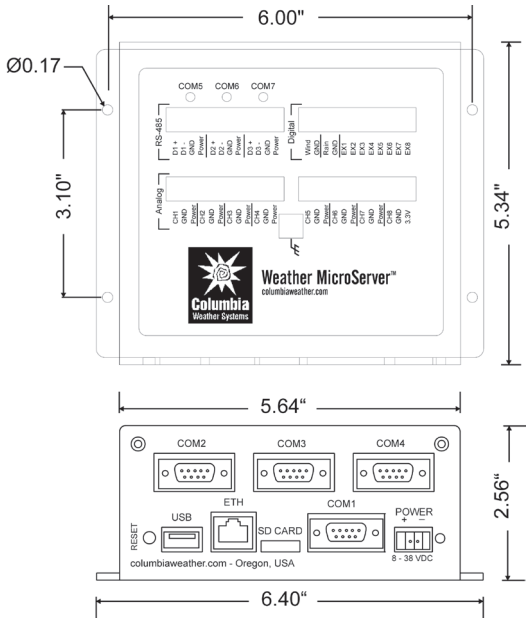
900 MHz Processor
16 GB micro SD card for Datalogger
4 Communication Serial Ports
1 Ethernet Port
8 Analog channels
1 Rainfall Digital channel
1 Wind Speed Pulse channel

Footprint Dimensions & Weight:
6.40" W x 2.56" H x 5.34" D
415 grams, 0.9 lbs

Power:
8 to 38 VDC (67 mA at 12 VDC)

Operating Temperature:
-40°C to +85°C

Compatible with any Columbia Weather Systems weather station including Orion, Pulsar, Capricorn FLX, and Magellan MX.



Measurements and Calculations

The parameters monitored depend on the weather station to which the MicroServer is connected. The MicroServer is compatible with any weather station from Columbia Weather Systems. For a current list, visit our website. Possible measurements and calculated parameters include:

Wind Speed & Direction
- Wind Speed
- Raw Wind Direction
- Adjusted Wind Direction
- 3 Second Rolling Average Wind Speed
- 3 Second Rolling Average Wind Direction
- 2 Minute Rolling Average Wind Speed
- 2 Minute Rolling Average Wind Direction
- 10 Minute Rolling Average Wind Speed
- 10 Minute Rolling Average Wind Direction
- 10 Minute Gust Wind Direction
- 10 Minute Gust Wind Speed
- 10 Minute Gust Time
- 60 Minute Gust Wind Direction
- 60 Minute Gust Wind Speed
- 60 Minute Gust Time

Precipitation
- Rain Today
- Rain this week
- Rain this month
- Rain this year
- Hail*
- Hail Intensity*
- Precipitation Type**

Relative Humidity

Solar Radiation

Visibility

Temperature
- Temperature 1
- Temperature 2
- Temperature 3
- Temperature 4
- Average Temperature Today
- Degree Days
- Wet Bulb Temperature

Barometric Pressure
- Raw Barometric Pressure
- Adjusted Barometric Pressure

Calculated Parameters
- Wind Chill
- Heat Index
- Dew Point
- Density Altitude

Air Quality Parameters
- Saturated Vapor Pressure
- Vapor Pressure
- Dry Air Pressure
- Dry Air Density
- Wet Air Density
- A bsolute Humidity
- Air Density Ratio
- Adjusted Altitude
- SAE Correction Factor

Additional Parameters
- Depending on sensors

* Available only with Orion Weather Stations
** Available only with Pulsar Weather Stations

Contact us today for a free quotation!

Columbia Weather Systems

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