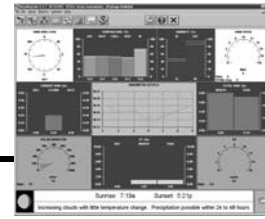


WeatherLink 5.4 for Vantage Pro



6510C

VANTAGE PRO

Software and Data Logger

WeatherLink 5.4 for Vantage Pro consists of our WeatherLink software and a data logger that connects to a Vantage Pro console. The software and data logger transfer your Vantage Pro weather data to your computer, allowing you to create a permanent weather database. Once stored in the database, your weather information can be used to generate a wide variety of reports and graphical displays, and can also be shared via the Internet.

WeatherLink Software Features

- Displays the current weather station data in a real-time “bulletin” on the computer.
- Allows you to set and clear data in the weather station console (time and date, highs and lows, alarm thresholds, calibration numbers, etc.) from the computer.
- Graphs archived weather data on an hourly, daily, weekly, monthly, or yearly basis.
- Generates Weather Watcher reports in the National Climatic Data Center (NOAA) format.
- Collects data from multiple weather stations on the same computer.
- Compatible with Weather Monitor II, Weather Wizard III, and Perception II weather stations.
- Internet support for creating your own weather website and for uploading other files such as web cam images.
- Includes support for GLOBE, an international weather-related science program for students from elementary through high school. Visit www.globe.gov for more information.
- APRS data protocol allows volunteers in the Citizen Weather Observer Program (CWOP) to send real-time weather data to the National Weather Service. CWOP data used for weather education and research projects. Visit www.wxqa.com for more information.
- Supports data uploads to the Weather Underground, making your weather data easily available to the public. Visit www.wunderground.com for more information.

WeatherLink Data Logger Features

- Archives weather data for subsequent transfer to the computer.
- Manages data communication between the Vantage Pro weather station and the WeatherLink software.
- Information on WeatherLink communications protocols and data formatting can be found on the Software Support page at our website: (<http://www.davisnet.com/support/weather/>).

Specifications

Software System Requirements

Computer running Windows™ 95, 98, ME, NT 4.0, Windows 2000 or XP with at least one free serial port and 5 MB of free disk space. The amount of disk space necessary for the data files depends on the archive interval. Each archive record in the database is 88 bytes. Every day in the database has an additional two records totalling 176 bytes that store daily summary information. A database containing data stored at a 30 – minute archive interval requires approximately 4400 bytes of disk space per day or 132KB of disk space per month. The file size changes in a linear fashion depending on the archive interval. For example, data stored at a one – minute interval requires approximately 3.9 MB a month while the data stored at a two – hour interval requires approximately 33 KB a month.

For phone modem connections, the following additional hardware is required: One external modem to connect to the WeatherLink and one internal modem or external modem connected to your computer (modems must be Hayes compatible), and Telephone Modem Adapter (#6533).

Communication Protocol

Data Channel Characteristics 1200, 2400, 4800, 9600, 14,400 and 19,200 baud (software-selectable), RS-232, half-duplex, data only (no CTS or RTS)

Data Logger Functions

Control Functions Set Archive Interval, Set/Clear Calibration Numbers, Set Longitude and Latitude, Set Year-to-Date Rain Total, Set/Clear Alarm Thresholds, Clear Total Values, Set Time and Date

Download Data may be transferred automatically to your computer once an hour using the Auto Download command. More frequent downloads can be selected to support Internet file transfers. Only new archive data is transferred during the download.

Data Logger Archived Data

The Data Logger stores up to 2560 archive records (one 52-byte record per archive interval) for later transfer to your computer. The archive records are stored in 128K of non-volatile memory; protecting the data even if the console loses power. Maxima, minima, averages, and totals are taken over the archive interval.

Archive Record Data Time/Date of Record, Inside Temperature (last or avg.), Outside Temperature (last or avg.), Maximum Air Temperature, Minimum Air Temperature, Wind Direction (dominant), Wind Speed (average), Maximum Wind Speed, Rainfall (total), Rain Rate, Inside Humidity (last), Outside Humidity (last), Barometric Pressure (last), Solar Radiation, Hi Solar Radiation, UV, Hi UV, Evapotranspiration, Forecast, Leaf Temperature (2), Leaf Wetness (2), Extra Humidity (2), Extra Temperature (2), Soil Temperature (4), Soil Moisture (4), Wind Samples, Wind Tx, Length of Archive Interval, ISS Reception

- Archive Interval User-selectable from the following intervals (in minutes): 1, 5, 10, 15, 30, 60, or 120
- Archive Storage Capacity (the amount of time before the archive is completely filled)
 - 1 Minute Archive Interval 42 hours
 - 5 Minute Archive Interval 8 days
 - 10 Minute Archive Interval. 17 days
 - 15 Minute Archive Interval. 26 days
 - 30 Minute Archive Interval. 53 days
 - 60 Minute Archive Interval. 106 days
 - 120 Minute Archive Interval. 213 days
- Download Data may be transferred automatically from the data logger to your computer up to once an hour using the Auto Download command. Data can be transferred more frequently, from once a minute to once every two hours, to support Internet uploading and other data sharing features. Only new archive data is transferred during the download.

Data Display Options

Some of the weather data and reports listed below require optional sensors.

Real-Time Displays (these displays update in real-time)

- Graphical Bulletin Inside Temperature, Outside Temperature, Wind Direction (0°-360°), Wind Speed, Daily Rain Total, Monthly Rain Total, Year-to-Date Rain Total, Storm Total, Rain Rate, Inside Humidity, Outside Humidity, Barometer, Barometer 6-hour Plot, Evapotranspiration (ET) (day, month, year), Today's Highs and Lows, Forecast Icons, Forecast Text, and Illuminated Fraction of the Moon Disk.
- Text-Based Summary Inside Temperature, Outside Temperature, Wind Direction (0°-360°), Wind Speed, Daily Rain Total, Monthly Rain Total, Year-to-Date Rain Total, Storm Total, Rain Rate, Inside Humidity, Outside Humidity, Barometer, UV, Solar Radiation, ET (day, month, year), Today's Highs and Lows, Forecast Text, and Moon Phase.
- Update Interval Two seconds (approximately)

Plotting Displays

- Plot Window Enables graphing of all database information (multiple variables may be plotted on a single graph) over any of the following spans (1 hr, 4 hr, 8 hr, 12 hr, 1 day, 3 days, Week, Month, Year). Multiple dates may also be plotted on the same graph.
- Strip Charts Four stacked line graphs (multiple variables may be plotted on a single graph), which update at the time of each archive interval. Strip charts may use any of the following spans (1 hr, 4 hr, 8 hr, 12 hr, 1 day, 3 days, Week, Month, Year).

Reports

- NOAA Monthly Summary Based on the National Oceanic and Atmospheric Administration (NOAA) Monthly Weather Watcher report
- NOAA Yearly Summary. Based on the National Oceanic and Atmospheric Administration (NOAA) Yearly Weather Watcher report
- Yearly Rainfall Calculates rainfall totals broken down by month and year. Rainfall data may be altered and data may be added to reflect rainfall totals for months and years which are not contained in your weather database.
- Degree-Days Tracks degree-days and progress towards development for an unlimited number of crops or pests; base and upper development thresholds and development totals entered by user.
- Temperature/Humidity Hours Calculates the number of hours the temperature has been either above or below a given threshold, and that during which time the humidity was above a given threshold from a given start date. Typically used to track conditions for the development of agricultural pests and molds.
- Soil Temperature Hours Calculates the time that soil temperature has been above freezing (or some other threshold). Typically used to determine a time to plant crops.
- Chilling Requirements. Calculates the number of hours spent below a specified temperature during a specified period of time. Typically used to determine if the coldness requirement for a fruit tree in dormancy has been met.
- Bright Sunshine Hours Calculates amount of sunshine for a selected time period.
- Leaf Wetness Hours Calculates the amount of leaf wetness hours over a selected time period.
- Fuel Demand Estimates fuel usage based on past usage and outside temperatures.
- Total ET Calculates ET for a selected time period.
- Sunrise & Sunset Times Calculates sunrise and sunset times for any given latitude, longitude and date.