

## Vantage Pro2 : Weather Station (Wireless)



**Weather Station & Transmitter**

**Datalogger Display Console**

### Weather Station measurements:-

- Wind Speed & Wind Direction
- Air Temperature & Relative Humidity
- Barometric Pressure
- Rainfall
- Solar Radiation
- UV Radiation Dose
- Forecast
- Dew point (calculated), Wind Chill (calculated), Heat Index (calculated)

The **Vantage Pro2 Weather Station** offers forecasting, on-screen graphing, and much more, all on a large (90 x 150 mm) LCD display. Quick view icons show the forecast at a glance - sunny, partly sunny, cloudy, rain, or snow - while a moving ticker-tape display gives more details. Mostly clear with little temperature change? Increasing clouds and cooler with precipitation within four to six hours? Whatever the forecast, Vantage Pro2 will let you know. Backlit display for easy viewing. Mounts on desk, shelf, or wall. US and metric units of measure.

### Vantage Pro2 Sensor Suite

The Vantage Pro2 includes an innovative integrated sensor suite, which combines Rain Gauge, Air Temperature Sensor, Humidity sensors, Wind Speed and Direction sensors all into one package, Solar Radiation sensor, UV Radiation sensor and Soil Moisture sensors are optional. Wind sensor is detachable for ultimate flexibility. Mount with integrated sensor suite, or mount separately using the included 40' (12 m) cable. Rain collector with self-emptying tipping bucket is exceptionally accurate. Read rainfall amounts in 0.01" or 0.25 mm increments. Temperature and humidity sensors are located inside the radiation shield. The shield protects the sensors from solar radiation and other sources of radiated and reflected heat. The tripod & Mast makes installation even easier. Integrated Sensor Suite is solar powered. Electronic components are housed in a weather-resistant shelter. Console may be powered using the included with three C batteries.

### WeatherLink Data Logger

For weather data collection, analysis, and display, connect Vantage Pro2 to your personal computer. The WeatherLink data logger fits neatly into the Vantage Pro console, storing your weather data even when the computer is off. Transfer data to the PC when you like. Later, use the software to create graphs, generate summaries, and more, The Vantage Pro2 Automatic weather Station use frequency hopping spread spectrum radio technology to transmit weather data wirelessly up to 1000' (300 m). **Transmits and receives data from up to 1,000 feet (300 Meter) away (line-of-sight).**

### Data Displayed on Console:-

Historical Data, Daily Data, Monthly Data, Yearly Data, Current Display Data, Current Graph Data, Graph Time Interval, Graph Time Interval, Graph Variable Span (Vertical Scale), Graph Variable Span (Vertical Scale), Transmission Interval, Update Interval

### Weather Station Sensors (ISS):-

- Wind Speed Sensor
- Wind Direction Sensor
- Air Temperature Sensor
- Relative Humidity Sensor
- Rain Gauge
- Solar Radiation Sensor
- Ultra Violet Radiation Sensor
- Barometric Pressure

### Related Accessories:-

- Data display console (Data Receiver)
- Datalogger
- Software (Weather Link)
- USB data cable
- Solar Power Panel & Battery
- Tripod Stand
- Mast & Mounting kit of ISS



# Automatic Weather Station

## Technical Specifications

Integrated Sensor Suit Sensors	
Parameter	Value
<b>Air Temperature Sensor</b> (Sensor Type : PN Junction Silicon Diode)	
Range	-40° to +150°F (-40° to +65°C)
Resolution	0.1°C
Accuracy	± 0.5°C
<b>Relative Humidity Sensor</b> (Sensor Type : Film capacitor element)	
Range	0 to 100% RH
Resolution	1%
Accuracy	±3%
<b>Wind Speed Sensor</b> (Sensor Type : Wind cups with magnetic switch)	
Range	1.5 to 79 m/s, 5 to 282 km/h
Resolution	1 km/h, 0.5 m/s,
Accuracy	1 m/s
<b>Wind Direction Sensor</b> (Sensor Type : Wind vane with potentiometer)	
Range	0 - 360°
Resolution	16 points (22.5°)
Accuracy	±3°
<b>Rain Gauge</b>	
Rain Collector Type	Tipping bucket 0.01" per tip (0.2 mm with metric rain adapter), 33.2 in2 (214 cm2) collection area
Range	0, 0.04"/hr (1 mm/hr) to 96"/hr (0 to 2438 mm/hr)
Resolution	0.2 mm
Accuracy	±3% of total or 0.2mm
<b>Barometric Pressure</b>	
Range	540 to 1100 hPa/mb , 16.00" to 32.50" Hg, 410 to 820 mm Hg
Resolution and Units	0.01" Hg, 0.1 mm Hg, 0.1 hPa/mb
Accuracy	±0.03" Hg (±0.8 mm Hg, ±1.0 hPa/mb)
<b>Solar Radiation Sensor</b>	
Range	0 to 1800 W/m2
Resolution	1 W/m2
Accuracy	±5% of full scale (Reference: Eppley PSP at 1000 W/m2)
Cosine Response	±3% for angle of incidence from 0° to 75°
Temperature Coefficient	-0.067% per °F (-0.12% per °C); reference temperature = 77°F (25 °C)
<b>Ultra Violet (UV) Radiation Dose</b>	
Resolution and Units	0.1 MEDs to 19.9 MEDs; 1 MED above 19.9 MEDS
Range	0 to 199 MEDs
Accuracy	±5% of daily total
<b>Wind Chill (Calculated)</b>	
Range	-110° to +135°F (-79° to +57°C)
Resolution	1°F or 1°C
Accuracy	±2°F (±1°C)
<b>Dewpoint (Calculated)</b>	
Range	-105° to +130°F (-76° to +54°C)
Resolution	1°F or 1°C
Accuracy	±3°F (±1.5°C)



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<b>Integrated Sensor Suite Specification</b>	
Operating Temperature	-40° to +150°F (-40° to +65°C)
Storage Temperature	-40° to +158°F (-40° to +70°C)
Current Draw	0.14 mA (average), 30 mA (peak) at 4 to 6 VDC
Solar Power Panel	0.5 Watts
Battery	3-Volt Lithium cell (CR-123)
Battery Life (3-Volt Lithium cell)	8 months without sunlight, greater than 2 years on solar charging
Connectors, Sensor	Modular RJ-11
Cable Type	4-conductor, 26 AWG
Housing Material	UV-resistant ABS, ASA plastic
Weight	6.1 lbs. (2.6 kg)
<b>Digital Display Console with Logger</b>	
Display Data	Current Data, Current Graph Data, Transmission Interval, Alarm Indication
Data storage interval	User-Selectable Storage Interval. Choose 1, 5, 10, 15, 30, 60, or 120 min.
Data storage (Datalogger)	Log and store data Store up to <b>six months</b> depending on the storage interval, even when the data logger is not connected to your PC
Console Operating Temperature	+32° to +140°F (0° to +60°C)
Storage Temperature	+14° to +158°F (-10° to +70°C)
Power Adapter	5 VDC, 300 mA, regulated
Current Draw	0.9 mA average, 30 mA peak, (add 120 mA for display lamps, add 0.125 mA for each optional wireless transmitter received by console) at 4 -6 VDC
Batteries Backup	3 C-Cells
Battery Life	up to 9 months
Console Display Type	LCD Transflective
Display Backlight	LEDs
Dimensions	10.625" x 6.125" x 1.625" (270 mm x 156 mm x 41 mm)
Display	5.94" x 3.375" (151 mm x 86 mm)
Weight (with batteries)	1.88 lbs. (.85 kg)
<b>Wireless Communications (Between ISS and Console)</b>	
Transmit/Receive Frequency	868.0 – 868.6 MHz FHSS
Output Power	868.0–868.6 MHz FHSS. CE-certified, less than 8 mW, no license required
Range	Line of Sight : up to 1000 feet (300 m) Through Walls : 200 to 400 feet (60 to 120 m)
Sensor Inputs	RF Filtering : RC low-pass filter on each signal line
Software	Windows based graphical display software
<b>Features of Datalogger and weatherLink Software</b>	
<ul style="list-style-type: none"> <li>• Displays the current weather station data in a real-time “bulletin” on the computer.</li> <li>• 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.</li> <li>• Graphs archived weather data on an hourly, daily, weekly, monthly, or yearly basis.</li> <li>• Collects data from multiple weather stations on the same computer.</li> <li>• Internet support for creating your own weather website and for uploading other files.</li> <li>• Archives weather data for subsequent transfer to the computer.</li> <li>• Manages data communication between the weather station and the WeatherLink software</li> </ul>	

\* The equipment manufacture by Davis Instruments –U.S.A.