

Partner: Davis Instruments
Model: Vantage PRO Weather Station
Device Type: Misc



GENERAL INFORMATION

SIMPLWINDOWS NAME:	Davis Vantage PRO Weather Station
CATEGORY:	Misc
VERSION:	1.0
SUMMARY:	<p>The Vantage PRO Weather Station consists of a console and an Integrated Sensor Suite (ISS). It is available in a cabled version and a wireless version. The terms "cabled" and "wireless" refer to the way that the ISS communicates to the console. This module was written for and tested with the cabled version of the Vantage PRO.</p> <p>This module will poll the Vantage PRO for a variety of current weather data. Most of this data is output from the module in both analog and serial formats. This will allow the programmer to optimize the user interface for his/her particular application.</p>
GENERAL NOTES:	<p>Follow the directions in the "Console Manual" to guide you through the Setup Mode of the console. This is necessary to configure your system and determine how your Vantage PRO station operates. Follow the directions in the "Integrated Sensor Suite Installation Manual" for instructions on mounting the ISS and the proper connection of the ISS to the console</p>
CRESTRON HARDWARE REQUIRED:	X-Series Processor, CNX-COM2, ST-COM, 2-Series Processor, C2COM3
SETUP OF CRESTRON HARDWARE:	<p>RS232</p> <p>Baud Rate - 19200</p> <p>Parity - None</p> <p>Data Bits - 8</p> <p>Stop Bits - 1</p>
PARTNER FIRMWARE:	None
PARTNER SETUP:	<p>The Vantage PRO console has a default baud rate setting of 19200 for communication with a PC. This baud rate setting can be changed using the console's setup menus, but only the 19200 baud rate setting was tested by Crestron.</p> <p>To connect to the Vantage PRO console, you must correctly install the "data logger" and the data logger cable assembly. This equipment is part of the Davis "WeatherLink" package which is required for external monitoring of the Vantage PRO console.</p> <p>Refer to Davis Instruments WeatherLink "Getting Started Guide" for details about the connection between the console and the COM port of a Crestron control system. For this application, you may consider the Crestron COM port to function the same as a COM port on a PC.</p>
CABLE DIAGRAM:	(use partner supplied cable)

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CONTROL:

Poll_Enable==1	D	Hold high to poll the Weather Station for current weather data. Will also poll once if pulsed.
Reset	D	Resets "High Temp" & "Low Temp" to current outside temperature; also sets "High Wind" to a value of zero (0) MPH; it is advised to activate this input shortly after the first poll for data
From_Device\$	S	Serial signal to be routed from an RS-232C port

FEEDBACK:

Inside_Temp_Negative	D	Indicates inside temperature is below zero degrees F (a negative number)
Inside_Temp_Analog	A	The inside temperature in degrees F
Outside_Temp_Negative	D	Indicates outside temperature is below zero degrees F (a negative number)
Outside_Temp_Analog	A	The outside temperature in degrees F
Wind_Chill_Negative	D	Indicates wind chill is below zero degrees F (a negative number)
Wind_Chill_Analog	A	The wind chill in degrees F
Dew_Point_Negative	D	Indicates dew point is below zero degrees F (a negative number)
Dew_Point_Analog	A	The dew point in degrees F
Wind_Speed_Analog	A	The current wind speed in miles per hour (MPH)
Wind_Speed_10_Minute_Average_Analog	A	The average wind speed over the last 10 minutes in MPH
Wind_Direction_Analog	A	The wind direction represented as an angle from 0 degrees (due north) to 90 degrees (due east) to 180 degrees (due south) to 270 degrees (due west) up to 359 degrees
Wind_Direction_*	D	The wind direction. Can be used to show indicator on a 16 point compass
Barometer_Analog	A	The current barometer value in thousandths of inches
Outside_Humidity_Analog	A	The current outside humidity value from 0% to 100%



Inside_Humidity_Analog	A	The current inside humidity value from 0% to 100%
Rain_Rate_Analog	A	The current rain rate in hundredths of inches per hour
Daily_Rain_Analog	A	The accumulated rain for the current day in hundredths of an inch
High_Temp_Negative	D	Indicates high temperature is below zero degrees F (a negative number)
High_Temp_Analog	A	The high temperature, since the last "Reset", in degrees F
Low_Temp_Negative	D	Indicates low temperature is below zero degrees F (a negative number)
Low_Temp_Analog	A	The low temperature, since the last "Reset", in degrees F
High_Wind_Analog	A	The high wind in MPH since the last "Reset"
Barometric_Trend\$	S	The trend of the Barometer (e.g. "Falling Rapidly", "Falling Slowly", "Steady", etc.)
Inside_Temp\$	S	Serial representation of the inside temperature in degrees F
Outside_Temp\$	S	Serial representation of the outside temperature in degrees F
Wind_Chill\$	S	Serial representation of the wind chill in degrees F
Dew_Point\$	S	Serial representation of the dew point in degrees F
Wind_Speed\$	S	Serial representation of the wind speed in MPH
Wind_Direction\$	S	Serial representation of the wind direction from 0 degrees to 359 degrees
Barometer\$	S	Serial representation of the barometer reading in inches
Outside_Humidity\$	S	Serial representation of the outside humidity in %
Inside_Humidity\$	S	Serial representation of the inside humidity in %
Rain_Rate\$	S	Serial representation of the rain rate in inches per hour
Daily_Rain\$	S	Serial representation of the daily rain in inches
High_Temp\$	S	Serial representation of the high temperature in degrees F



Low_Temp\$	S	Serial representation of the low temperature in degrees F
High_Wind\$	S	Serial representation of the high wind in MPH
To_Device\$	S	Serial signal to be routed to an RS-232C port

TESTING:

OPS USED FOR TESTING:	CNMSX – 5.14.02 Pro2 - 3.044
SIMPLWINDOWS USED FOR TESTING	2.04.11
SAMPLE PROGRAM:	Davis Vantage PRO Weather Station Demo PRO2 Davis Vantage PRO Weather Station Demo CNMSX
REVISION HISTORY:	None