



*WeatherHawk Series 500 Weather Station
with the Vaisala Weather Transmitter
WXT510.*

Watch your home like a hawk

WeatherHawk home automation solutions incorporate Vaisala's weather measurement know-how

WeatherHawk, a division of Campbell Scientific, Inc., identified the high value home automation weather station market in 2003 for its standard WeatherHawk fully self-contained meteorological station. By 2005, it became apparent that the best product for this application was a product that did not look like a traditional weather station. Based on that reality, WeatherHawk began the design of its new WeatherHawk 500 Series low profile home automation weather stations and selected the Vaisala Weather Transmitter WXT510 as the primary sensor module. The selection of the WXT510 was based on its specifications,

modern self-contained design, and excellent support provided by Vaisala.

What is a home automation weather station?

A microclimate is very simply the climate of a specific place within the climate of a larger area. Microclimates can be very different from the climate of the overall larger area. This fact is evident when you hear the weather report for a large city and note that the weather condition in the countryside is different than it is in the city.

It is this difference in the regional and microclimate conditions that has

created a market for high specification weather stations on high value homes. If a homeowner wants to control home features/functions, or make local plans based on weather, they cannot rely on a regional weather report, so many are using a home weather station for their microclimate information.

Home automation, as a technology products market, has evolved over the past 15 years from remote lighting and audio/visual controls, to very sophisticated total environment home control systems. The level of integration now includes both indoor and outdoor sensors and controllers for virtually any function

you can imagine in a home. The market also has unique product and application characteristics that make it a difficult long cycle sales/support challenge. Although it is global in nature, the home automation market is strongest in the United States where over 40,000 homes valued at over US \$1 million were built in 2004. Of that number, about 15% have a high level of home automation and a significant percentage of those are candidates for a home weather station.

At a home, a weather station measures the ambient conditions that create a homeowners microclimate. With that information and a connection to the Internet, various home automation systems can control home features/functions in a near immediate response to changes in the microclimate. In addition, any one of several independent weather services can use home weather station data to better predict the weather at that home for five-ten days into the future to facilitate homeowner recreational planning.

For homeowners that travel, or those that have more than one residence, current weather conditions at any of their homes can be automatically updated on their personal websites for access over the Internet from anywhere in the world. This enables them to make recreational and travel decisions to homes in remote locations that may not have reliable weather information.

The Vaisala Weather Transmitter WXT510 enabled WeatherHawk to design a low profile, visually pleasing, yet rugged and reliable, fully self-contained weather station that meets the aesthetic requirements of all but the toughest architectural restrictions. ■

WeatherHawk 511 Home Automation Weather Station.

WeatherHawk weather stations integrated with a home control system enable automatic responses to:

- changes in solar radiation
 - window coverings open or close to protect expensive carpets and furnishings from the effects of UV, and the activity provides a perception that the home is occupied
 - sidewalk lighting automatically turns on for safety and security
- changes in outdoor air temperature
 - walkway and driveway heating melts snow and ice for safety
 - optimizes pool and spa heating system functions
- changes in wind velocity and direction
 - controls sprinklers and fountains to eliminate overspray
 - closes storm shutters to protect windows from wind blown debris (hurricanes, typhoons and tornados)
- daily calculation of evapotranspiration for use by an irrigation controller
 - optimizes landscape irrigation to save water

To gain the most value from a home weather station a home owner needs a system that will:

- seamlessly connect to their chosen home control system
- connect to the Internet using software on their home control system, or their PC
- have minimal maintenance and no user calibration requirements
- have a range of mounting options
- look good to meet the architectural compliance requirements of many neighborhoods.

