Winery Video Information

A video file is included in the WirelessUSB N:1 DVK CD-ROM in the following location:

\Docs\Video\Winery Video.wmv

To save space, the video is not copied to the User's hard drive by the CD installer.

The video can be viewed by several different Windows media programs (such as Windows Media Player™ and RealPlayer™).

The video illustrates a WirelessUSB N:1 application created for T.J. Rodgers, Cypress CEO, for use in his vineyard. The system was created using the hardware and software included in the N:1 kit with a few minor modifications. The video has been included to demonstrate some of the capabilities of the N:1 DVK Kit.

The winery application required a system that could sense temperatures throughout the vineyard and could control water valves to provide cooling to grape clusters in areas of the vineyard that became too hot, typically from sun exposure. A wireless system has obvious advantages for this type of application.

- The winery application uses 12 N:1 Sensor Nodes with three thermistors per node to sense temperatures at various locations throughout the vineyard.
    - Three thermistors are wired to each Sensor Node Board expansion header.
- The application uses 3 actuator nodes to control water valves.
    - Relays are wired to each Actuator Node Board expansion header in order to control a water valve solenoid.
- The Hub Node is connected to a Host PC which contains a slightly customized version of the N:1 Sample Application Software.
    - The customizations are primarily meant to handle three temperature inputs per Sensor Node instead of one.
- The Software Application monitors the temperatures from all of the Sensor Nodes, and actuates the water valves when specified temperature thresholds are exceeded in certain areas of the vineyard.
    - The Software Application's Control Dialog is used to establish the control logic and trigger points for the system.
- When actuated, the watering system sprays a mist of water which has a cooling effect on the grape vines and clusters.

While this application may seem somewhat unusual, it actually demonstrates a very common sensor/actuator application. In essence, this application is simply a system that monitors temperature and controls actuators to modify temperature just like any conventional HVAC system.