Aeration Control Australia

Farmers Monitor Temperature in Silos with Sierra Wireless AirLink® Gateways - A Sierra Wireless® Remote Monitoring Application



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CUSTOMER CRITICAL CHALLENGE

- Multiple grain silos in remote locations require persistent wireless connectivityand remote monitoring capabilities for detection and notification of changing environmental conditions

SOLUTION

- AirLink® gateways integrated with Aeration Manager™ system for 24x7 monitoringand control
- Provides persistent high-speed connectivity, remote two-way data transmission,and a rugged design for use in harsh industrial environments

BENEFITS

- Reliable connectivity for transfer of critical storage condition data
- Ability to monitor conditions in silos spread across multiple farm locations
- Seamless integration with other monitoring solution components
- Elimination of travel time required for manual adjustments to grain storage facilities, saving time and money

Aeration Control Australia, part of the Industrial Automation Group, focuses onthe delivery of high-quality grain aeration control systems originally developed inassociation with Australia’s foremost research organization, the CommonwealthScientific and Industrial Research Organization (CSIRO).

Business Challenge

Today’s tough economic climate is seeing smaller farms bought out by largerneighbors, resulting in consolidated farming businesses dealing with more storagefacilities spread out over a larger geographic area. In order to efficiently control grainfacilities in multiple locations, farmers require remote monitoring of silos and control offans from a central location. Featured on ABC Television’s The New Inventors program,Aeration Manager - a grain storage control system by Aeration Control Australia -provides farmers with the means to remotely control the activation of fans to eitherdry or cool grain within their silos.

Sierra Wireless AirLink Solution

With the help of the Sierra Wireless® AirLink gateway, Aeration Manager is helpingfarmers monitor and control their grain storage facilities. The Aeration Managersystem is three controllers in one, allowing for drying, cooling, and maintenance ofgrain, with fully automatic transition between the three stages. The Aeration Manageris equipped with control inputs and outputs for eight silos. Each silo can store adifferent type of grain and, as such, the controls are fully configurable to monitora specific type of grain. The compact form factor and external Ethernet port of thegateway enables a straightforward integration within the Aeration Manager controller.Once integrated with the gateway, the Aeration Manager becomes a fully connectedremote data collection point no longer reliant on wired connectivity, which can be verydifficult to install in remote locations.

“Being able to improve grain production and storage efficiencies through a simple pieceof equipment is something that applies to the standard farmer,” explained Henk deGraaf, managing director at Industrial Automation Group. “Using the AirLink gatewaysfor cellular communication allows us to provide an affordable system that works wellfor both smaller farms and larger facilities.”

Results

Farmers are required to enter the condition (temperature, moisture, and oil content)of the grain when filling each silo and determine a target setpoint for the end product.With pervasive, two-way data communication provided by the AirLink gateways,farmers can access measurable silo conditions at anytime and from anywhere.

through a secure web interface. This centralized data access is particularly importantfor farmers with silos in multiple locations, allowing them to monitor and control siloconditions without having to travel to each location. In addition, farmers can set textand email alerts for notification of breaks in pre-determined environmental thresholds,which further helps them to catch potential issues before they can damage productand cause financial losses.