



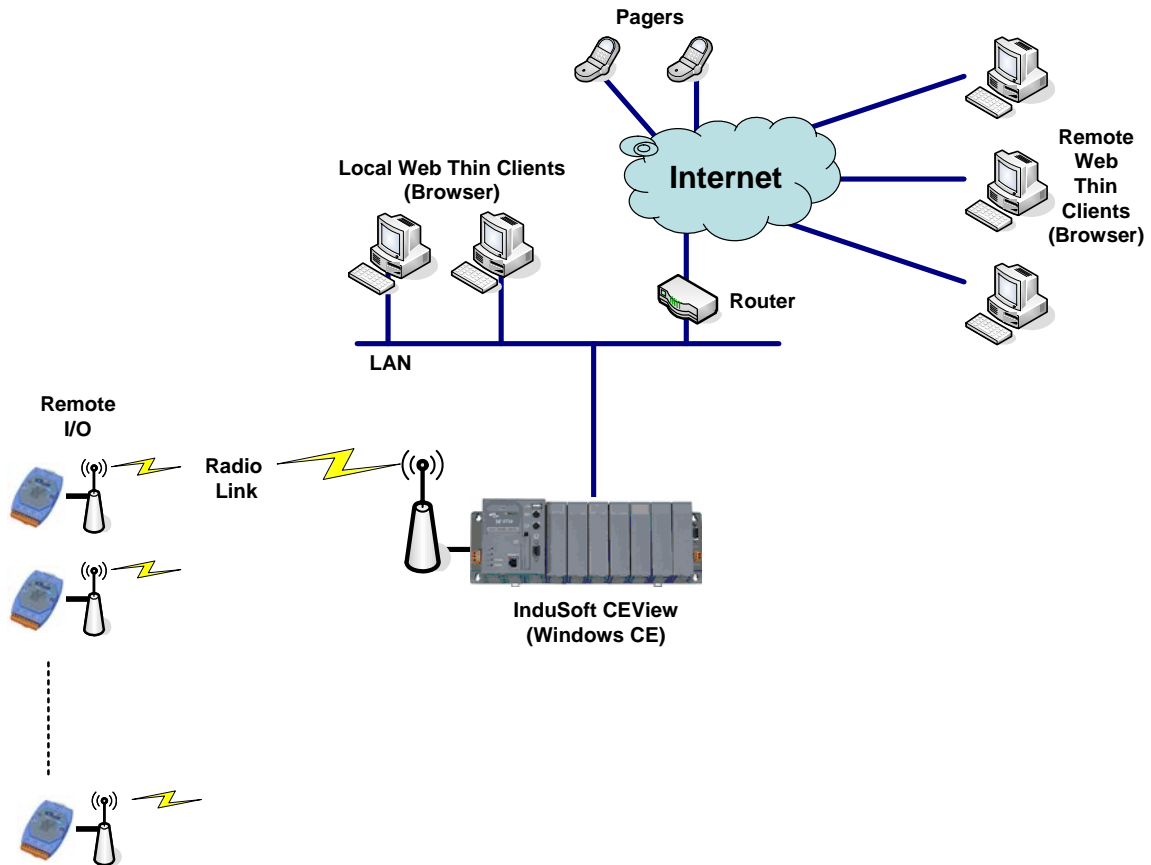
W-8739 Based Agricultural Facility Control System

With the constant need for reliable and accurate process control, in the field of industrial agriculture, it is no surprise that more and more producers are turning to industrial control based solutions to manage their facilities. By implementing robust and accessible Ethernet based control / data acquisition solutions, agricultural facilities can look to benefit from increased productivity, remote accessibility, increased profitability through waste management, and much more! With these factors in mind, ICP DAS USA was recently approached by a client looking to develop a comprehensive agricultural monitoring system, which would enable users to precisely monitor irrigation and fertilization information pertaining to plant operation, in real time. The proposed system would need to be capable of locally storing data, displaying online graphical data logging, comparative analysis from previously recorded information, and have a user friendly GUI, that would be accessible both locally and remotely (via a standard web browser).

For this particular application, ICP DAS USA chose to implement the W-8739 Windows CE.net / Indusoft equipped programmable automation control platform. By implementing the WinCON platform, ICP DAS USA effectively employed a modular and open architecture platform, that would enable the customer to take full advantage of a comprehensive selection of commercial off the shelf I/O modules, as well as the powerful web accessibility of Indusoft's "Web Ready" HMI package. By retrofitting the W-8739 based solution, the customer could greatly benefit from the combined IPC/PLC architecture; eliminating the need for their previously unreliable IPC based system. With the WinCON's stout industrial ratings, the client was able to mount the controller locally; to serve as a local HMI station, without worrying about failure due to excessive ambient temperature or dust.

Aside from assisting the client with a robust control solution, ICP DAS USA also chose to retrofit a number of distributed remote I/O, to further enhance the capabilities of the existing RS-485 based data acquisition network. With each remote I/O module strategically located throughout the facility, the I-7000 based DAQ infrastructure is capable of providing online data regarding: soil state (dry or wet), wind vane movement (forward or reverse), and so on. By routing the revised RS-485 network back through the WinCON, the client was also able to bring all of the associated data to the LAN, through the WinCON's 10BaseT Ethernet port. Another added feature presented by the implementation of the WinCON PAC, is the capability to use the plant's existing LAN based pager system. By interfacing the paging system with the machine's local HMI, plant engineers can page other workers in the facility from any local WinCON equipped workstation!

Overall, through the implementation of both the ICP DAS W-8739 programmable automation controller, as well as various ICP DAS I-7000, the client was overwhelmed with the newfound capability of their control and data acquisition infrastructure. Now equipped with user-friendly remote accessibility, plant supervisors are able to keep a constant watch over production and consumption from both local and remote locations!



The Main functionalities of Indusoft SCADA package:

- Acquire data from remote I/Os by a radio link.
- Store history information (events) in the main controller.
- Provide on-line and/or history information to remote Web Thin Clients.
- Send notifications to pagers when events occur.
- Send reports to pagers based on date/time.