Quality Control & Integration, Inc.

Control, Instrumentation, Telemetry, SCADA, and Automation Systems

Company Information Brochure

QCI provides controls, instrumentation, telemetry, SCADA, and automation Systems for all

Municipal / Industrial Water / Wastewater Process and Pumping Applications

Quality Control & Integration specializes in manufacturing and integrating control and telemetry systems for both municipal and industrial water/ wastewater pumping and processing applications. Working with the best products, we provide automation and control systems for any need, with the ability to provide complete service and startup.

What we do / Who we

Quality Control & Integration is the solution to all of your control and telemetry needs for all municipal and industrial water/wastewater applications. We specialize in control, SCADA, and telemetry systems of all sizes and complexities to meet your needs. Quality Control & Integration, with our highly skilled and reputable service and startup abilities, makes our customers' needs our own.

Services and Capabilities

Control & Automation

- Controls & panels for all water & wastewater applications
- Municipal and Industrial market applications and services
- UL 508A & UL 698A certified shop
- In-house engineering and CAD
- Experience in municipal & Industrial water/wastewater applications

Telemetry & SCADA

- Programming & Design on any PLC platform
- Experience on all controller types
- Radio path studies
- Cellular network integration
- Telephone network integration
- Ability to provide basic HMI packages
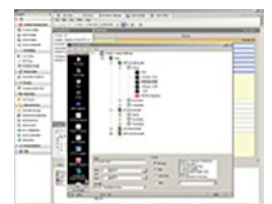- Sophisticated 3D graphics

Equipment Startup & Commissioning

- Instrument calibration & certification
- Radio path analysis & licensing services
- Dial-up troubleshooting & remote analysis
- Maintenance contracts & training services

Complete System Service and Troubleshooting

- Web Based Support Available
- Programming Support in any HMI or on any PLC
- SCADA Alarm
- Hardware Repair of any Controller or Instrumentation
- Part Replacement of any brand
- Dial-up Troubleshooting & Remote Analysis
- 24-7-365 Service Personnel
- Registered & Factory Trained Wonderware Systems Integrator
- Factory Trained and Experienced in Citect, RSView, and PlantScape

Products

Quality Control & Integration, Inc. is able to provide the products and services needed in order to serve all your control and Telemetry needs through our own manufacturing and our partnership with industry leading manufacturers.

QCI 1500ct Pump Controller

The 1500ct Controller is a unique and versatile Pump Controller made to meet municipal and industrial demands for a reliable, easy to use, and efficient user operator interface and controller. The 1500ct is telemetry ready with the addition of a radio, cellular modem, or leased phone line. The 1500ct allows you to monitor station status, change pump start and stop set points, change high and low level alarm set points, acknowledge alarms, and view pump run, fail, and performance information remotely. The 1500ct is an "Open" control platform supporting industry standard communication protocols like Modbus and DF1. This open protocol approach allows the 1500ct to be readily integrated into most new or existing SCADA systems. Two serial communication ports allow for redundant telemetry networks. The 1500ct is also versatile, it can be used to control and monitor up to three constant and/or variable speed pumps in either pump up or pump down mode. This versatility makes the 1500ct able to control even difficult pump applications such as pressure/flow applications.

QCI H20 Client

The H2O Client allows for an easy to use, affordable, and profitable means to sell bulk water. Quality Control & Integration has seen an emerging need to produce and distribute an alternative to coin or card operated Bulk Water Vending Systems. Our keypad operated system allows for multiple users to enter a simple PIN code in order to purchase water; saving the hassle and cost of card or coin management. This system also allows a city to preset each client's total amount of water they may draw. In addition to these many features the H2O Client can be customized to existing structures or can exist as a standalone unit. The H2O client provides cities and industries an affordable and hassle free way to distribute their valuable resource.

Integration/ Telemetry/ SCADA Systems

Supervisory Control & Data Acquisition (SCADA) Integration

QCI designs SCADA systems which offer true "open architecture". The major benefit of an "open architecture" structure is system flexibility. SCADA system capability can be extended using products and/or with integration of hardware/software from other manufacturers.

These products include:

- Sensaphone
- RS Logix
- MDS
- RS View
- Wonderware
- Citect
- PlantScape Vista

This flexibility provides a significant option to our customers and allows them to combine product "brand" satisfaction with QCI's proven expertise and performance. We have the in-house expertise and tools to provide the associated services that are required for radio based telemetry systems. We provide radio propagation path studies to determine exact specifications for each site. We also provide complete assistance in obtaining FCC licensing. Our experience has covered equipment by most radio manufacturers over the many frequency bands used in our industry including VHF/UHF/900MHz, 800 and 900MHz Truncating, and Spread Spectrum.

Programmable Logic Controller (PLC) integration

QCI can integrate PLCs from multiple manufacturers. We have consistently taken the lead on the more difficult aspects of a control system. These include process control loop definition and diagrams, Programmable Logic Controller (PLC) programming, communications design, programming and troubleshooting, as well as, various data management applications and the data reporting aspects of any given system.

Our engineering staff has successfully integrated virtually all major Programmable Logic Controller (PLC) projects. These products include:

- 1500ct
- Allen Bradley Micrologix controllers
- Allen Bradley Compactlogix Controllers
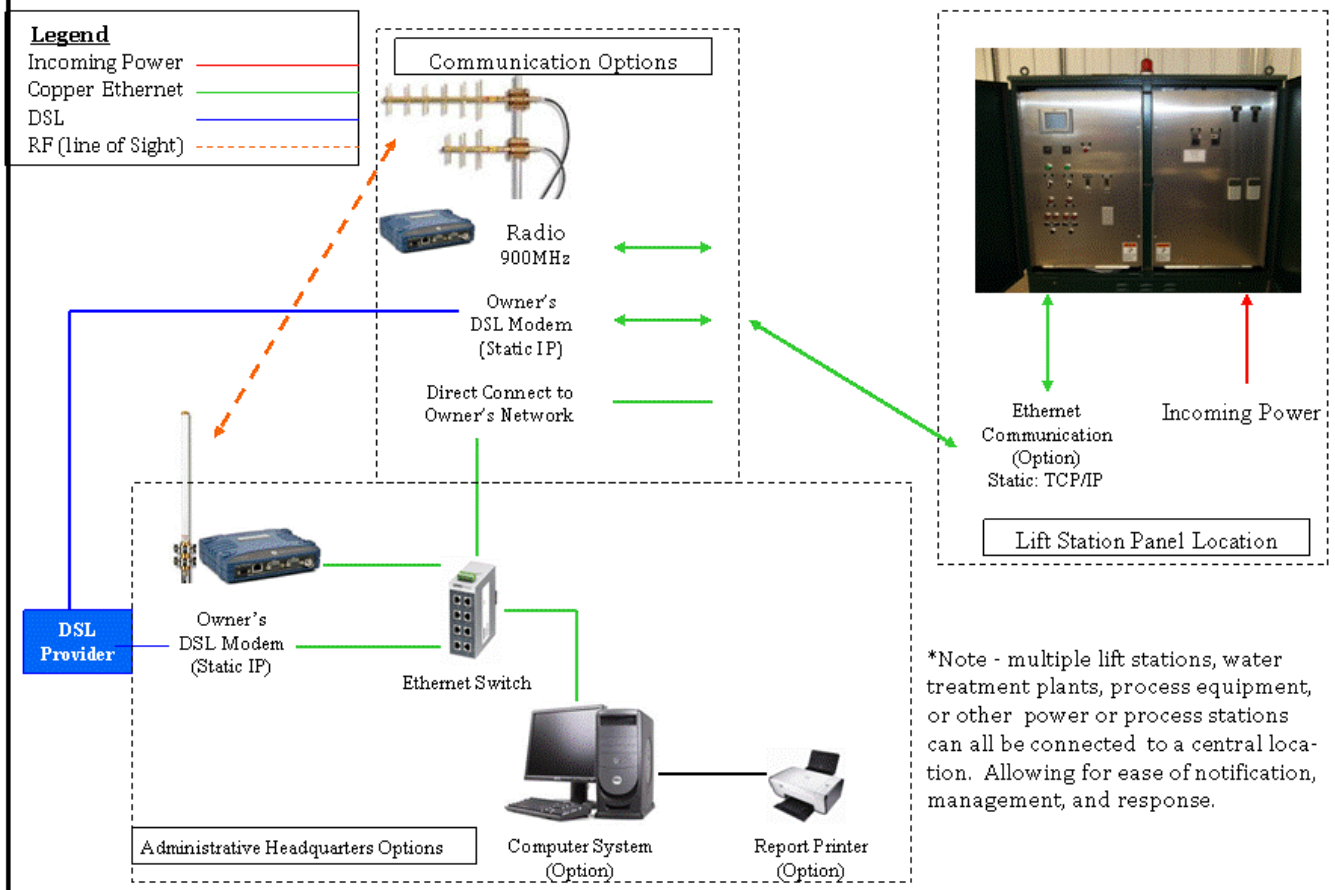
Personal Computer Integration:

Personnel Computer based Human Machine Interface (HMI) is an important aspect of all the QCI furnished PLC and SCADA systems. We are certified with InTouch Wonderware as System Integrators. We have implemented many of the most popular third party HMI packages, including the following:

- RS View
- Maple Systems
- Panel View/ Plus
- Wonderware

Reporting applications utilize standard Microsoft Excel for Windows, which enables the reports to be produced in virtually any format. Reports can be generated automatically based on virtually any criteria; examples include: "Shifts" or "Daily", "Weekly" "Monthly", and even on a yearly basis. Data can be automatically collected at a configurable rate and stored in an ODBC compliant database. This data can be manipulated to produce averages, totals, and minimum/maximum values, which can be imported into Excel. Government required reports could also be generated using this reporting method. All reports are automatically stored on the system's hard drive for printing out manually and/or automatically.

Example of Lift Station SCADA Network

Legend
Incoming Power ————
Copper Ethernet ————
DSL ————
RF (line of Sight) ‑‑‑‑‑‑‑‑

Communication Options

Radio 900MHz

Owner's DSL Modem (Static IP)

Direct Connect to Owner's Network

DSL Provider

Owner's DSL Modem (Static IP)

Ethernet Switch

Administrative Headquarters Options

Computer System (Option)

Report Printer (Option)

Ethernet Communication (Option) Static: TCP/IP

Incoming Power

Lift Station Panel Location

*Note - multiple lift stations, water treatment plants, process equipment, or other power or process stations can all be connected to a central location. Allowing for ease of notification, management, and response.

Controls

Customized Control Panel Manufacturing

QCI's control panels are UL508A/698A compliant / serialized and are of a NEMA 3R, NEMA 4X, or NEMA 12 standard construction. Panels can be customized to meet any design standard. QCI can meet any panel requirement desired by our customers and   Engineers, and has routinely designed and built double, single, or two sided double door control, process, and power panels. We utilize industry leading products, such as: Siemens, Allen Bradley, Square-D, and Phoenix Contact. Any parts or products can be used, as requested by a spec or a client. We have used all forms of pump controllers, PLCs, SCADA devices, radios, and dialing devices in previous panels and can quickly and efficiently adapt our panel model to fit any form of control, telemetry, or SCADA device or application. With our in house shop and engineering team we can remodel existing panels to update their operation or build a new panel to fit into an existing system.

Control Panel Examples

Triplex Pump Control Panel

Duplex Pump Control Panel
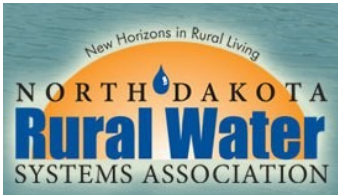
MCC and Power Panels

Clarifier Control Panel

Simplex Pump Control Panel

Qualifications/ Certifications

We are proud members of National Rural Water Association, Minnesota Rural Water Association, North Dakota Rural Water Association, and South Dakota Rural Water Association. We are FCC Radio/Telephone general class licensed. Additionally, we are a factory trained Wonderware System Integrator. Our Shop is UL 508A and 698A approved for the construction and serialization of industrial control panel manufacturing.

Engineering/ Field Service

Our technicians come to QCI with many years of experience in the design and programming of control system in the water and wastewater industry. We have three in-house engineers and three field service personnel. Their experience includes working with or using:

- All PLC platforms
- LabView
- RSLogix
- Wonderware
- Other third party platforms
- PHP Language
- C++ Language
- Assembly Ladder Logic
- RSView/ Factory Talk
- Allen Bradley PLCs
- C language
- MFC Language
- CAD
- MultiSim
- Visual Studio
- Industry Leading Products

- **Highly experienced control systems designers and have each completed several large projects, each including multiple aspects of control design and integration into new or existing SCADA networks**

- **The ability to handle all aspects of startup and integration of various control components into larger SCADA networks, Path Study Analysis and experience with varied radio models**

- **Experience with installation and programming of many telemetry systems involving radio to radio communication, as well as, to or with other communication methodologies**

Quality Control and Integration, provides our customers with the controls, instrumentation, telemetry, SCADA, and automation Systems for all their needs and applications. Providing the service and skill to ensure that all your Municipal / Industrial / Wastewater Process and Pumping Applications are not only achieved and maintained, but are also cost effective.

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