

Emerson SCADA Solutions for the Water and Wastewater Industries

Solutions

- Ovation™ automation technology with integrated SCADA
- OpenEnterprise™ SCADA
- Zedi cloud-based SCADA
- FB3000 RTU
- ControlWave PLC/RTU



Introduction

As the world's population grows, so does the demand for cleaner water and less waste. Producing effective results to these necessities calls for mission-critical processes that require constant, accurate control. Quality, conservation, regulatory control and deregulation are just some of the factors forcing changes in the way these vital processes are managed.

A secure, standardized automation infrastructure for sharing diagnostics and analytics enterprise-wide will drive continuous improvement from day one and well into the future. But, transitioning from long-standing practices to a new way of doing business requires the right strategy.

At Emerson, we apply our deep expertise to help every customer, small to large, implement an agile, intuitive measurement and control automation platform that leverages the existing infrastructure while facilitating change management to drive better bottom-line results.

Emerson has a comprehensive portfolio of SCADA products as described in this document.

Ovation SCADA

Ovation™ Supervisory Control and Data Acquisition (SCADA) communication server directly establishes a connection to the Ovation control system, maximizing plant effectiveness and increasing productivity, while reducing operating costs. The Ovation SCADA communication server operates as the master terminal unit (MTU), providing central monitoring and control for the SCADA system. Ovation SCADA major software components include real-time data and redundancy interfaces, as well as a polling engine that ensures easy communication between any RTU device and the Ovation SCADA communication server. Vital data is readily available to desktops of supervisors, managers and plant operators, enabling them to make faster, more effective decisions and bringing the automation process to a higher level.

OpenEnterprise SCADA

Emerson's OpenEnterprise™ is a SCADA platform designed applications where data integrity and uptime are essential over complex communications networks, enabling you to improve productivity, enterprise integration, reliability and profitability. OpenEnterprise is a client/server-based SCADA platform that meets the needs of customers with challenging communication requirements, such as low bandwidth, high latency and poor-quality networks. This flexible platform effectively retrieves data from remote locations via a wide variety of communications media (radio, satellite, cellular and hardwired media) while also supporting Emerson's primary SCADA protocols (BSAP and ROC™ / ROC Plus). Via OPC Remote Device drivers, the OpenEnterprise platform can be easily configured to interface with a wide range of third-party industry-standard SCADA protocols, including Modbus, Fieldbus and DNP3.

Zedi Cloud-Based SCADA

Emerson's secure, scalable Zedi cloud SCADA solutions enable producers around the world to compile data from any digital monitoring hardware via gateways that support a variety of protocols. We provide end-users with a web interface, as well as the ability to push data to third-party platforms, allowing remote control and optimization via cloud-based data access. Our Zedi solution enables secure and efficient monitoring of equipment performance and chemical dosage needs with alarms for levels and thresholds. The Zedi secure mobile app allows for efficient, effective monitoring of data anytime, anywhere, ensuring your staff can respond quickly to keep up with ever-increasing demands. Monitor, control and alarm pump locations, lift stations and even complex treatment centers with ease anytime, anywhere.

FB3000 Remote Terminal Unit

Emerson's next-generation FB3000 remote terminal unit (RTU) is a powerful yet easy-to-use controller that offers the scalability and expanded data capacity to fulfill the demanding requirements of today's water and wastewater operations. This flexible device for ultra-reliable measurement and control of liquids offers users the customized logic and control needed to meet application requirements. Industry-leading configurability and programmability fulfill standard to complex requirements while secure, built-in flow measurement calculations make it easier than ever to prove compliance. In addition, cloud-enabled functionality for licensing simplifies day-to-day operations. Digitally transform your operation by streamlining complex processes with the agile, intuitive FB3000 RTU. This new controller is also part of Emerson's next-generation FB Series measurement and control platform that offers a common set of configuration tools, including FBxConnect™, to expedite setup and facilitate commonly performed tasks.

ControlWave® Process Automation Controller

Emerson's ControlWave® process automation controller (PAC) is a high-performance hybrid PLC/RTU designed to meet the demanding requirements of industrial control. It is very flexible and capable of satisfying the requirements of local, expanded, remote, and distributed I/O needs. The controller is ideal for water and wastewater plant control applications. Configuration of the ControlWave RTUs/PLCs is performed through native tools, such as the ControlWave designer and OpenBSI utilities. Besides being capable of effortlessly integrating to an OpenEnterprise platform, ControlWave RTUs can be easily integrated into the Ovation SCADA platform as well, providing seamless supervisory control and data acquisition. Real-time data can be exchanged between the Ovation control system and the ControlWave RTUs through a configurable polling mechanism built into the Ovation SCADA communication server. Time-stamped historical and alarm data can also be captured for storage into the Ovation historian.

Emerson SCADA Solutions Summary Table

Emerson SCADA Solutions	Features
Ovation SCADA	<ul style="list-style-type: none"> ▪ Integrated with the Ovation automation platform ▪ Simplified software and hardware design ▪ Redundant configurations maximize reliability ▪ Intuitive system tools for system operation and configuration ▪ Flexible distributed design uses native Ovation controller or third-party devices
OpenEnterprise SCADA	<ul style="list-style-type: none"> ▪ Highly scalable client/server architecture for distributed SCADA ▪ Integrated historian with backfill capability ▪ Alarm and event manager with text and email messaging ▪ Powerful reporting and trending tools ▪ Designed for ease of integration with business systems
ZEDI Cloud-Based SCADA	<ul style="list-style-type: none"> ▪ Native mobile-ready application ▪ Runs on any operating system and modern web browser ▪ Encrypted and secure ▪ Allows for an unlimited amount of users ▪ Built-in alarming, trending and historical reporting
FB3000 RTU	<ul style="list-style-type: none"> ▪ Designed for flexibility ▪ Optimized for IIoT ▪ Scalable to fit I/O ▪ Hot-swappable modules ▪ FBxViewer HMI
ControlWave RTU	<ul style="list-style-type: none"> ▪ Designed for remote SCADA applications ▪ Power ARM processor ▪ Low power consumption (as low as 3 watts) ▪ 11 serial ports and 2 Ethernet ports with support for multiple protocols ▪ Modular and expandable I/O

©2021 Emerson. All rights reserved. The Emerson logo is a trademark and service mark of Emerson Electric Co. Ovation™ is a mark of one of the Emerson Automation Solutions family of business units. All other marks are the property of their respective owners. The contents of this publication are presented for information purposes only, and while effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.