

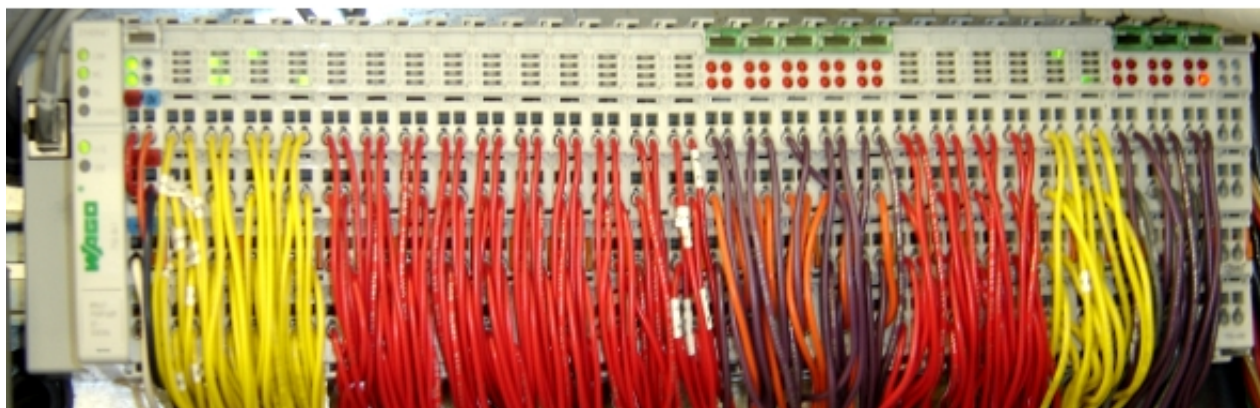
Osorno Automation

Osorno and its predecessors have been traditionally strong in control systems. The ControLogic™ concept has been developed more than 20 years ago, and has continually evolved as a control philosophy at the leading edge of technology. Now, Osorno Automation has become a division within the Osorno Group to carry this expertise to the next level.

The Osorno Automation team provides a wide spectrum of automation services. Our specialists are highly trained, well experienced, and - innovative. We provide services like building control and automation, water and waste water treatment plant automation, custom built SCADA systems, and system integration. Within our building control and automation systems, security systems are usually integrated by our team. Our SCADA systems are unique as it allows to build highly secure, high performance and very flexible SCADA solutions.



In complete harmony with Osorno's philosophy to strictly observe recognised standards, our automation team uses IEC 61131-3 compliant programming for PLCs, and will not use PLCs for which only proprietary protocols are available - vendor lock-in is not in the best interest of our clients. Osorno Automation supports the newest XML extension to that standard, and emerging vendor-independent activities such as AutomationML (Automation Markup Language) and FCML (Facility Control Markup Language).



ControLogic™ - The ControLogic™ system has evolved from the ultra-fast precision motion control system that it was in 1988, to the intelligent control system for microbiological processes that it is today. As a control philosophy, it is based on algorithms developed over the years by key personnel of Osorno Automation, in a process of continuing evolution. The hardware currently preferred in the implementation of the ControLogic™ intelligent control is the Wago 750 system; Osorno is recognised by Wago as a Systems Provider with special expertise in the water and wastewater field. With Wago being one of the major global players in the hardware business, Osorno Automation is in good company.



SCADA – Our supervisory control and data acquisition (SCADA) systems support reliable delivery of alarms locally as well as remotely by e-mail or SMS. Our SCADA has cross-platform capability and acts as a server, so that users can access the system either locally or remotely, independent of the operation system of the remote computer. Osorno's SCADA has an outstanding security level. It provides encrypted data transfer, hierarchical user



privileges, highly detailed logs, and remote secure connection. Never before has electronic security in infrastructure objects such as water and wastewater treatment plants, chemical facilities, refineries and pipelines been at the level that Osorno Automation can provide.

Automation Overview

Building Control - Osorno Automation provides a wide spectrum of building automation and control. Building automation not only increases energy efficiency by reducing power consumption, but also integrates with building security and work place safety.



Remote Access - Osorno Automation can provide remote access and monitoring via conventional telemetry, data radio link, and via Internet from remote locations. The radio link is capable of transmitting up to 54 Mbit/sec of data, and the maximum distance of the link is up to 50 km in a clear line of view. It operates in the 2.4 GHz range, and therefore in most countries does not require a radio permit for operation.

Our team is also experienced and certified in K-band satellite dish installation. We use Modbus, the dominant North American data communication protocol, and are proud that the Internet Assigned Numbers Authority (IANA) assigned Osorno Automation a port number earlier this year for our OSAUT protocol; IANA assigns numbers based solely on technical merit. We maintain OSAUT as an open protocol that everybody can use.



Securewall™ - This is the ultimate solution for shielding your network from Internet intruders. SecureWall™ was developed by the security professionals of Osorno Automation to eliminate security threats looming on the Internet. SecureWall™ keeps a log of attempted attacks, with the IP address and location of the attacker. The line of SecureWall™ keeps a minimal port configuration for highest security standards for automation needs – the fewer ports, the lower the possibility of intrusion. It has a separate network interface for connecting PLC.

- Unique Features:**
- ensures highly secure solution for protecting automation networks;
 - supports unique routing options for sophisticated automation needs;
 - implements secure interconnection of devices such as PLCs or stand alone I/Os, device network over Internet, Intranet, and wireless networks;
 - supplies remote monitoring and programming of PLCs (this depends on PLC software);
 - assures network activity logging, which allows to evaluate network throughput and QoS;
 - is expandable as NTP server, DHCP server and manufacturing DNS server.



A unique feature which is available with SecureWall™ is its use as a grouped device. This solution provides a robust redundant system which supplies uninterrupted highly reliable service with a not noticeable delay to switch from one SecureWall™ to the next.

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