



CALLISTO ADVANTAGE

- Diverse product portfolio
- Flexible configuration options
- Proven, reliable performance
- Based on >30 years of SCADA experience

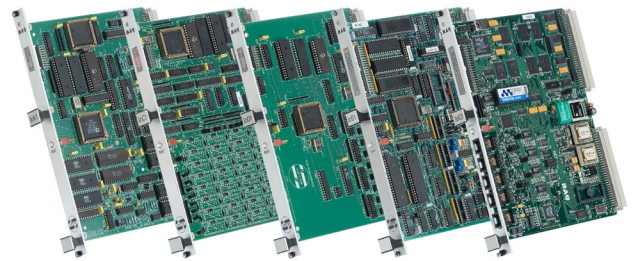
CUSTOM AUTOMATION

- IED integration
- Communication to multiple client/servers
- User-definable applications
- Extensive protocol library
- Advanced programmable logic capability

Designed to meet increasing demand for flexible communication options and advanced functionality, DAQ's intelligent Remote Terminal Unit (RTU) solutions deliver reliable performance for applications in power management and distribution. Named after the moons of Jupiter, the Callisto™ product suite includes an array of SCADA modules that perform complex control and monitoring functions, stand-alone remotes that combine the capabilities of multiple modules, and application-specific devices that directly address the needs of today's electric utilities.

With sophisticated communications architecture that allows simple integration of Intelligent Electronic Devices (IEDs) and an extensive list of supported protocols, Callisto provides proven, open solutions for substation applications. Utilizing the modular design of system hardware and software components, DAQ engineers are able to easily design multi-card systems that directly match the requirements of specific applications. Additionally, DAQ offers cost-effective, custom retrofit equipment for all types of existing RTUs, enabling utilities to upgrade equipment with minimal investment.

Callisto processing modules form the core of DAQ SCADA systems. These "building blocks" are modular in design and can be combined to create highly customized multi-card remote solutions.



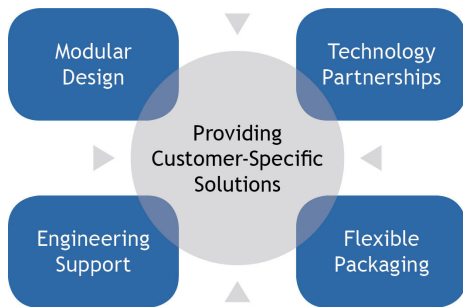
OPTIMAL PERFORMANCE

Residing on a local area network (LAN), Callisto processing nodes can be centrally located in a single bin or geographically distributed. When compared to traditional configurations, DAQ's distributed approach reduces the amount of field signal wiring needed and enhances performance and reliability. High-speed data exchange between modules at up to 2.5 megabits per second enables system processes, including power calculations and sequence-of-events (SOE) time tagging, to achieve 1-millisecond resolution. All processes are precisely controlled through software designs encompassed in the advanced CallistoView™ package.



Callisto remotes can be configured in free-standing, wall-mount, or pole-mount cabinets.

In addition to multi-card and retrofit remotes that combine separate modules, DAQ also offers several pre-configured RTUs designed to suit common SCADA applications, such as real-time information management and automation of motor-operated switches.



DAQ overcomes the limitations of proprietary systems with an open approach to system development and integration

THE CALLISTO™ MODEL

Finding the best technical solution for any application:

- Callisto hardware and software components can be “mixed and matched” to precisely suit project needs
- DAQ closely partners with our customers to develop system designs that remain open to future modification and expansion
- Callisto equipment is adaptable to a wide range of packaging specifications and meets all industry standards
- DAQ hardware and software expertise is fully available to support projects before, during, and after installation

AUTOMATION SOLUTIONS

The primary applications for DAQ’s SCADA technology are found in the electric utility industry, where Callisto automation products manage the distribution of power in substation and distribution line environments. Along with conventional data collection and control/monitoring functions, Callisto remotes are also capable of performing operations that are not traditionally associated with RTUs. In many cases, this functionality eliminates the need for utilities to purchase additional equipment to carry out specific tasks. Some of the SCADA applications that can be addressed using standard Callisto remotes and software packages are:

- Data Concentration** ▶ Incorporating sophisticated, high-speed data transfer technology, Callisto communication modules efficiently manage information received from IEDs and other system data streams.
- Capacitor Control** ▶ When configured to monitor I/O and calculate power system measurements, Callisto remotes collect the necessary data to make capacitor switching decisions that ensure the elimination of system transients.
- Switch Control** ▶ Communicating through cabling supplied by third party switch manufacturers, Callisto RTUs interface directly with distribution line switches that operate using stored energy operators.
- SOE Recording** ▶ All digital inputs processed by Callisto remotes can be time-stamped to within 1 millisecond accuracy, mirroring all functions of a traditional SER (Sequence of Events Recorder), including logging and printing of change of state events.
- Load Transfer** ▶ Callisto modules can be configured to make intelligent switching decisions based upon actual load and the maximum capacity of a line.

TECHNOLOGY FOCUS

- Powerful multi-processing architecture
- Extensive user configurability
- Real-time, multi-tasking software
- Simple protocol emulation
- Varied communications media
- Stand-alone / hubbing / satellite configurations
- In-built diagnostics
- Flexible packaging
- Industry standard interfaces

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