

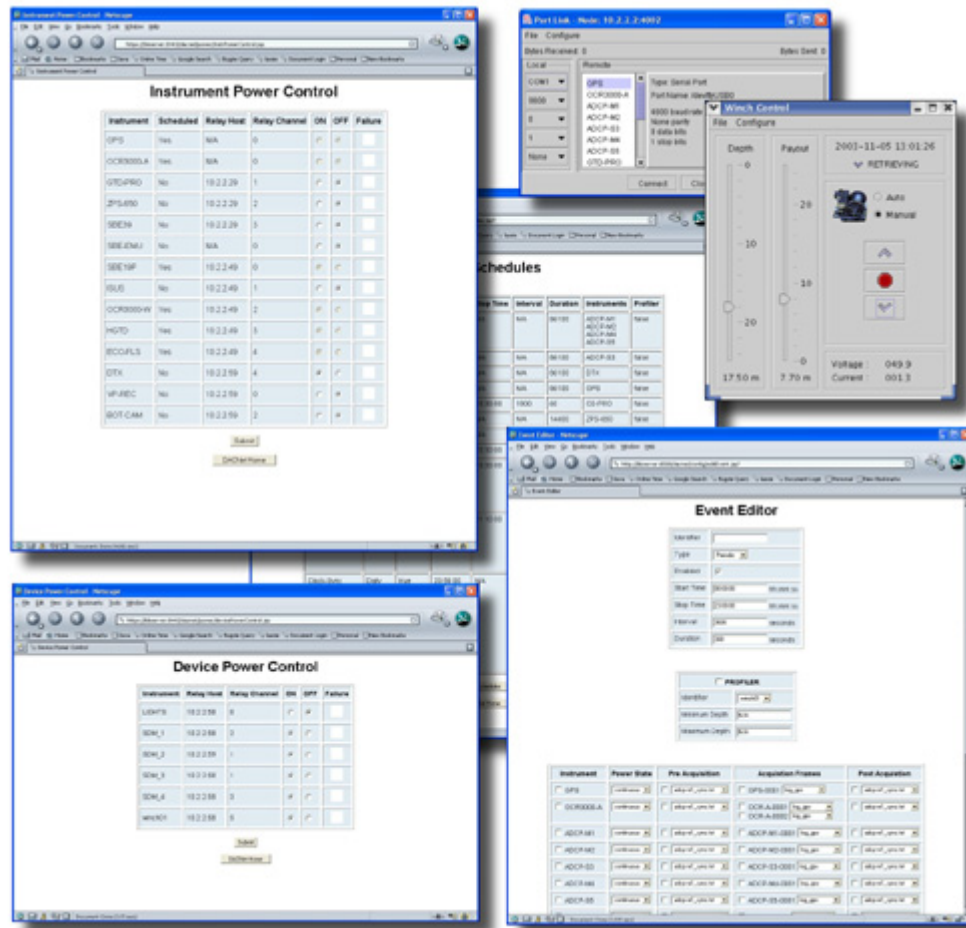


DATA ACQUISITION AND CONTROL NETWORK (DACNet)

Satlantic ocean observatory products represent a hierarchical layering of infrastructure that allows users easy access to a distributed network of sensors through the DACNet (Data Acquisition and Control Network) ocean observatory operating system. DACNet offers an extensive monitoring and control functionality that allows system managers to operate the system remotely from any designated secure computer on the Internet.

Satlantic offers the full commercial version of DACNet with control center functions, power system management, advanced scheduling, automated warning systems, special systems controls (sea bottom winches), metadata functions and PortLink, a utility to directly access and control specific instruments on the network. DACNet is designed to offer system managers a sophisticated level of operational control while allowing users to access system data with a minimal level of effort. Whether your system is a single mooring, a network of buoys or a complex cabled observatory, DACNet provides a proven solution for ocean observing systems.

DACNet





DACNet

The DACNet system can be used to directly control a distributed network of sensors on cabled observatories or control a network of Mooring System Managers (MSM) on remote platforms over wireless links. Key elements of DACNet are the Station Manager, the Telemetry Manager, and the Winch Controller.

Station Manager

- Acquisition scheduler, power manager, communication and configuration hub
- Remote secure administrative control using HTTP, TCP/IP, RMI
- Application level security through secure socket layers (SSL) with 128-bit encryption
- Web browser operator interface for local/remote Network Operation Centers
- Control, scheduling and monitoring of instruments and systems on the network
- Control, scheduling and monitoring of system power
- Sends emails on system status, faults (sensor, power, comms)
- Generic universal instrument driver uploaded remotely to nodes
- PortLink transparently connects serial sensors to 3rd party application software over the internet
- Hierarchical layout allows n-tier topology of stations, nodes and instruments

Telemetry Manager

- Tasked by Station Manager to execute acquisitions from network and direct telemetry
- Manages high speed telemetry at Gb rates and stores data on system server
- Real-time telemetry streaming to multiple clients
- File client allows access to telemetry logs on server via FTP/NTFS
- Telemetry metadata served to remote applications

Winch Controller

- Continuous unattended long-term monitoring of the water column through scheduled control of bottom-mounted instrument profiling winches.
- Iterative adaptive sampling of pressure sensor to limit extents of scheduled round-trip profiling.
- Real-time monitoring and control of automated and manual winching operations through remote graphical user interfaces.

DACNet is a proven commercial solution that has logged thousands of hours of continuous operation in real-world marine deployments. It is robust and fault-tolerant with an internal sensor feedback mechanism to monitor the health of the system infrastructure and take corrective action where appropriate. DACNet provides user-friendly interfaces and powerful configuration options to ease the management challenges faced by mission-critical marine observing systems.

Specifications may change without notice.