



remsdaq

Callisto^{nx}

Utility Controller

evolution of proven technology



FEATURES

- IEC 61850
- IEC 61131 logic
- 16 DI, 6 DO as standard
- Modular I/O expansion
- 1 Ethernet, 2 serial ports as standard
- Multi-protocol support
- Powerful 32 bit RISC processor
- Embedded Linux OS
- Complete suite of diagnostic and configuration tools

The Callisto^{nx} Utility Controller provides a foundation level standalone solution for small point count RTUs and its modular expansion facilities satisfy the largest RTU or substation automation application.

Utility Controller Features

A Callisto^{nx} Utility Controller provides six expansion slots for instrumentation class AC & DC analogues, digital I/O and comprehensive IED support using a library of plug-in modules.

General:

- Cost effective compact design
- Solutions for switchgear manufacturers and system integrators
- Unique solution for distribution automation, substation automation and Smart Grid applications
- IEC 61850 compliant (Kema certified)
- Station and Bus Process support
- SOE processing to 1 ms accuracy
- IEC 61131 PLoT^{nx} programmable logic
- View^{nx} embedded web server
- CaSE^{nx} PC based configuration tool

Technology & Performance:

- State of the art technology utilising NS9750 (Arm 9) processor working in tandem with Blackfin DSP
- In service upgradeable FLASH based boot system for upgrades on the fly

Monitoring & Watchdog:

- Comprehensive power failure detection and intelligent mechanisms to safely store critical data without the use of onboard battery technology
- External PSU hold-up facilities are also available to increase the hold-up period if necessary
- A comprehensive watchdog subsystem covers internal voltage rails, Blackfin DSP, NS9750 processor, memory and other important components

Temperature Sensor:

- Onboard temperature sensor monitors the ambient temperature to dynamically compensate temperature sensitive electronics

Control Output Enable:

- The Callisto^{nx} supports a hard-wired control output enable/disable facility

Time Synchronisation:

- An integrated GPS receiver (option) provides time to ensure 1 ms time accuracy for SOE data
- Better than 5 ms/hour when not synchronised
- Time source prioritisation (GPS/master/LAN)

SD Flash:

- For data logging and storage

Terminations:

- Screwless terminals
- Screw terminal block
- Barrier block type



Base I/O:

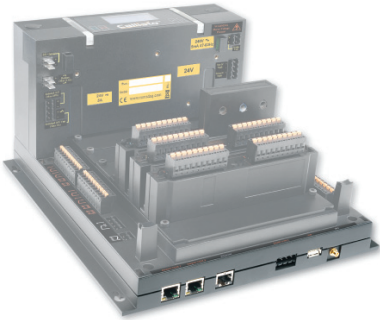
- 16 optically isolated digital inputs
- 6 digital outputs

Miscellaneous:

- Dummy control
- High stability voltage reference

Networked configurations utilising integral managed Ethernet switch.

Integrated Web server and programmable logic for maximum applications capability.



Integrated Communications Ports:

- 1 Ethernet port 10/100Base-T(X)
- Integral managed Ethernet switch for flexible station and process bus implementation
- 2 Isolated serial ports (1 x RS232, 1 x RS232/485)
- 1 USB Port (v 2.0)
- 1 CANbus/I²C (mini DIN connector)



Real Time Software:

- Embedded Linux
- View^{nx}, an embedded web server which provides access to configuration, commissioning tools and diagnostics.
- PC configuration using the Callisto Software Environment CaSE^{nx}
- PILOT^{nx} IEC61131 logic

Memory:

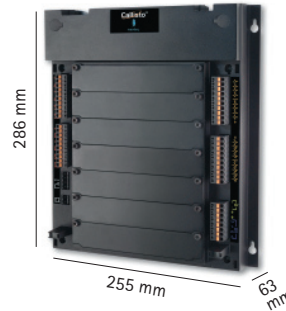
- FLASH 32MB
- SDRAM 40MB (8MB of which is dedicated to the DSP)
- SD FLASH slot

Integral Power Supply:

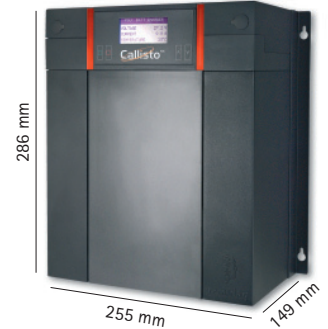
- Integrated non isolated power supply 24V (18-40V)
- Power consumption 32W (Max)

Dimensions:

- Utility Controller (no PSU)



- Utility Controller (with PSU/cover)



Power Supply Features

- Options to cover all standard substation voltages
- High contrast LCD for monitoring and diagnostics
- 2 non-isolated DC analogue inputs (0-20mA)
- 12 bit ADC
- Accuracy 0.2% FSD (at 25°C)



Integral Intelligent Battery Charger (Option):

- Onboard temperature sensor
- Optimised charger characteristics to maximise battery lifetime
- Nominal input voltage: 48VDC (45-56V) ¹
- Maximum charge current 2.4A
- Integral wetting supply (option)
- Back-up DC supply mode
- Mains fail detection

¹ requires external AC/DC converter for AC supply applications.

