

EDGE™

Remote Terminal Unit

COMPACT, FLEXIBLE REMOTE AUTOMATION DEVICE



The Callisto EDGE remote offers powerful solutions for both pole mount and distributed substation applications.

The latest offering from DAQ's Callisto™ series, the advanced EDGE™ remote provides seamless integration of analog, status, and control processing with flexible communications options. The unit is ideal for pole mount, panel mount, data concentration, and small substation applications. Specifically engineered to bridge the gap between low-cost, limited functionality units and expensive high-end devices, EDGE offers state-of-the-art automation technology at a highly competitive price.

In addition to supporting traditional, real-time SCADA information management, EDGE is optimized for the automation of motor-operated switches. Software routines enable the monitoring of historical switching events, leading to accurate maintenance scheduling and predictive failure analysis. EDGE is driven by DAQ's CallistoView™ configuration utility, which provides users with the protocols, programmable logic tools, and applications necessary for any type of installation.

KEY FEATURES

- 12 status inputs
- 12 analog inputs (AC or DC)
- 8 control outputs, configurable as:
 - 8 direct operate commands
 - 4 select-before-operate trip/close pairs
- Communications
 - 4 serial ports (RS232 or RS485)
 - USB port
 - Ethernet port
 - ArcNET port
- Asynchronous, byte or bit-oriented protocols
- Real-time and historical data
- IEC 1131-compliant PLC programmability

ADVANCED FUNCTIONS

- Motor-operated switch control
- Voltage regulator control
- Capacitor bank control
- Designed for simple expansion

CORE APPLICATIONS

- New or retrofit pole-mounted RTU
- IED integration
- Logical algorithms for automation
- Accurate fault and voltage event detection and analysis

PROCESSING

Hardware Platform

- ARM9-powered Printed Circuit Board (PCB)

Processors

- 200 MHz ARM9 Microcontroller
- 200 MHz SHARC DSP Processor

Operating System

- Thread X real-time, multi-tasking

Memory

- 16MB RAM
- 2MB Flash
- 64KB Serial Flash

Time Synchronization

- Real time clock maintains time and date during loss of power
- 1ppm crystal accuracy (1ms per 15 minute interval)
- Real time synchronization for all nodes on the LAN
- Maintains 1ms time-tagging accuracy for all events on the network

COMMUNICATIONS

Serial Input / Output

- 4 independent serial communication ports, individually configurable as RS232 or RS485
- Up to 115200 bit/sec, individually configurable per serial port
- USB host port
- Ethernet IP port, 10/100 MB
- ArcNET port for compatibility with legacy DAQ products
- Byte or bit-oriented, asynchronous protocols
- Support for external modems, both leased line and/or PSTN circuits
- Support for fiber, radio, trunked radio, and packet radio media

DIMENSIONS

Printed Circuit Board

- 2 standard 4-layer Double PCBs
- 9 1/2" x 9 3/4"
- 8" x 9 3/4"

Enclosure

- 11 1/2" x 9 1/2" x 3"

MEASUREMENTS / CONTROLS

Analog Inputs

- 12 analog inputs (AC or DC), definable for transducer, PT, CT, battery, or line post sensor on a per point basis

Analog Calculations

- Average and RMS volts and amps
- Neutral current
- Single and three phase watts, VARS, VA, PF
- Positive, negative, and zero sequence voltages and currents
- 2nd through 31st harmonic and THD for voltage and current
- Fault currents up to 20x nominal

Digital Inputs

- 12 digital inputs, individually configured to monitor status, SOE, or Form A/C accumulator inputs
- Opto-isolation > 5kV input-to-input and input-to-ground

Digital Outputs

- 8 control outputs configurable as 8 direct operate commands or 4 select-before-operate trip/close pairs
- Relays: 1 Form A contact rated for 16 A @ 277 VAC

ADDITIONAL SPECIFICATIONS

Isolation

- Surge withstand 5kV ANSI/IEEE C37.90.2002 SWC

Power

- 18 - 36 AC/DC directly
- 48 VDC, 120 VDC, 110 VAC via external power supplies or transformer
- Auxiliary Power Output: 13.8 VDC at 2A

Environmental

- Operating range: -20 to +70°C
- Storage range: -20 to +70°C
- Relative humidity: 5 to 95% non-condensing
- Vibration: 5 to 65Hz

PROTOCOL SUPPORT

Master Station and IED

- CDC Type II
- Conitel
- DNP 3.0 - serial and IP
- Modicon MODBus
- PMS-91
- QUICS IV
- SES-92
- Landis & Gyr 8979
- Valmet Series V

Master Station

- CDC Type I
- Harris 5000/6000
- IEC 870-5 Profile 103
- PG&E 2179

IED

- Cooper 2179
- Eaton Incom
- IEC 870-5 Profile 101 (Siemens)
- JEM 1
- PSE Quad 4 Meter
- Quantum Qdip
- Schweitzer Relay Protocol (221/251/351)
- SPABUS
- Transdata Mark V Meter

In addition to the protocols listed, DAQ can also accommodate special user requirements



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