

## Smart Remote Terminal Units (RTUs) for Substation Automation and Control

X

# **Callisto NX Smart RTU and Software Range**



### Callisto NX is a modular RTU solution with software tools for use in automation projects.



**Callisto**"



### **Callisto NX plug-in modules**

- PSU or battery charger
- DI/DO configurations
- Analogue AC/DC
- Communications



For supply to DNOs, IDNOs, TSOs, systems integrators and switchgear companies in applications from Generation and Transmission to Distribution and LV supplies.



Master Station Software Suite

**CaSe**<sup>\*\*</sup>

User Friendly Callisto<sup>nx</sup> Software Editor

**PILOT**"

Programmable Integrated Logic Tool



Embedded Web Server

**Touch**"\*

Touch screen colour graphics LUI

# **UK Manufactured Callisto NX Smart Solutions**





### 415/220V LV RTU



### 11kV RMU RTU







11kV RMU/OH 1-6

**Switches** 

#### 132/33kV Primary RTU Retrofits





132/33kV New Substation RTU



UK Power Networks

415/220V LV RTU (slave)



Callisto NX RTUs in custom cabinet solutions. Made by Remsdaq at our Deeside, North Wales manufacturing facility.





Certified by Afnor UK

# UK DNO / TSO Callisto Smart RTU Customers



**SSE** 

275kV, 132kV

**Celectricity** 

132kV, 33kV and 11kV



Northern Ireland

132kV, 33kV

33kV









11kV, 415/220V

20kV and 11kV

11kV

11kV



## **Callisto NX Smart RTU solutions**

- Power generation, transmission and distribution
- RMU automation
- Pole top applications
- Solar PV and wind farms
- LV monitoring and control



## **Callisto NX Automation Applications**



**PRODUCT FUNCTION** 

Remote Terminal Unit Programmable Logic Controller

**Events Recorder** 

Power Quality Monitor

Intelligent Electronic Device

APPLICATION

SCADA

**Automation Systems** 

**Sequence of Events** 

Harmonics-Sags-Surges

Integrated Protection Functions

Digital Fault-Recorder Plant Condition Monitor Electronic Meter Disturbance Analysis Condition Based Maintenance Demand Monitoring Operation Planning



Remsdaq Technical Objective: to deliver a single product fulfilling multiple applications.

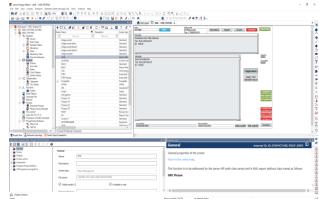
# **Celeste NX** Master Station Software Suite

Celeste NX delivers state of the art operator interface solutions ranging from a single workstation through to mission critical SCADA and Automation master stations with multiple redundancy and seamless transfer workstation configurations.

- Simple intuitive configuration editor
- Extensive SCADA and automation user facilities
- Multiple protocol support including IEC 61850 compliance
- Gateways including IEC 60870-5-101/104, DNP3, OPC, ICCP, SNMP, Syslog, Azure IoT and others
- Flexible alarm classification, grouping and filtering facilities
- Flexible on-line archiver with SQL export option
- Integral real-time and historic trending
- Powerful integrated report builder
- Integrated web-server option (HTTPS)
- Cyber secure to IEC 62351-4 with RADIUS authentication option
- Drivers for 3<sup>rd</sup> party devices including OCPP
- Exchange data via flexible protocols including MQTT, REST and AMQP
- Mapping System integration to Google, Microsoft Bing, OpenStreet and ArcGIS World Street Maps









## **Callisto NX Custom Solutions**



#### IDNO project using networked Callisto NX nodes





Built-in Local HMI Screen



Plant Termination Bay

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Substation Transformer Mimic

Events List

#### **Key Features**

- Computerised Substation Automation System
- Integral touch screen user interface for local operation
- Secure internet browser IP access (single or multiple users)
- Centralised data acquisition and control
- Data concentration from protection relays, IEDs and meters
- Multi-protocol support including DNP3, Modbus IEC 61850 and IEC 60870-5-101/103/104
- Network management via SNMPv3
- Logging and reports using Syslog
- Cybersecure by design

#### Options

- GPS time synchronisation
- Cloud-based HMI software
- Scalable HMI with N+X resilience
- Custom designs for any substation application
- Celeste Configuration Editor for project creation, editing and deployment
- Email and SMS alerts
- APN private network



Multiple Callisto NX RTUs in two server cabinets with a local HMI screen and secure web access over IP/mobile network Over 50,000 Callisto RTUs installed worldwide

## Over 25,000 in the UK



## **Callisto NX Accessories**



### Bespoke solutions manufactured or supplied by Remsdaq.

Umbilicals



Rogowski Coils



**G** Clamps

**Mounting Kits** 



**LV** Meter



### **Interface Boxes**





### **Retrofit Actuators**





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