

# Celeste<sup>nx</sup>

evolution of proven technology



## FEATURES

- Simple intuitive configuration editor
- Extensive SCADA and automation user facilities
- IEC 61850 compliant
- Numerous additional industry standard protocol support
- Flexible alarm classification, grouping and filtering facilities
- Automatic line colouring option
- Integral real-time and historic trending capability
- Powerful integrated report builder
- Flexible on-line archiver with SQL exports option
- Enhanced user interface capabilities via embedded VBA scripting
- Integrated web-server option
- Multiple language support

Celeste<sup>nx</sup> 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 bumpless transfer workstation configurations.

Exceptional editing capabilities and extensive runtime operator facilities ensure systems can be tailored to satisfy varying utility application requirements.

## Servicing the Electricity Supply Industry...

A Celeste<sup>nx</sup> system has two fundamental modes of operation:

**Runtime** is the normal operator mode under which supervision and control of the system is undertaken by a password authorised operator who is granted access to applications, alarm and event data, real-time graphics, archiving, trending and report facilities that have been configured by the system administrator. Extensive use is made of simple mouse driven point and click operations to move between different levels of graphical displays and for selection of system management applications.

**Editor** is the configuration mode under which a password authorised system administrator creates and modifies graphical and textual displays and applications that are required for customisation of the Celeste<sup>nx</sup> Runtime facilities. Editing functions are supported by a powerful toolbox to simplify the system configuration and include a graphical symbol library, scripting facilities, conditional logic constraints as well as trending, archiving and report building applications.



Celeste<sup>nx</sup> runs on standard PCs and is designed to take full advantage of the rich graphical user interface capabilities of Microsoft's latest Windows operating systems. Multiple workstation applications are supported and the Celeste<sup>nx</sup> build options also provide for simple configuration of redundant fault tolerant systems with seamless transfer.



Celeste<sup>nx</sup> gathers its data from remote RTUs, bay controllers, protection IEDs and other process devices using a configurable array of communication protocols. In addition to its IEC 61850 conformance, Celeste<sup>nx</sup> offers I/P support for DNP 3.0 and IEC 60870-5-104 as well as serial interface support for DNP 3.0, IEC 60870-5-101 and numerous other industry standard drivers. Process gateways to hierarchical and other enterprise domains are available via an OPC Server and a variety of above mentioned industry standard communication drivers.

# Smart Solutions



## ...Customising the Working Environment...



### Powerful Editor:

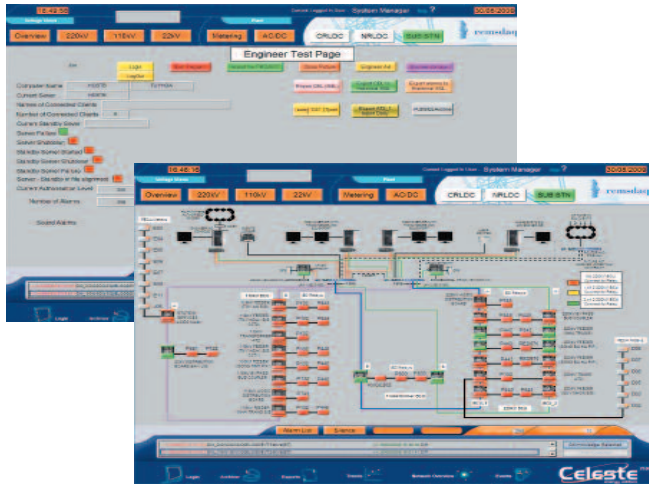
- Simple project architecture creation
- Operator permission profiling
- Flexible graphics creation
- Extensive dynamic symbols library
- Powerful global Editing facilities
- Archive, trend and report templating
- Integrated VB script language
- XML data import and export
- AutoCAD and Windows Metafile import

### Flexible Runtime:

- Simple point and click operation
- Operator permission levels
- Dynamic graphical display facilities
- Display zooming and decluttering
- Comprehensive alarm management
- Plant tagging support
- Event and audit trail recording
- Multi-screen workstation support
- Multiple operator workstation support

# for Global SCADA Applications

## ...Managing the Operation...

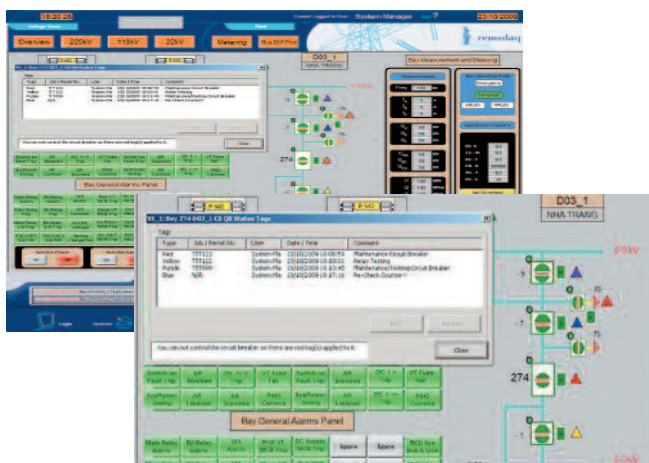
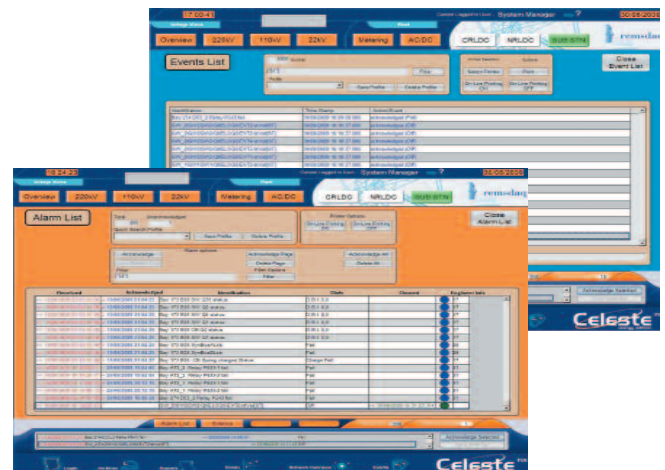


### Networking & Engineering

Celeste<sup>nx</sup> systems embody classic client server architectures and can be easily tailored by the system administrator to meet the user application requirements. A Celeste<sup>nx</sup> system may be simply configured using a single PC for client/server processes, encompassing both Editor and Runtime modes of operation. Multiple client/server workstation configurations can be supported on single or dual LAN systems and seamless redundant hot standby configurations, with guaranteed no-loss of data, using standard system build toolkits can be created without any special software development. The flexibility of the Celeste<sup>nx</sup> Editor, together with the exceptional diagnostics of the Callisto<sup>nx</sup> remote units, ensures that system-wide engineering displays can be provided to readily identify points of partial or operational failure.

### Alarm & Event Management

The powerful alarm and event management facilities encompassed in Celeste<sup>nx</sup> offer exceptional Editor customisation to meet system-wide user requirements, together with extensive and flexible Runtime services to readily satisfy operational demands. Alarm classifications include Groups for object oriented technological grouping such as EHV Line Bay, Class for differentiation of alarm priority classes and Areas for convenient assemblage of all alarms related to an area such as Transformer Bay. Additionally all alarm and all non-alarm status changes can be assigned to a Chronological Event List (CEL) file. Extensive on-line search filtering facilities enable truncated Alarm or CEL lists to be assembled to meet reporting requirements against time period or incident based occurrences.



### Plant Tagging

Celeste<sup>nx</sup> provides facilities for individual items of plant to be tagged for operational requirements such as cautionary orders or control inhibit protection during work order activities. Multiple levels of tagging are supported for each controllable device, with colour coding of the tag symbol to identify the highest level tag currently applied. A plant tag dialogue box ensures that a work order and associated comment is applied for each tag assignment. Plant inhibit level tags prevent the normal plant control dialogue box being launched for the protected plant. Cautionary order tags launch the plant tag dialogue box which must be acknowledged by the operator prior to the plant control dialogue box being launched to allow further action. All plant tagging operations are automatically saved to the CEL for future analysis as may be required.

## ...Analysing the Results



### Trending

Celeste<sup>nx</sup> incorporates flexible and comprehensive on-line Trending facilities that allow the Runtime operator to easily select on-line or archive based graphical displays of required process variables. Comprehensive display sets created in the Editor are available to the operator via simple push button picture switches. Individual displays are easily profiled by the operator selecting variables from the comprehensive display set. For example the operator can profile a graph containing only voltage and current readings from a comprehensive display set containing all power system measurements. Such profiles can be saved as a named display for simple future selection. Graphical displays can be zoomed on-line for varying time base resolutions, individual graphical display points can be queried for actual parameter values, and displays are easily directed to a printer for permanent record.



### Management Reports

The Celeste<sup>nx</sup> integrated Report Generator provides extensive functions for tabular recording and analysis of archived data to be used in comprehensive management reports. Reports are simply created using a spreadsheet program which provides flexible facilities for report format, parameter assignment, reporting period, and also assignment of statistical, mathematical or trigonometric operands. The comprehensive on-line archiving capability of Celeste<sup>nx</sup> delivers the simplicity with which management reports are created and used. Reports created in the Editor are available to the Runtime operator via simple push button picture switches; reports may be called at any time and will complete with entries up to the current time, leaving cells for future entries blank. Reports may be directed to the printer at any time and can also be automatically printed as a complete report at pre-configured times.



### Archiving

The Celeste<sup>nx</sup> system encompasses an on-line archiving module that enables plant and process data to be stored on a periodic or event driven basis. A unique archive cascading function enables records for multiple archive periods, such as daily, weekly and monthly, to be efficiently derived from a basic archive template. Archive scan rates, archive periods and file storage time are user configurable and analogue data may be saved as maximum, minimum and average values for each scan rate period. With the Celeste<sup>nx</sup> archiving application being an on-line function, the operator is easily provided with facilities to select, display and print archives. Archive data is readily available for use with other on-line Celeste<sup>nx</sup> applications such as Management Reports and Trending. In addition to its on-line applications, archive records can be assigned to automatically export in SQL, XML, dBase or ASCII formats.

## System Requirements

Component	Requirements			
Operating System	32 bit or 64 bit versions of:			
	Desktop: Microsoft Windows 10			
	Server: Microsoft Windows 2016 and 2019			
Port(s)	USB port for the security dongle Appropriate number of serial ports for any serial communication requirements			
Processor	Minimum	Single core with SSE2 support	Recommended	Quad core or more cores
RAM	Minimum	4GB	Recommended	8GB
Free Hard Disk Space	Minimum	20GB	Recommended	100GB
Screen Resolution	Minimum	1280 x 1024	Recommended	1680 x 1050
Graphics Board	Minimum	DirectX 11 mainstream graphics card 1GB VRAM	Recommended	Dedicated DirectX 11 AMD or nVidia high-end graphics card 2 GB VRAM or higher

### Software:

Product Range	Product Code	Type	Opt 1	Opt2	Opt 3	Options	
CX	SO	x	xx	xxx	x		
						S	Standard
						C	Custom*
						S	Standard
						ALC	Automatic Line Colouring
						15	1500 Tags
						45	4500 Tags
						70	7000 Tags
						UL	Unlimited Tags
						S	Server
						C	Client
						E	Editor

\*For other available features, please contact Remsdaq



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