

# 4NG

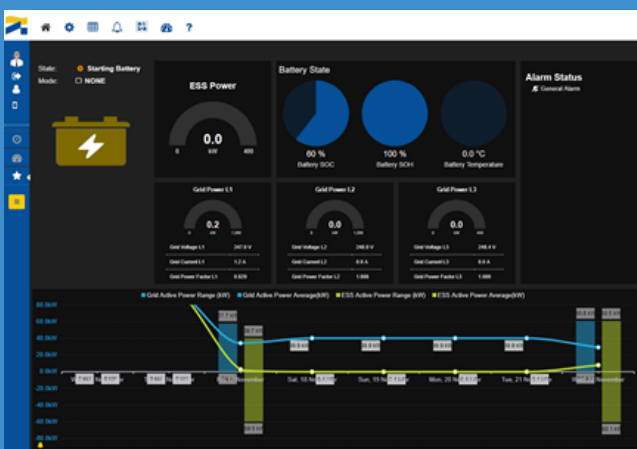
## SMARTset EMS

SMARTset EMS is an Industrial Energy Management System

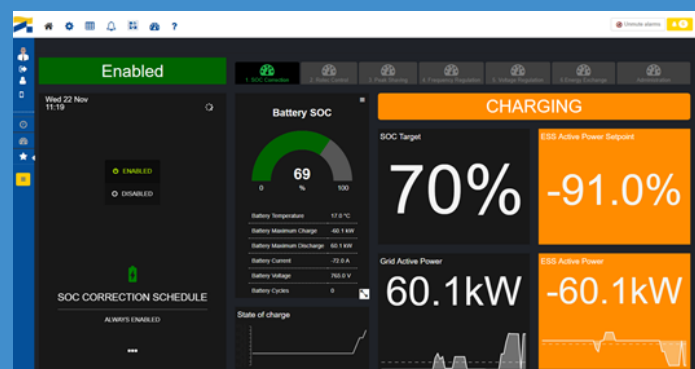
A 'single pane of glass' with infinitely flexible control and visibility of local energy management, storage, usage and grid supply.

### SMARTset EMS FEATURES:

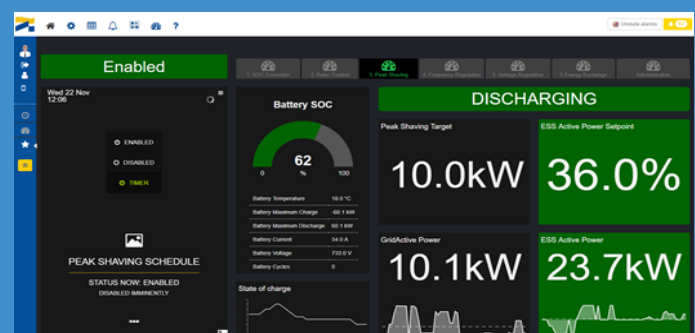
- User configurable dashboards that provide a 'single pane of glass' view across the whole EMS, from current and scheduled control modes, to historic and current energy usage
- Arbitration of control modes allows automatic optimal operation to be selected from Peak Shaving, Frequency Response, Voltage Regulation, SOC Correction or any other user defined modes
- Unlimited, bespoke modes can be configured easily to meet your exact requirements



- A sophisticated reporting engine generating rich, visual performance reports can be distributed to who you want, when you want and how you want
- SMARTset EMS can be hosted locally, in the cloud or with cloud backup
- Monitoring and operation can be performed remotely by multiple users via PC/Mac/Android/iPhone using any modern web browser



- Values are stored and displayed every second to give a continuous, real time view of the equipment to allow condition monitoring and predictive maintenance
- Pre-set and configurable, behavioural alarms allow real time/daily/weekly event logging, diagnostics and recording with a full audit trail
- Operating plans can be defined with a schedule on a second by second basis using the inbuilt scheduling widget
- Users can create separate plans for each individual mode of operation including manual overrides
- Weather information can be used to influence current and future behaviour of the system



## CONTROL CAPABILITY

- Connected devices **No limit**
- Maximum power **No limit**
- Control mode type **Time based and/or dynamic**
- Number of modes **No limit**
- Method **Blockly visual editor**
- Response time **<1 second**
- Equipment Manufacturer **Any**

## DYNAMIC DASHBOARDS

- Users **5 concurrent as standard Tiered & customisable**
- Access rights **No limit**
- Number of dashboards **35 including graphs, charts, geo-mapping, traffic light etc.**
- Dashboard widgets **No limit**
- Number of widgets **No limit**
- Corporate livery **Bespoke**

## REPORTS

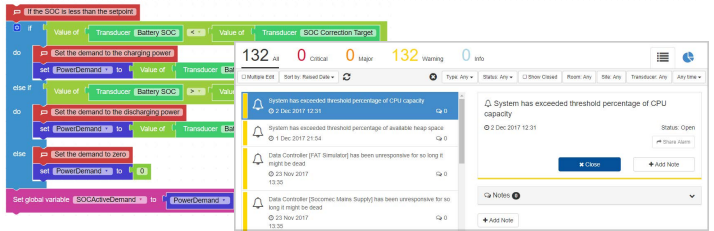
- Formats **HTML, PDF, CSV & TXT**
- Frequency **Any - from on demand to yearly SMS, email, email-link and Virtual File System**
- Distribution method **No limit**
- Maximum number **Yes**
- Templates included **Yes**
- Bespoke available **Yes**

## ALARMS

- Maximum number **No limit**
- Notification method **SMS, email, email-link and Virtual File System**
- Hierarchy **Federated**
- Templates included **Yes**
- Complex conditions **Yes, including trend analysis and machine condition detection**

## STORAGE

- Cloud backup **Yes**
- Historic readings **No limit - but we recommend 2 years as sufficient**



## OPTIONAL MODULES

- Environmental **Monitor and control your HVAC equipment**
- Security **Manage door locks and video cameras**
- Integrations **Integrate with company LDAP/SSO and forward alarms to SNMP traps**
- Optimisation **Real-time heatmaps of energy, temperature and humidity across your estate**

## TECHNICAL DETAILS

- SMARTset EMS can be viewed in any HTML5 compatible web browser (IE10+, Chrome 28+, Firefox 15+, Safari 7+) on any platform.
- Fully compatible with touch devices (iPad, Android and mobile phone)
- Monitoring is compatible with SNMP, MODBUS, BACnet, RFCODE, MQTT, NEST, EnOcean, HTTP(s) and 4NG proprietary protocols
- API - RESTful, SNMP, Modbus and OSGi Plugins

## MINIMUM SPECIFICATION

- On premise or hosted solutions available, subject to reliability & latency of internet connection available
- Any 32/64bit Java 1.8 platform
- (Linux/UNIX, Windows 20xx)
- Twin Core 1.70GHz CPU
- 2 Gb RAM
- 1 Gigabit Ethernet
- 250 GBb Disk



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