Datasheet MultiSite Monitor

Energy performance and status of all sites in one tool

Three monitoring views:

- Statistics of energy produced by;
  - Solar
  - Mains
  - Generator
- Instant status overview:
  - Connection: online/offline,
  - Status: normal/alarm
- KPI (Key Performance Indicators):
  - Solar energy produced
  - Generator kwh/l

Product Description

Server based monitoring software

The MultiSite software is a server based tool that gathers statistically data from connected sites and store it in a database. It also includes webpages for viewing the data from the database.

Application

Monitor the sites energy performance

The MultiSite software is a tool for monitoring multiple sites' energy performance and status. The site owner gets access to performance data that can be used to evaluate investments in hybrid DC power system and for marketing of site fleet's reduced carbon emission. The instant status of sites makes MultiSite a 1st line site maintenance tool; whenever there is a site in alarm, it is easily seen in the map, the list and top bar. One click in the site's details view will open the site's webpages in a new tab for further investigation of the alarm.

Key Features

- ü Easy access through web browser for both clients and administrators
- ü Monitoring clients do not need access to site network
- ü Central database server holds statistical data – decreased latency when browsing
- ü Server to site data transfer through http port 80 – fire wall friendly
- ü Map view – easy recognizable overview over sites
- ü Site list – organize in groups for easy look-up
- ü Help web pages (FAQ) available online

See last page for specifications

MULTISITE – Monitor your sites'

View select

- ü Home (map)
- ü Statistics
- ü KPI
- ü Link to online help

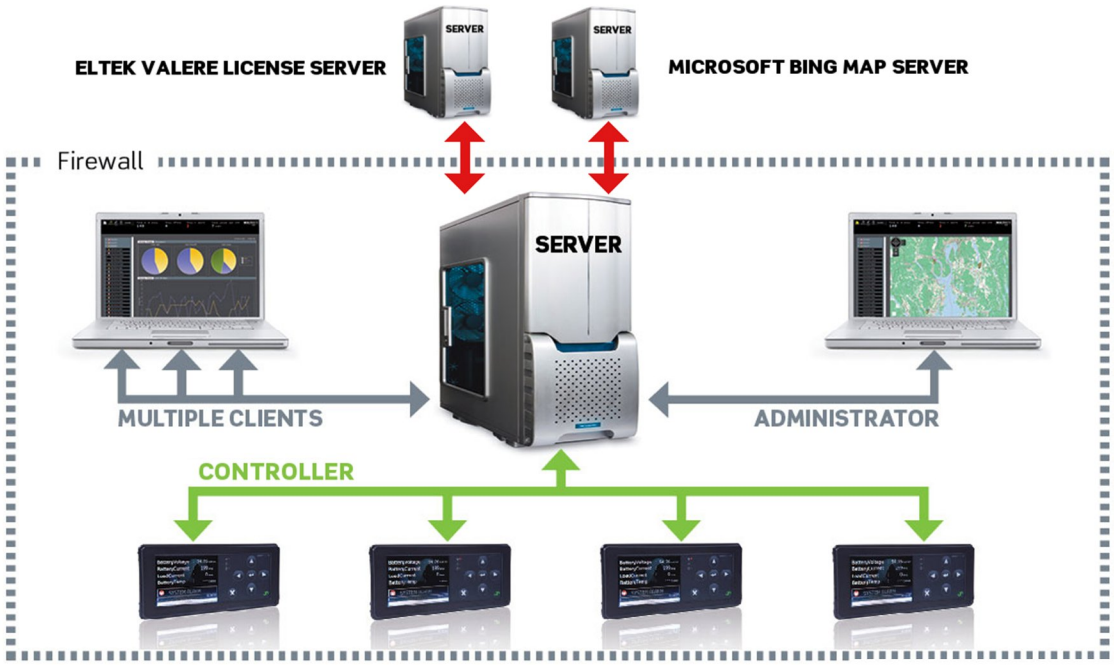
Key site fleet data

- ü Number of sites connected to MultiSite Monitor server
- ü Number of connected sites offline; not responding to the server
- ü Number of connected online sites with alarm status
- ü Total solar energy produced last 24 hours

Click on site to get key parameters

Site list

- ü Tree view of hierarchy of groups and sites
- ü Key parameters show at lowest level
- ü "Open site" – link to the site's internal web pages (WebPower) for detailed monitoring and configuration



See last page for list of compatible controllers.

green energy performance

Statistics – single site

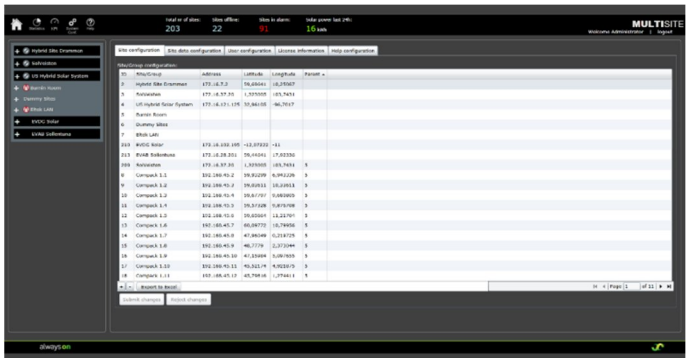
- Last day/30 days/52 weeks pie graphs of solar, diesel generator and mains energy at DC output produced
- Graph in selectable range day/30 days/30 weeks
- Print and save options

Statistics – compare sites

- Solar energy produced comparison between multiple sites and/or groups of sites. Drag and drop sites from list into graph
- Graph in selectable range day/30 days/30 weeks

KPI

- Solar energy versus total energy produced ratio; total, last 30 days and the configurable target
- Diesel generator energy produced; total, last 30 days and the configurable target



Administrator

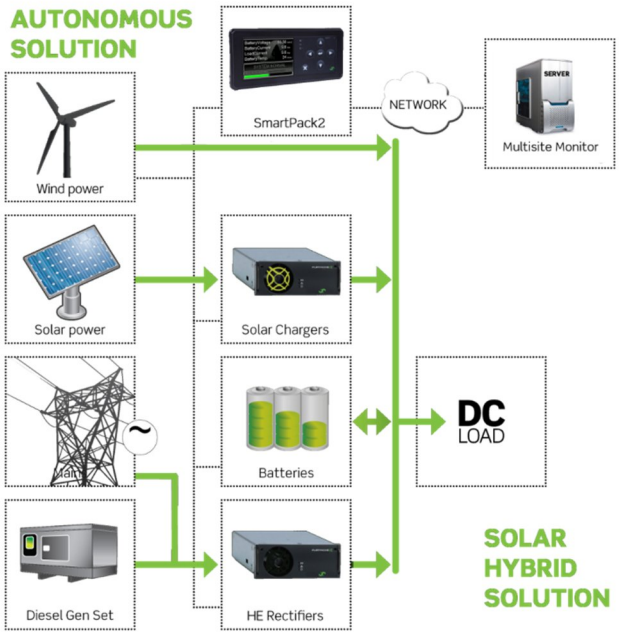
- Add sites and organize groups. Change key parameters to view for each site and latitude/longitude
- Administrate user accounts and license

System infrastructure

- The MultiSite Monitor server polls all connected sites for data using JSON protocol over http port 80. This transmission is not encrypted and suitable inside customer backbone network. If sites are to be connected through the open internet, IPsec encryption is recommended.
- Monitoring clients and administrator only needs access to the MultiSite Monitor server webpages.
- Service clients also need access directly to the sites to reach their internal webpages for configuration and details about alarms.

Eltek hybrid site

- Several energy sources can be utilized for feeding the DC load and charging the batteries; AC from mains or generator, and renewable source as wind and solar.
- The hybrid site controller logs energy produced by the various sources.
- The energy logs, key parameters and status are sent to the MultiSite Monitor server



MultiSite Monitor

Additional Technical Specifications

Available packages

	Small	Medium
Included clients*)	2	5
Maximum no of clients*)	5	15
Included sites*)	5	50
Maximum no of sites*)	49	200

Support

	Free	Maintenance
E-mail support	No minimum response time	2 business days response time
Telephone, free support hours yearly. Open business days	–	4 h (Small) 15 h (Medium) (0900-1500 CET)
Rectification of errors and defects	No minimum response time	5 business days response time
On-site support	–	Terms must be agreed case by case.
Free upgrades to new versions of MSM	–	●

Configuration

User access levels	●
Configurable monitors	7

Configuration

User access levels	●
Configurable monitors	7
Group parent levels	3
Automatic site detection	●**)
Site location, Latitude/Longitude	●

*) 'Clients' equals user accounts. 'Sites' equals connected power system controllers.
**) Certain network settings required, pls check FAQ (www.eltek.com/multisite/FAQ)

Server requirements

	Recommended	Minimum
CPU	Quad Core 2.4 GHz	Dual Core1.8 GHz
RAM	8 GB	2.5 GB
Free HD space	100 GB	50 GB
Operating system	MS Windows 2008 Server R2	MS Windows 2008 Server
Software	MS IIS 7.5, ASP.NET, SQL Express Database	MS IIS 7.0, ASP.NET SQL Express Database

Client requirements

Web browser with Silverlight (v4.0) plug-in on client computer

Site and controller requirements

Eltek system controller with Ethernet and JSON support.

Smartpack2 Master	All versions
Smartpack(only .242100.118)	WebPower version ≥ 4.6
Smartpack S	All versions
Compack	FW version ≥ 1.05

Network infrastructure requirements

Bandwidth to sites (no dial-up)	Minimum 3 kB/s
Daily payload to each site	Typically 20 MB
Transport layer	TCP Port 80
Maximum response time	1000 ms

Security

User login required, min 4 letters, upper/lower case & number

"●" means included, "–" means not included

GUIs/User Interfaces

Dashboard	
Total number of sites connected	●
Number of sites in alarm	●
Number of offline sites	●
Total solar energy generated last 24h	●
Map View	
Server data update interval, typical	30 min
Map data from BING map or similar service	●
Site location	●
Visible monitors	6
Statistics, single site	
Server data update interval, typical	daily
Energy generated last 30 h/d/w	
Pie chart	
Solar [% and kWh]	●
Generator [% and kWh]	●
Grid [% and kWh]	●
Line chart	
Solar [kWh]	●
Generator [kWh]	●
Grid [kWh]	●
Statistics, compare sites	
Server data update interval, typical	daily
Compare site vs. site	●
Compare site vs. group	●
Compare group vs. group	●
Bar graph	●
Solar [kWh]	●
KPI	
Server data update interval, typical	daily
Generated solar energy	
Total	●
last 30 days	●
target setting	●
Generated diesel energy	
Total	●
last 30 days	●
target setting	●

Data stored in database

Energy	
Daily generated solar [kWh]	●
Daily generated generator [kWh]	●
Daily generated mains [kWh]	●

Back-up of the database is not part of the MultiSite Monitor.

Part no.	Description
406100.009	SW MSMonitor Small Server inst
406101.009	SW MSMonitor Small extra client
406102.009	SW MSMonitor Small extra site
406110.009	SW MSMonitor Small sup_maint
406130.009	SW MSMonitor Medium Server inst
406131.009	SW MSMonitor Medium extra client
406132.009	SW MSMonitor Medium extra site
406140.009	SW MSMonitor Medium sup_maint

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