

**F**rench high-technology group with an international dimension, Sagemcom is a worldwide leader in telecom networks deployments and in energy management. Thanks to its combined expertise in telecommunication and energy, but also through its strong presence in Africa with its 17 subsidiaries, Sagemcom has already deployed thousands of smart sites, more than 27 000 km of optical networks in Africa during the last years.

Sagemcom offers turnkey network solutions including design, deployment (equipment supply, installation and commissioning), maintenance of active and passive equipment, and all associated support.

**SAGEMCOM - IDEAS & MORE.**

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**SAGEMCOM**

# ENERGY & SITES MANAGEMENT

## SMART SITES

- Energy & Sites monitoring
- Green energy micro generation
  - OPEX optimization
- Sites availability improvement
- Audit & Managed Services



**SAGEMCOM**



# ENERGY & SITES MANAGEMENT (ESM)

A solution to manage technical sites and a comprehensive range of energy equipment to supply cost effective energy

**S**agemcom, is a world supplier of Radio Site Infrastructures for telecommunication committed to providing solutions that reduce OPEX and CAPEX and increase service quality.

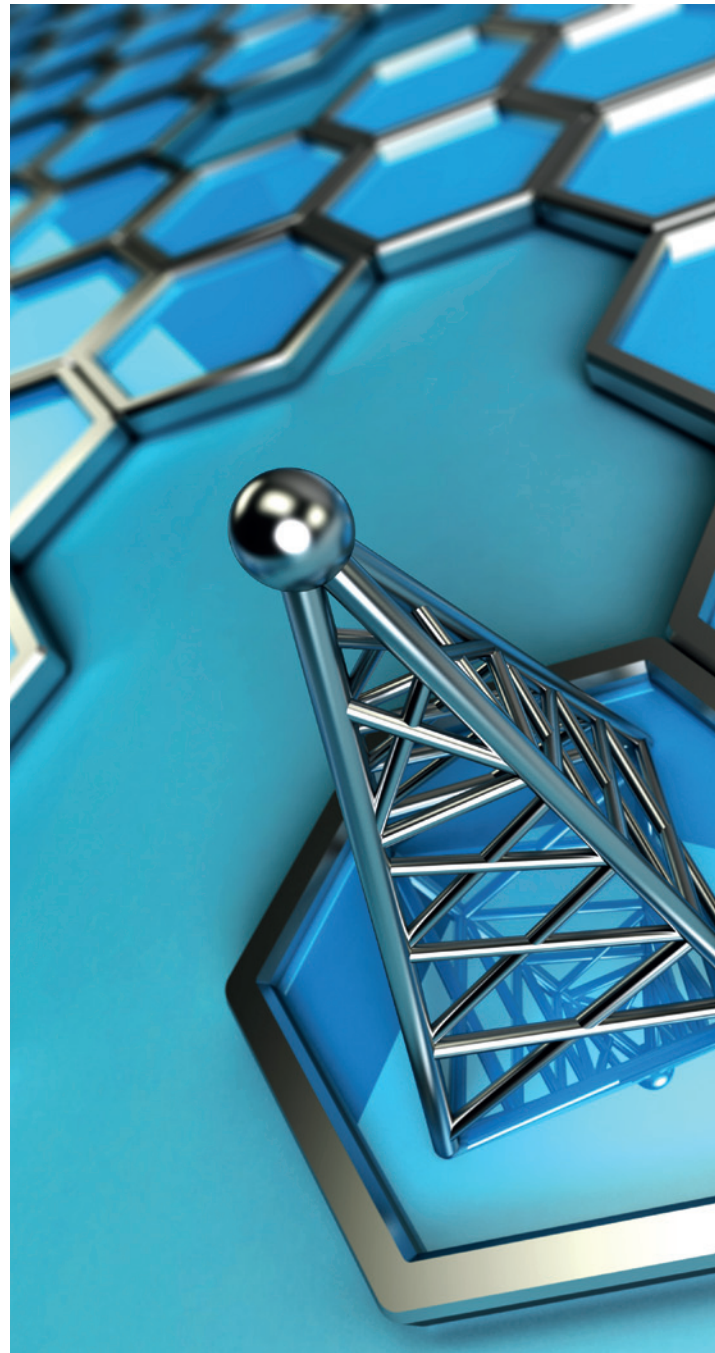
Sagemcom is a leader in broadband communication & convergence, energy management, and telecom system integration which are all essential to address new challenges in site performance management. Sagemcom's unique expertise has enabled it to create a comprehensive offer focused on site construction and maintenance as well as improving energy efficiency.

The Energy and Site Management system (ESM), composed of ESM-Vision, ESM-Power and ESM-Services, addresses the needs of Telecom Operators, Tower Companies and Utility companies.

The ESM is an essential component of telecom site infrastructures where energy costs constitute a major part of OPEX and where site availability and revenue is a major concern. Energy availability can also have a major influence on overall service quality and public interest is turned towards energy efficiency and the carbon footprint.

Remote monitoring and control are important system functions that enable OPEX ESM control and site availability assessments. The system provides the site operator with real time information on energy consumption, the availability of the various energy sources, and site alarms.

The "Energy and Sites Management" system is a powerful tool that reduces OPEX/CAPEX and increases service quality.



## BENEFITS FOR SITES OWNERS:

- Optimization of energy consumption and costs
- Simple maintenance services managements
- Availability improvement
- Management of shared sites
- Carbon footprint management

## THE SAGEMCOM ESM IS BUILT AROUND 3 MODULAR AND SCALABLE SYSTEMS:

### ESM-POWER

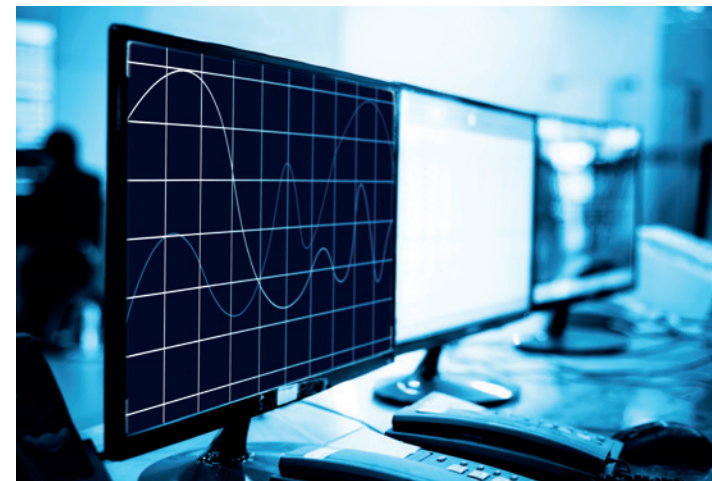
**ESM-Power** includes a range of solutions based on renewable energy to supply sites with cost-effective and reliable energy. Full management by ESM-Vision ensures a high level of availability.

**ESM-Power** will drastically reduce the energy costs of sites that are not connected to the grid or that are connected to a poor quality grid replacing the high OPEX cost of diesel generators.

**ESM-Power** proposes an optimised solution based on grid quality:

- Pure solar for low and medium consumption sites
- Hybrid (combining solar, wind, and diesel generator) for high power consumption sites
- Batteries cycling and smart ATS (Automatic Transfer Switch) are also proposed to reduce the period of operation of diesel generators and related fuel and maintenance costs.

Sagemcom will consolidate its **ESM-Power** solution by proposing an additional solution to reduce site energy consumption based on data collected by ESM-Vision (temperature, power consumption per load) such as replacing Air-conditioning by a Free Cooling system which would reduce energy consumption by 50%.



### ESM-VISION

**ESM-Vision** is a site monitoring and control solution. Its modular architecture allows it to address different areas such as Energy, Security, Maintenance, and Fuel as well as different user profiles such as Executives, Network centre operators, and Maintenance operators.

**ESM-Vision** provides these users with reports to monitor their site's main KPIs (OPEX, Availability, Fuel levels) and data to improve preventive and corrective maintenance operations, refuelling, and to decide on investing in new equipment such as "free cooling systems, batteries cycling solution, and smart ATS.

A special OPEX report compares different technical solutions, checking actual gains and return on investment.

### ESM-SERVICES

Sagemcom's expertise in Telecom and Energy helps it to provide turnkey solutions that include all related services for passive and active equipment.

**ESM-Services** for sites, optical fibre rollout, and telecom network deployment includes network design, site design, production, supply, civil engineering, tower erection, energy station installation and commissioning, shelters with air-conditioning and free-cooling systems, and all transmission and infrastructure equipment (Microwave-link, base station).

**ESM-services** also include local and remote support and site maintenance, including managed services and refuelling operations.

Sagemcom offers site and network audit services to help optimise energy costs and maintenance efficiency as well as ESM-Vision report customisation to monitor specific KPIs, track specific action performance, and investments for Site and Network optimisation.

