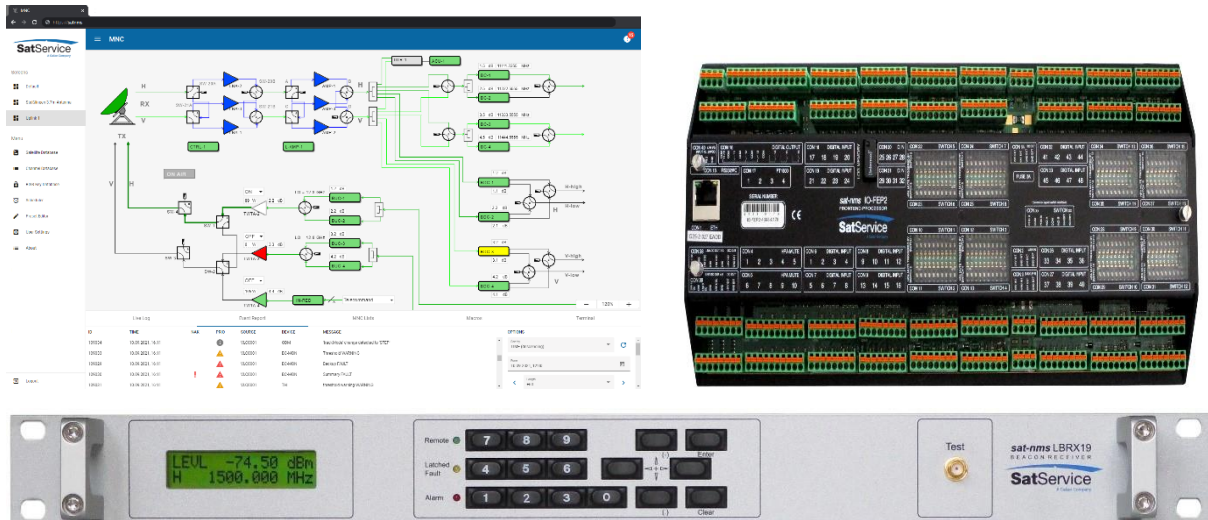# SatService Software and Hardware for SES's O3b mPOWER MEO Verified and Approved

SatService *sat-nms* products have been incorporated into SES's next-generation MEO satellite system.

Several hardware and software solutions from Steisslingen-based system house SatService (a Calian Company) have been included by SES, the leader in global content connectivity solutions, in their system design for O3b mPOWER.

O3b mPOWER is SES's next-generation Medium Earth Orbit (MEO) satellite communications system that can scale reliably and dynamically to meet customer demands. After its scheduled launch later this year, the O3b mPOWER system will deliver connectivity services ranging from tens of megabits to multiple gigabits per second.

SatService provided the following product solutions for the O3b mPOWER system:

- ***sat-nms* MNC system:** The MNC Monitoring & Control System is a comprehensive software-based system providing monitoring and control of any type of satellite ground station as well as associated baseband equipment. A new version with WebUI is now

available. The MNC Monitoring & Control system provides an interface for the O3b mPOWER gateway management application from SES, so that all equipment in each gateway can be configured just in time to establish connections for Telemetry, Tracking and Command (TT&C), and the data services between the O3b mPOWER MEO satellites and the ground stations.

- *sat-nms* IO-FEP2 I/O Front-End-Processor: It is a versatile component that monitors alarm and other low-level contacts, external temperatures and supplying LNA/LNBs, with the possibility to monitor the individual supply currents. It can control coaxial switches and waveguides and switch HPA and LNAs/LNBs redundantly. Beside various protocols—such as HTTP, SNMP and MODBUS—a user-friendly web browser interface for local control is available, making the installation and maintenance of the attached system efficient and convenient.

- *sat-nms* LBRX19 L-Band Beacon Receiver: Designed for antenna tracking and control systems, the SatService beacon receiver is a tool to measure the RF input level and to provide this information for control systems as output signal. It is thereof usable as a stand-alone solution, but also a perfect fit to other products from SatService, such as the *sat-nms* ACU Antenna Control System and the *sat-nms* MNC Monitoring & Control System.

Wilfried Megger, Managing Director of SatService says: "The trust and cooperation we have built with SES over a considerable time has, in recent years, positioned our solutions for the challenging technical tasks of O3b mPOWER and enabled further development. This has not only positioned us for use at SES, but also for other satellite and teleport operators. Some enhancements and developments were necessary, especially for the monitoring and control system, to ensure a solid foundation for *sat-nms* 4 and a state-of-the-art monitoring and control system with web front end and REST API."

"The collaboration with a wide range of hardware, software and services partners is the driving force behind the ecosystem vision of the O3b mPOWER system. Our collaboration with SatService has been especially important for our O3b mPOWER ground segment and fully unlocking a host of opportunities," said Stewart Sanders, Executive Vice President of Technology at SES.

SatService Germany provides turnkey satellite ground stations, software and hardware solutions under the ***sat-nms*** product family. It is also a reseller of selected high-class products. The company has continuously evolved and has become a reliable partner for commercial and governmental/military customers. The acquisition of SatService Germany in 2019 by the Calian Group further accelerated the company's development.

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