

sat-nms LSM - L-Band Switch Matrix

The *sat-nms* LSM L-Band Switch Matrix is a central sub-system in a satellite ground station or a teleport with several antennas. The switch matrix allows the user to switch each of its RF inputs, for example, from different antennas/LNCs, to each output, actively distributed, without any blocking effects. This gives the user an unlimited capability of routing and configuration.

In the standard configuration, all RF-connectors are SMA 50Ohm female connectors. If you need other connectors, e.g., F or a 75Ohm impedance, do not hesitate and contact us. SatService is able to offer the corresponding adaptors and impedance transformers.



The unit includes two power supplies with two independent mains voltage input connectors. Internal redundancy switchover between the two power supplies improves the availability of the unit. All modules are hot swappable without interrupting the users services.

Mechanical 19" configurations

3 RU	6 RU	9 RU
8x8	16x16	32x32
8x16	16x32	
8x32	32x16	
16x8		
32x8		

Combinations bigger than 32x32:		
32x64	32x96	32x128
64x32	64x96	64x128
64x64	128x32	
96x32	128x64	
96x64		

The switch matrix is available in a lot of different configurations. The number of inputs and outputs are the maximum possible number for the corresponding model. Subsets are also possible, e.g., the LSM 1012 is a 16x16 matrix equipped with 10 input cards and 12 output cards that can be expanded with up to 16 inputs and 16 outputs. These cards are hot-swappable and can be changed while the L-Band switch matrix is working.

The modular design allows also larger numbers of input and output ports. Matrix systems bigger than 32x32 will be realized by combining $n \times 32x32$ complete matrices.

Key Features

- 19" compact Design in 3, 6 or 9 RU
- High Port to Port Isolation
- Amplitude Flatness over the whole L-Band Frequency Range
- SNMP Interface for Monitoring & Control
- Front Panel Display and Keyboard
- TCP/IP and HTTP web browser Interface
- In Service Expansion by Card possible
- In Service Exchange of Cards / hot swap
- Dual redundant Power Supplies
- Coaxial Interfaces

Applications

- In any Type of Satellite Ground Station
- Automatic Measurement Systems
- Teleports with several Antennas
- Cable Head End Stations

Contact Information

SatService
 Gesellschaft für Kommunikationssysteme mbH

Hardstrasse 9, D-78256 Steisslingen, Germany

Phone: +49 7738 99791 10

Fax: +49 7738 99791 99

E-Mail sales@satservicegmbh.de

www.satnms.com www.satservicegmbh.de

Technical Specification

RF Specification

Frequency Range	950 to 2150MHz
L-Band Input Connectors	SMA female 50Ohm
L-Band Output Connectors	SMA female 50Ohm or F female 75 Ohm
Input Return Loss	> 17dB
Output Return Loss	> 17dB
Input Noise Figure	< 13dB
Gain	0 +/-1dB
Flatness	+/-1.5dB, +/-0.25dB in any 40MHz +/-0.25dB/24h
Gain Stability	+/-0.25dB/24h
OIP3	> +10dBm
Intermodulation at -13dBm Input Level	<-40dBc
Isolation	Out→In 50dB Out→Out 40dB

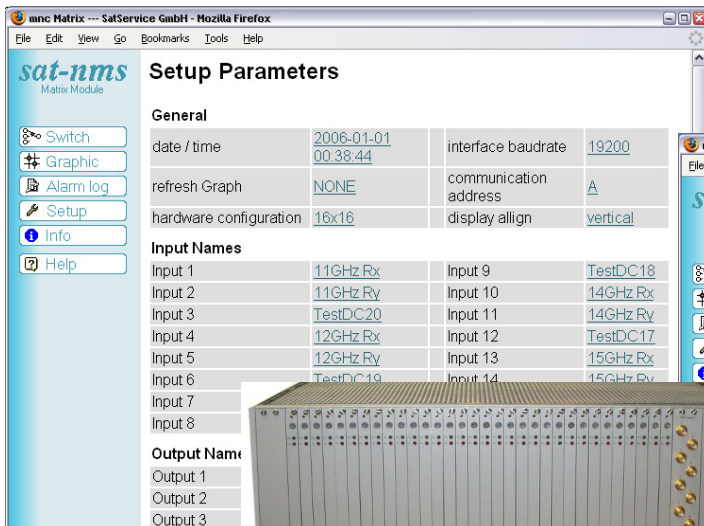
MNC Interface Specification

Local Control	Front Panel Keypad and LCD Display
Ethernet Interface for <i>sat-nms</i> MNC and User Interface	10-Base-T, via HTTP GET Requests or SNMP
Front Panel Display	Graphical LCD 16x32
RS232 <i>sat-nms</i> MNC Interface	D-SUB 9 female
Summary Fault Indication	Relay Contact D-SUB 9 male

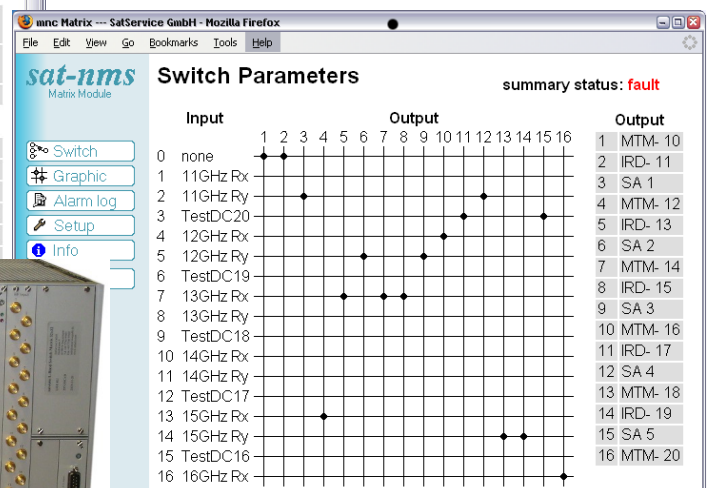
Electrical and Mechanical Specification, Environmental Conditions

Supply Voltage	90 to 230V AC 50 to 60Hz
Connector for the two Mains Voltage AC Inputs	IEC
Temperature Range	10 to +40°C
Humidity	Up to 90% non-condensing
Mechanical Size	8x8: 436 x 132,5 x 480 mm, 19" 3RU 16x16: 436 x 265,0 x 480 mm, 19" 6RU 32x32: 436 x 399,2 x 480 mm, 19" 9RU

Web Interface Configuration Page



Web Interface Crosspoints




Rear View of 32x32 Matrix Crosspoints