

sat-nms CBRX19 and C2BRX19 C-Band Beacon Receiver

The **sat-nms** CBRX19 C-Band Beacon Receiver manufactured by SatService GmbH is a measurement tool measuring the RF input level and provides this information as output signal for control systems. The **sat-nms** CBRX19 is based on the proven **sat-nms** LBRX L-band Beacon Receiver module operating jointly with a block down converter (BDC) in front of it, defining the input frequency range of the C-band beacon receiver. The main application of this receiver is in antenna tracking systems, where the receiver provides the tracking signal level to the antenna step track controller. Other applications can be pilot measurement and control loops like uplink power control.

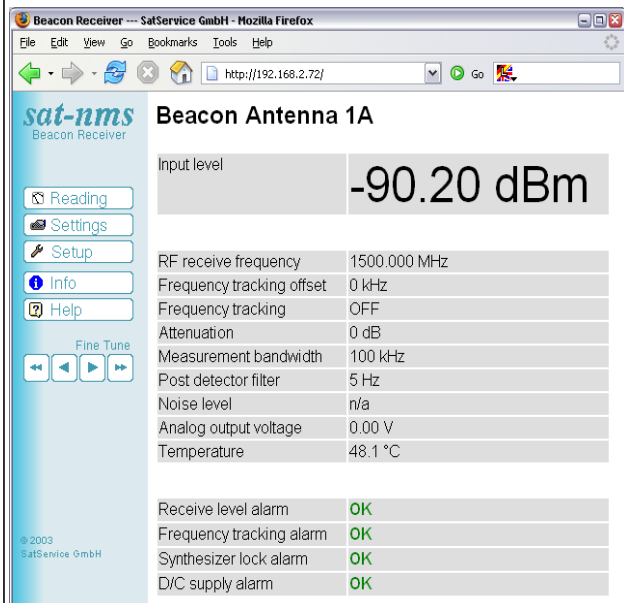


The **sat-nms** CBRX19 does not demodulate any satellite signals because the satellite signals are not always CW signals but even more often modulated in FM or QPSK. Due to this fact, the best implementation is a non-coherent receiver that measures the input level in a user selectable defined bandwidth and provides this digitized level information via local and remote interfaces. The signal level information is provided via four different interface types: an http web interface via internal web server, UDP datagram's, RS232 interface and the dB linear analog output voltage. The **sat-nms** CBRX19 Beacon Receiver is controlled remotely by a monitoring and control application via the TCP/IP interface. Communication with the beacon receiver is made with http requests or over a serial Monitoring and Control protocol.

The 19" rack-mount version of the beacon receiver is equipped with a LCD display and a front panel keypad for local control. The beacon receiver can be provided with one C-Band input port (**sat-nms** CBRX19) or with 2 C-band input ports (**sat-nms** C2BRX19) so that you can connect both polarization planes (RHCP / LHCP) to the beacon receiver and select input port by software both locally or via remote.

Key Features

- Full C-Band Tuning Range 4200 to 3400 MHz with 1KHz Step Size
- Modulation Independent Level Measurement
- No unpredictable Lock on PM/PSK Side Carriers
- Compact, 19" rack-mountable Unit with 1RU
- Front Panel Display and Keypad for Local Control
- Front Panel Test Output
- One or two C-Band input ports
- TCP/IP-based Design, Web Browser Interface
- Unlimited Number of Clients possible
- 14/18V 0/22kHz Interface to Switches and Switch Matrixes on L-Band interface
- Full Remote Administration & Support Capability
- Relay Contact Output for Level Alarm
- Electronically calibrated for Level and Temperature Linearity, which provides excellent Level Accuracy even in Outdoor Environments



Applications

- Antenna Tracking and Control Systems
- Pilot Measurement
- Uplink Power Control
- The **sat-nms** CBRX19 can operate as a stand-alone solution or fits into the overall **sat-nms** NMS Network Management System

Contact Information

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Technical Specification

RF Specification

Input Frequency Range in C-Band	4200 to 3400 MHz
Frequency Step Size	1KHz
Frequency Accuracy	1*E-6
C-Band Input Connector	N female 50 Ohm
L-Band Input Connector	SMA female 50 Ohm
LNB Voltage via L-Band Input Connector	OFF/14/18V 0/22 kHz
L-Band Test Output Connector	SMA female 50 Ohm
Input Level Measurement Range	-30dBm to -95 dBm
Large Signal Behavior	No Impact at -25dBm total input power
Damage Level	+10dBm
Measurement Bandwidths	6, 12, 30 and 100KHz
Minimum C/N ₀ (6KHz)	45dBHz
Analog Output Voltage	0V to 10V
Analog Voltage Slope adjustable by Software	-5V/dB to 5V/dB
0V Point adjustable by Software	
Output Connector for analog Output Voltage	SMA female
Linearity Failure	+/-1dB in any 10dB
Switchable Input Attenuator to adapt the dynamic Range and Input Signal Level	0, 10, 20, 30dB
Video Bandwidth selectable by Micro Controller	0.1Hz, 0.2Hz, 0.5Hz, 1Hz, 5Hz
C/N Measurement Functionality	Measured in Intervals relative to N Reference Frequency

MNC Interface Specification

Ethernet Interface for MNC and User Interface	10-Base-T, via HTTP GET Requests
RS232 MNC Interface	D-SUB 9 female
Summary Fault Indication	Relay Contact D-SUB 9 male
Level Alarm Indication	Relay Contact D-SUB 9 male

Electrical and Mechanical Specification, Environmental Conditions

Supply Voltage	90 to 240V AC 50 to 60Hz
Temperature Range	5° to 50° C
Humidity	Up to 90% non-condensing
Mechanical size	483x43x(460/530)mm (WxHxD), 1RU 19"
Weight	6 kg



sat-nms CBRX19-Band Beacon Receiver Rear Panel

