

BeamBox

Description

The BeamBox is a full Ka-Band communication payload that enables Space to Ground connectivity or Data Relay over MEO and GEO satellites for Earth Observation, ISR services and other applications.

The BeamBox payload is meticulously engineered to be integrated into Nano and small satellites.

BeamBox space terminal comprises of Expandable Antenna, RF Front End, Software Defined Radio (SDR) and Data Storage.

The state-of-the-art SWaP-C communication payload design provides very high throughput with high spectrum efficiency performances.

The BeamBox and deployable Antenna is at Technology Readiness Level 9 (TRL-9), validated on the International Space Station and Nano Satellite Missions.

Furthermore, BeamBox offers the flexibility of component separation, allowing for individual purchase of the Antenna, RF Front End, and SDR.

About NSL Comm

NSLComm is a space-tech company established in 2015, that has developed a satellite solution to the global growing demand for increased connectivity: A fabric-like, flexible dish antennas that expand in space offering high throughput for small satellites and substantial cost savings for larger satellites.

NSL believes that its space proven technologies and products on NSLSat-1 and NSLSat-2 missions will bring large leaps in satellite payload and antenna performance to weight ratios, positioning the company favorably in the market.



BENEFITS

High throughput with Ka deployable antenna

- Excellent for space-ground communication
- Excellent for MEO/GEO data relay

Software Defined Radio

- Flexibility in application
- Different waveforms and applications can be implemented.

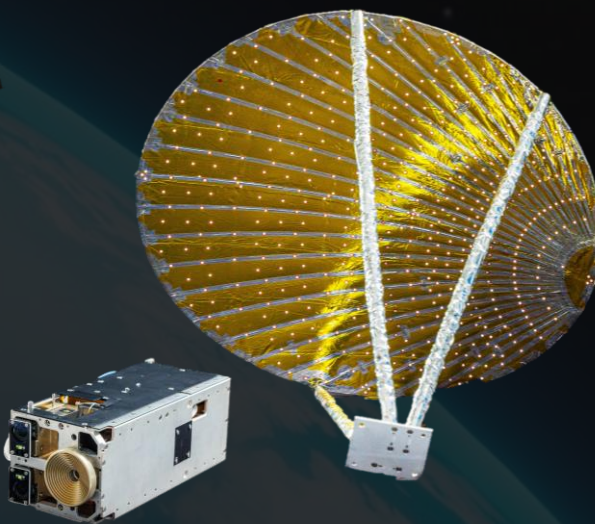
Small SWaP

- Can be fitted easily to any satellite.
- Ideal for small and nano satellite
- High compressibility of the antenna when stowed.

Proven technology - TRL 9

Operational modes: Store and Forward, Continuous Full Duplex

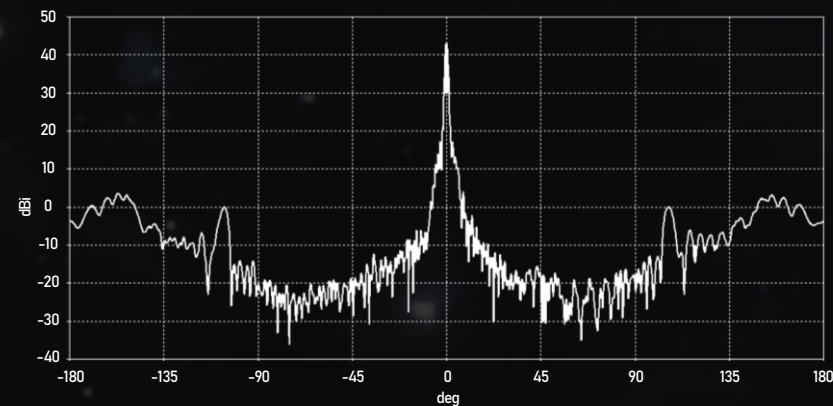
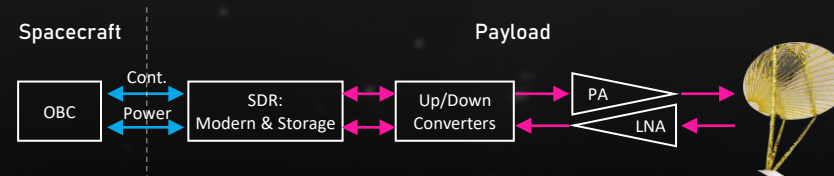
COMMUNICATION PAYLOAD



Contact Us

www.nslcomm.com
info@nslcomm.com

BLOCK DIAGRAM & ANTENNA PATTERN



SPECIFICATIONS

Antenna/BUC	60cm/2W
Antenna Type	Offset & Symmetrical
Frequency	Ka band: 29-31 / 19.2-21.2GHz
Gain	>38.5dBi @ 20GHz >41dBi @ 30GHz
Software Defined Radio (SDR)	DVB-S2 and DVB-S2X (Annex M) Other waveforms are optional. Store and forward, 128GB x2
Instantaneous BW	60 MHz Rx / 500MHz Tx
Total Weight	4Kg (120gr reflector only)
Power Consumption	47W
Temperature	-20C° to +80C°
BeamBox Dimensions	25x10x10 cm
Stowed Reflector Dimensions	23x10x10 cm



1st Prize Winner
 NASA New Space Competition