SLink/ SLink-Phy

SLink S Band Transceiver
SLink-Phy S Band Transceiver

Highlights

◊ High-speed data links from/to LEO
◊ Micro, nano or pico satellite usage
◊ Bidirectional communication links
  Sat2Gnd/ Telemetry up to 20 Mbps
  Gnd2Sat/ Telecommand 64 kbps+
  ISL 64 kbps

SLink is a compact transceiver system for S band communication links of small satellites in LEO environment. SLink is a full duplex transceiver for huge payload data rates in downlink and an integrated uplink for satellite telecommand. It is based on Software-Defined-Radio (SDR) architecture. SLink is a key component of the SNET project of TU Berlin for the evaluation of swarm configurations and constellations of small satellites in orbit. For this purpose the implemented intersatellite communication links are used.

SLink-Phy is a downsized transceiver system for S band communication links of small satellites in LEO environment. The mechanical dimensions fit for 1U CubeSat as well as for larger satellites. SLink-Phy is a full duplex transceiver conforming to standard CCSDS protocols. It’s a very cost effective solution for high data rates (up to 20 Mbps).

Key Specifications / SLink-Phy

S Band Operation: 2.025-2.290 GHz
Operational mode: FDD/ Full Duplex
Data Rate Sat2Ground: Up to 20 Mbps (BPSK, QPSK, 8-PSK)
Data Rate Ground2Sat: 64 kbps+
Linear RF Output Power: Up to +30 dBm
Automatic Doppler Shift compensation for Rx: Up to 65 kHz
Low Power Consumption: 3-4.5 W (Rx only)
                         13 W max. (Rx+Tx)
DC Supply Voltage: 7-18 V
Ultra Small volume: 50 x 55 x 94 mm³
Low Mass: <190 grams
Technology Readiness Level (TRL): 9