SLink / SLink-PHY

S Band Transceiver for Small Satellites with optional Inter Satellite Mode

**Highlights**
- High-speed data links from/to LEO
- Micro, nano and pico satellite usage
- Bidirectional communication links
- Sat2Gnd/TM & Payload up to 4 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. The full duplex transceiver handles huge payload data rates in downlink and provides an integrated uplink for telecommands. It is based on Software-Defined-Radio (SDR) architecture. SLink is a key component of the SNET project of TU Berlin for evaluation of satellite swarms in orbit and supports successfully with its integrated inter satellite communication links.

SLink-PHY is a downsized transceiver version of SLink. 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 is a very cost effective solution for high data rates.

**Key Specifications**
- S Band Tx Operation: 2.200-2.290 GHz
- S Band Rx Operation: 2.025-2.110 GHz
- Operational Mode: FDD/Full Duplex/Half Duplex
- Data Rate Sat2Ground: 4 Mbps (BPSK, QPSK, 8-PSK)
- Data Rate Ground2Sat: 64 kbps+
- Data Rate Inter Satellite Link: 64 kbps
- Linear RF Output Power: Up to +30 dBm
- Automatic Doppler Shift Compensation for Rx: Up to 65 kHz
- Low Power Consumption: <13 W (Tx + Rx), 3-4.5 W (Rx only)
- DC Supply Voltage: 7 - 18 V
- Ultra Small Volume: 50 x 55 x 94 mm³
- Low Mass: <190 grams
- Technology Readiness Level (TRL): 9