

TETHERS UNLIMITED, INC.

SWIFT[®]-XTS



SOFTWARE DEFINED RADIO S-BAND TRANSCEIVER X-BAND TRANSMITTER

SPECIFICATIONS

FREQUENCY RANGE

S-band: 1700 - 2500 MHz
X-band: 7000 - 8500 MHz

RF MODULATION

BPSK / QPSK / OQPSK / 8PSK / 16APSK

FORWARD ERROR CORRECTION

LDPC/BCH/REED SOLOMON/
CONVOLUTIONAL

BANDWIDTH

S-band: 10 MHz
X-band: 50 MHz

PEAK THROUGHPUT

S-band: Up to 6 Mbps
X-band: Up to 25 Mbps

INTERFACE OPTIONS

1x Ethernet, 2x RS-422, 2x LVDS, Spacewire,
1PPS/clock

TX POWER

S-band: Up to +33 dBm, finely adjustable
X-band: Up to +33 dBm, finely adjustable

ANTENNA PORTS

S-band: 1 TX port SMA / 1 RX port SMA
X-band: 1 TX port SMA

RECEIVER SENSITIVITY

-130 dBm @ 1 ksym/s, BPSK

MAX RF INPUT

-20 dBm

MAX RF INPUT WITHOUT DAMAGE

0 dBm

FREQUENCY ACCURACY

+/- 1.5 ppm Max

INPUT VOLTAGE

9 - 34.6 VDC

DC POWER CONSUMPTION

Standby: 4W Max
S-band: Tx: 12W Max / Rx: 8W Max
X-band: Tx: 22W Max

OPERATING TEMPERATURE

-30 C to +60 °C

MASS

< 800g

DIMENSIONS

90.4 mm x 98 mm x 62 mm

ENVIRONMENTAL

Pre-qualified to NASA GEVS shock/vibe

RADIATION ENVIRONMENT

10Krad TID

LIFETIME

3+ years, depending upon orbit

ENCRYPTION

AES-256 up & down, FIPS140-2 Level 1 available
Compatible with CryptoSWIFT-T1, KI-55, KI-103

WAVEFORM / AIR INTERFACE

CCSDS Standard

APPLICATIONS

SATCOM, SmallSats, UAVs, High Altitude Aircraft



DESCRIPTION

The SWIFT-XTS is a S-band transceiver and X-band transmitter software defined radio that has one of the smallest size, weight and power form factors for its capabilities. With a wide array of electrical interfaces and AES encryption, the SWIFT-XTS is ideally suited to many different applications.

