

TETHERS UNLIMITED, INC.

SWIFT[®]-XTRX



SOFTWARE DEFINED RADIO X-BAND TRANSCEIVER

SPECIFICATIONS

FREQUENCY RANGE

7000 - 8500 MHz

INPUT VOLTAGE

9 - 34.6 VDC

RF MODULATION

BPSK / QPSK / OQPSK / 8PSK / 16APSK

DC POWER CONSUMPTION

Standby: 4W Max
Tx: 22W Max

FORWARD ERROR CORRECTION

LDPC/BCH/REED SOLOMON/
CONVOLUTIONAL

OPERATING TEMPERATURE

-30 C to +60 °C

BANDWIDTH

50 MHz

MASS

< 300g

PEAK THROUGHPUT

> 25 Mbps

DIMENSIONS

90.4 mm x 98 mm x 62 mm

INTERFACE OPTIONS

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

ENVIRONMENTAL

Pre-qualified to NASA GEVS shock/vibe

TX POWER

Up to +33 dBm, finely adjustable

RADIATION ENVIRONMENT

10Krad TID; Baseband Board tested to 40krad

ANTENNA PORTS

1 TX port SMA
1 RX port SMA

LIFETIME

3+ years, depending upon orbit

RECEIVER SENSITIVITY

-117 dBm @ 50 ksymbols/s, BPSK

ENCRYPTION

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

MAX RF INPUT

-20 dBm

WAVEFORM / AIR INTERFACE

CCSDS Standard

MAX RF INPUT WITHOUT DAMAGE

0 dBm

APPLICATIONS

SATCOM, SmallSats, UAVs, High Altitude Aircraft

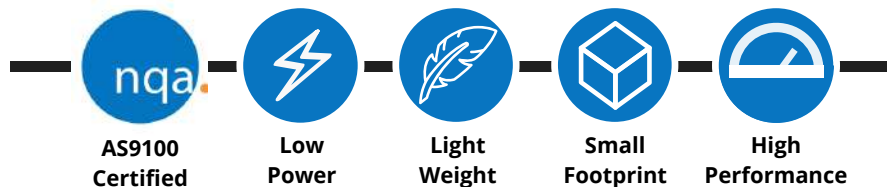
FREQUENCY ACCURACY

+/- 1.5 ppm Max



DESCRIPTION

The SWIFT-XTRX is a X-band transceiver 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-XTRX is ideally suited to many different applications.



AS9100
Certified

Low
Power

Light
Weight

Small
Footprint

High
Performance