

# TETHERS UNLIMITED, INC.

# SWIFT<sup>®</sup>-X KTRX



## SOFTWARE DEFINED RADIO KA-BAND TRANSCEIVER

### SPECIFICATIONS

#### FREQUENCY RANGE

Tx: 20.2 - 21.2 GHz / Rx: 30 - 31 GHz  
Tx / Rx: 24 - 27 GHz

#### RF MODULATION

BPSK / QPSK / OQPSK / 8PSK / 16APSK

#### FORWARD ERROR CORRECTION

LDPC/BCH/REED SOLOMON/  
CONVOLUTIONAL

#### BANDWIDTH

Tx: 250 MHz / Rx: 200 MHz

#### PEAK THROUGHPUT

> 1 Gbps

#### INTERFACE OPTIONS

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

#### TX POWER

Up to +35 dBm, finely adjustable

#### ANTENNA PORTS

1 TX port Waveguide  
1 RX port Waveguide

#### RECEIVER SENSITIVITY

Minimum - 117 dBm

#### MAX RF INPUT

- 20 dBm

#### MAX RF INPUT WITHOUT DAMAGE

0 dBm

#### FREQUENCY ACCURACY

+/- 1.5 ppm Max

#### INPUT VOLTAGE

22 - 36 VDC

#### DC POWER CONSUMPTION

Tx: 50 W MAX / Rx: 20 W MAX  
Total: 60 W MAX

#### OPERATING TEMPERATURE

-30 C to +60 °C

#### MASS

< 1 kg

#### DIMENSIONS

160.5 mm x 96 mm x 60 mm

#### ENVIRONMENTAL

Pre-qualified to NASA GEVS shock/vibe

#### RADIATION ENVIRONMENT

10Krad TID

#### LIFETIME

3+ years, depending upon orbit

#### ENCRYPTION

AES-256 up & down  
Compatible with CryptoSWIFT-T1, KI-55, KI-103

#### WAVEFORM / AIR INTERFACE

CCSDS Standard, DVB-S2 Optional

#### APPLICATIONS

SATCOM, SmallSats, UAVs, High Altitude Aircraft



### DESCRIPTION

The SWIFT-X KTRX is a Ka-band software defined transceiver 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-X KTRX is ideally suited to many different applications.



AS9100  
Certified



High  
Bandwidth



Low  
Power



Light  
Weight



Small  
Footprint



High  
Performance