



SWIFT[®]-XTS

High-Performance X-Band Transmitter and S-Band Transceiver

Capabilities

- >100 Mbps real X-band downlink rates
- >10 Mbps real S-band downlink rates
- >1 Mbps real S-Band uplink rates on up to two independent simultaneous channels
- >6 dB continuously adjustable X-band Tx power w/o losing efficiency
- MIMO antenna connectivity for attitude diversity and ADCS error recovery
- Integrated framing w/ deep store-and-forward buffers, automatic frame sizing and padding
- Full-rate AES-256/GCM crypto offload w/ multiple key indexing, including KIV-7MS GRYPHON compatibility
- Runtime configurable link parameters
 - BPSK/[O]QPSK/8PSK (8PSK Tx Only)
 - LDPC/Reed-Solomon/Convolutional
 - Continuously adjustable symbol rates
- Flexible high-speed digital interface options, including separate command and data ports:
 - RS-422/LVDS: Multiple pairs async. or sync. up to 50 Mbps each
 - SpaceWire: Dual up to 100 Mbps each
 - Ethernet: 10/100/1000 Mbit w/ integrated PHY and magnetics

Network Compatibility

- NASA's NEN and TDRS (SN), AFSCN, US DoD
- Commercial ground stations operating coherently in S- and X- Bands
- Verified w/ RT Logic T400XR and MMR/QMR, Cortex T70/70XL, Amersint satTRAC, and ViaSat VHR modems

Specifications

Metric	X-band Tx ¹	S-Band Rx (2)
Power/Sensitivity	1-7W RF Output	0.75 dB NF typ.
Gain Control Range	-30 to +6 dB	>90 dB AGC
Dynamic Range	>60 dBc SFDR	>66 dBc SFDR
Bandwidth	>70 MHz	7 MHz/ea typ.
Frequency	7000-8500 MHz	1500-3500 MHz
Base Input Power	3.0W	3.0W
Additional PA Power	+24-42W	1x Rx: +3.5W 2x Rx: +5.0W
Size & Mass	86 x 86 x 50mm , 500g	
Shock/Vibe	Pre-qualified to NASA GEVS levels	
Temperature	Pre-qualified to -40 to +60°C	

¹S-Band Transmitter not shown for clarity



Flight Units Available Now!

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