

SWIFT™ -XTS/SFN

High Performance Transceiver for SpaceFlight Networks



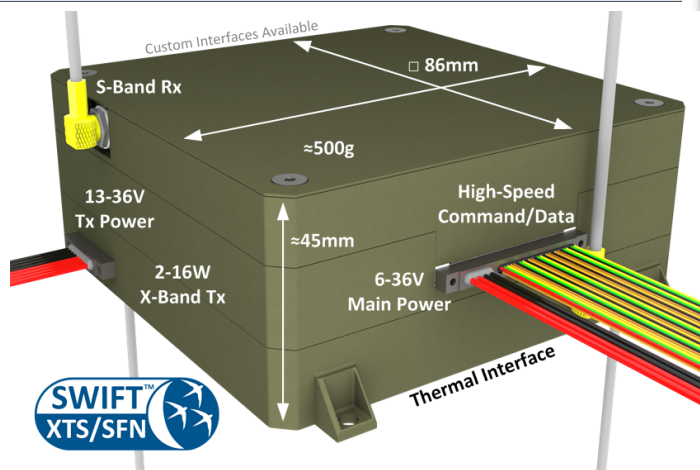
Transformative Technologies
for Space, Sea, Earth, & Air

SWIFT-XTS/SFN combines known-compatible firmware with a robust, high performance X-band/S-band transceiver for maximum communications throughput with SpaceFlight Networks.

Capabilities

SWIFT-XTS/SFN provides small satellites with a known-compatible, high-performance transceiver solution for utilizing the maximum capabilities of SpaceFlight Networks.

- >100 Mbps real X-band downlink rates
- >10 Mbps real S-band uplink rates on up to two independent, simultaneous channels
- >5 dB continuously adjustable X-band Tx power w/o losing efficiency
- MIMO antenna connectivity for attitude diversity and ADCS error recovery
- Continuously adjustable coherent turn-around
- Runtime configurable link parameters
 - BPSK/GMSK/OQPSK/SOQPSK-TG/8PSK
 - LDPC/Reed-Solomon/Convolutional
 - Continuously adjustable symbol rates
- Integrated framing w/ deep store-and-forward buffers, automatic frame sizing and padding
- AES-256 crypto offload w/ multiple key indexing
- Flexible high-speed digital interface options, including separate command and data ports:
 - RS-422: async. serial or clock+data
 - SpaceWire: dual up 200 Mbps each
 - Ethernet: 10/100 Mbit via external PHY
 - GPIO: discrete on/off, receive interrupts



Specifications

	X-band Tx	S-Band Rx (x2)
Power/Sensitivity	1x PA: 2-8W 2x PA: 4-16W	<1.5dB NF
Gain Control Range	-30 to +6 dB	>90dB AGC
Dynamic Range	>60dBc Harmonic Suppression	>66dBc SFDR
Bandwidth	>100MHz	up to 30MHz/ea
Frequency	8025-8400MHz	2025-2100MHz
Input Power	2.4W base input power	
	1x PA: +20-50W 2x PA: +40-100W	1x Rx: +2.5W 2x Rx: +4.5W
Shock/Vibe	Pre-qualified to NASA GEVS levels	
Temperature	Pre-qualified to -40 to +85°C	

Integrated conformal radiation shielding available!

