



RAVEN™ SDR

A High-Bandwidth, Adaptive, High-Resilience Software Defined Radio

Description

RAVEN represents the next generation of Tethers Unlimited, Inc. Software Defined Radios (SDRs). With incredible throughput, speed, and flexibility, RAVEN is the future of communication products. RAVEN can readily accept third-party applications to provide a tailored solution. With a wide array of electrical interfaces and AES encryption, RAVEN provides high resiliency (Uptime) combined with high bandwidth on an adaptive platform to customize and suit your needs.

Local Application Support:
Easily customized, with Linux inside

Optional GNUradio, Redhawk, or Custom Waveform Support:
Create and test third-party waveforms

Sophisticated Security:
Optional AES256 or Quantum Secure Zero Trust Blockchain™

Optional Swift Linq:
Easily customized, with Linux inside

Why RAVEN™?



Low SWaP-C

All in a ~2U CubeSat form Factor



Blazing Speeds

1Gbps up and down



Run your own Algorithms

Two cores available to run your own algorithms

Specifications

Radio Transmit (Tx) Functionality	Tx Specification	Total Tx
Center Frequency	75 MHz to 6 GHz	
Large Signal Bandwidth	Up to 200 MHz	Up to 500 MHz
Throughput	Up to 122 Msym/s per channel	Up to 244 Msym/s
Data Throughput	Up to 1 Gbps per channel	Up to 2 Gbps
Physical Channels	2 independent channels	
IF Output Power	Up to +5dBm	

Optional Radio Receive (Rx) Functionality	Rx Specification	Total Rx
Center Frequency	75 MHz to 6 GHz	
Bandwidth	Up to 200 MHz	Up to 400 MHz
Throughput	Up to 100 Msym/s per channel	Up to 200 Msym/s
Data Throughput	Up to 1 Gbps per channel	Up to 2 Gbps
Physical Channels	2 independent channels	
Max IF Input Power	-10 dBm (Protect up to +20 dBm)	

Hardware	Specification
Housing	
Dimensions	(L) 205 x (W) 116 x (H) 47 mm
Mass	1 kg
Interfaces	
Ethernet	2x GbE Ethernet
RS-422	2x Full duplex, up to 20 Mbps
LVDS	5x pairs, up to 500 Mbps
Power	
Input Voltage	22-34.6 VDC
Operating	23 W
Standby	7 W
Environmental	
Operating Temp	-30°C to 60°
Lifetime	5 Years LEO @ 100% Duty Cycle
TID	30 KRad
Vibration	GEVS