

SI-8746 HARRIER

Full-Band VLF/HF Multi-Channel Digital Tuner



UNSURPASSED ABILITY TO DETECT VERY WEAK SIGNALS IN DENSE AND NOISY VLF/HF SIGNAL ENVIRONMENTS

The VLF/HF world is a noisy place particularly when monitoring it 30 MHz at a time. Harrier, a 1U half-rack four-channel full-band VLF/HF digital tuner, provides exceptional dynamic range, clearly exceeding the performance of conventional narrowband and wideband digital VLF/HF radios.

The Harrier, named for a class of slender hawks that feed on small animals and reptiles, preys on small VLF/HF signals. Its low size, weight, power and cost (SWAP-C) per received signal makes it ideal for desktop or system installations. With the ability to continuously stare at the entire VLF/HF spectrum and to perform precision tuning in multiple sub-bands, the Harrier meets challenges posed by a range of COMINT missions.

The Harrier's digitized IF is packetized, precision time-stamped and output with context data in accordance with the VITA 49 Radio Transport standard and then transmitted over a 10 Gigabit fiber optic Ethernet link for further processing.

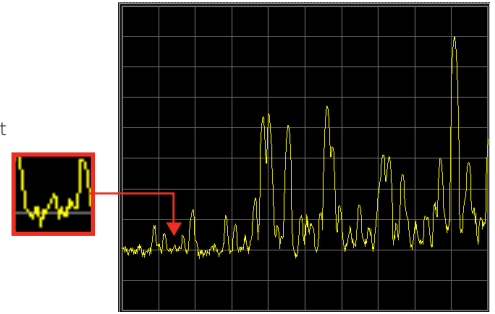


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HIGHLIGHTS

- With a continuous stare band of 10 kHz to 30 MHz and exceptional dynamic range, the Harrier captures the entire VLF/HF spectrum, even the weakest of signals
- 100% probability of capture of the entire VLF/HF spectrum instantaneously, even detecting elusive frequency hoppers
- Its phase-coherent tuning between four channels allows direction finding of intercepted signals or antenna beamforming
- Flexibly intercepts wideband and/or narrowband signals
- Extremely fast DDC tuning: sub-100 microseconds
- Supports geo-location of emitters by sensor networks using interferometry or time difference of arrival
- Multiple RF inputs eliminates the need for an antenna switch matrix

Detect signals of interest. Harrier's exceptionally high dynamic range enables the user to detect and recover tiny signals of interest among large interfering signals.

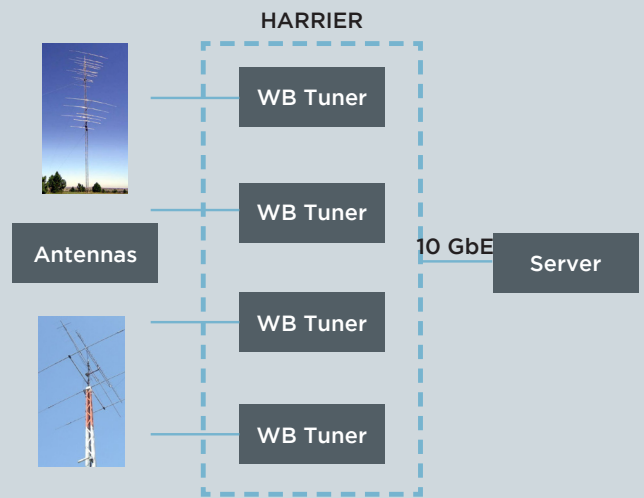


EASY SYSTEM INTEGRATION

- **19-inch Half-Rack Form Factor:**
 - Allows easy side-by-side installation with other Harrier or VHF/UHF Talon units
 - Mounting kits available
 - 19-inch half-rack ac-to-dc power supplies available to support one, two or three co-located Harriers
 - Cabling options allow flexibility in system integration
- **Standardized control and data networking:**
 - 10 Gigabit Ethernet over optical SFP+ data interface
 - 10/100 Base-T Ethernet primary control interface

MECHANICAL CHARACTERISTICS

PARAMETER	SPECIFICATION
Size	1.75"H x 8.5"W x 22"D
Weight	<10 lbs.
Power	+28 Vdc (+18 to +48 Vdc)
Power Consumption	Less than 100 watts nominal, steady state
Temperature, operating	-10°C to +50°C ambient air
Temperature, storage	-40°C to +85°C
Altitude	0 to 10,000 feet, <40°C ambient
Humidity	0% to 95% non-condensing



Networked VLF/HF architecture. The Harrier tuner can be coupled with a standard server in a networked environment for flexible data distribution.

Airborne & Intelligence Systems

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PN 14106484-001, -002 | REV F | March 2020