

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

DELIVERS UNMATCHED SPEED AND DYNAMIC RANGE IN SIGNAL DETECTION.

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

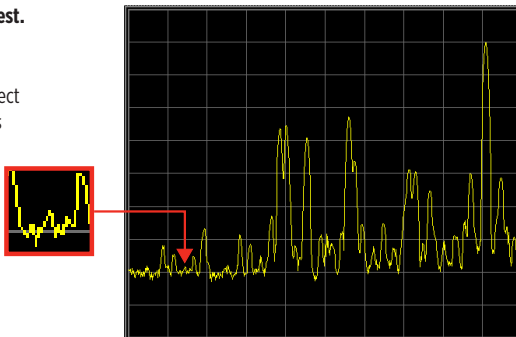
- With a continuous stare band of 10 kHz to 30 MHz and exceptional dynamic range, the Harrier captures the entire VLF/HF spectrum, even the weakest of signals
- 100% probability of capture of the entire VLF/HF spectrum instantaneously, even detecting elusive frequency hoppers
- Its phase-coherent tuning 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

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

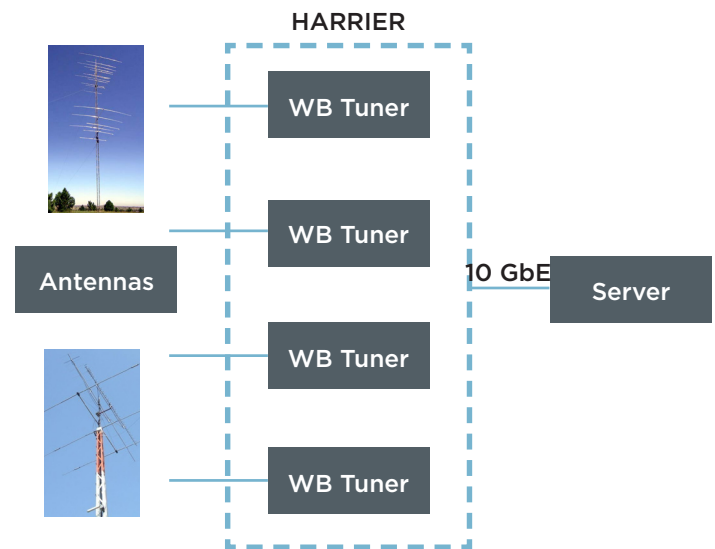
Detect signals of interest.

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



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

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