

SPIDER COMMUNICATIONS INTELLIGENCE

EXPLOIT YOUR ADVERSARY'S COMMUNICATIONS

In the modern battlefield, communications systems are used universally to share strategic Command & Control information and conduct tactical operations. This abundance of information provides an opportunity to gain a tactical advantage through the interception of communications and subsequent interpretation into actionable intelligence.

The COMINT product facilitates the detection, processing and exploitation of communications across a wide frequency spectrum. This information can then be used to determine an adversary's disposition, tactics and intentions.

Spider uses advanced direction finding techniques to locate targets, provide situational awareness, warn of incoming threats and cue supplementary sensors and weapons systems.

A small footprint allows it to be packaged alongside other sensor systems to satisfy a diverse range of operational requirements, while the mission software is flexible and configurable.

As new and complex target communications systems appear, the system can be readily updated to monitor the latest enemy Electronic Order of Battle.

DETECT	Ultra Wideband Auto Detection
INTERCEPT	Direction Finding and Geo-location
IDENTIFY	Classify and recognise threats
EXPLOIT	Record and generate Pattern of Life and analyse signal content for adversarial disposition and reportable intelligence

SPIDER

OPTIMISED FOR



KEY BENEFITS

- Highly accurate Direction Finding and geo-location enabling accurate sensor cueing at extended range from a single platform.
- Operator burden is reduced through automatic detection and Direction Finding of Fixed Frequency and Frequency Hopping emissions.
- A single, integrated antenna assembly eases aircraft installation.
- Automated processing of relevant target solutions enables rapid and effective development of tactical intelligence product.
- Ease of export around the world – non-ITAR

KEY FEATURES

- Sophisticated Super Resolution Direction Finding algorithms accurately prosecute co-channel targets in congested communications environments.
- World leading instantaneous digitised bandwidth, incorporating multi-channel parallel processing resources.
- Adaptive Digital Beam-Forming enhances weak target signals even in the presence of strong interfering signals.
- Fully integrated Mission Information System including multi-layer electronic mapping and smart, interactive database.
- Dynamic sensor reconfiguration whilst airborne supports both tactical Indications & Warnings and persistent, strategic COMINT tasking



Digital Receiver and Processing Unit

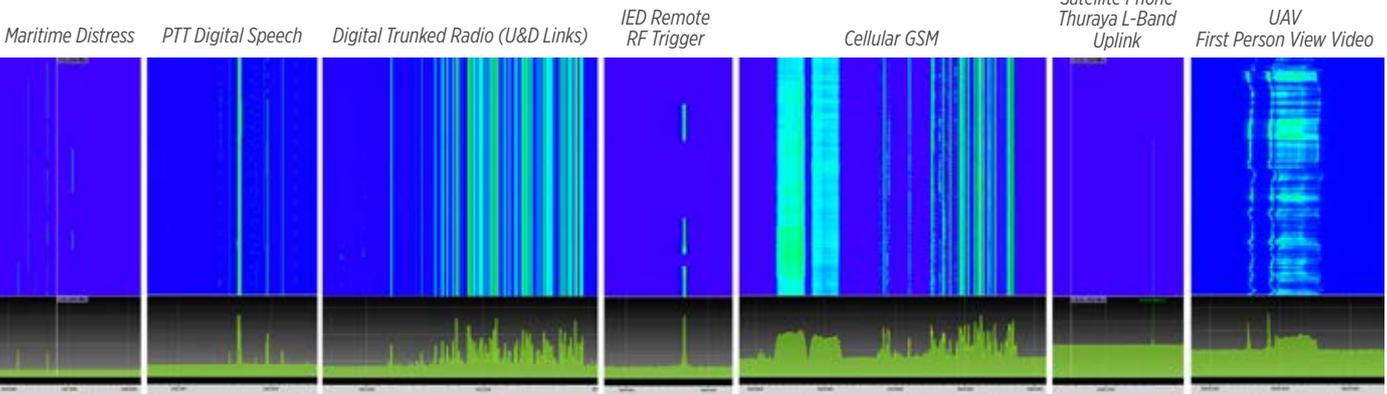


Spider deployed on a PA31 aircraft

TECHNICAL SPECIFICATION

Frequency range	20MHz to 6GHz
No. of wideband digitising channels	8
Instantaneous digitised bandwidth	100MHz per channel
No. of super resolution DF digital drop receivers	64
No. of DFs per second	64000
DF accuracy	typically 2° RMS
Instantaneous Spurious Free Dynamic Range (SFDR)	typically 85dB, (>120MHz)
Sensitivity (at wideband receiver input)	-115dBm (for 10dB SNR)
Wideband Sweep Rate (>100MHz)	40GHz/sec
Wideband and Narrowband IQ recording format	VITA49
Audio recording format	.wav

SWAP	
Antenna	1400mm x 400mm x 400mm, <20kg
Mission rack	19" rack form factor (scalable)



Sample spectrum outputs from the Spider system



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