

RAVEN AIRBORNE ECM Product Overview

Integrated
Airborne Suite

EAGLE
ESM Capability

COHO
ECM Capability

S-EAGLE
SIGINT Capability



The RAVEN (RF Airborne Volumetric Electronic Neutralization) system is an airborne electronic warfare suite for electronic warfare operational support application.

Derived from the Telemus AEWT integrated airborne electronic warfare system, the RAVEN was designed to take advantage of larger business jet platforms, such as the Challenger, the Embraer and the Gulfstream aircraft, where space and prime power availability ensure the full capability of the RAVEN suite can be realized.

With rising airframe modification costs, fuel costs and operating costs, the RAVEN suite aims to make available the most comprehensive and cost effective EW capability for each flying hour. In this way, maximum economic use of the RAVEN's capabilities can be made on each mission.

With the experience it has gained from working on the various Challenger related programs, Telemus has been able to apply many innovative solutions to increasing the capability and flexibility of an airborne avionics suite dedicated to all aspects of EW and passive surveillance. Telemus has also applied its experience to providing the highest possible

fundamental EW performance at the best possible overall cost.

By basing the RAVEN around a larger platform, Telemus anticipated the benefits of having an EW platform that will have longer endurance to support multiple tasks and/or multiple mission use. The RAVEN suite allows the aircraft platform to perform multiple types of missions using the same suite of equipment without black box change out.

RAVEN Options

- Missions/Modes/Configurations
- Radar EW and/or Communications EW
- EA & Threat Emitter Only
- SIGINT Only
- 1, 2, 4 or 8 Coherent Channels
- RAVEN's Claw High Power ECM Transmitter Pod
- High ERP Transmitters
- Transmitter Redundancy
- Millimeter Wave Operation
- Chaff and Flares
- GPS Target Tracking and Locating



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RAVEN Characteristics

- 0.03 to 18 GHz Standard
- 9.75 GHz (Fixed)
- Other Frequency Ranges Optional
- < -60 dBm Sensitivity
- High ERP
- > 80 dB Dynamic Range
- Instantaneous Bandwidth 500 MHz
- Coherent and Non-Coherent EA/ECM Noise and Deception
- Multiple Independent DRFM Channels
- Radar and Comms Signal Recording

RAVEN Features

- Integrated Airborne EW Suite
- Larger Business Jet Platform
- Fully Integrated EW Solution
- Comprehensive EA Capability
- S-EAGLE SIGINT Capability
- EAGLE ESM Capability
- Coho ECM Capability
- Coho Radar Signature Generator
- UDF or Point and Shoot ECM control
- Radar EW and/or Comms EW
- ESM/ES-ECM/EA-TES

The RAVEN is designed to operate as a full RF spectrum standoff jammer at realistic operating ranges, as well as operating in escort and self-protection roles against SAM/AAA. In its EA/ECM role, the RAVEN provides realistic and effective jamming of both surface and airborne radar and communications systems. These systems include long-range early warning search radar, GCI radar, acquisition radar, fire control radar, as well as air-to-air multi-mode intercept radar, airborne early warning radar, radar warning receivers, ESM receivers, navigation aids, and line-of-sight communications links.

With a Windows-selectable choice of ECM execution from UDF programming and/or real-time point-and-shoot EW operator ECM control, the RAVEN can provide a comprehensive and flexible EA/ECM response in any scenario. The ECM techniques available from the RAVEN include, but are not limited to the list below:

	Coherent ECM Techniques	Non-Coherent ECM Techniques
Range Deception	RGPO/RGPI RGPO/I + Hooks	
Velocity Deception	VGPO/VGPI VGPO/I + Hooks	
Range and Velocity Deception	R/VGPO/I R/VGPO/I + Hooks	
Angle	AM Inverse Gain	AM Inverse Gain
Range Jamming (with or without AM)	False Targets Range Masking RANRAP	Noise False Targets Cover Pulse Barrage Noise Spot Noise Swept Noise Sync Pulsed Noise RANRAP Blink Countdown
Range Jamming (with or without AM)	Velocity Noise Random Doppler Velocity Masking	NB Noise
Combinations	Yes	Yes



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