

# ISSYS – Integrated Self-Protection System



ISSYS provides aircrews with essential situational awareness of surrounding electromagnetic and laser spectrum environments.

## Description

ISSYS detects missiles approaching the aircraft and dispenses chaff and flare countermeasure for self-protection. As a customer-defined threat library, the detection, visual and aural reporting of threats as well as appropriate countermeasures per threat type can be defined.

## Integrated System

ISSYS consists of two parts:

1. Multi-Sensor Warning System (MSWS) for the detection of threats – all necessary sensors and a neuronal net-based Electronic Warfare Controller to detect radar and laser threat emissions over a wide spectrum. Also included are passive missile-approach warning sensors to detect Ultra Violet (UV) emission from approaching missiles.
2. Counter Measure Dispenser System (CMDS) – 2 to 16 latest generation chaff and flare dispensers specially adapted for operation on rotorcraft. The dispensers are capable of deploying the latest decoy units; any mixture of chaff and flare can be defined.



## System capabilities

<b>Radar Warning System</b>	0.7 to 40 GHz (pulsed)	Tangential sensitivity -59 dBm or better (-64 dBm typically)
	0.7 to 18 GHz (CW)	Tangential sensitivity -32 dBm or better (-36 dBm typically)
Capable of tracking up to 64 emitters in parallel		
<b>Laser Warning System</b>	Spectral wavelength coverage	0.5 to 1.7
	Probability of intercept	95% for a single pulse, 99% for multi pulse lasers
	False alarm rate	Less than 2 occurrences in 3 hours (1 alarm in 8 hours typically)
<b>Missile Warning System</b>	Field of view	110° conical field of view per sensor
	Typical detection range	5 km for a SAM-7 and > 5 km for a SAM-13
	False alarm rate	2 occurrences or less in 3 flying hours with high UV clutter 1 occurrence in 5 to 10 flying hours under normal conditions
	Probability of warning	> 99% for the following missiles: HN 5A, SAM-7, SAM-8, SAM-9, SAM-13, SAM-14, SAM-16, SAM-18, Stinger
	Capable of handling 10 threats simultaneously	



### Benefits

- Excellent self-protection capabilities (missile, laser & radar)
- Full integration into the platform
- Integration into MFD/HIS possible
- In-depth experience & knowledge of the complete solution
- MRO, analysis, integration, production, certification and training from a single source
- System safety analysis, system optimisation
- Detailed analysis and evaluation to guarantee safe and effective flare separation from the platform



### Your advantages

- Calculations/simulations for optimal system performance (sensor alignment, flare trajectories)
- Customised control unit to meet your operational requirements
- High performance electronic warfare (EW) system with high threat recognition rate and low false alarm rate
- EW system allows fast and efficient maintenance
- Integration into primary flight/navigation displays for additional aircrew awareness (glass cockpit)
- RUAG Aviation possesses complete end-to-end experience, i.e. system know-how, analysis and integration experience as well as MRO capabilities

