

SELF-PROTECTION SOLUTIONS

Integrated Self-Protection System



➤ The Integrated Self-Protection System provides aircrews with essential situational awareness of surrounding electromagnetic and laser spectrum environments.

DESCRIPTION

The Integrated Self-Protection System 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

The Integrated Self-Protection System 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

Radar Warning System	0.7 to 40 GHz (pulsed)	Tangential sensitivity –59 dBm or better (–64 dBm typically)
	0.7 to 18 GHz (CW)	Tangential sensitivity –59 dBm or better (–64 dBm typically)
	Capable of tracking up to 64 emitters in parallel	
TLaser Warning System	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)
Missile Warning System	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 possesses complete end-to-end experience, i.e. system know-how, analysis and integration experience as well as MRO capabilities

