



The Lockheed Martin Canada RAVEN System solution provides modern, effective on-board RF Electronic Countermeasures (ECM) through a wide range of jamming techniques. Deception, noise and self-synchronizing angle deception using cross-polarization combine to deny the exploitation of the electromagnetic spectrum by hostile forces. RAVEN provides 360° Anti-Ship Missile Defence (ASMD) self-protection for all naval platforms and is highly scalable. RAVEN consists of a set of steerable mid/high band antennas (6 to 18 GHz) with an option for low and/or very high band frequency coverage.

RAVEN builds upon the RAMSES (Reprogrammable Advanced Multimode Shipboard Electronic Countermeasures System) capabilities in service today with the Royal Canadian Navy through the introduction of modern technologies providing an open architecture that enables the RAVEN design to evolve more quickly to modern threats.

Unlike traditional radar jammers, RAVEN uses sophisticated RF and PRI prediction technology that is capable of producing both down-range and up-range false targets to a multitude of modern radar systems using complex PRI and RF agility patterns. RAVEN incorporates proven, leading edge, receiver technology to produce advanced deception and obsuration countermeasure waveforms against a variety of radar systems and radar-guided missile seekers.

RAVEN implements System on Chip (SoC) technology for the application of special mode techniques, soft-kill assessment, antenna stabilization and control. The SoC design is highly modular and easily adaptable to various antenna assembly and ship stabilization interfaces.

RAVEN is capable of performing both coherent and non-coherent radar countermeasures. The non-coherent channel is capable of AM and FM techniques with an instantaneous bandwidth of 1 GHz. The noise channel is constructed around a direct digital synthesizer for extremely fast and

Noise techniques can be set on with 1 MHz resolution and sweep bandwidths selected with 1 MHz resolution. The

RF Memory (DRFM). The DRFM is constructed around a 10-bit quantization ADC and DAC for low spurious responses. The DRFM memory depth is 1ms which allows use with wide pulse widths (i.e. pulse compression radars). The DRFM has an instantaneous bandwidth of 2 GHz and the centre frequency can be set on with 1 MHz resolution.





POLARIZATION

