

MMS

MAST MOUNTED SIGHT



SEE FIRST, UNDERSTAND FIRST, ACT FIRST AND FINISH DECISIVELY

Leonardo DRS' Mast Mounted Sight (MMS) is a unique surveillance system designed to meet the needs of today's battlefield operations. The MMS is a multi-sensor, fully integrated electro-optical sighting system with visible and infrared capability. Designed to be mounted above a helicopter's rotor, the MMS increases survivability through its capacity to identify and target potential threats in day, night and adverse weather conditions.

The MMS uses a combination of a high-resolution television camera, thermal imaging sensors and a laser rangefinder/designator to accomplish its mission. The imaging sensor package provides detection and recognition at night and in inclement weather, while the laser rangefinder/designator achieves precise target designation for laser-guided weapons. Mounted above the rotor of a helicopter, the MMS provides natural stealth and extended standoff range by allowing the craft to hide behind existing terrain while maintaining 360° surveillance.

The MMS offers a solid image through its stabilized sensor system. Known as the "soft mount", the stabilization system isolates the sensors and boresight system from vibration, pitch, yaw and roll motion.



MAST MOUNTED SIGHT (MMS)

FEATURE/BENEFITS

- Multi-sensor, fully integrated electro-optical sighting system
- Uses a combination of a high resolution TV camera and thermal imaging sensors

SYSTEM FEATURES

COMPONENT	DESCRIPTION
Television Sensor	Low Light Silicon Vidicon
Spectral Range	0.65 - 0.9 μm
Line Format	875
Field of View	Narrow 2.0°; Wide 8.0°
Thermal Imaging Sensor	640 x 480 element InSb detector
Spectral Range	3.8 - 4.8 μm
Line Format	875
Field of View	Narrow 1.6° x 2.0°; Wide 4.9° x 3.7°
Stabilization	Better than 20 μ Rad
Field of Regard	$\pm 190^\circ$ Azimuth, $\pm 30^\circ$ Elevation
Interface Architecture	MIL STD 1553
Track Capability	Auto - Tracker (Centroid, Scene, Offset)
Laser Rangefinder Designator	1.06 μm NdYAG
Turret Dimensions	25.5 inch diameter, 47 inch height



Mast Mounted Sight on a Kiowa Warrior SEP helicopter

FEATURE/BENEFITS

- Visible and infrared capability
- Mounts above helicopter rotor
- Stabilized “soft mount” system

MAST MOUNTED SIGHT

COMPONENTS AND SYSTEMS

TWO CARD SYSTEM PROCESSOR (TCSP)

- Weight reduction of 20 lbs and 1/2 LRU size
- 4X improvement in reliability
- Contains two identical CCAs - incumbent processors have 46 CCAs in total
- Allows net reduction of 45 CCAs and 1 LRU from Army's spare / depot pipeline
- Developed by DRS via Army ECP

DIODE PUMP-LASER RANGE FINDER / DESIGNATOR (DP-LRF/D)

- Drop-in replacement for old laser - same weight / CG
- Available shots improve by 10X to >10 million
- 3X improvement in reliability
- Integration into MMS with range validation performance
- DRS providing 2 year warranty from date of install

MMS LASER POINTER (MLP)

- Visible with NVG and TVS
- Field installed by FRA or FSR
- Laser pointer weight is minimal and no turret rebalance is needed
- Added Pilot safety by eliminating the need for finger pointing out the aircraft door and places laser pointer into the sighting system

MMS CENTRAL POWER SUPPLY 2 (MCPS 2)

- Total weight reduction of 8 lbs
- 2X increase in reliability
- Contains 8 CCAs
- Allows net reduction of 10 CCAs from Army's spare / depot pipeline

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