

LEOSS-T

LONG RANGE ELECTRO OPTICAL SURVEILLANCE AND TARGETING SYSTEM



LEOSS-T is the latest multi-sensor, high accuracy, 4 axes gyro-stabilised turret system designed for airborne surveillance applications.

It is designed to be integrated onto helicopters, turboprop aircraft to provide a targeting capability, where management of laser guided effectors is required.

LEOSS-T turret is a 15" system based on a modular payload, containing up to eight Electro-Optical (EO) sensors.

PAYLOAD CONFIGURATION

Up to 8 imaging and laser sensors can be selected:

- Medium Wave Infrared Camera (MWIR)
- Full HD TV Camera (FHTV) with Continuous Zoom
- 4K TV Spotter
- HD Short Wave Infrared (SWIR) Camera Spotter
- Laser Designator (LD)
- Eye-safe Laser Range Finder (LRF)
- Laser Illuminator (LI)
- Laser Marker (LM)

The system consists of a single LRU turret with embedded computer and an integrated Laser Code Management Unit (LCMU).

Designed to be compliant with demanding vibration profiles and multirole, it combines high performance sensors with a high performance turret to meet the operational needs of today's airborne rotary and fixed wing platforms as Close Air Support (CAS), Combat Search & Rescue (CSAR) and laser targeting.

KEY FEATURES

- Automatic Video Tracking (AVT)
- Target speed tracking
- Advanced Image Enhancement Features (Haze penetration)
- Contrast Stretching
- De-noise
- Local Area Contrast Enhancement
- Sharpening
- Electronic stabilization
- Augmented Reality
- Image Fusion
- Moving Target Indicator Mode (MTI)
- GEO-Pointing, GEO-Steering, GEO-Scan
- Map and waypoint management on MFD
- Video HD recorder
- Autoscan mode

TECHNICAL SPECIFICATIONS

THERMAL CAMERA

- IR Bandwidth 3µm to 5µm (MWIR)
- Detector HD FPA 1280 x 720 progressive scan
- FOV continuous zoom from 30° to 1.5°
4X digital zoom

TV CAMERA

- Detector Progressive scan global shutter CMOS
Removable IR cut filter for low light visibility
- FOV 10X optical zoom up to NFOV 2.5°
4X digital zoom

TV AND SWIR SPOTTER

- Detector scan 4K TV progressive scan global shutter CMOS
- FOV Continuous zoom from 1° to 0.47°
4X digital zoom
- Detector HD SWIR (1280 x 1024)
- FOV Continuous zoom from 1.8° to 0.8°
4X digital zoom

LASER DESIGNATOR (LD)

- General 1.064µm STANAG3733 (or any designation
code with a PRF in the range 8Hz to 23Hz)
- ITAR free

LASER RANGE FINDER (LRF)

- Laser Eyesafe
1.57µm
Class 1M

LASER ILLUMINATOR

- Power Adjustable from 0.5W to 10W pulsed/continuous
808nm
Class 4
- Divergence Wide, medium and narrow

LASER MARKER

- Power 100mW (nominal)
915nm, Class 3b
- Divergence Ultra narrow

PLATFORM TURRET

- Stabilisation 4 axes gyro-stabilised gimbal
- Steering Range Azimuth
- 360° continuous
Elevation -40° to +120° (ball up)
+40° to -120° (ball down)
- Maximum slew $\geq 60^\circ/s$ azimuth and elevation
- Total mass 50kg
- Dimensions
Diameter 381mm
Height 519mm
- Power 28VDC
650W (typical)
- Operating temperature -40° to +55°
- IMU/GPS Embedded
- User console One Multi-Function Display (MFD)
Dual Hand Control Grip (DHCU) or Single Hand
Control Grip (SHCU), Mini Hand Control Unit (MHCU)
- Interface Video HD-SDI, CVBS (PAL, NTSC), STANAG 3350A, H264 on ETH
- Interface links RS422, RS232, GB ETH, USB, 2xARINC429, 1x MIL-STD-1553B (redundant)
- Multirole capability
- Suitable for Land and Naval platforms
- ITAR free

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