

EOST-45/M - GEOS HIGH PERFORMANCE PASSIVE ELECTRO-OPTICAL SURVEILLANCE AND TRACKING SYSTEM

SELEX GALILEO is a leading supplier of stabilised airborne electro-optical sensor systems and has delivered turrets for fixed wing, rotary wing and unmanned aircraft platforms.

EOST-45 is a Multi-Sensors Turret System, based on a 3 sensors E/O payload, designed for the demanding airborne environment and roles.

It uses, both during day and night, a Thermal Imager operating in the medium wavelength spectrum ($3\div 5\ \mu\text{m}$). For day operations, including poor light conditions, it utilises a zoom TV colour camera, for target search, and a colour or B/W, high magnification, long range TV camera for target identification, even at long distance.

GEOS is the EOST-45 version including a shock-mount for helicopter installation.

TYPICAL MISSIONS

Maritime Patrol

All weather surveillance, day/night long stand-off range detection, identification and tracking of naval targets.

Search And Rescue

All weather, day/night detection of naval units in distress and/or men at sea.

Coast Guard/Police Operations

All weather, day/night detection and identification of illegal activities (immigration, smuggling, poaching, etc...).

Land Operations

All weather, day/night support to the operation of multirole armed helicopters employed for patrol, escort or protection of ground troops.

TECHNICAL CHARACTERISTICS

PLATFORM TURRET

4 axis gyrostabilized turret with Line Of Sight (LOS) stability <math><20 \mu\text{rad}</math>

Continuous rotation in azimuth: 360°

Wide vertical Field Of Regard (FOR): +20° / -120°

Equipment interfacing with Serial Line RS-422 or RS-232

Video output ITU472-3 (VBS-PAL)

SENSOR PACK

IR Camera (Erica)

Multi Functional Thermal Imager (MFTI) with Focal Plane Array (FPA) detector 384 X 288 operating in the 3÷5µm bandwidth

Optical fields Of View (FOV): 20°×15° ; 2,4°× 1,8° with 2 digital zoom

Auto/Manual Gain and Level control

Video output CCIR 625/25.

Daylight TV Color Camera /TVCC)

Continuous 16X zooming

Optical FOV 27°× 20° to 1,7°× 1,3°

Zoom, focus, colour sensitivity remotely controlled via serial link

Auto iris for automatic control of ambient illumination

White Balance modes: ATW (Automatic Tracking White balance), AWB (Automatic White Balance), One Push AWB

Video output PAL

Long Rang TV Color Camera (LRTVCC)

The LRTVCC is a colour or B/W sensor having an equivalent focal length lens of 460 mm

Optical FOV: 0,44° × 0,33°

Pixels 752 H × 582 V

Wavelength filters: FULL PASS, VISIBLE, NEAR IR and IR (1µm)

Sensitivity: better than 50 lux (Full Pass filter selected)

Automatic sensitivity control (ASC)

White Balance modes: ATW (Automatic Tracking White balance), AWB (Automatic White Balance), One Push AWB

Video output PAL

VIDEO AUTO TRACKER

The equipment provides an automatic target video tracker

Tracking modes are: Centroid Single Target
Centroid Multi Target (up to 5)
Correlation Area
Correlation Single Target
Correlation Multi Target (up to 5)

Video Polarity selectable: White or Black

Advanced operational features: Independent tracking function and display presentation.
Freeze
Auto focus.
Picture in Picture dual sensor display.

PLATFORM CONTROL UNIT (PCU)

The Platform Control Unit is used to provide the platform and sensors with power supply and controls.

Interfacing A/C mission avionics.

MAIN INSTALLATION DATA

Turret Dimension (mm): 500H ×350Ø (14")

Turret Weight (with sensor pack): Aircraft version ≤23.5 Kg
Helicopter version ≤29 Kg

Platform Control Unit dim. (mm): 129H ×233W × 231D

Platform Control Unit weight: ≤5.2 Kg

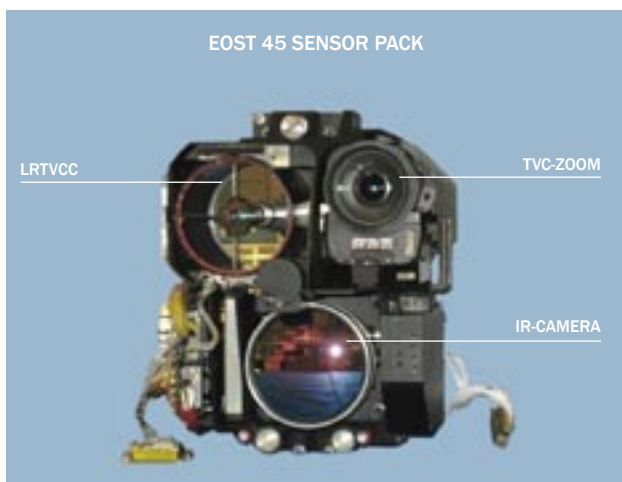
Power Consumption: 150 W (Typical); 400 W (max) at 28 VDC



AW109 Power helicopter



Piaggio P166 aircraft



Falco UAV