

NORTHROP GRUMMAN*Electronic Systems***RAVEN EYE II****Unmanned Multi-mission Stabilized Payload**

*Sensor configurations
may be customer-
tailored to meet
specific requirements*



Northrop Grumman Defensive Systems Division and Israel Aircraft Industries' TAMAM Division (TAMAM) have teamed to combine their expertise in the design and production of electro-optical (EO) payloads for intelligence, surveillance, targeting and reconnaissance for specified business opportunities. One of their first collaborations together is the RAVEN EYE II.

RAVEN EYE II is a family of advanced, off-the-shelf EO payloads designed for day and night operation including surveillance and targeting functions. It is based on the design of the TAMAM Multi-Mission Optronics Payload (MOSP). Over 400 MOSP systems have been supplied for different types of fixed- and rotary-wing platforms. The Unmanned MOSP is specifically configured for integration on the Vertical Takeoff Unmanned Aerial Vehicle (VTUAV).

RAVEN EYE II is supplied in triple sensor configurations that provide day and night observation, and laser rangefinding. Sensor configurations may be customer-tailored to meet specific requirements such as multiple day channels, fixed and variable zoom cameras, or a high quality color camera to provide broadcast image quality. RAVEN EYE II's small dimensions and excellent line of sight stabilization allow installation and use by virtually all helicopters, as well as other platforms that may require a high performance payload that is realitively small/light.

Benefits

- Full night and day observation
- Accurate target location for hand-off to forces or weapons
- Tactical laser
- Target identification prior to engagement
- Coastal patrol and airborne observation
- Intrusion detection for area or facility monitoring
- Anti-smuggling interdiction
- Ability to weaponize unmanned aerial vehicles (UAVs)

Features

- Rugged, low weight, highly-stabilized four gimbal construction
- Wide angular field of regard (including the nadir point)
- Selectable fields of view for increased range
- FLIR and TV cameras for day/night observation
- Automatic target tracking night and day
- User-friendly symbology features

RAVEN EYE II

Unmanned Multi-mission Stabilized Payload

Operating Modes

- Manual or remote payload control
- Slaved to other designating sources, such as navigation and radar
- Body fixed and stow

Basic Configuration

- Day channel: TV camera (monochrome or color CCD)
- Night channel: FLIR (3rd gen 3 to 5 μm FPA)
- Laser Designator and Rangefinder
- Automatic Video Tracker

Operation

- Temperature ranger: -30° to +55°C
- Stabilization: Better than 15 μrad
- Speed: Up to 400 knots
- Altitude: Up to 40 kft

RAVEN EYE II Configurations	Notation	Status
FLIR and Day TV	EO-IR	Available
FLIR and LRF	EO-IR-LRF	Available
FLIR and Day TV and LTD/LRF	EO-IR-LDRF	Available
FLIR and Day TV and LRF/Pointer	EO-IR-LRFP	Available
FLIR with Day TV and LTD/LRF/Pointer	EO-IR-LDRFP	Option
Large Format FLIR, Day TV, LTD/LRF/LP	EO-IRA-LDRFP	Option

Specifications (typical)

Dimensions (of the stabilized payload)

Diameter15 in/380 mm
Height20 in/500 mm

Weight (varies with sensor configuration)

Payload71 lb/< 32 kg
Total110 lb/< 50 kg

Spatial Coverage

Elevation +30° to -95°
Azimuth n x 360° (continuous)

Angular Velocity

Up to 60°/sec

TV Camera

Continuous zoom:
20 to 770mm:
Wide FOV13.6° x 10.2°
Narrow FOV 0.4° x 0.3°

Monochrome or color
1/3" one CCD TV camera
RS170 or CCIR
NTSC or PAL video output
Manual focus adjustment
Growth:
1/4" one CCD TV camera
1/6" one CCD TV camera
Multicolor three CCD TV camera

Thermal Imager (FLIR)

3rd Generation:
256 x 256 InSb FPA 3 to 5 μm with microscan
FOV:
Wide13.5° x 13.5°
Medium2.9° x 2.9°
Narrow0.73° x 0.73°

Auto/manual gain and level
Auto/manual focus
Polarity black/white hot
RS170
Growth512 x 512 FLIR
Low level gated TV

Lasers

Diode pumped type
Laser designator and rangefinder
1.06 μm
Growth: Eyesafe 1.57 μm LDRF

Interfaces

RS422 communication data bus
RS170 or CCIR video signal
Power requirements (average)
280 W at 28 VDC (day/night)

For more information, please contact:

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