CATS
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ELECTRO-OPTICAL RECONNAISSANCE, SURVEILLANCE AND TARGETING SYSTEM

#ElectroOptics



- COMPACT AND LIGHT-WEIGHT SYSTEM
- COMMON APERTURE WITH PRIMARY MIRROR OF DIAMETER 220 MM
- SINGLE-LRU SYSTEM
- SUPERIOR RANGE PERFORMANCE
- HIGH PERFORMANCE IR CAMERA
- TRUE FULL HIGH DEFINITION HD DAY TV CAMERA
- LOW LIGHT NIR CAMERA
- LASER TARGET DESIGNATION
- INTERNAL BORESIGHT SYSTEM (IBS)
- HIGH PRECISION 4 AXIS MECHANICAL + 2 AXIS OPTICAL STABILIZATION
- OPERATION IN VERY LOW TEMPERATURES IN HIGH ALTITUDES

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ELECTRO-OPTICAL RECONNAISSANCE, SURVEILLANCE AND TARGETING SYSTEM

CATS is a high-performance electro-optical, reconnaissance, surveillance and targeting system developed for Unmanned Aerial Vehicles (UAV). Multispectral optical aperture combines multiple optical channels in a single channel so that the system has high range and imaging performance even in adverse weather conditions without increasing size and weight.

Main Feautures

- Common Aperture with Diameter of 220 mm
  - Very Large Aperture for Narrow FOVs and Very Narrow FOVs of IR, HD Day TV and LL-NIR Cameras
  - Larger Aperture Means Lighter and Therefore Better Image Quality and Better Range
- Compact and Light-Weight System
- Single-LRU System
- Superior Range Performance
- High Performance IR Camera
- True Full High Definition (1920x1080) HD Day TV Camera
- Low Light Near Infrared (LL-NIR) Camera
- Common FOVs for IR, HD Day TV and LL-NIR Cameras
- Laser Range Finder and Target Designator
- Laser Pointer and Illuminator
- Internal Boresight Unit
- All-Digital Video Pipeline
- Advanced Image Processing
- Multi Target Tracking
- Accurate Target Geo-Location
- Determination of Coarse and Speed of Moving Target
- Inertial Measurement Unit (IMU)
- Accurate Stabilization
- Automatic Alignment with Platform
- Operation in Very Low Temperatures in High Altitudes

Technical Specifications

Primary Mirror Diameter : 220 mm

IR Camera

- Sensor Resolution : 640x512
- Field of Views (Horizontal) : 0.5° - 0.9° - 3.2° - 7.2°- 15.2° - 30°
- Wavelength : 3-5 µm (MWIR)

HD Day TV Camera

- Sensor Resolution : 1920x1080
- Field of Views (Horizontal) : 0.5° - 0.9° - 3.2° - 7.2°- 15.2° - 30°

LL-NIR Camera

- Sensor Resolution : 816x624
- Field of Views (Horizontal) : 0.5° - 0.9° - 3.2° - 5.5° - 15.2° - 30°

Field of Regard (FOR)

- Azimuth : 360° continuous
- Elevation : +57° to -105°

Laser Range Finder and Target Designator

- Wavelength : 1064 nm
- Range : Up to 35 km
- Repetition Range : Up to 20 Hz
- Coding : STANAG 3733 Band I and II

Laser Pointer and Illuminator

- Wavelength : 808 nm
- Laser Pointer Wavelength : NIR (Compatible with NVGs)
- Laser Illuminator Wavelength : NIR (Compatible with LL-NIR Camera)

Communication Interface : RS-422, MIL-STD-1553B

Video Interface

- 4x SMPTE-292M HD-SDI (1920x1080p)
- 2x PAL

Power Interface : 28 VDC

Size

- Width : 427 mm
- Height : 519.5 mm (Forward position)

Weight : 55 kg ±5%

Temperature

- Operating : -40°C to +50°C
- Storage : -55°C to +70°C

Specifications are subject to change without any notice. | All tolerances are within ±10%.



CALL CENTER +90 850 360 10 30 | P: +90 (312) 592 10 00 F: +90 (312) 354 13 02 | meosmarketing@aselsan.com

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