

CATS

ELECTRO-OPTICAL RECONNAISSANCE, SURVEILLANCE AND TARGETING SYSTEM

COMMON APERTURE WITH PRIMARY MIRROR OF DIAMETER 220 MM

COMPACT AND LIGHT-WEIGHT SYSTEM

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 Features

- 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° and between 3.2° - 30° continuous zoom
LL-NIR Camera	Sensor Resolution: 800x600 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: -54°C to +52°C Storage: -55°C to +70°C