Surveillance & Security

GEM elettronica

EOSS-500/RFI

ELECTRO-OPTICAL SURVEILLANCE SYSTEM

DESIGNED FOR H.24 OPTRONIC SURVEILLANCE ESPECIALLY FOR SECURITY APPLICATIONS.

FEATURES

- Hi-Res MWIR camera and Day Light / Low Light cameras
- Laser illuminator allowing to read a ship's name with 0.5 m characters at a distance not less than 0.5 NM in total darkness
- Image blending: Blending between IR and Daylight camera
- Image functions: freeze frame, Picture in Picture, split screen

SUPPLY COMPOSITION

- Electro-Optical stabilized Turret with:
  - MWIR HD thermal imager
  - HD Day Light Camera / Low Light camera
  - SWIR spotter scope
  - Laser range finder
  - Laser illuminator (option)
- Rugged Motion Control Unit
- Installation kit
- Technical manual of the system in English language
- Certificate of conformance
- Packing list

EOSS-500/RFI

Dynamic features

Control angle:
- Azimuth: Continuous N x 360° (with slip-ring)
- Elevation: -20° to +70°

Slewing Velocity: > 130°/s
Stabilization error: better than 50 µrad

MWIR HD thermal imager

Detector Type: cooled FPA 10 µm pixel pitch
Resolution: 1280 x 720
Spectral band: 3÷5 µm
Lens: 18÷330 mm, continuous zoom, F/4
Field of view (H): narrow (NFOV): 2.3°
wide (WFOV): 39°
Optical zoom: > 18x
Digital zoom: 1.5x / 2.0x / 4.0x
Focus control:: manual / automatic
Cooler: Stirling microcooler
Cooldown time: < 7 min @ 20°C
NETS (sensitivity): ≤ 30 mK

Detection performance:
(Target ΔT ≥ 2°C)
(Attenuation = 0.65 dB/km)

Target type	Detection	Recognition	Identification
Man (1.8 x 0.5m)	9.5 km	4.5 km	2.5 km
NATO (2.3 x 2.3m)	19.0 km	11.0 km	6.0 km

SWIR spotted scope

Wavelength: 1000÷1700 nm
Sensor type: Indium Gallium Arsenide (IngaAs)
Field of view (H): narrow (NFOV): ≤ 1°
wide (WFOV): ≥ 30°
Optical zoom: ≥ 30x
Electronic zoom: 4x
Gain Control: automatic

HD Day Light Camera / Low Light Camera

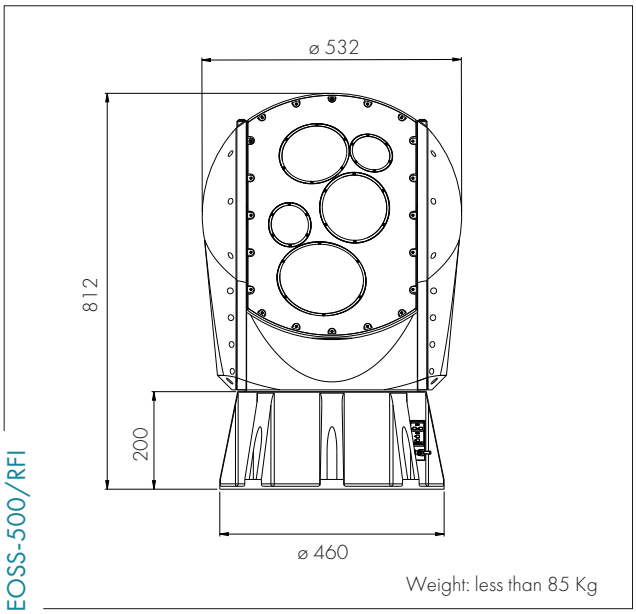
Type: colour 1/1.9" CMOS sensor
Max aperture ratio: 1:1.6
Video resolution: PAL: 1920(H) x 1080(V), 2.07 Mpixel approx
Field of view (H): NFOV: ≤ 2°
WFOV: ≥ 20°
Optical zoom: ≥ 20x
Sensor gain: automatic / manual
S/N ratio: 50 dB (rms) or better
Day/night mode: selectable in auto / manual mode
Minimum illumination: Colour mode: 0.05 lux@F1,2
B/N mode: 0.01 lux@F1,2

Laser Range Finder

Transmitter type: flashlamp pumped Nd:YAG laser
Wavelength: 1.57 µm, eyesafe (Class 1), linear polarization
Receiver type: APD photo diode based type
Beam divergence : 0.4 ± 0.1 mrad
Receiver FOV: 1 ± 0.1 mrad
Repetition rate: Continuous: 1 Hz
Burst mode: 3 Hz for max. 10 s after an idle period of 30 s min.
Measuring range: from 50 m to 20000 m
Measuring accuracy: +/- 1 m
Range discrimination: 5 m

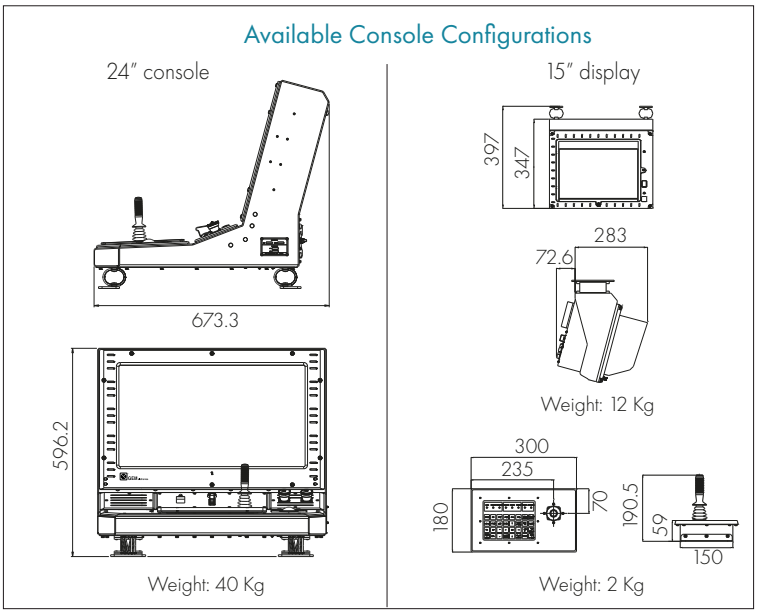
Laser illuminator

Energy: 10 mJ
Duration: 10 ns
Repetition rate: from single pulse to 30 Hz
Divergence: 0.5 ÷ 10 mrad
Diameter of lightened area: 4 ÷ 20 m (at any range between 0.2 and 10 Km)



Weight: less than 85 Kg

Available Console Configurations



Weight: 40 Kg
Weight: 12 Kg
Weight: 2 Kg

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