

EOFCS-115A MK4



NAVAL ELECTRO-OPTICAL FIRE CONTROL SYSTEM (EOFCS)

The EOFCS-115A **MK4** is GEM's top of the line EOFCS family system. This system is a High performance system based on multi-camera sensors designed for all-weather conditions. The system provides training, elevation and range data to a fire control or command system for target indication and weapon control purposes, and can be used as a remote observation and tracking sensor for navigation and surveillance purposes. Most of most common gun systems can be interfaced.

System key features:

- SWIR spotted scope
- SWIR illuminator
- High performance HD resolution MWIR Camera
- HD Daylight & Lowlight Camera
- Laser Range Finder
- IR & Daylight camera fusion
- Image recognition based on Neural Network & Artificial Intelligence technology
- Designed for all-weather conditions in harsh & demanding environments.
- Weapon system management for fire control
- Most advanced optronic subsystem determining the precise aiming parameters for the weapon system by optically tracking targets
- Rugged multifunctional compact console exploiting LCD technology with powerful software for ballistic calculations for several types of weapon systems (guns, missiles, etc.)
- High performance processing techniques including multilevel threat discrimination
- Built In Test Equipment (BITE) on the control console, capable to detect a fault to the LRU level
- Electronic alignment of sensors
- Fully automatic search, detection and acquisition reducing operator workload
- Target video tracking with information about target distance, bearing, speed, course, CPA etc., capable to handle external tracking requests

Equipment specifically designed for ease of installation and maintenance which, together with high reliability, keep through-life costs to a minimum.

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DYNAMIC FEATURES

Control angle:
 Azimuth: Continuous N x 360° (with slip-ring)
 Elevation: -20° ÷ 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): ≤ 2°
 wide (WFOV): ≥ 32°
 Optical zoom: ≥ 16 x
 Electronic zoom: 4 x
 Gain Control: automatic

HD DAY LIGHT CAMERA / LOW LIGHT CAMERA

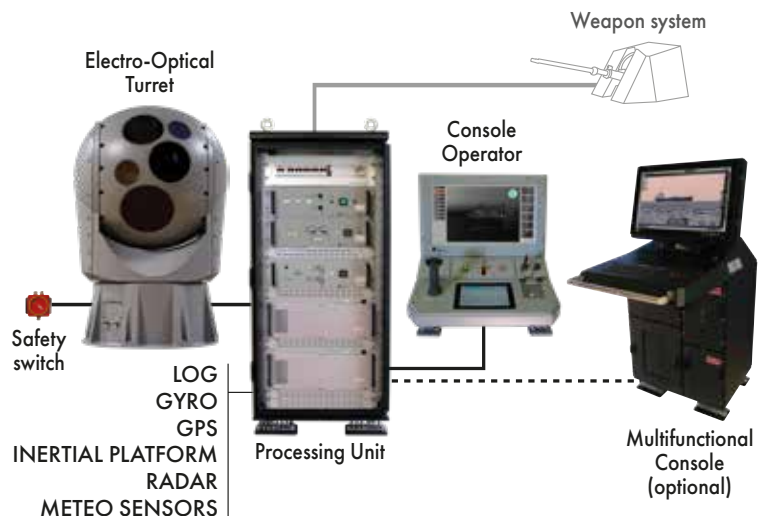
Type: colour 1/1.9" CMOS sensor
 Max aperture ratio: 1:1.6
 Video resolution: PAL: 1920(H) x 1080(V), 2.07 Mpixel approx
 Field of view (H): NFOV: ≤ 1.6°
 WFOV: ≥ 32°
 Optical zoom: 20x
 Sensor gain: automatic / manual
 S/N ratio: 50 dB (rms) or better
 Day/night mode: selectable in auto / manual mode
 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: 1.5 µm, eyesafe (Class 1), linear polarization
 Beam divergence: 0.4 ± 0.1 mrad
 Repetition rate: Continuous: 1, 4, 10, 100 Hz
 Measuring range: from 50 m to 20000 m
 Measuring accuracy: +/- 1 m
 Range discrimination: 5 m

SWIR ILLUMINATOR

Wavelength: 1 µm
 Power: max 3 W
 Divergence: 0.5 ÷ 10 mrad
 Diameter of lightened area: 4 ÷ 20 m (at any range between 0.2 and 10 Km)



This brochure should not be considered a contractual offer. The specifications given herein may be changed by the manufacturer, GEM elettronica, without notice.

