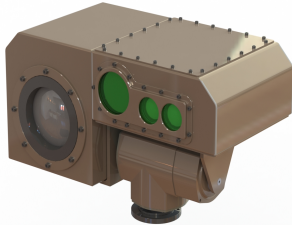


Product Data Sheet

FireFly® CMSLRF01

ER1, ER2 ER3 (extended range)

Compact Medium Range Multi Sensor Visual/Thermal Camera Head
with Laser Rangefinder and Pan/Tilt



Features

- **30X Colour/Mono HD Starlight Zoom Camera**
- **800 x 600, 17µm LWIR**
Standard: 100mm lens
ER1: 150mm
ER2: 30~180mm
ER3: 25~225mm
- **4Km Laser Rangefinder**
- **Variable Speed Pan/Tilt**
- **Thermal HFOV**
Standard: 7.8°
ER1: 5.2°
ER2: 3.5°
ER3: 2.8°
- **Optical Zoom**
63.7° ~ 2.3°
- **Low Light**
0.01 lux (Colour ICR ON)
0.0015 lux (Mono ICR OFF)
- **Sealed & Pressurised**
- **Optional Electronic Reticle**
- **Designed for medium range surveillance, radar boresight, targeting applications**
- **OEM systems integration**

The FireFly® CMSLRF01 is a multi-role Video Camera/Thermal Imager/ Laser Rangefinder camera head system with an integrated pan/tilt unit in a compact package which can be used for Border Surveillance, Mast Mounted Systems, Vehicle and Shipborne applications.

Extended Range Versions provide Thermal Imager performance increase over the standard fixed version and zoom lenses can also be supplied for ultimate performance

Featuring a high sensitivity colour/mono zoom camera which will operate in starlight conditions combined with an uncooled thermal imager which in standard mode is 800 x 600 pixel resolution. Mounted coaxially with the sensors is a 4Km laser rangefinder. ER Versions operate at 640 x 480 resolution, under software configuration at time of manufacture.

The integral positioner (pan & tilt) allows XY movement control with feedback.

For OEM integrators the camera/LRF head is available as a separate unit and as split modules

Control is by IP or separate serial data link.

A variety of control panels are available including a TeleCase option with built in Digital Video Recorder, 13.3" wide screen display and multi-picture display. Features include motion and crossing detection and alarm.

Stabilisation is also optional

The compact design and light weight package, enables use on a wide variety of applications e.g fast RIBs, offshore patrol boats, coastguard vessels, lifeboats, patrol vehicles, portable surveillance systems, base protection etc.

Specifications

Sensor Camera

Type: 1/12.8" Backlit CMOS. CMOS Total sensor pixels 2.13MP
Lens: 4.3 - 129mm, 30X. Presets
Field of view (H)° 63.7° - 2.3°
Systems: HDTV 1080P 1920 x 1080, 1280 x720 Analogue CVBS
Sensitivity: Colour: 0.01lux (ICR On)
Monochrome: 0.0015lux (ICR Off)
Video Compression: H.264 BP/MP/HP, H.265 main profile, MJPEG
Functions: Infra Red Cut Filter, 3D Noise Reduction, Defog Setting, Auto/Manual White Balance, Electronic Shutter, Auto/Manual focus. Up to 12x digital zoom
Alarm: Motion detection,

Thermal Imager

Type: LWIR Uncooled
Resolution: 800x600. 17µm software configurable
Sensitivity: <40mK
Lens: Standard: 100mm F1.1. Motorised Focus Digital Zoom (2x, 4X)
Extended Range1: 150mm F1.6. Motorised Focus (640 res)
ER2 Zoom: 30-180mm, F1 - F1.2 Motorised Zoom, Focus (640)
ER3 Zoom: 25-225mm, F1.2 - F1.5 Motorised Zoom, Focus (640)

Laser Rangefinder Option:

Type: Eyesafe, 905nm. Class 1
Power: >10mJ
Rate: 1Hz
Data: Serial output and control
Range: 4kms vehicle. 3kms man
Resolution: 1m
Laser Divergence: <2mR
Spot Size at 1000m: 50mm

Pan/Tilt Unit (alternatives available)

Payload: >6Kg
Operating Angle: Pan: ±185° Tilt: +30° - -90°
Speeds: Pan: 0-30°/sec Tilt: 0-10°/sec
Control: Serial data, built in controller. Presets

Range	Person/Vehicle	Detection	Recognition
Standard:	Day/Night Sensor	10.3km / 31km	2.6km / 9.3km
Standard	Thermal Fixed (100mm)	4Km / 9km	1.5Km / 3.5km
ER1:	Thermal Fixed (150 mm)	6Km / 13.5km	2.3Km / 3.4km
ER2:	Thermal Zoom (180mm)	7km / 16Km	2.7Km / 4Km
ER3:	Thermal Zoom (225mm)	9km / 20Km	3.3Km / 7.7Km

Options

Automatic Target Tracking using Charm Video Processor Built-In
Extreme Environment 850nm IR LED Illuminator (500m) (940nm available)

Environmental

Shock: Half sine wave, 30g, pulse length 6ms, 3X in direction of mount
Vibration: 10Hz-40Hz, 0.015g²/Hz ; 40Hz-500Hz, 0.00015g²/Hz ; Rms:1.04291g, 5min, Xaxis
Operating Temp: -30°C to +60°C Storage Temperature: -30°C to +70°C
Environment: IP66 Mounting: Top, Bottom, Side at time of order

E&oe