

# Electro Optical Tracking System (EOTS)

## INTRODUCTION

Electro Optical Tracking System is a high performance electro optical stabilized gimbal system integrated with video tracker which facilitates battlefield surveillance, target acquisition and auto tracking during day as well as night on a static and dynamic platform. It consists of EO sensors viz. Thermal Imager, Day TV and Eye Safe Laser range finder and beam directing optical channels as payloads. Continuous target tracking capability facilitates high precision pointing on the target. The system is capable of tracking the targets like UAVs and Drones at a range of 5 Kms. This Electro Optical Tracking Systems has a unique feature of autonomous tracking of the target after receiving a cue command from external source like RADAR.

### SALIENT SPECIFICATIONS

**Range Performance:** for UAV target (1.2 m x 0.2 m Fuselage)

(Tracking Range)

**ELRF:** 5 Km

**Day Camera:** 5 Km

**Thermal Camera:** 5 Km

**EOTS Gimbal Stabilisation Accuracy:** 25  $\mu$ rad ( $1\sigma$ )

Payload weight : 175 Kg

**Tracking Accuracy:** 100  $\mu$ rad @ 3<sup>0</sup>/sec

**Operational Tracking Range:** 1 km – 5 km

## TECHNOLOGIES INVOLVED

The development of Electro Optical Tracking System (EOTS) involved the development of following technologies:

- Development of 2 –Axis Stabilized Gimbal for large inertia payloads
- Development of Thermal Imager
- Development of a Day Camera
- Development of an Eye Safe Laser Range Finder
- Development of Video Tracker
- Autonomous Tracking on cueing from external source
- Integration of EOTS Gimbal with Platform

*All the above technologies were successfully developed at IRDE (DRDO) Dehradun.*

Interested industries may write at the following address:-

1. Director, IRDE  
DRDO, Min. of Defence,  
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Dehradun – 248008  
Fax: 0135-2787161/ 2787128
2. Director, DIITM, DRDO HQ,  
Min. of Defence, DRDO Bhawan,  
Room No. 447, B Block,  
Rajaji Marg, New Delhi - 110011  
Fax: 011-23793008
3. Mr. Avnish Kumar, Associate Director  
IRDE, Dehradun Phone: 0135-2787294

Kindly give following information

## Appendix G: Format for Seeking Expression of Interest (EOI)

Expression of Interest (EOI) will be sought through notification in all leading National dailies and DITM portal of the DRDO website ([www.drdo.gov.in/drdo/English/indexCorpDir.jsp?pg=tech\\_commercialisation.jsp](http://www.drdo.gov.in/drdo/English/indexCorpDir.jsp?pg=tech_commercialisation.jsp)). Following information will generally be sought through the EOI:

- (a) Memorandum and Articles of Association (Should be incorporated as per Indian Companies Act, 1956)
- (b) Certificates of registration as a manufacturing unit, if any.
- (c) Balance Sheet for the preceding three years.
- (d) Income Tax returns for the preceding three year period
- (e) Details of shareholding/ownership pattern especially foreign partners/ shareholders, foreign employees, directors, etc. The company must adhere to the prevailing Govt of India policies and regulations on Foreign Direct Investment (FDI)/DIPP norms as applicable.
- (f) Annual budget for R&D during last three years.
- (g) Numbers and details of IPR or patents, etc., held by the company.
- (h) Number of technically or professionally qualified personnel.
- (i) Record of past performance (e.g., Supply orders executed against of Ministry of Defence orders, Public Sectors and Paramilitary Forces, if any).
- (j) Availability of adequate infrastructure (List of machines and their production capacities) and technical expertise.
- (k) List of Testing and Support equipments
- (l) ISO/ ISI certification or any other certification
- (m) Relevant clearances form the authorities/ ministries (if any)
- (n) Capacity and capability to undertake developmental work and to accept attendant financial and commercial risks.
- (o) Capacity/capability to market the product through the marketing network, sales and service network, reliability to maintain confidentiality.