

Border Surveillance System

INTRODUCTION

Border Surveillance System has been developed to carry out all weather surveillance & to monitor the border area. It consists of Battle Field Surveillance Radar (BFSR) & EO payload (consists of day camera, eye-safe LRF & MWIR TI, DMC & GPS) mounted on the pan-tilt unit kept at the observation tower. It is equipped with hybrid energy source. It transmits the real-time video & data at a distance 20 km to control station through Wireless & Fiber optic link.

IRDE has designed and developed Border Surveillance System for High Altitude Border Area.

SPECIFICATIONS

Range Performance:

(Detection Range)

BFSR-XR: 10 Km (Light Vehicle); 08Km (Gp of Person)

Day Camera: 12 Km (Light Vehicle); 10Km (Gp of Person)

Thermal Camera: 10 Km (Light Vehicle); 08Km (Gp of Person)

Data & Video Transmission Capability

Up to 20 Km over Optical Fiber transmission Cable and Wireless (LOS)

Environmental:

Storage Temperature: - 40° to +55° C

Operating Temperature: - 30°C to + 55°C Applicable JSS

5855-11:2009 (in conjunction with JSS 55555)

FEATURES

Image Processing modules: Image Enhancement, Video Mosaicing, Automatic change detection, Map overlay & Target Profile generation Activity log, MMI Control & external interface

On-Site recording: 14 days

Modes of Operation: Radar only, EO only, Radar & EO mode

Integrated De-icing and De-fogging module & Security camera

TECHNOLOGIES INVOLVED

The development of Border Surveillance System involved the development of following technologies:

- Development of EO payload consisting of thermal & day camera, LRF, GPS and DMC
- Development of change detection unit with HMI such as image enhancement for improved detection & recognition, video mosaicing (Panoramic view), automatic change detection, Map overlay & target profile, Activity log
- Development of Hybrid renewable power source for Border Surveillance System Unit
- Development of Control unit for monitoring station
- Integration of EO Payload with radar

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

Interested industries may write to Director, IRDE, Dehradun at the following address:-

1. Director, IRDE

DRDO, Min. of Defence,

Raipur PO

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

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3. Mr. Manoj Purohit, Dy. Director (Technology)

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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 DI²TM portal of the DRDO website (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.