

Name of Technology: Multistatic Surveillance System (MSS)

Developed by: Electronics & Radar Development Establishment (LRDE), (Lead Laboratory) & Defence Electronics Research Laboratory (DLRL), DRDO

Multistatic Surveillance System (MSS) is a novel and effective system for detecting and tracking aerial targets. Armed forces have been using monostatic radars extensively for last few decades for this purpose. However, with increased radar performance requirements and advanced anti-radar tactics, monostatic radars are facing unprecedented challenges and threats in current scenario. Among these, the most serious challenges are detection and tracking of low observable targets, Anti-ARM operation and Jammer resistant operation. To mitigate these issues the Multistatic Surveillance System (MSS) has been designed and developed indigenously by DRDO.

The system can detect and track aerial targets using multiple types of sensors, transfer the information to command-and-control station. The detection and tracking of aerial targets are accomplished by a combination of Radar and EW sensors. The tracks from each of the systems are associated and a common air situation picture is provided to the user. These are technologies indigenously developed by DRDO.

Multistatic Surveillance System (MSS) is a passive multistatic surveillance system consisting of three complementary Multistatic Radar Technologies viz.

- Passive Coherent Location Radar (PCLR)
- Multistatic Surveillance Radar (MSR)
- Passive Emitter Tracker (PET)

Passive Coherent Location Radar (PCLR) carries out aerial target detection and tracking utilizing opportune broad band emissions such as FM radio.

Multistatic Surveillance Radar (MSR) carries out aerial target detection and tracking utilizing emissions from cooperative Radars.

Passive Emitter Tracker (PET) carries out aerial target detection and tracking utilizing on board emissions.

The cutting-edge technologies used leverage spatial diversity, and non-traditional configuration overcome limitations of the monostatic radars. Multistatic radar systems, which utilize multiple geographically separated transmitter and receivers, provide effective detection of stealth targets. Radar capabilities are augmented with EW capabilities with location fix to give a comprehensive emitter characterization. A demonstrable version of MSS system in static and mobile variants has been developed by DRDO and has been demonstrated

Salient features

- i. MSS is a Passive, multistatic, green surveillance system not emitting any further electromagnetic emissions.
- ii. **Multistatic Surveillance System (MSS)** can be deployed as an integrated system or three independent fully functional systems viz. PCLR, MSR and PET.
- iii. **MSS** is scalable and more number of sensors can be integrated for increased coverage
- iv. Capable of multiband operation, with MSR, PCLR and PET operating in different frequency bands
- v. Cost effective and green continuous inland surveillance, gap free border surveillance and early warning of aerial threats across the country's territory.
- vi. Effectively augment existing active radar and EW ELINT deployments
- vii. Remotely operated with minimal crew

1. Interested industries are requested to forward their Expression of Interest (EoI) (with supporting documents as per Annexure A, Part-1 & Part -2 attached) to the addresses mentioned below:-

The Director

Electronics and Radar Development Establishment (LRDE)

C V Raman Nagar, Bengaluru - 560093

Phone No – 080 - 25025750/ 25025615

Fax No – 080 – 25242916

Email: director.lrde@gov.in

2. A copy of the EoI (without the attachments/ documents) may be sent to the address mentioned below:

The Director

Directorate of Industry Interface & Quality Management (DIIQM)

Room No 447, DRDO Bhawan, DRDO HQrs, Rajaji Marg,

New Delhi – 110011

Phone: 011-23013209/ 23015291

Fax: 011-23793008

Email: director-diiqm-hqr@gov.in

- 3 **Special/ Additional Conditions:**

- a) **EoI Closing Date: 21 days** from the date of publication on DRDO website.
- b) **Industrial License:** Industries applying for ToT should be essentially in possession of atleast one Defence Industrial License issued by Ministry of Commerce and Industry, DIPP as per Press Note No. 1, (2019 series) at Annexure-I, S.No.(1)(iii) – “Allied Items of Defence Equipment” - Para 1(i) and 1(iii) under any one of the following categories:
 - 1(i) : Electronic Equipment used for Electronic Counter Measure (ECM) and Electronic Counter Counter Measure (ECCM), Surveillance, Intelligence, Command and Control systems.
 - 1(iii): Data processing, storage and transmission security equipment, identification and authentication equipment (including identification friend or Foe) and non-cooperative target return identification systems.

(Note: Industry partner will require to obtain all requisite industrial licenses for manufacturing the system / sub-system)

- c) **Technical Experience:**

The industry partner should have the following technical capabilities/ domain expertise and facilities:

(i)	Software development, testing and documentation capabilities	Details about manpower available with Industry partner to be provided. The industry partner should have a team with minimum three employees working in Antenna Design and Development, three employees working in Receiver Design and Development and three employees working on Software
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		development of signal processing and data processing. Also licensed software such as MATLAB and documentation tools should be available. The firm should demonstrate well-defined process and configuration control for documentation & Software. Evidence through licensed version control tools should be provided
(ii)	Firmware development, testing and documentation capabilities	The industry partner should have atleast a team with minimum two employees having skill set in usage of XILINX tools, as it is critically required for sub-system development.
(iii)	RF and digital subsystem integration testing facilities and expertise	Industry partner should have required test equipments such as Signal Generators, Vector Network Analyzer(VNA), Spectrum Analysers capable of measuring Signal Power & frequency upto 18GHz.
(iv)	System integration and testing facilities and expertise	Industry partner should have relevant experience and expertise for integration and testing microwave and RF systems upto 18GHz. The Interested Industry partner must possess or should have an MOU/Agreement with other industry for necessary infrastructure facilities for system integration and testing, including assembly halls, antenna test range, Radar and EW test range, communication test facilities.
(v)	Supply chain management	Proof of supply chain management process to be provided for the executed supply orders. The proof of supply chain can be proven with evidence of certificate /MoU/agreement.
(vi)	Radar and EW system testing, evaluation, fielding, and delivery capability	a) The Interested ToT partner should have been in the business and operating for a period of atleast five years in India in development and delivery of Radar systems/ subsystems and EW systems/ subsystems and accepted by Indian Armed Forces/ Govt. Agencies/ PSUs. b) Proof for deliveries and acceptance of systems/ subsystems should be provided while responding to EOI
(vii)	Engineering capabilities	The Interested Industry partner should have experience of developing complex systems for military use covering multiple domains of engineering, including RF, electrical, electronics, mechanical, microwave and digital systems. The evidence of experience be established with certificate from Customer/ Services / supply order.
(viii)	Quality related capabilities	The Interested ToT partner should have an established QA process with well laid procedures covering inspection, assembly, testing and documentation as per MIL-STD-810 and MIL-STD-461.

- d) **Turnover of the Industry:** An average turnover of Rs. 300 Cr per annum for the last three Financial Years.
- e) **Compliances required from the Industry Partner:** (industry partners are required to submit a signed undertaking to cover under mentioned aspects)

- i) The interested ToT partner should agree to take TOT of MSS comprising of PCLR, PET and MSR.
- ii) The interested ToT partner should agree to take TOT in as-is-where-is condition for all three technologies since the systems are deployed at various geographical locations and these systems are developed by two different Labs of DRDO located in Bangalore and Hyderabad respectively.
- iii) The interested ToT partner should agree that the modifications/adaptations/ enhancements required to meet user requirements or production requirements with respect to provided TOT by DRDO will be taken up by TOT partner with guidance from DRDO. Any other modifications outside these criteria shall be the responsibility of TOT partner.
- iv) The interested ToT partner should agree to deploy sufficient number of technically qualified experienced manpower as per S.No. 3(c) (i) and S.No. 3(c) (ii) to absorb domain specific knowledge in the technology areas of relevant systems/ subsystems and documentation for TOT absorption at Hyderabad and Bangalore.
- v) The interested ToT partner should agree to take the responsibility of Engineering aspects including environmental qualification of the system to meet various platform requirements as per S.No. 3(c)(viii)
- vi) The interested ToT partner should agree that selection as ToT partner does not guarantee production orders from potential users/DRDO.
- (vii) The Interested ToT partner should agree that they should not be under any evidence/ declaration of ineligibility for unsatisfactory past performance, corrupt or fraudulent practices, any other unethical business practices or blacklisted either by Ministry/ any Department of Govt of India/ State Governments will lead to disqualification.

4. **Pre-bid conference:-**

A pre-bid conference will be held at LRDE, Bengaluru on 06 Oct 2026 with the prospective companies wishing to respond, for any clarifications. The pre-bid conference cannot be conducted through VC, as scope of ToT will be discussed and an NDA will be signed during pre-bid conference.

The under mentioned officer can be contacted for any clarification regarding pre-bid conference:

- (a) Mrs Rose Abraham, Email: rose.abraham.lrde@gov.in Phone: 080 25025581
- (b) Mr Shrikant Sharma Email: shrikant.sharma.lrde@gov.in Phone: 080 25025864

List of Supporting Documents to be Attached with EoI

- (a) Memorandum and Articles of Association (Should be incorporated as per Indian Companies Act, as amended time to time)
- (b) Certificates of registration as a manufacturing unit, if any.
- (c) Audited Balance Sheet for the preceding three years.
- (d) Income Tax returns for the preceding three Financial Years
- (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 equipment
- (l) ISO/ ISI certification or any other certification
- (m) Relevant clearances from 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.
- (p) Confirmation of Industrial license as per Press Note No 1 (2019 series)
- (q) Under taking from company seeking ToT that none of its Directors, Independent Directors, non-executive Directors, Key management personnel are involved in any corrupt practices, unfair means and illegal activities.
- (r) Duly filled Application cum Industry Assessment Form (as per **annexure** attached)

All Industries interested in seeking (Transfer of Technology) ToT are requested to furnish details in the format given in Part-1 & Part-2 below. Kindly provide the reference of page no. of supporting document in the relevant field of form.

PART-1

General Information

(Please enclose documents in support of information provided)

1	Name of the Technology requested for Technology Transfer (Technology name and concerned Lab, Category)	
2	Name of the industry/ organization	
3	Complete Address and other details	
	Registered Office State _____ Phone No _____ Fax _____ Email _____ Website _____	
	Factory State _____ Phone No _____ Fax _____ Email _____ Website _____	
4	Point of Contact Name _____ Designation _____ Address _____ Mobile No _____ Ph No _____ Email ID _____	
5	NAME OF CMD/ MD /PARTNERS/ PROPRIETOR/ etc Name _____ Designation _____ Address _____ Mobile No _____ Ph No _____ Email ID _____	
6	Date of Incorporation of company	
7	Foreign Direct Investment in company (if any in %)	
8	Shareholding pattern	
9	Turn over as per Audited Balance Sheet for the preceding three years. Year _____ Year _____ Year _____	
10	Annual budget for R&D during last three years (if any) Year _____ Year _____ Year _____	

11	Income Tax returns for the preceding three years period Year _____ Year _____ Year _____	
12	Nature of company DPSU, Private Limited, Public Limited, Partnership, Proprietary, Ex- Serviceman Unit	
13	Category of industry Large Scale, Medium Scale, Small Scale, Micro, Startup	
14	MSME Registration No	
15	Certificates of registration as a manufacturing unit, if any.	
16	If Startup, DPIIT Registration No	
17	UDYOG AADHAR No	
18	PAN Number	
19	Details of Industrial license for defence manufacturing issued by DPIIT (if any)	
20	Details of PESO license (if any)	
21	GST Number	
22	Nature of business Manufacturing/ Sole Selling or Authorized Agent/ Assembler/ Traders/ Dealer/ Processor/ Repacker/ Others	
23	Details of current products and services Products and services Supplied (please specify Govt/ Domestic market/ Export)	
24	Record of past performance (e.g., Supply orders executed against of Ministry of Defence orders, Public Sectors and Paramilitary Forces, if any).	
25	Details of registration with NSIC / SSI, DGS&D, other Defence Department, other Govt. Dept, membership of FICCI/ASSOCHAM/CII or other Industrial Association (Attach relevant copies of registration letters)	
26	Have you already taken any technology from DRDO (If yes, give details attaching separate sheet) Name of the Technology, Lab, Year, License number & Status	
27	ISO/ ISI certification or any other certification (If yes, give details)	
28	Relevant clearances form the authorities/ ministries (if any)	
29	Capacity and capability to undertake developmental work and to accept attendant financial and commercial risks.	
30	Capacity/capability to market the product through the marketing network, sales and service network, reliability to maintain confidentiality.	

PART-2

Infrastructure and other Information

1	Total area of factory Covered (m ²), Uncovered (m ²), Bonded space available (m ²)	
2	Ownership of factory Self-owned, partnership, rental	
3	Electric power Sanctioned Installed Standby (if any)	
4	Availability of adequate infrastructure (List of machines and their production capacities) and technical expertise	
5	Name of bank & A/c No A/c type A/c no Address of the bank Phone: Email:	

6 Details of current products:

S.No	Type	Description	Licensed/installed capacity	Annual production for preceding 3 years

7 Details of foreign collaboration, if any

S.No	Product	Name and address of collaborator	Year	Remarks

8 Details of products developed for services

S.No	Nomenclature of stores	Order No. and date	Remarks

9 Please give details of important facilities & infrastructure as per following format for:

- a) Conventional machines
- b) Unconventional, special machines
- c) Testing & quality control facilities

S.No	Description of m/c	Make & model	Qty	Date of purchase	Remarks

10 Furnish the following details with relevant certificates and documents

- a) R&D facilities available :
- b) Inspection quality control of raw material components :
- c) Assistance from central agency for testing / calibration etc. :
- d) laboratory and drawing office facility :

11 Principal customers:

S. No	Name & address	S.O No and date	Date of last supply	Products supplied	Value

12 Future plans (if any) in respect of expansion programme/ installation of additional machines/ test facilities etc.

13 Name of the technology requested for transfer

(give self-assessment of your capability to absorb the technology)

14 Details of employee as on date on firm's pay roll

PERMANENT				
Category	Post Held	Number	Qualification	Total Service
Technical	Prod. Manager Q.C. Manager Supervisor Testing Staff (QC) Skilled workers Unskilled workers, etc			
Administrative	Purchase Manager Accounts Officer Office Superintendent Clerical Others, etc			

TEMPORARY				
Category	Post Held	Number	Qualification	Total Service
Technical	Prod. Manager Q.C. Manager Supervisor Testing Staff (QC) Skilled workers Unskilled workers, etc			
Administrative	Purchase Manager Accounts Officer Office Superintendent Clerical Others, etc			

DECLARATION:

I / we confirm that the information furnished in Part 1 & 2 above is correct. In the event of any information given by me / us is found incorrect / false at any time, I / we understand our EoI for ToT will be cancelled/ rejected without notice, beside any other appropriate action against me / us.

Industry seal

Authorized signatory
Name(s) in capital
Designation and seal of
authorized signatory

Date:

Place: