

GMLP1 and GMSU1

Technology Overview

1. GMLP1 unit is the primary processing unit of Vehicle which controls all the necessary sub-systems and operations of the vehicle.
2. Hardware design of GMLP1 is based on indigenous SoC (System on Chip) of RCI (DRDO). The GMLP1 design consists of Analog I/Os, Discrete I/Os and communication resources.
3. GMSU1 is the Training / testing jig for the Vehicle. It facilitates the clearance of vehicle at various stages and also used for training purposes.
4. The hardware design of GMLP1 and GMSU1 are identical except for the mechanical chassis design due to difference in the mounting scheme of the units.
5. GMLP1 and GMSU1 are designed and developed by RCI (DRDO).
6. EOI is requested from competent firms for Fabrication, Assembly and Testing (Built- to-Print) of GMLP1 and GMSU1 as part of ToT. The ToT terms and conditions are detailed below.

Terms and Conditions

- 1) Processing of EOI applications shall start after 21 days from the date of publication on DRDO website.
- 2) The firm's turnover should be greater than Rs. 36.25 Cr. per annum.
- 3) Documents to be submitted with EOI. The firm must provide details about firm and documents in support of their claim as per Appendix- A. Any additional documents as required by DRDO shall be sought based on request received from the interested industries.
- 4)
 - i) As an essential criterion, the firm should have demonstrated capability of development/fabrication & assembly of Avionics Systems (similar to On-Board Computers (OBC) and Missile Interface Unit (MIU) qualified and delivered to Ministry of Defence/Defence Establishments/Public Sectors /Paramilitary Forces/any Government agencies. In addition, prior experience in development/ fabrication of avionics systems with expertise in integration and handling should be possessed by the firm (SO copies for the delivery of similar systems should be provided with EOI).

- ii) Expertise in Avionics grade hardware development, testing and debugging based on Processors, FPGA, SoC with the following features-
 - A) High speed boards with processors (frequency of operation: 100MHz,200MHz)
 - B) Communication interface like Ethernet, MIL-STD-1553B, RS422
 - C) Memory interface SRAM, FLASH etc.
 - D) MIL grade/ IPC class-3 PCBs
 - E) FPGA and CPLDs (Xilinx, Altera etc.)

For the above, Relevant Supply Order (SO) copies with technical specifications/ Scope of work & Inspection/ Acceptance Report (IR) copies (Minimum 1 SO & IR and maximum 5 SO and IRs) and demonstration of such hardware. Systems/Sub-systems delivered on or after 01 January 2018 will only be considered.

- 5) Previous & on-going experience of delivery of above systems with clearance by Defence QA agencies like DGQA, MSQAA/R&QA, RCI, CQA etc is essential.
- 6) It is essential that the participating firms shall have ISO 9001:2015 /AS 9100D certification.
- 7) The participating firms shall have in house facilities for components/PCBs storage in controlled environments and facilities for environmental tests (Climatic and Dynamic test facilities).
 - a) Mandatory In-house Facilities
 - i) Humidity Controlled Storage facility
 - ii) 40XOptical inspection system
 - iii) ESD Safe Manual Soldering and rework facility
 - iv) controlled conformal coating facility
 - v) PCB cleaning facility
 - vi) ESD safe assembling and integration facility
 - vii) Test equipment such as multi-meters, oscilloscopes, isolation testers with valid calibration certificate
 - viii) ESD safe Test bench for functional testing
 - b) Desirable facilities

- i) SMT line for complete automated reflow certified by any QA agencies of DRDO
 - ii) Climatic and Dynamic test facility with valid calibration certificates
 - iii) Inspection systems: 3D X-Ray, Automated Optical Inspection equipment
 - iv) Pneumatic controlled conformal coating facility
 - v) Automated Aqueous cleaning facility for PCBs
- Relevant proof to be furnished for above.
- 8) The Industry shall also have experienced & skilled manpower for debugging, testing and documentation of embedded systems, established quality management system, willingness and capability to setup specialized infrastructure.
- a) Minimum Manpower requirement for Hardware development and testing
 - i) Two Electronic Engineers B.E/BTech. /Mtech. with minimum domain expertise of 3yrs for testing and debugging
 - ii) Two IPC certified Electronics/ Electrical Diploma/ITI persons
 - iii) One IPC certified QC Electronics Engineer B.E/Btech. with minimum domain expertise of 3yrs
 - iv) One QC Mechanical Engineers B.E/BTech. with minimum domain expertise of 3yrs
 - v) One Mechanical Diploma/ITI fitter for integration activity
 - b) Expertise in Documentation: Preparation and maintaining records of each stage involved in the realization of the Systems with QC approval such as line card/ log books

Relevant proof to be furnished for above.

- 9) The other terms and conditions are as per the 'DRDO Policy for ToT' for Category 'A' mentioned at
<https://drdo.gov.in/drdo/sites/default/files/inline-files/DRDOToTPolicy04022025.pdf>

Contact Details

Interested companies/industries are requested to apply against this EoI to following address:-

Director,
 Research Centre Imarat (RCI)

Vignyana Kancha
Hyderabad- 500 069
Fax:040-24306002
E-Mail: director[dot]rci@gov[dot]in

A copy of interest may be sent to the following address without any attachment:-

The Director,
Directorate of Industry Interface & Technology Management (DIITM), Room
No. 447, DRDO Bhawan,
Rajaji Marg, New Delhi-110 011
[Email: diitm\[dot\]hqr\[at\]gov\[dot\]in](mailto:diitm[dot]hqr[at]gov[dot]in)
Phone No.- 011-23007446 Fax No.-011-23793008

All industries interested in seeking ToT are requested to apply in the format given below. Kindly fill in the fields. The list of documents to be attached is provided in Annexure – I. 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 Name of bank A/c type A/c no Address of the bank Phone: Email:	

7. Details of current products:

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

8. Details of foreign collaboration, if any

S.No	Product	Name and address of collaborator	Year	Remarks

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9. Details of products developed for services

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

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

- Production
- Unconventional, special m/c
- Testing & quality control facilities

11. Furnish the following details with relevant certificates and documents

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

12. Principal customers:

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

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

14. Name of the technology requested for transfer
(give self-assessment of your capability to absorb the technology)

15. 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			
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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:

List of Support 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 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 equipment's
- 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.
- p. PESO and DPIIT license for explosive handling if ToT is for high energy Material, explosives, propellants, and component/ system dealing with it etc.
- q. Under taking form 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. Details of the industrials license for defence manufacturing be provided by the industry seeking ToTs.
- s. **Application cum Industry Assessment Form**