भारत सरकार/ Government of India
अंतरिक्ष विभाग/ Department of Space
इसरो जड़त्वीय प्रणाली यूनिट (आईआईएसयू)/ ISRO INERTIAL SYSTEMS UNIT (IISU)
तिरुवनंतपुरम/ Thiruvananthapuram - 695 013

अभिरुचि की अभिव्यक्ति के लिए सूचना का आवेदन / NOTICE FOR INVITING EXPRESSION OF INTEREST

Realization of Rate Gyro Package based on MEMS Gyroscope (RGPM)

विज्ञा.सं./ सा.नि/विज्ञा/ईओआई-03/2026 दिनांक 17 सितंबर, 2026
ADVT.NO. IISU /PT/ADVT/EOI-03/2026 dated September 17, 2026

भारत के राष्ट्रपति के लिए और उनकी ओर से, वरिष्ठ क्रय एवं भंडार अधिकारी, इसरो जड़त्वीय प्रणाली यूनिट (आईआईएसयू), वट्टियूरकावु, तिरुवनंतपुरम, प्रस्ताव हेतु अनुरोध (आरएफपी) जारी करने के लिए **एमईएमएस जायरोस्कोप पर आधारित दर जायरो पैकेज की प्राप्ति** के लिए अभिरुचि की अभिव्यक्ति (ईओआई) आमंत्रित करते हैं।

For and on behalf of the President of India, Senior Purchase and Stores Officer, ISRO INERTIAL SYSTEMS UNIT (IISU), Vattiyoorkavu, Thiruvananthapuram invites Expression of Interest (EoI) from reputed and reliable vendors, to be shortlisted to issue Request for Proposal (RFP) for the **Realization of Rate Gyro Package based on MEMS Gyroscope.**

संभावित एवं विश्वसनीय विक्रेताओं से अनुरोध है कि वे अपनी ईओआई मोहरबंद लिफाफे में, जो वरिष्ठ क्रय एवं भंडार अधिकारी, आईआईएसयू क्रय, वट्टियूरकावु पी.ओ. तिरुवनंतपुरम - 695 013 का संबोधन करता है, ऊपर " **ईओआई- एमईएमएस जायरोस्कोप पर आधारित दर जायरो पैकेज की प्राप्ति**" लिखकर, उपर्युप्त जैसे प्रस्तुत करें।

Potential and reliable vendors are requested to submit their EoI in a sealed cover superscribing " **EOI-Realization of Rate Gyro Package based on MEMS Gyroscope (RGPM)** " addressed to Senior Purchase and Stores Officer, IISU Purchase, Vattiyoorkavu P.O, Thiruvananthapuram-695 013, as per below schedule:-

स्पष्टीकरण नियत तिथि / EoI Clarification Due Date	**28/09/2026 को/ upto 14.00 बजे/ hrs. तक**
पूर्व- ईओआई चर्चा पर / Pre-EoI Discussion on	**01/10/2026 at 10.00 hrs.**
ईओआई प्रस्तुतीकरण की नियत तारीख / EoI Submission due date	**30/10/2026 को/ upto 14.00 बजे/ hrs तक**

विस्तृत निबंधन एवं शर्तें, लघुसूचीबद्ध करने के पात्रता मानदंड, लघुसूचीबद्ध करने हेतु दिशा-निर्देश हमारे **ईओआई दस्तावेज़** पर उपलब्ध हैं। इच्छुक संभावित विक्रेता हमारे संदर्भ संख्या आईआईएसयू/पीटी/एडीवीटी/ईओआई-03/2026 का उद्धरण करते हुए **30 अक्तूबर, 2026 को 14.00 बजे या उससे पहले** वरिष्ठ क्रय एवं भंडार अधिकारी, आईआईएसयू क्रय, वट्टियूरकावु पी.ओ. तिरुवनंतपुरम 695 013 को अपनी अभिरुचि की अभिव्यक्ति प्रस्तुत कर सकते हैं।

Contd.....

Detailed Terms and Conditions, eligibility norms for short-listing, guidelines for short-listing are available in our EoI document. Interested prospective vendors can furnish their Expression of Interest quoting our reference No. IISU/PT/ADVT/EOI-03/2026 **on or before October 30, 2026 [14:00 Hrs.]** to Senior Purchase and Stores Officer, IISU Purchase, Vattiyoorkavu P.O, Thiruvananthapuram 695 013.

शुद्धिपत्र, यदि कोई हो तो, केवल हमारे वेबसाइट www.isro.gov.in पर प्रकाशित किया जाएगा।
Corrigendum, if any will be published in our website www.isro.gov.in only.

हस्ताक्षरित / Sd/-
वरिष्ठ क्रय एवं भंडार अधिकारी/ Senior Purchase & Stores Officer
दूरभाष सं./ Phone No.0471-2569317/2569547
ई- मेल/ Email: spso_iisu_pur@vssc.gov.in

EXPRESSION OF INTEREST (EOI)

Realization of Rate Gyro Package based on MEMS gyroscope (RGPM)

ISRO Inertial Systems Unit
Indian Space Research Organization
Government of India

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General Terms

1.1 GOALS OF THIS EXPERSSION OF INTEREST (EoI)

The objective of this EoI is to solicit proposals from the interested bidders for participation in a bid process for selection of parties for **"Realization of Rate Gyro Packages based on MEMS gyroscope (RGPM)"**.

1.2 EoI ISSUING AUTHORITY

This Expression of Interest (EoI) is issued by IISU, intended to short-list potential bidders. IISU's decision with regard to the short-listing of bidders through this EoI, shall be final and the IISU reserves the right to reject any or all the bids.

The details of EoI and contact person are given below.

SINo.	Item	Description
1	Project Title	Realization of Rate Gyro Packages based on MEMS gyroscope (RGPM)
2	Project Initiator Details	ISRO Inertial Systems Unit
3	Contact Person	Balan K, GH-NSG / LVIS / IISU
4	Contact Details	ISRO Inertial Systems Unit Vattiyoorkavu PO, Thiruvananthapuram – 695 013

1.3 CALENDER OF EVENTS

The last date for receiving the EoI response at IISU from the bidders is **30/10/2026.**

1.4 AVAILABILITY OF THE EoI DOCUMENTS

The bidders are expected to examine all instructions, forms, terms, project requirements and other details in the EoI documents. Failure to furnish complete information as mentioned in the EoI documents or submission of a proposal not substantially responsive to the EoI documents in every respect, will be at the bidder's risk and may result in rejection of the proposal.

1.5 PRE-BID DISCUSSION

IISU will host a bidder's Pre-Bid Discussion on **01/10/2026 at 10.00 hrs.** and the **participation in the pre-bid discussion is mandatory for considering the party.**

1.6 VENUE & DEADLINE FOR SUBMISSION OF PROPOSALS

Proposals, in its complete form in all respects as specified in the Eol, must be submitted to IISU at the address specified in Section 1.2.

IISU may, in exceptional circumstances and at its discretion, extend the deadline for submission of proposals by issuing an addendum to be made available, in which case, all rights and obligations of IISU and the bidders previously subject to the original deadline will thereafter be subject to the deadline, as extended.

1.7 REQUIRMENT ON THE PRODUCTION CENTRE

The requirements given in this Expression of Interest are indicative only and IISU will seek inputs from the pre-qualified bidders in further refining the requirements and all aspects of services before finalizing the bidders.

1.8 Willingness to sign the Non-Disclosure Agreement (NDA)

Bidders should be willing to sign a **Non-Disclosure Agreement (NDA) with IISU** before receiving documents, data and drawings pertaining to the contract. Bidder shall guarantee that all information, data, documents, standards, drawings, 3D models, circuit diagrams etc received during execution of contract from IISU shall be classified as confidential within the meaning of the Official Secrets Act and will not be divulged to any third party without prior written permission of IISU. The format of NDA will be provided along with the RFP document.

Scope of Services

2.0 BACKGROUND

2.1 About ISRO Inertial Systems Unit (IISU)

ISRO Inertial Systems Unit (IISU) is responsible for the design and development of Inertial Systems for Launch Vehicles and Spacecraft programmes for ISRO. Major Systems like Inertial Navigation Systems based on mechanical gyros and optical gyros, attitude reference systems, Rate Gyro Packages, Accelerometer Packages are developed indigenously and used in various missions of ISRO. IISU also design and develop actuators and mechanisms viz. Solar Array Drive, Reaction wheel, Momentum wheel, Scan mechanisms for spacecraft and allied applications. IISU has crossed major milestones starting from design & development phase, competence building phase and is presently engaged in the process of consolidation and productionisation of the sensors, systems, actuators and mechanisms for a variety of launch vehicle and spacecraft applications. Over the years, IISU has mastered in the development and realisation of sensors, testing and evaluation etc. IISU has also established state of the art facilities for realisation of various types of sensors, actuators, systems and mechanisms.

The experience and knowledge gained over the years are used for perfecting the present class of sensors and systems. Further, IISU has initiated technology development programme in niche areas to adopt itself as a centre of excellence in inertial sensors and systems. IISU strives to make the systems cost effective, reliable and realizable in tune with global trends.

2.2 Need of the Expression of Interest (EoI)

The aim is to develop parties for realization of Rate Gyro Packages based on MEMS gyroscopes after due understanding of the technological challenges, risks, investments and returns.

2.3 Scope of RGPM Realization

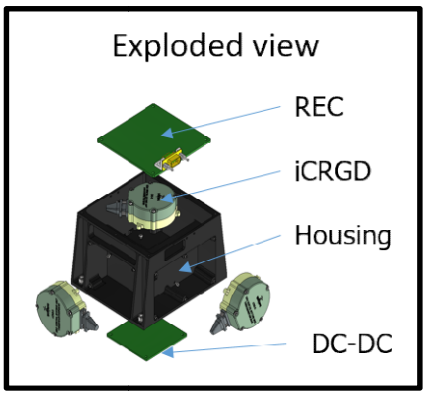
Scope of the project includes end-to-end realization of 25 sets of RGPMs (50 no.s). Activities related to initial 1 set (2 no.s) will be carried out with essential minimal guidance from IISU in order to make the party familiar with the technology. Once the familiarization is complete the party will be responsible of the following activities.

- Procurement of raw materials & electronic components
- Printed Circuit Boards (PCB) fabrication
- Mechanical hardware fabrication
- Wiring of electronic cards
- Quality Control (QC) inspection – Electrical and Mechanical
- Card level testing including development of test station

- System integration & integrated level tests
- Final QC & QA clearance certificates
- Presentation of test results to review forum in IISU
- Delivery to IISU with log files of production & test results

2.4 Description of RGPM

Rate Gyro Package – MEMS (RGPM) is designed with ISRO Coriolis Resonator Gyroscope – Digital for control applications of Launch Vehicle (LV). System is configured to meet the objectives of faster development, cost effectiveness, production friendliness, miniaturization and mass reduction.



RGPM system consist of

a. Sensors (Three nos. of gyros) :**FIM - will be supplied by IISU**. 3 iCRGDs hard mounted on chassis in orthogonal direction
b. Mechanical h/w : Housing + 4 covers
c. RGPM Electronics Card (REC)1 no. : SAMV71 processor based card. 1553B i/f to NGC bus through HOLT device. Power & Signal routing of iCRGDs through RGPM electronics card.
d. DC-DC 1 no. : PCB based DC-DC

Redundancy is achieved in LV by using 2 no.s of RGPM.

Overall size, mass and power of the system is given below.

a. Size : 136 mm x 120 mm x 100 mm
b. Mass : 1.3 kg
c. Power : 4 W

The party shall be responsible for the safe custody of FIMs issued. Submission of ARIP / Indemnity bond is required for receipt of FIM.

3.0 Realization of RGPM Mechanical sub-system

This section gives the technical terms & conditions involved in realization of RGPM Housing & 4 covers.
Details of mechanical hardware & materials used are as below:

Sl No	Part Description	Material	Dimension (mm)	Qty/set (Nos)
1	Housing	AA 6061-T6	136 x 122 x 94	1
2	Top Cover	AA 6061-T6	122x 120 x 2	1
3	Bottom cover	AA 6061-T6	81.6 x 78.6 x 2	1
4	Side Cover1	AA 6061-T6	103.6 x 67.6 x 2	1
5	Side Cover2	AA 6061-T6	76.6 x 67.6 x 2	1

3.1 Pre-requisite of fabrication facility

a. Party / their vendor shall have streamlined fabrication set up with maintained quality system including certification.
b. Party/their vendor shall have skilled mechanical production team to execute the precision fabrication activity.

3.2 General terms and conditions for material procurement

a. Material should be as per the technical specification provided in 3.4.
b. Material has to be procured from a reputed mill or through trading agency. If it is from trading agency, the details of the material manufacturer or the source or mill should be known.
c. All material certificates have to be verified and endorsed by a reputed third-party agency or by government approved, NABL accredited labs.
d. Following tests shall be done (as per relevant standard) and reports have to be available with every raw material batch.
    - Dimensional inspection
    - Mechanical properties test
    - Chemical composition test
    - Non–destructive testing
e. All material properties have to be well within the acceptable limit given in the specification.
f. 100% non-destructive test to be conducted on all material and cleared as per AMS 2630 class A1.
g. Each of the above report shall contain the information like Material, Heat /Lot No., Size, Quantity, Supply Condition etc.

3.3 Possible suppliers of material:

AA6061-T6 :- M/s Rachamallu, Hyderabad, M/s Asha forgings, Hyderabad, M/s. Jai Ambe, Mumbai, M/s. Virat Aluminium, Mumbai, M/s Kalapurna engineering, Mumbai, M/s. Manjira machine Builders, Hyderabad, M/s. Divya Business Solutions, Hyderabad.

3.4 Material Specification:

Aluminum alloy, AA6061

a) Material Specification : AA 6061 [T6 Condition]
b) Specification Standard : ASTM B211-M-19, ASTMB221M-21
c) Chemical composition :

Elements	% by weight	
	Minimum	Maximum
Si	0.40	0.8
Fe	--	0.7
Cu	0.15	0.40
Mn	--	0.15
Mg	0.8	1.2
Cr	0.04	0.35
Zn	--	0.25
Ti	--	0.15
Al	Balance	

d) Mechanical Properties :

Yield strength (Mpa)	Ultimate tensile strength (Mpa)	Density gm/cc	%Elongation
240	290	2.7	

e) Ultrasonic inspection: 100% Ultrasonic Inspection as per AMS 2630 class A1 (For Dia> 12.5mm)

3.5 Guidelines for Fabrication of components

- Party has to study the hardware drawings in detail and prepare necessary fabrication and inspection process plan / sheet as per the system available with the party.
- After approval, fabricate the hardware with the identified materials.
- Preparation of all required tooling, fixtures etc for fabrication.
- Party should machine the item in all respects within the tolerance limits mentioned in the drawings.
- Party has to maintain a fool proof system, like route card or process sheet, to control the material flow to avoid any type of mixing/change of raw material.
- All materials have to be stress relived during fabrication, before the finishing operation. Details below:

  Aluminum alloy, AA6061

Temperature	:	180^0 C
Duration	:	4 Hours
Cooling	:	Furnace cooling
Furnace used	:	Suitable with normal atmosphere

- Necessary surface treatments to be done as per drawing.
- Black anodizing: as per MIL-A-8625F, Type II, class-2 to a thickness of 0.012 to 0.02 mm.
- Yellow chromating (Chemical conversion coating) as per MIL -DTL-5541F, type 1, class 3.
- Necessary helicoil thread inserts (free running type), with Stainless Steel Grade 304 (AS7245 – Austenitic Corrosion Resistant Steel) material, as per DIN 81401, should be purchased by the party and to be inserted into the hardware as per drawing.
- Identification number has to be neatly engraved on the surface as given in drawing or surface which has open tolerance.
- Items are to be inspected and complete inspection report has to be prepared in the Inspection format.
- FCD inspection has to be repeated and separate report has to be made.

3.6 Essential facility / equipment requirement with the party or their vendor

Sl No.	Fabrication facility required	Model/Make with party	Qualification Status
1	CNC 3-Axis machining center: 400x400x400 mm, Accuracy: 0.008mm		
2	CNC Turning center: Ø300mm, Accuracy, Runout: 0.002mm, Axis: 0.006mm		
3	Heat Treatment furnace: 200ºC Temp		

4	Surface treatment facility, Black anodising and chemical conversion coating (chromating) on aluminum alloy.		
5	Precision fitting facility, tapping, helicoil insertion, deburring etc.		

Sl No.	Metrology	Model/Make with party	Qualification Status
1	Video measuring machine: 300x300x200mm, Accuracy: 0.005mm		
2	Linear height gauge: Range- 400mm, Accuracy: 0.002mm		
3	General Metrology equipment like granite table, Verniercaliper (0-300mm), Micrometer (Range 0-150mm), Radius gauge, Thread plug gauge, Thread ring gauge, Helicoil thread plug gauge	Compliance alone shall be mentioned. Model no. not required.	

The above table shall be filled by the party & sent along with the reply.

3.7 Quality control and acceptance Criteria

Quality assurance agency of the vendor has to ensure the following:

- All the raw material procured by the party, have to comply with the specification.
- Fabrications & inspection of all hardware shall be carried out as per the process identified.
- After completion of the fabrication and inspection, it shall be reported to IISU, along with full inspection report, raw material certificates, heat treatment certificates and surface treatment certificates.
- IISU reserves the right to inspect and verify the hardware at any phase at party's site.
- In case of any non-conformance, observed by the QC/QA of the party, same shall be discussed in NCRB of IISU, immediately and recommendation of the Committee shall be implemented.
- After verification and clearance, by the QA agency of the vendor, the hardware can be used for assembly.

4.0 Realization of RGPM Electronics Sub-Systems

This section gives the technical terms & conditions involved in realization of RGPM Electronics Sub-Systems: **RGPM Electronics Card (REC) & PCB based DC-DC**.

REC card : 95 mm x 95 mm, 2.4 mm thick, 8 layers
PCB based DC-DC : 53.5 mm x 31.5 mm, 2.4 mm thick, 6 layers

4.1 Electronic Components

- Components from reputed manufacturers (As per the part number/component list) have to be procured by the supplier through authorized suppliers/directly from the manufacturers as per ISRO vendor directory only. Necessary documents with respect to authorization and source of supply are to be attached in the production file.
- List of components will be mentioned in the configuration-controlled document (CCD). All parts must be with exact part number mentioned in the CCD.
- The procured components shall be subjected to “component level screening”. Party shall carry-out screening of the components through ISRO approved screening agencies.
- Supplier shall procure additional quantities of components (10 %) to account for rejections / failures.
- All parts must meet the relevant quality specifications as per the part number mentioned.
- The name of the manufacturer and datasheets shall be provided by the vendor as part of the offer.
- For MIL qualified components: The supplier must confirm that the Certificate of Conformance from the manufacturer, relevant to the supply lot shall be shipped along with the item.
- For Industrial/extended industrial components: The supplier must confirm that the date code traceability is available for the supplied lot. CoC from authorized supplier / manufacturer with date code and PO reference shall be provided.
- Certificate of Conformance (COC) from manufacturer/ OEM shall be supplied to IISU for verification on demand.
- The device Leads/Body shall be free from any type of oxidation/corrosion/brown spots etc and shall be ensured by online QC before wiring
- The supplier shall ensure that they are not receiving counterfeit or fake components by means of sample Destructive Physical Analysis (DPA) testing from each lot.
- Once the components are received, it is the responsibility of the party to do incoming inspection of the components. (Refer document: ‘Guidelines for Avionics Packages Fabrication’)
- Any device, if found not as per the required specifications, ie (manufacturing defect/material defect/unsuitable for the operation) shall not be used for fabrication.

- The procured components shall be stored in Moisture Barrier Bags (MBB) with vacuum sealing with Silica Gel and Humidity Indicator Card (HIC) in Humidity Controlled Chambers in temperature-controlled area.
- The supplier shall maintain full traceability (online) of the procured part from Purchase Order placement to assembly into a package.
- Procurement quantities shall be as per manufacturer specified Standard Packaging Quantity (SPQ) wherever applicable. No loose/bulk packing of the components in any other packing other than that recommended by the component manufacturer shall be accepted.

4.2 Printed Circuit Boards (PCBs)

- PCBs shall be fabricated by ISRO approved vendors only
- PCBs shall be inspected by ISRO trained QC inspectors at work centre, before accepting the PCB. If the PCBs are not meeting the ISRO inspection guidelines, replacement has to be made from the PCB manufacturers. It shall be informed to IISU.
- Traceability of manufacturing data and PCB inspection reports shall be available with the supplier and made available to IISU, as and when demanded.
- The construction type, PCB materials & Process shall be same as used in qualification samples. The fabricator shall specify the PID Document ID in the CoC.
- Thickness of the PCB shall be ±10% from the specified thickness. The thickness is calculated from metal to metal.
- Start-up copper thickness on outer layers and inner layer thickness shall be specified against the individual layers.
- Each panel shall have 4 test coupons - two X and two Y. Total Coupon area (4 nos) is 205 cm2. Test coupon shall not be solder masked.
- The PCB fabricator shall do Micro-section/Acceptance tests (as in ISRO PAX 304) of two coupons (one X and one Y) as mentioned in Annexure 8 for acceptance tests for PCBs. Photograph indicating the serial number (For traceability) and analysis report of the panel test coupon shall be sent along with the PCBs.
- The mould prepared for micro-section/ analysis and the remaining two coupons shall be retained with the party. These are to be submitted to IISU upon demand, for assessment at a later stage, if called for.
- 100 % Visual Inspection of PCBs shall be done by the QC of the supplier.
- Bare Board Testing of PCBs (100%) shall be carried out at PCB manufacturer’s end for every lot of PCB and certificate shall be obtained for the test result.
- PCB shall be marked by the party’s logo, Date code &Sl No.
- PCB shall be packed in vacuum sealed Moisture Barrier Bag (MBB) with desiccant and Humidity Indicator Card (HIC) inside.
- PCB shall be accepted from the PCB manufacturer with individual inspection reports of each board, micro section reports, electrical tests reports and moulds.

- The PCB Gerber data and fabricated PCBs are the property of Govt. of India and shall not be shared with/supplied to third party without written permission from appropriate authorities.
- PCBs shall be manufactured only as per the manufacturing data provided by IISU.
- These PCBs and moulds shall be inspected by ISRO trained QC inspectors. Any rejection of PCBs shall be intimated to IISU and the party has to take requisite corrective and preventive actions to replace the PCBs.
- Specifications for PCB fabrication is given in ISRO-PAX-304.

4.3 Card wiring

Pre-requisites for wiring of PCBs and Sub-assemblies

- Bare PCBs shall be inspected and cleared for flight use by in-house QC of party.
- Mechanical Sub-assemblies as applicable shall be inspected and cleared by inhouse QC of party
- Procured components and PCBs shall be subjected for verification of CoC and incoming inspection as per ISRO approved procedure prior to wiring.
- Materials and consumables listed in VSSC PML only shall be used after testing and certification as per avionics packages fabrication guidelines.
- Only ISRO certified personnel shall be employed for wiring and inspection of packages and assemblies.
- Production file:- Separate file to be prepared for each PCB/sub assembly, by attaching copies of applicable pages of the CCD issued. The production file shall contain two sections – Records section and Job traveler section. A sample production file template will be provided.
- Requirements given in the special instruction page of CCD shall be complied.

Requirements for card wiring

- All the consumables such as alcohol, flux solder etc. Shall be subjected to sample tests and shall meet the specifications given in VSSC PML. Acceptance test results shall be attached in the production file.
- Card wiring involves reflow soldering of SMT parts and hand soldering of leaded components.
- For Reflow soldering, RMA flux-based solder paste available in PML shall be used. No-clean based solder paste should not be used.
- Measured values of passive components shall be entered in the PCB level/sub assembly level wiring list in the production filewherever possible.
- Soft copies of photographs shall be archived at each stage of realization of package. It shall contain photos of top and bottom sides of all PCB assemblies (a) Before conformal coating (b) After conformal coating (c) After integration (d) Before package closing.
- Party shall store the finished packages in controlled environment, till it is delivered to IISU.
- Party shall realize and provide suitable boxes for packing and transportation of the packages. Transportation of the packages shall be the responsibility of party.

- Test reports, Production files, Quality certificates and other relevant documents for packages shall be provided along with each package.
- Automated Optical Inspection (AOI) is mandatory for SMD components.

4.4Card testing

Detailed test procedure document will be provided by IISU for the testing of REC & DC-DC card. Typical tests are given below:

1. Verification of card details, ie SI.no, QC no with production file
2. Verification of components for position, value and polarity
3. Polarity verification of capacitors & record in the production file.
4. Isolation measurements.
5. Electrical checks

Typical list of instruments & facilities required for testing are listed in Annexure – 2.

Card level test requirements & clearance strategy

- The party shall thoroughly study the test plan document before starting the test. Any clarification if needed shall be obtained from IISU.
- Card level test shall be carried out strictly as per the test plan documents, which will be provided by IISU. Precautions as mentioned in the test plan document shall be strictly followed.
- All observations shall be clearly logged in the production file. Test shall be stopped in case of any deviations/failures observed during testing and shall be recorded and informed to IISU in real time.
- Replacement of components due to failures during any phase of testing shall be done only after getting approval from IISU.
- Check list (format provided in the test plan document) shall be filled and attached in the production file.
- All test results shall be compiled in the provided template and clearance shall be obtained from IISU review committee.

4.5 Essential Facility Requirement with the party

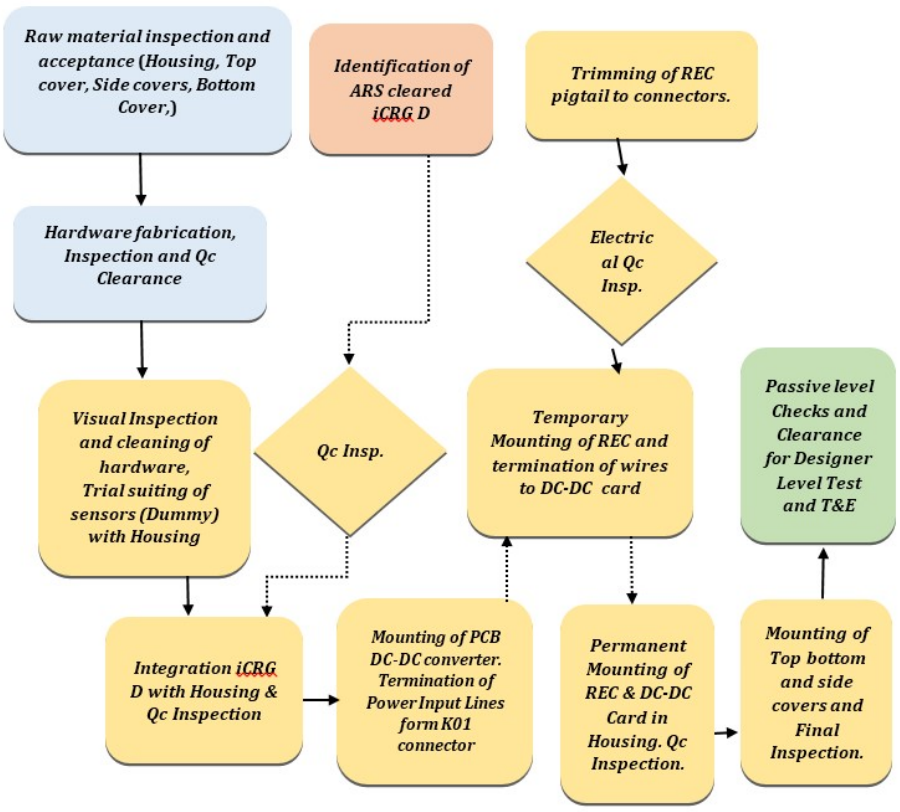
The following essential facilities required for carrying out works under this project are to be available with the party (No outsourcing is permitted). Facilities are required to be qualified by any of the ISRO centers for carrying out flight package realization (including personnel).

SINo.	Machine/Facility	Model/Make with party	Qualification Status
1	Automatic SMT stencil printer for solder paste dispensing		
2	Automatic Pick and Place machine with measurement of passive component values		
3	Reflow soldering oven suitable for IPC610 class 3 electronics		
4	AOI system at the exit of reflow system for real time inspection of wired cards		
5	Hand solderingfacilityfor flightpackage realization		
6	QC inspection system for flight packages		

The above table shall be filled by the party & sent along with the reply.

5. SYSTEM INTEGRATION & TESTING

The party shall carry out final integration of the system at their dedicated mechanical integration clean area. Inspection and clearance of all sub-systems shall be carried out before system integration. All standard components shall be procured by party and availability of necessary test certificates, CoCsetc shall be ensured. Assembly tools and necessary fixtures shall be procured or fabricated by the party. Fabrication drawings required for the fixtures if required can be provided by IISU. The party has to carry out system integration as per mechanical assembly and integration document. Typical flow of system integration is given here.



Mechanical Fasteners

Quality requirements: Mechanical fasteners of aerospace grade and with a minimum strength meeting A2 class (UTS 700 MPa). Material should be AISI 304 grade in passivated condition. Third party test certificates (TPI) for material composition and mechanical properties shall be available for all types of fasteners.

List of standard Metric fasteners

Sl No	Description	Material	Qty. per Package
01	Hex. Socket hd. Cap Screw, M3x8 (REC)	AISI 304	4
02	Hex. Socket hd. Cap Screw, M2.5x8(Power)	AISI 304	4
03	Ch. head screw, M2x6 (side)	AISI 304	10
04	Hex. Socket hd. Cap Screw, M2x10 (Sensors)	AISI 304	9
05	CSK screw M2x 6 (Bottom)	AISI 304	4
06	CSK screw M2.5x 6 (Top)	AISI 304	8
07	Flat washer M3	AISI 304	4
08	Flat washer M2.5	AISI 304	4
09	Flat washer M2	AISI 304	10

Test procedure for final integrated RGPM system will be addressed in Test Procedure document. Typically requires a stable platform (standard table or a granite platform) for sensor short term stability test.

Bidding Terms & Pre-Qualification Criteria

6.0 Conditions under which this EOI is Issued

- This EoI is not an offer and is issued with no commitment. IISU reserves the right to withdraw the EoI and change or vary any part thereof at any stage. IISU also reserves the right to disqualify any bidder, should it be so necessary at any stage.
- IISU reserves the right to withdraw this EoI if IISU determines that such action is in the best interest of the Government of India.
- Short-listed bidders would be issued formal tender enquiry / Request for proposal inviting their technical and commercial bids.
- Timing and sequence of events resulting from this EoI shall ultimately be determined by IISU.
- No oral conversations or agreements with any official, agent or employee of IISU shall affect or modify any terms of this EoI and any alleged oral agreement or arrangement made by a bidder with any Department, agency, official or employee of IISU shall be superseded by the definitive agreement that results from this EoI process. Oral communications by IISU to bidders shall not be considered binding on IISU, nor shall any written materials provided by any person other than IISU.
- Neither the bidder nor any of the bidder's representatives shall have any claims whatsoever against IISU or any of their respective officials, agents, or employees arising out of, or relating to this EoI or these procedures (other than those arising under a definitive service agreement with the bidder in accordance with the terms thereof).
- Applicants who are found to canvass or attempt to influence in any manner the qualification or selection process, including without limitation, by offering bribes or other illegal gratification, shall be disqualified from the process at any stage.
- Each applicant shall submit only one pre-qualification requirements proposal.

7.0 Rights to the Content of the Proposal

For all the bids received before the last date and time of bid submission, the proposals and accompanying documentation of the pre-qualification proposal will become the property of IISU and will not be returned after opening of the pre-qualification proposals. IISU is not restricted in its rights to use or disclose any or all of the information contained in the proposal and can do so without compensation to the bidders. IISU shall not be bound by any language in the proposal indicating the confidentiality of the proposal or any other restriction on its use or disclosure.

8.0 Acknowledgement of Understanding of Terms

By submitting a proposal, each bidder shall be deemed to acknowledge that it has carefully read all sections of this EoI, including all forms, schedules and annexure hereto, and has fully informed itself as to all existing conditions and limitations.

9.0 Evaluation of Prequalification Proposal

The bidders' pre-qualification proposal in the bid document will be evaluated as per the requirements specified in the EoI and adopting the pre-qualification criteria spelt out in this EoI. The bidders are required to submit all required documentation in support of the pre-qualification criteria specified (eg. detailed project citations and completion certificates, client contact information for verification and all others) as required for evaluation.

10.0 Language of Proposals

The proposal and all correspondence and documents shall be written in English.

11.0 Pre-Qualification Criteria

This invitation for bids is open to all entities registered in India who fulfil prequalification criteria as specified below.

a) ISO 9001 certified.
b) IISU reserves its right to subject the bidders to security clearances as it deems necessary.
c) The participation is restricted to companies registered in India under THE COMPANIES ACT 2013.

Notes:

1. In case of bidders where the ISO certification is under renewal, the bidders shall provide the details of the previous ISO certification and current assessment details.
2. In respect of the cited projects, the bidder should have been directly responsible for the implementation of the projects and not just a member of a consortium.
3. Only project citations completed/started in the last 5 financial years (2016-2021) will be considered for the evaluation.

12.0 Response Requirements

- The Response to the pre-qualification requirements shall be prepared in accordance with the requirements specified in this EoI and in the format prescribed in this document for each of the above mentioned qualifying criteria as proof of having the minimum requirements.
- Proposals must be direct, concise and complete. All information not directly relevant to this EoI should be omitted.
- The pre-qualification proposal shall be sealed and superscribed "Response to pre-qualification requirements – RGPM Production" on the top right hand corner and addressed to IISU at the address specified in this document.

- The pre-qualification proposal should be submitted with two printed copies of the entire proposal, one marked ORIGINAL and the second one as DUPLICATE with all the contents of the pre-qualification proposal. The Hard copy shall be signed by the authorised signatory on all the pages before being put in the envelope and sealed.
- The proposal should contain the copies of references and other documents as specified in the EoI.
- A board resolution authorising the Bidder to sign/execute the proposal as a binding document and also to execute all relevant agreements forming part of EoI shall be included in this envelope.
- IISU will not accept delivery of proposal in any manner other than that specified in this EoI. Proposal delivered in any other manner shall be treated as defective, invalid and rejected.

13.0 Prequalification requirements proposal

The pre-qualification proposal should be submitted in the sealed envelope with the following details. Bidders are requested to submit their responses for the pre-qualification requirements in four (4) parts, clearly labelled according to the following categories.

Part I. **Covering Letter and Board Resolution**

- Covering Letter from the Bidder as per the format provided in Annexure – Form 1
- Board Resolution authorising the bidder to sign/execute the proposal as a binding document and also to execute all relevant agreements forming part of EoI.
- Note explaining the strengths of the bidder and motivating factors for the bidding.

Part II. **Details of the Organization**

- This part must include a general background of the respondent organisation (limited to 400 words) along with other details of the organisation as per the format provided in the EoI (Annexure – Form II). Enclose the mandatory supporting documents listed in format.
- The bidder must also provide the financial details of the organisation as per format provided in the EoI(Annexure – Form III). Enclose the mandatory supporting documents listed in format.

Part III. **Relevant project experience**

- Respondents must provide details (Client organisation, nature/scope of the project, project value) of precision fabrication and system integration services experience. The experience mentioned here should match with the experience quoted by the respondent. Enclose the mandatory supporting documents.

Part IV. **Proof of Fulltime Technical Personnel in the Bidders Organization**

- The bidder must enclose certified copy by Statutory Auditor or Company secretary of the bidder's organisation with the number of full time professionals in the bidder's organization.
- **Party should ensure that following minimum manpower (1 no.) with Qualification&Experience are available.**

Sl.No	Function	Qualification	Experience(Minimum)
1	Fine Pitch Wiring	ITI+ISRO Wiring Certification	3 years
2	QC inspection	ITI+ISRO QC Certification	3 years
3	Mechanical QC	ITI+QC Certification	3 years
4	Mechanical Fitter	ITI+Assembly Experience	3 years
5	Test Engineer	Diploma in Electronics	3 years
6	Supervising Engineer	B.Tech in Electronics	5 years
7	Mechanical fabrication & System integration	Diploma in Mechanical	3 years

14.0 Purchase Preference Policy – Make in India (divisible items Class I & II Local Suppliers)

In line with Public Procurement (Preference to Make in India), Order 2017 & its amendments issued by Govt. of India from time to time with a view to support the Indian industries, ISRO has implemented "Purchase Preference Policy". The "Purchase Preference" is applicable for the "Class-I Local Supplier" for the goods/ services/ works covered in this EOI, subject to the following terms & conditions:

1. The Public Procurement (Preference to Make in India), Order 2017 issued by Govt. of India indicates that if there are any general or specific restrictive clauses to restrict participation of Indian companies in those countries procurement EOIs, reciprocity clause need to be invoked as per the order. Hence, if ISRO or Govt. of India come across that Indian suppliers of an item are not allowed to participate and / or compete in procurement by your government, the bid submitted by you will not be considered and excluded from eligibility for procurement. Please note this point.
2. **Purchase Preference Policy: Goods/Works which are not divisible (ie., required quantity is 1 or as a package) and Services:**

a) If L1 is from a 'Class-I local supplier, the contract will be awarded to L1 bidder.
b) If L1 is not from a 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price subject to local supplier's quoted price falling within the margin of purchase preference (i.e. 20%) and the contract shall be awarded to such 'Class-I

local supplier' subject to matching the L1 price (inclusive of duties, taxes and freight & insurance).

c) In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on, and order/contract shall be awarded accordingly. In case where none of the 'Class-I local supplier' within the margin of purchase preference agree to match the L1 price, then the order/contract shall be awarded to the originalL1 Bidder.

3. Work means all works as per Rule 130 of GFR-2017, and will also include ‘turnkey works’ Works include Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.
4. 'L1' means the lowest technically accepted tender / bid / quotation (i.e. lowest landed cost including duties, taxes and freight & Insurance).
5. 'Margin of purchase preference' means the maximum extent to which the price quoted by the "Class-I local supplier" above the L1 (landed cost).
6. The margin of Purchase Preference shall be upto 20%.
7. 'Local content' means the amount of value added in India (i.e. indigenous items/services added in the offered products/ services/ works) be the total value of the item offered (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties/IGST) as a proportion of the total value (excluding net domestic indirect taxes), in percent.
8. Definitions: A supplier or service provider, whose goods, services or works offered for procurement, has local content: i. Equal to or more than 50%: Class-I local supplier. ii. More than 20% but less than 50%: Class-II local supplier. iii. Less than or equal to 20%: Non-local supplier.
9. The 'Class-I & II local supplier' should provide a "Self Certification" along with technical offer indicating that the item offered meets the minimum local content [as per SI. No.(3)] as called for in the EOI and provide the percentage of local content along with details of the location(s) at which the local value addition is made. In case of two bid tenders, it is mandatory to indicate compliance to MLC (minimum Local Content) in technical bid zone.
10. The ink-signed certificate shall be provided on vendors letter head along with the offer (, copy of ink-signed certificate shall be attached along with your offer under concerned tab. Original in Hard copy shall be produced on request). In case of non-submission of certificate, the purchase preference shall not apply.
11. In cases the quoted price is in excess of Rs.1000 Lakhs (including duties, taxes and freight & Insurance) the 'Class-I & II local supplier shall provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in case of suppliers other than companies) giving thepercentage of local content.
12. A committee (with an external expert from a practicing cost accountant or practicing chartered accountant, if required) constituted for independent

verification shall verify the self-declarations & auditor's / accountant's certificates on random basis, as per the requirements.

13. In case of a complaint received from any local supplier indicating a need for review / verification of Local content of successful vendor / awarded vendor, for accepting a complaint from such complainant (w.r.t the false declaration given by the successful vendor on the local content), a complaint fee of Rs.2Lakhs or 1% of the locally manufactured items being procured (subject to a maximum Rs. 5Lakhs), whichever was higher, to be paid by demand draft by the complainant. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.
14. False declarations will be in breach of code of the integrity for which a bidder or its successor's will not be eligible/debarred for purchase preference from further tenders / pending tenders for two years along with other actions as may be applicable.

15.0 Conditions for Bidder from a country which shares land border with India

- Any party from a country which shares a land border with India will be eligible to respond against this EOI, only if the party is registered with the Competent Authority. Competent Authority for the purpose of registration shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).
- Validity of Registration: Registration should be valid at the time of submission of EOI and should be valid at the time of placement of order.
- Any false declaration and non-compliance of the above would be a ground for immediate rejection of offer / termination of the contract and further legal action in accordance with the laws.

ANNEXURES

ANNEXURE 1. RESPONSE FORMAT

FORM I: COVERING LETTER

(Company Letterhead)

(Date)

To

Sr. Purchase and Stores Officer
ISRO Inertial Systems Unit (IISU)
Vattiyoorkavu P O
Trivandrum 695 013

Ref: Expression of Interest Notice for Realization of Rate Gyro Packages based on MEMS Gyroscope (RGPM)

Sir

Having examine the Expression of Interest (EoI), the receipt of which ishereby acknowledged we the undersigned, intent to submit a prequalification requirements proposal in response to the Expression ofInterest (EoI) for realization of RGPM system.
Attach here to the response as required by the EoI, which constitutes ourproposal.Primary and Secondary contacts for our company are

	Primary Contact	Secondary Contact
Name		
Title		
Company Name		
Address		
Phone		
Mobile		
Fax		
E Mail		

We confirm that the information contained in this response or any partthereof, including its exhibits, and other documents and instrumentsdelivered or to be delivered to IISU is true, accurate, verifiable and complete. This response includes all information necessary to ensure thatthe statements therein do not in whole or in part mislead the department inits short - listing process.

We fully understand and agree to comply that on verification if any of theinformation provided here is found to be misleading the short listingprocess, we are liable to be dismissed from the selection process ortermination of the contract during the project, if selected to do so, forproviding RGPM system.
We agree for unconditional acceptance of all the terms and conditions setout in the EoI document.

It is hereby confirmed that I/We are entitled to act on behalf of ourcompany/corporation/firm/organisation and empowered to sign thisdocument as well as such other documents, which may be required in thisconnection.
Dated this Day of 2026

(Signature) (In the capacity of)

(Name)

Duly authorized to sign the Tender Response for and on behalf of:
(Name and Address of Company) Seal/Stamp of Bidder

Witness Signature:
Witness Name:
Witness Address:

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I,……. The company Secretary of ……..certify that …….. who signed the above Bid is authorized to do so and bind the company by authority of its board/governing body.

Date

Signature

(Company Seal) (Name)

FORM II. GENERAL DETAILS OF THE ORGANISATION

Details of Organization
Name of the Organisation
Nature of the legal status in India
Legal Status Reference details
Nature of Business of India
Date of Incorporation
Date of Commencement of Business
Address of the Headquarters
Address of the Registered Office in India
Other Relevant Information
Mandatory Supporting Documents: a. Certificate of Incorporation from Registrar of Companies (ROC) b. Relevant sections of Memorandum of Association of the company or filings to the stock exchanges to indicate the nature of business of the company.

FORM III. FINANCIAL DETAILS OF THE ORGANISATION

Financial Information					
Revenue (in INR Crores) Profit Before Tax (in INR Crores)	FY2021-22	FY2022-23	FY2023-24	FY2024-25	FY2025-26
Other Relevant Information					

Mandatory Supporting Documents

a. Auditor Certificate financial statements for the Last three financial years (Please include only the sections on P&L, revenue and the assets, not the entire balance sheet).
b. Unaudited financial statements certified by the company auditor for the latest year (in case the auditor certified statement is not available)
c. Certification by the company auditors supporting the revenue break up for precision production and system integration services.

ANNEXURE 2 :Typical list of instruments & facilities for testing

1. REC

1) Keysight 34461A 6 1/2 Digital Multimeteror equivalent
2) Tektronix MSO 4054B Mixed Signal Oscilloscopeor equivalent
3) Agilent 53131A Universal Counteror equivalent
4) YOKOGAWA 7651 Programmable DC Sourceor equivalent
5) Programmable Triple output Power Supply
6) Sensor Simulation card
7) R15-USB with Windows PC (1553B data acquisition)or equivalent

2. DC-DC Card

1) TDK Lambda Power Supply (0-100V, 4A)or equivalent
2) Digital Storage Oscilloscope (isolated)
3) Electronic Load
4) Digital Multimeter
5) Current probe

3. System level testing

1) Power Supply
2) Abaco make R15-USB with Windows PC (1553B data acquisition) or equivalent