

भारतीय राष्ट्रीय महासागर सूचना सेवा केंद्र
पृथ्वी विज्ञान मंत्रालय, भारत सरकार
“ओशियन वैली”, प्रगति नगर (बी. ओ.), निज़ामपेट (एस. ओ.), हैदराबाद - 500 090
दूरभाष सं. 040-2388 6002 / 23886074 फैक्स : 040-2389 2910 / 2389 5001
INDIAN NATIONAL CENTRE FOR OCEAN INFORMATION SERVICES
Ministry of Earth Sciences, Government of India
"Ocean Valley", Pragathi Nagar (BO), Nizampet (SO), Hyderabad - 500 090
Phone No.040-2388 6002/23886074 Fax: 040-2389 2910/2389 5001

ईकोईस: क्रय: 24/2025
Ref. INCOIS: PUR: 24/2025

दिनांक: 15.12.2025
Date: 15.12.2025

सरकारी ई बाज़ार द्वारा निविदा सूचना आमंत्रण
Notice Inviting Tender through Government E Market Place (GeM)

भारतीय राष्ट्रीय महासागर सूचना सेवा केंद्र, हैदराबाद भारत सरकार के पृथ्वी विज्ञान मंत्रालय के अंतर्गत एक स्वायत्त निकाय है।
Indian National Centre for Ocean Information Services (INCOIS), Hyderabad is an autonomous body under Ministry of Earth Sciences, Government of India.

निम्न विवरणों के लिए पंजीकृत विक्रेताओं से निविदाओं/बोलियों को आमंत्रित किया जाता है। जीईएम की एक अधिप्राप्ति होने के नाते बोलियों को केवल सरकारी ई बाज़ार (जीईएम) <http://gem.gov.in/> द्वारा ऑनलाइन से ही जमा किया जाए। एनआईटी का संक्षिप्त विवरण नीचे दिया जा रहा है।

Tenders/Bids are invited from registered vendors of GeM for the following items. Being a GeM procurement, the bids has to be submitted online through **Government E- Market Place (GeM)** <http://gem.gov.in/> only. The brief details of NIT are appended below.

कार्य का नाम Name of the Work	बोली संदर्भ सं. Bid Reference No.	बोली संख्या एवं दिनांक Bid Number and Date	बोली समाप्ति की तारीख और समय Bid end date and Time
Comprehensive Annual Maintenance Contract (CAMC) of Strong Motion Accelerograph (SMA) Network for 05 years at Andaman and Nicobar Islands अंडमान और निकोबार द्वीप समूह में 05 साल के लिए स्ट्रॉन्ग मोशन एक्सेलेरोग्राफ (SMA) नेटवर्क का व्यापक वार्षिक रखरखाव अनुबंध (CAMC)	ईकोईस: क्रय: 24/2025 INCOIS: PUR: 24/2025	जीईएम/2025/बी/7003725 दिनांक: 15.12.2025 GEM/2025/B/7003725 dated 15.12.2025	05.01.2025 17:00

जीईएम की एक अधिप्राप्ति होने के नाते बोलियों को केवल जीईएम पोर्टल अर्थात बोली/आरए के खाने के अंतर्गत <http://gem.gov.in/> द्वारा ऑनलाइन से ही जमा किया जाए। किसी भी प्रकार की सहायता के लिए कृपया जीईएम पोर्टल की हेल्प लाइन से संपर्क करें। निम्न अधिकारियों से भी संपर्क किया जा सकता है: श्री वी सुब्रह्मण्यम (ईमेल: manyam@incois.gov.in; दूरभाष सं. 040 2388 6022)/ श्री दसारी प्रसाद (ईमेल: dasariprasad@incois.gov.in दूरभाष सं 040-2388 6082)

Being a GeM procurement, the bid has to be submitted online through the GeM portal i.e., <http://gem.gov.in> under the Bids/RAs column. For any assistance, please contact help line of GeM portal. The following officials may also be contacted: Mr. V. Subrahmanyam (email: manyam@incois.gov.in; Phone No. 040 2388 6022)/Mr. Dasari Prasad (email: dasariprasad@incois.gov.in Phone No. 040-2388 6082).




(V. Subrahmanyam)
(प्रशासनिक अधिकारी (क्रय)/ Administrative Officer (Purchase)
निविदा आमंत्रण प्राधिकारी, ईकोईस/
Tender Inviting Authority, INCOIS

नोडल अधिकारी / Nodal Officer

एनआईटी / NIT GEM/2025/B/7003725

ई बाज़ार / E-Procurement dt 15/12/2025

बिड दस्तावेज़ / Bid Document

बिड विवरण/Bid Details	
बिड बंद होने की तारीख/समय /Bid End Date/Time	05-01-2026 17:00:00
बिड खुलने की तारीख/समय /Bid Opening Date/Time	05-01-2026 17:30:00
बिड पेशकश वैधता (बंद होने की तारीख से)/Bid Offer Validity (From End Date)	90 (Days)
मंत्रालय/राज्य का नाम/Ministry/State Name	Ministry Of Earth Sciences
विभाग का नाम/Department Name	Department Of Earth Sciences
संगठन का नाम/Organisation Name	Earth Sciences Secretariate
कार्यालय का नाम/Office Name	Indian National Centre For Ocean Information Servi
वस्तु श्रेणी /Item Category	Customized AMC/CMC for Pre-owned Products - CAMC of Strong Motion Accelerograph Network for 05 years at Andaman and Nicobar Islands; CAMC of Strong Motion Accelerograph Network for 05 years at Andaman and Nicobar Islands; Comprehensive Maintenance Co..
अनुबंध अवधि /Contract Period	5 Year(s) 1 Day(s)
बिडर का न्यूनतम औसत वार्षिक टर्नओवर (3 वर्षों का) /Minimum Average Annual Turnover of the bidder (For 3 Years)	47 Lakh (s)
उन्हीं/समान सेवा के लिए अपेक्षित विगत अनुभव के वर्ष/Years of Past Experience Required for same/similar service	3 Year (s)
इसी तरह की सेवाओं का पिछला आवश्यक अनुभव है/Past Experience of Similar Services required	Yes
टर्नओवर के लिए एमएसई को छूट प्राप्त है / MSE Relaxation for Turnover	Yes Complete
टर्नओवर के लिए स्टार्टअप को छूट प्राप्त है / Startup Relaxation for Turnover	Yes Complete
विक्रेता से मांगे गए दस्तावेज़/Document required from seller	Experience Criteria,Bidder Turnover,Certificate (Requested in ATC),Additional Doc 1 (Requested in ATC) *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer

बिड विवरण/Bid Details	
क्या आप निविदाकारों द्वारा अपलोड किए गए दस्तावेजों को निविदा में भाग लेने वाले सभी निविदाकारों को दिखाना चाहते हैं? संदर्भ में नू है/Do you want to show documents uploaded by bidders to all bidders participated in bid?	Yes (Documents submitted as part of a clarification or representation during the tender/bid process will also be displayed to other participated bidders after log in)
बिड लगाने की समय सीमा स्वतः नहीं बढ़ाने के लिए आवश्यक बिड की संख्या / Minimum number of bids required to disable automatic bid extension	1
दिनों की संख्या, जिनके लिए बिड लगाने की समय-सीमा बढ़ाई जाएगी। / Number of days for which Bid would be auto-extended	7
ऑटो एक्सटेंशन अधिकतम कितनी बार किया जाना है। / Number of Auto Extension count	1
बिड से रिवर्स नीलामी सक्रिय किया/Bid to RA enabled	No
बिड का प्रकार/Type of Bid	Two Packet Bid
तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय /Time allowed for Technical Clarifications during technical evaluation	11 Days
अनुमानित बिड मूल्य /Estimated Bid Value	9500040
मूल्यांकन पद्धति/Evaluation Method	Total value wise evaluation
मूल्य दर्शाने वाला वित्तीय दस्तावेज ब्रेकअप आवश्यक है / Financial Document Indicating Price Breakup Required	Yes
मध्यस्थता खंड/Arbitration Clause	No
सुलह खंड/Mediation Clause	No

ईएमडी विवरण/EMD Detail

एडवाइजरी बैंक/Advisory Bank	State Bank of India
ईएमडी राशि/EMD Amount	190000

ईपीबीजी विवरण /ePBG Detail

एडवाइजरी बैंक/Advisory Bank	State Bank of India
ईपीबीजी प्रतिशत (x)/ePBG Percentage(%)	5.00
ईपीबीजी की आवश्यक अवधि (माह) /Duration of ePBG required (Months).	62

(a). जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित कैटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज़ प्रस्तुत करने हैं। एमएसई कैटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।/EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy.

(b).ईएमडी और संपादन जमानत रुशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए। / EMD & Performance security should be in favour of Beneficiary, wherever it is applicable.

लाभार्थी /Beneficiary :

Director INCOIS

Payable at Hyderabad Indian National Centre for Ocean Information Services, Ministry of Earth Science, Govt of India, Pragathi Nagar Hyderabad 500090
(Director Incois)

बोली विभाजन लागू नहीं किया गया/ Bid splitting not applied.

एमआईआई अनुपालन/MII Compliance

एमआईआई अनुपालन/MII Compliance	Yes
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एमएसई खरीद वरीयता/MSE Purchase Preference

एमएसई खरीद वरीयता/MSE Purchase Preference	Yes
सूक्ष्म और लघु उद्यम मूल उपकरण निर्माताओं को खरीद में प्राथमिकता, यदि उनका मूल्य $L1+X\%$ तक की सीमा में हो / Purchase Preference to MSE OEMs available upto price within $L1+X\%$	15
सूक्ष्म और लघु उद्यम को खरीद में प्राथमिकता के लिए बिड की मात्रा का अधिकतम प्रतिशत / Maximum Percentage of Bid quantity for MSE purchase preference	100

1. If the bidder is a Micro or Small Enterprise (MSE) as per latest orders issued by Ministry of MSME, the bidder shall be relaxed from the eligibility criteria of "Bidder Turnover" as defined above subject to meeting of quality and technical specifications. If the bidder itself is MSE OEM of the offered products, it would be relaxed from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. The bidder seeking Relaxation from Turnover, shall upload the supporting documents to prove his eligibility for Relaxation.

2. If the bidder is a DPIIT registered Startup, the bidder shall be relaxed from the the eligibility criteria of "Bidder Turnover" as defined above subject to their meeting of quality and technical specifications. If the bidder is DPIIT Registered OEM of the offered products, it would be relaxed from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. The bidder seeking Relaxation from Turnover shall upload the supporting documents to prove his eligibility for Relaxation.

3. The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated above in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.

4. Years of Past Experience required: The bidder must have experience for number of years as indicated above in bid document (ending month of March prior to the bid opening) of providing similar type of services to any Central / State Govt Organization / PSU. Copies of relevant contracts / orders to be uploaded along with bid in

support of having provided services during each of the Financial year.

5. Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference for services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered service. If L-1 is not an MSE and MSE Service Provider (s) has/have quoted price within L-1+ 15% of margin of purchase preference /price band as defined in the relevant policy, then 100% order quantity will be awarded to such MSE bidder subject to acceptance of L1 bid price. The buyers are advised to refer to the QM No.1 4 2021 PPD dated 18.05.2023 for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits of MSE will be allowed only if the credentials of the service provider are validated online in GeM profile as well as validated and approved by the Buyer after evaluation of submitted documents.

6. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.

7. Past Experience of Similar Services: The bidder must have successfully executed/completed similar Services over the last three years i.e. the current financial year and the last three financial years(ending month of March prior to the bid opening): -

1. Three similar completed services costing not less than the amount equal to 40% (forty percent) of the estimated cost; or
2. Two similar completed services costing not less than the amount equal to 50% (fifty percent) of the estimated cost; or
3. One similar completed service costing not less than the amount equal to 80% (eighty percent) of the estimated cost.

एक्सेल में अपलोड किए जाने की आवश्यकता /Excel Upload Required :

PRICE BID - [1765791873.xlsx](#)

अतिरिक्त योग्यता /आवश्यक डेटा/Additional Qualification/Data Required

Please provide list of spares/parts/replacement for AMC services[1765791883.pdf](#)

Scope of Work:[1765791886.pdf](#)

Special Terms and Conditions/Penalty/Payment Terms pertaining to the Bid/Contract:[1765791889.pdf](#)

The bidder should have at least Y years of experience of (till the date of bidding) maintaining Similar Equipment (Name) at a minimum of X organization. Also specify the documents to be uploaded by Service Provider in Compliance of this condition.:[1765791977.pdf](#)

Product/Equipment Details:[1765792017.pdf](#)

Financial Breakup Required:[1765792155.pdf](#)

Customized AMC/CMC For Pre-owned Products - CAMC Of Strong Motion Accelerograph Network For 05 Years At Andaman And Nicobar Islands; CAMC Of Strong Motion Accelerograph Network For 05 Years At Andaman And Nicobar Islands; Comprehensive Maintenance Co.. (1)

तकनीकी विवरणियाँ /Technical Specifications

विवरण/ Specification	मूल्य/ Values
कोर / Core	
Product category	CAMC of Strong Motion Accelerograph Network for 05 years at Andaman and Nicobar Islands

विवरण/ Specification	मूल्य/ Values
Product Brand	CAMC of Strong Motion Accelerograph Network for 05 years at Andaman and Nicobar Islands
Type of service	Comprehensive Maintenance Contract (CMC)
Preventive Maintenance Frequency	once in six months
Manpower Required	Yes
एडऑन /Addon(s)	

क्रेता द्वारा निर्धारित न्यूनतम मूल्य/Minimum Floor Price defined by Buyer

क्रेता द्वारा निर्धारित न्यूनतम मूल्य/Minimum Floor Price defined by Buyer	No
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अतिरिक्त विशिष्टि दस्तावेज़ /Additional Specification Documents

प्रेषिती/रिपोर्टिंग अधिकारी /Consignees/Reporting Officer and Quantity

क्र.सं./S.N o.	प्रेषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	संसाधनों की मात्रा / Quantity of product/ equipment	अतिरिक्त आवश्यकता /Additional Requirement
1	Reddipalli Velangini Girdhar	500090, Indian National Centre for Ocean Information Services (INCOIS), Ministry of Earth Sciences, Government of India, Ocean valley, Pragathi Nagar BO, Nizampet SO, Hyderabad - 50090 INDIA	1	<ul style="list-style-type: none"> Number of months within the contract period for which service is required : 60

क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें/Buyer Added Bid Specific Terms and Conditions

1. Generic

OPTION CLAUSE: The buyer can increase or decrease the contract quantity or contract duration up to 25 percent at the time of issue of the contract. However, once the contract is issued, contract quantity or contract duration can only be increased up to 25 percent. Bidders are bound to accept the revised quantity or duration

2. Certificates

Bidder's offer is liable to be rejected if they don't upload any of the certificates / documents sought in the Bid document, ATC and Corrigendum if any.

3. Buyer Added Bid Specific ATC

Buyer Added text based ATC clauses

Comprehensive Annual Maintenance Contract (CAMC) of Strong Motion Accelerograph (SMA) Network for 05 years at Andaman and Nicobar Islands.

Payment terms: Payment will be released within 30 days on quarterly basis, against submission of Ink Signed Invoice in Triplicate (Original, Duplicate and Triplicate) and subject to satisfactory performance. The following documents are to be submitted along with Quarterly Invoice: -

- a) Joint Log Report for the quarter.
- b) Attendance details of Manpower deployed.
- c) Tax Payment copies as applicable.
- d) Proof of back-to-back support from OEM's (Wherever applicable).

Net payment will be released after statutory deductions. No advance payment will be allowed, and no other payment terms will be considered.

The following services are to be provided by the Vendor to INCOIS:

1. **On-site maintenance:** Covers all the supplied equipment which has comprehensive on-site comprehensive Annual Maintenance Contract (CAMC) for 5 years. Data acquisition Software and Apollo Server maintenance and any kind of support log in credentials and all other access to be shared with the INCOIS, Official In charge Scientist.
2. **Preventive maintenance:** Preventative maintenance shall be performed once in 6 months as scheduled and calibration as required.
3. **Breakdown maintenance:** Breakdown maintenance shall be performed on Vendor's problem-ticketing system and calibration as required.
4. **Installation and commissioning** of the data acquisition software to receive the data from the field station at INCOIS, Hyderabad.

5.

6. **4. Technical Requirements:**

4.1. Project Management:

4.1.1 As part of the CAMC, the vendor is required to maintain adequate spares, ensure continuous data availability, and prevent any seismic SMA station from remaining off line beyond the permitted downtime as per Table 1.

4.1.2 The vendor must maintain a minimum inventory of spares equivalent to 30% of the total systems, as specified in Annexure- I. Spare availability status must be shared with INCOIS every 15 days with serial numbers.

4.1.3 The vendor is responsible for promptly sending defective units or spares for repair upon returning from the SMA stations. The vendor shall initiate the repair process and coordinate with INCOIS for necessary export documentation. All export responsibilities lie solely with the vendor.

4.1.4 The turnaround time (TAT) for repairs is 90 days from the date the instrument is delivered to the vendor. If repairs are not completed within this period, the vendor must provide a replacement unit.

4.1.5 Prior approval must be obtained via email from both INCOIS Hyderabad officials and local INCOIS representatives before visiting any site.

4.1.6 For every preventive or breakdown maintenance visit, the vendor must submit before-an

d-after photographs, a detailed service report, and a summary of the system's overall physical condition.

- 4.1.7 A single consolidated invoice must be submitted covering all 35 SMA station sites, including those installed by Vendor.
- 4.1.8 The vendor must support the upgrade of sensors, instruments, and associated accessories (as detailed in Annexure-I) at SMA stations in the Andaman & Nicobar Islands, as well as assist with data reception and software installations at INCOIS, Hyderabad.
- 4.1.9 The vendor must maintain a dedicated and experienced team to ensure 24x7 operational status of all 35 stations, particularly in the Andaman & Nicobar Islands.
- 4.1.10 **Documentation:** After every successful visit to an SMA site, a service report and/or calibration report must be submitted. Calibration reports are required during preventive maintenance. A battery load test report must also be included with the service report as per Annexure-III.

1.2. Technical Maintenance Activities:

- 1.2.1. Ensure all equipment is installed correctly and aligned as per manufacturer specifications. The Titan Strong Motion Accelerometer must be oriented toward True North and installed only on a seismic pier.
- 1.2.2. Maintain sites to ensure uninterrupted solar exposure for solar panels and clear sky visibility for GPS antennas. Clean all solar panels and trim obstructing vegetation during each visit.
- 1.2.3. Solar panels must be installed on proper mounting stands, not directly on the floor or roof. Maintain stands through necessary repairs, welding, and painting to ensure durability and optimal sun exposure.
- 1.2.4. All cables must be securely routed and clamped along walls or floors. Loose or hanging cables are strictly prohibited.
- 1.2.5. Clean all connectors and apply silica gel to those exposed to the environment, such as GPS, solar panel, and sensor connectors.
- 1.2.6. Maintain the seismic pier by verifying sensor orientation, cleaning connectors, and mitigating any water seepage to protect the sensor.
- 1.2.7. During each preventive maintenance visit, perform calibration of both sensor and digitizer. Attach the calibration report to the service report.
- 1.2.8. Ensure firmware is updated to the latest version. Include the firmware version details in the service report.
- 1.2.9. Photograph and document serial numbers of each component, referencing them in the service report.
- 1.2.10. Record voltage readings at the solar panel, charge controller, and battery. Include these values in the report. Perform battery load tests and monitor battery health during each visit. Attach the battery test report to the service documentation.
- 1.2.11. Continuously monitor data transmission and identify any data gaps. Record the data period reviewed and schedule the next preventive maintenance visit accordingly.
- 1.2.12. Document the duration of each maintenance activity, including start and end date/time, to assist with data quality analysis.
- 1.2.13. Confirm successful data transmission via the communication network and include evidence in the service report.

The exact time of maintenance activities conducted at each station must be recorded and documented to support data gap analysis and overall data management.

1.3. List of Available Makes and Models of Strong Motion Accelerometers and Recorders Installed at Each SMA Station in the Andaman & Nicobar Islands.

1.3.1. Titan Strong Motion Accelerometer

- **Manufacturer:** NMX
- **Model:** Titan

1.3.2. Centaur 6-Channel Digitizer

- Includes: 32 GB storage media, power cable, Ethernet cable, Bullet GPS antenna (Part No.: GA-88P Series) with 15m cable, and the latest software/firmware.

1.3.3. Manufacturer & Model: NMX Centaur

Note: Only the specified GPS antenna make/model is acceptable. **No substitutes are permitted.**

1.3.4. VSAT Modem / Switch Interface Cable

- Ethernet cable with RJ45 Connector - 20m
- Sensor to Recorder Cable - 15m
- Manufacturer & Model: NMX

1.3.5. Solar Charge Controller

- **Manufacturer & Model:** Morningstar Professional Series SS-10/10L or higher

1.3.6. Solar Panels

- **Capacity:** 20V, 100W or higher

1.3.7. Battery

- **Model:** SMF 100AH, 12V or higher ampere rating

1.3.8. Power Cables

- Multi-strand copper wires, 2 core, 2.5 sq.mm or higher
- ISI-marked, Armoured XLPE Power Cable
- Properly crimped and terminated with lugs

Note: No temporary or makeshift connections are allowed.

1.3.9. Battery Charger (230V AC Input)

Note: If any of the above instruments or components listed in Annexure-I are found to be unavailable or non-functional, the **Vendor must supply replacements of equal or higher specification** and must **Inform INCOIS, Hyderabad immediately.**

4. Buyer Added Bid Specific ATC

Buyer uploaded ATC document [Click here to view the file.](#)

5. Service & Support

Dedicated /toll Free Telephone No. for Service Support : BIDDER/OEM must have Dedicated/toll Free Telephone No. for Service Support.

6. Service & Support

Escalation Matrix For Service Support : Bidder/OEM must provide Escalation Matrix of Telephone Numbers for Service Support.

अस्वीकरण/Disclaimer

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for attached categories, trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.
15. Any ATC clause in contravention with GeM GTC Clause 4 (xiii)(h) will be invalid. In case of multiple L1 bidders against a service bid, the buyer shall place the Contract by selection of a bidder amongst the L-1 bidders through a Random Algorithm executed by GeM system.
16. Buyer added ATC Clauses which are in contravention of clauses defined by buyer in system generated bid template as indicated above in the Bid Details section, EMD Detail, ePBG Detail and MII and MSE Purchase Preference sections of the bid, unless otherwise allowed by GeM GTC.
17. In a category based bid, adding additional items, through buyer added additional scope of work/ additional terms and conditions/or any other document. If buyer needs more items along with the main item, the same must be added through bunching category based items or by bunching custom catalogs or bunching a BoQ with the main category based item, the same must not be done through ATC or Scope of Work.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

All GeM Sellers/Service Providers shall ensure full compliance with all applicable labour laws, including the provisions, rules, schemes and guidelines under the four Labour Codes i.e. the Code on Wages, 2019; the Industrial Relations Code, 2020; the Occupational Safety, Health and Working Conditions Code, 2020; and the Code on Social Security, 2020 as and when notified and brought into force by the Government of India.

For all provisions of the Labour Codes that are pending operationalisation through rules, schemes or notifications, the corresponding provisions of the pre-existing labour enactments (such as The Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972, etc. and relevant State Rules) shall continue to remain applicable.

The Seller/ Service Providers shall, therefore, be responsible for ensuring compliance under:

- **All notified and enforceable provisions of the new Labour Codes as mentioned hereinabove; and**
- **All operative provisions of the erstwhile Labour Laws until their complete substitution.**

All obligations relating to wages, social security, safety, working conditions, industrial relations etc. and any other statutory requirements shall be strictly met by the Seller/ Service Provider. Any non-compliance shall constitute a breach of the contract and shall entitle the Buyer to take appropriate action in accordance with the contract and applicable law.

This Bid is governed by the सामान्य नियम और शर्तें/General Terms and Conditions, conditions stipulated in Bid and Service Level Agreement specific to this Service as provided in the Marketplace. However in case if any condition specified in सामान्य नियम और शर्तें/General Terms and Conditions is contradicted by the conditions stipulated in Service Level Agreement, then it will over ride the conditions in the General Terms and Conditions.

जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्यवाई का आधार होगा।/In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.

---धन्यवाद/Thank You---

इंकोईस: पी यू आर: 24/2025
INCOIS: PUR: 24/2025

दिनांक: 15.12.2025
Date: 15.12.2025

Request for Proposal of "Comprehensive Annual Maintenance Contract (CAMC) of Strong Motion Accelerograph (SMA) Network for 05 years at Andaman and Nicobar Islands."

Dear Sirs,

On behalf of Director, INCOIS tenders are invited in "Two Bid System" (Techno Commercial Bid) from Contractors with appropriate registration having adequate resources and setup and dealing with the maintenance of equipment/supplying V-SAT, Solar material like "Comprehensive Annual Maintenance Contract (CAMC) of Strong Motion Accelerograph (SMA) Network ". The offers, in the prescribed format, shall be submitted through online Government e-Marketplace at <http://gem.gov.in>. No tender will be accepted in hard copy, fax, e-mail or any other such means. The intending, bidders must be registered with Government E Marketplace

1.	Name of the work	:	Comprehensive Annual Maintenance Contract (CAMC) of Strong Motion Accelerograph (SMA) Network for 05 years at Andaman and Nicobar Islands
2.	BID Reference No.	:	INCOIS: PUR: 24/2025
3.	Submission of Bid	:	Please note that the subject tender has to be submitted online via Government E Marketplace at http://gem.gov.in
4.	Earnest Money Deposit (EMD)	:	Rs.1, 90,000/- (Rupees one Lakhs ninety thousand only) as per clause 9 of the General Terms and Conditions under section 6.
5.	Last date for seeking the clarifications and Extension	:	On or before 0900Hrs of December 26, 2025
6.	Bid submission due date online	:	On or before 17 00 Hrs of January 05, 2026
7.	Bid opening date	:	After 1730 Hrs of January 05, 2026
8.	Contract period	:	For a period of 05 years from the date of Acceptance of Material.
9.	Acceptance of the Order by the successful bidder upon AOC	:	Within 10 days from the date of issue of the PO/Order.

Being a GeM procurement, the bid must be submitted online through the GeM portal i.e., <http://gem.gov.in>. For any assistance, please contact help line of GeM portal. The following officials may also be contacted: Mr. V Subrahmanyam (email: manyam@incois.gov.in; Phone No. 040 2388 6022)/Mr. Dasari Prasad (email: dasari.prasad@incois.gov.in; Phone No. 040-2388 6082).

INCOIS may, at its discretion, extend the deadline for submission of bids by issuing a corrigendum, in which case all rights and obligations of the owner and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

Postal Address	Location Address
Indian National Centre for Ocean Information Services (INCOIS), Ministry of Earth Sciences, Govt. of India, "Ocean Valley", Pragathi Nagar (BO), Nizampet (SO), Hyderabad - 500 090	Indian National Centre for Ocean Information Services (INCOIS), Ministry of Earth Sciences, Govt. of India, "Ocean Valley", Survey No.342/3, Beside ALEAP, Near Pragathi Nagar, Opp. JNTU-Kukatpally, Hyderabad 500 090, Ph.No.040-2388 6000, Fax No.040-23892910

Index:

Sl No.	Description	Page No.
1.	Introduction	02
2.	Eligibility Criteria	02
3.	Scope of Work	03
4.	Technical Requirements	04
5.	Content of the Bd	05
6.	General Terms and Conditions	06
7.	Technical Clarification	11
8.	Bid Securing Declaration	Annexure - I
9.	Stations Names and Details	Annexure -II
10.	Mandatory Tests Requirements (03 Tests)	Annexure - III

1. Introduction

- 1.1. The Indian National Centre for Ocean Information Services (INCOIS), Hyderabad, an autonomous body under Ministry of Earth Sciences (MoES), Govt. of India is engaged in providing ocean information and advisory services. INCOIS deals with the projects related to tsunami early warning system, ocean state forecast, ocean observing systems, ocean modelling, satellite oceanography, coastal geospatial applications, ocean data and information management and web-based services relevant to societal needs.
- 1.2. INCOIS has an operational VSAT network with 42 VSAT terminals installed at A&N islands. Under the project, the Seismic and GPS observatories spread across the A&N islands have been integrated through VSAT communication (shared hub) to the data centers at Indian National Centre for Ocean Information Services (INCOIS), Hyderabad (through MPLS Links) for receiving real-time continuous ground motion data from these observatories to meet the operational activities of INCOIS.
- 1.3. The Strong Motion Accelerograph (SMA) network in the Andaman & Nicobar Islands shall operate continuously on a 24x7 basis, recording seismic data into the internal memory of the recorder and simultaneously transmitting real-time data to INCOIS, Hyderabad via VSAT modem. Under the Comprehensive Annual Maintenance Contract (CAMC) the Vendor must independently arrange all required parts and services and maintain a minimum inventory of spares at all times, based on the total of 35 stations, as specified in Annexure-I.

2. Eligibility Criteria:

- The bidder must be a company registered under Indian Company Act 1956 or a registered firm. (Proofs for Registration of company, PAN and GST certificates to be submitted).
- The bidder must provide profile of their company, its infrastructure, on-roll technical manpower and their expertise and Details of "Escalation matrix" with full contact details for the resolution of reported issues during Warranty period to be submitted.
- The bidder should have their service / support centre along with on-roll support teams in India. (Proof of having service / support centre in India is to be submitted)
- The bidder should have an average annual financial turnover of Rs. 47.50 lakh or more during the last three years ending March 31, 2025. (Proof of turnover issued and duly attested by the chartered accountant to be submitted.)
- Tenderers should have competence and adequate work experience in maintenance of Strong Motion Accelerograph (SMA) Network (especially in Island locations) and should submit the documentary evidence for the same along with details of past experience.
- The bidder should have past-experience in executing similar nature of works of similar volume in last three years ending previous day of last date of submission of the online Bid. Out of which one

work of value Rs. 76.00 lakh or above OR two works of value Rs.57.00 lakh each OR three works of value Rs.38.00 lakh each. (Last three years copies of POs and Work completion certificate from clients to be attached).

- Tenderer should provide MAF from OEM with specific reference to this tender to support INCOIS Strong Motion Accelerograph (SMA) Network for the period of 05 years.
- Earnest Money Deposit (EMD): As per Claus 9 of Section 6, A bid securing declaration to be submitted on the bidding firm's letter head duly signed and stamped by the authorized signatory as per Annexure -I (Proof for submission of EMD / Details based on which EMD exemption is claimed is to be submitted)
- Startups: In order to promote make in India and startups, the prior turnover and prior experience for all startups shall be relaxed subject to their meeting of quality, technical specifications and tender conditions as per tender. (The bidder who intends to participate as "startup" company should submit the certificate towards startup enterprise registration / recognition issued by Department of Industrial Policy and Promotion, Ministry of Commerce and the certificate should be certified by the Chartered Accountant or should be registered with GeM as startup)

Note: Offers received without proof of the eligibility criteria will not be considered for further evaluation. No further communication in this regard will be entertained.

3. Scope of Work:

The Strong Motion Accelerograph (SMA) network in the Andaman & Nicobar Islands shall operate continuously on a 24x7 basis, recording seismic data into the internal memory of the recorder and simultaneously transmitting real-time data to INCOIS, Hyderabad via VSAT or GPRS modem. The Vendor shall be solely responsible for the maintenance of all components and accessories listed in Annexure-I, including the repair or replacement of any faulty systems, sensors, or units through the respective OEMs. Under the Comprehensive Annual Maintenance Contract (CAMC), all listed items are covered; the Vendor must independently arrange all required parts and services and maintain a minimum inventory of 30% spares at all times, based on the total of 35 stations, as specified in Annexure-II. Breakdown maintenance issues must be resolved within 7 days for local sites and within 14 days for remote sites (list of site mentioned in Annexure-II), including holidays, calculated from the time the fault is logged in the Vendor's ticketing system to the full restoration of real-time data transmission. Delays due to transportation or logistical constraints shall not be accepted, and only natural calamities or other unavoidable circumstances, subject to approval by INCOIS, may be considered valid exceptions.

If the resolution timelines are exceeded, deductions shall be applied to the Comprehensive annual maintenance charges as specified in Table 1, with downtime calculated per site on an half yearly basis.

Down Time (days) / half Yearly / per site	Payment Deduction
0-7 (for Local sites), 0-14 (for Remote sites)	Nil
15-21	10%
22-29	15%
30-44	30%
45-60	50%
>60	100% (No Payment)

The following services are provided by the Vendor to INCOIS:

1. **On-site maintenance:** Covers all the supplied equipment which has comprehensive on-site comprehensive Annual Maintenance Contract(CAMC) for 5 years. Data acquisition Software and Apollo Server maintenance and any kind of support log in credentials and all other access to be shared with the INCOIS, Official In charge Scientist.
2. **Preventive maintenance:** Preventative maintenance shall be performed once in 6 months as scheduled and calibration as required.
3. **Breakdown maintenance:** Breakdown maintenance shall be performed on Vendor's problem-ticketing system and calibration as required.
4. **Installation and commissioning** of the data acquisition software to receive the data from the field station at INCOIS, Hyderabad.

5. **Device Uptime Levels:** The accelerometer and Centaur Data Recorder system is expected to operate in the field continuously 24x7, log the data in its internal memory (of Centaur Data Recorder), and feed the data to VSAT/GPRS at the same time.

Any fault in the system (Sensor & Centaur Data Recorder) shall be resolved by the Vendor within **7 days for the Local sites and 14 days for the Remote sites**, which include holidays. The fault resolution time begins when the request is logged with the Vendor's problem-ticketing system and stops when the fault is rectified –indicated by the real-time data resuming transmission through VSAT/GPRS to the **data acquisition system at INCOIS, Hyderabad**. If resolution timelines are exceeded, **deductions** shall apply to the comprehensive annual maintenance charge as per **Table 1**. Downtime will be calculated per site on an annual basis.

6. Vendor shall supply offline data off-loaded from the memory card of the Centaur Data Recorder to INCOIS every 6 months.
 7. Transportation of the equipment during the repair/replacement/maintenance/installation purpose will be at no extra charge to INCOIS.
 8. **Upgrades to Application Software and Associated Devices:** Occurs when an upgrade to an existing device is released; includes operating system upgrades, device upgrades, software upgrades, and manufacturer required updates. The upgrade shall be coordinated with the preventive maintenance service calls or schedule with the Customer to reduce downtime.
 9. **Equipment replacement:** If the device is un-repairable, a replacement for like or greater capacity to be provided for the remaining term of the agreement. Vendor should be available for up-gradation of Sensor / Instrument and associated accessories and mentioned in the Annexure-I at the SMA Stations at Andaman & Nicobar and as well as Data Reception part at INCOIS, Hyderabad for the Data Reception and Software Installations.
 9. **New Applications or Devices:** New applications and versions implemented during the term of this agreement will move into the Vendor support model through the Vendor process. The Vendor shall be responsible for initiating and ensuring completion of the appropriate process. These applications will be incorporated into the inventory of applications supported in Technical Requirements.
 10. The bidder should have an OEM authorization.
 11. The vendor is responsible for all customs documentation related to the import/export of faulty instruments to and from the OEM. The vendor must also bear any customs duties and handle all required import/export documentation. INCOIS will not provide any duty payments or related documents. INCOIS provides historical documents to the vendor and end user documents only once during the entire contract period to the successful bidder.
 12. The vendor must physically submit 30% of the spares to INCOIS during the technical evaluation period. INCOIS will issue a separate intimation to the bidders requesting the submission of spare details, including serial numbers and model information. The submitted spares will be verified by INCOIS scientists, along with the corresponding instrument serial numbers. Only vendors whose spares are successfully verified will be qualified for the opening of the financial bids. Failure to produce the required spares as specified will result in technical disqualification.
- 4. Technical Requirements:**
- 4.1. Project Management:**
- 4.1.1 As part of the CAMC, the vendor is required to maintain adequate spares, ensure continuous data availability, and prevent any seismic SMA station from remaining offline beyond the permitted downtime as per Table 1.
 - 4.1.2 The vendor must maintain a minimum inventory of spares equivalent to 30% of the total systems, as specified in Annexure- I. Spare availability status must be shared with INCOIS every 15 days with serial numbers.
 - 4.1.3 The vendor is responsible for promptly sending defective units or spares for repair upon returning from the SMA stations. The vendor shall initiate the repair process and coordinate with INCOIS for necessary export documentation. All export responsibilities lie solely with the vendor.
 - 4.1.4 The turnaround time (TAT) for repairs is 90 days from the date the instrument is delivered to the vendor. If repairs are not completed within this period, the vendor must provide a replacement unit.
 - 4.1.5 Prior approval must be obtained via email from both INCOIS Hyderabad officials and local INCOIS representatives before visiting any site.
 - 4.1.6 For every preventive or breakdown maintenance visit, the vendor must submit before-and-after photographs, a detailed service report, and a summary of the system's overall physical condition.

- 4.1.7 A single consolidated invoice must be submitted covering all 35 SMA station sites, including those installed by Vendor.
- 4.1.8 The vendor must support the upgrade of sensors, instruments, and associated accessories (as detailed in Annexure-I) at SMA stations in the Andaman & Nicobar Islands, as well as assist with data reception and software installations at INCOIS, Hyderabad.
- 4.1.9 The vendor must maintain a dedicated and experienced team to ensure 24x7 operational status of all 35 stations, particularly in the Andaman & Nicobar Islands.
- 4.1.10 **Documentation:** After every successful visit to an SMA site, a service report and/or calibration report must be submitted. Calibration reports are required during preventive maintenance. A battery load test report must also be included with the service report as per Annexure-III.
- 4.2. Technical Maintenance Activities:**
 - 4.2.1. Ensure all equipment is installed correctly and aligned as per manufacturer specifications. The Titan Strong Motion Accelerometer must be oriented toward True North and installed only on a seismic pier.
 - 4.2.2. Maintain sites to ensure uninterrupted solar exposure for solar panels and clear sky visibility for GPS antennas. Clean all solar panels and trim obstructing vegetation during each visit.
 - 4.2.3. Solar panels must be installed on proper mounting stands, not directly on the floor or roof. Maintain stands through necessary repairs, welding, and painting to ensure durability and optimal sun exposure.
 - 4.2.4. All cables must be securely routed and clamped along walls or floors. Loose or hanging cables are strictly prohibited.
 - 4.2.5. Clean all connectors and apply silica gel to those exposed to the environment, such as GPS, solar panel, and sensor connectors.
 - 4.2.6. Maintain the seismic pier by verifying sensor orientation, cleaning connectors, and mitigating any water seepage to protect the sensor.
 - 4.2.7. During each preventive maintenance visit, perform calibration of both sensor and digitizer. Attach the calibration report to the service report.
 - 4.2.8. Ensure firmware is updated to the latest version. Include the firmware version details in the service report.
 - 4.2.9. Photograph and document serial numbers of each component, referencing them in the service report.
 - 4.2.10. Record voltage readings at the solar panel, charge controller, and battery. Include these values in the report. Perform battery load tests and monitor battery health during each visit. Attach the battery test report to the service documentation.
 - 4.2.11. Continuously monitor data transmission and identify any data gaps. Record the data period reviewed and schedule the next preventive maintenance visit accordingly.
 - 4.2.12. Document the duration of each maintenance activity, including start and end date/time, to assist with data quality analysis.
 - 4.2.13. Confirm successful data transmission via the communication network and include evidence in the service report.
The exact time of maintenance activities conducted at each station must be recorded and documented to support data gap analysis and overall data management.
- 4.3. List of Available Makes and Models of Strong Motion Accelerometers and Recorders Installed at Each SMA Station in the Andaman & Nicobar Islands.**
 - 4.3.1. **Titan Strong Motion Accelerometer**
 - **Manufacturer:** NMX
 - **Model:** Titan
 - 4.3.2. **Centaur 6-Channel Digitizer**
 - **Includes:** 32 GB storage media, power cable, Ethernet cable, Bullet GPS antenna (Part No.: GA-88P Series) with 15m cable, and the latest software/firmware.
 - 4.3.3. **Manufacturer & Model:** NMX Centaur
Note: Only the specified GPS antenna make/model is acceptable. No substitutes are permitted.
 - 4.3.4. **VSAT Modem/Switch Interface Cable**
 - Ethernet cable with RJ45 Connector – 20m
 - Sensor to Recorder Cable – 15m
 - **Manufacturer & Model:** NMX
 - 4.3.5. **Solar Charge Controller**
 - **Manufacturer & Model:** Morningstar Professional Series SS-10/10L or higher
 - 4.3.6. **Solar Panels**
 - **Capacity:** 20V, 100W or higher
 - 4.3.7. **Battery**
 - **Model:** SMF 100AH, 12V or higher ampere rating

4.3.8. Power Cables

- Multi-strand copper wires, 2 core, 2.5 sq.mm or higher
- ISI-marked, Armoured XLPE Power Cable
- Properly crimped and terminated with lugs

Note: No temporary or makeshift connections are allowed.

4.3.9. Battery Charger (230V AC input)

Note: If any of the above instruments or components listed in Annexure-I are found to be unavailable or non-functional, the Vendor must supply replacements of equal or higher specification and must inform INCOIS, Hyderabad immediately.

5. Contents of the Bid: The quote should be submitted in two bid format. (i) Technical Bid and (ii) Commercial Bid

- i) **Technical Bid:** Technical bid should contain all the information as listed below without which the offer will not be considered further.
- Technical bid should contain filled-in Table-1 along with legible documentary proof, without which the offer will not be considered further.
 - Part/conditional/incomplete quotations will not be accepted.

NOTE:

- Part/conditional/incomplete quotations will not be accepted.
- Bidder has to quote for all the components given in the Price bid. Hence, please indicate as Yes or No in the table given below.

Table 1: Technical Compliance Statement

S No	Description	Compliance status Yes / No	Page number against the Proof attached.	Remarks/ Deviations, if any
General				
1.	Name of the Bidder			
2.	The bidder is a 1) Registered Indian under Indian Company Act 1956 / 2) Proprietary /3) OEM/(s) /4) System Integrator/5) Others			
3.	Bidder Address and contact details like E Mail , Phone etc.,			
4.	MSE / NSIC certificate details if any Registration/ License from the Government: GST Registration No. PAN Number			
5.	Full Bank Details: <i>(Note: Bank Details provided cannot be changed during Contract, unless special request from the company)</i>			
6.	Single point of Contact : E-mail: Ph No.			
7.	The bidder must be a Company registered under Indian Company Act 1956 or a registered firm. (Proofs for Registration of company, PAN and GST certificates to be submitted.)			
8.	The bidder should have their service / support centre along with on-roll support teams in India. (Proof of having service / support centre at India is to be submitted).			
9.	The Bidder should have an average annual financial turnover of Rs.47.50 lakh during the last three years ending March 31, 2025. Proof of			

S No	Description	Compliance status Yes / No	Page number against the Proof attached.	Remarks/ Deviations, if any																				
	<p>turnover and Proof of annual profit certificate issued by the chartered accountant to be submitted.</p> <table><tr><th>Financial year</th><th>Details of Turnover</th><th>Details of Profit</th><th>Details of Net worth</th></tr><tr><td>2024-25</td><td></td><td></td><td></td></tr><tr><td>2023-24</td><td></td><td></td><td></td></tr><tr><td>2022-23</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>	Financial year	Details of Turnover	Details of Profit	Details of Net worth	2024-25				2023-24				2022-23										
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11.	Earnest Money Deposit (EMD) : As per clause 9 of the General Terms and Conditions under section 6.																							
12.	Acceptance to Scope of Work of this tender																							
13.	Acceptance of general terms and conditions of this tender																							
14.	Pre-Bid attendance report duly signed by INCOIS																							
15.	Escalation matrix with full contact details, for the resolution of reported issues during contract period.																							
16.	Start ups: In order to promote make in India and startups, the prior turnover and prior experience for all startups shall be relaxed subject to their meeting of quality, technical specifications and tender conditions as per tender. The bidder who intends to participate as "start up" company should enclose the certificate towards startup enterprise registration/recognition issued by Department of Industrial Policy and Promotion, Ministry of Commerce and the certificate should be certified by the Chartered Accountant or should be registered with GeM as startup. Applicable certificate should be enclosed.																							
17.	Signature on all the pages of the tender document, including addendum, if any, issued by INCOIS and The bidder should give a self-declaration certificate for acceptance of all terms & conditions of tender document																							

ii) Commercial Bid:

Table 2: Compliance Statement (Un-Priced bid format)

NOTE:

- Bidder has to quote for all the components given in the Price bid. Hence, please indicate as Yes or No in the table given below.
- Bidder should upload the price breakup (In the commercial bid cover). In the following format on bidder letter head duly signed and stamped by the authorized signatory.
- Part/conditional/incomplete quotations will not be accepted.
- Price bids submitted in any other formats will be summarily rejected.

S.No	Item Description	Total Qty	Unit	Please confirm whether prices are Quoted in commercial bid or not. (Yes / No) Please do not mention prices here.
01	Comprehensive Annual Maintenance Contract (CAMC) of Strong Motion Accelerograph (SMA) Network for 05 years at Andaman and Nicobar Islands (1 No) a) 1 st Year b) 2 nd year c) 3 rd year d) 4 th year e) 5 th year	05	Years	

- Total quoted price will be calculated for the entire duration of the contract to decide L1
- The above rates shall remain fixed during the contract period of 5 years.
- An un priced Bill of Materials (BoM) should be submitted with the technical bid..
- Price bid format (in pdf format excluding note/instructions) shall be uploaded on www.Gem.gov.in.

* AN: Andaman & Nicobar Islands.

6. General terms and Conditions:-

Point No.	Details
1.	Quotation: Quotation has to submit online in the Government E Marketplace at http://gem.gov.in .
2.	A two-bid system will be followed in selecting the vendor
3.	INCOIS expects the bids submitted by Bidder should meet the requirements, provisions, specifications, etc. as stipulated in the tender Document without any deviations and exceptions.
4.	Validity Period: Bids/ Offers shall have the validity period of 90 days from the tender closing date.
5.	Contract period: For a period of Five Years, from the date of Acceptance of the material/Purchase order
6.	Delivery Period for Supply and Installation of Material : 3 Months from the date of Acceptance of Purchase Order
7.	* Acceptance of the order by successful bidder upon AOC: Within 10days from the date of issue of the PO/Order. If the acceptance communication is not received within 10days, then PO would be deemed as accepted and binding to the successful bidder.
8.	<p>Payment terms: Payment will be released within 30 days on quarterly basis, against submission of Ink Signed Invoice in Triplicate (Original, Duplicate and Triplicate) and subject to satisfactory performance. The following documents are to be submitted along with Quarterly Invoice: -</p> <p>a) Joint Log Report for the quarter.</p> <p>b) Attendance details of Manpower deployed.</p> <p>c) Tax Payment copies as applicable.</p> <p>d) Proof of back-to-back support from OEM's (Wherever applicable).</p> <p><i>Net payment will be released after statutory deductions. No advance payment will be allowed, and no other payment terms will be considered.</i></p>

9.	<p>Earnest Money Deposit (EMD): Rs.1,90,000 /- (Rupees one Lakh ninety thousand only) has to be submitted by way of Demand Draft/RTGS from any Nationalized Bank in favor of "Director, INCOIS payable at Hyderabad". The Scanned copy of the Demand Draft/RTGS/ Bank Guarantee/FDR /Insurance Surety Bond is to be uploaded to the GeM Portal while submitting the offer. Bank Guarantees/Counter Guarantees should be obtained from any of the Nationalized/schedule bank of India with a validity of 6 months from the closing of the bid due date and should be sent by the issuing banker directly to the office of INCOIS, Hyderabad.</p> <p><i>The original DDs/ Financial Instruments if any should reach to INCOIS on or before 14:00 Hrs of 05.01.2026. ie., before closing of the bid submission date. Offers received without EMD & bid securing declaration as per Annexure-1 will be summarily rejected. (RTGS details: Name of the Bank: SBI, HAL campus Branch; Account Name: Director, INCOIS; A/c No. 10442322840; IFSC Code: SBIN0001676)</i></p> <p>Indian Vendors registered with Ministry of Micro Small Enterprises (MSE) /National Small Scale Industries Corporation (NSIC) are exempted from payment of EMD only <u>if the Indian vendor is manufacturing and supplying the tendered products for this NIT</u>. A copy of valid registration certificate should be submitted along with bid securing declaration to be submitted on the bidding firm's letter head duly signed and stamped by the authorized signatory as per Annexure -1</p>
10.	The Contractor shall ensure safety and security of all workforce employed for this work and equipments provided by him under the Contractor until all the works entrusted are completed in all respects and taken over by INCOIS. In the event of damages except under force majeure clause ie., fire, wind, rain, floods or through any hazards, pilferage, other natural calamities etc., the Contractor shall make good the damaged works and restore the same to the original condition at his own cost
11.	Performance Guarantee: Successful bidder has to submit 5% of the contract value within 15days of acceptance of order towards Performance Guarantee by means of Demand Draft/NEFT/RTGS drawn in favor of Director, INCOIS payable at Hyderabad or Bank Guarantee from any Nationalized/scheduled Bank valid up to beyond 60 days of contract period. This deposit will be free of interest and is refundable after the satisfactory execution of the contract and complete fulfillment of contractual obligations.
12.	<p>Performance Guarantee is liable to forfeiture in the event of:</p> <ol style="list-style-type: none"> Non execution of order during validity period of the contract If the service of the successful bidder is found to be unsatisfactory and fails to adhere to our tender terms and conditions. Any unilateral revision/decision made by the successful bidder during the validity period of the contract.
13.	Successful bidder has to submit the Service Legal Agreement in prescribed format on Indian non-judicial stamp paper worth Rs. 200/- duly signed by authorized signatory within 21 days of the acceptance of the order
14.	If any loss or damage is caused to INCOIS property by workmen deployed by the successful bidder, the cost of the same will be recovered from the agency/contractor.
15.	The Contractor shall ensure safety and security of all workforces employed for this work and equipments provided by him under the Contractor until all the works entrusted are completed in all respects and taken over by INCOIS. In the event of damages except under force majeure clause ie., fire, wind, rain, floods or through any hazards, pilferage, other natural calamities etc., the Contractor shall make good the damaged works and restore the same to the original condition at his own cost
16.	Before submitting the bid, tenderers are advised to inspect the site of works and its environments and be well acquainted with actual working conditions, approach to site of work, surroundings of the Site of work and other prevailing conditions, position of materials and labor. The Tender(s) shall be well acquainted with the General and Special conditions of Contract and specifications and all other documents which form part of the Agreement. Any misunderstandings of the conditions/rules/ regulations/specifications shall not entitle the Tenderer(s) contractor(s) for any sort of compensation
17.	Bidder's from a country which shares a land border with India will be eligible to participate in this tender only, if the bidder is registered with Department for Promotion of Industry and Internal Trade (DPIIT) under Order (Public procurement No. 1) issued by Ministry of Finance, Department of Expenditure in line with OM No. F.No.6/18/2019-PPD dt 23rd July, 2020 and F.18/37/2020-PPD, dt. 08.02.2021inserting Rule 144 (xi) in GFR 2017.
18.	GST: The bidder should specifically/particularly state GST if any applicable as extra and the rate

	at which the same is chargeable, failing which, the prices quoted, will be deemed to be inclusive of such levies. If a particular bidder is not registered under the GST Act, the prices quoted by him will be treated as net and inclusive of all taxes and statutory levies and that any future claims made by him for reimbursement of those levies on account of retrospective registration under the GST Act will under no circumstances be entertained by the INCOIS and that liability for payment of these levies will be wholly and exclusively that of the bidder quoting against our tender.
19.	Please note that any falsification/suppression of information could lead to the disqualification.
20.	Before submitting the bid tenderers are advised to inspect the site of works and its environments and be well acquainted with actual working conditions, approach to site of work, surroundings of the Site of work and other prevailing conditions, position of materials and labor. The Tender(s) shall be well acquainted with the General and Special conditions of Contract and specifications and all other documents which form part of the Agreement. Any misunderstandings of the conditions/rules/ regulations/specifications shall not entitle the Tenderer(s) contractor(s) for any sort of compensation
21.	Bidders should fill and submit the technical compliance sheet along with supporting documents along with Techno-Commercial bid. Offers received without the compliance sheet will be summarily rejected.
22.	<p>Liquidated Damages Clause: In case the supply/delivery/services is delayed and delay is attributed to the Successful Bidder or is not as per our specifications and in the event of breach of any of the terms and conditions mentioned in the Purchase Order, INCOIS shall have the right:-</p> <ul style="list-style-type: none"> a) To recover at the rate of 0.5% per week for the value equivalent to undelivered material / services against the delay in execution of the order or part thereof subject to a maximum of 10% of the services/material not executed/delivered. b) To purchase elsewhere, after due notice to the Tenderer on the account and at the risk of the defaulting supplier for the stores/services not supplied or others of a similar description without cancelling the work order in respect of the job not yet due for supply or c) To cancel the order or a portion thereof and if so desired to purchase the stores / services at the risk and cost of the defaulting supplier and also. d) To extend the period of delivery with or without penalty shall not be more than agreed liquidated damages referred to in clause (a) above, e) To forfeit the security deposit full or in part at the discretion of Director, INCOIS upon ascertain the circumstances
23.	Tenders not in complete shape or not conforming to technical specifications or not conforming to terms and conditions are liable for rejection.
24.	All above relevant documents must be enclosed with technical bids failing which bids may be ignored and will not be considered for technical evaluation.
25.	Proof for fulfillment of eligibility criteria mentioned above should be submitted along with the tender. If the tender is submitted without valid documents, INCOIS shall not consider the bid offered as responsive. Tenders received without proof of eligibility criteria will be rejected
26.	Any deviations technically or commercially should be clearly indicated in the Technical bid offer only.
27.	Before submitting the bid tenderers are advised to inspect the site of works and its environments and be well acquainted with actual working conditions, approach to site of work, surroundings of the Site of work and other prevailing conditions, position of materials and labor. The Tender(s) shall be well acquainted with the General and Special conditions of Contract and specifications and all other documents which form part of the Agreement. Any misunderstandings of the conditions/rules/ regulations/specifications shall not entitle the Tenderer(s) contractor(s) for any sort of compensation
28.	<p>Force Majeure Clause:</p> <p>If the execution of the contract / supply order is delayed beyond the period stipulated in the contract as a result on out-break of hostilities, declaration of an embargo's or blockage or fire flood, acts of nature or any other contingency , pandemic declared by WHO/Govt. authorities causing stoppage of work beyond the supplier's /INCOIS control, Director, INCOIS may allow such additional time by extending the delivery period as he considers to be justified by the circumstances of the case and his decision shall be final, conclusive and binding. If and when additional time is granted by the INCOIS, the contract/supply shall be read and understood as if it had contained from its inception the delivery date as extended.</p>
29.	If any tenderer withdraws his tender after price bid is opened, within the validity period or

	makes any modifications in the terms and conditions of tender, which are not acceptable to the INCOIS, then INCOIS shall without prejudice to any other right or remedy available to it, be at liberty to initiate appropriate action w.r.t bid for forfeit of EMD & bid securing declaration in case of MSEs.
30.	The bidder shall sign and upload the Bids with the exact name and address of the firm, which is bidding for the tendered requirement.
31.	The Bids shall be uploaded only after signed by a duly authorized officer of the firm which is bidding for the tendered requirement, and in the case of a Corporation, seal, or otherwise appropriately executed under seal.
32.	The acceptance of tender will solely rest with Director, INCOIS who does not bind himself to accept the lowest or any other tender. No reasons will be furnished for acceptance or rejection of any tender.
33.	Termination Claus: Director, INCOIS reserves the right to terminate the contract either whole or part of the contract with one month notice.
34.	Canvassing in connection with tender is strictly prohibited and any canvassing will render the bid of such tenderer ineligible.
35.	INCOIS reserves the right to alter the scope/or reduce quantum of work, before/after issue of work order and tenderer shall not have any claim whatsoever on this account.
36.	In case of any un resolved dispute or differences arising at any time between this Institute and the firm holding the contract, these shall be resolved in terms of the Arbitration and Conciliation Act 1996 and held at Hyderabad, Telangana, India only. Further, this contract is subject to laws of India alone

7. Technical Clarifications & Bid Extension: -

If firms require clarifications & Bid Extension on certain points in this document may be submitted (via e-mail) on or before 15:00 Hrs of December 26, 2025. Note: Firms may submit a consolidated query only once. e-mail: manyam@incois.gov.in, dasariiprasad@incois.gov.in, E-mail subject should be mentioned as "Queries (A) "Comprehensive Annual Maintenance Contract (CAMC) of Strong Motion Accelerograph (SMA) Network for 05 years at Andaman and Nicobar Islands."

Administrative Officer (Purchase)

Indian National Centre for Ocean Information
Services (INCOIS) Ministry of Earth Sciences, Govt.
of India, "Ocean Valley", Pragathi Nagar (BO),
Nizampet (SO), Hyderabad - 500 090, T.S., India
Phone No.: 040 23886022/6082
Fax No.: 040-23895001 / 23892910
e-mail: manyam@incois.gov.in

Declaration: I, _____ son/daughter of _____ aged _____ years
and residing at _____ State and sole proprietor /managing partner
/director of _____ after having read and understood the tender document
No. _____ dated _____ floated by the Institute, hereby undertake that I agree to and
shall abide by the terms and conditions prescribed in the said tender document for Comprehensive Annual
Maintenance Contract (CAMC) of Strong Motion Accelerograph (SMA) Network for 05 years at Andaman and
Nicobar Islands

Signature of the Tenderer/ Authorized Signatory & date

Name

OFFICE SEAL,

Address

Note: The bidder/ tenderer has to sign & stamp on all pages of tender document and upload the same

BID-SECURING DECLARATION FORM

Bid No. INCOIS: PUR: 24/2025 date 09.12.2025 Comprehensive Annual Maintenance Contract (CAMC) of Strong Motion Accelerograph (SMA) Network for 05 years at Andaman and Nicobar Islands.

To

The Director

Indian National Centre for Ocean Information Services (INCOIS),

Ministry of Earth Sciences, Govt. of India,

"Ocean Valley", Pragathi Nagar (BO),

Nizampet (SO), Hyderabad - 500 090,

I/We the undersigned, declare that: I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any tender/contract with INCOIS for a period of one year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, i.e., if I/We withdraw, modify, amend, impair or derogate from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or refuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Dated on _____ day of _____

Signature of the Tenderer/Authorized Signatory & date

Name of the authorized signatory:

OFFICE SEAL,

Designation:

Name of the Bidder:

Address:

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)

Station Names and Details.

Local Sites (Latitude and Longitude details will be provided based on Request)

S.No	Station Names	Installed Instruments at stations
1	Bakultala	(SMA S.No: , Recorder S.No:184, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
2	Baratang	(SMA S.No: , Recorder S.No:197, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
3	Betapur	(SMA S.No: , Recorder S.No:306, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
4	Chidiyatapu	(SMA S.No: , Recorder S.No:183, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
5	Ferrargunj	(SMA S.No: , Recorder S.No:266, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
6	Havelock	(SMA S.No: , Recorder S.No:325, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
7	Kadamtala	(SMA S.No: , Recorder S.No:186, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
8	Kishorinagar	(SMA S.No: , Recorder S.No:258, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
9	Long Island	(SMA S.No: , Recorder S.No:334, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
10	Mohanpur	(SMA S.No: , Recorder S.No:331, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
11	Namunagar	(SMA S.No: , Recorder S.No:185, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
12	Neil Island	(SMA S.No: , Recorder S.No:311, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
13	Nimbutala	(SMA S.No: , Recorder S.No:177, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
14	Radhanagar	(SMA S.No: , Recorder S.No:310, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
15	Ramnagar	(SMA S.No: , Recorder S.No:317, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
16	Rut Island	(SMA S.No: , Recorder S.No:205, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
17	Shoalbay	(SMA S.No: , Recorder S.No:313, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
18	Wandoor	(SMA S.No: , Recorder S.No:316, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)

Remote Sites

(Latitude and Longitude details will be provided based on Request)

S.No	Station names	Installed Instruments at stations
19	Arong	(SMA S.No: , Recorder S.No:214, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
20	Afrabay	(SMA S.No: , Recorder S.No: 314 , GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
21	Chowra	(SMA S.No: , Recorder S.No:216, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
22	Daring	(SMA S.No: , Recorder S.No:332, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
23	East Island	(SMA S.No: , Recorder S.No:315, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
24	Mildera-Katchal	(SMA S.No: , Recorder S.No:312, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
25	Kamorta AC Office	(SMA S.No: , Recorder S.No:329, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
26	Kakana	(SMA S.No: , Recorder S.No:337, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
27	Makachua	(SMA S.No: , Recorder S.No:261, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
28	Sashtrinagar	(SMA S.No: , Recorder S.No:305, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
29	Alurang-Teressa Island	(SMA S.No: , Recorder S.No: 300, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
30	Chukmanchi-Teressa Island	(SMA S.No: , Recorder S.No:, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
31	Trinket	(SMA S.No: , Recorder S.No:212, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
32	Upper Katchal	(SMA S.No: , Recorder S.No:182, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
33	VK Pur	(SMA S.No: , Recorder S.No:195, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
34	Interview Island (YTC)	(SMA S.No:199, Recorder S.No:615, GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)
35	Narcondam Island (YTC)	(SMA S.No: , Recorder S.No: , GPS antenna, Solar Panels, Solar Charge Controller, Battery, Battery Charger, Power, Sensor Cables and other necessary Accessories)

Mandatory Tests Requirements:**Test-I:****Titan Strong Motion Accelerograph (SMA) Sensor Testing and Calibration Report****1. Instrument Details**

- **Sensor Model:** Titan Accelerometer
- **Type:** Strong Motion Accelerograph
- **Serial Number:** TITAN-615
- **Manufacturer:** Nanometrics Inc.
- **Date of Testing:** 14-May-2025
- **Location of Testing:**
INCOIS Calibration Facility / On-Site Station / Nanometrics Calibration Facility]

2. Purpose of the Report

To verify the operational status, sensitivity, linearity, and calibration of the Titan SMA sensor prior to field deployment.

3. Visual and Physical Inspection

Parameter	Status	Remarks
Housing and Connectors	No Damage	Rugged enclosure, no visible damage
Sensor Mounting Base	Verified	Stable and properly aligned
Connector Integrity	Good	No corrosion or loose contacts
Internal Temperature Sensor	Functional	Temperature stable at ~25°C

4. Functional Testing

Test Description	Result	Remarks
Power-On Response	OK	No errors
Self-Test (Built-in Test Signal)	Passed	Signal output matches expected response
Output Verification (DC Level Drift)	Nominal	±1 mV stability
Cross-Axis Sensitivity	<1%	Within specification
Output Noise Level	Low	RMS < 10 µg

5. Calibration Results

Axis	Input Excitation (±g)	Measured Output (V)	Sensitivity (V/g)	Linearity (%)	Phase Response
X	±0.5	±2.50	5.00	<0.5%	In Phase
Y	±0.5	±2.49	4.98	<0.5%	In Phase
Z	±0.5	±2.52	5.04	<0.5%	In Phase

- **Bandwidth Tested:** DC to 100 Hz
- **Dynamic Range:** >135 dB
- **Clip Level:** ±4 g

6. Environmental and Stability Tests

Test Condition	Result	Remarks
Temperature Drift ($\pm 5^{\circ}\text{C}$)	$< \pm 0.1\%$	Stable output
Power Supply Variation	No Effect	10.5 V to 36 V range tested
Humidity Impact (RH 90%)	No Effect	Sensor fully sealed

7. Conclusion

The Titan Strong Motion Accelerograph (S/N: 000615) passed all visual, functional, and calibration tests. The sensitivity, noise, and phase response are within manufacturer specifications. The sensor is certified for field deployment in seismic monitoring applications.

8. Technician Details

- **Name:** [Your Name]
- **Designation:** Instrumentation Engineer
- **Signature:** _____
- **Date:** [14-May-2025]

Test-II

Nanometrics Centaur 6-Channel Digitizer Testing and Calibration Report

1. Instrument Details

- **Model:** Centaur Digital Recorder
- **Channels:** 6
- **Serial Number:** 000199
- **Manufacturer:** Nanometrics Inc.
- **Date of Testing:** 14-May-2025

Location of Testing:

[INCOIS Calibration Facility / On-Site Station / Nanometrics Calibration Facility]

2. Objective

To verify the operational status, signal integrity, and calibration response of the Nanometrics Centaur 6-Channel Digitizer prior to deployment.

3. Visual and Physical Inspection

Parameter	Status	Remarks
Physical Damage	No Damage	Casing intact
Connectors and Ports	Functional	All ports clean and secure
LEDs and Display	Operational	As per manufacturer spec
Mounting and Enclosure	Verified	Suitable for field deployment

4. Functional Tests

Test Description	Result	Remarks
Power-On Self-Test	Passed	No errors
Communication with PC (via Ethernet)	Successful	Static IP assigned

Data Retrieval (via nmxPT or CentaurTool)	Verified	Continuous data stream observed
Clock Synchronization (GPS/NTPC)	Synchronized	Time sync accurate to within ± 1 ms
Channel Integrity Check	All channels OK	No dropouts or anomalies detected

5. Calibration Details

Channel	Input Signal Applied	Sampling Rate (sps)	Observed Output	Linearity	Noise Floor (dB)
CH1	1 Vpp sine wave 1 Hz	200	As expected,	Linear	-125
CH2	1 Vpp sine wave 5 Hz	200	As expected,	Linear	-123
CH3	2 Vpp pulse input	100	No distortion	Linear	-122
CH4-6	Loopback Test	100	Verified	Linear	-124

6. Firmware and Software Verification

- **Firmware Version:** 4.9.6
- **Tool Used:** CentaurTool v3.3
- **Configuration File Loaded:** [centaur_config2025.xml]
- **Sample Rate Set:** 100 sps (Primary), 1 sps (Secondary)
- **Data Format:** miniSEEDcompatible

7. Conclusion

The Nano metrics Centaur 6-Channel Digitizer (SN: 000199) was successfully tested and calibrated. All channels are functioning normally. The digitizer is suitable for deployment in a field seismic station. Calibration results conform to manufacturer specifications.

8. Technician Details

- **Name:** [Your Name]
- **Designation:** Instrumentation Engineer
- **Signature:** _____
- **Date:** [14-May-2025]

Test-III
Battery Load Test and Power System Evaluation Report

System Under Test:

- **Sensor:** Titan Strong Motion Accelerograph (SMA)
- **Digitizer:** Nanometrics Centaur 6-Channel
- **Power Source:** 12V 100Ah Sealed Lead Acid Battery
- **Solar Panel:** 100W, 20V Output (Open Circuit)
- **Charge Controller:** Morningstar SunSaver SS-10 / SS-10L (10A, 12V, PWM)

1. Purpose of Test

To assess the reliability of the power system configuration to operate the Titan SMA and Centaur Digitizer under continuous load conditions, verify battery backup duration, solar charging efficiency, and charge controller behavior.

2. Power Consumption Summary

Equipment	Voltage	Current Draw (Avg)	Power Consumption (W)
Titan Accelerometer	12V	0.015 A	0.18 W
Centaur Digitizer	12V	0.70 A	8.4 W
Total Load		~0.72 A	~8.6 W

3. Test Setup

- **Battery Fully Charged:** 13.0 V terminal voltage at 100% SOC
- **Solar Panel Oriented Southward:** Tilted at site-specific optimal angle
- **Data Logging Interval:** 10 seconds (voltage, current, SOC)
- **Load Duration Test:** System run without solar input until battery depleted to 11.0 V (approx. 50% DOD recommended)

4. Battery Load Test Results (No Solar Input)

Time Elapsed	Battery Voltage	Load Current	SOC Estimate	System Status
0 hrs	13.0 V	0.72 A	100%	Normal Operation
12 hrs	12.5 V	0.72 A	~80%	Stable
24 hrs	12.2 V	0.72 A	~65%	Stable
36 hrs	12.0 V	0.72 A	~55%	Stable
48 hrs	11.8 V	0.72 A	~45%	Operational
60 hrs	11.4 V	0.72 A	~30%	Low Battery Alert
70 hrs	11.0 V	0.72 A	~20%	Cutoff Recommended

- **Backup Time (No Solar Input):** ~70 hours before reaching safe cutoff

5. Solar Charging Performance

- **Test Conditions:** Sunny Day, Clear Sky
- **Measured Peak Solar Voltage:** ~19.8 V
- **Controller Output to Battery:** 13.6 V at ~4.8 A (Max)
- **Charge Time from 11.8V to Full (13.0V):** ~6-7 hrs full sun

Time	Battery Voltage	Charge Current	SOC Increase
08:00	11.8 V	4.2 A	45%

10:00	12.2 V	4.5 A	65%
12:00	12.8 V	4.7 A	85%
14:00	13.0 V	0.5 A (float)	100%

6. Charge Controller Evaluation - SS-10/10L

Parameter	Observation
Charging Mode	PWM - Multi-Stage
Low Voltage Disconnect	~11.5 V (Default setting)
High Voltage Disconnect	~14.1 V
LED Indicators	Charging/Load OK LED Functioning
Night Detection (L-version)	Verified (For SS-10L)