

**GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE  
VIKRAM SARABHAI SPACE CENTRE (VSSC)  
THIRUVANANTHAPURAM**

**Tender for IP based Audio System for Structural Test Facility**

**Bids to be submitted online**

**Tender No.: VSSC/PURCHASE UNIT I (MAIN PURCHASE)/VS202300550001 dated  
07-05-2024**

## A. Tender Details

Tender No :	<b>VSSC/PURCHASE UNIT I (MAIN PURCHASE)/VS202300550001</b>
Tender Date :	<b>07-05-2024</b>
Tender Classification:	<b>GOODS</b>
Purchase Entity :	<b>PURCHASE UNIT I (MAIN PURCHASE)</b>
Centre :	<b>VIKRAM SARABHAI SPACE CENTRE (VSSC)</b>

### IP based Audio System for Structural Test Facility

1. In order to avail the benefits extended by the Govt. of India to the Micro and Small sector Vendors are requested to submit along with their offers-attested copy of valid EM Part II signed by the General Manager, DIC.

2. Make/Model should be specifically mentioned in your offer.

3. If any of the bidders submit any forged or false documents along with the tender such tenders will be summarily rejected and such bidders will be blacklisted for all future tenders.

4. All Tax Invoices issued by supplier/ service providers shall invariably bear their GST Registration No. (GSTIN) & the applicable GST rates. In the absence of which, the invoices shall not be processed for payment.

#### A.1 Tender Schedule

Bid Submission Start Date :	<b>07-05-2024 11:31</b>
Bid Clarification Due Date :	<b>22-05-2024 14:00</b>
Bid Submission Due Date :	<b>23-05-2024 14:00</b>
Bid Opening Date :	<b>23-05-2024 14:10</b>

## **B. Tender Attachments**

NA

### **Instructions To Vendors**

#### **1. Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA**

1. 1. As per the Rule 144(xi) of General Financial Rule, 2017, any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the competent authority ie., Department for Promotion of Industry and Internal Trade (DPIIT).

2. 2. Hence, Vendors or Agents of a Vendor (Indian or others) from a country sharing border with India shall submit copy of valid registration made with Department for Promotion of Industry and Internal Trade (DPIIT), Government of India along with the tender mandatorily, without which the offer will be treated as invalid.

3. 3. Model Certificate for Tenders : "I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered". Please submit this declaration duly signed and stamped by your Authorized signatory in your Company/OEM's Letter head.

4. 4. Validity of Registration: Registration should be valid at the time of submission of bids and should be valid at the time of placement of order.

5. 5. Any false declaration and non-compliance of the above would be a ground for immediate rejection of offer or termination of the contract and further legal action in accordance with the laws.

#### **2. Specific Terms and Conditions to Tender (detailed)**

1. As per Notification No. 5/2018-CUSTOMS DTD. 25/01/2018, we are eligible for concessional payment of customs duty and IGST. Hence CD & IGST element shall be specified separately in the quotation. Necessary exemption certificate shall be issued upon request.

2. If any bidder submits forged / false document along with the tender, offer of such vendors will be summarily rejected and such bidders will be blacklisted for all future tenders.

3. In case if any Bidder is submitting their Offer on HIGH SEA SALES BASIS: then the Indian Trader shall submit the following documents mandatorily along with their offer.

- a.The Import Export Code of the Indian Trader
- b.Bank Authorization Code of the Indian Trader
- c.GSTIN of the Indian Trader

4. In case of Foreign/Import Tenders:

- a.The bidder shall clearly mention the full ordering address in capital letters.
- b.The bidder shall clearly mention their bankers address including their SWIFT code compulsorily.
- c.Any change of address shall be compulsorily supported by Documentary proof issued either by Governmental agencies or by Chamber of Commerce.
- d.Foreign Principals Proforma Invoice/quote indicating the Agency Commission payable to the Indian Agent and the nature of after sales service to be rendered by the Indian Agent.
- e.Copy of the Agency Agreement between the Foreign Principal and the Indian Agent, and the precise relationship between them their mutual interest in the business.
- f.Registration and Item empanelment of the Indian Agent.

5. In order to avail of the benefits extended to by Govt. of India to the Micro and Small Sectors, please submit attested copy of the valid Entrepreneur Memorandum Part-II signed by the General Manager, District Industries Centre / Udyog Adhar / NSIC Registration Certification along with your offer.

6. Likewise, while executing the Purchase Order/Contract; the Indian Trader shall mandatorily submit the following:

- a.High Sea Sale Agreement.
- b.Invoice pertaining to the Indian Trader in INR and the invoice of the foreign vendor in foreign currency.

7. Note: SD, LD and PBG clauses are mandatory and offers of the vendors who have not agreed for the above conditions will be excluded from the procurement process. Micro and Small Vendors are not exempted from the submission of Security Deposit. Only Govt Departments/PSUs/PSEs can submit Indemnity Bond instead of Bank Gurantee towards SD/PBG.

8. Our standard delivery term is FOR, VSSC. In case any vendor offers delivery term of Ex-works, Packing and Forwarding charges if any should be indicated separately either as a percentage of the quoted rate or as a Lumpsum amount.

9. Our standard payment term is 100% within 30 days for indigenous orders and Sight Draft for foreign orders.

10. Performance Bank Guarantee: Wherever products offered carry warranty, the warranty should be for one year or as per manufacturers standard warranty term. Against such cases, please confirm

submission of Performance Bank Guarantee. The Performance Bank Guarantee should be for 3% of the order value covering the warranty period obtained from any Scheduled Bank on Rs.200/- Non Judicial Stamp Paper and should be valid beyond 2 months from the completion of the warranty period. Alternately vendors can request for withholding 3% payment till completion of the warranty period.

11. Please quote applicable GST separately.

(a) In line with Notification No. 01/2017-Central Tax (Rate) dated 28-06-2017, as amended by Notification No. 06/2018-Central Tax (Rate) dated 25-01-2018 and Notification No. 24/2018 - Central Tax (Rate) dated 31-12-2018 and corresponding SGST Rate Notifications, GST rate for the goods at Sl. No. 243 B: "Scientific and technical instruments, apparatus, equipment, accessories, parts, components, spares, tools, mock up and modules, raw material and consumable required for Launch Vehicles and Satellites and Payloads" is 2.5% CGST and 2.5% SGST. IGST is charged at 5 % in terms of Notification No. 01/2017-IGST dated 28-06-2017 as amended by Notification No. 07/2018 - IGST dated 25-01-2018 and Notification No. 25/2018 - IGST dated 31-12-2018, necessary IGST/CGST/SGST concession certificate shall be issued

12. Please upload the Technical Details / Catalogue / Data Sheets (wherever applicable)

13. Security Deposit: Wherever the offer value is Rs. 5.00 Lakhs or above, the successful tenderer should submit Security Deposit @ 3% of the order value by way of Bank Guarantee / FD Receipt. The Bank Guarantee shall be obtained from any Scheduled Bank on Rs.200/- Non Judicial Stamp Paper and should be valid beyond 2 months from the completion of all contractual obligations. If the Contractor is called upon by the Purchaser to deposit, Security and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor. In case if Security Deposit is submitted and the contractor fails to execute the order, then the security deposit will be forfeited.

14. The offer should be valid for a period of minimum 90 days from the date of opening of Tender.

15. The other attached forms are our standard terms and conditions, which are to be complied with. If any conflict arise between the specific terms and standard terms, then in those cases, the specific terms will prevail over the standard terms.

16. Where agents participate in a tender;

(a) Either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.

(b) If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

17. Wherever samples are required to be submitted along with the quotation, offer without sample will

not be considered.

#### 18. LIQUIDATED DAMAGES:

The delivery date stipulated in the order is the essence of the contract. In case of delay in supplying the items from mutually agreed delivery date, liquidated damages @ 0.5% of the order value per week subject

to a maximum of 10% of the order value for the delayed period will be deducted from your bill. The supply will be deemed to have been completed only when the entire system is supplied, installed and accepted.

#### 19. FORCE MAJEURE:-

In case completion of job is delayed by any circumstances such as acts of god, sabotages, civil commotion, riots, insurrections, revolution, blockades, earthquakes, fire, floods, lightening, storms, or other natural events over which we do not have control, the contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time.

The purchaser on receipt of such notice after verification if necessary may agree to extend the contract delivery date as may be reasonable but without prejudice to other terms and conditions of the contract.

20. Arbitration: In the event of any dispute/s, difference/s or claim/s arising out of or relating to the interpretation and application of the Contract, such dispute/s or difference/s or claim/s shall be settled amicably by mutual consultations of the good Offices of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible, within 30 days from the date of receipt of written notice of the existence of such dispute/s, then the unresolved dispute/s or difference/s or claim/s shall be referred to the Arbitrator(s) appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation (Amendment) Act of 2015. The arbitration shall be conducted in Bengaluru in the Arbitration and Conciliation Centre Bengaluru (Domestic and International) as per its rules and regulations. The expenses for the Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The applicable language for Arbitration shall be English only.

Work under the Contract shall be continued by the CONTRACTOR during the pendency of arbitration proceedings, without prejudice to a final adjustment in accordance with the decision of the Arbitrator unless otherwise directed in writing by the DEPARTMENT or unless the matter is such that the works cannot be possibly continued until the decision (whether final or interim) of the Arbitrator is obtained.

### **3. PPP Make in India(Non- Divisible Items-Class I & II Local Suppliers Only)**

1. 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.

2. a) The subject item falls under Non-divisible category. b) The offers sought only from Class-I & Class-II local suppliers

3. 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.

4. 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.

5. 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.

6. 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 the percentage of local content.

7. 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 tender, subject to the following terms & conditions:-

8. 'L1' means the lowest technically accepted tender / bid / quotation (i.e. lowest landed cost including duties, taxes and freight & Insurance).

9. '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.

10. 'Margin of purchase preference' means the maximum extent to which the price quoted by the "Class-I local supplier" above the L1 (landed cost).

11. 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 original L1 Bidder.

12. 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 Sl. No.(3)] as called for in the tender 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.

13. The ink-signed certificate shall be provided on vendors letter head along with the offer (in case of online tender, copy of ink-signed certificate shall be uploaded 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.

14. The margin of Purchase Preference shall be up to 20%.

15. 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 tenders, 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 be not be considered and excluded from eligibility for procurement. Please note this point.

16. Works means all works as per Rule 130 of GFR- 2017, and will also include 'turnkey works'. Works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.

#### **4. Format for Self Certification under Preference to MAKE IN INDIA Policy**

1. 1. In line with Government Public Procurement Order No. P-45021/2/2017-BE-II dt. 15.06.2017, as amended from time to time and as applicable on the date of submission of tender, we hereby certify



that we M/s. \_\_\_\_\_(supplier name) are local supplier meeting the requirement of minimum percentage of Local content \_\_\_\_\_ ( class I/Class II) as defined in above orders for the materials against Tender No. \_\_\_\_\_

2. 2. Details of locations at which local value addition will be made is as follows: -----  
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3. 3. We also understand, false declarations will be in breach of the Code in Integrity under Rule 175(1) (i) (h) of the General Financial Rule for which a bidder or its successors can be debarred for up two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

4. 4. Seal and Signature of Authorized Signatory.

## **5. PROFORMA FOR INSTRUCTIONS TO TENDERERS AND TERMS & CONDITIONS OF TENDER (IG)**

1. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.

(b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of nonacceptance of tender, the tenderer will have to remove the samples at his own expense.

(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.

(d) Specifications: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

2. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.

(b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of nonacceptance of tender, the tenderer will have to remove the samples at his own expense.

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the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

### 3. ACCEPTANCE OF STORES:

(a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.

(b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.

(c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.

(d) If the whole or any part of the stores supplied are rejected in accordance with Clause No. (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

4. As a Government of India Department, this office is exempted from payment of Octroi and similar local levies. Tenderers shall ensure that necessary Exemption Certificates are obtained by them from the Purchase Officer concerned to avoid any payment of such levies.

5. a) Your offer should be valid for 90 days from the date of opening of the tender.

b) Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.

6. DESPATCH: The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods despatched. The consignment should be despatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on 'said to contain' basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

7. d) The term "Purchase Order" shall mean the communication signed on behalf of the Purchaser by an Officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the

Contractor for supply of stores or plant, machinery or equipment or part thereof.

#### 8. GUARANTEE & REPLACEMENT:

(a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.

(b) For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty.

(c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.

(d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.

(e) The decision of the Purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the Purchaser, as to whether or not the Stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or any other period or as to whether the nature of defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.

(f) To fulfill guarantee conditions outlined in (a) to (e) above, the Contractor shall, at the option of the Purchaser, furnish a Bank Guarantee (as prescribed by the Purchaser)

9. PACKING FORWARDING & INSURANCE: The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

10. Preference will be given to those tenders offering supplies from ready stocks and on the basis of FOR destination/delivery at site.

11. PRICES: Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

#### 12. REJECTED STORES:

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for

their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

13. Sales Tax and/or other duties/levies legally leviable and intended to be claimed should be mentioned in the price bid template. If nothing is mentioned, then it will be presumed that the rate quoted is inclusive of all taxes/duties.

14. SECURITY DEPOSIT: Wherever, the Purchase Order value is Rs. 5.00 Lakhs or more, on acceptance of the tender, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding ten percent of the value of the Contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit, 'Security' and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor in terms of Sub-Clause (ii) and (iii) of clause regarding Delivery. (b) hereof and/or to recover from the Contractor, damages arising from such cancellation.

#### 15. TERMS & CONDITIONS OF TENDER

16. TEST CERTIFICATE: Wherever required, test certificates should be sent along with the despatch documents.

17. The authority of the person signing the tender, if called for, should be produced.

18. The Purchaser reserves the right to place order on the successful tenderer for additional quantity up to 25% of the quantity offered by them at the rates quoted.

19. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.

20. The tenderer should supply along with his tender, the name of his bankers as well as the latest Income-Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser.

21. The term Contractor shall mean, the person, firm or company with whom or with which the order for the supply of Stores is placed and shall be deemed to include the Contractor's successors, representative, heirs, executors and administrators unless excluded by the Contract.

22. The term Purchaser shall mean the President of India or his successors or assigns.

23. The term "Stores" shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants & machinery and subsequent testing, should such a condition is included in the Purchase Order.

## C. Bid Templates

### C.1 Technical Bid - IP based Audio System for Structural Test Facility

#### 1. MICROPHONES - Two-way, full duplex, multi-zone suitable for integration with VoIP systems

##### Item specifications for MICROPHONES

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Microphone	Microphone console for paging with advanced functions such as broadcasting to 12 zones with two-way communication using a built-in speaker and option for playing back pre-recorded messages. All these functions should be available without the need of server or distance limitations. It should have option to upload or record a message via the microphone and then play it by simple push of a button to a designated zone	Yes / No / Explain		
2	Audio streaming	Two-way, full duplex	Yes / No / Explain		
3	Audio compression	G.711 PCM 8 kHz, G.722, L1616 kHz (wideband), L1632 kHz (wideband)	Yes / No / Explain		
4	Audio input/output	Mic-in, line-in, line-out, headphones out	Yes / No / Explain		
5	SNR	91 dB	Yes / No / Explain		
6	Frequency response	20 Hz - 20 kHz (+/- 0.5 dB)	Yes / No / Explain		
7	Maximum output voltage	Relay contact 250 V AC / 220 V DC 2A	Yes / No / Explain		
8	Maximum input voltage	12 V max	Yes / No / Explain		

9	Speaker component	2 x 1 W stereo (built-in), 8 Ohm	Yes / No / Explain		
10	Max sound pressure level	86 dB (+/- 3 dB)	Yes / No / Explain		
11	Amplifier description	2.9W per channel, type MAX98089, (4 Ohm, Vdd=5V)	Yes / No / Explain		
12	Supported protocols	IPv4, HTTP, NTP, RTP, TCP, UDP, DHCP, SIP, mDNS	Yes / No / Explain		
13	Application Programming Interface	Open API for software integration.	Yes / No / Explain		
14	VoIP	Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems. Peer to peer or integrated with SIP/PBX. Tested with: 2N PBX Supported SIP features: NAT (STUN)	Yes / No / Explain		
15	Event actions	Scheduled events configured for each button through Action Scheduler.	Yes / No / Explain		
16	Casing	Wood and metal casing	Yes / No / Explain		
17	Power	8 W, Power over Ethernet (PoE) IEEE 802.3af 25 W, external power adapter	Yes / No / Explain		
18	Connectors	Power: 12 V DC / 2 A main adapter connector (adapter is sold as an optional accessory) relay output. RJ45 10BASE-T/100BASE-TX PoE with Auto-MDIX function 2 x 3,5 mm Universal Audio Jack line and mic input 1 x 3,5 mm audio line out.	Yes / No / Explain		
19	Operating conditions	0 °C to 40 °C (32 °F to 104°F) Humidity: 10 % to 85 % (non-condensing)	Yes / No / Explain		

20	Storage Conditions	-25 °C to 60 °C (-13 °F to 140 °F)	Yes / No / Explain		
21	Approvals	EMC: EN 55032, EN 55024, FCC Part 15 Subpart B Class A Safety: EN/UL 62368-1	Yes / No / Explain		
22	Weight	2 kg max	Yes / No / Explain		
23	Language	English	Yes / No / Explain		
24	Warranty	3 years	Yes / No / Explain		

## 2. SPEAKERS - Network Horn Speaker - 30 Mtrs range 91dB SPL

### Item specifications for SPEAKERS

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Network Horn Speaker	Stand alone VoIP based horn speaker with built-in memory which supports pre-recorded messages, or security personal can respond to notifications with live speak. Should have very good and clear sound. Should support easy integration with network video, access control, analytics, and VoIP (supporting SIP). It should support simple installation with PoE and also remote health monitoring.	Yes / No / Explain		



2	Audio management	Software applications for managing and controlling your audio system regardless of its size and complexity: Software should run inside the device which should offer zone management, content management, content scheduling and health monitoring. Up to 200 speakers and 20 zones must be supported by the software.	Yes / No / Explain		
3	Audio streaming	One-way/two-way (mono)	Yes / No / Explain		
4	Audio encoding	AAC LC 8/16/32/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, $\mu$ -law 16 kHz, WAV, MP3 in mono/stereo from 64 kbps to 320 kbps. Constant and variable bit rate. Sampling rate from 8 kHz up to 48 kHz.	Yes / No / Explain		
5	Audio input/output	Built-in microphone (50 Hz - 12 kHz)	Yes / No / Explain		
6	Max sound pressure level	>121 dB	Yes / No / Explain		
7	Frequency response	280 Hz - 12.5 kHz	Yes / No / Explain		
8	Coverage pattern	70° horizontal by 100° vertical (at 2 kHz)	Yes / No / Explain		
9	Amplifier description	Built-in 7 W Class D amplifier	Yes / No / Explain		
10	Security	Password protection, IP address filtering, HTTPS encryption, IEEE 802.1X network access control, digest authentication, User access log	Yes / No / Explain		

11	Supported protocols	IPv4/v6, HTTP, HTTPS, SIP, SSL/TLS, QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP, SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, TCP, UDP, IGMP, ICMP, DHCP, ARP, SOCKS, SSH	Yes / No / Explain		
12	Application Programming Interface	Open API for software integration	Yes / No / Explain		
13	Audio synchronization	Built-in audio synchronization for up to 50 speakers with unicast and hundreds of speakers with multicast. No additional speaker management software or hardware required.	Yes / No / Explain		
14	VoIP	Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/PBX. Tested with: SIP client such as Cisco, Bria and Grandstream and PBX suppliers such as Cisco and Asterisk. Supported SIP features: secondary SIP server, IPv6, SRTP, SIPS, SIP TLS, DTMF (RFC2976 and RFC2833), NAT (ICE, STUN, TURN) Supported codecs: PCMU, PCMA, opus, L16/16000, L16/8000, speex/8000, speex/16000, G.726-32	Yes / No / Explain		
15	Intelligent audio	Auto Speaker Test	Yes / No / Explain		

16	Event triggers	Virtual inputs, External input Call: DTMF, State changes	Yes / No / Explain		
17	Event actions	File upload: HTTP, network share and email Notification: email, HTTP and TCP Play audio clip Perform Auto Speaker Test Send SNMP trap Status LED	Yes / No / Explain		
18	Built-in installation aids	Test tone verification and identification	Yes / No / Explain		
19	Functional monitoring	Auto Speaker Test, Connection verification, Built-in system logging	Yes / No / Explain		
20	Casing	Impact-resistant aluminum, IP66- IP67-, NEMA 4X- rated, and MIL-STD- 810G 509.5-rated	Yes / No / Explain		
21	Memory	256 MB RAM, 512 MB Flash	Yes / No / Explain		
22	Power	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3 (max. 12.95 W)	Yes / No / Explain		
23	Connectors	RJ45 10BASE- T/100BASE-TX PoE I/O: 4-pin 2.5 mm terminal block for one input and one output	Yes / No / Explain		
24	Operating conditions	-40 °C to 60 °C (-40 °F to 140 °F) Humidity 10-100% RH (condensing)	Yes / No / Explain		

25	Approvals	EMC: EN 55032 Class B, EN 50121-4, IEC 62236-4, EN 55024, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class B, ICES-3(B)/NMB-3(B), VCCI Class B, RCM AS/NZS CISPR 32 Class B, KC KN32 Class B, KC KN35 Safety: IEC/EN/UL 62368-1, IEC/EN/UL 60950-22 Environment: IEC/EN 60529 IP67, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, IEC/EN 60529 IP66, NEMA 250 Type 4X, MIL-STD-810G 509.5	Yes / No / Explain		
26	Dimensions	With bracket: 170 x 230 x 310 mm (max)	Yes / No / Explain		
27	Weight	1.5 Kg max	Yes / No / Explain		
28	Languages	English	Yes / No / Explain		
29	Warranty	5 years	Yes / No / Explain		

### 3. SPEAKERS - Mini Speaker - 10 Mtrs range 70dB SPL

#### Item specifications for SPEAKERS

SI No	Specification	Value	Compliance	Offered Specification	Remark
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1	Network Mini Speaker	VoIP based discrete speaker that fits into smaller spaces and provides wide-area audio coverage. Should have built-in memory that supports pre-recorded messages, or personnel can respond to notifications with live speak. Should have good sound fidelity. Must support support easy integration with network video, access control, analytics, and VoIP. It should connect to standard network and installation with PoE. It also must support remote health checking.	Yes / No / Explain		
2	Audio management	Software applications for managing and controlling your audio system regardless of its size and complexity: Software should run inside the device which should offer zone management, content management, content scheduling and health monitoring. Up to 200 speakers and 20 zones must be supported by the software.	Yes / No / Explain		
3	Audio streaming	One-way/two-way (mono)	Yes / No / Explain		
4	Audio encoding	AAC LC 8/16/32/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, $\mu$ -law 16 kHz, WAV, MP3 in mono/stereo from 64 kbps to 320 kbps. Constant and variable bit rate. Sampling rate from 8 kHz up to 48 kHz.	Yes / No / Explain		

5	Audio input/output	Built-in microphone (50 Hz - 12 kHz)	Yes / No / Explain		
6	Enclosure	One way enclosure with 2.5 inches broadband dynamic cone speaker	Yes / No / Explain		
7	Max sound pressure level	90 dB	Yes / No / Explain		
8	Frequency response	100 Hz - 20 kHz	Yes / No / Explain		
9	Coverage pattern	145° coaxial	Yes / No / Explain		
10	Amplifier description	Built-in 7 W Class D amplifier	Yes / No / Explain		
11	Security	Password protection, IP address filtering, HTTPS encryption, IEEE 802.1X network access control, digest authentication, User access log, Centralized Certificate Management	Yes / No / Explain		
12	Supported protocols	IPv4/v6, HTTP, HTTPS, SSL/TLS, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, Bonjour, UPnP, SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS, SSH, NTCIP, SIP (Cisco, Avaya, Asterisk)	Yes / No / Explain		
13	Application Programming Interface	Open API for software integration	Yes / No / Explain		
14	Audio synchronization	Built-in audio synchronization for up to 50 speakers with unicast and hundreds of speakers with multicast. No additional speaker management software or hardware required.	Yes / No / Explain		

15	VoIP	Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems. Peer to peer or integrated with SIP/PBX. Tested with: SIP client such as Cisco, Bria and Grandstream and PBX suppliers such as Cisco and Asterisk. Supported SIP features: secondary SIP server, IPv6, SRTP, SIPS, SIP TLS, DTMF (RFC2976 and RFC2833), NAT (ICE, STUN, TURN) Supported codecs: PCMU, PCMA, opus, L16/16000, L16/8000, speex/8000, speex/16000, G.726-32	Yes / No / Explain		
16	Intelligent audio	Auto Speaker Test	Yes / No / Explain		
17	Event triggers	Virtual inputs, Call: DTMF, State changes	Yes / No / Explain		
18	Event actions	Play audio clip, send SNMP trap, send Auto Speaker Test, status LED, File upload via HTTP, network share and email, Notification via email, HTTP, HTTPS and TCP	Yes / No / Explain		
19	Built-in installation aids	Test tone verification and identification	Yes / No / Explain		
20	Functional monitoring	Auto Speaker Test, Connection verification, Built-in system logging	Yes / No / Explain		
21	Casing	Plastic casing, IP40 rated Repaintable.	Yes / No / Explain		
22	Memory	256 MB RAM, 512 MB Flash	Yes / No / Explain		

23	Power	Power over Ethernet (PoE) IEEE 802.3af/802.3af Type 1 Class 3 (max 12.95 W)	Yes / No / Explain		
24	Connectors	RJ45 10BASE-T/100BASE-TX PoE	Yes / No / Explain		
25	PIR Sensor	Passive infrared (PIR) motion sensor. Max range: 6 m (19.7 ft)	Yes / No / Explain		
26	Operating conditions	-20 °C to 50 °C (4 °F to 122 °F) Humidity 10–85% RH (condensing)	Yes / No / Explain		
27	Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F)	Yes / No / Explain		
28	Approvals	EMC: EN 55032 Class B, EN 55035, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class B, ICES-3(B)/NMB-3(B), RCM AS/NZS CISPR 32 Class B, VCCI Class B Safety: IEC/EN/UL 62368-1	Yes / No / Explain		
29	Dimensions	Ø190 X 60 mm (max)	Yes / No / Explain		
30	Weight	1 Kg max	Yes / No / Explain		
31	Languages	English	Yes / No / Explain		
32	Warranty	5 years	Yes / No / Explain		

#### 4. Network switch - L2 switch with 24 x 10/100/1000T PoE ports and 4 x 100/1000X SFP ports.

##### Item specifications for Network switch

SI No	Specification	Value	Compliance	Offered Specification	Remark
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1	Physical Interfaces	24 # 1Gbps POE+ 300W, 2 # 1Gbps Base-T, 4 # 1Gbps SFP ports, Ethernet: Out-of-band 1G port (Front), Console: RJ45 RS232, Console: Mini-USB, PSU with On/Off switch, 1U Rackmount	Yes / No / Explain		
2	CPU/ Memory	Quad-Core Cortex-A57 ARMv8 1.8Ghz64-bit, 2GB RAM, Packet buffer memory: 16 MB, Flash: 256 MB	Yes / No / Explain		
3	Performance	Switching fabric: 60 Gbps Line-Rate (non blocking fabric)	Yes / No / Explain		
4	Throughput	Min. 44.64 Mpps	Yes / No / Explain		
5	Latency	<2.15.µs 1G ports	Yes / No / Explain		
6	IP Multicast Routing Entries	512 IPv4 & 128 IPv6.	Yes / No / Explain		
7	Address database size	16,000 MAC addresses (48-bit MAC address)	Yes / No / Explain		
8	Number of VLANs	4,093 (IEEE 802.1Q) simultaneously	Yes / No / Explain		
9	Jumbo Frames	Up to 12K	Yes / No / Explain		
10	Multicast IGMP Group membership	2K IPv4 & 2K IPv6	Yes / No / Explain		
11	DHCP Server	IPv4: 256 pools IPv6: 16 pools	Yes / No / Explain		

12	Performance features	Software-controlled fan adjustments; Pre-configured for audio and video over IP out of the box with zero touch configuration, For audio, profiles for Dante, Q-SYS and AES67 AVB license should be available; Auto-Trunk and Auto-LAG; Static, RIP and PIM-SM, DM and SSM multicast routing, DHCP Server and Pv2 Transparent Clock; Voice VLAN with SIP, H323 and SCCP protocols detection; authentication tiering with successive DOT1X, MAB and Captive Portal methods for streamlined BYOD,	Yes / No / Explain		
13	L3 & L2 Services	Industry standard SNMP, RMON, MIB, LLDP, AAA, sFlow, RSPAN and PTPv2; Voice VLAN with SIP; Advanced IPv4/IPv6 security implementation including malicious code detection; Multicast VLAN Registration Protocol (MVRP); Broadcast, Unicast, Multicast DoS Protection	Yes / No / Explain		

#### 5. UTP cable - Cat-6 4 pair UTP cable (rolls of 305 Meters)

##### Item specifications for UTP cable

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Cat-6 4 pair UTP cable	Cat-6 4 pair UTP cable (rolls of 305 Meters)	Yes / No / Explain		

#### 6. EQUIPMENT RACK - 9U Wall Mount Rack

##### Item specifications for EQUIPMENT RACK

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	EQUIPMENT RACK	9U Wall Mount Rack for housing network switch	Yes / No / Explain		

## 7. RJ45 Connector - UTP RJ45 MALE JACK (100 nos)

### Item specifications for RJ45 Connector

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	UTP RJ45 MALE JACK	UTP RJ45 MALE JACK	Yes / No / Explain		

## 8. Patch Panel - 24Port UTP Patch Panel

### Item specifications for Patch Panel

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Patch Panel	Fully Loaded 24Port UTP Patch Panel	Yes / No / Explain		

## 9. CASING AND CAPING

### Item specifications for CASING AND CAPING

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Caping and casing	40 mm Casing and Capping	Yes / No / Explain		

## 10. PVC conduit

### Item specifications for PVC conduit

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	PVC Conduit	1.5"/2" PVC CONDUITS	Yes / No / Explain		

## 11. Installation and Commissioning

## Item specifications for Installation and Commissioning

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Installation and Commissioning	Complete Installation, functional checking, verification of the System. This also includes Fixing of Caping and casing, 1.5"/2" PVC CONDUITS FIXING, CAT6 UTP CABLE LAYING, 9U WALL MOUNT RACK FIXING.	Yes / No / Explain		

### Supporting Documents required from Vendor

5 additional documents can be uploaded by the vendor

## C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	Taxes and other costs,	Yes / No / Explain	
2	Security Deposit (Applicable if Offer Value is Rs. 5 Lakhs or above. MSME/NSIC Units are NOT EXEMPTED from the payment of SD. Bank Guarantee @ 3% of Order Value valid till 60 days from the date of supply to be submitted. Mandatory compliance required. Only Government Bodies/PSUs/PSEs can submit Indemnity Bond in lieu of BG. In the event of non-performance of contractual obligations, SD will be forfeited).	Yes / No / Explain	
3	Delivery Terms (F.O.R VSSC)	Yes / No / Explain	
4	Delivery Period (Please specify the delivery period)	Yes / No / Explain	
5	Liquidated Damages (Applicable beyond the delivery period mentioned in this tender @ 0.5% per week or part thereof on the undelivered portion subject to a maximum of 10% of the contract value. Mandatory compliance required).	Yes / No / Explain	
6	Warranty (as per specification)	Yes / No / Explain	
7	Performance Bank Guarantee (PBG) Bank Guarantee @ 3% of Order Value valid till the completion of warranty period plus 2 months claim period to be submitted. Mandatory compliance required. Only Government Bodies/PSUs/PSEs can submit Indemnity Bond in lieu of BG. In the event of non-performance of warranty obligations, PBG will be forfeited).	Yes / No / Explain	
8	Payment Term: 100% within 30 days of receipt, acceptance, installation and commissioning of item at our site and on submission of PBG.	Yes / No / Explain	

9	<p>The Class-I &amp; II local supplier should provide a Self Certification along with your offer in PDF format indicating that the item offered meets the minimum local content as called for in the tender as mentioned above and provide the % of local content along with details of the location(s) at which the local value addition is made. In case of two part tenders, it is mandatory to indicate compliance to MLC(minimum local content) in technical bid itself. Confirm attachment of Self declaration along with the offer.</p>	Yes / No / Explain	
10	<p>PO Placement Address (with Name and Contact Details of sales person concerned).</p>	Yes / No / Explain	
11	<p>Force Majeure: In case completion of job is delayed by any circumstances such as acts of god, sabotages, civil commotion, riots, insurrections, revolution, blockades, earthquakes, fire, floods, lightening, storms, or other natural events over which we do not have control, the contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice after verification if necessary may agree to extend the contract delivery date as may be reasonable but without prejudice to other terms and conditions of the contract.</p>	Yes / No / Explain	

12	<p>Arbitration Clause: In the event of any dispute/s, difference/s or claim/s arising out of or relating to the interpretation and application of the Contract, such dispute/s or difference/s or claim/s shall be settled amicably by mutual consultations of the good Offices of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible, within 30 days from the date of receipt of written notice of the existence of such dispute/s, then the unresolved dispute/s or difference/s or claim/s shall be referred to the Arbitrator(s) appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation (Amendment) Act of 2015. The arbitration shall be conducted in Bengaluru in the Arbitration and Conciliation Centre Bengaluru (Domestic and International) as per its rules and regulations. The expenses for the Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The applicable language for Arbitration shall be English only. Work under the Contract shall be continued by the CONTRACTOR during the pendency of arbitration proceedings, without prejudice to a final adjustment in accordance with the decision of the Arbitrator unless otherwise directed in writing by the DEPARTMENT or unless the matter is such that the works cannot be possibly continued until the decision (whether final or interim) of the Arbitrator is obtained.</p>	Yes / No / Explain	
13	Any Other Terms	Yes / No / Explain	
14	Offer Validity	Yes / No / Explain	

### C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
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1	MICROPHONES - Two-way, full duplex, multi-zone suitable for integration with VoIP systems	7.00 Nos.					
2	SPEAKERS - Network Horn Speaker - 30 Mtrs range 91dB SPL	9.00 Nos.					
3	SPEAKERS - Mini Speaker - 10 Mtrs range 70dB SPL	9.00 Nos.					
4	Network switch - L2 switch with 24 x 10/100/1000T PoE ports and 4 x 100/1000X SFP ports.	2.00 Nos.					
5	UTP cable - Cat-6 4 pair UTP cable (rolls of 305 Meters)	4.00 Rolls					
6	EQUIPMENT RACK - 9U Wall Mount Rack	2.00 Nos.					
7	RJ45 Connector - UTP RJ45 MALE JACK (100 nos)	1.00 Box					
8	Patch Panel - 24Port UTP Patch Panel	2.00 Nos.					
9	CASING AND CAPING	500.00 Nos.					
10	PVC conduit	200.00 Nos.					
11	Installation and Commissioning	1.00 Sets					

**Common charges (Applicable for all items)**



<b>Freight charge</b>	
<b>P&amp;F Charges</b>	