

**GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE  
LIQUID PROPULSION SYSTEMS CENTRE, VALIAMALA (LPSC)  
THIRUVANANTHAPURAM**

**Tender for Supply, installation and configuration of AV facility for 1st floor conference hall at Recruitment and Hindi building**

**Bids to be submitted online**

**Tender No.: LPSC/LVF/LP202300002801 dated 20-01-2023**

## A. Tender Details

Tender No :	<b>LPSC/LVF/LP202300002801</b>
Tender Date :	<b>20-01-2023</b>
Tender Classification:	<b>GOODS</b>
Purchase Entity :	<b>LVF</b>
Centre :	<b>LIQUID PROPULSION SYSTEMS CENTRE, VALIAMALA (LPSC)</b>

### **Supply, installation and configuration of AV facility for 1st floor conference hall at Recruitment and Hindi building**

For and on behalf of the President of India, the Head, Purchase & Stores, Liquid Propulsion Systems Centre (LPSC), Valiamala, Thiruvananthapuram invites tenders through e-procurement mode for Supply, installation and configuration of AV facility for 1st floor conference hall at Recruitment and Hindi building.

Prospective vendors interested in participating in the tendering process need to get registered in the portal. Offers submitted through our online portal only will be considered and no other means will be considered. Detailed instruction, pre-requisites and illustrative tutorials for bid enrollment, preparation etc are available in the portal. A help desk is also functioning to assist the vendors whose contact details are available in the portal.

Pre bid visit: Interested parties can visit the hall for getting an idea about AV facility to be established. For this, bidders may contact SPSO (Ph:04712567726/7727) by sending a mail to pso\_2@lpsc.gov.in & spso\_purchase@lpsc.gov.in. Pre-bid visit shall be allowed only till 06/02/2022

#### **A.1 Tender Schedule**

Bid Submission Start Date :	<b>20-01-2023 10:00</b>
Bid Clarification Due Date :	<b>26-01-2023 14:00</b>
Bid Submission Due Date :	<b>14-02-2023 14:30</b>

Bid Opening Date : **14-02-2023 14:30**

Price Bid Opening Date : **14-03-2023 14:30**

## **B. Tender Attachments**

### **Technical Write-up/Drawings**

**Document : Annexure III - Compliance matrix**

**Document : Annexure Ia - Detailed Specification**

**Document : Annexure Ib - Scope of Work**

### **Instructions To Vendors**

#### **4. SPECIAL INSTRUCTIONS TO TENDERERS**

1. As far as implementation of public procurement policy (Preference to Make In India) Order, 2017 is concerned, the Office Orders vide No. P-45021/2/2017-B.E-II dt.15.06.2017, which is partially modified by Order No. P-45021/2/2017-PP(BE-II) dt.28.05.2018, Order No.P-45021/2/2017-PP(BE-II)dt. 29.05.2019, Order No. P-45021/2/2017-PP (BE-II) dt 04.06.2020 and Order No.P-45021/2/2017-PP (BE-II) dt16.09.2020 and subsequent Amendments issued by the Department for Promotion of Industries and Internal Trade, Ministry of Commerce and Industry regarding Class-I/Class-II local suppliers, Purchase preference, verification of local contents etc shall be applicable to this tender. Therefore, bidders may ensure compliance of the same while submitting tenders.

2. Class-I / Class- II local suppliers are only eligible to participate in this tender

3. Price Preference shall be extended to the MSEs under the Public Procurement Policy for MSEs. Such MSEs shall produce documentary proof of registration as per provisions of the Policy ie: registration with District Industries Centre (DIC) or Khadi and Village Industries Commission (KVIC) or Khadi and Industries Board (KVIB) or Coir Board or National Small Industries Commission (NSIC) or Directorate of Handicrafts and Handlooms or UdyogAadhar Memorandum or any other body specified by Ministry of MSME.

4. The tendered requirement is having local content minimum 20%. Hence, the provision/evaluation of offers shall be as per the office orders mentioned above, issued by Govt. of India. Bidders have to submit all relevant documents as per the said office orders.

#### **5. INSTRUCTIONS TO INDIGENOUS TENDERERS**

1. a) As far as implementation of provision for Public Procurement (Preference to Make in India) Order, 2017 is concerned, the Office orders vide No. P-4502/2/2017-B.E-II dt 15.06.2017, which is partially

modified by Order No.P-45021/2/2017-PP (BE-II) dt 28.05.2018, Order P- 45021/2/2017-PP (BE-II) dt 29.05.2019, Order No. P-45021/2/2017-PP (BE-II) dt 04.06.2020 and Order No. P-45021/2/2017-PP (BE-II) 16.09.2020 and subsequent Amendments issued by the Department of Promotion of Industries and Internal Trade, Ministry of Commerce and Industry regarding Class-I/Class-II local suppliers, Purchase preference, verification of local contents etc shall be applicable to this tender. Therefore, bidders are requested to ensure compliance of the same while submitting tenders. b) Price Preference shall be extended to the MSEs under the Public Procurement Policy for MSEs. Such MSE s shall produce documentary proof of registration as per provisions of the Policy ie: registration with District Industries Centre (DIC) or Khadi and Village Industries Commission (KVIC) or Khadi and Industries Board (KVIB) or Coir Board or National Small Industries Commission (NSIC) or Directorate of Handicrafts and Handlooms or Udyog Aadhar Memorandum or any other body specified by Ministry of MSME.

2. Applicable Law: - The Contractor shall be interpreted, construed and governed by the Law of India.

3. Bank Details :- The offer should contain Bank details viz., Bankers Name, Address, Phone No. & Mail id, Bank Account No., IFSC code, PAN No., GST No., etc.

4. Contractors Default Liability :- The purchaser may upon written notice of default to the Contractor terminate the Contract in whole or in part in circumstances detailed hereunder: a) If in the judgement of the Purchaser the Contractor fails to make delivery of Stores within the time specified in the Contract/agreement or within the period for which extension has been granted by the Purchaser to the Contractor. b) If in the judgment of the Purchaser the Contractor fails to comply with any of the other provisions of this Contract.

5. Counter Terms and Conditions of suppliers: - Where counter terms and conditions / printed or cyclostyled conditions has been offered by the Supplier, the same shall not be deemed to have been accepted by the Purchaser unless specific written acceptance thereof is obtained.

6. DELIVERY AND LIQUIDATED DAMAGES (LD) :- (a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates. (b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either. (i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5% per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10%, or (ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or (iii) to cancel the Contract or a portion thereof and if so desired to purchase

or authorise the purchase of stores not so delivered or others of a similar description (where others exactly if complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor. In the event of action being taken under sub-clause (ii) & (iii) of clause 15 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the re-purchase or if there is an agreement to re-purchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such re-purchase made against default. The manner and method of such re-purchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such re-purchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

7. Delivery Period :- The time for and the date / period of delivery of the stores stipulated in the Tender / Purchase Order shall be deemed to be the essence of the contract and delivery must be completed on or before the specified dates.

8. Delivery Term :- Ex-Works / FOR LPSC

9. Extension of Time: - If the completion of supply of Stores is delayed due to reason of FORCE MAJEURE such as acts of God, acts of public enemy, acts of Government, fires, floods, epidemics, quarantine restrictions, strikes, and freight embargoes etc., 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 the other terms and conditions of the Contract.

10. 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 or for a period as specified in the tender document 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 as to whether the nature of the defects requires

renewal or replacement, shall be final, conclusive and binding on the Contractor. f) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of the stores at purchaser's site.

11. Indemnity:- The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of Infringement of any Patent, Copy right or Trade mark and shall at all times indemnify the Purchaser against all claims which may be made in respect of stores for infringement of any right protected by patent, registration of design or trade mark, and shall take all risk of accident or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfilment of the Contract.

12. Language and Measures :- All documents pertaining to the Contract including specification, schedule, notice, correspondence, operating and maintenance instructions, drawings or any other writings shall be written in English Language. The metric system of measurement shall be used exclusively in the Contract.

13. Mode of Despatch :- For supplies BY ROAD / BY RAIL:- 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. The Contractor will be held responsible for any demurrage / wharfage paid due to non-receipt of documents in time.

14. Offer Validity :- a) For Single Part Tender - Quotation should be valid for 90 days from the date of opening of the tender or any other period as specified in the tender. b) For Two Part Tender - Quotation should be valid for 120 days from the date of opening of the tender or any other period as specified in the tender. Note :- Offer with validity lesser than that specified is liable for exclusion from the procurement process

15. Packing Forwarding & Insurance:- The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by Rail / Road 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. b) Insurance : 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.

16. Payment :- 100% payment shall be made through RTGS within 30 days of receipt and acceptance of the item at our site against submission of PBG.

17. Performance Bank Guarantee (PBG) :- To fulfil guarantee conditions outlined in clause 2(a) to (e)

above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to 3% of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.

18. Price : a) Price should be firm and fixed and should be on the basis of FOR, LPSC / delivery at site. The Purchaser will not pay separately for transit insurance, and the risk and cost during transit shall be exclusively the responsibility of the Contractor and the purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract. b) Tenders 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 variations. c) Prices are required to be quoted according to the units indicated in the tender. When quotations are given in terms of units other than those specified in the tender form, relationship between the two systems of unit must be furnished.

19. Quantity (QTY) and Unit of Measure (UOM) Quote should be as per the quantity and unit of measure mentioned the tender. If dimensional details are available, the same should also be indicated in your offer.

20. Resolution of Disputes:- Any dispute, disagreement or question arising out of or relating to or in consequence of the contract or to its fulfillment, or the validity of enforcement thereof which cannot be settled mutually, or the settlement of which is not herein specifically provided for, shall within 30 (thirty) days from the date either party informs the other in writing that such dispute or disagreement exists be referred to arbitration by the sole arbitrator. The Arbitrator shall be appointed As per the Indian Arbitration and Conciliation Act 1996 and proceedings will be conducted in Trivandrum. The Arbitration proceedings shall be conducted in accordance with and subject to the Arbitration and Conciliation Act 1996 (Act 26 of 1996) as amended from time to time and the decision of the Arbitrator shall be final and binding on the parties thereto. Each party shall bear its own cost of preparing and presenting its case. The cost of Arbitration including the fees and expenses of the Arbitrator shall be shared equally by the parties unless the award provides otherwise. Subject to provisions of this clause, the courts at Kerala shall have exclusive jurisdiction. Performance under this Contract shall, however continue during Arbitration proceeding and no payment due or payable by the parties hereto shall be withheld unless any such payment is/or forms a part of the subject matter of the Arbitration proceedings.

21. Security Deposit (SD) :- Applicable for order value above INR 5 L (Including taxes and other charges). On acceptance of the order, 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 3 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.

22. Specifications:- a) Stores offered should strictly conform to Purchasers 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. Wherever options are called for in our specifications, the tenderer should address all such options. 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 non-acceptance of tender, the tenderer will have to remove the samples at his own expense.

23. Taxes :- The applicable GST / IGST shall be clearly mentioned in your offer along with HSN code of the offered items. We are eligible for IGST @ 5% as per the Department of Revenue Notification No. 25/2018 Integrated Tax (Rate) Schedule-I; Sl.No.243B dated 31.12.2018 (Amendment to Notification No. 7/2018 - Integrated Tax (Rate) dated 25.01.2018 and Notification No. 1/2017 - Integrated Tax (Rate) dated 28.06.2017

24. Training:- The Contractor shall, if required by the Purchaser, provide facilities for the practical training of Purchasers engineering / technical personnel from India and for the active association on the manufacturing processes throughout the manufacturing period of the Contract / Stores, number of such personnel to be mutually agreed upon.

## C. Bid Templates

### C.1 Technical Bid - Supply, installation and configuration of AV facility for 1st floor conference hall at Recruitment and Hindi building

#### 1. Video Conferencing System

##### Item specifications for Video Conferencing System

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of end point	1+9 Multiparty Full HD or better	Yes / No / Explain		
2	Resolution	1080p or better	Yes / No / Explain		
3	Frame rate	60 fps or better	Yes / No / Explain		
4	Type of camera	PTZ	Yes / No / Explain		
5	Camera resolution	1080p or better	Yes / No / Explain		
6	Camera positioning system	Preset	Yes / No / Explain		
7	Camera control (Focusing, Brightness and White balance)	Automatic	Yes / No / Explain		
8	Optical zoom	12X or better	Yes / No / Explain		
9	Digital zoom	10X or better	Yes / No / Explain		
10	Angle of view (Horizontal)	72 degrees or better	Yes / No / Explain		
11	Pan range	+/- 130 degrees or better	Yes / No / Explain		
12	System delivers Full HD video and voice & Full HD content for an overall Full HD experience at specified bandwidth	Yes	Yes / No / Explain		
13	Video coding support protocol	H.264AVC or better	Yes / No / Explain		

14	System has G-722/ G-711 or equivalent wideband audio coding support	Yes	Yes / No / Explain		
15	Dual Stream Support (H.239,BFCP)	Yes	Yes / No / Explain		
16	Communication bandwidth	256 kbps to 18 Mbps or better	Yes / No / Explain		
17	Multi-monitor support	Yes	Yes / No / Explain		
18	System is equipped with one or more Omni directional High-Definition Microphones	Yes	Yes / No / Explain		
19	Number of Ethernet connection points for System supports for RJ-45, 10/100/1000 Mbps Base-T Ethernet connection	1 or more	Yes / No / Explain		
20	Network Protocol	TCP/IPv4 and TCP/IPv6 and UDP/IPv4 and UDP/IPv6 and DHCP and DNS and HTTP and HTTPS and TELNET and NTP	Yes / No / Explain		
21	System supports AES encryption video calls and has encryption on and off capability	Yes	Yes / No / Explain		
22	System should have handheld remote control or touch panel with operating distance	Yes	Yes / No / Explain		
23	Equipment is in compliance with the requirements of ITU- T (SIP Protocol & H. 323) standard related to Video Conferencing	Yes	Yes / No / Explain		
24	System to be IPv6 ready from day one	Yes	Yes / No / Explain		
25	Number of Input HDMI or equivalent ports	3 or more	Yes / No / Explain		
26	Number of Output HDMI or equivalent ports	3 or more	Yes / No / Explain		

27	System supplied complete with the following components from the same OEM (a) Codec (b) Camera (c) At least one Microphones with suitable connectivity (d) Remote Control/Touch Panel (e) Data sharing capability using hardware or software (f) Necessary Cables	Yes	Yes / No / Explain		
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## 2. Boundary layer microphone

### Item specifications for Boundary layer microphone

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type	Condenser microphone	Yes / No / Explain		
2	Acoustic principle	Boundary layer microphone	Yes / No / Explain		
3	Pick-up pattern	Cardioid	Yes / No / Explain		
4	Sensitivity	10 mV / Pa or better	Yes / No / Explain		
5	Frequency response	80 Hz to 15 kHz or better	Yes / No / Explain		
6	Maximum sound pressure level	117 dB or better	Yes / No / Explain		
7	Phantom power	48V	Yes / No / Explain		
8	LED indicator	Yes	Yes / No / Explain		
9	Microphone modes	Toggle on/off and Push to mute and Push to talk	Yes / No / Explain		

## 3. Wireless Handheld microphone

### Item specifications for Wireless Handheld microphone

SI No	Specification	Value	Compliance	Offered Specification	Remark
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1	Type	Wireless	Yes / No / Explain		
2	Pickup pattern	Cardioid	Yes / No / Explain		
3	Form factor	Handheld	Yes / No / Explain		
4	Transducer type	Condenser	Yes / No / Explain		
5	Audio frequency response	80 Hz to 15 kHz or better	Yes / No / Explain		
6	Channel / frequency selection	Yes	Yes / No / Explain		
7	Power requirement	AA batteries	Yes / No / Explain		
8	Working range	60m or better	Yes / No / Explain		
9	LED indicator	Yes	Yes / No / Explain		
10	On/off switch	Yes	Yes / No / Explain		
11	Transmitter and Receiver units	Both required	Yes / No / Explain		

#### 4. Wireless Headset

##### Item specifications for Wireless Headset

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Type	Wireless	Yes / No / Explain		
2	Pickup pattern	Unidirectional	Yes / No / Explain		
3	Form factor	Headworn	Yes / No / Explain		
4	Transducer type	Condenser	Yes / No / Explain		
5	Frequency response	80 Hz to 15 kHz or better	Yes / No / Explain		
6	Operating range	90m or better	Yes / No / Explain		

7	On/off switch	Yes	Yes / No / Explain		
8	LED indicator	Yes	Yes / No / Explain		
9	Transmitter and Receiver units	Both required	Yes / No / Explain		

## 5. Audio Digital Signal Processor

### Item specifications for Audio Digital Signal Processor

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Analog inputs	12 Mic/Line level inputs with individual AEC processing on Phoenix/Combicon removable screw connector and selectable 48v Phantom power.	Yes / No / Explain		
2	Analog outputs	8 Mic/Line level outputs on Phoenix/Combicon removable screw connector	Yes / No / Explain		
3	Noise cancellation	Yes	Yes / No / Explain		
4	Frequency response	80 Hz to 15 kHz or better	Yes / No / Explain		
5	RS-232 serial port	Yes	Yes / No / Explain		
6	RJ45 ethernet port	Yes	Yes / No / Explain		
7	Network audio port (AVB/Dante/BLUlink or equivalent)	Yes	Yes / No / Explain		
8	USB audio support	Yes	Yes / No / Explain		
9	The 2 DSP units of the same OEM may be cascaded to support 24 mic / line inputs and 8 mic / line level outputs.	Yes	Yes / No / Explain		

## 6. AUDIO AMPLIFIER

### Item specifications for AUDIO AMPLIFIER

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type	Quad channel Class-D power amplifier	Yes / No / Explain		
2	Frequency response	80 Hz to 15 kHz or better	Yes / No / Explain		
3	Signal to Noise ratio	90 dB or better	Yes / No / Explain		
4	Output power	8 ohm: 120 watts per channel or better	Yes / No / Explain		
5	70 V / 100 V High impedance mode	Yes	Yes / No / Explain		

## 7. SPEAKERS

### Item specifications for SPEAKERS

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Mount Type	Ceiling mount	Yes / No / Explain		
2	System Type	6 inch full range or better	Yes / No / Explain		
3	Coverage Angle	110 degree conical or better	Yes / No / Explain		
4	Nominal impedance	8 ohm	Yes / No / Explain		
5	Power rating	30 watts or better	Yes / No / Explain		
6	Transformer Taps (70V)	30w, 15w	Yes / No / Explain		
7	Transformer Taps (100V)	30w, 15w, 7.5w	Yes / No / Explain		
8	Sensitivity (1w, 1M)	85 dB SPL or better	Yes / No / Explain		
9	Maximum sound pressure level	104 dB or better	Yes / No / Explain		

## 8. USB 3.0 peripheral sharing switch

### Item specifications for USB 3.0 peripheral sharing switch

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Computer connections	2 or more	Yes / No / Explain		
2	Port selection	Remote port selector	Yes / No / Explain		
3	Connector (Computer)	2 x USB Type B Female or better	Yes / No / Explain		
4	Connector (Device)	4 x USB Type A Female or better	Yes / No / Explain		
5	LED indicators	Yes	Yes / No / Explain		
6	Data rate	5 Gbps or better	Yes / No / Explain		

## 9. Multimedia Projector

### Item specifications for Multimedia Projector

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Technology	LCD / DLP	Yes / No / Explain		
2	Projection Method	Front	Yes / No / Explain		
3	Native Resolution	1920 x 1080 or better	Yes / No / Explain		
4	Brightness	6000 lumens or better	Yes / No / Explain		
5	Throw	Standard throw	Yes / No / Explain		
6	Zoom Feature	Yes	Yes / No / Explain		
7	Aspect ratio	16:9 or better	Yes / No / Explain		
8	Keystone correction	Horizontal & Vertical	Yes / No / Explain		
9	Lens shift supported	Yes	Yes / No / Explain		
10	Type of light source	Laser	Yes / No / Explain		



11	Minimum life of projection lamp (in normal mode)	20000 hours or better	Yes / No / Explain		
12	No. of HDMI Input ports	2 or more	Yes / No / Explain		
13	No. of Audio Output ports	1 or more	Yes / No / Explain		
14	No. of LAN ports	1 or more	Yes / No / Explain		
15	HD Base T support	Yes	Yes / No / Explain		
16	Wireless Remote control	Yes	Yes / No / Explain		
17	Power supply	230 V, 50 Hz, Indian standard plug tops	Yes / No / Explain		
18	Ceiling mount kit	Required	Yes / No / Explain		

## 10. Projection Screens

### Item specifications for Projection Screens

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type	Motorised	Yes / No / Explain		
2	Supported Display Technology	1080p or better	Yes / No / Explain		
3	Screen Size (Diagonal)	118 to 125 inches	Yes / No / Explain		
4	Aspect Ratio	16:9	Yes / No / Explain		
5	Mounting Type	Ceiling Mount	Yes / No / Explain		
6	Display Fabric Material	Matte white	Yes / No / Explain		
7	Gain	1.1	Yes / No / Explain		
8	Remote controller	Yes	Yes / No / Explain		
9	Type of Remote	Wireless	Yes / No / Explain		

10	Ceiling mount kit and other accessories for installation	Yes	Yes / No / Explain		
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## 11. LED Display

### Item specifications for LED Display

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Technology	LED Backlit	Yes / No / Explain		
2	Screen Size (Diagonal)	65 inches or more	Yes / No / Explain		
3	Resolution (Pixels)	(3840 x 2160) UHD or better	Yes / No / Explain		
4	Aspect Ratio	16:9	Yes / No / Explain		
5	Brightness Nits	400 or better	Yes / No / Explain		
6	Viewing Angle	178:178	Yes / No / Explain		
7	Speakers	Yes	Yes / No / Explain		
8	HDMI port	2 or more	Yes / No / Explain		
9	Audio port	1 or more	Yes / No / Explain		
10	USB port	1 or more	Yes / No / Explain		
11	Ethernet Port	1 or more	Yes / No / Explain		
12	Tiltable Ceiling Mount Kit and other accessories for installation (load bearing capacity 100 kg or more)	Yes	Yes / No / Explain		

## 12. LED DISPLAY

### Item specifications for LED DISPLAY

SI No	Specification	Value	Compliance	Offered Specification	Remark
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1	Technology	LED Backlit	Yes / No / Explain		
2	Screen Size (Diagonal)	75 inches or more	Yes / No / Explain		
3	Resolution (Pixels)	(3840 x 2160) UHD or better	Yes / No / Explain		
4	Aspect Ratio	16:9	Yes / No / Explain		
5	Brightness Nits	400 or better	Yes / No / Explain		
6	Viewing Angle	178:178	Yes / No / Explain		
7	Speakers	Yes	Yes / No / Explain		
8	HDMI port	2 or more	Yes / No / Explain		
9	Audio port	1 or more	Yes / No / Explain		
10	USB port	1 or more	Yes / No / Explain		
11	Ethernet Port	1 or more	Yes / No / Explain		
12	Tiltable Ceiling Mount Kit and other accessories for installation (load bearing capacity 100 kg or more)	Yes	Yes / No / Explain		

### 13. Computer Monitor

#### Item specifications for Computer Monitor

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Technology	LED Backlit	Yes / No / Explain		
2	Display Technology	IPS	Yes / No / Explain		
3	Screen Size (Diagonal)	27 inches or more	Yes / No / Explain		
4	Resolution (Pixels)	1920 x 1080 or better	Yes / No / Explain		

5	Aspect Ratio	16:9	Yes / No / Explain		
6	Brightness Nits	250 or better	Yes / No / Explain		
7	Viewing Angle	178:178	Yes / No / Explain		
8	HDMI port	1 or more	Yes / No / Explain		
9	Display port	1 or more	Yes / No / Explain		
10	Height adjustable & Tilttable floor mount stand	Yes	Yes / No / Explain		

#### 14. CAMERA

##### Item specifications for CAMERA

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of camera	PTZ	Yes / No / Explain		
2	Sensor	1/2.8 inch CMOS or better	Yes / No / Explain		
3	Resolution	1080p or better	Yes / No / Explain		
4	Frame rate	60 fps or better	Yes / No / Explain		
5	Optical zoom	20X or better	Yes / No / Explain		
6	FOV	54 degree or better	Yes / No / Explain		
7	Horizontal rotation range	±170 degrees or better	Yes / No / Explain		
8	Vertical rotation range	-30 to +90 or better	Yes / No / Explain		
9	Backlight compensation	Supported	Yes / No / Explain		
10	Camera Preset support	Yes	Yes / No / Explain		
11	Video output: HDMI port	1 or more	Yes / No / Explain		

12	Video output: USB 3.0 port	1 or more	Yes / No / Explain		
13	RJ-45 port	1 or more	Yes / No / Explain		
14	IR Remote control	Yes	Yes / No / Explain		
15	Wall Mount Kit	Yes	Yes / No / Explain		

## 15. HDMI to USB CONVERTER

### Item specifications for HDMI to USB CONVERTER

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of Device	USB Capture Device with Single input	Yes / No / Explain		
2	No. of Input (HDMI)	1 or more	Yes / No / Explain		
3	No. of Output (USB 3.0)	1 or more	Yes / No / Explain		
4	USB Compatibility	USB 3.0 or higher	Yes / No / Explain		
5	Video input Resolution	1920 x 1080 or better	Yes / No / Explain		
6	Video output Resolution	1920 x 1080 or better	Yes / No / Explain		
7	Audio Input	HDMI Embedded Audio & 3.5 mm stereo in	Yes / No / Explain		
8	Connecting cables and adapter	Yes	Yes / No / Explain		

## 16. HDMI Matrix Switcher

### Item specifications for HDMI Matrix Switcher

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Inputs	8 HDMI: on female HDMI Connectors	Yes / No / Explain		
2	Outputs	8 HDMI: on female HDMI Connectors	Yes / No / Explain		

3	Resolution	4K@60Hz (4:4:4)	Yes / No / Explain		
4	Video	HDMI Support Deep Colour, 3D, ARC, upto 7.1 Uncompressed Audio channel as specified in HDMI 2.0 Content Protection HDCP 2.2	Yes / No / Explain		
5	Maximum Data Rate	18 Gbps or better	Yes / No / Explain		
6	EDID management	Yes	Yes / No / Explain		
7	RJ-45 Ethernet port	1 or more	Yes / No / Explain		
8	RS-232 Port	1 or more	Yes / No / Explain		
9	Stereo balanced Audio Output on a 5-pin Terminal Block Connector	Yes	Yes / No / Explain		

## 17. DISTRIBUTION AMPLIFIER

### Item specifications for DISTRIBUTION AMPLIFIER

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Inputs	1 HDMI: on female HDMI Connector	Yes / No / Explain		
2	Outputs	4 HDMI: on female HDMI Connectors	Yes / No / Explain		
3	Resolution	4K@60Hz (4:4:4)	Yes / No / Explain		
4	Video	HDMI Support Deep Colour, 3D, up to 7.1 Uncompressed Audio channel as specified in HDMI 2.0 Content Protection HDCP 2.2	Yes / No / Explain		
5	EDID management	Yes	Yes / No / Explain		

## 18. HDBase T Transmitter

### Item specifications for HDBase T Transmitter

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Inputs	1 HDMI: on a female HDMI connector	Yes / No / Explain		
2	Outputs	1 HDBT: on an RJ-45 female connector	Yes / No / Explain		
3	IR port on a 3.5 mm connector	1 or more	Yes / No / Explain		
4	RS-232 port	1 or more	Yes / No / Explain		
5	Video resolution	4K UHD @60 Hz or better	Yes / No / Explain		
6	Video (Max data rate)	18 Gbps or better	Yes / No / Explain		
7	HDCP 2.2 content protection	Yes	Yes / No / Explain		
8	Extension Line (at 4K @60Hz)	40m or more	Yes / No / Explain		
9	Extension Line (at Full HD - 1080p @60Hz)	70m or more	Yes / No / Explain		

## 19. HDBase T Receiver

### Item specifications for HDBase T Receiver

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Inputs	1 HDBT: on an RJ-45 female connector	Yes / No / Explain		
2	Outputs	1 HDMI: on an HDMI connector	Yes / No / Explain		
3	IR port on a 3.5 mm connector	1 or more	Yes / No / Explain		
4	RS-232 port	1 or more	Yes / No / Explain		
5	Video resolution	4K UHD @60 Hz or better	Yes / No / Explain		
6	Video (Max data rate)	18 Gbps or better	Yes / No / Explain		
7	HDCP 2.2 content protection	Yes	Yes / No / Explain		

8	Extension Line (at 4K @60Hz)	40m or more	Yes / No / Explain		
9	Extension Line (at Full HD - 1080p @60Hz)	70m or more	Yes / No / Explain		

## 20. HDMI table flip box for laptop

### Item specifications for HDMI table flip box for laptop

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Input	1 HDMI: on a female HDMI connector	Yes / No / Explain		
2	RJ45 port	1 or more	Yes / No / Explain		
3	Power socket	Yes	Yes / No / Explain		

## 21. NETWORK RACKS AND ACCESSORIES

### Item specifications for NETWORK RACKS AND ACCESSORIES

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Type of Rack	Portable Rack	Yes / No / Explain		
2	Usable height	18 U	Yes / No / Explain		
3	Usable width	19 inches	Yes / No / Explain		
4	Mount Type	Free-Standing	Yes / No / Explain		
5	Front glass Door	Yes	Yes / No / Explain		
6	Secure Locks	Yes	Yes / No / Explain		
7	Support cable entry from top or bottom	Yes	Yes / No / Explain		
8	No. of Fan for Heat dissipation	1 or more	Yes / No / Explain		
9	No. of Rack trays	1 or more	Yes / No / Explain		



10	6 Outlet Power strip with universal socket	3 Nos or more	Yes / No / Explain		
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## 22. DP(Male) to HDMI( Fema)converter

### Item specifications for DP(Male) to HDMI( Fema)converter

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Input - Display port (Male)	1 or more	Yes / No / Explain		
2	Output - HDMI port (Female)	1 or more	Yes / No / Explain		
3	Supported Resolution	4K @60Hz (4:4:4)	Yes / No / Explain		

## 23. USB Type-C (Male) to HDMI (Female) Adapter / Adapter cable

### Item specifications for USB Type-C (Male) to HDMI (Female) Adapter / Adapter cable

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Input	One USB Type-C (Male)	Yes / No / Explain		
2	Output	One HDMI (Female)	Yes / No / Explain		
3	Supported Resolution	4K @60Hz (4:4:4)	Yes / No / Explain		

## 24. Mini Display Port (Male) to HDMI (Female) Adapter / Adapter cable

### Item specifications for Mini Display Port (Male) to HDMI (Female) Adapter / Adapter cable

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Input	One Mini-Display port (Male)	Yes / No / Explain		
2	Output	One HDMI (Female)	Yes / No / Explain		
3	Supported Resolution	4K @60Hz (4:4:4)	Yes / No / Explain		

## 25. EQUIPMENT INSTALLATION SERVICES

## Item specifications for EQUIPMENT INSTALLATION SERVICES

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Installation, programming, configuration and integration with existing system	Required	Yes / No / Explain		

### Common Specifications (Applicable for all items)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	Make and model number of all items quoted should be explicitly mentioned by the supplier in the technical bid. Datasheet of quoted items should be included along with the bid.	Required	Yes / No / Explain		

### Supporting Documents required from Vendor

- 1. Document containing quote of 2 year comprehensive AMC after Warranty period (Price Bid Related)**
- 2. Compliance matrix regarding Terms and conditions (Given in Annexure III)**
- 3. Manufacturer Authorization Form (MAF) from OEM**

5 additional documents can be uploaded by the vendor

## C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	The configuration file of the Audio DSPs installed and programmed, should be handed over to LPSC at the time of commissioning the facility.	Yes / No / Explain	
2	As the scope of work involves installation and configuration of AC equipment in a conference hall, splitting of the Purchase Order to multiple parties shall not be carried out	Yes / No / Explain	
3	Comprehensive AMC: Rates for the next 2 years after the completion of the warranty period shall be quoted explicitly in a separate document uploaded with the price bid	Yes / No / Explain	
4	Pre bid visit: Interested parties can visit hall for getting an idea about AV facility to be established. For this, bidders may contact SPSO (Ph:04712567726/7727) by sending a mail to pso_2@lpsc.gov.in & spso_purchase@lpsc.gov.in	Yes / No / Explain	
5	Party shall be ready for a demonstration of the sample of the offered products at LPSC at the time of technical evaluation if requested. A confirmation for this demonstration has to be included in the technical offer.	Yes / No / Explain	
6	Delivery period: 2 months for delivery. 1 month for installation	Yes / No / Explain	
7	MII content of items quoted in percentage of total value & the location at which value addition is made should be specified by the suppliers along with offer. A minimum of 20% MII content is required for the total items quoted.	Yes / No / Explain	
8	The system integration document with all installation details and the operation manual for the user need to be provided at the time of commissioning of the system.	Yes / No / Explain	
9	Training on the facility operation should be given to LPSC officials, including hands on sessions	Yes / No / Explain	

10	Updates/renewal of licenses: For all the licensed products, required licenses shall be submitted with appropriate authorization. Updates/renewal of such licenses during warranty & AMC periods will be the responsibility of the vendor.	Yes / No / Explain	
11	Installation & commissioning has to be carried out as per LPSC requirement & connectivity to existing systems/facilities has to be carried out by supplier. Necessary cables, connectors, converters, consumables & accessories required should be supplied	Yes / No / Explain	
12	Authorization certificate from OEM stating back-to-back onsite comprehensive warranty support for 3 years & support for spares should be submitted. In case OEM provides more than 3 years comprehensive warranty, the same shall be passed on to LPSC	Yes / No / Explain	
13	Warranty:- All the items shall have a warranty period of three years from the date of acceptance of the systems	Yes / No / Explain	
14	P & F charges, if any, (If mentioned as EXTRA OR INCLUDED in your quote, please mention the percentage in Remarks Column)	Yes / No / Explain	
15	Whether applicable GST percentage mentioned in your offer. (We are eligible for IGST @ 5% as per the Department of Revenue Notification No. 25/2018 Integrated Tax (Rate) Schedule-I; Sl.No.243B dated 31.12.2018 (Amendment to Notification No. 7/2018 - Integrated Tax (Rate) dated 25.01.2018 and Notification No. 1/2017 - Integrated Tax (Rate) dated 28.06.2017 ) (If mentioned as EXTRA OR INCLUDED in your quote, please mention the percentage in Remarks Column).	Yes / No / Explain	

16	ISRO is eligible for Customs Duty Concession vide Notification No.12/2012-Customs dated 17.03.2012. and Notification No. 50/2017-customs dtd 30.06.2017 [We will provide Customs Duty Concession Certificate for bought out items being imported for manufacturing the ordered items (List of items to be imported with quantities to be enclosed along with offer) OR for Orders placed on Foreign Vendors OR for High Sea Sale orders.]	Yes / No / Explain	
17	Installation Charges, if any, (If mentioned as EXTRA OR INCLUDED in your quote, please mention the percentage in Remarks Column).	Yes / No / Explain	
18	Delivery Term :- FOR : LPSC, VALAIAMALA In case of Foreign orders, FOB or FCA	Yes / No / Explain	
19	Freight charges, if any. (If mentioned as EXTRA OR INCLUDED in your quote, please mention the percentage in Remarks Column).	Yes / No / Explain	
20	Delivery Period (If any specific delivery period is mentioned in the tender, please comply the same. If not agreed, please mention your delivery period in remarks column OR if already mentioned in your quote please mention as already furnished in the quote)	Yes / No / Explain	
21	Payment Term :- (a) 100% payment shall be made through RTGS within 30 days of receipt and acceptance of the item at our site. (b) In case of Foreign orders, Payment term shall be SIGHT DRAFT / 80% BY IRREVOCABLE LETTER OF CREDIT AND BALANCE 20% BY WIRE TRANSFER AFTER RECEIPT & ACCEPTANCE OF THE ORDERED ITEM.	Yes / No / Explain	
22	Liquidated Damages (LD) :- If the ordered items are not supplied within the delivery schedule, LD shall be levied from your bill @ 0.5% per week for the undelivered items subject to a maximum of 10% of the order value for the delayed period.	Yes / No / Explain	

23	Warranty :- Warranty for the offered item shall be from the date of installation/acceptance of the item at our site for a minimum period of one year or as specified in the tender document.	Yes / No / Explain	
24	Security Deposit (SD) :- (only for order value above Rs.5 Lakh) You have to furnish a Bank Guarantee for 3% of the order value (from a bank of international repute incase of foreign vendors) within 10 days of receipt of Order towards the faithful execution of the order valid till the completion of the scope of work as per order plus sixty days. (This will be returned to you immediately on execution of the order satisfactorily as per order terms. In case of non-performance / poor performance, the amount will be forfeited).	Yes / No / Explain	
25	Performance Bank Guarantee (PBG) :- You have to submit a PBG from a Nationalised / Scheduled Bank (from a bank of international repute incase of foreign vendors) for 3% of the order value towards the performance of the system at the time of supply valid till the completion of warranty period plus 60 days as per the format provided by the Department. OR 3% OF THE ORDER VALUE SHALL BE WITH HELD TILL THE COMPLETION OF WARRANTY PERIOD PLUS 60 DAYS.	Yes / No / Explain	
26	In case, if parties are unable to provide two separate BGs, i.e., one for SD and one for PBG, they can submit a combined BG for SD & PBG within 10 days of receipt of order for 3% of order value valid till the completion of total contractual obligation (i.e., supply period plus warranty period plus 60 days) as per the format provided by the Department.	Yes / No / Explain	
27	Insurance :- Being a Govt. Of India Dept., Insurance is not required at our cost. Please ensure the safe delivery of the ordered item with proper AIR / SEA / ROAD worthy packing.	Yes / No / Explain	

28	<p>Validity of Offer :-</p> <p>(a)The validity of the offers should be 90 days (in case of single part tender) from the date of opening of the tenders.</p> <p>(b)The validity of the offers should be 120 days (in case two part tender) from the date of opening of the tenders.</p> <p>Note :- Tenders shorter than offer validity mentioned above will not be considered for evaluation.</p>	Yes / No / Explain	
29	Bank Details, viz., Bank Name, Branch, Address, Account No., IFSC (Details to be given in Vendor Terms Column)	Yes / No / Explain	
30	PAN No. (Details to be furnished in Vendor Terms Column)	Yes / No / Explain	
31	GST No. (Details to be given in Vendor Terms Column)	Yes / No / Explain	
32	Purchase Order to be placed on whom (Please mention the Address, Phone No. & E-mail id )	Yes / No / Explain	
33	HSN Code of offered items	Yes / No / Explain	
34	Local content involved in the quoted item shall be declared/ certified in percentage.	Yes / No / Explain	
35	Furnish the details of place(s) where the value addition for the quoted item takes place.	Yes / No / Explain	
36	State whether MSE or not. If yes, please provide the necessary documentary proof	Yes / No / Explain	
37	Pre-bid visit shall be completed on or before 6th February 2023	Yes / No / Explain	

### C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Other Costs, if any	Remark
1	Video Conferencing System	1.00 Nos.		-			
2	Boundary layer microphone	22.00 Nos.		-			
3	Wireless Handheld microphone	2.00 Nos.		-			

4	Wireless Headset	1.00 Nos.	-				
5	Audio Digital Signal Processor	2.00 Nos.	-				
6	AUDIO AMPLIFIER	1.00 Nos.	-				
7	SPEAKERS	8.00 Nos.	-				
8	USB 3.0 peripheral sharing switch	1.00 Nos.	-				
9	Multimedia Projector	1.00 Nos.	-				
10	Projection Screens	1.00 Nos.	-				
11	LED Display	4.00 Nos.	-				
12	LED DISPLAY	2.00 Nos.	-				
13	Computer Monitor	1.00 Nos.	-				
14	CAMERA	1.00 Nos.	-				
15	HDMI to USB CONVERTER	1.00 Nos.	-				
16	HDMI Matrix Switcher	1.00 Nos.	-				
17	DISTRIBUTION AMPLIFIER	2.00 Nos.	-				
18	HDBase T Transmitter	5.00 Nos.	-				
19	HDBase T Receiver	5.00 Nos.	-				
20	HDMI table flip box for laptop	1.00 Nos.	-				
21	NETWORK RACKS AND ACCESSORIES	1.00 Nos.	-				



22	DP(Male) to HDMI(Fema)converter	3.00 Nos.		-			
23	USB Type-C (Male) to HDMI (Female) Adapter / Adapter cable	2.00 Nos.		-			
24	Mini Display Port (Male) to HDMI (Female) Adapter / Adapter cable	2.00 Nos.		-			
25	EQUIPMENT INSTALLATION SERVICES	1.00 Lot		-			

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

<b>Additional Costs, if any</b>	
<b>Additional Costs, if any (Value)</b>	