

	<p>भारतीय प्रौद्योगिकीसंस्थानमद्रासचेन्ने 600 036</p> <p>INDIAN INSTITUTE OF TECHNOLOGY MADRAS Chennai 600 036</p> <p>भंडार एवं क्रय अनुभाग</p> <p>STORES & PURCHASE SECTION</p> <p>Email: adstores@iitm.ac.in</p> <p>दूरभाष / Telephone : (044) 2257 8285/8287/8288</p> <p>GSTIN: 33AAAI3615G1Z6</p>	
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Booma Sowrirajan
Assistant Registrar (Stores & Purchase)

Dated : 14.06.2022

Tender No. IITM/SPS/A& LED Dis. System/004/2022-23/SPL

Due Date: 04.07.2022
Before 2.00 p.m.

Dear Sirs,

On behalf of the Indian Institute of Technology Madras, Tenders are invited in two bid system from **Class-I local suppliers and Class II local suppliers**, namely technical and financial bids for

“SUPPLY, INSTALLATION AND COMMISSIONING OF AUDIO AND LED WALL DISPLAY SYSTEM IN CAMPUS CAFE OF IIT MADRAS AS PER DESIGN“

conforming to the specifications enclosed.

Tender Documents may be downloaded from Central Public Procurement Portal <https://etenders.gov.in/e procure/app>. Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website <https://etenders.gov.in/e procure/app>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at **“Help for contractors”**. [Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this eProcurement Portal].

Bidders can access tender documents on the website (For searching in the NIC site, kindly go to Tender Search option and type ‘IIT’. Thereafter, Click on “GO” button to view all IIT Madras tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <https://etenders.gov.in/e procure/app> as per the schedule attached.

No manual bids will be accepted. All tender documents including Pre-qualification, Technical and Financial bids should be submitted in the E-procurement portal.

1	LAST DATE for receipt of Tender	:	04.07.2022 before 02.00 p.m
	Date & Time of opening of Tender	:	05.07.2022 @ 03.00 p.m
GUIDELINES, TERMS AND CONDITIONS OF TENDER			
A	Submission of Tender	:	<p>As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal URL: https://etenders.gov.in/e procure/app</p> <p>The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal</p> <p>More information useful for submitting online bids on the CPP Portal may be obtained at: https://etenders.gov.in/e procure/app</p> <p>All tender documents including Technical Bid & Financial Bid should be submitted separately in online CPP portal as per the specified format only. Right is reserved to ignore any tender which fails to comply with the above instructions. No manual bid submission will be entertained.</p>

B	Instructions for online bid submission	<p>: REGISTRATION</p> <ul style="list-style-type: none"> • Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal URL: https://etenders.gov.in/eprocure/app by clicking on “Online Bidder Enrollment”. Enrolment on the CPP Portal is free of charge. • As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts. • Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal. • Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.) https://eprocure.gov.in/eprocure/app with their profile. • Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse. • Bidder then may log in to the site through the secured log-in by entering their user ID / password and the password of the DSC / eToken.
C	Searching for tender documents	<p>: </p> <ul style="list-style-type: none"> • There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several Parameters These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal. • Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective “My Tender” folder. This would enable the CPP Portal to intimate the bidders through SMS / email in case there is any corrigendum issued to the tender document. • The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.
D	Preparation of bids	<p>: </p> <ul style="list-style-type: none"> • Bidder should take into account any corrigendum published on the tender document before submitting their bids. • Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid. • Bidder, in advance, should prepare the bid documents to be submitted as indicated in the tender document / schedule and generally shall be in PDF / XLS formats as the case may be. Bid documents may be scanned with 100 dpi with black and white option. • To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, GSTIN Details, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Documents” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

E	Submission of bids	: <ul style="list-style-type: none"> • Bidder should log into the site well in advance for bid submission so that he/she can upload the bid in time i.e. on or before the bid submission date and time. Bidder will be responsible for any delay due to other issues. • The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document. • Bidder has to transfer the EMD as applicable by online mode only. The EMD should be transferred on or before the closure date and time of the tender. If the EMD is not transferred before the closure date and time, the tender will be summarily rejected. The proof of transfer has to be submitted in the Technical Bid. Otherwise, the tender will be summarily rejected. • A standard BOQ format has been provided in Annexure-D with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BOQ file, open it and complete the detail with their respective financial quotes and other details (such as name of the bidder). If the BOQ file is found to be modified by the bidder, the bid will be rejected. • The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission. • The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders due to local issues. • The uploaded tender documents become readable only after the tender opening by the authorized bid openers. • Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details. • Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.
F	Assistance to bidders	: <ul style="list-style-type: none"> • Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender. • Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is [0120-4200462, 0120-4001002, 0120-4001005]
G	General Instructions to the Bidders	: <ul style="list-style-type: none"> • The tenders will be received online through portal https://etenders.gov.in/eprocure/app. In the Technical Bids, the bidders are required to upload all the documents in pdf format. • Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through https://etenders.gov.in/eprocure/app • Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site https://etenders.gov.in/eprocure/app under the "Information about DSC".
H	Earnest Money Deposit (EMD)	: <ul style="list-style-type: none"> i. EMD of INR 2,00,000/- (Rupees Two lakhs only) should be transferred through NEFT/RTGS to the following bank account on or before due date 04.07.2022 before 2:00 p.m. Name : Registrar IIT Madras Bank : State Bank of India Account No. : 10620824305 Branch : IIT MADRAS IFSC CODE : SBIN0001055

		<ul style="list-style-type: none"> ii. As per O.M. No.F.1/2/2022-PPD Dated 01.04.2022, the EMD will be returned to unsuccessful Bidder(s), within 30 days after declaration of result of first stage i.e. technical evaluation etc. The EMD shall be forfeited if any Bidder withdraws the offer before finalization of the tender. iii. The EMD amount should not be sent through DD. iv. Non-submission of EMD details on or before the due date and time will result in rejection of the e-bid. v. As per Rule 170 of GFR 2017, exemption of EMD will be given subject to submission of undertaking by the firm seeking such exemption. Copies of relevant orders/ documents regarding such exemption should be submitted along with the tender document <p>The successful bidder shall submit a Performance Guarantee of 3% of the bid amount by way of DD/ Bank Guarantee/FDR/Insurance Surety Bonds obtained from any commercial bank within 7 (seven) days from the date of issue of Letter of Intimation and Acceptance by IIT Madras. The tender inviting authority may extend the period for another 7 (seven) days on written request of the contractor for a valid reason for delay in submission of the performance guarantee.</p>
2	Marking on Technical Bid	<ul style="list-style-type: none"> i. The vendor eligibility criteria, scope of work and technical Specification along with bill of materials details for this tender is given in Annexure A. ii. The Bidder shall go through the Annexures and submit the technical bid. iii. The layout of the diagram of Campus Café is given in Annexure –B. iv. The Technical bid should be submitted in the proforma given as per Annexure –C. v. All technical bids should have the page-wise heading as “Technical Bid” and page no. in all pages with seal and signature of authorized signatory. The total no. of pages should be mentioned at the last page of the documents. <p>The technical bid should consist of all technical details along with catalogue/brochure, model number and other technical, commercial terms and conditions. The technical bid should contain only technical details called for in the prescribed proforma along with the supporting documents. No other details apart from the technical details should be submitted in the technical bid. If any deviation found in this regard in the technical bid submitted, the tender will be summarily rejected.</p>
3	Marking on Financial Bid	<ul style="list-style-type: none"> i. Financial bid should be submitted in the prescribed proforma format as per Annexure-D in xls format (BOQ) through e-tender only. No manual or other form of submission will be entertained. ii. Financial bid should indicate item-wise price <u>for all the items</u> mentioned in the technical bid. iii. Total value in the financial bid should be indicated in figures & words clearly.
4	Preparation of Tender:	<ul style="list-style-type: none"> a) You should quote your product as per our specification by mentioning our requirements and your offer side by side and the rate should be in total as per our requirements. We will not make any calculation if you have mentioned the rates of items separately. b) The offer/bids should be submitted in two bid system i.e. Technical Bid and Financial Bid separately.
5	Signing of Tender:	<p>The Tender is liable to be rejected if complete information is not given therein or if the particulars and date (if any) asked for in the schedule to the Tender are not fully filled in or not duly signed/authenticated. Specific attention is drawn to the delivery dates and terms and conditions enclosed herewith. Each page of the technical bid required to be signed and bears the official seal of the Bidders.</p>

	<p>If the application is made by a firm in partnership, it shall be signed (with seal) by all the partners of the firm above their full typewritten names and current addresses or alternatively by a partner holding power of attorney for the firm in which case a certified copy of the power of attorney shall accompany the application. A certified copy of the partnership deed along with current addresses of all the partners of the firm shall also accompany the application.</p> <p>If a limited company or a corporation makes the application, it shall be signed by a duly authorized person holding power of attorney for signing the application, in which case a certified copy of the power of attorney shall accompany the application. Such limited company or corporation may be required to furnish satisfactory evidence of its existence. The applicant shall also furnish a copy of the Memorandum of Articles of association duly attested by a Public notary.</p>
6	<p>Period for which the offer will remain open:</p> <p>The Tender shall remain open for acceptance/validity till: 120 days from the date of opening of the tender. However, the day up to which the offer is to remain open being declared closed holiday for the Indian Institute of Technology Madras, the offer shall remain open for acceptance till the next working day.</p>
7	<p>Prices:</p> <ul style="list-style-type: none"> i. The prices quoted must be Nett considering all scope of work, terms & conditions and as per the technical specification mentioned in Annexures A. The prices quoted by the bidders should be inclusive of GST and other statutory levies. ii. The percentage of tax etc. included in the price should be indicated in clear terms. If the inclusive price is not given, we will treat your offered rate as inclusive rate and comparison be made with others. If at the time of comparison of your offer without taxes etc. is happen to be lowest, you are bound to supply as per the offered rate, i.e. without taxes etc. iii. Prices should be quoted in INR only. iv. All conditional tenders will be summarily rejected.
8	<p>PRE-QUALIFICATION CRITERIA</p> <p>Bidder Eligibility Criteria I:</p> <ul style="list-style-type: none"> 1. The bidder shall not be from a country sharing land border with India and if the bidder is from a country sharing land border with India the bidder should have been registered with the competent authority as per orders of DIPP OM No. F. No. 6/18/2019-PPD dated 23rd July 2020, and MoCI Order No. P-45021/112/2020-PP (BE II) (E-43780) dated 24th August 2020. A declaration shall be submitted with the bid as per format given in Annexure – E. 2. Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE II) dated 16th September 2020 and other subsequent orders issued therein, shall be eligible to bid in this tender. Declaration for Class-I and Class-II local suppliers should be submitted in the prescribed proforma format as per Annexure – F. <p>Bidder Eligibility Criteria II:</p> <ul style="list-style-type: none"> 1. The bidder should not have been blacklisted / debarred by any Government/ regulatory bodies in India. A self-declaration format given in Annexure – G. 2. The bidder should submit OEM authorization for Make/brand (except microphones, cables and cabinet) of item for which they are submitting the bid (format is given in Annexure-H). 3. The bidder should have similar experience (like supply, installation and commissioning of Audio and LED wall display system) in the last 3 years (2019, 2020 and 2021) in Govt. Institutions/any of Central PSU's / any of central Government organisations/ autonomous bodies/reputed firms in executing the following works (any one category). <ul style="list-style-type: none"> i) Three (3) similar contracts each costing not less than Rs.27 Lakhs (Or) ii) Two (2) similar contracts each costing not less Rs. 40 Lakhs (Or) ii) One (1) similar contract costing not less than Rs. 54 Lakhs <p>Copies of the documents listed below should be submitted as a proof for the above work experience:</p> <ul style="list-style-type: none"> i. Purchase Order ii. Work Completion Certificate with User Performance Certificate from End User <ul style="list-style-type: none"> 4. The bidder should have an annual turnover of Rs.35 Lakhs each in the last three years i.e. 2019-20, 2020-21 and 2021-22 (Financial statements / certificates issued by Chartered Accountant should be submitted as proof).

9	<p>Number of Bids and their Submission : The bidders should submit the bids in two bid system as detailed below:-</p> <p>Bid I Technical Bid The technical bid should consist of Pre-Qualification Criteria (Bidder Eligibility Criteria - I & II) and technical specification compliance sheet as per Annexure C.</p> <p>Bid II Financial Bid The financial bid should be submitted in excel format (BoQ) as per the proforma (Annexure D) uploaded in the e-Tender web site. The Quoted price should be for supply and installation of the item and inclusive of all cost and statutory levies at IIT Madras.</p>
10	<p>Evaluation of Bids:</p> <p>Bid evaluation will take place in two stages.</p> <p>Stage I: Technical Bid evaluation</p> <ol style="list-style-type: none"> 1. Pre-Qualification Criteria of Bidder Eligibility Criteria-I will be evaluated first and those bidders who have complied with this criteria alone be evaluated for the Bidder Eligibility Criteria-II and technical Specification. 2. In the 2nd stage, the Bidder Eligibility Criteria-II and the technical specification offered by the bidders will be evaluated by the technical committee for compliance. The proposed technical specification offered by the bidder should be equivalent or higher to the specifications mentioned in the technical bid. 3. All bidders who have fully complied with Bidder Eligibility Criteria I, II and technical evaluation will only be considered for opening of financial bid. <p>Stage II: Financial Bid Evaluation The financial bid evaluation will be based on price quoted by the bidder (BoQ). The tender will be awarded to the overall L1 bidder for the total work (Comprising all items).</p>
11	<p>Selection of successful bidder and Award of Order The order will be directly awarded to the technically qualified bidder as per the condition in para 3A of DIPP, MoCI Order No. 45021/2/2017-PP (BE II) dated 16th September 2020.</p>
12	<p>Delivery Period: The Items should be delivered within 4-6 weeks of issue of Purchase Order. Please indicate the actual delivery period clearly. No further extension of time will be allowed.</p>
13	<p>Payment:</p> <ul style="list-style-type: none"> • No Advance Payment will be made for Indigenous purchase. • Payment will be made only after supply and satisfactory installation.
14	<p>Warranty: 3 Years from date of installation and commissioning.</p>
15	<p>Terms and conditions : Failure to comply with any of the instructions stated in this document or offering unsatisfactory explanations for non-compliance will likely to lead to rejection of offers.</p>
16	<p>Right of Acceptance: IIT MADRAS reserves the right to reject the whole or any part of the Tender without assigning any reason or to accept them in part or full.</p>
17	<p>Communication of Acceptance: Letter of Intimation and acceptance will be communicated by post/email to the successful bidder to the address indicated in the bid.</p>
18	<p>Transit Insurance: The Purchaser will not pay separately for Transit Insurance.</p>
19	<p>In terms of Rule 173 (iv) of General Financial Rules, 2017 the bidder shall be at liberty to question the bidding conditions, bidding process and/or rejection of its bid.</p>
20	<p>Bidder shall submit along with this Tender: Name and full address of the Banker and their swift code, PAN No. and GSTIN number.</p>
21	<p>Jurisdiction: All questions, disputes, or differences arising under, out of or in connection with the contract, if concluded, shall be subject to the exclusive jurisdiction at the place from which the acceptance of Tender is issued.</p>
22	<p>Penalty & Liquidated Damages / Force Majeure: If the selected Bidder fails to complete the due performance of the contract in accordance with the terms and conditions, Institute reserves the right either to cancel the contract or to accept performance already made by the selected Bidder after imposing Penalty on Selected Bidder. A penalty will be calculated on a per week basis and on the same Rate as applicable to Liquidated Damages (LD). In case of termination of the contract, Institute reserves the right to recover an amount equal to 5% of the Contract value as Liquidated Damages for non-performance.</p>

	Both Penalty and Liquidated Damages are independent of each other and are applied separately and concurrently. Penalty and LD are not applicable for reasons attributable to the Institute and Force Majeure. However, it is the responsibility of the selected Bidder to prove that the delay is attributable to the Institute and Force Majeure. The selected Bidder shall submit the proof authenticated by the Bidder and Institute's official that the delay is attributed to the Institute and/or Force Majeure along with the bills requesting payment.
23	Risk Purchase Clause: In event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from the other source on the total risk of the supplier under risk purchase clause
24	The Bidder shall certify that the tender document submitted by him / her are of the same replica of the tender document as published by IIT Madras and no corrections, additions and alterations made to the same. If any deviation found in the same at any stage and date, the bid / contract will be rejected / terminated and actions will be initiated as per the terms and conditions of the contract.
25	The bidders will not be entertained to participate in opening of Bids, since the tender is e-tender, the opening of the bids may be checked using the respective logins of the bidders.
26	Bidders can submit their queries and clarifications on or before 20.06.2022 to the email id: adstores@iitm.ac.in or contact: Dr. C.R. Jeevandoss Central Electronics Centre IIT Madras Chennai – 600036 Ph: 044 - 2257 4947

Sd/-
(Booma Sowrirajan)
Assistant Registrar
Stores and Purchase Section

ACKNOWLEDGEMENT

It is hereby acknowledged that I/We have gone through all the points listed under “Specification, Guidelines, Terms and Conditions” of tender document. I/We totally understand the terms and conditions and agree to abide by the same.

**SIGNATURE OF BIDDER ALONG WITH
SEAL OF THE COMPANY WITH DATE**

SCHEDULE OF TENDER

Tender No. IITM/SPS/A& LED Dis. System/004/2022-23/SPL

SUPPLY, INSTALLATION AND COMMISSIONING OF AUDIO AND LED WALL DISPLAY SYSTEM IN CAMPUS CAFE OF IIT MADRAS AS PER DESIGN

Name of Organization	Indian Institute of Technology Madras
Tender Type (Open/Limited/EOI/Auction/Single)	OPEN
Tender Category (Services/Goods/Works)	Goods
Type/Form of Contract (Work/Supply/Auction/ Service/ Buy/ Empanelment/ Sell)	Supply, Installation and Commissioning
Product Category (Civil Works/Electrical Works/Fleet Management/ Computer Systems)	Supply, Installation and Commissioning of Audio and LED Wall Display in Campus Café of IIT Madras as per Design
Source of Fund (Institute/Project)	IIT Madras
Is Multi Currency Allowed	No
Date of Issue/Publishing	14.06.2022
Document Download Start Date	14.06.2022
Document Download End Date	04.07.2022
Bid Submission Start Date	24.06.2022 @ 10 am
Last Date and Time for Uploading of Bids	04.07.2022 before 02.00 pm
Date and Time of Tender Opening	05.07.2022 at 03.00 pm
No. of Covers (1/2/3/4)	2
Bid Validity days (180/120/90/60/30)	120 Days
Address for Communication	The Assistant Registrar Stores & Purchase Section IIT Madras Chennai – 600 036
Contact No.	For Technical Queries: 044 2257 4947 For General Queries : 044- 2257 8285/8287/8288
Email Address	adstores@iitm.ac.in

SUPPLY, INSTALLATION AND COMMISSIONING OF AUDIO AND LED WALL DISPLAY SYSTEM IN CAMPUS CAFÉ OF IIT MADRAS AS PER DESIGN

(A) PRE-QUALIFICATION CRITERIA

Bidder Eligibility Criteria I:

1. The bidder shall not be from a country sharing land border with India and if the bidder is from a country sharing land border with India the bidder should have been registered with the competent authority as per orders of DIPP OM No. F. No. 6/18/2019-PPD dated 23rd July 2020, and MoCI Order No. P-45021/112/2020-PP (BE II) (E-43780) dated 24th August 2020. A declaration shall be submitted with the bid as per format given in **Annexure-E**.
2. Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE II) dated 16th September 2020 and other subsequent orders issued therein, shall be eligible to bid in this tender. Declaration for Class-I and Class-II local suppliers should be submitted in the prescribed proforma format as per **Annexure – F**.

Bidder Eligibility Criteria II:

1. The firm should not have been blacklisted / debarred by any Government/ regulatory bodies in India. A self-declaration format given in **Annexure – G**.
2. The bidder should submit OEM authorization for all Make/brand of item for which they are submitting the bid (format is given in **Annexure-H**).
3. The bidder should have similar experience (like supply, installation and commissioning of Audio and LED wall display system) in the last 3 years (2019, 2020 and 2021) in Govt. Institutions/any of Central PSU's / any of central Government organisations / autonomous bodies/reputed firms in executing the following works (any one category).
 - i) Three (3) similar contracts each costing not less than Rs.27 Lakhs
(Or)
 - ii) Two (2) similar contracts each costing not less Rs. 40 Lakhs
(Or)
 - iii) One (1) similar contract costing not less than Rs. 54 LakhsCopies of the documents listed below should be submitted as a proof for the above work experience:
 - i) Purchase Order
 - ii) Work Completion Certificate with User Performance Certificate from End User
4. The bidder should have an annual turnover of Rs.35 Lakhs each in the last three years i.e. 2019-20, 2020-21 and 2021-22 (**Financial statements / certificates issued by Chartered Accountant should be submitted as proof**).

(B) SCOPE OF WORK

1. The tender is called for Design, Supply, Installation and Commissioning of Audio and LED Wall Display System in Campus Café, IIT Madras.
2. The bidder can be an OEM or an authorized dealer (format is given in **Annexure-H**).
3. The desired brand of materials required to be used by the successful bidder with quantity in the proposed audio, LED display system is given in the list of Bill of Materials. The vendor should not alter the Quantity mentioned in the BOM.
4. The bidder should use the Quantity mentioned in the Bill of Material for designing and should choose any of one of the mentioned brand/make of items as per BOM.
5. Any other brand other than what mentioned in BOM will not be accepted.
6. The Audio and LED Wall Display System should be fine-tuned for excellent output.
7. The layout diagram is given in **Annexure – B**.

(C) BILL OF MATERIAL

Sl.No.	Description	Make	UoM	Qty
1.00	LED Wall Display System			
1.01	4.56m x 2.4m (14.96'x7.87'), 1.875mm Pixel Pitch LED wall with Required Controller and Buffer Cabinets	SAMSUNG, CHRISTIE, ICAMIC, DELTA	No.	1
1.02	Mounting structure for LED Wall	Custom	No	1
1.03	Video Wall Processor (Sending Card)	Extron, Novastar, RGB Spectrum	No.	1
2.00	Audio System			
2.01	600W Wall Speakers	Audio focus, Martin Audio, JBL, NEXO	Nos.	4
2.02	4x1200W Power Amplifier	Crown, OHM, NEXO, L-Acoustics	No.	1
2.03	Digital Signal Processor	NEXO, BSS, Extron, Biamp	No.	1
2.04	Digital Mixer	Yamaha, Midas, Allen heath, QSC	No.	1
2.05	Touch Panel	Apple	No	1
2.06	Wireless Handheld Microphone	Beyerdynamic, Sennheiser, Shure, AKG	Nos.	2
2.07	Wireless Presenter (Lapel) Microphone	Beyerdynamic, Sennheiser, Shure, AKG	No.	1
2.08	Gooseneck Microphone	Beyerdynamic, Sennheiser, Shure, AKG	No.	1
2.09	Hanging Bracket for speakers	Custom	No.	4
3.00	Cables and accessories			
3.01	Connectors and accessories.	Amphenol, Neutrik	Lot	1
3.02	Microphone bulk cable	Belden, Euro, Kramer	Meter	200
3.03	Speaker cables	Belden, Euro, Kramer	Meter	400
3.04	Twisted Pair Cable	Kramer, Belden, Extron, EURO	Meter	300
3.05	Equipment Rack	Valrack, NT, President	Nos.	1
3.06	Installation, Cabling, Termination and Coordination and Project Management	Integrator	Lot	1

(D) DETAILED TECHNICAL SPECIFICATIONS

1.00 LED Wall Display System

1.01 LED wall with Required Controller and Buffer Cabinets

Item Reference	1.01
Item Description	LED wall with Required Controller and Buffer Cabinets
Approved Make/Brand	Samsung, Christie, ICAMIC, Delta
Minimum Performance Parameters	
Pixel Pitch	1.875mm Physical
LED per pixel	3 in1 SMD High Brightness LED
LED	4.56m x 2.4m (14.96 x 7.87 Feet)
Resolution per Tile	128x128
Single Cabinet Dimension/Pixel(W x H)	4560 mm x 2400 mm
Casing Material	iron Casing
Horizontal & Vertical Viewing Angle	160°

LED Brightness	> 1000cd/m ²
Grey Scale	16 bits
Color Ref	281 trillion colors
Operating Temperature	-10°C to +55°C and 10% to 95%RH
Temperature Checkup	at 70°C auto shut off
LEDs Lifetime	>1,00,000 Hours
Refresh Rate	≥ 3840 Hz
Frame Rate	> 60 frames/sec
Compliance	IP 54 rated (front) CE, CCC, Rohs
Data Transfer Method	HDMI or DVI
Aspect Ratio	16 : 9 High Definition Compatibility
Contrast Ratio	In excess of 1500 : 1
Input Format	HDMI, DVI,
Data Transmission	cat 6
Input Voltage	220V -240V, 50Hz

1.02 Mounting structure for LED Wall

Item Reference	1.02
Item Description	Mounting structure for LED Wall
Approved Make/Brand	Custom
Minimum Performance Parameters	Structural arrangement should be made as per site condition

1.03 Video Wall Processor (Sending Card)

Item Reference	1.03
Item Description	Video Wall Processor (Sending Card)
Approved Make/Brand	Extron, NOVASTAR, RGB Spectrum
Minimum Performance Parameters	
Max. Input Cards	≥4
Max. Input Channels	≥16
Max. Output Cards	≥2
RJ45	16xRJ45 Gigabit Ethernet Outputs, 2xOPT outputs
Max. Load Capacity	≥26000000 Pixels
Max. Layers	≥32
HDMI 2.0	12 Bit RGB 4:4:4 4096x2160@30Hz, 4096x1080@60Hz
DP1.2	12 Bit RGB 4:4:4 4096x2160@30Hz, 4096x1080@60Hz

2.0 Audio System

2.01 600W Wall Speakers

Item Reference	2.01
Item Description	600W Wall Speakers
Approved Make/Brand	Audio focus, Martin Audio, JBL, NEXO
Minimum Performance Parameters	
Coverage	120x60 degree
Frequency Range(-10dB)	36Hz – 20Khz
LF Driver	12” driver with 3” dual voice coil
HF Driver	1.5” compression driver, 3” voice coil
Frequency response (+,-3dB)	42Hz – 18Khz
System Power Rating	600W Passive mode
Maximum SPL(1m)	Passive Mode 123dB (129 dB Peak)
Crossover Modes	Passive switchable
Passive crossover frequency	1.8Khz
Nominal Impedance	8 Ohms
Nominal LF Driver Impedance	8 Ohms
Nominal HF Driver Impedance	8 Ohms
System Sensitivity(1W@ 1m)	≥95dB

2.02 4x1200W Power Amplifier

Item Reference	2.02
Item Description	4x1200W Power Amplifier
Approved Make/Brand	Crown, OHM, NEXO, L-Acoustics
Minimum Performance Parameters	
Rated Output Power @ 4ohms per channel	1200W
THD (full rated power, 20 Hz – 20 kHz)	≤0.35%
Damping Factor (20 Hz to 100 Hz)	> 1000
Frequency Response (8Ω, 20 Hz – 20 kHz)	+/-0.25dB
No. of Input & Output Channels	4
Input Impedance (nominally balanced, nominally unbalanced)	20K ohms balanced, 10K ohms Unbalanced
Analog Input SNR at 8 ohms	>104dB
Crosstalk (below rated power) 20Hz - 1Khz	>80dB

2.03 Digital Signal Processor

Item Reference	2.03
Item Description	Digital Signal Processor
Approved Make/Brand	NEXO, BSS, Extron, Biamp
Minimum Performance Parameters	
Analog Inputs	12
Mic/Line Inputs:	Nominal gain 0dB, electronically switchable up to +48dB,in +6dB steps
Input Impedance:	Input Impedance: 3.0kΩ
Maximum Input Level:	+20dBu with 0dB input gain,+8dBu with 12dB gain
CMRR:	>75dB at 1KHz
Input Noise (E.I.N.):	<-125dBu typical with 150Ω source
Phantom Power:	48V nominal, selectable per input

A/D Latency:	37/Fs [0.77ms@48k]
Analog Outputs:	8
Maximum Output Level:	+19dBu
Frequency Response:	20Hz-20KHz (+0.5dB/-1dB)
THD:	<0.01% (20Hz to 20KHz)
Dynamic Range:	108dB typical, 22Hz-22KHz unweighted
AEC Processing:	12 independent algorithms
AEC Processing Latency	2385/Fs [49.69ms@48k]
Tail Length:	T200 ms
Average Convergence Rate:	49 dB/s (Net convergence over multiple FFT bands)
Control Network Connectors:	RJ45 Ethernet connector
Maximum Cable Length:	100m/300ft

2.04 Digital Mixer

Item Reference	2.04
Item Description	Digital Mixer
Approved Make/Brand	Yamaha, Midas, Allen heath, QSC
Minimum Performance Parameters	
Fader Configuration	16+1(Master)
Inputs	16 Mic/line (XLR/TRS combo) +2 Stereo line (RCA Pin)
Stereo Buses	1
Sub Buses	1
AUX Buses	20(8 mono + 6 Stereo)
Outputs	16 (XLR)
On board Processor	8 effects + 10 GEQ
Sampling frequency rate	48KHZ
THD	Less than 0.05%
No. of Faders	16+1
Faders	100mm motorized
Recording/Playback	PC/Mac - USB2.0 recording 34 tracks, Playback 34 tracks USB Storage - Recording 2 tracks, playback 2 tracks
Expansion Slots	1
GEQ	Stereo, Aux 1-8
Input Mixing Channel	32mono + 2 stereo + 2 return

2.05 Touch Panel

Item Reference	2.05
Item Description	Touch Panel
Approved Make/Brand	Apple
Minimum Performance Parameters	
Size	10.2" diagonal
Pixel Resolution	2160x1620
Brightness	500Nits
Wireless	Wifi only (802.11a/b/g/n/ac), Dual band (2.5GHz and 5 GHz), HT80 with MIMO Bluetooth 4.2 technology
Processor	A10 Bionic chip
Size	Passive Mode 123dB (129 dB Peak)

2.06 Wireless Handheld Microphone

Item Reference	2.06
Item Description	Wireless Handheld Microphone
Approved Make/Brand	Beyerdynamic, Sennheiser, Shure, AKG
Minimum Performance Parameters	
Carrier Frequency Range	500.1 MHz - 864.9 MHz
Audio Bandwidth	35 – 20KHZ(+/-3dB)
Modulation	Wideband Frequency Modulation
Preprogrammed frequencies	16
Microphone capsule	Dynamic
Transmitter THD	≤0.7%
Receiver THD	≤0.3%
Audio Bandwidth	35 Hz to 20KHz
Signal to noise	120dB-A

2.07 Wireless Presenter (Lapel) Microphone

Item Reference	2.07
Item Description	Wireless Presenter Microphone
Approved Make/Brand	Beyerdynamic, Sennheiser, Shure, AKG
Minimum Performance Parameters	
Carrier Frequency Range	500.1 MHz - 864.9 MHz
Audio Bandwidth	35 – 20KHZ(+/-3dB)
Transmitter THD	≤0.7%
Receiver THD	≤0.3%
Modulation	Wideband Frequency Modulation
Audio Bandwidth	35 Hz to 20KHz
Signal to noise	120dB-A

2.08 Gooseneck Microphone

Item Reference	2.08
Item Description	Gooseneck Microphone
Approved Make/Brand	Beyerdynamic, Sennheiser, Shure, AKG
Minimum Performance Parameters	
Audio Frequency Bandwidth	70 – 18000 Hz
Polar Pattern	Cardioid
Equivalent Noise Level	<21 dB-A
Signal to noise (A-weighted)	>73dB
Audio Output	Balanced XLR
Electrical Impedance	≤600 Ohms
Microphone Length	50cm
MAX SPL	125dB
Supply Voltage	9 to 52V
Programmable functions	Push to talk, push to mute, Push on/off, low cut on/off
Table stand	Heavy duty table stand with switch

2.09 Hanging Bracket for speakers

Item Reference	2.09
Item Description	Hanging Bracket for speakers
Approved Make/Brand	Custom
Minimum Performance Parameters	Hanging Support for the speaker to be made as per site condition

3.0 Cables and accessories

3.01 Connectors and accessories.

Item Reference	3.01
Item Description	Connectors and accessories
Approved Make/Brand	Amphenol, Neutrik
Minimum Performance Parameters	All connectors XLR M,F, Mono, Ep stereo etc

3.02 Microphone bulk cable

Item Reference	3.02
Item Description	Microphone bulk cable
Approved Make/Brand	Belden, Euro, Kramer
Minimum Performance Parameters	
No. of Element	2
Conducting Material	Bare copper
Size	24AWG
Stranding	27x38
Insulation Material	PVC
Outer Jacket	PVC
Outer Shield Material	Bare copper
Non Conducting DCR	22.8 ohm/1000ft
Max. Current	3.9 Amps per conductor

3.03 Speaker cables

Item Reference	3.03
Item Description	Speaker cables
Approved Make/Brand	Belden, Euro, Kramer
Minimum Performance Parameters	
Insulation Material	Poly Vinyl Chloride
Size	14AWG
Stranding	42x30
Conducting Material	Tinned Copper
Max. Current	9.6A per conductor
No. of Element	1
Outer Jacket Material	PVC

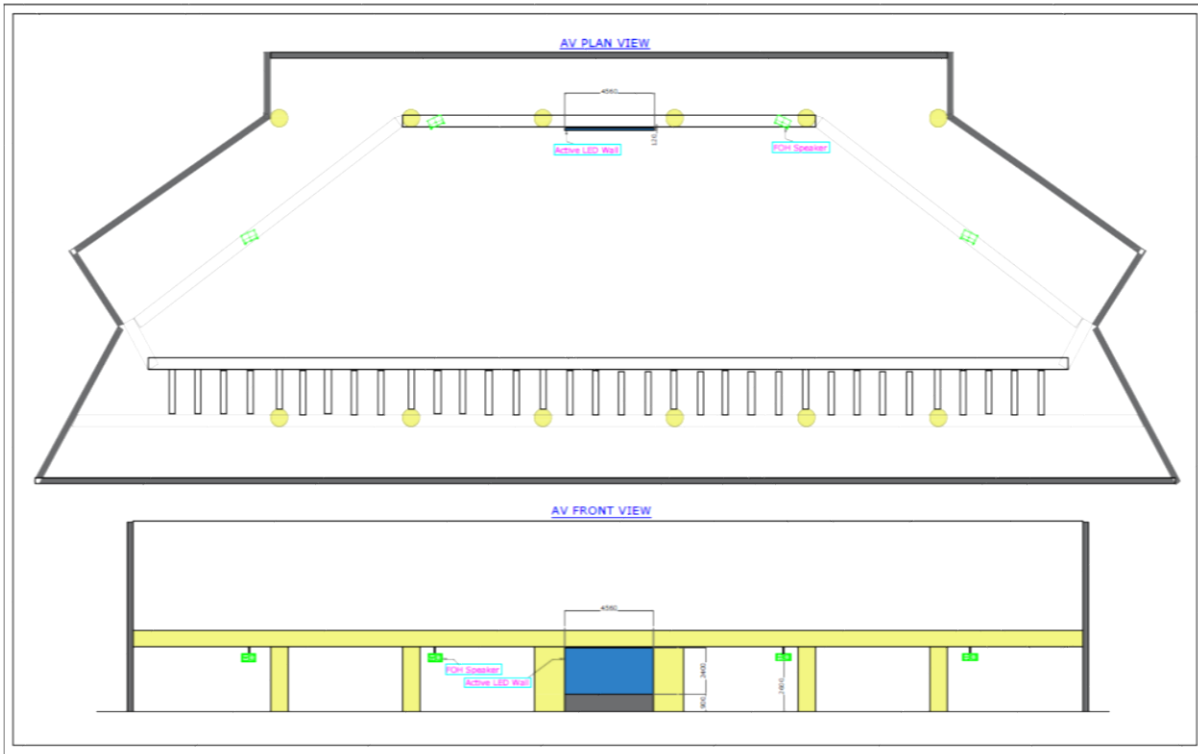
3.04 Twisted Pair Cable

Item Reference	3.04
Item Description	Twisted Pair Cable
Approved Make/Brand	Kramer, Belden, Extron, EURO
Minimum Performance Parameters	
Size	23AWG
No. of Pairs	4
Delay Frequency	100 MHz
Material	Bare copper
Insulation Material	Polyolefin
Outer Jacket	LSZH - Low smoke zero halogen (Flame retardant)

3.05 Equipment Rack

Item Reference	3.05
Item Description	Equipment Rack
Approved Make/Brand	Valrack, NT, President
Minimum Performance Parameters	
Size	15U
Width	600mm
Depth	800mm
Caster Wheel	Yes
PDU	16/5A
Color	Black
Door	Glass door with lock and key

Lay out Diagram of Campus café



**SUPPLY, INSTALLATION AND COMMISSIONING OF AUDIO AND LED WALL DISPLAY SYSTEM
IN CAMPUS CAFE OF IIT MADRAS AS PER DESIGN**

TECHNICAL BID COMPLIANCE STATEMENT

Tender No. IITM/SPS/A& LED Dis. System/004/2022-23/SPL

(A) PRE-QUALIFICATION CRITERIA

Sl.No.	Description	Compliance (Yes/ No)	Proof with Page No.
I	Bidder Eligibility Criteria I:		
1	The bidder shall not be from a country sharing land border with India and if the bidder is from a country sharing land border with India the bidder should have been registered with the competent authority as per orders of DIPP OM No. F. No. 6/18/2019-PPD dated 23rd July 2020, and MoCI Order No. P-45021/112/2020-PP (BE II) (E-43780) dated 24th August 2020. A declaration shall be submitted with the bid as per format given in Annexure – E.		
2	Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE II) dated 16 th September 2020 and other subsequent orders issued therein, shall be eligible to bid in this tender. Declaration for Class-I and Class-II local suppliers should be submitted in the prescribed proforma format as per Annexure – F.		
II	Bidder Eligibility Criteria II:		
1	The firm should not have been blacklisted / debarred by any Government/ regulatory bodies in India. A self-declaration format given in Annexure – G.		
2	The bidder should submit OEM authorization for Make/brand (except microphones, cables and cabinet) of item for which they are submitting the bid (format is given in Annexure-H.)		
3.	The bidder should have similar experience (like supply, installation and commissioning of Audio and LED wall display system) in the last 3 years (2018, 2019 and 2020) in Govt. Institutions/any of Central PSU's / any of central Government organisations/ autonomous bodies/reputed firms in executing the following works (any one category). i) Three (3) similar contracts each costing not less than Rs.27 Lakhs (Or) ii) Two (2) similar contracts each costing not less Rs. 40 Lakhs (Or) iii) One (1) similar contract costing not less than Rs. 54 Lakhs Copies of the documents listed below should be submitted as a proof for the above work experience: i) Purchase Order ii) Work Completion Certificates with User Performance Certificate from End User		
4.	The bidder should have an annual turnover of Rs.35 Lakhs each in the last three years i.e. 2019-20, 2020-21 and 2021-22 (Financial statements / certificates issued by Chartered Accountant should be submitted as proof.)		

TECHNICAL SPECIFICATION FOR AUDIO AND LED WALL DISPLAY SYSTEM IN CAMPUS CAFÉ OF IIT MADRAS AS PER DESIGN

1.00 LED Wall Display System

1.01 LED wall with Required Controller and Buffer Cabinets

LED wall with Required Controller and Buffer Cabinets			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description	Compliance (Yes/ No)	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.	
Pixel Pitch	1.875mm Physical		
LED per pixel	3 in1 SMD High Brightness LED		
LED	4.56m x 2.4m (14.96 x 7.87 Feet)		
Resolution per Tile	128x128		
Single Cabinet Dimension/Pixel(W x H)	4560 mm × 2400 mm		
Casing Material	iron Casing		
Horizontal & Vertical Viewing Angle	160°		
LED Brightness	> 1000cd/m ²		
Grey Scale	16 bits		
Color Ref	281 trillion colors		
Operating Temperature	-10°C to +55°C and 10% to 95%RH		
Temperature Checkup	at 70°C auto shut off		
LEDs Lifetime	>1,00,000 Hours		
Refresh Rate	≥ 3840 Hz		
Frame Rate	> 60 frames/sec		
Compliance	IP 54 rated (front) CE, CCC, Rohs		
Data Transfer Method	HDMI or DVI		
Aspect Ratio	16 : 9 High Definition Compatibility		
Contrast Ratio	In excess of 1500 : 1		
Input Format	HDMI, DVI,		
Data Transmission	cat 6		
Input Voltage	220V -240V, 50Hz		
Pixel Pitch	1.875mm Physical		
LED per pixel	3 in1 SMD High Brightness LED		
LED	4.56m x 2.4m (14.96 x 7.87 Feet)		
Resolution per Tile	128x128		
Single Cabinet Dimension/Pixel(W x H)	4560 mm × 2400 mm		
Casing Material	iron Casing		
Horizontal & Vertical Viewing Angle	160°		
LED Brightness	> 1000cd/m ²		
Grey Scale	16 bits		
Color Ref	281 trillion colors		
Operating Temperature	-10°C to +55°C and 10% to 95%RH		

1.02 Mounting structure for LED Wall

Mounting structure for LED Wall			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description	Compliance (Yes/ No)	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.	
Structural arrangement should be made as per site condition			

1.03 Video Wall Processor (Sending Card)

Video Wall Processor (Sending Card)			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description	Compliance (Yes/ No)	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.	
Max. Input Cards	≥4		
Max. Input Channels	≥16		
Max. Output Cards	≥2		
RJ45	16xRJ45 Gigabit Ethernet Outputs, 2xOPT outputs		
Max. Load Capacity	≥26000000 Pixels		
Max. Layers	≥32		
HDMI 2.0	12 Bit RGB 4:4:4 4096x2160@30Hz, 4096x1080@60Hz		
DP1.2	12 Bit RGB 4:4:4 4096x2160@30Hz, 4096x1080@60Hz		

2.0 Audio System

2.01 600W Wall Speakers

600W Wall Speakers			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description	Compliance (Yes/ No)	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.	
Coverage	120x60 degree		
Frequency Range(-10dB)	36Hz – 20Khz		
LF Driver	12" driver with 3" dual voice coil		
HF Driver	1.5" compression driver, 3"voice coil		
Frequency response (+,-3dB)	42Hz – 18Khz		

System Power Rating	600W Passive mode		
Maximum SPL(1m)	Passive Mode 123dB (129 dB Peak)		
Crossover Modes	Passive switchable		
Passive crossover frequency	1.8Khz		
Nominal Impedance	8 Ohms		
Nominal LF Driver Impedance	8 Ohms		
Nominal HF Driver Impedance	8 Ohms		
System Sensitivity(1W@ 1m)	≥95dB		

2.02 4x1200W Power Amplifier

4x1200W Power Amplifier			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description	Compliance (Yes/No)	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.	
Rated Output Power @ 4ohms per channel	1200W		
THD (full rated power, 20 Hz – 20 kHz)	≤0.35%		
Damping Factor (20 Hz to 100 Hz)	> 1000		
Frequency Response (8Ω, 20 Hz – 20 kHz)	+/-0.25dB		
No. of Input & Output Channels	4		
Input Impedance (nominally balanced, nominally unbalanced)	20K ohms balanced, 10K ohms Unbalanced		
Analog Input SNR at 8 ohms	>104dB		
Crosstalk (below rated power) 20Hz - 1Khz	>80dB		

2.03 Digital Signal Processor

Digital Signal Processor			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description	Compliance (Yes/No)	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.	
Analog Inputs	12		
Mic/Line Inputs:	Nominal gain 0dB, electronically switchable up to +48dB,in +6dB steps		
Input Impedance:	Input Impedance: 3.0kΩ		
Maximum Input Level:	+20dBu with 0dB input gain,+8dBu with 12dB gain		
CMRR:	>75dB at 1KHz		
Input Noise (E.I.N.):	<-125dBu typical with 150Ω source		
Phantom Power:	48V nominal, selectable per input		
A/D Latency:	37/Fs [0.77ms@48k]		
Analog Outputs:	8		
Maximum Output Level:	+19dBu		

Frequency Response:	20Hz-20KHz (+0.5dB/-1dB)		
THD:	<0.01% (20Hz to 20KHz)		
Dynamic Range:	108dB typical, 22Hz-22KHz unweighted		
AEC Processing:	12 independent algorithms		
AEC Processing Latency	2385/Fs [49.69ms@48k]		
Tail Length:	T200 ms		
Average Convergence Rate:	49 dB/s (Net convergence over multiple FFT bands)		
Control Network Connectors:	RJ45 Ethernet connector		
Maximum Cable Length:	100m/300ft		

2.04 Digital Mixer

Digital Mixer			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description		Compliance (Yes/No)	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.
Minimum Performance Parameters			
Fader Configuration	16+1(Master)		
Inputs	16 Mic/line (XLR/TRS combo) +2 Stereo line (RCA Pin)		
Stereo Buses	1		
Sub Buses	1		
AUX Buses	20(8 mono + 6 Stereo)		
Outputs	16 (XLR)		
On board Processor	8 effects + 10 GEQ		
Sampling frequency rate	48KHZ		
THD	Less than 0.05%		
No. of Faders	16+1		
Faders	100mm motorized		
Recording/Playback	PC/Mac - USB2.0 recording 34 tracks, Playback 34 tracks USB Storage - Recording 2 tracks, playback 2 tracks		
Expansion Slots	1		
GEQ	Stereo, Aux 1-8		
Input Mixing Channel	32mono + 2 stereo + 2 return		

2.05 Touch Panel

Touch Panel			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description		Compliance (Yes/No)	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.
Minimum Performance Parameters			
Size	10.2" diagonal		

Pixel Resolution	2160x1620		
Brightness	500Nits		
Wireless	Wifi only (802.11a/b/g/n/ac), Dual band (2.5GHz and 5 GHz), HT80 with MIMO Bluetooth 4.2 technology		
Processor	A10 Bionic chip		
Size	Passive Mode 123dB (129 dB Peak)		

2.06 Wireless Handheld Microphone

Wireless Handheld Microphone			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description		Compliance	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.
		(Yes/No)	
Minimum Performance Parameters			
Carrier Frequency Range	500.1 MHZ - 864.9 MHZ		
Audio Bandwidth	35 – 20KHZ(+/-3dB)		
Modulation	Wideband Frequency Modulation		
Preprogrammed frequencies	16		
Microphone capsule	Dynamic		
Transmitter THD	≤0.7%		
Receiver THD	≤0.3%		
Audio Bandwidth	35 Hz to 20KHz		
Signal to noise	120dB-A		

2.07 Wireless Presenter (Lapel) Microphone

Wireless Presenter (Lapel) Microphone			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description		Compliance	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.
		(Yes/No)	
Minimum Performance Parameters			
Carrier Frequency Range	500.1 MHZ - 864.9 MHZ		
Audio Bandwidth	35 – 20KHZ(+/-3dB)		
Transmitter THD	≤0.7%		
Receiver THD	≤0.3%		
Modulation	Wideband Frequency Modulation		
Audio Bandwidth	35 Hz to 20KHz		
Signal to noise	120dB-A		

2.08 Gooseneck Microphone

Gooseneck Microphone			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description		Compliance	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.
		(Yes/No)	
Minimum Performance Parameters			
Audio Frequency Bandwidth	70 – 18000 Hz		
Polar Pattern	Cardioid		
Equivalent Noise Level	<21 dB-A		
Signal to noise (A-weighted)	>73dB		
Audio Output	Balanced XLR		
Electrical Impedance	<=600 Ohms		
Microphone Length	50cm		
MAX SPL	125dB		
Supply Voltage	9 to 52V		
Programmable functions	Push to talk, push to mute, Push on/off, low cut on/off		
Table stand	Heavy duty table stand with switch		

2.09 Hanging Bracket for speakers

Hanging Bracket for speakers			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description		Compliance	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.
		(Yes/No)	
Minimum performance parameters	Hanging Support for the speaker to be made as per site condition		

3.0 Cables and accessories

3.01 Connectors and accessories.

Connectors and accessories			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description		Compliance	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.
		(Yes/No)	
Minimum Performance Parameters	All connectors XLR M,F, Mono, Ep stereo etc		

3.02 Microphone bulk cable

Microphone bulk cable			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description		Compliance (Yes/No)	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.
No. of Element	2		
Conducting Material	Bare copper		
Size	24AWG		
Stranding	27x38		
Insulation Material	PVC		
Outer Jacket	PVC		
Outer Shield Material	Bare copper		
Non Conducting DCR	22.8 ohm/1000ft		
Max. Current	3.9 Amps per conductor		

3.03 Speaker cables

Speaker cables			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description		Compliance (Yes/No)	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.
Insulation Material	Poly Vinyl Chloride		
Size	14AWG		
Stranding	42x30		
Conducting Material	Tinned Copper		
Max. Current	9.6A per conductor		
No. of Element	1		
Outer Jacket Material	PVC		

3.04 Twisted Pair Cable

Twisted Pair Cable			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description		Compliance (Yes/No)	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.
Size	23AWG		
No. of Pairs	4		

Delay Frequency	100 MHz		
Material	Bare copper		
Insulation Material	Polyolefin		
Outer Jacket	LSZH - Low smoke zero halogen (Flame retardant)		

3.05 Equipment Rack

Equipment Rack			
Name of the Make/Brand and Model No		Make /Brand Name :	
		Model No	
Description		Compliance	Details of Catalogue/ Data Sheet Proof with Page No in the tender document.
		(Yes/No)	
Minimum performance parameters			
Size	15U		
Width	600mm		
Depth	800mm		
Caster Wheel	Yes		
PDU	16/5A		
Color	Black		
Door	Glass door with lock and key		

**SUPPLY, INSTALLATION AND COMMISSIONING OF AUDIO AND LED WALL DISPLAY SYSTEM
IN CAMPUS CAFE OF IIT MADRAS AS PER DESIGN**

PROFORMA FOR FINANCIAL BID (BOQ) FORMAT

Tender No. IITM/SPS/A& LED Dis. System/004/2022-23/SPL

Sl.No	Description	Qty	UoM	Rate per unit	Total cost without Tax in INR	GST in %	Total cost with tax in INR
1.00	LED Wall Display System						
1.01	4.56m x 2.4m (14.96'x7.87'), 1.875mm Pixel Pitch LED wall with Required Controller and Buffer Cabinets	1	No.				
1.02	Mounting structure for LED Wall	1	No				
1.03	Video Wall Processor (Sending Card)	1	No.				
2.00	Audio System						
2.01	600W Wall Speakers	4	Nos.				
2.02	4x1200W Power Amplifier	1	No.				
2.03	Digital Signal Processor	1	No.				
2.04	Digital Mixer	1	No.				
2.05	Touch Panel	1	No				
2.06	Wireless Handheld Microphone	2	Nos.				
2.07	Wireless Presenter (Lapel) Microphone	1	No.				
2.08	Gooseneck Microphone	1	No.				
2.09	Hanging Bracket for speakers	4	No.				
3.00	Cables and accessories						
3.01	Connectors and accessories.	1	Lot				
3.02	Microphone bulk cable	200	Meter				
3.03	Speaker cables	400	Meter				
3.04	Twisted Pair Cable	300	Meter				
3.05	Equipment Rack	1	Nos.				
3.06	Installation, Cabling, Termination and Coordination and Project Management	1	Lot				
	Grand Total						

Total Amount in Words _____

(To be given on the letter head of the bidder)

No. _____

Dated: _____

CERTIFICATE

(Bidders from India)

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that I am not from such a country.

OR (*whichever is applicable*)

(Bidders from Country which shares a land border with India)

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that I from _____ (Name of Country) and has been registered with the Competent Authority. I also certify that I fulfil all the requirements in this regard and is eligible to be considered. *(Copy/ evidence of valid registration by the Competent Authority is to be attached)*

Place:
Date:

Signature of the Bidder
Name & Address of the
Bidder with Office Stamp

**FORMAT OF SELF-CERTIFICATION UNDER PUBLIC PROCUREMENT POLICY
(PREFERENCE TO MAKE IN INDIA) 2017**

Tender Reference No. IITM/SPS/A& LED Dis. System/004/2022-23/SPL

**Name of the item / Service: SUPPLY, INSTALLATION AND COMMISSIONING OF AUDIO AND LED WALL DISPLAY
SYSTEM IN CAMPUS CAFE OF IIT MADRAS AS PER DESIGN**

Date: _____

I/We _____ S/o, D/o, W/o, _____

Resident of _____

hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the Public Procurement (Preference to Make in India) Policy vide Gol Order no. P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019 and 04.06.2020) MOCI order No. 45021/2/2017-PP (BE II) Dt.16th September 2020 & P- 45021/102/2019-BE-II-Part(1) (E-50310) Dt.4th March 2021 and any subsequent modifications/Amendments, if any and

That the local content for all inputs which constitute the said item/service/work has been verified by me and I am responsible for the correctness of the claims made therein.

Tick (✓) and Fill the Appropriate Category	
<input type="checkbox"/>	I/We _____ [name of the supplier] hereby confirm in respect of quoted items that Local Content is equal to or more than 50% and come under “Class-I Local Supplier” category.
<input type="checkbox"/>	I/We _____ [name of the supplier] hereby confirm in respect of quoted items that Local Content is equal to or more than 20% but less than 50% and come under “Class-II Local Supplier” category.

The details of the location (s) at which the local value addition is made and the proportionate value of local content in percentage

Percentage of Local content : _____ %**

Location at which value addition done : _____

For and on behalf of (Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)

<Insert Name, Designation and Contact No.>

[Note: In case of procurement for a value in excess of Rs. 10 Crores, the bidders shall provide this certificate from statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.]

This letter should be on the letterhead of the quoting firm and should be signed by a competent authority.

**** Services such as transportation, insurance, installation, commissioning, and training and after sales service support like AMC/CMC cannot be claimed as local value addition**

(To be given on the letter head of the bidder)

Self-Declaration that the Service Provider has not been Black listed
Tender No. IITM/SPS/A& LED Dis. System/004/2022-23/SPL

I S/o
R/o police station District Director
/ partner/ sole proprietor (Strike out whichever is not applicable) of
..... (Firm or Company) do hereby declare and solemnly affirm:

- I. That the Firm has not been Blacklisted or declared insolvent by any of the Union or State Government / Organization.
- II. That none of the individual / firm / Company Blacklisted or any partners or shareholder thereof has any connection directly or indirectly with or has any subsistence interest in the deponent business / firm company.
- III. That neither the Firm nor any of its partner has been involved / convicted in any criminal case / economic offence nor any criminal case / economic offence is pending against firm or any partner of the Firm before any Court of Law / Police.

Place:
Date:

Signature of the Bidder
Name & Address of the
Bidder with Office Stamp

OEM CERTIFICATION FORM
(in Original Letter Head of OEM)

Tender No: Dated:

We are Original Equipment Manufacturers (OEM) of..... (Name of the company)

Ms..... (Name of the vendor) is one of our Distributors/Dealers/Resellers/Partners (tick one) for the and is participating in the above mentioned tender by offering our product model.....(Name of the product with model number).

..... is authorized to bid, sell and provide service support warranty for our product as mentioned above.

Name and Signature of the authorized signatory of OEM along with seal of the company with Date