



अप्रमत्तेन वेदव्यम्

COTTON UNIVERSITY

Tender for

Supply, Installation, Testing and Commissioning
(SITC) of the Audio Visual and Video conferencing
System in the conference room of the MCB building
of Cotton University

Technical bid

NIT No: 10 of 2019-2020 Dtd. 12.03.2020

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NOTICE INVITING TENDER

No: 10 of 2019-2020 Dtd. 12.03.2020

Cotton University invites sealed tenders in two bid system from the interested and eligible reputed, experienced and financially sound Companies/Firms/Agencies for Supply, Installation, Testing and Commissioning (SITC) of the Audio Visual and Video conferencing System in the conference room of the MCB building of Cotton University on a turnkey basis.

Key details of the tender are furnished below-

Tender Notice No	10 of 2019-2020 Dtd. 12.03.2020
Name of the work	Supply, Installation, Testing and Commissioning (SITC) of the Audio Visual and Video conferencing System in the conference room of the MCB Building of Cotton University
Estimated value	Rs 27,15,720.00
Cost of tender document	Rs 1000.00
Last date and time of receipt of tenders	25.03.2020, 14.00 Hrs
Date and time of opening of technical bid	25.03.2020, 15.00hrs
Date and time of opening of price bid	Will be intimated to the technically qualified bidders through email.
EMD	Rs 55,000.00
Completion period	60 days

Terms and Conditions:

1. Tenders will be opened in presence of authorized bidder's representatives who choose to attend the opening of tender on the above specified date, time. If the opening date happens to be a closed day/holiday, the tender will be opened on the next working day.
2. Any future clarification(s) and / or corrigendum (s) shall be communicated through the website. Therefore, the bidders are requested to regularly visit the website.
3. The University reserves the right to amend or withdraw any of the terms and conditions contained in the Tender Document including quantity of items to be supplied or to reject any or all tenders without giving any notice or assigning any reason. The decision of the University shall be final in this regard.
4. **Validity period:** The rates quoted in the tender shall remain valid for 120 days.
5. Complete Tender Document may be downloaded from the university's website www.cottonuniversity.ac.in. Interested contractors who have credentials to fulfil the qualifying criteria as detailed in the Special Conditions of Contract, are requested to submit tenders as per the formats and guidelines given in this document.



6. **Submission of EMD and cost of tender document:** The EMD and the cost of tender documents shall be submitted in the form of Demand draft/ Banker's cheque in favour of "Registrar, Cotton University" payable at Guwahati. The EMD and the cost of tender document shall be submitted in the envelope containing the Technical Bid. **Tender submitted without EMD and cost of tender document shall be summarily rejected and such tenders will not be considered for technical evaluation.**
7. Bidders are expected to examine all instructions, forms, terms & conditions, and specifications in the bidding document. The bidders may also visit the conference room with prior intimation to the Registrar, Cotton University and upon his permission. Failure to furnish all information prescribed in the bidding documents or submission of bids not substantially responsive to the bidding documents in every respect may result in the rejection of the bid.
8. **Scope and Specifications of Work:** The scope and specifications of work to be completed by the agency engaged for this purpose is given in Annexure I. The offered system shall strictly conform to the specifications given in Annexure I. It may be noted that the technical parameters specified against respective equipment/ accessories are minimum requirement expected to be fulfilled. However, the bidders are free to quote equipment/ accessories with better technical parameters. The system or equipment(s) not fulfilling the minimum parameters specified in the technical specification may lead to rejection of the bid, at the discretion of the University. The decision of the University in this regard shall be final.
9. **Submission of Bid:** The Notice Inviting Tender (NIT) is being issued under two bids system, i.e. Technical Bid & Price Bid. The interested bidders are required to submit the bid as per detailed instructions given in the Special Conditions of Contract, to **The Registrar, Cotton University, Panbazar, Guwahati-781001**, so as to reach within the specified time of the last date of submission of the tender. If the submission date is a holiday, the time and date of the next working day shall be the last date and time of submission of the bids.
10. Late tenders will not be considered. No responsibility will be taken for postal delay or non-receipt of Bid documents. Unsealed bids or bids sent by FAX or e-mail, will not be considered.
11. The Price Bids of only the eligible bidders shall be opened in presence of their authorized representatives, on a date, to be intimated to them (the eligible bidders). The price bids of only those bidders will be opened whose bids have been found eligible as per the terms mentioned in the Special Conditions of Contract. Interested bidders are requested to carefully study the eligibility criteria stated in the Special Conditions of Contract. All eligibility conditions have to be satisfied on the date of submission of the bid and not on a later date. The date and time of opening of the technical bids/ price bids will not be postponed due to the non-presence of any bidder or his authorised representative.
12. **Rejection of Bids:** Canvassing by the bidder in any form, unsolicited letter and post tender correction, unsigned bids shall be summarily rejected and may lead to forfeiture of EMD. Conditional tenders will also be rejected. Cotton University reserves the right to cancel/reject any/all the tenders without assigning any reason thereof.
13. **Completion period:** The successful bidder will have to complete the works within 60 days from the date of conclusion of the contract or signing of work order unless the period is extended by mutual agreement.
14. The authority of Cotton University may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The University, at its discretion, may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.

15. A bid submitted with false information will not only be rejected but also the EMD submitted by the bidder will be forfeited. Further, the OEM/Vendor may be debarred from participation in future tendering process.

Registrar,
Cotton University

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SPECIAL CONDITIONS OF CONTRACT

1. Scope:

Scope of work shall include audio visual system of the conference room being constructed on the first floor of the MCB building of the cotton University. The layout drawing of the conference room is attached. The requirement of the system and specification is attached at Annexure-1.

The scope shall also include video-conferencing and web streaming system. However, the University reserves the right to exclude these systems (video-conferencing and web streaming) at the time of execution, or take up these parts on a later date. But, evaluation of tenders will be done on the complete scope for the purpose of awarding the contract.

2. Offered system to meet the minimum technical parameters:

The offered system shall strictly conform to the specifications given in Annexure I. It may be noted that the technical parameters specified against respective equipment/ accessories are minimum requirement expected to be fulfilled. However, the bidders are free to quote equipment/ accessories with better technical parameters. The system or equipment(s) not fulfilling the minimum parameters specified in the technical specification may lead to rejection of the bid, at the discretion of the University. The decision of the University in this regard shall be final.

3. Bids should include complete documents/ information:

Bidders are expected to examine all instructions, forms, terms & conditions, and specifications in the bidding document. The bidders may also visit the conference room with prior intimation to the Registrar, Cotton University and upon his permission. Failure to furnish all information prescribed in the bidding documents or submission of bids not substantially responsive to the bidding documents in every respect may result in the rejection of the bid.

4. Release/ forfeiture of EMD:

The EMD submitted shall bear no interest. The EMD of the unsuccessful bidders shall be released, while that of the successful bidder shall be retained till submission of the performance security. The EMD of the bidders shall be forfeited under following conditions-

- i) If the bid is prematurely withdrawn.
- ii) If submission of any false document is detected.
- iii) If the successful bidder fails to commence the work within 15 days of issue of the work order, or fails to submit the performance security within 10 days of issue of the w/o, or fails to sign the agreement within 10 days of issue of the work order.
- iv) If the successful bidder abandons the work before completion, or fails to complete the work within stipulated time.
- v) If the contract with the successful bidder faces termination due to reasons stated in clause-19 below.

5. Performance Security Deposit:

The successful bidder will have to deposit a Performance Security Deposit of 5% of the total amount of work order within 10 days of the receipt of the LOI/Order. The Performance Security Deposit may be furnished in the form of Demand draft/Banker's Cheque of any scheduled bank drawn in favour of "The Registrar, Cotton University" payable at Guwahati. Bid security/ EMD shall be refunded to the successful bidder on receipt of performance security. The performance security deposit shall be released after successful completion of the warranty/ guarantee period.

6. ELIGIBILITY CRITERIA:

The bidders must fulfil the following minimum qualifying criteria to become eligible for opening of the price bid-

- i) Must be a system integrator of the OEMs of principal equipments in the scope like-microphone, speaker, amplifier, projector, AV switching equipment, video conferencing system etc. Tender specific supporting document(s) including Manufacturer's Authorization Form (MAF) from the OEMs shall be enclosed along with their bids.
 - ii) Must have executed at least two similar works of value not less than Rs 18 lakhs in any Govt/ Semi Govt department/ PSU/ Autonomous body in the North Eastern Region during last seven years. Copies of work order and completion certificate shall be enclosed as supporting document. "Similar" works shall mean AV conferencing system with DSP/ Automatic mixer. The work executed against one work order shall be considered as one work.
 - iii) The bidder should have minimum annual financial turn over (gross) of Rs. 20,00,000.00 /- during the immediate last three consecutive financial years. Audited balance sheets shall be submitted as supporting document.
 - iv) Must have office/ branch office in Guwahati, operating for at least past three years from the date of submission of the bid. Documentary evidence against this shall be submitted.
 - v) Must have experience in providing after sales service for AV system of conference room or auditorium in any Govt/ Semi Govt department/ PSU/ Autonomous body in North Eastern Region. Copy of CAMC or AMC orders shall be enclosed.
- 7. Submission of Bid:** The Notice Inviting Tender (NIT) is being issued under two bids system, i.e. Technical Bid & Price Bid. The interested bidders are required to submit two separate sealed envelopes super scribing as mentioned below
- 7.1 Envelope No.1-** "Technical Bid": Technical Bid" shall contain all the information and documents in the same serial order as mentioned in the Annexure-T-I. The complete document should be numbered chronologically and super-scribed "Technical Bid for Supply, Installation, Testing and Commissioning (SITC) of the Audio Visual and Video conferencing System in the conference room of the MCB Building of Cotton University" on the top of envelope. This envelope shall also contain the bid EMD and the cost of tender document.
- 7.2 Envelope No. 2** "Price Bid": Price Bid shall contain Price Bid of the agency in the prescribed format and signed and stamped, super-scribed "Price Bid for Supply, Installation, Testing and Commissioning (SITC) of the Audio Visual and Video conferencing System in the conference room of the MCB Building of Cotton University" on the top of envelope.
- 7.3** All envelopes shall indicate the name and address of the bidder to enable the bid to be returned, if required. If any envelope is not sealed and marked as required, the University will assume no responsibility for the bid's displacement or premature opening. Both envelopes shall be sealed in third envelope of bigger size, which shall also be sealed with superscription "Supply, Installation, Testing and Commissioning (SITC) of the Audio Visual and Video conferencing System in the conference room of the MCB Building of Cotton University" with date and time of submission and addressed to- **The Registrar, Cotton University, Panbazar, Guwahati-781001**, so as to reach within the specified time of the last date of submission of the tender.

- 7.4 Late tenders will not be considered. No responsibility will be taken for postal delay or non-receipt of Bid documents. Unsealed bids or bids sent by FAX or e-mail, will not be considered.
- 7.5 Each page of the tender and all the documents/ attachments shall be duly signed and stamped by the authorized person of the bidder. Unsigned and unstamped document shall not be considered for evaluation.
8. **Opening of the Price bids:** The Price Bids of only the eligible bidders shall be opened in presence of their authorized representatives, on a date, to be intimated to them (the eligible bidders). The price bids of only those bidders will be opened whose bids have been found qualified and eligible as per the terms mentioned above. All eligibility conditions have to be satisfied on the date of submission of the bid and not on a later date. The date and time of opening of the technical bids/ price bids will not be postponed due to the non-presence of any bidder or his authorised representative.
9. **Rejection of Bids:** Canvassing by the bidder in any form, unsolicited letter and post tender correction, unsigned bids shall be summarily rejected and may lead to forfeiture of EMD. Conditional tenders will also be rejected. Cotton University reserves the right to cancel/reject any/all the tenders without assigning any reason thereof.
10. **GST and Duties:** Price shall be inclusive of cost of product, GST, duties, labour charges, levies and all cartage charges. No escalation whatsoever shall be payable. The bidders will be entirely responsible for all charges and levies payable by him to the respective authorities.
11. **Warranty/ Guarantee:**
- 11.1 The period of comprehensive warranty / guarantee of the SITC works covered under the scope of this tender shall be for two years (24 months) and the same need to be clearly specified.
- 11.2 The Warranty / Guarantee will commence from the date of final handing over of the system after successful completion of the work to the satisfaction of the Cotton University.
- 11.3 The contractor shall rectify any defect/ deficiency in performance of the system by replacement/ repair of equipment/ component/ accessories, within the period of warranty/ guarantee, free of cost. Cost of replacement/ repair of any equipment/ accessories required for such rectification(s), shall be borne by the contractor.
- 11.4 The contractor shall attend to such complaint(s) not later than 24 hours from receipt of the notice. The contractor shall ensure to maintain minimum 95% uptime of the full system on annualized basis throughout the warranty period.
- 11.5 **Penalty for lapses in warranty service:**
The contractor shall be responsible to maintain the complete systems/equipment/software in good working condition by maintaining minimum uptime 95%, which would be calculated for each individual system, which form part of the overall system of the building. The uptime would be calculated on annualized basis and deductions would be made from the performance security deposit available with the University as follows: -

SNo.	Uptime	Deductions
1	95 –100%	No deduction
2	85 –95%	30% of the total value of the performance security
3	75 –85%	60% of the total value of the performance security
4	Below 75%	100% of the total value of the performance security

Note: No complaint in regard to systems etc. should remain pending for more than 24hrs., however these need to be attended immediately without loss of time.

12. Completion period:

The successful bidder will have to complete the works within 60 days from the date of conclusion of the contract or signing of work order unless the period is extended by mutual agreement.

13. Terms of Payments:

Terms of payment shall be as follows:

- a) Advance payment will not be made in any case;
- b) The invoice shall be raised in favour of the Registrar, Cotton University, Guwahati
- c) Payment will be released through bank transfer (RTGS / NEFT) after successful completion of the works to the satisfaction of the Cotton University.

18. Liquidated Damages:

The SITC under the scope of this tender shall be completed within the time schedule as mentioned above to be calculated from the date of supply order/ award letter failing which the contractor shall be liable to pay liquidated damages as compensation for an amount equal to 1% or such smaller amount as authorities at the University may decide, on the said bid price of the whole work for every day delay but not exceeding 10% on the total value of the order.

19. Termination of Contract:

The University shall have the right to terminate this contract in part or in full in any of the following cases if:

- a) The work is delayed for causes not attributable to natural calamity, or not attributable to the owner (Cotton University) for more than 30 days after the schedule date of completion,
- b) The contractor fails to start the work within 15 days from the date of issue of the work order,
- c) The bidder is declared bankrupt or becomes insolvent; and
- d) For any other reason, which in the opinion of the Cotton University, warrants cancellation of contract award.
- e) In case of termination of contract, for the reasons stated above, the contractor shall forfeit the right to claim any balance payment/ EMD/ Performance Security etc due to him from the Cotton University on the date of cancellation against the contract.

20. Only new materials to be used:

Each and every material/ equipment/ accessories used for the SITC works must be in brand new condition. Old / damaged/ repaired material will not be acceptable. It will be returned to the contractor for replacement on his / her own expenses. The delay caused in completion of the work, if any, due to such replacement, shall be considered as a cause attributable to the contractor.

ANNEXURE-1
TECHNICAL SPECIFICATIONS

(A) System requirement

i) Main Audio Conference & Visual Display System:-

The Audio Conferencing System will be of 17 Conferencing Microphone (1 Chairman and 16 Delegates). The Conferencing Microphone shall be miniature Boundary Microphone with programmable On/Off Switch and bi-colour LED Indicator (green for On and red for Off so that the Operator can easily find out the On/Off Status of the microphone). Wired remote control for the audio processor/ mixer for source selection/ preset recall and Master Volume Control. Incorporating 2 Wireless Handheld Microphone and 1 Lapel Microphone which shall be there in Audio Mixer. The Audio from the Laptop shall be amplified during the presentation. Full HD or better quality laser projection system with multiple input points (Pop Up Unit on a table) and provision of wireless presentation is required. During PowerPoint the presenter should be able to annotate, highlight, PPT slides from his sitting position. Provision of De embedder for separation of Audio Signal from HDMI is required.

ii) Optional Items (AV):-

Provision of Multipoint Full HD Video Conferencing System is required with 12x optical zoom for best coverage of the entire room. The Professional Grade full HD or UHD 65" Display is required. Provision of full HD PTZ camera for recording of the Conference Room Audio Video in a USB drive is required. Additional provision for web streaming the live content is required. The Video Conferencing and web streaming items have been shown separately under 'B' & 'C' respectively in the BOQ. The University reserves the right to exclude either 'B' or 'C' or both or part thereof, from the scope during execution. However, the tenders will be evaluated for the complete scope including 'A' 'B' & 'C', for the purpose of award of the contract.

iii) Special Note

The BOQ has been prepared against the above requirements, however, if any bidder feels that any additional item/equipment is necessary for compliance to the above requirement the same may be quoted separately. The same may be highlighted in the technical bid giving justification for the necessity of the additional item(s).



(B) Technical specifications:

Sl no	Specification	Approve makes	Qty
1	On-table Boundary Layer Microphone With Programmable Microphone Button (PTT, PTM, toggle ON/OFF, permanent on) and A Bi-color LED ring for status indication: Frequency Response Of 40 Hz - 20 kHz or better: Max. sound pressure level 140 dB or better Dynamic range 111 dB (A) or better Sensitivity 10 mV/Pa or better	Sennheiser/ AudioTechnica/ Shure	17 Nos
2	Advanced Digital Audio Processor with Configurable DSP, Audio Networking and Acoustic Echo Cancellation: Channels- 8 Channels of wide band Acoustic Echo Cancellation (AEC) for telephone and video conferencing or better. Output- 6 electronically balanced low impedance line level outputs or better Dynamic Range > 105 dB A-weighted 20 Hz – 20 kHz or better Frequency Response 20 Hz to 20 kHz (+0.3 dB/-0.1 dB) or better	Klarktechnik/ Biamp/ Clearone/ Bose	2 Nos
3	Remote Control for Volume and Source Selection	Klarktechnik/ Biamp/ Clearone	1 No
4	Audio equipment, Compact Full Range 6" Ceiling Speaker: Power- 40w to 60 W RMS Power or better Certification- UL1480,UL2043 certified or better Frequency Response (+/-3 dB) 80 Hz - 17 kHz or better Frequency Range (-10 dB) 70 Hz - 19 kHz or better Sensitivity (SPL / 1 W @ 1 m) 87 dB SPL or better Coverage-90 degrees conical Coverage or better Nominal Impedance 6 /8 ohms or better Maximum SPL 103 dB Average or better Transformer Taps 70 V: 2.5 W, 5 W, 10 W, 20 W, 40 W 100 V: 5 W, 10 W, 20 W, 40 W or better	Tannoy/ TurboSound/ Funktion One /Bose	8 Nos
5	Professional 300-Watt Amplifier: Power- 4 x 75 Watts into 4 Ohms; 4 x 50 Watts into 8 Ohms or 4 x 100 W @ 4-8 Ω or better Type- Light Weight 4-Channel Power or better Fequency Response 20 Hz – 20 kHz or better Input sensitivity 0dBu or 4 / 12 dBu Signal-to-noise 100dB	Behringer/ Apart Audio/ Funktion One/ Bose	2 Nos
6	Professional 8-Channel 3- Bus Mic/Line Zone Mixer with Remote Control and Link Ports: Inputs 1-6: Euroblock Connector, Balanced, Impedance: 5 kOhms Balanced, 2.5 kOhms Unbalanced,	Behringer/ Midas/ Allen & Heath	1 No

	<p>Maximum Input Level: +12 dBu (with Pad), Maximum Gain: 40 dB Pad: -20 dB, Crosstalk: -63 dB @ 1 kHz, L/Out R/Aux, Type: Euroblock Connector, Balanced, Impedance: 120 Ohms Balanced, 60 Ohms Outputs Out: Unbalanced, Max Gain: 18 dB, Max Gain: (Input / Output): 58 dB (without Pad), CommonMode Rejection Ratio: (CMRR): 70 dB @ 1 kHz, 22 Hz to 22 kHz, Maximum Output Level: : +21 dBu, Crosstalk (Output / Output): -63 dB @ 1 kHz, Noise (All Level Controls Down): -105 dBu, A-Weighted</p>		
7	<p>Audio equipment VOCAL SET Sensitivity < 30 at 52 dB(A)rms S/N or better Input sensitivity 1.5 mV / Pa, Line / Mic level 20 dB, switchable or better Receivers AF frequency response: Receiver: 50 to 16,000 Hz (-3 dB) or better</p>	Sennheiser/ Audio Technica/ Shure	2 Nos
8	<p>Audio equipment LAVALIER SET: Receivers AF frequency response: 50 to 16,000 Hz (-3 dB) or better, Microphone Sensitivity-< 3 pV at 52 dB(A)rms S/N or better Input sensitivity 1.5 mV / Pa or better</p>	Sennheiser/ Audio Technica/ Shure	1 No
9	<p>4500 lumens, WUXGA LCD Laser Projector: Resolution: 1920 x 1200 pixels or better Technology: Laser or better, Technology: Laser or better, LCD Panel size (mm) 16 mm (0.64 inch) diagonal (16:10 aspect ratio) Display Method Transparent: (x 3, R/G/B) or better Pixels 2,304,000 (1920 x 1200) x 3, total of 6,912,000 pixels or better Lens 1.6 x Manual zoom (throw ratio 1.09-1.77 :1), F = 1.60-2.12, f = 15.30- 24.64 mm or better Screen size (diagonal) (mm):- 0.76 - 7.62 m (30-300 in), 16:10 aspect ratio or better</p>	Panasonic/ Christie/ Barco	1 No
10	<p>Supplying installation, testing, programming and commissioning of Wireless Presenter: Operating system: Windows 7, 8, 10 and above, macOS X 10.9 and above, Chromebook OS 74 and above, Android 4.1 and above, iOS 9 and above Native industry standard support: Apple AirPlay, Video Output 1 x HDMI 1 x VGA or better, Frame rate up to 30 fps or better, Output resolution up to 1080p or better, Connected users: up to 64 or better</p>	Barco/ Kramer/ Extron	1 No

Shure

Barco

11	8X5 Feet Format Motorized Projection Screen with Remote control	Liberty/ Milan/ CLite	1 No
12	Projector Ceiling Mount Kit	Liberty/ Milan/ CLite	1 No
13	Popup Box: Type: Easy Access To Connectors Durable Pneumatic Movement and Mechanical Latching Mechanism, Video: One Female 15pin HD Connector or better, Audio: 3.5mm Mini Stereo Audio Jack or better, Network: Two CAT R145 Network/Data/Phone Connectors or better Power: Two Unswitched AC Outputs, HDMI: One HDMI or better	Magnum/ Extron/ Kramer	5 Nos
14	8- Port HDMI Switch: Video Input: Interfaces 8 x HDMI Type A Female (Black) or better, Impedance: 100 Ohm or better, Max. Distance 1.8 m or better, Video Output: Interfaces 1 x HDMI Type A Female (Black) or better, Impedance 100 Ohm or better, Video: Max. Data Rate: 6.75 Gbps (2.25 Gbps Per Lane) or better, Max. Pixel Clock: 225 MHz or better, Compliance: HDMI (3D, Deep Color) , HDCP Compatible , Consumer Electronics Control (CEC) or better, Max. Resolution Up to 1080p or better Max. Distance Up to 15 m or better, Audio Input: 8 x HDMI Type A Female (Black), Output 1 x HDMI Type A Female (Black) or better, Control: RS-232 Connector: 1 x DB-9 Female (Black), Baud Rate and Protocol: Baud Rate: 19200, Data Bits: 8, Stop Bits:1, Parity: No, Flow Control: No or better	Aten/ Kramer/ cerDigital	1 No
15	HDMI Repeater Plus Audio De-embedder: Video Input: Interfaces 1 x HDMI Type A Female (Black) or better, Impedance 100 Ohm or better, Video Output: Interfaces 1 x HDMI Type A Female (Black) or better, impedance 100 Ohm or better, Video: Max. Data Rate: 6.75 Gps (2.25 Gbps Per Lane) or better, Max. Pixel Clock: 225. MHz or better, Compliance: HDMI (3D, Deep Color) , HDCP Compatible or better, Max. Resolution Up to 1920 x 1080 or better, Audio Output: 1 x HDMI Type A Female (Black); 1 x Toslink (Black); 1 x RCA (Orange); 2 x RCA (Red/White) or better	Aten/ Kramer/ Extron	1 No

16	Video equipment HDMI HDBaseT Lite Extender (4K@40m)(HDBaseT Class B): Video Max. Data Rate: 10.2Gbps (3.4Gbps per lane) 10.2Gbps (3.4Gbps per lane) or better, Max. Pixel Clock: 340 MHz 340 MHz or better, Compliance HDMI (3D, Deep Color, 4K) HDCP Compatible, HDMI (3D, Deep Color, 4K) or better Max. Resolutions / Distance: Up to 4K@35m (Cat Se/6) / 40m (Cat 6a/ATEN 2L-2910 Cat6); 1080p@60m (Cat Se/6) / 70m (Cat 6a/ATEN 2L- 2910 Cat6) 4K supported: 4096 x 2160 / 3840 x 2160 @ 60Hz (4:2:0); 4096 x 2160 / 3840 x 2160 @ 30Hz (4:4:4) or better	Aten/ Kramer/ Extron	2 Pair
17	17U Floor Mounted Equipment Rack with castor wheels, PDU and Exhaust Fan	Nettrack/ Valrack/ APW	1 No
18	Speaker Cable	Gotham/ Belden/ Klotz	300 M
19	Audio Signal Cable	Gotham/ Belden/ Klotz	400 M
20	Audio Connectors like XLR, RCA, Speakon, EP Jack, Mono Jack etc Amphenol/ Neutrik	Amphenol/ Neutrik	1 Lot
21	PVC Conduits	ARG/ Berlia	1 Lot
22	6KVA Online UPS with Isolation Transformer including 16 Nos 28AH Batteries and MS Battery Rack	Numeric/ APC/ Vertive	1 Set
23	HDMI to HDMI Cables of Length 15 M	Aten/ Kramer/ Belden	4 Nos
24	HDMI to HDMI Cables of Length 10 Mtr	Aten/ Kramer/ Belden	3 Nos
25	HDMI to HDMI Cables of Length 1 Mtr	Aten/ Kramer/ Belden	6 Nos
26	HDMI to HDMI Cables of Length 3 Mtr	Aten/ Kramer/ Belden	1 No
27	8 Core Audio Snake Cable	Gotham/ Klotz/ Belden	50 M
28	65" LED Display: Screen Size (Diagonal) / Aspect ratio:- 165.1 cm / 16:9 or better, Panel Type:- IPS Panel / ID- LED or better, Effective Display Area: (W x H):- 142.85 cm x 80.35 cm or better Resolution (H x V):- 3840 x 2160 pixels or better, Brightness:- 500 cd/m ² or better, Viewing Angle (Horizontal/Vertical):- 178° / 178° or better Response time:- 6ms (G to G) or better	Panasonic/ Christie/ Samsung	1 No
29	Video Conference System: Video up to: 1080p , 720p or better, Data up to: 1080p/ WUXGA 30fps or better, Support: Full band audio Dual screen support 12 Mbps bandwidth Support or better Video standards: H.264,H.263++ and other video standards or better AEC: Full HD camera with pan, tilt and zoom features	Polycom/ Cisco	1 No

	Digital Mic array with automatic echo cancellation and noise suppression and speakers with 1 (One) year or better		
30	<p>Audio equipment, Compact 2 way full range surface-mount loudspeakers with line transformer:</p> <p>Driver: Dual 5" LF driver, dual 1" HF soft dome driver or better, Power: 120 Watts rms or better, Impedance: 8 ohms, 70V/100V taps of 120W, 60W, 30W (and 15 at 70V) or better, Frequency response: 43 Hz-20 kHz(-10 dB), 100° x 70° coverage, 90 dB or better, Sensitivity: SPL 111 dB continuous, 117 dB peak or better</p>	Turbosound/Tannoy/ Funktion	2 Nos
31	<p>Ultra-Lightweight, High Density Power Amplifier:</p> <p>Power: Delivers 2 x 500 Watts, into 2 Ohms; 2 x 300 Watts into 4 Ohms, 1000 Watts into 4 Ohms (bridge mode) or better Distortion: <-0.05% or better, Frequency response: 20 Hz to 20 KHz, +/-1 dB or better, Damping factor: >145 @ 8 Ω >155 @ 4 Ω or better, Signal-to-noise: >100 dB or better, USB: USB Rear panel USB connector type B for remote control of DSP section</p>	Behringer/ Labgruppen/ Powersoft	1 No
32	<p>USB PTZ Camera:</p> <p>Sensor: Equipped with a 1/2.8 inch image sensor or better, Interface: USB 3.0 and HDMI video output interface or better, Video: Full HD 1080p signal output format with a high frame rate of 60 fps, 12x optical zoom or better, Type: Applicable for a medium size conference room or better Viewing Angle: 74°(H) 82°(D) or better Movement: Wide range Pan/ Tilt/Zoom actions PTZ angles: Pan angle from -100° to +100°; tilting angle from -30° to +30° or better</p>	Lumens/ Panasonic	1 No
33	<p>HDMI/VGA to HDMI Live Video Streamer with Recording Function:</p> <p>HDMI: 1 HDMI input, 1 VGA input and 1 HDMI output (for local monitoring) are supported HDCP 1.x and HDCP 2.2 compliant or better, Resolutions: HDMI input/output supports resolutions up to 4K UHD (18Gbps, 4K@60Hz 4:4:4, 8-bit) or better VGA: VGA input supports resolutions up to WUXGA (1920x1200@60Hz) or better Advanced H.264 video streaming and recording is provided at QVGA (320x240), VGA (640x480), 720p, or 1080p at up to 60fps or better</p>	Cypress/ Aten/ Kramer	1 No

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ANNEXURE-2

Tender particulars to be filled up by the bidders

Sl no	Particulars	To be filled by the tenderer
1.	. Name of the tenderer (Attach copy of the Registration under relevant laws)	
2	Status of the tenderer (Attach documents, if registered company/ partnership/ proprietary ship)	
3	. Power of attorney of the official signing the tender document	
4	Details of EMD – Amount, Draft Number, Date, and Issuing Bank	
5	Details of Cost of tender document – Amount, Draft Number, Date, and Issuing Bank	
6	Whether the firm has been debarred or blacklisted for any services, supplies or products dealing in, by any organization or educational institute/university or central/state government and criminal case/legal proceedings are pending or industrial dispute is pending or contemplated against them	
7	Credential related document provided with copies of PO, completion certificates and contact information of the clients during the last 7 years for similar type of AV equipment installation and commissioning. (Eligibility criteria specified in the Special Conditions of Contract may be referred)	
8	Credential related document provided with copies of PO/ contract document and contact information of the clients of CAMC/ AMC for AV system in conference room/ auditorium. (Eligibility criteria specified in the Special Conditions of Contract may be referred)	
9	PAN Number (Copy of PAN card to be enclosed)	
10	Copy of GST registration certificate	
11	Audited balance sheet for last three years	
12	Copy of unpriced bill of materials	
13	Product literatures of all quoted products	
14	Technical compliance statement of the quoted products clearly indicating the make, model number and the deviation, if any	
15	Tender specific original ink signed MAFs are provided for all the quoted products	
16	Address, contact no of the office/ branch office in Guwahati	
17	How long the above office has been operating	

	(documentary evidence may be submitted)	
18	. After sales support facility in and around Guwahati and call escalation matrix	

: It is certified that all the above information are correct to the best of my/our information, knowledge and belief.

Date :

Signature of the authorized person

Place :

Name :

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Designation :
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ANNEXURE-3

SIGNED AND STAMPED DECLARATION

1. I, Son/Daughter of Shri
..... Proprietor/Partner/Director/Authorized signatory of M/S
..... am competent to sign this declaration and
execute the tender document.
2. I have carefully read and understood all the terms and conditions of the tender and hereby
convey my acceptance of the same.
3. The information/documents furnished along with the above application are true and authentic
to the best of my knowledge and belief.
4. I/We am/are well aware of the fact that furnishing of any false information/ fabricated
document would lead to rejection of my tender at any stage/ forfeiture of EMD besides liabilities
towards prosecution under appropriate law.
5. Each page of the tender document and papers submitted by my company is authenticated,
sealed and signed, and I take full responsibility for the entire documents submitted.

Date :

Place :

.....

Signature of the authorized person

Name :

Designation :
SEAL

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ANNEXURE-4

Compliance to the specification: to filled by the bidder

Sl no	Specification	Make	Model	Comply		Remark
				Y	N	
1	<p>On-table Boundary Layer Microphone With Programmable Microphone Button (PTT, PTM, toggle ON/OFF, permanent on) and A Bi-color LED ring for status indication: Frequency Response Of 40 Hz - 20 kHz or better: Max. sound pressure level 140 dB or better Dynamic range 111 dB (A) or better Sensitivity 10 mV/Pa or better</p>					
2	<p>Advanced Digital Audio Processor with Configurable DSP, Audio Networking and Acoustic Echo Cancellation: Channels 8 Channels of wide band Acoustic Echo Cancellation (AEC) for telephone and video conferencing or better. Output- 6 electronically balanced low impedance line level outputs or better Dynamic Range > 105 dB A-weighted 20 Hz – 20 kHz or better Frequency Response 20 Hz to 20 kHz (+0.3 dB/-0.1 dB) or better</p>					
3	Remote Control for Volume and Source Selection					
4	<p>Audio equipment, Compact Full Range 6" Ceiling Speaker: Power- 40w to 60 W RMS Power or better Certification- UL1480,UL2043 certified or better Frequency Response (+/-3 dB) 80 Hz - 17 kHz or better Frequency Range (-10 dB) 70 Hz - 19 kHz or better Sensitivity (SPL / 1 W @ 1 m) 87 dB SPL or better Coverage-90 degrees conical Coverage or better Nominal Impedance 6 /8 ohms or better Maximum SPL 103 dB Average or better Transformer Taps 70 V: 2.5 W, 5 W, 10 W, 20 W, 40 W 100 V: 5 W, 10 W, 20 W, 40 W or better</p>					
5	<p>Professional 300-Watt Amplifier: Power- 4 x 75 Watts into 4 Ohms; 4 x 50 Watts into 8 Ohms or 4 x 100 W @ 4-8 Ω or better Type- Light Weight 4-Channel Power or better Frequency Response 20 Hz – 20 kHz or better Input sensitivity 0dBu or 4 / 12 dBu Signal-to-noise 100dB</p>					

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6	<p>Professional 8-Channel 3- Bus Mic/Line Zone Mixer with Remote Control and Link Ports: Inputs 1-6: Euroblock Connector, Balanced, Impedance: 5 kOhms Balanced, 2.5 kOhms Unbalanced, Maximum Input Level: +12 dBu (with Pad), Maximum Gain: 40 dB Pad: -20 dB, Crosstalk: -63 dB @ 1 kHz, L/Out R/Aux, Type: Euroblock Connector, Balanced, Impedance: 120 Ohms Balanced, 60 Ohms Outputs Out: Unbalanced, Max Gain: 18 dB, Max Gain: (Input / Output): 58 dB (without Pad), CommonMode Rejection Ratio: (CMRR): 70 dB @ 1 kHz, 22 Hz to 22 kHz, Maximum Output Level: : +21 dBu, Crosstalk (Output / Output): -63 dB @ 1 kHz, Noise (All Level Controls Down): -105 dBu, A-Weighted</p>				
7	<p>Audio equipment VOCAL SET Sensitivity < 30 at 52 dB(A)rms S/N or better Input sensitivity 1.5 mV / Pa, Line / Mic level 20 dB, switchable or better Receivers AF frequency response: Receiver: 50 to 16,000 Hz (-3 dB) or better</p>				
8	<p>Audio equipment LAVALIER SET: Receivers AF frequency response: 50 to 16,000 Hz (-3 dB) or better, Microphone Sensitivity-< 3 pV at 52 dB(A)rms S/N or better Input sensitivity 1.5 mV / Pa or better</p>				
9	<p>4500 lumens, WUXGA LCD Laser Projector: Resolution: 1920 x 1200 pixels or better Technology: Laser or better, Technology: Laser or better, LCD Panel size (mm) 16 mm (0.64 inch) diagonal (16:10 aspect ratio) Display Method Transparent: (x 3, R/G/B) or better Pixels 2,304,000 (1920 x 1200) x 3, total of 6,912,000 pixels or better Lens 1.6 x Manual zoom (throw ratio 1.09-1.77 :1), F = 1.60-2.12, f = 15.30- 24.64 mm or better Screen size (diagonal) (mm):- 0.76 - 7.62 m (30-300 in), 16:10 aspect ratio or better</p>				
10	<p>Supplying installation, testing, programming and commissioning of Wireless Presenter: Operating system: Windows 7, 8, 10 and above, macOS X 10.9 and above, Chromebook OS 74 and</p>				

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	above, Android 4.1 and above, iOS 9 and above Native industry standard support: Apple AirPlay, Video Output 1 x HDMI 1 x VGA or better, Frame rate up to 30 fps or better, Output resolution up to 1080p or better, Connected users: up to 64 or better				
11	8X5 Feet Format Motorized Projection Screen with Remote control				
12	Projector Ceiling Mount Kit				
13	Popup Box: Type: Easy Access To Connectors Durable Pneumatic Movement and Mechanical Latching Mechanism, Video: One Female 15pin HD Connector or better, Audio: 3.5mm Mini Stereo Audio Jack or better, Network: Two CAT R145 Network/Data/Phone Connectors or better Power: Two Unswitched AC Outputs, HDMI: One HDMI or better				
14	8- Port HDMI Switch: Video Input: Interfaces 8 x HDMI Type A Female (Black) or better, Impedance: 100 Ohm or better, Max. Distance 1.8 m or better, Video Output: Interfaces 1 x HDMI Type A Female (Black) or better, Impedance 100 Ohm or better, Video: Max. Data Rate: 6.75 Gbps (2.25 Gbps Per Lane) or better, Max. Pixel Clock: 225 MHz or better, Compliance: HDMI (3D, Deep Color) , HDCP Compatible , Consumer Electronics Control (CEC) or better, Max. Resolution Up to 1080p or better Max. Distance Up to 15 m or better, Audio Input: 8 x HDMI Type A Female (Black), Output 1 x HDMI Type A Female (Black) or better, Control: RS-232 Connector: 1 x DB-9 Female (Black), Baud Rate and Protocol: Baud Rate: 19200, Data Bits: 8, Stop Bits:1, Parity: No, Flow Control: No or better				
15	HDMI Repeater Plus Audio De-embedder: Video Input: Interfaces 1 x HDMI Type A Female (Black) or better, Impedance 100 Ohm or better, Video Output: Interfaces 1 x HDMI Type A Female (Black) or better, impedance 100 Ohm or better,				

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	<p>Video: Max. Data Rate: 6.75 Gps (2.25 Gbps Per Lane) or better, Max. Pixel Clock: 225. MHz or better, Compliance: HDMI (3D, Deep Color) , HDCP Compatible or better, Max. Resolution Up to 1920 x 1080 or better, Audio Output: 1 x HDMI Type A Female (Black); 1 x Toslink (Black); 1 x RCA (Orange); 2 x RCA (Red/White) or better</p>				
16	<p>Video equipment HDMI HDBaseT Lite Extender (4K@40m)(HDBaseT Class B): Video Max. Data Rate: 10.2Gbps (3.4Gbps per lane) 10.2Gbps (3.4Gbps per lane) or better, Max. Pixel Clock: 340 MHz 340 MHz or better, Compliance HDMI (3D, Deep Color, 4K) HDCP Compatible, HDMI (3D, Deep Color, 4K) or better Max. Resolutions / Distance: Up to 4K@35m (Cat 5e/6) / 40m (Cat 6a/ATEN 2L-2910 Cat6); 1080p@60m (Cat 5e/6) / 100m (Cat 6a/ATEN 2L-2910 Cat6) 4K supported: 4096 x 2160 / 3840 x 2160 @ 60Hz (4:2:0); 4096 x 2160 / 3840 x 2160 @ 30Hz (4:4:4) or better</p>				
17	<p>17U Floor Mounted Equipment Rack with castor wheels, PDU and Exhaust Fan</p>				
18	<p>6KVA Online UPS with Isolation Transformer including 16 Nos 28AH Batteries and MS Battery Rack</p>				
19	<p>65" LED Display: Screen Size (Diagonal) / Aspect ratio:- 165.1 cm / 16:9 or better, Panel Type:- IPS Panel / ID- LED or better, Effective Display Area: (W x H):- 142.85 cm x 80.35 cm or better Resolution (H x V):- 3840 x 2160 pixels or better, Brightness:- 500 cd/m² or better, Viewing Angle (Horizontal/Vertical):- 178° / 178° or better Response time:- 6ms (G to G) or better</p>				
20	<p>Video Conference System: Video up to: 1080p , 720p or better, Data up to: 1080p/ WUXGA 30fps or better, Support: Full band audio Dual screen support 12 Mbps bandwidth Support or better Video standards: H.264,H.263++ and other video standards or better AEC: Full HD camera with pan, tilt and zoom features Digital Mic array with automatic echo cancellation</p>				

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	and noise suppression and speakers with 1 (One) year or better				
21	Audio equipment, Compact 2 way full range surface-mount loudspeakers with line transformer: Driver: Dual 5" LF driver, dual 1"HF soft dome driver or better, Power: 120 Watts rms or better, Impedance: 8 ohms,70V/100V taps of 120W,60W,30W (and 15 at 70V) or better, Frequency response: 43 Hz-20 kHz(-10 dB), 100° x 70° coverage, 90 dB or better, Sensitivity: SPL 111 dB continuous,117 dB peak or better				
22	Ultra-Lightweight, HighDensity Power Amplifier: Power: Delivers 2 x 500 Watts, into 2 Ohms; 2 x 300 Watts into 4 Ohms, 1000 Watts into 4 Ohms (bridge mode) or better Distortion: <-0.05% or better, Frequency response: 20 Hz to 20 KHz, +0/-1 dB or better, Damping factor: >145 @ 8 Ω >155 @ 8 Ω or better, Signal-to-noise: >100 dB or better, USB: USB Rear panel USB connector type B for remote control of DSP section				
23	USB PTZ Camera: Sensor: Equipped with a 1/2.8 inch image sensor or better, Interface: USB 3.0 and HDMI video output interface or better, Video: Full HD 1080p signal output format with a high frame rate of 60 fps,12x optical zoom or better, Type: Applicable for a medium size conference room or better Viewing Angle: 74°(H) 82°(D) or better Movement: Wide range Pan/ Tilt/Zoom actions PTZ angles: Pan angle from -100' to +100'; tilting angle from -30° to +30°. or better				
24	HDMI/VGA to HDMI Live Video Streamer with Recording Function: HDMI: 1 HDMI input ,1 VGA input and 1 HDMI output (for local monitoring) are supported HDCP 1.x and HDCP 2.2 compliant or better, Resolutions: HDMI input/output supports resolutions up to 4K UHD (18Gbps, 4K@60Hz 4:4:4, 8-bit) or better VGA: VGA input supports resolutions up to WUXGA (1920x1200@60Hz)or better Advanced H.264 video streaming and recording is				

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provided at QVGA (320x240), VGA (640x480), 720p, or 1080p at up to 60fps or better					
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Date :

Place :

Signature of the authorized person

Name :

Designation :
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ANNEXURE-5

List of similar works executed during last 7 years

(to be filled by the bidder)

Sl no	Name of the work and work order no, date	Name and address of client with contact no.	Value of the work in Rupees	Date of commencement	Date of completion

Note: Copies of the work order and completion report shall be enclosed, without which the works shown in the table will not be considered,

Date :

Place :

Signature of the authorized person

Name :

Designation :

SEAL

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ANNEXURE-6

**List of CAMC/ AMC works of AV system of auditorium or
conference room executed by the bidder**

(to be filled by the bidder)

Sl no	Name of the work and work order no, date	Name and address of client with contact no.	Value of the work in Rupees	Date of commencement	Date of completion

Note: Copies of the work order shall be enclosed, without which the works shown in the table will not be considered. If any such work is ongoing for not less than one year, the same may also be shown.

Date :

Signature of the authorized person

Place :

Name :

Designation :
SEAL