



**NORTH EASTERN REGIONAL INSTITUTE OF  
SCIENCE & TECHNOLOGY  
(DEEMED UNIVERSITY)  
NIRJULI :: ITANAGAR :: ARUNACHAL PRADESH**

**OPEN TENDER NOTICE NO. ET Cell/South Campus/VC-Internet/2023-01  
DATED.22/09/2023**

<b>THE LAST DATE OF RECEIPT OF TENDER</b>	<b>:</b>	<b>05/10/2023 up to 4.00PM</b>
<b>DATE OF OPENING OF TENDER</b>	<b>:</b>	<b>06/10/2023 at 4.00 PM</b>



**NORTH EASTERN REGIONAL INSTITUTE OF SCIENCE AND TECHNOLOGY  
NIRJULI :: ARUNACHAL PRADESH  
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**TENDER NOTIFICATION NO. ET Cell/South Campus/VC-Internet/2023-01  
DATED.22/09/2023**

Sealed tenders are invited from reputed manufacturers/authorized dealers for supply, installation and commissioning of audio visual conferencing system for Administrative Building. The details of tender can be downloaded from our website : [www.nerist.ac.in](http://www.nerist.ac.in). Tender fee of Rs.5,000/- (non refundable). The last date of receiving tender is 05/10/2023 upto 04.00PM and the date of opening of tender is 06/10/2023 at 4.00PM. The Director, NERIST reserves the right to accept or reject any tender partly or fully without assigning any reasons whatsoever.

**Section Officer (S&P)**

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**NORTH EASTERN REGIONAL INSTITUTE OF SCIENCE AND TECHNOLOGY  
NIRJULI :: (ITANAGAR) :: ARUNACHAL PRADESH**

**TENDER NOTIFICATION : NO. ET Cell/South Campus/VC-Internet/2023-01  
DATED.22/09/2023**

**TERMS AND CONDITIONS :**

1. A) Rate : The rate which should be quoted both in figure & words must be not inclusive of packing forwarding freight and all other incidentals charges.
- B) GST : Rate inclusive of GST will not be preferred. GST to be shown separately.
2. A) Consignee : All stores are required to be consigned to the Director, North Eastern Regional Institute of Science & Technology, Itanagar, Nirjuli, Arunachal Pradesh – 791109.
- B) Mode of dispatch : The consignment is required to be dispatched by Road Transport or delivered at this Institute under supplier's own arrangement free of additional charges. All offers of delivery should be made ex-stock and clear note should be inserted in case of damage or loss in transit, if any will be borne by the supplier.
- C) Dispatch of Document: The consignment note along with the quadruplicate of copy of relevant bill and two copies of priced challan should dispatch to the Director, NERIST, Nirjuli (Itanagar), Arunachal Pradesh – 791 109 immediately on completion of dispatch of consignment. If these documents do not reach the said office in time all wharf age/demurrage incurred, if any will be recoverable from the suppliers.
3. Delivery : The stores are required to be delivered/dispatched within 15 (fifteen) days from the date of receipt of the supply order. Suppliers are requested to take care that all the items mentioned above are to be supplied in full set basis and the items are required to be installed in the Administrative Building. Users manuals are also to be provided along with the items supplied.
4. Quality Specification : The stores offered should be of the best/standard quality available unless, otherwise specified conforming strictly to the specification cited. The Director reserves the right to reject such stores as are found unacceptable on these grounds. Items of only reputed manufacturers will be given preference.

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5. Liquidated damages : If a firm accepts the order and fails to execute the order in full or part as per terms and conditions stipulated therein, it will be open to the Competent Authority to recover liquidated damages from the firm at the rate of 1% per month or the part thereof, subject to a maximum of 5% of the value of the undelivered stores. It will also be open to the Competent Authority, alternatively to arrange procurement of the required stores from any source, at the risk and expense of the firm that has accepted the order and failed to execute the order according to stipulations agreed upon. This will also entail removal of the defaulter's name from the approved/registered list of suppliers.
6. A) Submission of quotation: Quotation should be submitted to the Section Officer (S&P), NERIST, Itanagar, Nirjuli, Arunachal Pradesh – 791109 in double sealed cover. The Inner cover should bear tender enquiry/Notice Number. If no counter offer is made in quotation, it will be taken for granted that the offer is strictly in accordance with the specification, terms and conditions as laid down in the tender notice. Acceptance of quotation will accordingly constitute a concluded contract on said basis. Otherwise tender will not be accepted.
- B) Earnest Money : At the time of submission of Tender, the earnest money in the form of DD @2% on the quoted tender value is to be deposited with the tender which will be interest free. No Tender will be accepted without earnest money. The earnest money is to be deposited in favour of Director, NERIST on State Bank of India, NERIST Branch. On receipt of supply order, in case the firm fails to supply, the earnest money will be forfeited.
7. Validity (Firmness): The rate should be valid for six months from the date of opening of tender. No representation for enhancement of price once accepted will be considered during the contract.
8. Opening of Quotation: (a) Every quotation will be opened on the date and time as fixed in presence of a duly constituted committee of the Institute. A firm may depute its accredited representative to witness the opening, if it so desires.
- (b) In the event of the specified date for the opening of Tender is declared a holiday or due to any circumstances, if the Tenders could not be opened on the specified date by the NERIST, the Tenders will be opened at the appointed time and location on the next working date.

9. GST clearance : The tender should be accompanied by up to date GST Return certificate.
10. Mode of payment : Payment will be made on receipt of the bill (on full satisfactory supply of ordered stores, their commissioning, installation etc. as required as per terms and conditions) through RTGS. No advance payment will be made to any selected firm as per Institute norm.
11. Quantity of Stores : The approximate quantities of item proposed to be purchased as mentioned in the list are liable to be increased or decreased at the time of placement of purchase order.
12. Special discount/rebate: Special discount/rebate admissible to Educational Institute of National importance may be specifically indicated in the quotation.
13. Rejection of offer : Tenders not conforming to the terms and conditions and procedure so out lined are liable to be rejected summarily.
14. Guarantee/Warranty : The stores should be covered by warranty of quality/warranty of performance and manufactures defect for a minimum period of thirty six months from the date of satisfactory installation.
15. Special condition : Special condition, if any, printed on the quotation sheets of the tenders or condition attached with the tender will not be applicable to the contract unless these are expressly accepted in writing by the Director. Due weight age will be given to bidder offering warranty for a longer period.
16. ISI Marks : The tenders shall specify whether the articles offered bear bureau of Indian standard certification mark or not. In such cases they shall produce copies of certification mark along with their tender in support of it. Also specific make and model No. of the equipment is to be mentioned.
17. Discretionary power : The Director, NERIST reserves the right to accept or reject any or all tenders without assigning any reason there of and also to modify in exceptional case any of the stipulated terms and conditions on merit on genuine and justifying grounds if it is in the larger interest of the Institute. The final acceptance of the tenders rests entirely with the Director who does not bind himself to accept the lowest tender.

18. Tender fee: Tender fee of Rs.5,000.00 (Rupees five thousand) only (non refundable in the form of Demand Draft in favour of Director, NERIST, Payable at SBI, NERIST Branch must be sent along with tenders.
19. Receipt of the tender: The last date of receiving tender is 05/10/2023 upto 04.00PM.
20. Price: Abnormal price OR price higher than prevailing Market Rate / MRP will not be accepted.
21. The following updated documents should also accompany with the tenders:

- Trade Licence
- Income Tax clearance certificate
- GST Registration certificate
- Up to date GST return Certificate.
- Authorization must be from Original Equipment Manufacturer (OEM). The OEM certificate will be cross verified. If found faulty, the firm will be liable to be black listed by the Institute.
- Manufacturer /Proprietary Certificate.
- Bidder Turn Over of ₹2,00,00,000.00 (Rupees two crores) (for the last three years).
- Audited balance sheet for last three years.
- The suppliers must be a reputed dealer/distributor/manufacturer.
- All the above documents are mandatory.

Sd/-  
Section Officer (S&P)  
NERIST :: NIRJULI  
ARUNACHAL PRADESH

## **Technical Terms and Conditions:**

1. Bidder should provide turnkey solution for audio visual conferencing system for Board Room, NERIST, supply and install the items with specification mentioned in Annexure-I .
2. **Warranty:** Comprehensive onsite warranty for 3 (Three) Years including Spare Parts etc. from the date of final satisfactory installation, Implementation and working demonstration. No expenditure (either for repairs and replacement of consumable and /or non-consumable parts / or custom clearance) will be borne by the NERIST during warranty period, however required documents will be provided. All the supplied items should be covered under warranty period. If any manufacturing or other technical defects found in any equipment which gives continuous trouble and malfunctioning during the warranty period, the Bidder shall replace the same with new equipments without any additional cost to the purchaser.
3. Bidder should have previous experience for similar solution of Audio & Video integration for similar work. Bidder must produce supply order min 2 Nos. orders for similar solutions for value not less than Rs.50 Lakhs executed during last 5 years in any government organizations, PSU, Government Institutes , Government educational institutes.
4. Bidder should submit Tender Specific OEM Authorization Certificate for the items mentioned in Annexure-I.

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## Annexure-I

**AUDIO & VIDEO CONFERENCING SOLUTION FOR ADMINSTRATIVE BUILDING**

<b>SL</b>	<b>Item Name</b>	<b>Qty.</b>
1.	98 Inch Display 4 K	01
2.	VC System for Board Room	01
3.	8 x 8 True 4K HDMI Matrix Switch	01
4.	Digital Signal Processor ( It should certified & run with Teams Room)	01
5.	Cable Cubby (Popup Connectors)	06
6.	USB Over Cat6 Extender	02
7.	HDMI Over Cat-6 Extender	09
8.	10 Port POE Network Switch	01
9.	24" Touch Screen Monitor for Director Sir's	01
10.	75 Inch Display 4 K for Side Walls .	02
11.	Wall Mount Speaker (Pair).	08
12.	2 Channel Amplifier	02
13.	Column Speakers to be placed at bezel end of 98 Inch 4k Displays	02
14.	Power Cable , Connectors to Install the Speaker & Amplifier, integration with Video Conferencing System.	01 Lot
15.	Central Conference Controller with Recording & WEB GUI for ( Recoding Audio Discussion)	01
16.	Delegate Discussion Unit with Removable Microphone of minimum Length 400 mm	25
17.	Chairman Discussion Unit with Removable Microphone of minimum Length 400	01
18.	17 U Equipment floor standing Rack 600x800mm with all required accessories	01
19.	Installation Cost for Audio & Video Solution along with Demonstration Cost	01

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**ITEM: 01 Specification of 98 Inch 4 K Display**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Diagonal Size	98	
2.	Panel Technology	IPS	
3.	Resolution	3840x2160(16:9)	
4.	Brightness(Typ.)	500 nit or higher	
5.	Static Contrast Ratio(Typ)	`1200:1	
6.	Viewing Angle	178/178	
7.	Dynamic Contrast Ratio	MEGA	
8.	Response Time(G to G)	8ms	
9.	Display Colors	1.07 B ( dither 10 Bit)	
10.	Haze	25% or higher	
11.	Operational Hour	24/7	
12.	Connectivity Input	DVI-D,DP 1.2 (1), HDMI 2.0 (2)	
HDCP2.2			
USB 2.0 x 2			
13.	Connectivity Output	Stereo mini Jack	
HDMI 2.0(Loop Out)			
14.	External Control	RS232C(in/out), RJ45	
15.	Power Supply	AC 100 - 240 V, 50/60 Hz	
16.	Power consumption(Typ)	414W	
17.	Operating Temperature	0 °C ~ 40 °C	
18.	Humidity	10 % ~ 80.0 %	
19.	Key Features	Wi-Fi, S/W : Workspace (Microsoft365/VMWare/RDP) ,Switching & Recovery , Inbuilt Media Player 1.7Ghz Quad core, 2.5GB RAM, 8GB Storage, Temperature Sensor,Pivot Display, Clock Battery(168hrs Clock Keeping), Built in Speaker(10W 2ch), Video Wall Daisy Chain Support (HDCP2.2:4EA,HDCP1.4:7EA)	

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20.	Certification	EMC Class B, EPEAT, CE, FCC, UL & BIS	
21.	OEM Credentials	OEM must have R & D center in India	
		OEM must have Service Centre in Assam/ Arunachal Pradesh from last 10 Year.	
		OEM must have 9001 : 14001 certificate	
		Product should not be manufactured in any country sharing land border with India	
		OEM Should have toll free call center number for service call registration	
		OEM should have presence in India for more than 10 years	
22.	Warranty	3 Years onsite	

**ITEM NO: 02 VC SYSTEM**

Technical Specifications of Video Conferencing System			Compliance ( Yes/ No)
<p><b>The proposed system must support PAL/equivalent with PTZ camera. The codec must be based on ITU standards &amp; hardware based. No software based solution will be accepted. All components of the VC system like Codec, Camera, Microphones and Wireless Remote Control/Touch Control Panel should be from the same OEM. System should support Zoom Room also natively.</b></p>			
Sr. No.	Description	Specification Parameter	Compliance ( Yes/No)
1	Package	Full HD 1080p60 PTZ Camera, Codec, Microphone Array, Cables and Wireless Remote Control/Touch Control Panel	
2	Video Standards and Resolutions	It should support H.323 & SIP standards for communications.	
		It should support interoperability and bandwidth saving using video compression H.264 AVC, H.264 High Profile, H.265	
		It should support 1080p 60 fps, 1080p 30 fps , 720p 60 fps , 720p 30 fps.	
3	Content Standards and Resolutions	It should support both wired and wireless content sharing using standard based H.239 and BFCP. It should also support audio from PC used for content sharing.	

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		It should transmit both people and content both simultaneously to the far end location at 1080p 30fps	
		It should support wireless content sharing using Airplay and Miracast.	
		It should support Content Annotation and WhiteBoarding capability when connected to Touch Display.	
4	Audio Standards and Features	It should support G.711, G.728, G.729A, G.722, G.722.1, G.719 or better	
		It should support 20kHz or better bandwidth with crystal clear audio and stereo sound.	
		Automatic Gain Control and Automatic Noise Suppression	
		Keyboard Noise Reduction and NoiseBlock	
5	Video and Audio Inputs	1 x HDMI/HDCI/USB input for connecting main Full HD camera	
		3 x HDMI/USB inputs to connect additional PTZ cameras from same OEM to capture whiteboard/presenter and podium area in future whenever required.	
		1 x HDMI input to share 4K/Full HD content from PC/Laptop/Document camera/PTZ Camera.	
		3 x Microphone Inputs or more with support for minimum 3 mics. The bidder needs to quote 1 microphone with 360 degree coverage from day one with mute/unmute soft touch button & LED indication on the microphone.	
		1 x RCA/3.5mm stereo line-in	
6	Video and Audio Outputs	2 x HDMI output for connecting primary and secondary 4K(UHD)/Full HD displays.	
		2 x USB for connecting to two touch display	

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		1 x RCA/3.5 mm stereo line-out	
7	Other Interfaces	1 x 10/100/1000 Ethernet port	
		1 x USB for software upgrade	
		Bluetooth 5.0 and WiFi 802.11a/b/g/n/ac (MIMO)	
		1 x RS-232 Serial Port or equivalent port for connecting to external RS-232 controller	
8	Camera	1/2.4" CMOS Sensor or better	
		The camera should support minimum 10X Optical Zoom, PAN +/-100°, Tilt +20/-30° & minimum 10 camera presets.	
		The system should have an option to turn the PIP view off.	
		Video Conference Camera and Codec should be controlled using same remote control.	
9	Network Features	H.323 and SIP bandwidth supporting 64 kbps to 6 Mbps or more.	
		Must support IPv4 and IPv6 from day one on both H.323 and SIP.	
		Auto Gatekeeper Discovery, Lost Packet Recovery (LPR) technology, IP Precedence and DiffServ, Configurable MTU size	
10	USB Device Mode	Single USB port functionality to use the system as an external camera, microphone and speaker when connected to a Laptop/PC.	
11	Security	Media Encryption (H.323, SIP): AES-128, AES-256, H.235.6 support	
		Authenticated access to admin menus, web interface and APIs	
		Local account password policy configuration	
		Global Directory/Centralized Directory/LDAP support	
12	Other Standards/features	H.460.18, H.460.19, SSL, TLS	
13	Warranty	3 Years	
14.	OEM Authorization	<b>Tender specific OEM authorization should be attached.</b>	

**ITEM NO: 03 HDMI Matrix Switch:**

SL	Parameter	Specification	Compliance ( Yes/No)
1	HDMI ports	Should be able to connects any of 8 HDMI sources to any of 8 HDMI displays	
2	Input resolutions up to	4096 x 2160 @ 60Hz (4:4:4).	
3	Output Resolution:	Up to 4K@60Hz 4:4:4, HDR10.	
4	HDMI Version:	2.0 and HDCP Version: 2.3.	
5	Audio Support	Digital	
6	Audio Output	8X SPDIF	
7	Analog Audio Output:	8 x Analog L/R Audio.	
8	Digital SPDIF Audio Format	PCM 2CH.	
9	Frequency Response	20 Hz to 20 kHz, $\pm 1$ dB.	
10	System management	should have system management via front-panel pushbuttons, IR remote, RS-232 control, and Web GUI/Telnet via Ethernet connections.	
11.	Warranty	3 Years	
12.	OEM Authorization	<b>Tender specific OEM authorization should be attached.</b>	

**ITEM NO: 04 Digital Signal Processor**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Type of DSP	Digital Signal Processor with 4 Chanel Network Input Expander	
2.	Audio I/O channels	Digital Signal Processor with 8 local audio I/O channels	
3.	Main features of the DSP	USB AV bridging, dual LAN ports, VoIP telephony, 8x8 GPIO, 8 AEC processors	
		4 Chanel Input Expander on network	
		64x64 network I/O channels with 8x8 Software-based Dante license included	
4.	Certifications	CE, UL, FCC, JATE, ROHS.	
5.	Licenses	Perpetual Licenses as required for DSP scripting, deployment & collaboration solution.	

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6.	Warranty	3 Years	
7.	OEM Authorization	Tender specific OEM authorisation should be attached.	

**ITEM NO: 05 Cable Cubby (Popup Connectors)**

SL	Parameter	Specification	Compliance ( Yes/No)
1	Cable Cubby (Popup Connectors)	Should have at least 2 Nos Power. 2 Nos Ethernet. 1 Nos USB. 1 Nos 3.5 mm Audio Jack. 1 Nos HDMI. 1 USB C Port Warranty : 3 Years Tender specific OEM authorisation should be attached.	

**ITEM : 06 USB Over Cat6 Extender**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	USB	High-Speed USB 2.0 compliant	
2.	Operation type	Plug and play.	
3.	Transfer Rate	The transfer data rate up to 480Mbps.	
4.	Distance of Transmission	Transmission distance should be up to 50m over a CAT5e/6/7 cable.	
5.	Interface	Should be Equipped with 4 USB peripherals to connect with keyboards, mouse, cameras and more.  The first two USB-A ports should provide 5V1A each, and the other two output 5V 500mA each.	
6.	Supported OS	Should be Compatible with Windows, IOS and Linux.	
7.	OEM Authorization	Tender specific OEM authorisation should be attached.	
8.	Warranty	3 Years	

**ITEM : 07 HDMI Over Cat6 Extender**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Resolution Support	4K@60Hz with 4.4.4. Max	
2.	Resolutions / Distance	Up to 4K@70m (CAT 7 ).	
3.	Compliance	HDMI 2.0 and HDCP 2.2	
4.	Transmitter Input Ports	1 X HDMI	

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5.	Transmitter Output	1 X RJ 45Out, 1 X HDMI	
6.	Receiver Input Port	1 x RJ 45	
	Receiver Output	1 X HDMI.	
7.	OEM Authorization	Tender specific OEM authorisation should be attached.	
8.	Warranty	3 Years	

**ITEM : 08 8 Port AV POE Network Switch**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Configuration	8 Port POE Network Switch compatible with the Audio DSP.	
2.	Uplinks	2 x Gigabit SFP ports	
3.	Auto MDI/MDIX	Yes Available	
4.	Forwarding Rate	14 Mpps or higher	
5.	Flash Memory	32MB or better	
6.	RAM	128 MB or More	
7.	Jumbo Frame	10,000 Bytes	
8.	MAC address Size	8 k or more	
9.	Other Features required	802.1D Spanning Tree (STP) 802.1w Rapid Spanning Tree (RSTP) 802.1s Multiple Spanning Tree (MSTP) 802.3ad Link Aggregation Port Mirroring Loopback Detection (LBD) IGMP Snooping MLD Snooping 802.1Q VLAN RADIUS Needed SNMP & SNMP Trap RMONv1 DHCP/BootP Client Boot Relay	
10.	OEM Authorization Letter	Tender specific OEM authorisation should be attached.	
11.	Warranty	3 Years	

**ITEM NO: 09 24" Touch Screen Monitor for Director Sir's Use**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Size	24" Diagonal LED-backlit Touchscreen Monitor	
2.	Panel Type:	VA Technology / LCD	
3.	Aspect Ratio	16:9	
4.	Brightness	250 cd/m <sup>2</sup> or better	
5.	Contrast Ratio:	1000:1	
6.	Surface	3H Hard Coating	
	Interfaces:	HDMI, DisplayPort, USB 3.0 upstream and downstream or better.	

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7.	Certifications	Energy Star, CEC, RoHS, BIS.	
8.	OEM Authorization Letter	Tender specific OEM authorisation should be attached.	
9.	Warranty	3 Years	

**ITEM NO : 10 75 Inch Display**

SL	Specification	Description	Compliance (Yes /No)
1.	Manufacturer Credentials for reliability & Serviceability	OEM must have Service Centre in Assam/ Arunachal Pradesh from last 10 Year.	
		OEM must have ISO 9001 : ISO 14001 certificate.	
2.	Diagonal Size	75 Inch or Higher	
3.	Panel Technology	SVA / IPS or Equivalent	
4.	Resolution	(4K UHD)	
5.	Brightness(Typ.)	300 nit or better	
6.	Static Contrast Ratio(Typ)	4000 :1 or better	
7.	Viewing Angle	178/178	
8.	Response Time(G to G)	8 Ms or less	
9.	Connectivity Input	2 Nos HDMI 2.0 ,1 No USB 2.0, Stereo Mini Jack	
10.	Connectivity Output	AUDIO - Stereo Mini Jack	
11.	External Control	RS232C(in) thru stereo jack, <b>RJ45</b>	
12.	Power Supply	AC 100 - 240 V~ (+/- 10 %), 50/60 Hz	
13.	Key Features Expected	UHD , Inbuilt Signage software . Quad-Core CPU or better . Storage(FDM) - 8 GB. H/W: Temperature Sensor. Clock Battery(168hrs Clock Keeping). Built in Speaker(10W 2ch). IP5x. Rating S/W: Auto Source. Switching & Recovery. LFD Home UI. Button Lock. Hot key option. Plug & Play (Initial Setting). <b>Operating System:</b> Linux/Webos/windows	
14.	Certification	BIS,CE,FCC.	
15.	Warranty	3 Years	

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**ITEM NO: 11 Surface Mount Speakers**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Type of Speaker	2 Way Surface Mount Speakers with Frequency range (-10dB): 80 Hz – 20 kHz.	
2.	Nominal coverage	90°(H/V).	
3.	LF Components	6.5" Cone.	
4.	HF Component	1.0"	
5.	Program Power	50 W	
6.	Transformer taps on 100V	25 W, 12.5 W, 6.3 W.	
7.	Peak SPL	109 dB SPL	
8.	OEM Authorization Letter	Tender specific OEM authorisation should be attached.	
9.	Warranty	3 Years	

**ITEM NO: 12 6 Channel Amplifier**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Features	2 Channel Amplifier for ceiling speakers with 8 $\Omega$ dynamic, both channels driven: 60 W on each channel. 8 $\Omega$ & 4 $\Omega$ Bridged Mode Watts per channel: 200 Watts. High pass Filter: Switchable 80 Hz when Bridged in 70V & 100V.	
2.	Certification	UL, CE, ENERGY STAR.	
3.	OEM Authorization Letter	Tender specific OEM authorisation should be attached.	
4.	Warranty	3 Years	

**ITEM NO: 13 Column Speakers to be placed at bezel end of 98 Inch 4k Displays**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Column Speaker with Frequency range (-10dB)	70 Hz – 20 kHz	
2.	Horizontal Effective coverage (-10dB)	170°	
3.	Vertical Effective coverage (-10dB)	40°	
4.	Maximum output level (1m; on axis):	111 dB SPL	
5.	Power rating	40W.	
6.	OEM Authorization Letter	Tender specific OEM authorisation should be attached.	
7.	Warranty	3 Years	

**ITEM NO: 14 Power Cable , Connectors to Install the Speaker & Amplifier, integration with Video Conferencing System.**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Cable connectors	<p>Power Cable , Connectors to Install the Speaker &amp; Amplifier, integration with Video Conferencing System to be supplied to complete the Entire integration. This is will be lumpsum by value ( Quntity)</p> <p>All cables should be supplied to complete the project requirement. The vendor shall be responsible to ensure the length and cable quality to meet the highest industry standards.</p> <p><b>HDMI cables Acceptable Brands :</b> ATEN/Extron/Kramer.</p> <p><b>Cat Cable Brands :</b> Molex/DLk/Kramer.</p> <p><b>Audio Signal cable Brands :</b> Belden/Sommer/Krystal or Similar Brand.</p> <p><b>Speaker cable Brands:</b> Belden/Sommer/Krystal or Similar Brand.</p> <p><b>Audio Connectors Brands:</b> Neutrik/Amphenol or Similar Brand)</p>	

**ITEM NO: 15 Central Conference Controller with Recording & WEB GUI for ( Recoding Audio Discussion)**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Central Conference Controller with Recording & WEB GUI	Conference Controller with built-in Digital Signal Processing	
		Control up to minimum 50 Discussion Unit and expandable up to 150 Discussion Unit by configuring multiple Controller Unit	
		Controller unit with 4 Bus Connections (4 branches or 2 closed loops) for redundancy mechanism	
		Control & Configure the Controller via the Integrated Web GUI	
		Two USB Connections to connect USB Storage Device for Direct Recording of the Meeting. The Second USB Storage Device will take over automatically in-scenario the First USB Storage get full.	
		Camera Control Integration Capability	
		Number of Open Mic Attenuation Should be Available.	

		Controller with LCD display to implement several Conference Mode: Direct access, Request, push to talk, FIFO, Vox control	
		Selectable Voice Activation	
		Volume control 0 dB to -46 dB + “OFF”	
		Digital Acoustic, Feedback Reduction	
		With Audio Input & Output for connectivity with external system like amplifier, wireless microphone & audio/video conference system	
		Audio Quality 16Bit digital	
		With Power Saving Mode allows controller to sleep state if it has been left ON	
		Connectivity: Balanced XLR input, 1 Unbalanced RCA input, 2 Unbalanced RCA outputs, 4 Bus connections (4 branches or 2 loops), LAN connection, 2 USB connections, 1 Lockable Power connection, Headphone Port	
		Certification: CE	
		Warranty : 03 Years	
		Tender specific OEM authorisation should be attached.	

**ITEM NO: 16 Delegate Discussion Unit with Removable Microphone**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Delegate Discussion Unit with Removable Microphone of minimum Length 400mm	Delegate Discussion Unit with built-in Digital Signal Processing	
		Unit with Microphone On / Off Button	
		User Button with Feedback	
		Shielded microphone, immune to mobile phone interference	
		High-quality integrated loudspeaker	
		Headphone output with Volume Adjustment	
		Loop-through, daisy-chain cabling	
		Unit with Bi colour bar indicator	
		Compatible Screw Lock Microphone of length 400mm	
		Different LED Signaling for Mic On/Off OR Request-to-Speak Push Button	
		Connectivity: 2 digital bus connections (IN/OUT - interchangeable), Headphone connection.	
		Audio Quality 16Bit digital	
		Frequency Response: 25 Hz-15,000 Hz (± 3 dB)	
		Microphone with 400 Gooseneck Length	
Polar Pattern: Unidirectional, Cardioid			

**// 18 //**

	Max SPL @ 1kHz: 110 dB SPL (1% THD+N)	
	S/N Ratio: > 67 dB(A)	
	sensitivity: (-40.5±2) dBV @ 1Pa, 1KHz	
	Connection: Screw Lock	
	Microphone with Ring Indicator to light up Red when active and Green when in Request	
	Material: Brass	
	Certification: CE	
	2M CAT 6 cable from the same OEM	
	Max SPL @ 1kHz: 110 dB SPL (1% THD+N)	
	S/N Ratio: > 67 dB(A)	
	Warranty : 03 Years	
	Tender specific OEM authorisation should be attached.	

**ITEM NO: 17 Chairman Discussion Unit with Removable Microphone of minimum Length 400**

SL	Parameter	Specification	Compliance ( Yes / No)
7	Chairman Discussion Unit with Removable Microphone of minimum Length 400 mm	Chairman Discussion Unit with built-in Digital Signal Processing	
		Unit with Microphone On / Off Button	
		User Button with Feedback	
		Shielded microphone, immune to mobile phone interference	
		High-quality integrated loudspeaker	
		Headphone output with Volume Adjustment	
		Loop-through, daisy-chain cabling	
		Unit with Bi colour bar indicator	
		Compatible Screw Lock Microphone of length 400mm	
		Different LED Signalling for Mic On/Off OR Request-to-Speak Push Button	
		Priority button shall mute all delegate microphones and allows only the chairperson to speak	
		Next-in-line button gives the floor to the next speaker in a waiting list of speakers who requested to speak	
		Connectivity: 2 digital bus connections (IN/OUT - interchangeable), Headphone connection.	
		Audio Quality 16Bit digital	
		Frequency Response: 25 Hz-15,000 Hz (± 3 dB)	
		Microphone with 400 Gooseneck Length	
		Polar Pattern: Unidirectional, Cardioid	
		Max SPL @ 1kHz: 110 dB SPL (1% THD+N)	
		S/N Ratio: > 67 dB(A)	
sensitivity: (-40.5±2) dBV @ 1Pa, 1KHz			
Connection: Screw Lock			

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	Microphone with Ring Indicator to light up Red when active and Green when in Request	
	Material: Brass	
	Certification: CE	
	2M CAT 6 cable from the same OEM	
	Max SPL @ 1kHz: 110 dB SPL (1% THD+N)	
	S/N Ratio: > 67 dB(A)	
	Warranty : 3 Years	
	<u>Tender specific OEM authorisation should be attached.</u>	

**ITEM NO: 18**                      **17 U Equipment floor standing Rack**

SL	Parameter	Specification	Compliance ( Yes/No)
1.	17 U Equipment floor standing Rack 600x800mm with all required accessories	17U Equipment floor standing Rack 600x800mm with all required accessories, made of MS for housing of all above equipment, front lockable Perforated Mild Steel Door, Fan tray for cooling, Caster wheel base, Horizontal Smart PDU (15/5A) Warranty: 3 Years Tender specific OEM authorisation should be attached.	

**ITEM NO: 19**    Installation Cost for Audio & Video Solution along with Demonstration Cost

SL	Parameter	Specification	Compliance ( Yes/No)
1.	Installation Cost for Audio & Video Solution along with Demonstration	Installation of Audio & Video Solution along with Demonstration for one Complete Days about hand handling of the audio video devices at Site	