

### THAVAKKARA, CIVIL STATION P.O. KANNUR, KERALA - 670002

TENDER DOCUMENT FOR THE SUPPLY AND INSTALLATION OF HYBRID VIDEO CONFERENCING SOLUTION AT THAVAKKARA CAMPUS, KANNUR UNIVERSITY.

Name of the work	SUPPLY AND INSTALLATION OF HYBRID VIDEO CONFERENCING SOLUTION AT THAVAKKARA CAMPUS, KANNUR UNIVERSITY
Required Quantity	1 No
Tender Notice No.	PICO/A4/16617/2025
Tender ID	2025_KnrU_800622
Last date for receipt of Tender :	30/10/25 at 3.00 pm
Date and time of opening of Tender:	31/10/2025 at 3.00 pm
EMD:	₹.20,340/-
Period of completion of Supply and installation	Within <b>30 days</b> on receipt of the work order
Warranty period	3 Years of comprehensive onsite warranty
Address of the officer to whom tenders are to be submitted	Registrar, Kannur University, Thavakkara Campus, Civil Station P.O Kannur-670002



### **CONTENTS**

### **Section I**

Overview of the work

- 1. Scope of the work
- 2. Specification & Details
- **3**. Instructions to the Bidders

### **Section II**

- 1. Technical bid
- 2. Financial bid
- 3. Check list

### **Section III**

1. General Terms & Conditions

### **Section I**

Overview of the work & General Instructions

### **1.Overview of the work:**

The University is looking for vendors who have experience in supplying Hybrid Video Conferencing solution, are advised to study all Technical and Commercial aspects, instructions, Terms & Conditions, and Specifications carefully in the Tender document. Failure to furnish all information required in le Tender Document or submission of a bid without proper documents may result in the rejection of the bid.

### **Scope of the work:**

SL NO	Campuses	Location to Supply
		Thavakkara Campus. Kannur Civil Station P.O,
1.	THAVAKKARA	Kannur – 670002
		Contact: 0497 2715267,

### 3. Tender Schedule and Details (see Annexure 1 and 2)

### 4. Instruction to Bidders:

### **Amendment of Tender Document**

At any time prior to the deadline for submission of bids, Registrar, Kannur University, Kerala may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Tenderer, modify the Tender document by amendment and will be published as corrigendum on the website. The deadline for submission of bids may also be extended at the discretion of Kannur University, Kerala.

### **Tendering Process**

The tender will be published in the form of e-tender and will be available on the e-tender site of Govt. of Kerala. All the rules and regulations of the e-tendering will also be applicable to this tender also. The tender will be invited in the two-cover format. i.e. (i) Technical Bid and (ii) Financial Bid. The Financial Fid of a bidder will be considered if and only if the bidder qualifies in the Technical Bid evaluation.

### **Section II**

### **Cover 1 (Technical Bid) :**

- ♦ Technical details of the High Brid Video Conferencing Solution along with manufacturers name.
- ♦ Address proof for Service centers and details

Warranty details

The bidder shall have executed at least two similar Video Conference/Audio-Video works in Government



organisations/PSUs in Kerala, with a total value not less than Rs. 3,00,000/-. Documentary proof shall be submitted.

◆ The OEM (*Original Equipment Manufacturer*) is required to have a support setup in Kerala and should able to provide onsite support in Kannur.

### **Cover 2 (Financial bid) :**

♦ BOQ

### **Check list**

		Attached
SN	Description	(Y/N)
01	Bidders Profile as per Annexure 3	
02	Warranty details (3Years) ,attach certificate	
03	Address proof for Service centers and details. (The OEM is required to have a support setup in Kerala and should able to provide onsite support in Kannur)	
04	The supplier should have a track record of supplying similar Video Conference solution that have been offered to Government organizations/PSUs, specifically in Kerala and the total value of these supplies should be Rs.3 Lakhs or above (attach proof)	
05	Copy of GST payment receipt of Tender fee (18% of tender fee) { MSME firms attach MSME certificate /UDYAM registration certificate }	
06	Scanned copy of valid registration certificate, GST and PAN card of Bidder	
07	Detailed Technical Specification and documents	

### **Section III**

### **Terms and Conditions**

- 1. The tender should be submitted in two cover system ( Technical bid & Financial bid ).
- 2. Bidders shall keep their rate for a period of 120 days

. Prices shall be quoted in Indian Currency only

Tender fee and EMD for each item as given below should be remitted through SBI Internet anking/ online NEFT transaction as indicated in the e-Tender notice. All payments including EMD should be made through online but 18% GST of Tender Fee should be remitted to the GST

Department directly and upload the receipt in the e-procurement portal.

All the MSMEs with Udyog Aadhaar Registration or any other body specified by the Ministry of Micro, Small and Medium Enterprises working within the State of Kerala will be exempted from payment of Tender Fee and Earnest Money Deposit.

Sl. No	Item	Tender Fee (excl GST)	Tender Fee (18% GST)	EMD
1.	SUPPLY AND INSTALLATION OF HYBRID VIDEO CONFERENCING SOLUTION AT THAVAKKARA CAMPUS		₹.558/-	₹.20,340/-
	KANNUR UNIVERSITY  TOTAL	₹.3,100/-	₹.558/-	₹.20,340/-

- **5.** The total rate tendered should be inclusive of all taxes and other charges.
- 6. The successful bidder shall, before signing the agreement and within the period specified in the letter of acceptance of his tender, deposit a sum equivalent to 5% of the value of the contract (including EMD) by way of Security Deposit or Demand Draft or bank guarantee drawn in favour of the *Finance Officer*, *Kannur University payable at SBI Kannur University Campus Branch or Kannur Branch of other Nationalized or Scheduled bank*, *as security* for the satisfactory fulfillment of the contract.
- 7. The OEM should have established office in India from more than 15 Years. (Valid Certificate of incorporation required). The OEM (*Original Equipment Manufacturer*) is required to have a support setup in Kerala and should able to provide onsite support in Kannur.
- 8. The OEM Should have direct technical support staff and/or office in Kerala for immediate technical support. Official HR documentation Required. Local phone number to be shared along with address of location to be provided.
- 9.The OEM Must have valid ISO 9001:2015,ISO 45001:2018, ISO 27001:2022, ISO 14001:2015 and ISO 50001:2018 Certified Company. (Related certificate copy required).
- 10. The bidder shall have executed at least two similar Video Conference/Audio-Video works in Government organisations/PSUs in Kerala, with a total value not less than Rs. 3,00,000/-. Documentary proof shall be submitted.
- 11.Manufacturer authorization: Wherever Authorized Distributors / Dealers are submitting the bid, Manufacturers Authorization Form (MAF)/Certificate with OEM details such as name, designation, address, e-mail Id and Phone No. required to be furnished along with the tender. MAF specific to the tender to be submitted.
- 12. Any amendment/corrigendum to this tender will be published on the website
- 13. Profile of Bidder as per Annexure 3 shall be provided.
- 14.Data sheet of the product(s) offered in the bid, are to be uploaded along with the bid documents.

  uyers can match and verify the Data Sheet with the product specifications offered. In case of any nexplained mismatch of technical parameters, the bid is liable for rejection.
- 5. All major items will be from a single OEM to avoid integration issues. Otherwise will be rejected.

- 16. The OEM should have at least 300 employees on its payroll in India. This is to justify that OEM has made investment in India and is serious about its business in India, which will ensure long term after sales support and spare support from the OEM.
- 17. Bidder shall produce copy of GST Registration and PAN card.
- 18. Warranty for Equipment will be Three years.
- 19.Bidder to visit proposed site and make themselves clear about the requirements before bidding. In this regard, the bidder should upload a statement, mentioning that "I have visited the Site Location and studied the site condition". The statement should be countersigned by the responsible person of University Technical side. Otherwise, tender will be rejected.
- 20.Bidder should have completed minimum two works of Video & Audio installation in Govt. Sector. Proof should be produced
- **21.** The financial bid of those bidders who qualify the technical evaluation after opening of Technical bid shall only be opened.
- 22.Dedicated/ toll free Telephone No. for service support, Escalation Matrix for Service support.
- 23. Registrar, Kannur University reserves the right not to process the tender, cancel the contract, supply order, hold the payment and to trade or not to trade the old stores without assigning any reason.

GSTIN32AAAGK0152J1ZT

Contct: 0497 2715267

Sd/-

Registrar



# Annexure 1

	ANNEXURE A (WIRED DISCUSSION UNITS WITH HYBRID CONFERENCE CONTROLLEER)		
S No	Parameter	Specifications	Yes/No
1	Technology	The unique digital ring network technology achieve full-digital signal transmission and processing	100,110
2	Audio Sampling and Frequency response	48K audio sampling rate and 20Hz~20KHz frequency response	
3	Special Features	Output 16 segment equalized EQ to achieve sound field adjustment; pressure limit, which can recognize the noise gate passed by human voice. AGC automatic volume gain control; AFC automatic feedback suppression and auto-mix technology,advanced noise cancellation technology,Echo cancellation	
4	Output Zone Control	6 separated output zones function, each zone is automatically adjusted according to the volume of the position of the microphone, achieve longer distances pickup without whistle.	
5	Recording	USB audio recording	
6	Discussion Units Support	Single controller can support up to 90 units, by using additional Extension Main Units can be extended up to 5200 units	
7	Audio Input	2 channel audio input, XLR or RCA type, for local audio input or remote video-conferencing input.	
8	Audio Output	Maximum 8-channel audio output, XLR, RCA and Phoenix type, can be connected to simultaneous interpretation output or partitioned output	
9	Control Port	RS232 central control, realize microphone switch, priority, volume and other control	
10	Camera Control	RS232 or RS485 to send the PELCO/VISCA protocol to realize camera autotracking function.	
11	Limit on the number of active speaking persons	Active units at the same time will be 2 Chairman and 6 Delegates	
12	Discussion modes	"OPEN" Free for all, limited by the active units setting by controller, "VOICE" Can activate MIC by detecting sound without press button, "OVERRIDE" First in First out, "APPLY" To apply then to speak,	



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LCD display to show all the operations and results  4-Way button for menu operate One-button press to start recording light indicator Master volume control knob Front panel USB recording interface, 3.5mm headphone for monitoring, 1x RCA audio input, 1x XLR audio input, 1x RCA audio output, 1x XLR audio output 6x Phoenix audio output connector, 2x RJ45 digital audio connection, 2x RJ45 for chairman unit, delegate unit, unit translators and other connection, 1x RJ45 for wireless AP or router, 1x DB9 male interface for external control, 1x RJ45 for wireless AP or router, 1x DB9 male interface for external control, 1x RJ45 for wireless AP or router, 1x DB9 male interface for computer connection, 1x three-pin phoenix interface for camera 1x three-pin phoenix interface for camera control keyboard, 1x RJ45 for computer connection or network switcher,1x grounding screw, 1x 100 ~ 240V AC Power Interface  15 Type Wired Table Top unit with built in speaker and RJ45 Loop in and out 16 Speaker Internal high-fidelity loudspeaker 17 Transmit technology High fidelity sound by zero loss audio transmit technology 18 Audio Sampling and Frequency response 19 Special Features Support AGC (Automatic Gain Control, 15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC(Active Noise Control 15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC(Active Noise Control 15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC(Active Noise Control 15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC(Mortive Noise Control 15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC (Active Noise Control 15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC (Active Noise Control 15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC (Active Noise Control 15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC (Active Noise Control 15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC (Active Noise Control 15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC (Active Noise Control 15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC (Active Noise			Tree in the state of the state	
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Audio Sampling and Frequency response  Support AGC (Automatic Gain Control,15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC(Active Noise Control 15 segment)/ Mix (Auto-Mix) technology  Chairman Priority  Chairman unit has priority to close all other units or mute them temporarily and consent the request for speaking from delegate  OLED Display, MIC ON/OFF,  Chairman unit with priority button and consent button for the delegates, Volume up and down  Socket for Pluggable Gooseneck microphone  3.5mm stereo Headphone jack 2x RJ45 Connectors  Input impedance  2 kΩ  Signal to Noise Ratio  70 dB  20 ~ 20000Hz				
19Special FeaturesCancellation)/ ANC(Active Noise Control 15 segment)/ Mix (Auto-Mix) technology20Chairman PriorityChairman unit has priority to close all other units or mute them temporarily and consent the request for speaking from delegate21Control & IndicatorsChairman unit with priority button and consent button for the delegates, Volume up and down22Interfaces3.5mm stereo Headphone jack $2x$ RJ45 Connectors23Input impedance $2 k\Omega$ 24Signal to Noise Ratio70 dB25Frequency response $20 \sim 20000$ Hz	18	Audio Sampling and Frequency response		
technology         20 Chairman Priority       Chairman unit has priority to close all other units or mute them temporarily and consent the request for speaking from delegate         21 Control & Indicators       OLED Display, MIC ON/OFF,         21 Control & Indicators       Chairman unit with priority button and consent button for the delegates, Volume up and down         22 Interfaces       3.5mm stereo Headphone jack         23 Input impedance       2 kΩ         24 Signal to Noise Ratio       70 dB         25 Frequency response       20 ~ 20000Hz			Support AGC (Automatic Gain Control,15 segment)/ AFC (Adaptive Feedback	
technology         20 Chairman Priority       Chairman unit has priority to close all other units or mute them temporarily and consent the request for speaking from delegate         21 Control & Indicators       OLED Display, MIC ON/OFF,         21 Control & Indicators       Chairman unit with priority button and consent button for the delegates, Volume up and down         22 Interfaces       3.5mm stereo Headphone jack         23 Input impedance       2 kΩ         24 Signal to Noise Ratio       70 dB         25 Frequency response       20 ~ 20000Hz	19	Special Features		
20Chairman PriorityChairman unit has priority to close all other units or mute them temporarily and consent the request for speaking from delegate21Control & IndicatorsOLED Display, MIC ON/OFF, Chairman unit with priority button and consent button for the delegates, Volume up and down22InterfacesSocket for Pluggable Gooseneck microphone23Input impedance2 kΩ24Signal to Noise Ratio70 dB25Frequency response20 ~ 20000Hz		·	technology	
Control & Indicators   Chairman unit with priority button and consent button for the delegates, Volume up and down				
Control & Indicators  Chairman unit with priority button and consent button for the delegates, Volume up and down  Socket for Pluggable Gooseneck microphone  1. Interfaces  1. Input impedance  2. k $\Omega$ 2. Input impedance  2. k $\Omega$ 2. Signal to Noise Ratio  2. Frequency response  OLED Display, MIC ON/OFF,  Chairman unit with priority button and consent button for the delegates, Volume up and down  Socket for Pluggable Gooseneck microphone  3.5mm stereo Headphone jack  2x RJ45 Connectors  2 k $\Omega$ 20 $\Omega$	20	Chairman Priority	and consent the request for speaking from delegate	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	21	Control & Indicators	Chairman unit with priority button and consent button for the	
22Interfaces3.5mm stereo Headphone jack 2x RJ45 Connectors23Input impedance $2 kΩ$ 24Signal to Noise Ratio $70 dB$ 25Frequency response $20 \sim 20000 Hz$				
22Interfaces3.5mm stereo Headphone jack 2x RJ45 Connectors23Input impedance $2 kΩ$ 24Signal to Noise Ratio $70 dB$ 25Frequency response $20 \sim 20000 Hz$				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	22	Interfaces	3.5mm stereo Headphone jack	
23Input impedance $2 kΩ$ 24Signal to Noise Ratio70 dB25Frequency response $20 \sim 20000 Hz$				
25 Frequency response 20 ~ 20000Hz	23	Input impedance		
25 Frequency response 20 ~ 20000Hz	24	Signal to Noise Ratio	70 dB	
26 Microphone Cardioid, Sensitivity46dBV/Pa, Length-485mm			20 ~ 20000Hz	
	26	Microphone	Cardioid,Sensitivity46dBV/Pa,Length-485mm	

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27	Warranty	3 Year Onsite Warranty	
28	MAF	Manufacture Autherization Letter	
	ANN	NEXURE B (DELEGATE UNIT)	
S No	Parameter	Specifications	Compliance Yes/No
1	Туре	Wired Table Top unit with built in speaker and Rj45 Loop in and out	
2	Speaker	Internal high-fidelity loudspeaker	
3	Transmit technology	High fidelity sound by zero loss audio transmit technology	
4	Audio Sampling and Frequency response	48K audio sampling rate and 20Hz~20KHz frequency response	
5	Special Features	Support AGC (Automatic Gain Control,15 segment)/ AFC (Adaptive Feedback Cancellation)/ ANC(Active Noise Control 15 segment)/ Mix (Auto-Mix) technology	
6	Control & Indicators	OLED Display, MIC ON/OFF, Volume up and down	
7	Interfaces	Socket for Pluggable Gooseneck microphone 3.5mm stereo Headphone jack 2x RJ45 Connectors	
8	Input impedance	2 kΩ	
9	Signal to Noise Ratio	70 dB	
10	Frequency response	20 ~ 20000Hz	
11	Microphone	Cardioid, Sensitivity46dBV/Pa, Length-485mm	
12	Certifications	CE,FCC and RoHS	
13	Local Content	The offered product shall have a minimum local content of 50% or more, in compliance with Government guidelines.	
14	Warranty	3 Year Onsite Warranty	
15	MAF	Manufacture Autherization Letter	
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		ANNEXURE C (ALL IN ONE DSP)	
S No	Parameter	Specifications	Compliance Yes/No
		The DSP should have a 100% Full Duplex Echo Canceling – no attenuation	TES/INO
1		during full-duplex.	
2		The system should be Automatic echo cancellation(AEC).	
3		The system should be Automatic Gain Control (AGC).	
4		The system should be Dynamic Noise reduction.	
5		The should have frequency response between 20 Hz – 20 KHz	
		DSP Should have dual capability of Local Sound Reinforcement and Far end	
	Disital Cianal Busassan	Audio to be sent for Video conferencing at the same time without any Noise	
	Digital Signal Processor	and Echo. Whatever teacher or student speaks through Collar or hand held	
6		microphone and Gooseneck microphone all should be Going to Far end	
		Location over Video Conference and also should come out of Speakers for	
		local Sound Reinforcement so that everyone present in class can also hear	
		clearly.	
		The DSP should have inbuilt Amplifier. It should come as one single unit as	
7		DSP-cum-Amplifier, from day 1. It should have inbuilt Receiver for Wireless	
		Microphones from day 1.	
_		2 no. of wireless Microphones should be supplied along with DSP from day	
8		one or more.	
_		The Microphone should have Frequency band of UHF 610MHz - 680MHz or	
9		better.	
-10	Wireless Microphone Features	The system should be Microphone Frequency Response- 80Hz~18KHz or	
10		better	
11		The system should have the facility to control the gain of microphone.	
12		The system should have LED indicator for status.	
13		Operating Range upto 100 Feet	
14		The system having inbuilt digital amplifier.	
15		The Amplifier should consist of a 200 Watts ( 100 Watts x 2) at 8 Ohms or	
15		more	
1.0	A see a life ou Footh was	2 no. of 50W wall mount Speakers should be supplied along with DSP from	
16	Amplifier Features	day one or more.	
17		The Amplifier should have S/N Ratio of >80dB.	



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18		The Amplifier should be inbuilt with DSP from day 1. Amplifier & DSP should	
		come as single unit.	
19		Built-In 1 x Handheld, 1 x headband Microphone	
20		Unbalanced MIC input ( 1x 6.5mm phono jack )with gain control	
21		Balanced 48v/12v phantom mic inputs (2x Phoenix ports) with separate gain	
21	I/O Ports	controller	
22	l Ports	Line input - 1 x 2RCA	
23		Line Output - 1 x 2RCA	
24		USB voice interface X 1 or more	
25		It should have 1 X RS232 port for controlling	
26	Form Factor	The system should be standard 19 inches Rack Mountable or better.	
27	Contification	Proposed product must have CE, RoHS, FCC certification. Copy to be	
27	Certification	attached as proof.	
20	Land Carlant	The offered product shall have a minimum local content of 50% or more, in	
28	Local Content	compliance with Government guidelines.	
29	Warranty	3 Year Onsite Warranty	
30	MAF	Manufacture Autherization Letter	
	ANNEXU	RE D (WALL MOUNT SPEAKER)	
S No	Parameter ANNEXU	RE D (WALL MOUNT SPEAKER)  Specifications	Compliance Yes/No
		, 	•
1	Parameter	Specifications	•
1 2	Parameter Enclosure Material	Specifications  The system should be made of ABS Plastic	•
1 2 3	Parameter Enclosure Material Woofer type	Specifications  The system should be made of ABS Plastic  The system should be have polypropylene cone woofer  The system should be have woofer size of 5.25" or higher	•
1 2 3 4	Parameter Enclosure Material Woofer type Woofer size	Specifications  The system should be made of ABS Plastic The system should be have polypropylene cone woofer	•
1 2 3 4 5	Parameter  Enclosure Material  Woofer type  Woofer size  Tweeter type	Specifications  The system should be made of ABS Plastic  The system should be have polypropylene cone woofer  The system should be have woofer size of 5.25" or higher  The system should be have Titanium dome type Tweeter	•
1 2 3 4 5	Parameter  Enclosure Material  Woofer type  Woofer size  Tweeter type  Tweeter size	Specifications  The system should be made of ABS Plastic  The system should be have polypropylene cone woofer  The system should be have woofer size of 5.25" or higher  The system should be have Titanium dome type Tweeter  The system should be have Tweeter size of 1" or higher	•
1 2 3 4 5 6	Parameter  Enclosure Material  Woofer type  Woofer size  Tweeter type  Tweeter size  Frequency response	Specifications  The system should be made of ABS Plastic  The system should be have polypropylene cone woofer  The system should be have woofer size of 5.25" or higher  The system should be have Titanium dome type Tweeter  The system should be have Tweeter size of 1" or higher  It should be frequency bandwidth 90HZ – 20 kHz	•
1 2 3 4 5 6 7	Parameter  Enclosure Material Woofer type Woofer size Tweeter type Tweeter size Frequency response Impedance	Specifications  The system should be made of ABS Plastic The system should be have polypropylene cone woofer The system should be have woofer size of 5.25" or higher The system should be have Titanium dome type Tweeter The system should be have Tweeter size of 1" or higher It should be frequency bandwidth 90HZ – 20 kHz It should have impedance of 8 ohms or higher	•
1 2 3 4 5 6 7 8	Parameter  Enclosure Material  Woofer type  Woofer size  Tweeter type  Tweeter size  Frequency response  Impedance  SPL (Sound Pressure Level)	Specifications  The system should be made of ABS Plastic  The system should be have polypropylene cone woofer  The system should be have woofer size of 5.25" or higher  The system should be have Titanium dome type Tweeter  The system should be have Tweeter size of 1" or higher  It should be frequency bandwidth 90HZ – 20 kHz  It should have impedance of 8 ohms or higher  It should have SPL of 90dB or higher	•
1 2 3 4 5 6 7 8 9	Parameter  Enclosure Material  Woofer type  Woofer size  Tweeter type  Tweeter size  Frequency response  Impedance  SPL (Sound Pressure Level)  Power (RMS)	Specifications  The system should be made of ABS Plastic  The system should be have polypropylene cone woofer  The system should be have woofer size of 5.25" or higher  The system should be have Titanium dome type Tweeter  The system should be have Tweeter size of 1" or higher  It should be frequency bandwidth 90HZ – 20 kHz  It should have impedance of 8 ohms or higher  It should have SPL of 90dB or higher  It should have 50 watts or higher Power (RMS)	•
1 2 3 4 5 6 7 8 9 10	Parameter  Enclosure Material  Woofer type  Woofer size  Tweeter type  Tweeter size  Frequency response  Impedance  SPL (Sound Pressure Level)  Power (RMS)  Connectors	Specifications  The system should be made of ABS Plastic  The system should be have polypropylene cone woofer  The system should be have woofer size of 5.25" or higher  The system should be have Titanium dome type Tweeter  The system should be have Tweeter size of 1" or higher  It should be frequency bandwidth 90HZ – 20 kHz  It should have impedance of 8 ohms or higher  It should have SPL of 90dB or higher  It should have 50 watts or higher Power (RMS)  It should have 1 (one) pair metal binding terminal type connectors	•
1 2 3 4 5 6 7 8 9 10 11	Parameter  Enclosure Material  Woofer type  Woofer size  Tweeter type  Tweeter size  Frequency response  Impedance  SPL (Sound Pressure Level)  Power (RMS)  Connectors  Type of Mounting	Specifications  The system should be made of ABS Plastic  The system should be have polypropylene cone woofer  The system should be have woofer size of 5.25" or higher  The system should be have Titanium dome type Tweeter  The system should be have Tweeter size of 1" or higher  It should be frequency bandwidth 90HZ – 20 kHz  It should have impedance of 8 ohms or higher  It should have SPL of 90dB or higher  It should have 50 watts or higher Power (RMS)  It should have 1 (one) pair metal binding terminal type connectors  It should be wall-mounting or higher	•
1 2 3 4 5 6 7 8 9 10 11 12	Parameter  Enclosure Material  Woofer type  Woofer size  Tweeter type  Tweeter size  Frequency response  Impedance  SPL (Sound Pressure Level)  Power (RMS)  Connectors  Type of Mounting  Dual axis Mounting	Specifications  The system should be made of ABS Plastic  The system should be have polypropylene cone woofer  The system should be have woofer size of 5.25" or higher  The system should be have Titanium dome type Tweeter  The system should be have Tweeter size of 1" or higher  It should be frequency bandwidth 90HZ – 20 kHz  It should have impedance of 8 ohms or higher  It should have SPL of 90dB or higher  It should have 50 watts or higher Power (RMS)  It should have 1 (one) pair metal binding terminal type connectors  It should be wall-mounting or higher  It can be mounted vertically or horizontally in both axis	•

S No Parameter

Sensor

Field of View (FOV)

Video Format

Lens

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4 Video Format	2160P@30fps
5 Optical Zoom	12x
6 Digital Zoom	16x
7 Al Features	Presenter Framing, Group Framing, Humanoid Tracking, and Target Tracking
8 Minimum Illumination	0.5Lux @(F1.8, AGC ON)
9 Shutter	1/30s - 1/10000s
10 White Balance	Auto, indoor, outdoor, one-push, manual VAR
11 Backlight Compensation	Supported
12 Digital Noise Reduction	2D & 3D DNR
13 Signal-to-Noise Ratio (SNR)	>55dB
14 Pan Angle	170°
15 Tilt Angle	-30° to 90°
16 Pan Speed	2.7° - 35.7°/s
17 Tilt Speed	2.7° - 31.5°/s
18 Image Flip	Supported
19 Preset Positions	255
20 Video Compression	H.264/MJPEG
21 Video Stream	Dual Stream (First and Second Stream)
22 First Stream Resolution	3840x2160, 1920x1080, 1280x720, etc.
23 Second Stream Resolution	1920x1080, 1280x720, 1024x576, etc.

**ANNEXURE E (4K 12X OPTICAL ZOOM CAMERA)** 

f4.4mm-52.8mm, F1.8-F2.6

1/2.5 inches CMOS, 8.51 Megapixels or better

YUY2: Max 1080P@30fps; MJPEG: 2160P@30fps; H.264 AVC/SVC: Max

Specifications

Compliance

Yes/No



24	Video Bit Rate	32kbps - 20480kbps	
25	Frame Rate	50Hz: 1fps - 25fps; 60Hz: 1fps - 30fps	
26	Audio Compression	AAC	
27	Audio Bit Rate	96kbps, 128kbps, 256kbps	
28	Protocols	NDI (Optional), TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP, SRT, GB/T28181, Multicast	
29	USB Interface	1 x USB 3.0 Type-C	
	HD Output	1 x HDMI	
	Network Interface	1 x RJ45: 10M/100M/1000M Adaptive Ethernet	
-	Audio Interface 1 x Line In (3.5mm jack)		
1 x RJ45 (IN), 1 x RS232 IN (8Pin mini DIN, Max Dist		1 x RJ45 (IN), 1 x RS232 IN (8Pin mini DIN, Max Distance: 30m), Protocol: VISCA/Pelco-D/Pelco-P	
34	Power Interface	JETA Type (DC IN 12V)	
35	Accessory IR Remote Control and Wall Mount kit (included as standard accessory)		
36	It should have BIS (Indian), CF, ECC, RoHS, and CB Certification, CB Test		
37	Warranty	3 Year Onsite Warranty	
38	Manufacture Autherization Letter		
ANNEXURE F (VIDEO MIXER& TRACKING CONTROLLER )			
S No	Parameter	Specifications	Compliance Yes/No
1	Video input port (SDI)	4-channel SDI HD interface; (SDI supports 3G-SDI and HD-SDI; supports digital audio input)	
2	Video input port (HDMI)	2-channel HDMI HD interface; (HDMI supports 1080P60Hz downward compatibility; supports digital audio input)	
3	Audio input port 1-channel RCA audio interface; (analog audio)		
4	2-channel HDMI HD interface; (HDMI supports 1080P60Hz downward compatibility; supports up to four screen splits output; supports audio output)		
	Video output port	1-channel USB interface; (The USB port supports 1080P30Hz, and the USB can be output to the computer, which is equivalent to the function of the	



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6	Input impedance	750;		
7	Remote control interface	2-way RS232 serial port; 1-way RJ45 Ethernet interface: (Support web		
		control)		
8	Local control interface	support local button control (buttons are deployed on the front panel)		
9				
10	Power supply	Rated AC100~240V; -		
11	Dimensions	19-inch rack cabinet, height 1U, depth 260mm (without panel);		
12	Power consumption	<8W		
13				
14	MAF	Manufacture Autherization Letter		
		ANNEXURE G (HDMI AOC CABLE )		
	HDMI AOC CABLE			
HDM	I AOC CABLE			
	I AOC CABLE Parameter	Specifications	Compliance Yes/No	
		Specifications  Male to Male HDMI UHD 4K60 (4:4:4) with complete signal integrity,		
S No	Parameter			
S No	Parameter HDMI connection	Male to Male HDMI UHD 4K60 (4:4:4) with complete signal integrity,	-	
\$ No 1 2 3	Parameter HDMI connection Data Rate	Male to Male HDMI UHD 4K60 (4:4:4) with complete signal integrity, It should have data transfer speed up to 18 GBps		
\$ No 1 2 3 4	Parameter  HDMI connection  Data Rate  Material	Male to Male HDMI UHD 4K60 (4:4:4) with complete signal integrity,  It should have data transfer speed up to 18 GBps  It should be Offer fiber-optic noise immunity		
\$ No 1 2 3 4	Parameter  HDMI connection  Data Rate  Material  Protocals	Male to Male HDMI UHD 4K60 (4:4:4) with complete signal integrity, It should have data transfer speed up to 18 GBps It should be Offer fiber-optic noise immunity It shuld Support HEC, CEC, EDID, HDR, ARC, 3D	-	
\$ No 1 2 3 4 5	Parameter  HDMI connection  Data Rate  Material  Protocals  Power Supply	Male to Male HDMI UHD 4K60 (4:4:4) with complete signal integrity,  It should have data transfer speed up to 18 GBps  It should be Offer fiber-optic noise immunity  It shuld Support HEC, CEC, EDID, HDR, ARC, 3D  No External Power supply in required		

# 回答的。General Form of File PICO-/A4/16617/2025 Approved by Development Officer (Registrar in-charge) on 03-Oct-2025 12:50 PM - Page 15

# Proforma to quote Make and Model

Name of Work :- HYBRID VIDEO CONFERENCING SOLUTION AT KANNUR UNIVERSITY

SI.N	Description	Offered Make	Offered Model
<b>0.</b>	•		
ਰ 1.	Supply and Providing VC camera sensor should be 1/2.5 inch, CMOS,		
<u> </u>	effective pixels: 8.46 MP UHD 4K CMOS, Option of Auto, Manual, One Push, focus system of Auto, Manual, One Push Trigger, PTZ S/N Ratio		
-	of ≥50dB, Trigger, 12x optical zoom and 16 X digital zoom, 1 x		
3	HDMI 1.4 Video Format 4K@60/50fps, 4K@30/25fps, 1080P@60fps,		
	1080P@30fps, 720P@60fps , 1 x RJ-45 ∏ 10M/100M Self-adaptive		
707	Ethernet Interface ,Audio Interface: 1 x LINE IN3.5mm .Preferred		
3	Make : Cisco , Peoplelink , Polycom . MAF Required. 3 Year		
5	Warranty. Specification as Per Annexure		
2.	Manual, One Push, focus system of Auto, Manual, One Push Trigger,		
	PTZ S/N Ratio of ≥50dB , Trigger , 12x optical zoom and 16 X digital		
) D	zoom , 1 x HDMI 1.4 Video Format 4K@60/50fps, 4K@30/25fps,		
5	1080P@60fps, 1080P@30fps, 720P@60fps , 1 x RJ-45 [] 10M/100M		
=	Self-adaptive Ethernet Interface ,Audio Interface: 1 x LINE		
31 a l a l a l a l a l a l a l a l a l a	IN3.5mm .Preferred Make : Cisco , Peoplelink , Polycom . MAF		
<u></u>	Required. 3 Year Warranty. Specification as Per Annexure		
3.	Supply and Providing Audio Conference microphone and Wireless		
<u> </u>	Receiver. USB port or better for charging. LED indicator for battery		
	status for charging. Frequency Range of 2,400 [] 2,483 GHz bandwidth Efficient Modulation Format. 5 or 2 Mbps Over-the-Air		
	Data Rate or better. Coverage range of 360-degree or better.		
	Reverberation time of < 0.5 seconds or better. Noise level of < 48 dBA		
	Audio Pickup of Up to 10 ft radial or better. Acoustic Echo		
	Cancellation of > 40dB or better.		
<u>&gt;</u>	Automatic Echo Cancellation, Automatic Gain Control, Automatic		
2	Noise reduction, Automatic Non Linear Processing, Automatic Level		
5	Control, Automatic Microphone Equalizer.3 Year Onsite Warranty.		
2	Preferred Make :Cisco , Peoplelink , Polycom. MAF Required.		
<u> </u>	Specification as Per Annexure		
4.	Supply and Providing Portable sound bar 2 Channel or higher, output		
-	power of 2*20W=40W or higher, thresh hold of ≤10%, frequency		
3	bandwidth- 20Hz-16kHz , SPL of ≥80db or higher , driver size of 2"x4 or higher impedance of 40hm 10W or higher , LED8 indicating Display		
È	, USB/TF card/3.5mm/Bluetooth 5.0/optical ports , power		
5	consumption of AC~110-240V, 50/60Hz, remote control,1.5M Audio		
2	cable, Adaptor, wall mount screw, Stand pad, 1.5M Left and right		
_ D	connect cable ,60mm left and right connect cable , 3 Year Onsite		
-	Warranty. Preferred Make :Cisco , Peoplelink , Polycom . MAF		
	Required. Specification As Per Annexure		
5.	Supply and Providing 75" size Interactive panel with 4 gb RAM , 32gb		
<u> </u>	ROM , touch panel , speaker , i5 OPS with 8 gb ram , 250gb ssd ,		
	Android OS Windows 11 Home OS3 Year Onsite Warranty , MAF		
Ď	Required, Preferred Make, Benq, Peoplelink, LG. Specification as		
	r Annexure		
	pply and Providing of AV mixer with 4 HDMI inputs, 2 HDMI tputs, USB webcam out, built in DVE,1 x USB Type-C 3.1 Gen out, 2		
	3.5mm stereo mini jack audio input, 10/100 Ethernet port, etc.		
	J. Shiili stereo hiili jack addio iliput, 10/100 Ethernet port, etc.		

		supplied with all necessary accessories including power adaptor. Preferred Make: Black Magic Design ATEM Mini Pro.3 Year Warranty	
	7.	Supply and Providing interconnecting cables like high quality USB cable, 8K HDMI cable, and other power cable for connecting trolly and tripod and display unit. Preferred Make: LOGIC, Bluerigger, Vention	
	8.	Supply and providing Fully Customized solution for the Display Pods with cabin from 43" to 98". A Versatile Display Option can fix Single or Dual Screens. Hard and sturdy material. Camera placements for both the sound bar and PTZ are available. The camera will be fixed either at the top or bottom of the display. Innovative Design for All-in-one Solution In-built Equipment tray and Power spike which eliminates unwanted cablings and provides space management. It comes with an acoustic modular frame to enhance the audio quality. Acoustic Modular frame available in 4 different colours. Display Compatibility – any display brands can be fixed. Camera Compatibility Peoplelink, Cisco, Polycom.	
100	Λ	Equipment Installation, configuration and testing training and commissioning.	

Contractor Signature



## Annexite 3

### BIDDER PROFILE

Sl.No	Particulars	
]	Details of bidder(Firm/Company)	
1 Name		
2	address	
3	Telephone & Mob	
4	Email & website	
	Details of Authorized Person	
5	Name	
6	Address	
7	Telephone & Email	
	Information about the company	
8	Status of Company (Public Ltd./Pvt.Ltd)	
	own functional service centre or zed functional service centres	
9	Number of Professionals	
10	Service Tax Registration Number	
11	Income Tax Registration Number (PAN)	
12	GST Registration Number	

Signature of the Bidder

