PROPOSAL FOR SUPPLY, INSTALLATION COMMISIONING AND MAINTENANCE OF VIDEO CONFERENCING SYSTEM AT THE OFFICE OF MALAYALAM UNIVERSITY VAKKAD, TIRUR.

Sealed Tenders are invited from accredited agencies, Central/State Government Organization, Public Sector Undertakings, Total Solutions Providers etc for the supply, installation, commissioning and maintenance of Video Conferencing system at the office of **Malayalam University, Vakkad, Tirur**. The detailed specifications of the required items, the terms and conditions eligibility criteria are given below:-

	Virtual Connect		
A	Full HD 1080p60 camera (1 camera to be supplied from day 1), codec, microphone array, cables, and remote control	Nos	1
B	Dual Boundary Wireless Mic	Nos	1
C	Wall Speakers with Stand as per the specification.	Nos	2
D	Audio Mixer- 4 Channel	Nos	1
E	Tripod Camera Stand as per the specification.	Nos	1
F	Full HD(1920x1080) Ultra Short Through Projector having 3500 lumen or higher with 100" image size with DLP technology.	Nos	1
G	Dual Purpose White Board: 6feet * 4 feet , 18MM thickness White board Dual purpose (Marker board and projection board) with out reflection	Nos	1
H	Equipment Rack 19U or above as per the specification.	Nos	1
I	Connectors and Other accessories - as per the requirement.	Set	1

The bidder should submit Manufacturer Authorization Form (MAF) from the OEM for all the quoted products along with the technical bid.

DETAILED SPECIFICATION

A	**High definition video conferencing end point with one camera** -The proposed system must support PAL with a PTZ camera. The codec must be based on ITU standards. The VC End Point should be a codec based hardware. No software based solution is accepted here. The camera and codec must be from the same OEM.	
	MODEL	

Sl. No.	Description		Compliance
1	Package	Full HD 1080p60 camera, codec, Microphone Array, cables, and remote control	
2	Video Standards and Resolutions	It should support both H.323 and SIP standards for communications.	
		It should support H.261, H.263, H.264 AVC/ SVC, H.264 High Profile/H.265	
		It should support 1080p 60 fps, 1080p 30 fps, 720p 60 fps and 720p 30fps	
3	Content Standards and Resolutions	It should support content sharing using standard based H.239 & BFCP. It should also support audio from PC used for content sharing.	
		It should transmit both people and content both simultaneously to the far end location at 1080p 30fps	

4	Audio Standards and Features	It should support G.711, G.728, G.729A, G.722, G.722.1, AAC-LD 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 instant adaptation echo cancellation	
5	Video and Audio Inputs	1 x HD input for connecting main HD camera	
		1 x HDMI/DVI & 1 VGA input for connecting PC/Laptop to share HD content	
		1 x Microphone Input or more (Support for minimum 3 mics)	
		1 x 3.5mm stereo line-in	
6	Video and Audio Outputs	2 x HDMI output for connecting main monitor & second monitor.	
		1 x 3.5 mm stereo line-out	
7	Other Interfaces	1 x 10/100/1000 LAN port	
		2 x USB for software upgrade and connecting external devices	
		1 x RS-232 mini-DIN 8-pin or equivalent	
8	Camera	It should support 1080p60fps with 10x optical zoom.	
		The codec should be scalable in the future to enhance video conferencing experience with advanced face-recognition technology such that it automatically scans the room and seamlessly commands the main camera to appropriately frame the users during a call without any manual intervention.	
		It should support PAN Range of +/-90°, and Tilt of +/-20°	
9	Network Features	H.323 and SIP bandwidth up to 6 Mbps	
		IPv4 and IPv6 support from day one	
		Auto Gatekeeper Discovery	
		IP Precedence, QoS	
		H.323 based Packet Lost Recovery	
10	Multisite Feature	The codec should be scalable to include a 1+4 multipoint license. The multipoint license should allow connection of 4 other sites (apart from current site) at HD 720p resolution.	
11	Security	Media Encryption (H.323, SIP): AES-128, AES-256	
		Authenticated access to admin menus, web interface and telnet API	
		Local account password policy configuration	
12	Other Standards	H224/H.281, H.323 Annex Q, H.225, H.245, H.241, H.239, H.243, H.460	

B	Dual boundary Mic (Audio-Technica, Shure, Sennheiser)	
Sl. No.	Description	Compliance
	Model	
1	• 2 x Boundary Mic Transmitter	
2	• 2 x Receiver Unit	
3	• Rackmount Receiver Chassis	
4	• Digital 24-Bit/48 kHz	
5	• Automatic Frequency Selection	
6	• Easy Channel Selection, Sync	
7	Operating Frequencies – 2.4 Ghz ISM band	
8	Dynamic Range > 109 dB (A-weighted), typical	
9	Total Harmonic Distortion (THD) < 0.05% typical	
10	Frequency Response – 20Hz to 20Hz (depending on microphone type)	
11	Maximum Output Level – XLR Balanced: 0 dBV ¼ (6.3 mm) Unbalanced: +6 Dbv	

C	Powered Speakers with Wall mount (Yamaha/Questa/JBL/EV)	
Sl. No.	Description	Compliance
	Model	
1	The loudspeaker shall be a two-way compact system consisting of 1 x 8" Mid bass cast frame woofer(LF), 1 x 1" Throat driver, titanium diaphragm(HF) with HF rotatable wave-guide.	
2	Frequency Response : 70Hz - 20Khz ±3dB	
3	Power: 150 w RMS	
4	Sensitivity : 95 dB, 1W/1m	
5	Impedance : 8 ohms	
6	Max SPL : 119 dB nominal, 122dB peak	
7	HF Dispersion : 90° x 40°	
8	Crossover Frequency : 2 kHz	
9	LF Transducer : 1 x 8"	
10	HF Transducer : 1"	
11	Front Finish: Perforated acoustic foam on steel grill	

D	Four Channel Audio Mixer (Allen&heath/Yamaha/Soundcraft)	
Sl. No.	**Description**	**Compliance**
	Model	
1	Input: Mono channel (XLR) Input; Mono channel Line Input (Jack socket); Stereo Input (Jack or phono sockets)	
2	Output; L/R Outputs (XLR) Normal/DI out; Aux & FX Outputs (Jack sockets); Record & Monitor Outputs (phono sockets)	
3	4 mic/line inputs, 2 with Class A FET high impedance inputs	
4	3 band EQ with MusiQ	
5	1 pre-fade Aux send	
6	1 FX send	
7	Stereo returns & playback	
8	All inputs with level control	
9	12 bar meters	
10	Responsive 3-band, swept mid EQ with MusiQ	
11	2 stereo sources with MP3 player compatibility	
12	Separate 2-track record outputs	
13	Stereo playback input for 2-track replay	
14	XLR main stereo outputs with inserts	
15	Comprehensive monitoring	
16	Configurable USB stereo audio in/out	
17	Stereo monitor outs	

E	Tripod Camera Stand	
Sl. No.	**Description**	**Compliance**
	Model	
1	Tripod Camera Stand for Video Conference Equipment -2 feet to 5 feet adjustable.	
2	Material : Aluminum, ABS, POM, PC, and PS	
3	Load capacity : Approx. 3.00 Kg	
4	Panning Angle : 360 degrees	
5	Adjustable height and three-way head allow for creative camera angles	
6	Reputed Make.	
F	**Ultra Short Throw Projector for Class rooms**	
Sl. No.	**Description**	**Compliance**
	Model	
1	1 DLP Projector, Full HD or higher	
2	10000 : 1 Contrast Ratio	
3	Ultra Short Throw Projector, 3000 ANSI Lumens or higher.	
4	Computer Compatibility UXGA, SXGA, WXGA, HD, XGA, SVGA, VGA, Mac	
5	Inputs HDMI, VGA, Composite, Audio, RJ45, RS232, Mic, USB Remote	
6	Projection Distance less than 0.6 m	
7	Throw Ratio 0.25:1, Fixed Zoom lens	
8	Aspect Ratio 16:9 Native, 4:3 Compatible	
9	Should support 3D, 100" image size	

| 10 | Power Consumption 310W Bright mode / 260W Eco mode | |
| 11 | 100-240 V 50/60 Hz Power Supply | |

G	Dual Purpose White Board	
Sl. No.	Description	Compliance
	Model	
1	Dual purpose white board of size 7 feet* 5 feet or higher	

H	EQUIPMENT RACK 19U or above	
Sl. No.	Description	Compliance
	Model	
1	Floor mount with four wheels & Stopper	
2	6/8 Power Socket	
3	Front door (Transparent) with lock & key with all standard accessories	
4	02 * Equipment Tray	
5	02 * 230v AC Fans 90 CFM	
6	Cable manager	
7	Reputed Make	

I	Connectors and Other accessories	
Sl. No.	Description	Compliance
	Model	
1	Connectors and Other accessories - as per the requirement.	

ELIGIBILITY CREITERIA

Sl No	Pre Qualification Criteria	Documents
1	Bidder should be Central / State Government organizations including Autonomous organizations, TSPs or PSUs	Copy of valid Registration Certificates
2	Turnover shall be minimum of average 5 cr during the last 3 financial years (2015-2016, 2016-2017 and 2017-2018).	CA Certified Balance sheet. Proof to be attached.
3	The bidder should have a registered number of i. GST where his business is located ii. Income Tax / PAN number.	Copies of relevant certificates of registration
4	Should have executed similar nature of projects in the last three financial years	1. Copy of work order. 2. Completion report or Self declaration certificate of the submitted work orders
5	Should have an office in Kerala	Documentary proof
6	Should not have been blacklisted by any of the Government entities under state / central government.	Self-certificate
7	Bidder should be ISI certified, ISO 9001-14001	Produce valid certificates

Sl No	Item	Specification	GST %	Qty	Rate	Amount
1	VC Equipment	Polycom RealPresence Group 500				
2	Mic	Dual Boundary Wireless Mic				
3	Powered Speakers 8" Questa	Powered Speaker -Questa -150W program, 300W peak, 80-20kHz, 8" High Power Woofer, 1.4" Ferrite Compression Driver Tweeter				
4	Audio Mixer (Allen & Heath)	Analog Mixer 4 channel				
5	Camera stand	Tripod camera stand.				
6	Projector	Full HD (1920x1080) Ultra Short Through Projector having 3500 lumen or higher with 100" image size with DLP technology.				
7	White Board	Dual Purpose White Board: 6feet * 4 feet, 18MM thickness White board Dual purpose (Marker board and projection board) with out reflection				
8	Equipment Rack	Wall mount enclosure 19U				
9	Accessories	Connectors & other accessories				
10		Warranty/Maintainance Charges for 3 years after regular warranty period.				

Place:

Date:

Name of the Bidder …………………………………….

Address …………………………………….

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Telephone No …………………………………….

E - Mail ID …………………………………….

EARNEST MONEY AND TENDER DOCUMENT COST: Earnest Money/Bid security should be 2.5% of the bid amount in the form of Demand Draft payable at Tirur or Bank Guarantee in the prescribed format from a Scheduled Bank, in favour of Malayalam University, shall be submitted along with the tender.

TENDER DOCUMENT FEE: Tender document fee is Rs. 500/- (Rupees Five hundred Only). In case bidder has downloaded the tender document, the same has to be submitted in form of Demand Draft in favour of Malayalam University, payable at Tirur.

Micro and Small Enterprises registered with the NSIC/MSME are exempted from submission of tender document fee on production of requisite proof in the form of valid certification from NSIC/MSME etc. for the tendered item/services in accordance to the MSME Act. Micro and Small Enterprises entitled for the above exemption for which submission of valid Memorandum certificate is mandatory.

The tender fulfilling all conditions detailed above should reach the under singed on or before **7th May 2019 2.00 PM**, and the instillation of the Video Conferencing system should be completed before **10th May 2019.**

For further information please contact Phone No. 0494 – 2631230

Dr. T. ANITHAKUMARY
Registrar in Charge