CIPET: SCHOOL FOR ADVANCED RESEARCH IN POLYMERS (SARP)- ARSTPS

GOVERNMENT OF INDIA

SECTION - I

SUPPLY, INSTALLATION, COMMISSIONING & TESTING OF VIDEO CONFERENCE FACILITY AT HRD BLOCK

TECHNICAL BID

Tender No.	**e-TENDER No. CIPET:SARP-ARSTPS/VC/e-Ten-06/2019-20**
Items of Description	**Supply, Installation, Commissionnig & Testing of Video Conference Facility work at HRD Block, Ground Floor.**

		Particulars	**Remarks**
I	Name of the Supplier / Manufacturer		
II	Postal address		
III	Telephone No. with STD code		
IV	Fax with STD code		
V	Name of Contact person		
VI	Mobile No.		
VII	e-mail ID		
	BELOW GIVEN DOCUMENTS TO BE SCANNED AND UPLOADED IN THE WEBSITE www.tenderwizard.com/CIPET WITHIN THE PERIOD OF SUBMISSION.		
1	**Certificates:**		
	i) PAN (Permanent Account Number) Registration		
	ii) Certificates of Registration for GST.		
	iii) Authorization certificate from OEM (if not manufacturer)		
	iv) Turn over details past 3 years (min.50 Lakhs / Per Year)		
	Commericial Terms for Quoted items (Please Provide Commercial terms and conditions in the below form)		
2	Validity of offer		
3	The Commerical quote should be **INR** only		
4	**Terms of Payments :- 100% payment** for actual Supply, Installation, Commissioning & Testing of Video Conference Work and other incidental services at site and submission of acknowledgement and report issued by the Purchaser's representative.		
6	Delivery period (in days)		
7	Guaranty / Warranty(Please Indicate the Period)		
8	Whether All Documents Relating to tender Viewed		

TECHNICAL SPECIFICATIONS

S. No	**Descriptions**	**CIPET Specification**	**BIDDERS SPECIFICATIONS /**
I	**VIDEO CONFERENCE**		
	Package	HD Codec, HD camera, Omni Directional Microphone, Cables and Wireless Remote Control	
	General	OEM must be present in India and doing video conference business for minimum 10 years	
		H.323 and SIP Compliant	

	Protocols: Image Compression Method/ Video standards and protocols	H.261, H.263, H.264 AVC, H.264 High Profile, H.264 SVC, RTV. The system should support higher Video Compression protocols such as H.264 High Profile/H.265 H.263 & H.264 Video error concealment	
	Other supported standards	H224/H.281, H.323 Annex Q, H.225, H.245, H.241, H.239, H.243, H.460, BFCP (RFC 4582) & TIP	
	Audio Cpmpression Method	G.711, G.728, G.729A (3.4khz), G.722, G.722.1(7 kHz), G.722.1 Annex C (14 kHz) & AAC-LD	
	Remote Camera Control	H.281 far end camera control	
	Encription	Media Encryption (H.323, SIP): AES-128, AES-256 as well as H.235.6 support	
	Security		
	Video Inputs	It should have 1 x Full HD Camera Interface.	
		It should have another inbuilt 2 x HDMI/DVI/VGA port for PC, Document Camera etc.	
	Video Outputs	It should have atleast 2 x HDMI/DVI ports to connect displays.	
	People Video Resolution	• 1080p, 60 fps from 1740 Kbps	
		• 1080p, 30 fps from 1024 Kbps	
		• 720p, 60 fps from 832 Kbps	
		• 720p, 30 fps from 512 Kbps	
		• 4SIF/4CIF, 60 fps from 512 Kbps	
		• 4SIF/4CIF, 30 fps from 128 Kbps	
		• SIF (352 x 240), CIF (352 x 288) from 64 kbps	
		• QSIF (176 x 120), QCIF (176 x 144) from 64 kbps	
		• w288p from 128 Kbps	
		• w448 from 384 Kbps	
		• w576p from 512 Kbps	
	Main Video Resolutions	Shall work in high definition video resolution of 1080p@60fps for live video for both Transmit and receive.	
	Content Resolutions	The system should support 1080p@30fpss content along with 1080p@30fps Main Video Upgradable to support 1080p@30fps	
	Camera	1280 x 1080p CCD/CMOS imager	
		Optical Zoom - 10x or more	
		PAN Range - +/- 100 Degrees	
		TILT Range - +20 Degrees / - 20 Degrees	
		Field of View - 65 Degrees or Higher Horizantal FOV	
		Camera should be supplied with cable of min. 3 mts.	
		Camera should be able to upgrade in future to support automatic speaker tracking and framing of participants from same OEM	
	Audio Inputs	It should support 4 nos of Powerful High-fidelity Omnidirectional Microphones either directly or through array & One nos of Powerful High-fidelity Omnidirectional Microphones should be supplied from day one along with minimum 25 feet cable.	
		It should have atleast 1 x HDMI port for Audio input	
		It should have additional Audio Input for PC Audio (1 x 3.5 mm stereo line-in)	
	Audio Outputs	It should have atleast 1 x HDMI port	
		It should have atleast 1 x 3.5mm/RCA Stereo Line-Out port	
	Network	Should have 100/1000 Mbps auto speed Ethernet port	
		Should support both IPv4 and IPv6	
		Support Data Rate of 6 Mbps or more on IP (H.323 and SIP)	
		System should have LPR technologies from day one	

	Multipoint	The system should have capability to connect to 5 more locations @ 720p30, excluding the main location using the inbuit S/W capabilities	
	Other Ports	Serial/Ethernet control port for integrating with external control system	
	Other Features	Should be capable to support Touch Screen Interface directly	
		Should support QOS (Quality of Service) definitions	
		Global Directory / Centralized directory support	
	Power	Should operate on 230v, 50 Hz Power supply	
	Operating temperature	Operating temperature: 0 to 40 ℃	
II	**SWITCHER**	**CIPET Specification**	**BIDDERS SPECIFICATIONS /**
	Video Input & Output		
	Interface	4 x HDMI Type A Female (Black)	
	Video		
	Max Data Rate	10.2 Gbps (3.4 Gbps Per Lane)	
	Max Pixel Clock	340 MHz	
	Compliance	HDMI (3D, 4K, Deep Color)	
		HDCP 1.4 Compatible	
		Consumer Electronics Control (CEC)	
	Max Resolution	Up to 4096 x 2160 / 3840 x 2160 @ 60 Hz (4:2:0); 4096 x 2160 / 3840 x 2160 @ 30 Hz (4:4:4)	
	Max Distance	Up to 15 m	
	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	
	USB	1 x Micro USB, F/W Upgrade	
	IR	1 x Mini Stereo Jack Female (Black)	
	EDID Settings	EDID Mode: Default / Port1 / Remix	
	Power		
	Connectors	1 x DC Jack (Black)	
	Consumption	5 VDC, 10.58 W	
	Environmental		
	Operating Temperature	0° to 40° C	
	Storage Temperature	-20° to 60° C	
	Humidity	0 - 80% RH, Non-Condensing	

III	**DE-EMBEDDER**	**CIPET Specification**	**BIDDERS SPECIFICATIONS /**
	Video Input & Output		
	Interface	1 x HDMI Type A Female (Black)	
	Video		
	Max Data Rate	6.75 Gbps (2.25 Gbps Per Lane)	
	Max Pixel Clock	225 MHz	
	Compliance	HDMI (3D, 4K, Deep Color)	
		HDCP 1.4 Compatible	
	Max Resolution	1920x1080p	
	Output	1 HDMI Female, 1xToslink (Black),1xRCA(Orange), 2xRCA(Red/white)	
	Power		

	Connectors	1 x DC Jack (Black)	
	Consumption	5.3VDC, .8 W	
	Environmental		
	Operating Temperature	0° to 50° C	
	Storage Temperature	-20° to 60° C	
	Humidity	0 - 80% RH, Non-Condensing	

IV	**WIRELESS PRESENTER**	**CIPET Specification**	**BIDDERS SPECIFICATIONS /**
	Operating system	Windows 7/8/8.1/10 32 & 64 bit macOS 10.12/10.13/10.14 (Mojave) Android v7; v8 & 8.1 (ClickShare app) iOS 10; 11 &12 (ClickShare app)	
	Video outputs	1x HDMI	
	Frame rate	Up to 30 fps	
	Output resolution	1920x1080	
	Noise Level	Fanless	
	Number of sources simultaneous on screen	1	
	Number of simultaneous connections	8	
	Audio	Via HDMI, analog via Audio Jack 3.5mm	
	iPad, iPhone and Android compatibility	Sharing of documents, browser, camera for both Android and iOS devices ClickShare app	
	Extended desktop	Available (depending on your operating system). May require ClickShare Extension Pack.	
	Authentication protocol	WPA2-PSK in stand alone mode	
	Wireless transmission protocol	IEEE 802.11 a/g/n	
	Reach	Adjustable with signal strength modulation; max. 30m (100 ft) between ClickShare Button and ClickShare Base Unit	
	Frequency band	2.4 GHZ and 5 GHz (DFS channels not supported)	
	Connections	1x Ethernet LAN 100Mbit	
		1x (back) + 1x (front) USB	
		Audio analog line out on mini jack socket (3.5mm)	
	Temperature range	Operating: 0°C to +40°C (+32°F to +104°F)	
		Max: 35°C (95°F) at 3000m	
		Storage: -20°C to +60°C (-4°F to +140°F)	
	Humidity	Storage: 0 to 90% relative humidity, non-condensing Operation: 0 to 85% relative humidity, non-condensing	
	Anti-theft system	Kensington lock	
	Certifications	FCC/CE	
	Warranty	3 years standard	
	Power consumption	Operation: 6W (typical) / 18W (max)	
		Standby: 2.6W (ECO standby) / 0.4W (Deep standby)	

	HANDHELD MIC	**CIPET Specification**	**BIDDERS SPECIFICATIONS /**
	Microphone Type	Dynamic (moving coil)	
	Polar Pattern	Cardioid (unidirectional)	
	Frequency Response	60 to 15,000 Hz	
	Polarity	Positive pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of microphone output connector	
	Output Impedance (at 1000 Hz)	300 ohms	
	Sensitivity (at 1000 Hz)	-53 dBV/Pa, (2.2 mV), 1 Pascal=94 dB SPL	
	Electromagnetic Hum Sensitivity	26 dB equivalent SPL in a 1 millioersted field (60 Hz)	
V	Switch	Built-in On/Off switch	

	Connector	Three-pin professional audio connector (male XLR type)	
	Case	Die cast metal handle, black matte finish; hardened silver colored, spherical steel mesh grille	
	Environmental Conditions	This microphone operates over a temperature range of -29 to 57 degrees Celsius (-20 to 135 degrees Fahrenheit), and at a relative humidity of 0 to 95%.	
	Weight	Net: 321 g (11.3 oz)	
		Packaged: 908 g (2 lb)	

VI	COLLAR MIC	CIPET Specification	BIDDERS SPECIFICATIONS /
	Type	Electret Condenser	
	Frequency Response	50 to 20,000 Hz	
	Polar Pattern	Unidirectional (Cardioid)	
	Output Impedance	600 Ω	
	@ 1 kHz, typical		
	Audio Output Level	-43.5 dBV/Pa	
	Signal-To-Noise Ratio[1]	72 dB	
	@ 1 kHz		
	Maximum SPL[1]	139.0 dB	
	1000 Ω load, @ 3% THD		
	Dynamic Range[1]	117.0 dB	
	@ 1 kHz, 1000 Ω load		
	Equivalent Output Noise[1]	22 dB	
	Typical, A-Weighted		
	Power Requirements	+5 V DC (nominal), 10 V maximum (DC bias)	

VII	AMPLIFIER	CIPET Specification	BIDDERS SPECIFICATIONS /
	Output	120W @ 4/8 Ohms (1kHz Power, THD+N<0.5%)	
	Frequency Response	+/- 1dB (@1W into 4 or 8 Ohms)	
	Load Impedance	Stable from 2 - 16 Ohms	
	Sensitivity	1.4Vrms	
	Signal to Noise Ratio	Greater than 100 dB - 1kHz, A-weighted	
	Input Impedance	Balanced 20K Ohms/Unbalanced 10K Ohms	
	Max Input	+20dBu Typical	

VIII	CEILING MIC	CIPET Specification	BIDDERS SPECIFICATIONS /
	CEILING MIC	360-degree directional pickup	
		Three cardioid elements per microphone – elements spaced 120 degrees apart	
		Each Ceiling Microphone Array covers a 24’ diameter	
		Total coverage area for a single Ceiling Microphone Array is 400 square feet	
		Dynamic microphone steering	

		Full-duplex digital audio	
		Instant adaptation echo cancellation	
		Automatic noise suppression (ANS)	
		Automatic gain control (ACG	

IX	DSP	CIPET Specification	BIDDERS SPECIFICATIONS /
	Full stereo Acoustic Echo Cancellation	• Eliminates echoes while maintaining full stereo separation with remarkable clarity	
	(AEC) to 22 kHz	• Completely transparent echo canceller experience even during doubletalk with multiple independent audio sources	
	Immersive audio experience	• Stereo separation makes it possible to be “in the middle” of the audio and understand where remote participants are seated	
	Powerful gain sharing automixer	• Provides additional flexibility and smoother transitions to ensure robust performance in a variety of operating environments	
	Dynamics processing	• Compensates for level variation on telco and video calls to improve system sound in even the most acoustically challenging environments	
	Unrivaled noise cancellation technology	• Eliminates background noise, even in extremely challenging rooms	
	Comfort noise	• Background noise fill used for more natural sounding conferencing	
	Analog gain control	• Adjusts input gains in the analog domain to maximize signal-to-noise ratio and eliminate background hiss	
	Fast, responsive Automatic Gain Control (AGC)	• Seamless gain adjustments are transparent to participants	
	Modular telephony slot	• Configurable telephony options for added flexibility and investment protection for future technology	
	Input & Output Slots	12 inputs/12 outputs slots	
	Inegration	Digital integration with VC	