

Pre Bid Reply

Bidder No 01

Pre-bid Query			Reply
	Tender Clause 3: Similar Work		
	For the purpose of this clause, "similar work" shall mean "Augmented Reality, Virtual Reality, Audio & Visual" works for buildings like Libraries/ Museum/ Offices/ /Auditoriums/ IT Parks / Research and Development center's / Universities / Colleges including IT & LAN Networking, DMX controller etc within a single order in last seven years in India"	Kindly remove the Augmented Reality, Virtual Reality from the similar work	NIT conditions prevail
S/N	Tender Specifications		Remarks / Query
	DESIGN AND SITC OF HDMI TWISTED PAIR RECEIVER WITH 4k COMPATIBLE:		
1	SITC of HDMI Twisted Pair Receiver, for receiving HDMI, control and analog audio up to 230 feet (70 meters) over a shielded CAT6 cable; Input: One CAT6 twisted pair input on RJ-45; Outputs: One HDMI and one Audio; the device shall be HDCP compliant and with EDID support WITH 4k COMPATIBLE.	Kindly clarify the necessity of providing analog audio output in every receiver, when the required analog audio is already being provided from the matrix switcher to the Audio DSP. Since both the matrix switcher and the DSP are installed within the same AV rack, this approach is more practical and simplifies the connectivity.	It will depend on the design and this technical specification has been given for reference that if design will be confirming to the analog audio output in receiver in such case this will be required and referred. NIT condition prevails
	The device shall receive HDMI plus control signal up to 230 feet (70 meters) over a shielded twisted pair CAT6 cable		
	Input: 1 x twisted pair on RJ-45		
	Outputs: 1 x HDMI with audio		
	Shall be able to accept additional RS232 and IR signals over CAT6 cable		
	Video standards supported: the unit shall be EDID & HDCP compliant		
	TABLE TOP MOUNTABLE DOCUMENT CAMERA		
	SITC of Full HD/1080p, Table Top Mountable Document Camera with minimum 14 x optical zoom — 1 x HDMI or DVI output and 1 x LAN port. DVI models shall be acceptable with external DVI to HDMI convertor interface unit or cable.	Kindly change it to 4K as all latest documents cameras supports 4K. Even the Ceiling Mount Document Camera mentioned above in the tender is 4K.	For display the 4K is being accepted and the corrigendum is being issued.
	Type: Full HD/1080p Document Camera, Ceiling mounting	Kindly remove Ceiling Mounting	
11	Output Resolution: XGA (1024 x 768), SXGA (1280 x 1024), UXGA (1600 x 1200), WXGA (1280 x 800), HD720p and Full HD 1080p	Given specs is for ceiling mount camera, kindly revise the specs as per table mount document camera	This is subject to confirmation of the design, as per the design solutions this may be required or may not be depend on the solution by EPCC System Integrator/Contractor.
	Frame Rate: Up to 30 fps or better with all resolutions		
	Zoom Capacity: Minimum 14 x optical zoom or better		
	Output Interfaces : 1 x HDMI preferred or 1 x DVI with DVI to HDMI cable adaptor inclusive		
	Protocols: Ethernet or RS-232 as either RS-232 port on 9-pin D-Sub or via RJ-45 connector		
	Power Supply: POE preferred or else via OEM's adaptor		
	Type of mounting: table top, movable.		
	ULTRA SHORT THROW PROJECTOR, if required subject to the design approval.		

	SITC of Ultra Short Throw Projector - 3LCD Technology, minimum ANSI 6000 Lumens, 16:9 Aspect Ratio, WXGA 1280 x 720 Native Resolution, Minimum Ports - 1 x HDMI, 1 x D-Sub 15 pin VGA + 3.5 mm Audio Jack, 1 x wired (RJ-45) LAN Port or wireless connectivity for configuration, 1 x USB or 1 x RS232 for control. The projector shall be complete with mounting brackets and all such accessories for mounting including poles/rods for ceiling installation, as may be required.		Kindly Remove the 3LCD and ADD the DLP, As the DLP is the latest technology and all the reputed brands manufacture the DLP projector	Suggestion Accepted, to be read as amended
14	Inclusive of standard or optional lens as per OEM to project on a 120" diagonal size screen.			
	Should support wall installation, and shall be supplied with all requisite mounting accessories such as brackets, rods and cables			
	Lens specification: It should permit projection on an approximately 120" diagonal projection screen. This may be a standard or optional accessory; however, cost for the same shall be inclusive.			
	Brightness: Minimum 6000 ANSI lumens or better		Kindly change it to 6000 ISO Lumens or better	Both will be accepted
	Resolution: Preferably 4K, or if 4K not available in the market then FHD (1920 x 1080) or better with 16:9 Aspect ratio			
	Supported Interfaces: 1 x HDMI, 1 x VGA on 15 pin, 1 x 3.5 mm audio, 1 x Wired (RJ45) or Wireless LAN for configuration, 1 x RS232 or 1 x USB for control.			
	MINIMUM 10,000 LUMENS PROJECTOR			
	SITC of Laser type Projector - Minimum 10,000 ANSI Lumens, 16:9 Aspect Ratio, Resolution : UHD/4K, Minimum Ports - 1 x HDMI, 1 x D-Sub 15 pin VGA + 3.5 mm Audio Jack, 1 x HDBaseT (RJ-45) for receiving video over CAT6 or twisted pair, 1 x wired (RJ-45) LAN port or wireless connectivity for configuration; 1 x USB or 1 x RS232 for control. The projector shall be complete with mounting brackets and all such accessories for mounting including poles/rods for ceiling installation, as may be required.		Kindly Remove the ANSI and ADD the DLP, As the DLP is the latest technology and all the reputed brands manufacture the DLP projector	Suggestion Accepted, to be read as amended
15	Inclusive of standard or optional lens as per OEM to project on a 200".			
	Type of projection technology: Laser based			
	Should support ceiling suspended installation, and shall be supplied with all requisite mounting accessories such as brackets, rods and cables			
	Lens specification: It should permit projection on an approximately 200" diagonal screen; however, cost for the same shall be inclusive			
	For providing projection on a High Gain Material Tubular Motorized Projection screen of size approximately 200" diagonal having aspect ratio of 16:9			
	Brightness : Minimum 10,000 ANSI lumens or better		Kindly change it to 10000 Lumens or better	Accepted
	Resolution : UHD (4K) or better with 16:9 Aspect ratio			
	Supported Interface : 1 x HDMI, 1 x HDBaseT (RJ-45), 1 x VGA on 15 pin, 1 x 3.5 mm audio, 1 x Wired (RJ45) or Wireless LAN for configuration, 1 x RS232 or 1 x USB for control.			
17	UHF Wireless Lapel Microphone			
	SITC of UHF True Diversity Wireless Microphone System consisting of - 1 x Receiver, 1 x Lapel Microphone with body pack; RF Frequency Range - as per respective OEM, however, minimum 8 or higher pre-programmed selectable channels per frequency range shall be available in the receiver; Polar Pattern : Cardioid / Hyper-cardioid / Super-cardioid; THD : <0.9% or better; RF Power : 20mW or better; S/N Ratio : >100 dB or better, PLL synthesized technology, complete with all cables and standard accessories. (All cables shall be original OEM supplied)		Kindly remove the specification 'PLL synthesized technology,' as this requirement appears to favor a particular brand and may limit broader compliance and fair competition.	The equivalent may also be accepted.
	The wireless microphone system shall support simultaneous operation of 4 or more wireless microphones per room/area.			
	Diversity: True diversity or better			
	Frequency response: 80Hz to 15 KHz			
	Radiated Transmitter Power: Min. 20mW or better			
	Transducer Type: Condenser			
	Polar pattern: Omni Directional			
	S/N ratio: >100dB or better			
18	UHF Wireless Head-worn Microphone			

	SITC of UHF True Diversity Wireless Microphone System consisting of - 1 x Receiver, 1 x Head-worn Microphone with body pack; RF Frequency Range - as per respective OEM, however, minimum 8 or higher pre-programmed selectable channels per frequency range shall be available in the receiver; Polar Pattern : Cardioid / Hyper cardioid / Super-cardioid; THD : <0.9% or better; RF Power : 20mW or better; S/N Ratio : >100 dB or better, PLL synthesized technology, complete with all cables and standard accessories. (All cables shall be original OEM supplied).		Kindly remove the specification ' PLL synthesized technology, ' as this requirement appears to favor a particular brand and may limit broader compliance and fair competition.	The equivalent may also be accepted.
	The wireless microphone system shall support simultaneous operation of 4 or more wireless microphones per room/area.			
	Diversity: True diversity or better			
	Frequency response: 80Hz to 15 KHz			
	Radiated Transmitter Power:Min. 20mW or better			
	Transducer Type: Condenser			
	Polar pattern:Cardioid			
	S/N ratio: >100dB or better			
19	UHF Wireless Handheld Microphone			
	SITC of UHF True Diversity Wireless Microphone system consisting of - 1 x Receiver, 1 x Handheld Microphone with transmitter; RF Frequency Range - as per respective OEM, however, minimum 8 or higher pre-programmed selectable channels per frequency range shall be available in the receiver; Polar Pattern : Cardioid / Hyper cardioid / Super-cardioid; THD : <0.9% or better; RF Power : 20mW or better; S/N Ratio : >100 dB or better, PLL synthesized technology, complete with all cables and standard accessories. (All cables shall be original OEM supplied).		Kindly remove the specification ' PLL synthesized technology, ' as this requirement appears to favor a particular brand and may limit broader compliance and fair competition.	The equivalent may also be accepted.
	The wireless microphone system shall support simultaneous operation of 4 or more wireless microphones per room/area.			
	Diversity: True diversity or better			
	Frequency response: 80Hz to 15 KHz			
	Radiated Transmitter Power:Min. 20mW or better			
	Transducer Type: Dynamic			
	Polar pattern:Cardioid			
	S/N ratio: >100dB or better			
20	12 x 8 AUDIO DSP (with AEC feature)			
	SITC of 12x8 DSP - Digital Matrix Processors, with 12 mic/line inputs and 8 outputs with AEC - Acoustic Echo Cancellation features.			
	No. of Inputs Channels: should have minimum 12 mic/line inputs			
	Audio Input DC Phantom Power: should have +48 VDC			
	Audio Output Interface: should have minimum 8 balanced/unbalanced outputs			
	Acoustic echo cancellation (AEC) shall be supported			
	Control Interface: Minimum 1 x RJ-45 based Ethernet port supporting TCP/IP at minimum 100Mbps or 1 x RS232 or 1 x USB port for control and configuration.			
	Gain : should have unbalanced output: -6 dB; balanced output: 0 dB			
	Frequency response : should be between 20 Hz to 20 kHz			
	THD + Noise : should have <0.01%, 20 Hz to 20 kHz			
	Input Impedance : should be minimum 8K ohm or better			
	Output Impedance : should be 210 Ohms or better		Kindly change it to Output Impedance : 200 Ohms	Subject to design confirmation
	S/N or Dynamic range : should have >104 dB, 20 Hz to 20 kHz			
	Mounting Type : should be rack mountable			
21	SITC of 6x4 DSP - Digital Matrix Processors, with 6 mic/line inputs and 4 outputs.			
	No. of Inputs Channels: should have minimum 6 mic/line inputs			
	Audio Input DC Phantom Power: should have +48 VDC			
	Audio Output Interface: should have minimum 4 balanced/unbalanced outputs			
	Control Interface: Minimum 1 x RJ-45 based Ethernet port supporting TCP/IP at minimum 100Mbps or 1 x RS232 or 1 x USB port for control and configuration			
	Gain : should have unbalanced output: -6 dB; balanced output: 0 dB			
	Frequency response : should be between 20 Hz to 20 kHz			
	THD + Noise : should have <0.01%, 20 Hz to 20 kHz			

	Input Impedance : should be minimum 8K ohm or better			
	Output Impedance : should be 210 Ohms or better		Kindly change it to Output Impedance : 200 Ohms	Subject to design confirmation
	S/N or Dynamic range : should have >104 dB, 20 Hz to 20 kHz			
	Mounting Type : should be rack mountable			
22	Ceiling Mount Speaker			
	SITC of full-range or 2-way minimum 4" ceiling mount loudspeaker, 4/8 ohms or 70V/100V operation, Frequency Response - 80 Hz - 19 kHz (-10dB), Power handling@70/100V : 30W or better, Sensitivity : SPL/W@1 Mtr - 86 db or better, Max SPL@1 Mtr - 100dB or better and inclusive of all mounting brackets, assemblies, hardware and standard accessories.		Kindly revise the Frequency Response specification to 80 Hz – 17 kHz (-10 dB) to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Frequency range (-10dB) : should be between 80 Hz to 19 kHz or better		Kindly revise the Frequency Response specification to 80 Hz – 17 kHz (-10 dB) to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Power Rating : minimum 30 W or better			
	Maximum Peak SPL @ 1m : 100dB or better			
	Drivers: Full range driver or 2-way - minimum 1 x 4" LF Driver & minimum 1 x 0.75" HF Driver		Kindly make it 1x 0.75" HF Driver Optional	NIT conditions prevails, the wall /ceiling mount speakers both may be considered subject to design confirmation inline with the interior.
	Coverage (conical): 100 degrees or higher			
	Sensitivity 1W @1m : 86dB or better			
	Impedance : 4/8 Ohms or 70/100V tapping operation			
24	Column Loudspeaker (Rating Confirming to the design requirement and approval of EIC)			
	SITC of full-range 150W or better confirming to the design requirements column type left and right loudspeaker, 8 ohm impedance, frequency response : 120 Hz - 16 KHz, Sensitivity : SPL/W@1 Mtr - 85 dB SPL or better, Max SPL@1 Mtr - 100 dB or better and inclusive of all mounting brackets, assemblies, hardware and standard accessories.		Kindly revise the Frequency Response specification to 120 Hz – 15 kHz (-10 dB) to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Frequency range : should be between 120 Hz to 14 kHz or better		Kindly revise the Frequency Response specification to 120 Hz – 15 kHz (-10 dB) to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Power Rating (Average) : minimum 150 W or better confirming to the design requirements			
	Power Rating (Max/Peak): minimum 600 W or better confirming to the design requirements			
	Maximum Peak SPL @ 1m : 100dB or better confirming to the design requirements			
	Sensitivity 1W @ 1m : 85dB or better confirming to the design requirements			
	Coverage (conical): 125H x 20V degrees or better confirming to the design requirements		Kindly revise the Frequency Response specification to Coverage: 120H x 20V degrees or better to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Driver : should be full range type or three way driver			
	Impedance : 8 Ohms or better confirming to the design requirements			
25	Four Channel Power Amplifier 4 x 250 W or better confirming to the design and approval of the EIC.			
	SITC of Class D Power Amplifier, 4 x 250 W, selectable 4/8 ohms or 70/100V operation, Power @ 70/100V: 500W or better, supporting short circuit, thermal, and under-voltage protection, 1U/2U form factor. Or the better specification confirming to the design requirements duly approved by the EIC.			
	Frequency Response : should be between 40 Hz to 20 KHz or better confirming to the design requirements			
	No. of Channels : should have minimum 4 channels			
	Output Power per Channel: minimum 250 Watts per channel			
	selectable 4/8 ohms or 70/100V operation			
	S/N Ratio : minimum 98dB or higher			
	THD 20 Hz - 20 kHz, 1 W: less than 0.4%			

	Channel Separation (Crosstalk) : 64dB or better			
	Input Impedance : minimum 20kOhms or better		Kindly make the Input Impedance : minimum 10k-20kOhms or better to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Amplifier Class : Class D Amplifier			
	Cooling requirement : temperature level controlled fans for front to rear airflow			
	Protection : should have overload protection, mains under-voltage and over- voltage protection			
26	Dual Channel Power Amplifier 2 x 60 W or higher rating confirming to the design requirements			
	SITC of Dual Channel Class D or Class AB Power Amplifier, 2 x 60 W @ 8 ohms, Comprehensive short circuit, thermal, and under-voltage protection, 1U/2U form factor. Or higher rating confirming to the design requirements.			
	Frequency Response : should be between 40 Hz to 20 KHz			
	No. of Channel : should have minimum 2 Channels			
	Output Power per Channel: minimum 60 Watts per channel at 8 ohms			
	S/N Ratio or dynamic range : minimum 75dB or higher			
	Total Harmonic Distortion : less than 0.5%			
	Channel Separation (Crosstalk) : 60dB or better		Kindly change it to 58 dBu	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Input Impedance : minimum 10kOhms or better			
	Amplifier Class: Class AB or Class D			
	Cooling requirement : minimum 1 fan for front to rear airflow			
	Protection : should have overload protection			
31	CORDED VOCAL MICROPHONE			
	SITC of Corded Vocal Microphone with Dynamic Neodymium Magnet microphone element, with frequency response 80Hz-16kHz, Cardioid, Super-Cardioid polar pattern or better pattern, sensitivity of min. 2.2mV/Pa or better and min. impedance 600 ohm or better including microphone stand.			
	Frequency response: 80Hz to 15 KHz			
	Transducer Type: Dynamic			
	Polar pattern: Cardioid, Super-Cardioid or better			
	Connection: 3-pin XLR			
32	1x12" OR BETTER PASSIVE LOUDSPEAKER OR HIGHER RATING CONFIRMING TO THE DESIGN REQUIREMENTS			
	SITC of 1x12" or better passive loudspeaker having 70Hz - 16kHz (-10dB), Max. SPL: 126dB SPL, Coverage (H X V) 90 X 60 degree, Power handling capacity: minimum 800 Watts or better. Inclusive of all mounting brackets, assemblies, hardware and standard accessories for portable/outdoor application.			
	Frequency range : should be between 70 Hz to 16 kHz or better			
	Power handling capacity (Max/Peak) : minimum 800 W or better			
	Maximum Peak SPL @ 1m : 126dB or better			
	Sensitivity 1W @ 1m : 93dB or better			
	Coverage (conical): 90H x 60V degrees or better			
	Driver : 1 x 12" 2-way or better			
	Impedance : 8 Ohms or better			
33	1x12" OR BETTER PASSIVE SUBWOOFER OR HIGHER RATING CONFIRMING TO THE DESIGN REQUIREMENTS			
	SITC of 1x12" or better passive subwoofer having 40Hz - 200Hz (-10dB), Max SPL 123dB SPL. Max. power handling capacity of 1600 Watts with 8 Ohm impedance. Inclusive of all mounting brackets, assemblies, hardware and standard accessories for portable /outdoor application.			

	Frequency range : should be between 40 Hz to 200 Hz or better		Kindly change the frequency range to 40-Hz to 130 Hz (-10dB),	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Power handling capacity (Max/Peak) : minimum 1600 W or better			
	Maximum Peak SPL @ 1m : 123dB or better			
	Sensitivity 1W @ 1m : 93dB or better			
	Driver : 1 x 12" or better			
	Impedance : 8 Ohms or better			
34	2 x 600 W Class D Power Amplifier OR HIGHER RATING CONFIRMING TO THE DESIGN REQUIREMENTS WITH DANTE SUPPORT.			
	SITC of Class D Power Amplifier, 2 x 600 W, selectable 8 ohms operation, Power @ 70/100V : 450W or better, supporting short circuit, thermal, and under-voltage protection, 1U/2U form factor.			
	Frequency Response : should be between 40 Hz to 20 KHz or better			
	No. of Channels : should have minimum 2 channels			
	Output Power per Channel: minimum 600 Watts per channel			
	selectable 4/8 ohms or 70/100V operation			
	S/N Ratio : minimum 98dB or higher			
	THD 20 Hz - 20 kHz, 1 W: less than 0.4%			
	Channel Separation (Crosstalk) : 64dB or better			
	Input Impedance : minimum 20kOhms or better			
	Amplifier Class : Class D Amplifier			
	Cooling requirement : temperature level controlled fans for front to rear airflow			
	Protection : should have overload protection, mains under-voltage and over- voltage protection			
36	Specifications of Lecture Recording Camera subject to confirmation of the design and specs is minimum as listed below :			
	Parameter	Specification		
	Sensor	1/1.8" 9.17MP CMOS 2160p: 59.94 / 50 / 29.97 / 25		
	Video Format	1080p: 59.94 / 50 / 29.97 / 25 1080i: 59.94 / 50 720p: 59.94 / 50 / 29.97 / 25		
	Video Output (HD) Interface	12G-SDI / HDMI 2.0 / Ethernet / USB 3.0	Kindly make all the mentioned interfaces mandatory to provide simultaneous output from each port.	Accepted
	Optical Zoom	30x		
	Digital Zoom	12x		
	Viewing Angle	63° (H) 35.4° (V) 72.3° (D)		
	Aperture	F1.6 ~ F4.8		
	Focal Length	6.5mm ~ 202mm		
	Shutter Speed	1/1 ~ 1/10,000 sec		
	Minimum Object Distance	1.5m (Wide/Tele)		
	Video S/N Ratio	> 50dB		
	Minimum Illumination	0.05 lux (F1.6, 50IRE, 30fps)		
	Focus System	Auto / Manual / Smart AF		
	Gain Control	Auto / Manual		
	White Balance	Auto / Manual		
	Exposure Control	Auto / Manual / Smart AE		
	IQ Sync	Yes		
	WDR	Yes		
	3D NR	Yes		
	Image Flip	Yes		
	Color Space AR/VR	Standard /BT.2020 / REC.709		
	Systems	FreeD		
	Tally Light	Yes		

	Panning Angle	+170° ~ -170° B552		
	Panning Speed	300°/sec		
	Tilting Angle	+90° ~ -30°		
	Tilting Speed	300°/sec		
	Preset Positions	256		
	HDMI / 12G- SDI /IP Stream IP	2160p59.94 HEVC(H.265) 4K 59.94fps H.264 1080p 59.94fps H.264 640x360 29.97fps		
	Compression	HEVC(H.265) / H.264 H.264 4K30fps MJPEG		
	USB Output	1080p30		
	USB Compression	H.264 / MJPEG RTSP / RTMP / RTMPS / MPEG-TS / SRT		
	IP Protocol PoE	PoE++ (IEEE802.3bt)		
	Audio Input	Line In / MIC In, Phone Jack 3.5mm x1		
	Audio Output	Ethernet / 12G-SDI / HDMI 2.0 / USB		
	Audio Compression Format	AAC / G.711 / PCM		
	Control Interface	RS-232 / RS-422 / Ethernet / USB 3.0/ Remote		
	Control Protocol	VISCA / VISCAIP / PELCO D / ONVIF / UVC		
	UVC	1.1		
	UAC	Yes		
38	Specification Sheet: 55-Inch 4K Professional Confidence Monitor with VESA mounting with suitable interior support			
	Display Specifications			
	Feature	Specification		
	Screen Size (Diagonal)	55" (139.7 cm)		
	Panel Technology	IPS (In-Plane Switching)	Kindly change it to IPS or VA or Direct LED, so that more bid can come and create a healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Resolution	4K UHD (3840 x 2160 pixels)		
	Aspect Ratio	16:9		
	Brightness	500 cd/m² (nits)		
	Contrast Ratio	4000:1 (Static)		
	Color Depth	10-bit (1.07 Billion Colors)		
	Viewing Angle (H/V)	178° / 178°		
	Response Time	8ms (Gray to Gray)		
	Refresh Rate	60Hz		
	Surface Treatment	Anti-Glare, Haze 25%		
	Backlight Type	Direct LED		
	Display Orientation	Landscape & Portrait		
	Expected Panel Life	50,000+ Hours		
	Operation Rating	24 hours / 7 days		
	Connectivity			
	Port Type	Quantity & Description		
	HDMI Input	2x HDMI 2.0 (HDCP 2.2 Compliant)		
	DisplayPort Input	1x DisplayPort 1.2a		
	SDI Input	1x 3G-SDI BNC		
	HDMI Output	1x HDMI 2.0 (Loop-through)		
	SDI Output	1x 3G-SDI BNC (Loop-through)		
	USB Port	2x USB 2.0 (for media playback & firmware)		
	Audio Output	1x 3.5mm Stereo Mini-Jack		
	External Control	1x RS-232C (In/Out), 1x RJ45 (LAN)		
	Mechanical & Physical			

	Feature	Specification	
	Dimensions (W x H x D)	48.9" x 28.1" x 2.5" (1241mm x 714mm x 64mm)	
	Bezel Width (T/L/R/B)	9.9mm / 9.9mm / 9.9mm / 11.5mm	
	Weight (Without Stand)	45.2 lbs (20.5 kg)	
	VESA Mounting Pattern	400 x 400 mm	
	Housing Material	Metal Chassis	
	Color	Matte Black	
	Power		
	Feature	Specification	
	Power Supply	AC 100-240V~, 50/60Hz	
	Power Consumption (Typ.)	125W	
	Power Consumption (Max)	150W	
	Power Consumption (Standby)	<0.5W	
	Special Features		
	<ul style="list-style-type: none"> • Image Flip: Horizontal and Vertical image flip for teleprompter applications. • Built-in Speakers: 2x 10W integrated speakers. • On-Screen Display (OSD): Full control over picture, color, and signal settings. • Key Lock: Disables buttons to prevent accidental changes. • Scheduler: On/Off scheduling for automated operation. 		
	<ul style="list-style-type: none"> • Control System Compatibility: Compatible with major control systems via LAN and RS-232. 		
	Environmental		
	Feature	Specification	
	Operating Temperature	0°C to 50°C (32°F to 104°F)	
	Operating Humidity	10% to 80% (non-condensing)	

Bidder No 02				
S.No	Clause	Clause Details	Query / Suggestion / Clarification	Reply
16	1.3.1	Similar Work (Single Order – 80%) One completed similar AR/VR/AV work of ₹10.80 Cr in a single order	<p>Clause 1.3.1 - Similar work (Single Order – 80%)</p> <p>Vizara Technologies Pvt. Ltd. is a DPIIT-recognized Startup and MSME, primarily engaged in advanced AR/VR research, immersive technology development, and innovation-driven experience design. The domain is highly technical and specialized, encompassing AV, AR, and VR, which involves substantial R&D efforts and custom engineering rather than repetitive execution.</p> <p>Vizara is working in the spirit of innovation and is an R&D partner of IIT Delhi, and is presently executing major institutional projects such as Nalanda Museum Upgradation (approx. ₹14 Cr), NIMHANS (approx. ₹35 Cr), and has successfully completed Hampi Project (approx. ₹3 Cr). Such projects are typically awarded through multiple or ongoing work orders, rather than a single consolidated order.</p> <p>Given that AR and VR are emerging and highly specialized domains, and considering that the present tender involves a combination of AV with AR/VR, it is rare for any single agency to possess executed credentials of such magnitude under a single work order. Further, AR and VR are fundamentally different disciplines requiring deep R&D capabilities.</p> <p>In view of the above, Vizara respectfully requests the Authority to accept ongoing similar works for meeting the eligibility criterion under Clause 1.3.1, or alternatively allow Joint Venture (JV) participation, or grant relaxation under MSME provisions, including reduction of the criterion to 20% of the estimated cost, in line with GeM portal provisions and MSME</p>	Kindly refer to the corrigendum is being issued
16-17	1.3.2	Average Annual Turnover Minimum ₹6.75 Cr from AR/VR/AV/IT works	<p>Clause 1.3.2 - Average Annual Turnover</p> <p>Vizara Technologies Pvt. Ltd., being a DPIIT-recognized Startup and MSME, operates in an R&D-intensive and innovation-driven AR/VR ecosystem, where project execution is highly customized, knowledge-centric, and technology-heavy rather than volume-based. Consequently, the turnover pattern in such domains does not always reflect the true technical capability, financial resilience, or execution strength of the organization.</p> <p>The firm's average annual turnover of ₹5.70 Crore is marginally around the prescribed threshold; however, Vizara is currently executing large-value institutional projects, including Nalanda Museum Upgradation (₹14 Cr) and NIMHANS (₹35 Cr), and has already completed the Hampi Project (₹3 Cr), which clearly establishes its financial soundness, project management capability, and operational stability.</p> <p>Considering the specialized nature of AR/VR work, the startup and MSME status, and the Government of India's policy thrust on promoting innovation-led MSMEs, Vizara humbly requests the Authority to relax the average annual turnover requirement under Clause 1.3.2 in line with MSME facilitation principles and startup-friendly procurement norms and inline of the Gem Guidelines.</p>	Kindly refer to the corrigendum is being issued
63-64	Form D	Performance Report of Works Referred to in 'Form C'	<p>Form-D - Performance Report of Works</p> <p>It is submitted that most Government Departments and institutional clients issue work orders and completion certificates in their prescribed standard formats and do not provide performance reports strictly as per Form-D.</p> <p>Accordingly, Vizara requests the Authority to kindly accept client-issued work orders, completion certificates, and performance certificates as valid proof of satisfactory performance for similar works referenced under Form-D.</p>	The others format may be accepted subject to confirmation of the all parameters as mentioned in Form D.

Bidder No 03

S. No.	Page / Clause Number in RFP	As per RFP	Query / Clarification	Reply
1.	File name: Library Final NIT , Page No. 11 , Tender Notice	Earnest Money: Rs. 23,50,000/- (RTGS/NEFT/50% RTGS/NEFT and 50% BG)	We request that 100% EMD may be permitted in the form of Bank Guarantee issued by a Scheduled Bank, to facilitate ease of participation.	Accepted as an alternative option of the exiting clauses and corrigendum is being issued.
	Page No. 29, Point No. 1.6.3			
		Payment of Bid Security (Earnest Money Deposit):- Rs. 23,50,000/- to be submitted through NEFT or RTGS in favour of Nalanda University to the following bank account –		
		A/c Name : Nalanda University Bank : State Bank of India Account No. : 37646810882 Branch : Rajgir Branch IFSC CODE : SBIN003499		
		Alternatively, the bidders can submit the EMD in a combination of NEFT/RTGS and Bank Guarantee. In such case at least 50% of the EMD to be submitted through NEFT/RTGS in the above mentioned bank account and the rest through Bank Guarantee issued by a Scheduled Bank in favour of Nalanda University, Rajgir, Bihar.		
2.	File name: Library Final NIT, Page No. 18 & 19	1.3.14-Online bid documents submitted by intending bidders shall be opened only of those bidders, whose original EMD Original Exempted Earnest Money Declaration proforma duly filled (Form F) and uploaded to the e-Tendering website and other documents scanned and uploaded are found in order.	Form-F does not clearly specify the basis for EMD exemption. We request clarification and confirmation that MSME exemptions for EMD are allowed as per GFR Rule 171.	Please ignore the exemption provision. EMD submission is mandatory
		1.3.15.2 The bidder does not deposit original EMD declaration form (Form F) with Nalanda University.		
		1.3.15.3 The bidder does not upload all the documents (including GST Registration) as stipulated in the bid document including the copy of receipt for deposition of Exempted EMD Declaration Performa. (Form F)		
3.	File name: Library Final NIT, Page No. 34, Clause 20	Bid Security Declaration and e-Tender Processing Fee of which hard copies are placed in Envelope 1;	Kindly clarify whether the Financial Bid is also required in hard copy, or only to be submitted online, along with tender processing fee, EMD, and eligibility documents.	The financial bid is required to be submitted online on the portal
		Eligibility documents of which hard copies are placed in Envelope 2;		
		Financial Tender of which hard copies are placed in Envelope 3, to be opened only for the bidders fulfilling necessary eligibility criteria per this tender document and accepted by NU. The date of opening of financial tender shall be intimated separately to each successful/eligible bidders evaluated on the basis of eligibility criteria.		
4.	File name: Library Final NIT, Page No. 21, Clause 1.3.32	1.3.32 The eligible bidders shall quote rate per square meter only, which shall	Kindly clarify whether the tender is a percentage rate tender or item/rate tender, and please share the financial bid format.	The tender is called under the percentage rate tender under EPCC mdoe. For price bid, kindly refer to the onlien tender portal as mentioned in the NIT
		include all components of the work as per the financial bid format.		
			Please confirm the applicable quoting method in line with Clause 1.3.32 to avoid ambiguity.	As per the price bid format
5.	File name: Library Final NIT, Page No. 32, Clause 10	The percentage rates shall be quoted by the bidder as per various terms and conditions of this document which shall form part of the agreement.		
6.	File name: Library Final NIT, Page No. 34, Clause 23	If a tenderer quotes nil rates against each item in item rate tender or does	Please confirm that percentage rate tender conditions prevail and share the Schedule-A / BOQ format.	Please refer to the price bid on the portal
		not quote any percentage above/below on the total amount of the tender of		
		any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest bidder.		
7.	File name: Library Final NIT, Page No. 98, Clause 5	This tender being a Percentage Rate Tender, contractor shall fill up the usual		
		printed form, stating at what percentage below/above (in figures as well as in		
		words) the total estimated cost given in Schedule of Quantities at Schedule-A, he		
		will be willing to execute the work. The tender submitted shall be treated as invalid if:-		

8.	File name: Library Final NIT, Page No. 70, Clause E	Maximum – 25 Marks (Based on Form-D)	Completion certificates issued by various departments are in different standard formats . We request that department-issued completion certificates in original formats be accepted .	This is subject to the all parameters mentioned in the form D.
9.	File name: Librray AV TS, Page No. 6	AR STUDIO	Kindly provide the exact location of the AR Studio within the project premises.	Kindly refer to the NIT, the same has been also explained during the site visit and pre-bid presentation.
10.	File name: Librray AV TS, Page No. 6	Four projectors mentioned for AR Studio.	Page 6 of the specification sheet mentions four projectors. Please confirm the detailed technical specifications or preferred models for these projectors.	This subject to the design confirmation by the Engineer In-Charge (EIC)
11.	File name: Librray AV TS, Page No. 14	SITC of Ultra Short Throw Projector -3LCD Technology, minimum ANSI 6000 Lumens, 16:9 Aspect Ratio, WXGA 1280 x 720 Native Resolution, Minimum Ports -1 x HDMI, 1 x D-Sub 15 pin VGA + 3.5 mm Audio Jack, 1 x wired (RJ-45) LAN Port or wireless connectivity for configuration, 1 x USB or 1 x RS232 for control. The projector shall be complete with mounting brackets and all such accessories for mounting including poles/rods for ceiling installation, as may be required.	We propose using 1-Chip DLP Laser Projectors for improved performance and longevity. Kindly confirm if this is acceptable.	Accepted and to be read as amended
12.	File name: Details of floorwise and quadrant wise, Page No. 1, Q4	Digital display system: Wall-sized digital LED display screens with seamless integration.	Kindly confirm the exact dimensions of the LED wall space.	This subject to the design confirmation by the Engineer In-Charge (EIC)
13.	File name: Librray AV TS, Page No. 38,	2x (designed rating) UPS for all AV and IT System with 30 Minutes of backup and communication port for remote monitoring –Rating confirming to the design requirement :	Please confirm the total estimated UPS load and whether a single centralized UPS or multiple UPS systems are intended.	This subject to the design confirmation by the Engineer In-Charge (EIC). This can be done quadrant or floor wise based on the voltage drop and most feasible calculation. The UPS is including wiring upto the end point.
14.	File name: Librray AV TS, Page No. 1,	A lift for carrying books for better movability throughout the G+5 floors similar to the lift installed in library of the Indian parliament. Electronic Dumbwaiter Lift.	Kindly share the exact location, shaft availability, and dimensions of the proposed dumbwaiter lift	Kindly refer to the NIT, the same has been also explained during the site visit and pre-bid presentation.
15.	NA	NA	Kindly share the AutoCAD drawings of the library/museum layouts for accurate coordination.	Kindly refer to the University web portal.
16.	File name: Library Final NIT, Page No. 11	Last date & time of Online submission of Bids	We request an extension of one week from the current bid submission deadline to incorporate pre-bid clarifications.	Kindly refer to the corrigendum issued in this regard

Bidder No 04

Pre-bid Query		Reply
	<p>Tender Clause 3: Similar Work</p> <p>For the purpose of this clause, "similar work" shall mean "Augmented Reality, Virtual Reality, Audio & Visual" works for buildings like Libraries/ Museum/ Offices/ Auditoriums/ IT Parks / Research and Development center's / Universities / Colleges including IT & LAN Networking, DMX controller etc within a single order in last seven years in India"</p>	<p>Since the nature and scope of work involved in Augmented Reality, Virtual Reality, and Audio-Visual systems are closely aligned in terms of technology integration, system design, and execution methodology, we kindly request you to consider Augmented Reality or Virtual Reality or Audio & Visual works executed in buildings such as Libraries, Museums, Offices, Auditoriums, IT Parks, Research & Development Centers, Universities, and Colleges, including IT & LAN Networking, DMX Controllers, etc., completed under a single order during the last seven years in India." as similar works.</p>
		NIT Conditions Prevails
		We also kindly request you to consider substantially completed projects as eligible under the "Similar Work" category.
S/N	Tender Specifications	Remarks / Query
1	<p>DESIGN AND SITC OF HDMI TWISTED PAIR RECEIVER WITH 4K COMPATIBLE:</p> <p>SITC of HDMI Twisted Pair Receiver, for receiving HDMI, control and analog audio up to 230 feet (70 meters) over a shielded CAT6 cable; Input: One CAT6 twisted pair input on RJ-45; Outputs: One HDMI and one Audio; the device shall be HDCP compliant and with EDID support WITH 4K COMPATIBLE. The device shall receive HDMI plus control signal up to 230 feet (70 meters) over a shielded twisted pair CAT6 cable Input: 1 x twisted pair on RJ-45 Outputs: 1 x HDMI with audio Shall be able to accept additional RS232 and IR signals over CAT6 cable Video standards supported: the unit shall be EDID & HDCP compliant</p>	<p>Kindly clarify the necessity of providing analog audio output in every receiver, when the required analog audio is already being provided from the matrix switcher to the Audio DSP. Since both the matrix switcher and the DSP are installed within the same AV rack, this approach is more practical and simplifies the connectivity.</p>
		This is subject to design confirmation. NIT Conditions prevails
11	<p>TABLE TOP MOUNTABLE DOCUMENT CAMERA</p> <p>SITC of Full HD/1080p, Table Top Mountable Document Camera with minimum 14 x optical zoom — 1 x HDMI or DVI output and 1 x LAN port. DVI models shall be acceptable with external DVi to HDMI convertor interface unit</p> <p>Type: Full HD/1080p Document Camera, Ceiling mounting</p> <p>Output Resolution: XGA (1024 x 768), SXGA (1280 x 1024), UXGA (1600 x 1200), WXGA (1280 x 800), HD720p and Full HD 1080p</p> <p>Frame Rate: Up to 30 fps or better with all resolutions</p> <p>Zoom Capacity: Minimum 14 x optical zoom or better</p> <p>Output Interfaces: 1 x HDMI preferred or 1 x DVI with DVI to HDMI cable adaptor inclusive</p> <p>Protocols: Ethernet or RS-232 as either RS-232 port on 9-pin D-Sub or via RJ-45 connector</p> <p>Power Supply: POE preferred or else via OEM's adaptor</p> <p>Type of mounting: table top, movable.</p>	<p>Kindly change it to 4K as all latest documents cameras supports 4K. Even the Ceiling Mount Document Camera mentioned above in the tender is 4K.</p> <p>Kindly remove Ceiling Mounting</p> <p>Given specs is for ceiling mount camera, kindly revise the specs as per table mount document camera</p>
		For display the 4K is being accepted and the corrigendum is being issued.
		This is subject to confirmation of the design, as per the design solutions this may be required or may not be depend on the solution by EPCC System Integrator/Contractor.
14	<p>ULTRA SHORT THROW PROJECTOR, if required subject to the design approval.</p> <p>SITC of Ultra Short Throw Projector - 3LCD Technology, minimum ANSI 6000 Lumens, 16:9 Aspect Ratio, WXGA 1280 x 720 Native Resolution, Minimum Ports - 1 x HDMI, 1 x D-Sub 15 pin VGA + 3.5 mm Audio Jack, 1 x wired (RJ-45) LAN Port or wireless connectivity for configuration, 1 x USB or 1 x RS232 for control. The projector shall be complete with mounting brackets and all such accessories for mounting including poles/rods for ceiling installation, as may be required.</p> <p>Inclusive of standard or optional lens as per OEM to project on a 120" diagonal size screen.</p> <p>Should support wall installation, and shall be supplied with all requisite mounting accessories such as brackets, rods and cables</p> <p>Lens specification: It should permit projection on an approximately 120" diagonal projection screen. This may be a standard or optional accessory; however, cost for the same shall be inclusive.</p> <p>Brightness: Minimum 6000 ANSI lumens or better</p> <p>Resolution: Preferably 4K, or if 4K not available in the market then FHD (1920 x 1080) or better with 16:9 Aspect ratio</p> <p>Supported Interfaces: 1 x HDMI, 1 x VGA on 15 pin, 1 x 3.5 mm audio, 1 x Wired (RJ45) or Wireless LAN for configuration, 1 x RS232 or 1 x USB for control.</p>	<p>Kindly Remove the ANSI and ADD the DLP, As the DLP is the latest technology and all the reputed brands manufacture the DLP projector</p> <p>Kindly change it to 6000 Lumens or better</p>
		Suggestion Accepted, to be read as amended
		Both will be accepted
	MINIMUM 10,000 LUMENS PROJECTOR	

	SITC of Laser type Projector - Minimum 10,000 ANSI Lumens, 16:9 Aspect Ratio, Resolution : UHD/4K, Minimum Ports - 1 x HDMI, 1 x D-Sub 15 pin VGA + 3.5 mm Audio Jack, 1 x HDBaseT (RJ-45) for receiving video over CAT6 or twisted pair, 1 x wired (RJ-45) LAN port or wireless connectivity for configuration; 1 x USB or 1 x RS232 for control. The projector shall be complete with mounting brackets and all such accessories for mounting including poles/rods for ceiling installation, as may be required.		Kindly Remove the ANSI and ADD the DLP, As the DLP is the latest technology and all the reputed brands manufacture the DLP projector	Suggestion Accepted, to be read as amended
15	Inclusive of standard or optional lens as per OEM to project on a 200". Type of projection technology: Laser based Should support ceiling suspended installation, and shall be supplied with all requisite mounting accessories such as brackets, rods and cables Lens specification: It should permit projection on an approximately 200" diagonal screen; however, cost for the same shall be inclusive For providing projection on a High Gain Material Tubular Motorized Projection screen of size approximately 200" diagonal having aspect ratio of 16:9 Brightness : Minimum 10,000 ANSI lumens or better Resolution : UHD (4K) or better with 16:9 Aspect ratio		Kindly change it to 10000 Lumens or better	Accepted
	Supported Interface : 1 x HDMI, 1 x HDBaseT (RJ-45), 1 x VGA on 15 pin, 1 x 3.5 mm audio, 1 x Wired (RJ45) or Wireless LAN for configuration, 1 x RS232 or 1 x USB for control.			
17	UHF Wireless Lapel Microphone SITC of UHF True Diversity Wireless Microphone System consisting of - 1 x Receiver, 1 x Lapel Microphone with body pack; RF Frequency Range - as per respective OEM, however, minimum 8 or higher pre-programmed selectable channels per frequency range shall be available in the receiver; Polar Pattern : Cardioid / Hyper-cardioid / Super-cardioid; THD : <0.9% or better; RF Power : 20mW or better; S/N Ratio : >100 dB or better, PLL synthesized technology, complete with all cables and standard accessories. (All cables shall be original OEM supplied) The wireless microphone system shall support simultaneous operation of 4 or more wireless microphones per room/area. Diversity: True diversity or better Frequency response: 80Hz to 15 KHz Radiated Transmitter Power: Min. 20mW or better Transducer Type: Condenser Polar pattern: Omni Directional S/N ratio: >100dB or better		Kindly remove the specification 'PLL synthesized technology,' as this requirement appears to favor a particular brand and may limit broader compliance and fair competition.	The equivalent may also be accepted.
18	UHF Wireless Head-worn Microphone SITC of UHF True Diversity Wireless Microphone System consisting of - 1 x Receiver, 1 x Head-worn Microphone with body pack; RF Frequency Range - as per respective OEM, however, minimum 8 or higher pre-programmed selectable channels per frequency range shall be available in the receiver; Polar Pattern : Cardioid / Hyper cardioid / Super-cardioid; THD : <0.9% or better; RF Power : 20mW or better; S/N Ratio : >100 dB or better, PLL synthesized technology, complete with all cables and standard accessories. (All cables shall be original OEM supplied). The wireless microphone system shall support simultaneous operation of 4 or more wireless microphones per room/area. Diversity: True diversity or better Frequency response: 80Hz to 15 KHz Radiated Transmitter Power:Min. 20mW or better Transducer Type: Condenser Polar pattern:Cardioid S/N ratio: >100dB or better		Kindly remove the specification 'PLL synthesized technology,' as this requirement appears to favor a particular brand and may limit broader compliance and fair competition.	The equivalent may also be accepted.
19	UHF Wireless Handheld Microphone SITC of UHF True Diversity Wireless Microphone system consisting of - 1 x Receiver, 1 x Handheld Microphone with transmitter; RF Frequency Range - as per respective OEM, however, minimum 8 or higher pre-programmed selectable channels per frequency range shall be available in the receiver; Polar Pattern : Cardioid / Hyper cardioid / Super-cardioid; THD : <0.9% or better; RF Power : 20mW or better; S/N Ratio : >100 dB or better, PLL synthesized technology, complete with all cables and standard accessories. (All cables shall be original OEM supplied). The wireless microphone system shall support simultaneous operation of 4 or more wireless microphones per room/area. Diversity: True diversity or better Frequency response: 80Hz to 15 KHz Radiated Transmitter Power:Min. 20mW or better Transducer Type: Dynamic		Kindly remove the specification 'PLL synthesized technology,' as this requirement appears to favor a particular brand and may limit broader compliance and fair competition.	The equivalent may also be accepted.

	Polar pattern: Cardioid			
	S/N ratio: >100dB or better			
20	12 x 8 AUDIO DSP (with AEC feature)			
	SITC of 12x8 DSP - Digital Matrix Processors, with 12 mic/line inputs and 8 outputs with AEC - Acoustic Echo Cancellation features.			
	No. of Inputs Channels: should have minimum 12 mic/line inputs			
	Audio Input DC Phantom Power: should have +48 VDC			
	Audio Output Interface: should have minimum 8 balanced/unbalanced outputs			
	Acoustic echo cancellation (AEC) shall be supported			
	Control Interface: Minimum 1 x RJ-45 based Ethernet port supporting TCP/IP at minimum 100Mbps or 1 x RS232 or 1 x USB port for control and configuration.			
	Gain : should have unbalanced output: -6 dB; balanced output: 0 dB			
	Frequency response : should be between 20 Hz to 20 kHz			
	THD + Noise : should have <0.01%, 20 Hz to 20 kHz			
	Input Impedance : should be minimum 8K ohm or better			
	Output impedance : should be 210 Ohms or better	Kindly change it to Output impedance : 200 Ohms	Subject to design confirmation	
	S/N or Dynamic range : should have >104 dB, 20 Hz to 20 kHz			
	Mounting Type : should be rack mountable			
21	SITC of 6x4 DSP - Digital Matrix Processors, with 6 mic/line inputs and 4 outputs.			
	No. of Inputs Channels: should have minimum 6 mic/line inputs			
	Audio Input DC Phantom Power: should have +48 VDC			
	Audio Output Interface: should have minimum 4 balanced/unbalanced outputs			
	Control Interface: Minimum 1 x RJ-45 based Ethernet port supporting TCP/IP at minimum 100Mbps or 1 x RS232 or 1 x USB port for control and configuration			
	Gain : should have unbalanced output: -6 dB; balanced output: 0 dB			
	Frequency response : should be between 20 Hz to 20 kHz			
	THD + Noise : should have <0.01%, 20 Hz to 20 kHz			
	Input Impedance : should be minimum 8K ohm or better			
	Output impedance : should be 210 Ohms or better	Kindly change it to Output impedance : 200 Ohms	Subject to design confirmation	
	S/N or Dynamic range : should have >104 dB, 20 Hz to 20 kHz			
	Mounting Type : should be rack mountable			
22	Ceiling Mount Speaker			
	SITC of full-range or 2-way minimum 4" ceiling mount loudspeaker, 4/8 ohms or 70V/100V operation, Frequency Response - 80 Hz - 19 kHz (-10dB), Power handling@70/100V : 30W or better, Sensitivity : SPL/W@1 Mtr - 86 db or better, Max SPL@1 Mtr - 100dB or better and inclusive of all mounting brackets, assemblies, hardware and standard accessories.	Kindly revise the Frequency Response specification to 80 Hz – 17 kHz (-10 dB) to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements	
	Frequency range (-10dB) : should be between 80 Hz to 19 kHz or better	Kindly revise the Frequency Response specification to 80 Hz – 17 kHz (-10 dB) to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements	
	Power Rating : minimum 30 W or better			
	Maximum Peak SPL @ 1m : 100dB or better			
	Drivers: Full range driver or 2-way - minimum 1 x 4" LF Driver & minimum 1 x 0.75" HF Driver	Kindly make it 1x 0.75" HF Driver Optional	NIT conditions prevails, the wall /ceiling mount speakers both may be considered subject to design confirmation inline with the interior.	
	Coverage (conical): 100 degrees or higher			
	Sensitivity 1W @ 1m : 86dB or better			
	Impedance : 4/8 Ohms or 70/100V tapping operation			
24	Column Loudspeaker (Rating Confirming to the design requirement and approval of EIC)			
	SITC of full-range 150W or better confirming to the design requirements column type left and right loudspeaker, 8 ohm impedance, frequency response : 120 Hz - 16 KHz, Sensitivity : SPL/W@1 Mtr - 85 dB SPL or better, Max SPL@1 Mtr - 100 dB or better and inclusive of all mounting brackets, assemblies, hardware and standard accessories.	Kindly revise the Frequency Response specification to 120 Hz – 15 kHz (-10 dB) to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements	
	Frequency range : should be between 120 Hz to 14 kHz or better	Kindly revise the Frequency Response specification to 120 Hz – 15 kHz (-10 dB) to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements	
	Power Rating (Average) : minimum 150 W or better confirming to the design requirements			
	Power Rating (Max/Peak): minimum 600 W or better confirming to the design requirements			
	Maximum Peak SPL @ 1m : 100dB or better confirming to the design requirements			
	Sensitivity 1W @ 1m : 85dB or better confirming to the design requirements			
	Coverage (conical): 125H x 20V degrees or better confirming to the design requirements	Kindly revise the Frequency Response specification to Coverage: 120H x 20V degrees or better to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements	

	Driver : should be full range type or three way driver			
	Impedance : 8 Ohms or better confirming to the design requirements			
25	Four Channel Power Amplifier 4 x 250 W or better confirming to the design and approval of the EIC.			
	SITC of Class D Power Amplifier, 4 x 250 W, selectable 4/8 ohms or 70/100V operation, Power @ 70/100V: 500W or better, supporting short circuit, thermal, and under-voltage protection, 1U/2U form factor. Or the better specification confirming to the design requirements duly approved by the EIC.			
	Frequency Response : should be between 40 Hz to 20 KHz or better confirming to the design requirements			
	No. of Channels : should have minimum 4 channels			
	Output Power per Channel: minimum 250 Watts per channel			
	selectable 4/8 ohms or 70/100V operation			
	S/N Ratio : minimum 98dB or higher			
	THD 20 Hz - 20 kHz, 1 W: less than 0.4%			
	Channel Separation (Crosstalk) : 64dB or better			
	Input Impedance : minimum 20kOhms or better		Kindly make the Input Impedance : minimum 10k-20kOhms or better to allow wider brand participation and promote healthy competition.	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Amplifier Class : Class D Amplifier			
	Cooling requirement : temperature level controlled fans for front to rear airflow			
	Protection : should have overload protection, mains under-voltage and over-voltage protection			
26	Dual Channel Power Amplifier 2 x 60 W or higher rating confirming to the design requirements			
	SITC of Dual Channel Class D or Class AB Power Amplifier, 2 x 60 W @ 8 ohms, Comprehensive short circuit, thermal, and under-voltage protection, 1U/2U form factor. Or higher rating confirming to the design requirements.			
	Frequency Response : should be between 40 Hz to 20 KHz			
	No. of Channel : should have minimum 2 Channels			
	Output Power per Channel: minimum 60 Watts per channel at 8 ohms			
	S/N Ratio or dynamic range : minimum 75dB or higher			
	Total Harmonic Distortion : less than 0.5%			
	Channel Separation (Crosstalk) : 60dB or better		Kindly change it to 58 dBu	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Input Impedance : minimum 10kOhms or better			
	Amplifier Class: Class AB or Class D			
	Cooling requirement : minimum 1 fan for front to rear airflow			
	Protection : should have overload protection			
31	CORDED VOCAL MICROPHONE			
	SITC of Corded Vocal Microphone with Dynamic Neodymium Magnet microphone element, with frequency response 80Hz-16kHz, Cardioid, Super-Cardioid polar pattern or better pattern, sensitivity of min. 2.2mV/Pa or better and min. impedance 600 ohm or better including microphone stand.			
	Frequency response: 80Hz to 15 KHz			
	Transducer Type: Dynamic			
	Polar pattern: Cardioid, Super-Cardioid or better			
	Connection: 3-pin XLR			
32	1x12" OR BETTER PASSIVE LOUDSPEAKER OR HIGHER RATING CONFIRMING TO THE DESIGN REQUIREMENTS			
	SITC of 1x12" or better passive loudspeaker having 70Hz - 16kHz (-10dB), Max. SPL: 126dB SPL, Coverage (H X V) 90 X 60 degree, Power handling capacity: minimum 800 Watts or better. Inclusive of all mounting brackets, assemblies, hardware and standard accessories for portable/outdoor application.			
	Frequency range : should be between 70 Hz to 16 kHz or better			
	Power handling capacity (Max/Peak) : minimum 800 W or better			
	Maximum Peak SPL @ 1m : 126dB or better			
	Sensitivity 1W @ 1m : 93dB or better			
	Coverage (conical): 90H x 60V degrees or better			
	Driver : 1 x 12" 2-way or better			
	Impedance : 8 Ohms or better			
33	1x12" OR BETTER PASSIVE SUBWOOFER OR HIGHER RATING CONFIRMING TO THE DESIGN REQUIREMENTS			
	SITC of 1x12" or better passive subwoofer having 40Hz - 200Hz (-10dB), Max SPL 123dB SPL. Max. power handling capacity of 1600 Watts with 8 Ohm impedance. Inclusive of all mounting brackets, assemblies, hardware and standard accessories for portable /outdoor application.			
	Frequency range : should be between 40 Hz to 200 Hz or better		Kindly change the frequency range to 40-Hz to 130 Hz (-10dB),	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements

	Power handling capacity (Max/Peak) : minimum 1600 W or better			
	Maximum Peak SPL @ 1m : 123dB or better			
	Sensitivity 1W @ 1m : 93dB or better			
	Driver : 1 x 12" or better			
	Impedance : 8 Ohms or better			
34	2 x 600 W Class D Power Amplifier OR HIGHER RATING CONFIRMING TO THE DESIGN REQUIREMENTS WITH DANTE SUPPORT.			
	SITC of Class D Power Amplifier, 2 x 600 W, selectable 8 ohms operation, Power @ 70/100V : 450W or better, supporting short circuit, thermal, and under-voltage protection, 1U/2U form factor.			
	Frequency Response : should be between 40 Hz to 20 KHz or better			
	No. of Channels : should have minimum 2 channels			
	Output Power per Channel: minimum 600 Watts per channel			
	selectable 4/8 ohms or 70/100V operation			
	S/N Ratio : minimum 98dB or higher			
	THD 20 Hz - 20 kHz, 1 W: less than 0.4%			
	Channel Separation (Crosstalk) : 64dB or better			
	Input Impedance : minimum 20kOhms or better			
	Amplifier Class : Class D Amplifier			
	Cooling requirement : temperature level controlled fans for front to rear airflow			
	Protection : should have overload protection, mains under-voltage and over-voltage protection			
38	Specification Sheet: 55-inch 4K Professional Confidence Monitor with VESA mounting with suitable interior support			
	Display Specifications			
	Feature	Specification		
	Screen Size (Diagonal)	55" (139.7 cm)		
	Panel Technology	IPS (In-Plane Switching)	Kindly change it to IPS or VA or Direct LED	Subject to design confirmation subject to without compromise in the intent, quality, features and requirements
	Resolution	4K UHD (3840 x 2160 pixels)		
	Aspect Ratio	16:9		
	Brightness	500 cd/m ² (nits)		
	Contrast Ratio	4000:1 (Static)		
	Color Depth	10-bit (1.07 Billion Colors)		
	Viewing Angle (H/V)	178° / 178°		
	Response Time	8ms (Gray to Gray)		
	Refresh Rate	60Hz		
	Surface Treatment	Anti-Glare, Haze 25%		
	Backlight Type	Direct LED		
	Display Orientation	Landscape & Portrait		
	Expected Panel Life	50,000+ Hours		
	Operation Rating	24 hours / 7 days		
	Connectivity			
	Port Type	Quantity & Description		
	HDMI Input	2x HDMI 2.0 (HDCP 2.2 Compliant)		
	DisplayPort Input	1x DisplayPort 1.2a		
	SDI Input	1x 3G-SDI BNC		
	HDMI Output	1x HDMI 2.0 (Loop-through)		
	SDI Output	1x 3G-SDI BNC (Loop-through)		
	USB Port	2x USB 2.0 (for media playback & firmware)		
	Audio Output	1x 3.5mm Stereo Mini-Jack		
	External Control	1x RS-232C (In/Out), 1x RJ45 (LAN)		
	Mechanical & Physical			
	Feature	Specification		
	Dimensions (W x H x D)	48.9" x 28.1" x 2.5" (1241mm x 714mm x 64mm)		
	Bezel Width (T/L/R/B)	9.9mm / 9.9mm / 9.9mm / 11.5mm		
	Weight (Without Stand)	45.2 lbs (20.5 kg)		
	VESA Mounting Pattern	400 x 400 mm		
	Housing Material	Metal Chassis		
	Color	Matte Black		
	Power			
	Feature	Specification		
	Power Supply	AC 100-240V~, 50/60Hz		
	Power Consumption (Typ.)	125W		
	Power Consumption (Max)	150W		
	Power Consumption (Standby)	<0.5W		
	Special Features			
	• Image Flip: Horizontal and Vertical image flip for teleprompter applications.			
	• Built-in Speakers: 2x 10W integrated speakers.			
	• On-Screen Display (OSD): Full control over picture, color, and signal settings.			
	• Key Lock: Disables buttons to prevent accidental changes.			
	• Scheduler: On/Off scheduling for automated operation.			
	• Control System Compatibility: Compatible with major control systems via LAN and RS-232.			
	Environmental			
	Feature	Specification		
	Operating Temperature	0°C to 50°C (32°F to 104°F)		
	Operating Humidity	10% to 80% (non-condensing)		