

**पनवेल महानगरपालिका**  
**जाहीरनिविदा दरपत्रक**

पनवेल महानगरपालिका हद्दीतील प्रभाग समिती 'क' प्रभाग क्र.१४ मधील भुखंड क्र.०४, सेक्टर -१६, नवीन पनवेल (प) या भूखंडावर पनवेल महानगरपालिकेचे "स्वराज्य" मुख्यालय इमारतीचे अंतर्गत सजावट व इतर अनुषंगीक कामे करणे. या कामाचे अंदाजपत्रक बनविण्याकरीता खाली नमूद केलेल्या बाबींकरिता खालील नमूण्यात दर मागविण्यात येत आहे.

अ.क्र.	कामाचे नाव	मुदत
१	पनवेल महानगरपालिका हद्दीतील प्रभाग समिती 'क' प्रभाग क्र.१४ मधील भुखंड क्र.०४, सेक्टर -१६, नवीन पनवेल (प) या भूखंडावर पनवेल महानगरपालिकेचे "स्वराज्य" मुख्यालय इमारतीचे अंतर्गत सजावट व इतर अनुषंगीक कामे करणे.	२७/०२/२०२४ ते ०४/०३/२०२४ (७ दिवस)

**Audio Visuals**  
**Specification**

SR N O	Make	Tender specs	Qty	Unit Price (INR)
<b>Reception Ground Floor</b>				
1	LG	SITC of 55" Professional Display. 55" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have 2 nos. of HDMI Should have built-in speakers <b>Approved Makes : Christie / LG / Sony</b>	1	
2	Brightsign	SITC of Digital Signage media player. VIDEO ENGINE DECODER- Native 4K@60p and HDR10 video decoding, 4k60p video decoding, Single 1080p60 video decoding, Dual HD video decoding, MEDIA FORMATS- 4K Video codecs: H.265 at 60p and H.264 at 30p, 4K Video Containers: .ts, .mov, .mp4, .mkv, Full HD Video Codecs: H.265, H.264 (MPEG-4, Part 10), MPEG-2, Full HD Video Containers: .ts, .mpg, .vob, .mov, .mp4, .m2ts, Images: BMP, JPEG, PNG up to 4K resolution, Audio: MP2, MP3, AAC and WAV (AC3 is passed through), DISPLAY RESOLUTIONS- 4K Video Resolutions: 4096x2160,3840x2160, 3840x600, Full HD Resolutions: 1920x1080x23.97/24/25/29.97/30/50/59.94/60p, HARDWARE INTERFACES- Locking Power Connector, Primary micro SD card Slot, USB-A: provides 5V/1A power to peripheral devices, Audio: 3.5mm Output (Analog or SPDIF), HDMI Out 2.0a, HDMI 2.0a Input, Gigabit Ethernet, Power over Ethernet (PoE+), Optional Wi-Fi/Bluetooth: E Key M.2, Hardware OS: Linux, FEATURES- 4K Video, Support HDR10, HLG & Rec.2020/BT.2020, Free BrightSign App: update signs via iOS device, android,ACCESSORIES- MicroSD Class 10 Cards. Approved Makes : Brightsign	1	
3		Cables & connector lot	1	

4		Installtion Testing & Commissioning lot	1	
<b>Cafeteira Ground Floor</b>				
1	Biamp	SITC of 6.5" two-way thin edge design ceiling speaker 100-70 volt / 20 watts, 16 ohms / 60 watts, white, with basket integrated neodymium magnets for a perfect seal, removable logo and quick fit push connector.	RO	
2	Biamp	SITC of 4 Channel class D amplifier 4 x 120 Watts (70/100 Volts or RMS @ 4 Ohms) or in bridge mode 2 x 240 Watts (70/100 Volts or RMS @ 8 Ohms), combined convection and fan cooling, 2 U, 19" rackmount	RO	
4	Biamp	SITC of professional multisource CD/USB/SD-card music player with integrated FM RDS and DAB+ tuner. It shall have an internal Bluetooth receiver which can be connected to any music source, smartphone or computer equipped with a Bluetooth connection. It shall be equipped with multiple independent analog outputs, coaxial and optical digital output for the CD/USB/SD player and a RS232-port for use with integrated control systems. It shall have a USB and SD-card slot on the front and another USB-input on the back of the unit (to avoid people from taking the memory stick out). The unit shall have an operation mode switch at the back to choose between Auto Play and Cue. It shall have a Auto Play mode, the unit will always start playing automatically when it's powered on. In Cue mode the unit will always wait for a play command after power is restored or another track is selected. The analog output gain level can be adjusted at the back in order to match the output level of other audio sources. It shall have combined output available. This output will play the music from the CD/USB/SD player by default. When there is no media playing from the CD/USB/SD player, the output shall automatically switch to the tuner (FM or DAB+) output after a few seconds, provided that the tuner is not in standby mode. The unit shall be controlled by the front panel controls via the included infrared remote or RS232-commands.	RO	
5	LG	SITC of 43" 4K UHD 400 nit LCD panel with Weight Shape Bracket for angular floor Mount. Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers <b>Approved Makes : Christie / LG / Sony</b>	RO	
6	Brightsign	SITC of Digital Signage media player. VIDEO ENGINE DECODER- Native 4K@60p and HDR10 video decoding, 4k60p video decoding, Single 1080p60 video decoding, Dual HD video decoding, MEDIA FORMATS- 4K Video codecs: H.265 at 60p and H.264 at 30p, 4K Video Containers: .ts, .mov, .mp4, .mkv, Full HD Video Codecs: H.265, H.264 (MPEG-4, Part 10), MPEG-2, Full HD Video Containers: .ts, .mpg, .vob, .mov, .mp4, .m2ts, Images: BMP, JPEG, PNG up to 4K resolution, Audio: MP2, MP3, AAC and WAV (AC3 is passed through), DISPLAY RESOLUTIONS- 4K Video Resolutions: 4096x2160,3840x2160, 3840x600, Full HD Resolutions: 1920x1080x23.97/24/25/29.97/30/50/59.94/60p, HARDWARE INTERFACES- Locking Power Connector, Primary micro SD card Slot, USB-A: provides 5V/1A power to peripheral devices, Audio: 3.5mm Output (Analog or SPDIF), HDMI Out 2.0a, HDMI 2.0a Input, Gigabit Ethernet, Power over Ethernet (PoE+), Optional Wi-Fi/Bluetooth: E Key M.2, Hardware OS: Linux, FEATURES- 4K Video, Support HDR10, HLG & Rec.2020/BT.2020, Free BrightSign App: update signs via iOS device, android,ACCESSORIES- MicroSD Class 10 Cards. Approved Makes : Brightsign	RO	
7	NETRACK	SITC of 9 U AV Rack closable doors. Wall Mount - 09U - 600W - 600D - Double Fan Provision - Black Fine Tex. Single Fan For WallMount. Metal Cable Manager - 01U - Plastic Cable Loop's Mountable - Black Fine Tex. - Assembly.	RO	
8		Power Distribution Unit - 06 Amp Universal - 06 Socket - 16 Amp Switch with Indicator - 06 Amp Fuse - 06 Amp 4 Pin Plug with Power Cable 0.75 sq.mm 1.5 meter Length alongwith Mounting Hardware Packet. Any other accessories as required for proper mounting, cable management & rack dressing to be considered.Approved Makes : Valrack / Netrack /Rittal/APC	RO	
9		Installtion Testing & Commissioning lot	RO	

**Amphitheater 1st Floor**

1	Biamp	<p>SITC of two-way, full-range compact system with one 10-inch (254mm) low frequency transducer with a treated paper cone and one 1.4-inch (35mm) voice coil HFcompression driver mounted coaxially on the LF driver. The drivers shall be connected to an integral crossover, having a crossover frequency of 1480 Hz, with dynamic driver protection circuitry. The system shall exceed IEC60529 IP54 ratings for dust and splash resistance and shall also withstand testing to IEC 60068-2-5 (solar radiation), IEC 60068-2-11 (salt mist), IEC 60068-2-42 (SO2), and IEC 60068-2-60 (chlorine) with no effect on its acoustical performance or structural integrity. The enclosure shall be constructed of a high-impact polycarbonate/ABS blend and the front of the enclosure shall be fitted with a wraparound powder-coated 1.5mm perforated marine-grade aluminum grille backed with hydrophobic cloth. The loudspeaker shall have a pan-tilt mounting bracket with interlocking notch mechanisms that provide indexed aiming control in vertical and horizontal directions. The bracket shall have a 4- position wire clamping lever-actuated terminal block for electrical connections integrated into the cabinet interface segment of the bracket. The loudspeaker and bracket shall provide a quick attach / detach mechanism that allows for mounting the loudspeaker in either vertical or horizontal orientation. The loudspeaker shall include a theft-deterrent bracket release mechanism and vandal-resistant aiming lock mechanism. The loudspeaker color and mounting bracket shall be either RAL9016 white or RAL9017 black. The system shall have an operating range of 48 Hz to 20 kHz, in full space, and a low impedance (8Ω) input capability of 45.7V RMS. The system shall also be equipped with a 120W high performance transformer for use in 70.7V or 100V distributed audio systems with switchable 120W, 60W, 30W and 15W taps available in 70.7V distributed systems (120W, 60W, 30W available in 100V distributed systems). The sensitivity on-axis at one meter with a power input of 1 watt shall be 91 dB. The nominal dispersion shall be 100° x 100°. Dimensions shall be 20.8 inches (529 mm) high, 12.2 inches (310 mm) wide and 12.3 inches (312 mm) deep, with a loudspeaker weight of 33.43 lbs (15.2 kg).</p>	8	
2	Biamp	<p>SITC of high output subwoofer system with one 10-inch (250mm) low frequency transducer with a treated paper cone. The system shall exceed IEC60529 IP54 ratings for dust and splash resistance and shall also withstand testing to IEC 60068-2-5 (solar radiation), IEC 60068-2-11 (salt mist), IEC 60068-2-42 (SO2), and IEC 60068-2-60 (chlorine) with no effect on its acoustical performance or structural integrity. The enclosure shall be constructed of a high-impact polycarbonate/ABS blend and the front of the enclosure shall be fitted with a wraparound powder-coated 1.5mm perforated marine-grade aluminum grille backed with hydrophobic cloth. The loudspeaker shall have a pan-tilt mounting bracket with interlocking notch mechanisms that provide indexed aiming control in vertical and horizontal directions. The bracket shall have a 4- position wire clamping lever-actuated terminal block for electrical connections integrated into the cabinet interface segment of the bracket. The loudspeaker and bracket shall provide a quick attach / detach mechanism that allows for mounting the loudspeaker in either vertical or horizontal orientation. The loudspeaker shall include a theft-deterrent bracket release mechanism and vandal-resistant aiming lock mechanism. The loudspeaker color and mounting bracket shall be either RAL9016 white or RAL9017 black.</p> <p>The system shall have an operating range of 38 Hz to 140 Hz, in full space, and a low impedance (8Ω) input capability of 39.8V RMS. The sensitivity on-axis at one meter with a power input of 1 watt shall be 89 dB. The nominal dispersion shall be omnidirectional. Dimensions shall be 20.8 inches (529 mm) high, 12.2 inches (310 mm) wide and 12.3 inches (312 mm) deep, with a loudspeaker weight of 28.26 lbs (12.8 kg).</p>	4	
3	Biamp	<p>SITC of 4 Channel class D amplifier 4 x 240 Watts (70/100 Volts or RMS @ 4 Ohms) or in bridge mode 2 x 480 Watts (70/100 Volts or RMS @ 8 Ohms), combined convection and fan cooling, 2 U, 19" rackmount</p>	2	

4	Biamp	<p>The Conference Room DSP shall support Ethernet connection for programming and control on a RJ-45 connector. The Conference Room DSP shall have internal DSP processing. The Conference Room DSP shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The Conference Room DSP shall include a Universal Serial Bus (USB) connection on a standard USB-B type connector. The Conference Room DSP shall be software configurable to stream up to 2 channels of digital USB Class 1 Audio transmission either into or out of the Conference Room DSP or simultaneous input and output. The Conference Room DSP shall support port authentication via IEEE 802.1X. The Conference Room DSP shall provide 2 balanced input connections for receiving of microphone or line level analog audio signals on screw-down, removable connectors. Any network audio or analog audio connection may be assigned one of eight channels of Acoustic Echo Cancellation (AEC). Acoustic Echo Cancellation (AEC) hardware and firmware, the parameters, routing and operation of which shall be software programmable. The Conference Room DSP shall provide 2 balanced output channels for the transmission of microphone or line level analog audio signals on screw-down, removable connectors. Each individual channel shall have its own dedicated connection. The Conference Room DSP shall integrate to Voice Over Internet Protocol (VoIP) systems on a RJ-45 connector and shall support Session Initiation Protocol (SIP) v2.0 or later. The Conference Room DSP shall be capable of being deployed with zero programming or manual tuning and shall provide a post-commissioning status report via the use of Biamp Launch technology. The Conference Room DSP shall feature software-configurable signal processing, including but not limited to: signal routing and mixing, equalization, filtering, dynamics, and delay, as well as control, monitoring, and diagnostic tools. The Conference Room DSP shall provide front panel LED identification of device power, status, alarm, and activity as well as system-wide alarm. The Conference Room DSP shall be surface mountable using the included mounting hardware. The Conference Room DSP shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.</p>	1	
5	Biamp	<p>SITC of professional multisource CD/USB/SD-card music player with integrated FM RDS and DAB+ tuner. It shall have an internal Bluetooth receiver which can be connected to any music source, smartphone or computer equipped with a Bluetooth connection. It shall be equipped with multiple independent analog outputs, coaxial and optical digital output for the CD/USB/SD player and a RS232-port for use with integrated control systems. It shall have a USB and SD-card slot on the front and another USB-input on the back of the unit (to avoid people from taking the memory stick out). The unit shall have an operation mode switch at the back to choose between Auto Play and Cue. It shall have a Auto Play mode, the unit will always start playing automatically when it's powered on. In Cue mode the unit will always wait for a play command after power is restored or another track is selected. The analog output gain level can be adjusted at the back in order to match the output level of other audio sources. It shall have combined output available. This output will play the music from the CD/USB/SD player by default. When there is no media playing from the CD/USB/SD player, the output shall automatically switch to the tuner (FM or DAB+) output after a few seconds, provided that the tuner is not in standby mode. The unit shall be controlled by the front panel controls via the included infrared remote or RS232-commands.</p>	1	

6	Biamp	The audience engagement solution shall be comprised of a host device and two mobile applications. The first mobile application shall support event attendee functionality, including but not limited to: requesting the opportunity to talk, participating in polls conducted by the event moderator, sending text messages to the moderator, and using the built-in microphone to talk once given the opportunity by the moderator. The second mobile application shall support event moderator functionality, including but not limited to: reviewing attendees who have requested to talk, selecting an attendee to talk, creating and distributing polls, deactivating attendee microphones, and sharing poll and/or event data to an external video output. Both the attendee and moderator applications shall be supported on Apple® devices running iOS® v9.0 or newer. The attendee application shall also be supported on Android devices running v10.0 or newer. The moderator interface shall also be supported and accessible via modern web browsers. The attendee and moderator applications and the moderator web interface shall be localized in over 20 languages. The host device shall utilize an Ethernet network via RJ-45 connector for interfacing with attendee and moderator applications, as well as for control monitoring. The host device shall be equipped with two High-Definition Multimedia Interface (HDMI®) ports, balanced analog audio outputs, and two USB 3.0 type A ports. The host device shall be CE marked, UL listed and shall be compliant with the RoHS directive. The host device warranty shall be five years.	1	
7	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
8	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
9	Biamp	SITC for Table stand for touch panel	1	
10	Sennheiser	SITC of Wireless Lapel Microphone. SYSTEM (XSW 2-ME2)- Modulation: Wideband FM, Frequency ranges: A: 548-572 MHz, GB: 606-630 MHz, B: 614-638 MHz, C: 766-790 MHz, D: 794-806 MHz,, E: 821-832 MHz, 863-865 MHz, K: 925-937.5, Switching bandwidth: up to 24 MHz, Frequencies: 8 frequency banks, each with up to 12 factory-preset channels, MHz Signal_to_Noise_Ratio: ≥ 103 dBA, Total Harmonic Distortion: ≤ 0.9%, Temperature range operation: 0°C to +40°C, storage: -20°C to +70°C, Transmitter sychronization:2.4 GHz, Low Power OQPSK, RECEIVER (EM-XSW 2)- Receiver principle: double superheterodyne, Diversity principle: True Diversity, Sensitivity (at peak deviation): < 3 µV at 52 dB(A)rms S/N, AF frequency response: 50 to 16,000 Hz (-3 dB), Audio adjustment range: 40 dB, adjustable in 5-dB steps, Power supply: 12 V DC nom. / 300 mA, Squelch: adjustable from 3 dBµV to 28 dBµV (combined with pilot tone), Line/Mic level: 20 dB, switchable, Housing material: rugged metal housing, BODYPACK TRANSMITTER (SK-XSW)- RF output power: 10 mW, AF frequency response:Line: 50-16,000 Hz,Mic: 50-16,000 Hz,Audio Input:3.5 mm jack socket, Max. input voltage (Mic/LIne) at 3% THD: typ. 1.V rms Mic / typ. 2.6 V rms Line at -30 dB gain, Power supply: 2 AA size batteries, 1.5 V, Operating time: approx. 10 hrs, Adjustment range of transmitter sensitivity: to -30 dB, adjustable in 10 dB steps, LAVALIER MICROPHONE (ME 2-2)- Transducer principle:condenser, pre-	4	

		polarized, Sensitivity:20 mV/Pa, Pick-up pattern: omni-directional,Max. SPL:130 dB. Approved make: Sennheiser/ Audio Technica/ Shure.		
11	Sennheiser	SITC of Wireless Handheld Microphone. System- Audio link:470.2 - 526 MHz, frequency ranges:520 - 576 MHz,Audio frequency response:20 Hz - 20 kHz (-3 dB) @ 3 dBfs, Audio THD:≤ -60 dB for 1 kHz @ -3 dBfs input level, Dynamic range:134 dB, System latency:1.9 ms,Operating temperature:-10 °C - +55 °C (14 °F - 131 °F), Relative humidity:5 - 95 % (non-condensing),EW-D EM (Rack Receiver)- Input voltage:11 - 13 V , Input current:≤ 300 mA,Transmit power (radiated) BLE: max. 10 mW EIRP, Audio output power:18 dBu max., EW-D SKM-S (Handheld Transmitter)- Input voltage:2.0 - 4.35 V, Input current: < 300 mA, Power supply: 2 AA batteries 1.5 V (alkali manganese) or BA 70 rechargeable battery pack, Occupied bandwidth:200 kHz, Transmit power (radiated):Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP, MMD 835 (Microphone Module) - Transducer principle:dynamic, Sensitivity: 2.1 mV/Pa, Sound pressure level: 154 dB SPL, Pick-up pattern: cardioid. Approved make: Sennheiser/ Audio Technica/ Shure.	4	
12	AOTO	SITC of P2.5 I Outdoor 5.3x9.6 mtrs.(HxW) Active LED Active LED: Module Size: 2.5mm Pixel,Pixel Density:160,000 dots/m2,Pixel Configuration:1R1G1B, LED Type: SMD2020/1515, Modular Size: W320*H160mm. Module weight: 506, Module resolution: W128*H64 dots. Module QTY/ m2 Max. Current: 19.53 cs/ m2, Min. Viewing Distance: >2.5m, Brightness: 550 cd/m2, Viewing Angle: He::160° Ve::140°, Driving Mode:1/32 scan constant current, Interface: HUB75-16P, Input Voltage: 5V, Max. Power Consumption: 422 w/m2, Avg. Power Consumption: 211 w/m2, Max. Current:4 .5A, Gray Level: 15bits (32768), Vedio frame rate: 60 frames/s or better. Refresh Rate: 1920HZ & 3840Hz or better. Defective Dots Rate: <0.0001 (LED industry standard: 0.0003. Brightness Conformity: >95%, MTBF: 10000 hours, Lifespan: 100000 hours or more. Protective function: Over-heat/Over-load /Power-down/Power-leakage /Lightning protection etc, Operating Temperature: -20 'C +60 'C: Operating Humidity: 10-80% no condensation, Storage Temperature: -20 'C +60 'C, Storage Humidity: 10-85% no condensation Approved Makes : Aero / AOTO / Christie	1	

13	Sennheiser	<p>SITC of Wireless Gooseneck MIC. SL Rack Receiver DW-RF sensitivity: &lt; -90 dBm, RF output power back channel: adaptive, up to 250 mW (country-specific), XLR output level, balanced: max. +18 dBu, RCA output level, unbalanced: max. +6 dBu, Audio effects Low cut: -3 dB at 120 Hz, Equalizer: 7-band graphic equalizer with sound presets, Sound profiles: female voice, male voice, media, Display: OLED, Network protocol: Media Control Protocol, TCP/IP IPv4 (DHCP, manual)/ IPv6, Power supply: 12 V DC, Current consumption: 350 mA, AF connection sockets: XLR/2 x RCA, Antenna sockets: 2 x reverse SMA, Network sockets: RJ-45, DC socket for power supply: hollow jack, Power supply units- Nominal input voltage: 100 to 240 V, Power frequency: 50 or 60 Hz, Input current: max. 120 mA, Nominal output voltage: 12 V, Standby power consumption: ≤ 0.3 W, operating temperature: -10 °C to 55 °C (14 °F to 131 °F), Storage temperature: 20 °C to +70 °C (-4 °F to 158 °F), Relative air humidity: max. 95 %, SL Tablestand 133-S DW- AF frequency response: 75 to 20,000 Hz, Max. input level: 1.7 V RMS, Input impedance: 30 kΩ, Power supply: BA 40 accupack (Li Ion 3.6 V), Operating time: Accupack: typ. 11 h, Microphone connector: XLR-3F, Relative humidity: max. 95 %, Operating temperature: 10 °C to 45 °C (50 °F to 113 °F), MEG 14-40 B- Pick-up pattern: cardioid, Frequency response: 50 Hz - 20,000 Hz, Acoustic principle: gooseneck microphone (condenser), Output impedance @ 1 kHz: &lt; 100 Ω, Sensitivity: 15 mV/Pa, Max. sound pressure level: 130 dB @ 1 kHz &lt; 3 %, Equivalent noise level: 37 dB (CCIR) 26 dB (A), Power supply microphone: 12 V - 48 V phantom power (P 12 - P 48), Current consumption: 3 mA, Connector: XLR-3M, Operation Temp: 0 °C to 40 °C (32 °F to 104 °F), Storage Temp: -25 °C to +70 °C (-13 °F to 158 °F). Approved make: Sennheiser/ Audio Technica/ Shure.</p>	1	
14	Brightsign	<p>SITC of Digital Signage media player. VIDEO ENGINE DECODER- Native 4K@60p and HDR10 video decoding, 4k60p video decoding, Single 1080p60 video decoding, Dual HD video decoding, MEDIA FORMATS- 4K Video codecs: H.265 at 60p and H.264 at 30p, 4K Video Containers: .ts, .mov, .mp4, .mkv, Full HD Video Codecs: H.265, H.264 (MPEG-4, Part 10), MPEG-2, Full HD Video Containers: .ts, .mpg, .vob, .mov, .mp4, .m2ts, Images: BMP, JPEG, PNG up to 4K resolution, Audio: MP2, MP3, AAC and WAV (AC3 is passed through), DISPLAY RESOLUTIONS- 4K Video Resolutions: 4096x2160, 3840x2160, 3840x600, Full HD Resolutions: 1920x1080x23.97/24/25/29.97/30/50/59.94/60p, HARDWARE INTERFACES- Locking Power Connector, Primary micro SD card Slot, USB-A: provides 5V/1A power to peripheral devices, Audio: 3.5mm Output (Analog or SPDIF), HDMI Out 2.0a, HDMI 2.0a Input, Gigabit Ethernet, Power over Ethernet (PoE+), Optional Wi-Fi/Bluetooth: E Key M.2, Hardware OS: Linux, FEATURES- 4K Video, Support HDR10, HLG &amp; Rec.2020/BT.2020, Free BrightSign App: update signs via iOS device, android, ACCESSORIES- MicroSD Class 10 Cards. Approved Makes : Brightsign</p>	2	

15	Biamp	<p>The video encoder shall utilize an AVB/TSN network for all media networking as well as software configuration and control. The video encoder shall provide one High-Definition Multimedia Interface (HDMI®) port and one DisplayPort™ 1.2 port. The video encoder shall accept video signals up to and including 4K60. End-to-end network transit latency shall be 1.5 frames (25ms at 60fps) or less. Compression shall be visually lossless using M-JPEG. The video encoder shall be equipped with one RJ-45 port to support AVB/TSN transmission at 1Gb, and one SFP+ port to transmit at 1Gb or 10Gb. The video encoder shall be equipped with a separate RJ-45 Ethernet port for control connection to third party control systems and configuration. The video encoder shall support port authentication via IEEE 802.1X. The video encoder shall provide two balanced input connections for receiving microphone or line level analog audio signals on screw-down, removable connectors. Analog-to-Digital conversion shall be 24-bit with a sampling rate of 48kHz. The video encoder shall support the transmission of HDCP 2.2 protected content. The video encoder shall provide front panel OLED display of device power, status, alarm, and activity as well as system-wide alarm. The video encoder shall be built in a half-rack chassis and feature software-configurable signal processing, including but not limited to: signal routing and mixing, levels, mute, delay, and audio embedding/de-embedding, as well as control, monitoring, and diagnostic tools. The video encoder shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The video encoder shall include a RS-232 connection for control data transmission into or out of the device and such operation shall be software programmable. The video encoder shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be 5 years.</p>	1	
16	Biamp	<p>The video decoder shall utilize an AVB/TSN network for all media networking as well as software configuration and control. The video decoder shall provide one High-Definition Multimedia Interface (HDMI®) port and shall output video signals up to and including 4K60. End-to-end network transit latency shall be 1.5 frames (25ms at 60fps) or less. Compression shall be visually lossless using M-JPEG. The video decoder shall be equipped with one RJ-45 port to support AVB/TSN transmission at 1Gb, and one SFP+ port to receive at 1Gb or 10Gb. The video decoder shall be equipped with a separate RJ-45 Ethernet port for control connection to third party control systems and configuration. The video decoder shall support port authentication via IEEE 802.1X. The video decoder shall provide two balanced output connections for transmitting microphone or line level analog audio signals on screw-down, removable connectors. Digital-to-Analog conversion shall be 24-bit with a sampling rate of 48kHz. The video decoder shall support the transmission of HDCP 2.2 protected content. The video decoder shall provide front panel OLED display of device power, status, alarm, and activity as well as system-wide alarm. The video decoder shall be built in a half-rack chassis and feature software-configurable signal processing, including but not limited to: signal routing and mixing, levels, mute, delay, and audio embedding/de-embedding, as well as control, monitoring, and diagnostic tools. The video decoder shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The video decoder shall include an RS-232 connection for control data transmission into or out of the device and such operation shall be software programmable. The video decoder shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be 5 years.</p>	1	
17	Biamp	<p>The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android</p>	1	



		operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.		
18	NETRACK	SITC of 9 U AV Rack closable doors. Wall Mount - 09U - 600W - 600D - Double Fan Provision - Black Fine Tex. Single Fan For WallMount. Metal Cable Manager - 01U - Plastic Cable Loop's Mountable - Black Fine Tex. - Assembly.	1	
19	SIS	Power Distribution Unit - 06 Amp Universal - 06 Socket - 16 Amp Switch with Indicator - 06 Amp Fuse - 06 Amp 4 Pin Plug with Power Cable 0.75 sq.mm 1.5 meter Length alongwith Mounting Hardware Packet. Any other accessories as required for proper mounting, cable management & rack dressing to be considered.Approved Makes : Valrack / Netrack /Rittal/APC	1	
20	SIS	Installtion Testing & Commissioning lot	1	
<b>Multipurpose Hall 2nd Floor</b>				
1	Biamp	The loudspeaker system shall be a two-way, full-range bass reflex design incorporating one 12 in. (305mm) ferrite LF driver with an inherently weather resistant cone and one 1.4 in. exit ferrite HF compression driver with a hybrid titanium/polyamide diaphragm mounted to a 90° x 60° rotatable fiberglass constant directivity horn. In Passive Mode, drivers shall be connected to an internal frequency dividing network with an acoustical crossover frequency of 1500 Hz. There shall be two sixterminal barrier strips and external jumper assembly to allow the selection of Passive or Biamp operating modes on a recessed powder-coated 2mm thick steel input panel. The loudspeaker enclosure shall be 30° trapezoidal in shape. It shall be constructed of 11-layer cross-laminated exterior grade 15mm thick Baltic birch plywood and shall be fitted with 15 x M10 flying/rigging inserts and finished with low gloss, uniformly textured coating. The front of the enclosure shall be fitted with a wraparound powder-coated 1.5mm perforated steel grille backed with color-matched acoustically transparent woven fabric. The system shall have an operating range of 37 Hz to 19 kHz (-10dB SPL). In Passive Mode, the system shall have a nominal impedance of 8 Ohms, an input capability of 69V, shall produce a sound pressure level of 94 dB (averaged SPL between -10 dB points) on axis at one meter with a power input of 1 Watt, and shall be capable of producing a continuous output of 122 dB SPL (with peak output of 128 dB SPL) on axis at one meter. In Biamp Mode, the low frequency section shall have a nominal impedance of 8 Ohms, an input capability of 63V, shall produce a sound pressure level of 95 dB (averaged SPL between -10 dB points) on axis at one meter with a power input of 1 Watt, and shall be capable of producing a continuous output of 122 dB SPL (with peak output of 128 dB SPL) on axis at one meter. The high frequency section shall have a nominal impedance of 8 Ohms, an input capability of 24V, shall produce a sound pressure level of 105 dB (averaged SPL between -10 dB points) on axis at one meter with a power input of 1 Watt, and shall be capable of producing a continuous output of 124 dB SPL (with peak output of 130 dB SPL) on axis at one meter. The nominal dispersion shall be 90° H x 60° V. The loudspeaker shall be 28.00 in. (711 mm) H x 14.50 in. (368 mm) W (front) x 5.83 in. (148 mm) W (rear) x 17.70 in. (449 mm) D, and weigh 64.0 lbs. (29.0 kg).	2	
2	Biamp	SITC of U brackets for Loudspeakers.	2	

3	Biamp	<p>The loudspeaker system shall be a two-way, full-range design incorporating one 8 in. (203mm) ferrite LF driver with an inherently weather resistant cone and one 1 in. (25mm) exit advanced polymer diaphragm, ferrite compression driver. The drivers shall be connected to an internal frequency dividing network with an acoustical crossover frequency of 1800 Hz. There shall be one five-terminal barrier strip on a recessed powder-coated 2mm thick steel input panel. The modified trapezoidal loudspeaker enclosure shall be constructed of 11-layer cross-laminated exterior grade 15mm thick Baltic birch plywood and shall be fitted with (7) M10 and (4) M8 rigging inserts and finished with low gloss, uniformly textured coating. The front of the enclosure shall be fitted with a wraparound powder-coated 1.5mm perforated steel grille backed with acoustically transparent woven fabric. The system shall have an operating range of 53 Hz to 20 kHz (-10dB SPL). The system shall have a nominal impedance of 8 Ohms, an input capability of 45V, shall produce a sound pressure level of 95 dB (averaged SPL between -10 dB points) on axis at one meter with a power input of 1 Watt, and shall be capable of producing a continuous output of 119 dB SPL (with peak output of 125 dB SPL) on axis at one meter. The nominal dispersion shall be 90° H x 60° V. The loudspeaker shall be 18.75 in. (476 mm) H x 10.40 in. (264 mm) W (front) x 7.69 in. (195 mm) W (rear) x 10.63 in. (270 mm) D, and shall weigh 25.0lbs. (11.3 kg).</p>	4	
4	Biamp	SITC of U brackets for Loudspeakers.	4	
5	Biamp	<p>The loudspeaker system shall be a low frequency subwoofer incorporating one 18 in. (457mm) long excursion ferrite LF driver with a 4" inside/outside wound voice coil and double-treated cone. The loudspeaker shall be acoustically and mechanically capable of integrating into a single array with andfull range loudspeakers. Input connectors shall be two parallel-wired NL4 connectors and one four-terminal barrier strip. Two terminal pairs on the barrier terminal strip shall be wired in parallel to the NL4 +1/-1 connections, respectively and to the loudspeaker's internal passive circuitry. The NL4 +2/-2 connections shall be wired in parallel with no internal connections to the loudspeaker. The loudspeaker enclosure shall be rectangular in shape. It shall be constructed of a combination of 15mm and 18mm thick exterior grade Baltic birch plywood, finished with a low gloss, uniformly textured paintable coating, and shall be fitted with multiple integral steel plates on each side that bolt to aluminum color-matched adjustable rigging plates. Each side of the enclosure shall include a pair of integrated lifting handles. The front of the enclosure shall be fitted with a wraparound powdercoated 1.5mm perforated steel grille backed with color-matched acoustically transparent woven fabric with mounting fasteners that are accessible on each side of the enclosure. All rigging hardware, handles and other fasteners shall be concealed from view by removable side panels constructed from 15mm thick exterior grade Baltic birch with the same paintable finish as the enclosure. The system shall have an operating range of 37 Hz to 132Hz (-10dB SPL). The passive system shall have a nominal impedance of 8 Ohms, an input capability of 80V. In half space loading conditions, a single loudspeaker element shall produce a sound pressure level of 99 dB (averaged SPL between -10 dB points) on axis at one meter with a power input of 1 Watt, and shall be capable of producing a continuous output of 128 dB SPL (with peak output of 134 dB SPL) on axis at one meter. The loudspeaker shall be 28.12 in. (714 mm) W x 20.00 in. (508 mm) H x 28.08 in. (713 mm) D, and weigh 130.1 lbs. (59.0 kg).</p>	2	

6	Biamp	<p>The loudspeaker system shall be a compact, two-way, full-range coaxial design. The loudspeaker system shall have one 10-inch woofer and one 1.25-inch exit high frequency driver with 100 degree conical coverage. Drivers shall be connected to an integral crossover with a crossover frequency of 1 kHz. There shall be two NL4-compatible locking connectors and one 2-screw terminal strip. The loudspeaker enclosure shall be solid birch plywood with a 16-gauge perforated steel grille and finished with black paint. The system shall have an amplitude response of 90 Hz to 16 kHz (+/- 4 dB), input capability of 40V RMS, 99 dB sensitivity at one meter and 2.83V / 8 ohms nominal impedance. The nominal dispersion shall be 100°H x 100°V from 500 Hz to 6 kHz. The loudspeaker shall be 10.8 in. (275 mm) H x 12.6 in. (321 mm) W x 16.5 in. (419 mm) D and weigh 22 lbs (10 kg).</p>	2	
7	Biamp	<p>SITC of The Amplified Loudspeaker Controller that shall provide four channels of power amplification and digital signal processing with analog inputs. Total available power can be safely distributed asymmetrically across the outputs in any combination of low impedance and 70V/100V loads in single ended and/or bridged configurations. Power delivered from each output is individually monitored and automatically limited to the stated, safe operating ranges. shall include manufacturer-optimized equalization, high pass filters, multi-stage limiters, and other model-specific control settings tailored to each loudspeaker, ensuring consistent sound quality and complete loudspeaker protection. The amplifier shall have internal heat sinks cooled by a continuously variable speed fan with a Microprocessor Temperature Control. Airflow shall be from front to rear. The amplifier shall be able to drive low impedance loads (2/4/8 ohms) and 70V/100V distributed lines selectable per channel by using dipswitch settings at the rear panel of the amplifier. The amplifier shall deliver a maximum output power per channel of 1250W at 8Ω; 1400W at 4Ω; 1600W at 2Ω; 2800W at 8Ω bridged; 3200W at 4Ω bridged; 1600W at 100V and 1600W at 70V. The amplifier shall contain a DSP board for real-time audio processing not exceeding a 2.5ms fixed latency architecture. As part of the DSP the amplifier will offer a 4 x 4 matrix for all analog and digital inputs. The amplifier rear panel shall provide AC mains connector, Phoenix output connectors, Phoenix line input connector, Phoenix GPI connector, Phoenix GPO connector, Phoenix, RJ45 Ethernet connector, system configuration dip switches and output configuration dip switches. Approved Make : Biamp, AI acoustic, Lab gruppen</p>	3	

8	Biamp	<p>The Conference Room DSP shall support Ethernet connection for programming and control on a RJ-45 connector. The Conference Room DSP shall have internal DSP processing. The Conference Room DSP shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The Conference Room DSP shall include a Universal Serial Bus (USB) connection on a standard USB-B type connector. The Conference Room DSP shall be software configurable to stream up to 2 channels of digital USB Class 1 Audio transmission either into or out of the Conference Room DSP or simultaneous input and output. The Conference Room DSP shall support port authentication via IEEE 802.1X. The Conference Room DSP shall provide 2 balanced input connections for receiving of microphone or line level analog audio signals on screw-down, removable connectors. Any network audio or analog audio connection may be assigned one of sixteen channels of Acoustic Echo Cancellation (AEC). Acoustic Echo Cancellation (AEC) hardware and firmware, the parameters, routing and operation of which shall be software programmable. The Conference Room DSP shall provide 2 balanced output channels for the transmission of microphone or line level analog audio signals on screw-down, removable connectors. Each individual channel shall have its own dedicated connection. The Conference Room DSP shall integrate to Voice Over Internet Protocol (VoIP) systems on a RJ-45 connector and shall support Session Initiation Protocol (SIP) v2.0 or later. The Conference Room DSP shall be capable of being deployed with zero programming or manual tuning and shall provide a post-commissioning status report via the use of Biamp Launch technology. The Conference Room DSP shall feature software-configurable signal processing, including but not limited to: signal routing and mixing, equalization, filtering, dynamics, and delay, as well as control, monitoring, and diagnostic tools. The Conference Room DSP shall provide front panel LED identification of device power, status, alarm, and activity as well as system-wide alarm. The Conference Room DSP shall be surface mountable using the included mounting hardware. The Conference Room DSP shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.</p>	1	
9	Biamp	<p>The audience engagement solution shall be comprised of a host device and two mobile applications. The first mobile application shall support event attendee functionality, including but not limited to: requesting the opportunity to talk, participating in polls conducted by the event moderator, sending text messages to the moderator, and using the built-in microphone to talk once given the opportunity by the moderator. The second mobile application shall support event moderator functionality, including but not limited to: reviewing attendees who have requested to talk, selecting an attendee to talk, creating and distributing polls, deactivating attendee microphones, and sharing poll and/or event data to an external video output. Both the attendee and moderator applications shall be supported on Apple® devices running iOS® v9.0 or newer. The attendee application shall also be supported on Android devices running v10.0 or newer. The moderator interface shall also be supported and accessible via modern web browsers. The attendee and moderator applications and the moderator web interface shall be localized in over 20 languages. The host device shall utilize an Ethernet network via RJ-45 connector for interfacing with attendee and moderator applications, as well as for control monitoring. The host device shall be equipped with two High-Definition Multimedia Interface (HDMI®) ports, balanced analog audio outputs, and two USB 3.0 type A ports. The host device shall be CE marked, UL listed and shall be compliant with the RoHS directive. The host device warranty shall be five years.</p>	1	

10	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
11	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
12	Biamp	SITC for Table stand for touch panel	1	
13	Biamp	The video encoder shall utilize an AVB/TSN network for all media networking as well as software configuration and control. The video encoder shall provide one High-Definition Multimedia Interface (HDMI®) port and one DisplayPort™ 1.2 port. The video encoder shall accept video signals up to and including 4K60. End-to-end network transit latency shall be 1.5 frames (25ms at 60fps) or less. Compression shall be visually lossless using M-JPEG. The video encoder shall be equipped with one RJ-45 port to support AVB/TSN transmission at 1Gb, and one SFP+ port to transmit at 1Gb or 10Gb. The video encoder shall be equipped with a separate RJ-45 Ethernet port for control connection to third party control systems and configuration. The video encoder shall support port authentication via IEEE 802.1X. The video encoder shall provide two balanced input connections for receiving microphone or line level analog audio signals on screw-down, removable connectors. Analog-to-Digital conversion shall be 24-bit with a sampling rate of 48kHz. The video encoder shall support the transmission of HDCP 2.2 protected content. The video encoder shall provide front panel OLED display of device power, status, alarm, and activity as well as system-wide alarm. The video encoder shall be built in a half-rack chassis and feature software-configurable signal processing, including but not limited to: signal routing and mixing, levels, mute, delay, and audio embedding/de-embedding, as well as control, monitoring, and diagnostic tools. The video encoder shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The video encoder shall include a RS-232 connection for control data transmission into or out of the device and such operation shall be software programmable. The video encoder shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be 5 years.	5	

14	Biamp	The video decoder shall utilize an AVB/TSN network for all media networking as well as software configuration and control. The video decoder shall provide one High-Definition Multimedia Interface (HDMI®) port and shall output video signals up to and including 4K60. End-to-end network transit latency shall be 1.5 frames (25ms at 60fps) or less. Compression shall be visually lossless using M-JPEG. The video decoder shall be equipped with one RJ-45 port to support AVB/TSN transmission at 1Gb, and one SFP+ port to receive at 1Gb or 10Gb. The video decoder shall be equipped with a separate RJ-45 Ethernet port for control connection to third party control systems and configuration. The video decoder shall support port authentication via IEEE 802.1X. The video decoder shall provide two balanced output connections for transmitting microphone or line level analog audio signals on screw-down, removable connectors. Digital-to-Analog conversion shall be 24-bit with a sampling rate of 48kHz. The video decoder shall support the transmission of HDCP 2.2 protected content. The video decoder shall provide front panel OLED display of device power, status, alarm, and activity as well as system-wide alarm. The video decoder shall be built in a half-rack chassis and feature software-configurable signal processing, including but not limited to: signal routing and mixing, levels, mute, delay, and audio embedding/de-embedding, as well as control, monitoring, and diagnostic tools. The video decoder shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The video decoder shall include an RS-232 connection for control data transmission into or out of the device and such operation shall be software programmable. The video decoder shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be 5 years.	5	
16	Biamp	SITC of AVB-enabled Netgear 10-port 1G switch, 8-ports w/ PoE+, 240W	1	
17		SITC of Projector (7000 to 8000 lumens ) Laser projector. Projection System High-aperture Epson® 3LCD, 3-chip technology Projection Method Front/rear/ceiling mount Driving Method Poly-silicon TFT Active Matrix Pixel Number 2,304,000 dots (1920 x 1200) x 3 chips Signal Input Maximum Display Resolution: 4096 x 2160 (resizing display) Display Resolution: 1920 x 1200 pixels Native Resolution WUXGA with 4K Enhancement1 (1920 x 1200 x2) Resolution on Screen WUXGA with 4K1 Enhancement/4.6 million pixels1 Aspect Ratio Supports 4:3, 16:9, 16:10 Pixel Arrangement Cross stripe Color Brightness3 Color Light Output: 8,500 lumens White Brightness3 White Light Output: 8,500 lumens Contrast Ratio 2,500,000:1 (Dynamic Contrast: On) Brightness Uniformity (typical) 85% Color Reproduction Up to 1.07 billion colors Keystone Correction Vertical: ±45 degrees; Horizontal: ±30 degrees Illumination Technology Laser Phosphor Operating Temperature 32 ° to 113 °F (0 ° to 45 °C) Power Supply Voltage 100 – 240 V ±10%, 50/60 Hz AC Power Consumption 559 W (Normal, Custom) 469 W (Medium, Quiet, Extended) 2.0 W Standby (Communication on) 0.5 W Standby (Communication off) Fan Noise 35dB (Normal Mode), 34dB (Medium Mode), 30dB (ECO Mode) Security Security cable hole, lens lock, Kensington lock provision, wireless LAN unit lock, DVI-D x 1 HDMI (HDCP 2.3) x 1 HDBaseT x 1 RGB D-sub 15pin Variable audio out: Mini Stereo x 1 USB connector Type-B x 1 USB connector Type-A x 2 Serial: RS-232c x 1 Remote Stereo Mini Network: RJ-45. Approved Makes : Epson / Panasonic / Sony	1	
18	Netrack	SITC of 22 U AV Rack closable doors. 22U Rack, 600W - 800D Front Glass Door - Cam Lock - Ventilation 3 Inch Castor Set, Monitor Tray - Ventilation Metal Cable Manager - 01U - Plastic Cable Loop's Mountable, Four Fan, Power Distribution Unit - 06/16 Amp Indian-Standard - 12 Socket - Single Pole / Screw Mountable / 32 Amp MCB / Alternating Current - Industrial Plug 32A with Power Cable 6 sq.mm 3 meter Length Mounting Hardware Packet { Containg 1 Nos Each Of 3 } - 20 Set. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. Approved Makes : Valrack / Netrack /Rittal/APC	1	

19	Biamp	<p>The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.</p>	1	
20	Sennheiser	<p>SITC of Wireless Lapel Microphone.  SYSTEM (XSW 2-ME2)- Modulation: Wideband FM, Frequency ranges: A: 548-572 MHz, GB: 606-630 MHz, B: 614-638 MHz, C: 766-790 MHz, D: 794-806 MHz,, E: 821-832 MHz, 863-865 MHz, K: 925-937.5, Switching bandwidth: up to 24 MHz, Frequencies: 8 frequency banks, each with up to 12 factory-preset channels, MHz Signal_to_Noise_Ratio: <math>\geq 103</math> dBA, Total Harmonic Distortion: <math>\leq 0.9\%</math>, Temperature range operation: <math>0^{\circ}\text{C}</math> to <math>+40^{\circ}\text{C}</math>, storage: <math>-20^{\circ}\text{C}</math> to <math>+70^{\circ}\text{C}</math>, Transmitter sychronization:2.4 GHz, Low Power OQPSK, RECEIVER (EM-XSW 2)- Receiver principle: double superheterodyne, Diversity principle: True Diversity, Sensitivity (at peak deviation): <math>&lt; 3 \mu\text{V}</math> at 52 dB(A)rms S/N, AF frequency response: 50 to 16,000 Hz (<math>-3</math> dB), Audio adjustment range: 40 dB, adjustable in 5-dB steps, Power supply: 12 V DC nom. / 300 mA, Squelch: adjustable from 3 dB<math>\mu\text{V}</math> to 28 dB<math>\mu\text{V}</math> (combined with pilot tone), Line/Mic level: 20 dB, switchable, Housing material: rugged metal housing, BODYPACK TRANSMITTER (SK-XSW)- RF output power: 10 mW, AF frequency response:Line: 50-16,000 Hz,Mic: 50-16,000 Hz,Audio Input:3.5 mm jack socket, Max. input voltage (Mic/Line) at 3% THD: typ. 1.V rms Mic / typ. 2.6 V rms Line at <math>-30</math> dB gain, Power supply: 2 AA size batteries, 1.5 V, Operating time: approx. 10 hrs, Adjustment range of transmitter sensitivity: to <math>-30</math> dB, adjustable in 10 dB steps, LAVALIER MICROPHONE (ME 2-2)- Transducer principle:condenser, pre-polarized, Sensitivity:20 mV/Pa, Pick-up pattern: omni-directional,Max. SPL:130 dB. Approved make: Sennheiser/ Audio Technica/ Shure.</p>	4	
21	Sennheiser	<p>SITC of Wireless Handheld Microphone.  System- Audio link:470.2 - 526 MHz, frequency ranges:520 - 576 MHz,Audio frequency response:20 Hz - 20 kHz (<math>-3</math> dB) @ 3 dBfs, Audio THD:<math>\leq -60</math> dB for 1 kHz @ <math>-3</math> dBfs input level, Dynamic range:134 dB, System latency:1.9 ms,Operating temperature:<math>-10^{\circ}\text{C}</math> - <math>+55^{\circ}\text{C}</math> (<math>14^{\circ}\text{F}</math> - <math>131^{\circ}\text{F}</math>), Relative humidity:5 - 95 % (non-condensing),EW-D EM (Rack Receiver)- Input voltage:11 - 13 V , Input current:<math>\leq 300</math> mA,Transmit power (radiated) BLE: max. 10 mW EIRP, Audio output power:18 dBu max., EW-D SKM-S (Handheld Transmitter)- Input voltage:2.0 - 4.35 V, Input current: <math>&lt; 300</math> mA, Power supply: 2 AA batteries 1.5 V (alkali manganese) or BA 70 rechargeable battery pack, Occupied bandwidth:200 kHz, Transmit power (radiated):Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP, MMD 835 (Microphone Module) - Transducer principle:dynamic, Sensitivity: 2.1 mV/Pa, Sound pressure level: 154 dB SPL, Pick-up pattern: cardioid. Approved make: Sennheiser/ Audio Technica/ Shure.</p>	4	

23	Sennheiser	SITC of Professional high quality 21” gooseneck microphone with Base. Meg 14-40- Transducer principle:pre-polarised condenser microphone, Pick-up pattern: cardioid, Frequency response: 50 Hz - 20 kHz, Maximum sound pressure level: 130 dB SPL, Equivalent noise level:26 dB (A) 37 dB (CCIR), Phantom powering:P12 - P48 V, Current consumption microphone: 3 mA, Connectivity: XLR 3M, Operating temperature: 0 °C to 40 °C (32 °F to 104 °F), Coating: matte black, MAT 133-S- Current consumption:3.7 mA, Connectors: Mic In - XLR-3F, Mic Out - XLR-3M, Pin assignment out: XLR-3M out, 1 = gnd, 2 = Audio +, 3 = Audio -, Pin assignment in: XLR-3F in, 1 = gnd, 2 = Audio (+), 3 = Audio (-), LED light ring color: red/green, Microphone modes: Toggle on/off Push to mute Push to talk permanent on, Connection: clip contact for logic, Operating temperature: -10 °C to +50 °C (+14 °F to +122 °F) Approved make: Sennheiser/ Audio Technica/ Shure.	2	
24	LG	SITC of 55" Professional Display. 55" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have 2 nos. of HDMI Should have built-in speakers <b>Approved Makes : Christie / LG / Sony</b>	3	
25	DVDO	Professional Voice Tracking, HD PTZ AI Camera with HDMI/IP/3G-SDI/USB3.0 (Black)	1	
26	SIS	Cables & connector lot	1	
27	SIS	Installtion Testing & Commissioning lot	1	
<b>2nd Floor Conference Room</b>				
1	Biamp	The room bundle shall include all the necessary equipment and cabling to provision a 6m x 6m meeting room with conferencing audio capabilities in concert with a UC room system. This equipment shall be two ceiling mounted loudspeakers, one Beamtracking® ceiling mounted microphone, one integrated PoE+ powered amplifier, and one room hub and audio digital signal processor that shall connect all other devices to an Ethernet network via RJ-45 connectors. The system shall connect to a UC Codec via a USB interface. The room bundle shall make use of Launch for automatic device discovery and tuning.	1	
2	Biamp	SITC of Cable cubby, 2 universal power connectors	1	
3	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	1	
4	Biamp	The UC compute and controller shall be supplied to support Microsoft Teams Rooms and include a Biamp-specific device image. It shall consist of a computing device (“UC Compute”) and an USB interface touch panel (“UC Controller”). The UC Compute shall have an Intel®i5-1145G7E microprocessor and 16GB of memory, configured with Microsoft Windows 11 IoT Enterprise SAC as the operating system and be pre-loaded with Microsoft Teams Rooms software. The UC Compute shall have mass storage of 256GB. The UC Compute shall have connectivity via 802.11ax WiFi (AKA Wi-Fi 6) and also Bluetooth® Low Energy (LE) 5.0. The UC Compute shall have the following ports: 2x USB-A 3.2 Gen 2; 1x USB-A 3.2 Gen 1; 1x USB-C 3.2 Gen 2; 1x USB-C 3.2 Gen 1 dedicated for the UC Controller; 2x HDMI out; 1x HDMI in; 1x RJ45 ethernet. The UC Compute shall be certified for Microsoft Teams Rooms. The UC Controller shall have a display with diagonal size 10.1” and support 1280x800 resolution at a 16:10 aspect ratio. The UC Controller shall have a display that is touch sensitive and be capable of 10point multi-touch. The UC Controller shall have the following ports: 1x USB-C 2.0; 1x combination audio jack supporting headphones and microphone. The UC Compute and Controller shall be CE marked, UL/cUL listed and shall be compliant with the RoHS directive. Warranty shall be 3 years.	1	



5	Biamp	The AV Switcher for BYOM shall be designed to mount behind a display or under a conference table. The AV Switcher for BYOM shall accept video and data signals from an in-room UC Compute via an HDMI 2.0 port and a USB 3.0 Type B port. The AV Switcher for BYOM shall accept video and data signals from a user laptop via an HDMI 2.0 port and a USB 3.0 Type B port. The AV Switcher shall enable network connectivity via a Gigabit ethernet port and support communication protocols to be compatible with the software application for monitoring and updating video conferencing bar. The AV Switcher for BYOM shall include a USB 3.0 Type C port with sufficient Power Delivery to support a video conferencing bar. The AV Switcher for BYOM shall have three additional USB 3.0 Type A ports for connecting to in-room peripheral devices. The AV Switcher for BYOM shall be CE marked, UL and cUL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	
6	LG	SITC of 98" Professional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
7	Netrack	SITC of 12 U Equipment Rack. 12U - 600W - 600D - Double Fan Provision - Black Fine Tex. Single Fan For WallMount. Metal Cable Manager - 01U - Plastic Cable Loop's Mountable - Black Fine Tex. - Assembly. Power Distribution Unit - 06 Amp Universal - 06 Socket - 16 Amp Switch with Indicator - 06 Amp Fuse - 06 Amp 3 Pin Plug with Power Cable 0.75 sq.mm 1.5 meter Length alongwith Mounting Hardware Packet. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. <b>Approved Makes : Valrack / Netrack /Rittal/APC</b>	1	
8	DVDO	SITC of 4K/30 PTZ Camera with HDMI/IP/USB3.0 & AI Voice Tracking	1	
9	Biamp	The conferencing hub shall be designed to connect soft codec conferencing systems with in-room audio and video devices. The conferencing hub shall connect to a Windows® or Mac OS X computer via a Universal Serial Bus (USB) connection using a standard USB type B connector. The conferencing hub shall be equipped with one USB 3.0 type A port and two USB 2.0 type A ports. The conferencing hub shall be able to receive and transmit audio streams over USB via a USB Class 1 Audio device. The conferencing hub shall be equipped with one High-Definition Multimedia Interface (HDMI®) port to connect a monitor to a BYOD computer using DisplayLink USB graphics technology. The conferencing hub shall be equipped with one 3.5mm jack for analog stereo audio input and one 3.5mm jack for analog stereo audio output. The conferencing hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be three years	1	
10		Cables & connector lot	1	
11		Installtion Testing & commissioning Charges	1	
<b>2nd Floor U Shape Conference Room Left Wing</b>				
1	Biamp	SITC of Chairman Telescopic Gooseneck Microphone for Microphone discussion system	2	
2	Biamp	SITC of Delegate Telescopic Gooseneck Microphone for Microphone discussion system	18	
3	Biamp	SITC of Interface and PSU for Microphone discussion system. Interface shall connects to any pre-amplifier or matrix with a MIC input with wide gain control (about +20dB of gain needed), allowing you to control the volume and/or use the record output for recording the meeting.	1	

4	Biamp	The PoE+ conferencing amplifier shall provide control data and digital audio over AVB via an RJ-45 connector. The PoE+ conferencing amplifier shall provide four software-configurable output channels of 3 watts of continuous power per channel into a 4-ohm load and an 8-ohm load. The PoE+ conferencing amplifier shall also provide burst power of 50 watts per channel into a 4-ohm load, and 30 watts per channel into an 8-ohm load in accordance with ANSI/CTA-2006-B. Burst mode will operate in accordance with U.S. Patent 10404218. The PoE+ conferencing amplifier shall provide connections to loudspeakers via RJ-45 connectors. The PoE+ conferencing amplifier shall be powered by PoE+ (IEEE 802.3at Class 4) and shall be suitable for use in air handling spaces in accordance with UL 2043. The PoE+ conferencing amplifier shall be capable of being attached directly to the back can of a ceiling speaker. The signal processing of the PoE+ conferencing amplifier shall be configurable via the design software including, but not limited to: volume control, filters, compressor/limiting, delay, speaker equalization and output sensitivity. The PoE+ conferencing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	
5	Biamp	The loudspeaker shall be a two-way, passive coaxial design intended for in-ceiling mounting. The loudspeaker shall be equipped with a 6.5-inch (165 mm) treated paper low frequency transducer (“woofer”), a 1-inch (25 mm) soft dome high frequency transducer (“tweeter”), and a passive crossover/protection circuit network. The high frequency transducer shall be physically separate from the low frequency transducer and shall be bridge-mounted above the low frequency transducer. The loudspeaker shall have a ported architecture and a nominal impedance of 8 ohms. The loudspeaker shall have a coverage angle of 130° from 1kHz to 6kHz. The loudspeaker enclosure shall be constructed of formed steel and UL94V-0 fire rated plastic. The loudspeaker shall include a terminal box that shall interface with conduit having an inside diameter of either 13 mm (0.5 inches) or 22 mm (0.875 inches). The loudspeaker shall be equipped with a four-position, 5.08 mm (0.2 inches) pluggable Euroblock connector and two RJ-45 connectors for audio signal connections. The loudspeaker shall be suitable for blind-mounting from below the ceiling and shall support a magnetically attached grille. The loudspeaker shall have an attachment point for connection via chain or wire to building structure as a secondary support point. The loudspeaker shall include mounting points for direct attachment of amplifier. The loudspeaker shall comply with the requirements of UL Standard 1480A and UL Standard 2043. The loudspeaker shall be UL listed, CE marked, and shall be compliant with the RoHS directive. Warranty shall be five years.	6	
6	Biamp	SITC of Cable cubby, 2 universal power connectors	2	
7	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	2	
8	Biamp	The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
9	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller	1	

		connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.		
10	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
11	Biamp	SITC for Table stand for touch panel	1	
12	Sennheiser	SITC of Wireless Handheld Microphone. System- Audio link:470.2 - 526 MHz, frequency ranges:520 - 576 MHz,Audio frequency response:20 Hz - 20 kHz (-3 dB) @ 3 dBfs, Audio THD:≤ -60 dB for 1 kHz @ -3 dBfs input level, Dynamic range:134 dB, System latency:1.9 ms,Operating temperature:-10 °C - +55 °C (14 °F - 131 °F), Relative humidity:5 - 95 % (non-condensing),EW-D EM (Rack Receiver)- Input voltage:11 - 13 V , Input current:≤ 300 mA,Transmit power (radiated) BLE: max. 10 mW EIRP, Audio output power:18 dBu max., EW-D SKM-S (Handheld Transmitter)- Input voltage:2.0 - 4.35 V, Input current: < 300 mA, Power supply: 2 AA batteries 1.5 V (alkali manganese) or BA 70 rechargeable battery pack, Occupied bandwidth:200 kHz, Transmit power (radiated):Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP, MMD 835 (Microphone Module) - Transducer principle:dynamic, Sensitivity: 2.1 mV/Pa, Sound pressure level: 154 dB SPL, Pick-up pattern: cardioid. Approved make: Sennheiser/ Audio Technica/ Shure.	2	
13	Netrack	SITC of 12 U Equipment Rack. 12U - 600W - 600D - Double Fan Provision - Black Fine Tex. Single Fan For WallMount. Metal Cable Manager - 01U - Plastic Cable Loop's Mountable - Black Fine Tex. - Assembly. Power Distribution Unit - 06 Amp Universal - 06 Socket - 16 Amp Switch with Indicator - 06 Amp Fuse - 06 Amp 3 Pin Plug with Power Cable 0.75 sq.mm 1.5 meter Length alongwith Mounting Hardware Packet. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. <b>Approved Makes : Valrack / Netrack /Rittal/APC</b>	1	
14	LG	SITC of 98" Professional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
15	SIS	Cables & connector lot	1	
16	SIS	Installtion Testing & commissioning Charges	1	
<b>2nd Floor U Shape Conference Room Right Wing</b>				
1	Biamp	SITC of Chairman Telescopic Gooseneck Microphone for Microphone discussion system	2	
2	Biamp	SITC of Delegate Telescopic Gooseneck Microphone for Microphone discussion system	18	
3	Biamp	SITC of Interface and PSU for Microphone discussion system. Interface shall connects to any pre-amplifier or matrix with a MIC input with wide gain control (about +20dB of gain needed), allowing you to control the volume and/or use the record output for recording the meeting.	1	

4	Biamp	The PoE+ conferencing amplifier shall provide control data and digital audio over AVB via an RJ-45 connector. The PoE+ conferencing amplifier shall provide four software-configurable output channels of 3 watts of continuous power per channel into a 4-ohm load and an 8-ohm load. The PoE+ conferencing amplifier shall also provide burst power of 50 watts per channel into a 4-ohm load, and 30 watts per channel into an 8-ohm load in accordance with ANSI/CTA-2006-B. Burst mode will operate in accordance with U.S. Patent 10404218. The PoE+ conferencing amplifier shall provide connections to loudspeakers via RJ-45 connectors. The PoE+ conferencing amplifier shall be powered by PoE+ (IEEE 802.3at Class 4) and shall be suitable for use in air handling spaces in accordance with UL 2043. The PoE+ conferencing amplifier shall be capable of being attached directly to the back can of a ceiling speaker. The signal processing of the PoE+ conferencing amplifier shall be configurable via the design software including, but not limited to: volume control, filters, compressor/limiting, delay, speaker equalization and output sensitivity. The PoE+ conferencing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	
5	Biamp	The loudspeaker shall be a two-way, passive coaxial design intended for in-ceiling mounting. The loudspeaker shall be equipped with a 6.5-inch (165 mm) treated paper low frequency transducer (“woofer”), a 1-inch (25 mm) soft dome high frequency transducer (“tweeter”), and a passive crossover/protection circuit network. The high frequency transducer shall be physically separate from the low frequency transducer and shall be bridge-mounted above the low frequency transducer. The loudspeaker shall have a ported architecture and a nominal impedance of 8 ohms. The loudspeaker shall have a coverage angle of 130° from 1kHz to 6kHz. The loudspeaker enclosure shall be constructed of formed steel and UL94V-0 fire rated plastic. The loudspeaker shall include a terminal box that shall interface with conduit having an inside diameter of either 13 mm (0.5 inches) or 22 mm (0.875 inches). The loudspeaker shall be equipped with a four-position, 5.08 mm (0.2 inches) pluggable Euroblock connector and two RJ-45 connectors for audio signal connections. The loudspeaker shall be suitable for blind-mounting from below the ceiling and shall support a magnetically attached grille. The loudspeaker shall have an attachment point for connection via chain or wire to building structure as a secondary support point. The loudspeaker shall include mounting points for direct attachment of amplifier. The loudspeaker shall comply with the requirements of UL Standard 1480A and UL Standard 2043. The loudspeaker shall be UL listed, CE marked, and shall be compliant with the RoHS directive. Warranty shall be five years.	6	
6	Biamp	SITC of 2 Channel class H amplifier 2 x 600 Watts (RMS @ 4 Ohms), 2 x 840 Watts (Dynamic @ 4 Ohms), variable fan cooled, Analogue Devices DSP processor, 2 U, 19" rackmount	1	
7	Biamp	SITC of Cable cubby, 2 universal power connectors	2	
8	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	2	
9	Biamp	The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	

10	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
11	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
12	Biamp	SITC for Table stand for touch panel	1	
13	Sennheiser	SITC of Wireless Handheld Microphone. System- Audio link:470.2 - 526 MHz, frequency ranges:520 - 576 MHz,Audio frequency response:20 Hz - 20 kHz (-3 dB) @ 3 dBfs, Audio THD:≤ -60 dB for 1 kHz @ -3 dBfs input level, Dynamic range:134 dB, System latency:1.9 ms,Operating temperature:-10 °C - +55 °C (14 °F - 131 °F), Relative humidity:5 - 95 % (non-condensing),EW-D EM (Rack Receiver)- Input voltage:11 - 13 V , Input current:≤ 300 mA, Transmit power (radiated) BLE: max. 10 mW EIRP, Audio output power:18 dBu max., EW-D SKM-S (Handheld Transmitter)- Input voltage:2.0 - 4.35 V, Input current: < 300 mA, Power supply: 2 AA batteries 1.5 V (alkali manganese) or BA 70 rechargeable battery pack, Occupied bandwidth:200 kHz, Transmit power (radiated):Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP, MMD 835 (Microphone Module) - Transducer principle:dynamic, Sensitivity: 2.1 mV/Pa, Sound pressure level: 154 dB SPL, Pick-up pattern: cardioid. Approved make: Sennheiser/ Audio Technica/ Shure.	2	
14	Netrack	SITC of 12 U Equipment Rack. 12U - 600W - 600D - Double Fan Provision - Black Fine Tex. Single Fan For WallMount. Metal Cable Manager - 01U - Plastic Cable Loop's Mountable - Black Fine Tex. - Assembly. Power Distribution Unit - 06 Amp Universal - 06 Socket - 16 Amp Switch with Indicator - 06 Amp Fuse - 06 Amp 3 Pin Plug with Power Cable 0.75 sq.mm 1.5 meter Length alongwith Mounting Hardware Packet. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. <b>Approved Makes : Valrack / Netrack /Rittal/APC</b>	1	
15	LG	SITC of 98" Professional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
16	SIS	Cables & connector lot	1	
17	SIS	Installtion Testing & commissioning Charges	1	
<b>3rd Floor U Shape Conference Room Right Wing -I</b>				
1	Biamp	SITC of Chairman Telescopic Gooseneck Microphone for Microphone discussion system	2	
2	Biamp	SITC of Delegate Telescopic Gooseneck Microphone for Microphone discussion system	18	

3	Biamp	SITC of Interface and PSU for Microphone discussion system. Interface shall connects to any pre-amplifier or matrix with a MIC input with wide gain control (about +20dB of gain needed), allowing you to control the volume and/or use the record output for recording the meeting.	2	
4	Biamp	The PoE+ conferencing amplifier shall provide control data and digital audio over AVB via an RJ-45 connector. The PoE+ conferencing amplifier shall provide four software-configurable output channels of 3 watts of continuous power per channel into a 4-ohm load and an 8-ohm load. The PoE+ conferencing amplifier shall also provide burst power of 50 watts per channel into a 4-ohm load, and 30 watts per channel into an 8-ohm load in accordance with ANSI/CTA-2006-B. Burst mode will operate in accordance with U.S. Patent 10404218. The PoE+ conferencing amplifier shall provide connections to loudspeakers via RJ-45 connectors. The PoE+ conferencing amplifier shall be powered by PoE+ (IEEE 802.3at Class 4) and shall be suitable for use in air handling spaces in accordance with UL 2043. The PoE+ conferencing amplifier shall be capable of being attached directly to the back can of a ceiling speaker. The signal processing of the PoE+ conferencing amplifier shall be configurable via the design software including, but not limited to: volume control, filters, compressor/limiting, delay, speaker equalization and output sensitivity. The PoE+ conferencing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	
5	Biamp	The loudspeaker shall be a two-way, passive coaxial design intended for in-ceiling mounting. The loudspeaker shall be equipped with a 6.5-inch (165 mm) treated paper low frequency transducer (“woofer”), a 1-inch (25 mm) soft dome high frequency transducer (“tweeter”), and a passive crossover/protection circuit network. The high frequency transducer shall be physically separate from the low frequency transducer and shall be bridge-mounted above the low frequency transducer. The loudspeaker shall have a ported architecture and a nominal impedance of 8 ohms. The loudspeaker shall have a coverage angle of 130° from 1kHz to 6kHz. The loudspeaker enclosure shall be constructed of formed steel and UL94V-0 fire rated plastic. The loudspeaker shall include a terminal box that shall interface with conduit having an inside diameter of either 13 mm (0.5 inches) or 22 mm (0.875 inches). The loudspeaker shall be equipped with a four-position, 5.08 mm (0.2 inches) pluggable Euroblock connector and two RJ-45 connectors for audio signal connections. The loudspeaker shall be suitable for blind-mounting from below the ceiling and shall support a magnetically attached grille. The loudspeaker shall have an attachment point for connection via chain or wire to building structure as a secondary support point. The loudspeaker shall include mounting points for direct attachment of amplifier. The loudspeaker shall comply with the requirements of UL Standard 1480A and UL Standard 2043. The loudspeaker shall be UL listed, CE marked, and shall be compliant with the RoHS directive. Warranty shall be five years.	6	
6	Biamp	SITC of 2 Channel class H amplifier 2 x 600 Watts (RMS @ 4 Ohms), 2 x 840 Watts (Dynamic @ 4 Ohms), variable fan cooled, Analogue Devices DSP processor, 2 U, 19" rackmount	1	
7	Biamp	SITC of Cable cubby, 2 universal power connectors	2	
8	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	2	

9	Biamp	The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
10	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
11	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
12	Biamp	SITC for Table stand for touch panel	1	
13	Sennheiser	SITC of Wireless Handheld Microphone. System- Audio link:470.2 - 526 MHz, frequency ranges:520 - 576 MHz,Audio frequency response:20 Hz - 20 kHz (-3 dB) @ 3 dBfs, Audio THD:≤ -60 dB for 1 kHz @ -3 dBfs input level, Dynamic range:134 dB, System latency:1.9 ms,Operating temperature:-10 °C - +55 °C (14 °F - 131 °F), Relative humidity:5 - 95 % (non-condensing),EW-D EM (Rack Receiver)- Input voltage:11 - 13 V , Input current:≤ 300 mA,Transmit power (radiated) BLE: max. 10 mW EIRP, Audio output power:18 dBu max., EW-D SKM-S (Handheld Transmitter)- Input voltage:2.0 - 4.35 V, Input current: < 300 mA, Power supply: 2 AA batteries 1.5 V (alkali manganese) or BA 70 rechargeable battery pack, Occupied bandwidth:200 kHz, Transmit power (radiated):Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP, MMD 835 (Microphone Module) - Transducer principle:dynamic, Sensitivity: 2.1 mV/Pa, Sound pressure level: 154 dB SPL, Pick-up pattern: cardioid. Approved make: Sennheiser/ Audio Technica/ Shure.	2	
14	NetRack	SITC of 22 U AV Rack closable doors. 22U Rack, 600W - 800D Front Glass Door - Cam Lock - Ventilation 3 Inch Castor Set, Monitor Tray - Ventilation Metal Cable Manager - 01U - Plastic Cable Loop's Mountable, Four Fan, Power Distribution Unit - 06/16 Amp Indian-Standard - 12 Socket - Single Pole / Screw Mountable / 32 Amp MCB / Alternating Current - Industrial Plug 32A with Power Cable 6 sq.mm 3 meter Length Mounting Hardware Packet { Containg 1 Nos Each Of 3 } - 20 Set. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. Approved Makes : Valrack / Netrack /Rittal/APC	1	

15	LG	SITC of 98" Professional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
16	SIS	Cables & connector lot	1	
17	SIS	Installation Testing & commissioning Charges	1	
<b>3rd Floor U Shape Conference Room Right Wing -II</b>				
1	Biamp	SITC of Chairman Telescopic Gooseneck Microphone for Microphone discussion system	2	
2	Biamp	SITC of Delegate Telescopic Gooseneck Microphone for Microphone discussion system	18	
3	Biamp	SITC of Interface and PSU for Microphone discussion system. Interface shall connect to any pre-amplifier or matrix with a MIC input with wide gain control (about +20dB of gain needed), allowing you to control the volume and/or use the record output for recording the meeting.	2	
4	Biamp	The PoE+ conferencing amplifier shall provide control data and digital audio over AVB via an RJ-45 connector. The PoE+ conferencing amplifier shall provide four software-configurable output channels of 3 watts of continuous power per channel into a 4-ohm load and an 8-ohm load. The PoE+ conferencing amplifier shall also provide burst power of 50 watts per channel into a 4-ohm load, and 30 watts per channel into an 8-ohm load in accordance with ANSI/CTA-2006-B. Burst mode will operate in accordance with U.S. Patent 10404218. The PoE+ conferencing amplifier shall provide connections to loudspeakers via RJ-45 connectors. The PoE+ conferencing amplifier shall be powered by PoE+ (IEEE 802.3at Class 4) and shall be suitable for use in air handling spaces in accordance with UL 2043. The PoE+ conferencing amplifier shall be capable of being attached directly to the back can of a ceiling speaker. The signal processing of the PoE+ conferencing amplifier shall be configurable via the design software including, but not limited to: volume control, filters, compressor/limiting, delay, speaker equalization and output sensitivity. The PoE+ conferencing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	
5	Biamp	The loudspeaker shall be a two-way, passive coaxial design intended for in-ceiling mounting. The loudspeaker shall be equipped with a 6.5-inch (165 mm) treated paper low frequency transducer ("woofer"), a 1-inch (25 mm) soft dome high frequency transducer ("tweeter"), and a passive crossover/protection circuit network. The high frequency transducer shall be physically separate from the low frequency transducer and shall be bridge-mounted above the low frequency transducer. The loudspeaker shall have a ported architecture and a nominal impedance of 8 ohms. The loudspeaker shall have a coverage angle of 130° from 1kHz to 6kHz. The loudspeaker enclosure shall be constructed of formed steel and UL94V-0 fire rated plastic. The loudspeaker shall include a terminal box that shall interface with conduit having an inside diameter of either 13 mm (0.5 inches) or 22 mm (0.875 inches). The loudspeaker shall be equipped with a four-position, 5.08 mm (0.2 inches) pluggable Euroblock connector and two RJ-45 connectors for audio signal connections. The loudspeaker shall be suitable for blind-mounting from below the ceiling and shall support a magnetically attached grille. The loudspeaker shall have an attachment point for connection via chain or wire to building structure as a secondary support point. The loudspeaker shall include mounting points for direct attachment of amplifier. The loudspeaker shall comply with the requirements of UL Standard 1480A and UL Standard 2043. The loudspeaker shall be UL listed, CE marked, and shall be compliant with the RoHS directive. Warranty shall be five years.	6	



6	Biamp	SITC of 2 Channel class H amplifier 2 x 600 Watts (RMS @ 4 Ohms), 2 x 840 Watts (Dynamic @ 4 Ohms), variable fan cooled, Analogue Devices DSP processor, 2 U, 19" rackmount	1	
7	Biamp	SITC of Cable cubby, 2 universal power connectors	2	
8	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	2	
9	Biamp	The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
10	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
11	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
12	Biamp	SITC for Table stand for touch panel	1	
13	Sennheiser	SITC of Wireless Handheld Microphone. System- Audio link:470.2 - 526 MHz, frequency ranges:520 - 576 MHz,Audio frequency response:20 Hz - 20 kHz (-3 dB) @ 3 dBfs, Audio THD:≤ -60 dB for 1 kHz @ -3 dBfs input level, Dynamic range:134 dB, System latency:1.9 ms,Operating temperature:-10 °C - +55 °C (14 °F - 131 °F), Relative humidity:5 - 95 % (non-condensing),EW-D EM (Rack Receiver)- Input voltage:11 - 13 V , Input current:≤ 300 mA, Transmit power (radiated) BLE: max. 10 mW EIRP, Audio output power:18 dBu max., EW-D SKM-S (Handheld Transmitter)- Input voltage:2.0 - 4.35 V, Input current: < 300 mA, Power supply: 2 AA batteries 1.5 V (alkali manganese) or BA 70 rechargeable battery pack, Occupied bandwidth:200 kHz, Transmit power (radiated):Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP, MMD 835 (Microphone Module) - Transducer principle:dynamic, Sensitivity: 2.1 mV/Pa, Sound pressure level: 154 dB SPL, Pick-up pattern: cardioid. Approved make: Sennheiser/ Audio Technica/ Shure.	2	
14	LG	SITC of 98" Professional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better	1	

		Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony		
15	SIS	Cables & connector lot	1	
16	SIS	Installation Testing & commissioning Charges	1	
<b>3rd Floor U Shape Conference Room Left Wing -I</b>				
1	Biamp	SITC of Chairman Telescopic Gooseneck Microphone for Microphone discussion system	2	
2	Biamp	SITC of Delegate Telescopic Gooseneck Microphone for Microphone discussion system	18	
3	Biamp	SITC of Interface and PSU for Microphone discussion system. Interface shall connect to any pre-amplifier or matrix with a MIC input with wide gain control (about +20dB of gain needed), allowing you to control the volume and/or use the record output for recording the meeting.	2	
4	Biamp	The PoE+ conferencing amplifier shall provide control data and digital audio over AVB via an RJ-45 connector. The PoE+ conferencing amplifier shall provide four software-configurable output channels of 3 watts of continuous power per channel into a 4-ohm load and an 8-ohm load. The PoE+ conferencing amplifier shall also provide burst power of 50 watts per channel into a 4-ohm load, and 30 watts per channel into an 8-ohm load in accordance with ANSI/CTA-2006-B. Burst mode will operate in accordance with U.S. Patent 10404218. The PoE+ conferencing amplifier shall provide connections to loudspeakers via RJ-45 connectors. The PoE+ conferencing amplifier shall be powered by PoE+ (IEEE 802.3at Class 4) and shall be suitable for use in air handling spaces in accordance with UL 2043. The PoE+ conferencing amplifier shall be capable of being attached directly to the back can of a ceiling speaker. The signal processing of the PoE+ conferencing amplifier shall be configurable via the design software including, but not limited to: volume control, filters, compressor/limiting, delay, speaker equalization and output sensitivity. The PoE+ conferencing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	
5	Biamp	The loudspeaker shall be a two-way, passive coaxial design intended for in-ceiling mounting. The loudspeaker shall be equipped with a 6.5-inch (165 mm) treated paper low frequency transducer ("woofer"), a 1-inch (25 mm) soft dome high frequency transducer ("tweeter"), and a passive crossover/protection circuit network. The high frequency transducer shall be physically separate from the low frequency transducer and shall be bridge-mounted above the low frequency transducer. The loudspeaker shall have a ported architecture and a nominal impedance of 8 ohms. The loudspeaker shall have a coverage angle of 130° from 1kHz to 6kHz. The loudspeaker enclosure shall be constructed of formed steel and UL94V-0 fire rated plastic. The loudspeaker shall include a terminal box that shall interface with conduit having an inside diameter of either 13 mm (0.5 inches) or 22 mm (0.875 inches). The loudspeaker shall be equipped with a four-position, 5.08 mm (0.2 inches) pluggable Euroblock connector and two RJ-45 connectors for audio signal connections. The loudspeaker shall be suitable for blind-mounting from below the ceiling and shall support a magnetically attached grille. The loudspeaker shall have an attachment point for connection via chain or wire to building structure as a secondary support point. The loudspeaker shall include mounting points for direct attachment of amplifier. The loudspeaker shall comply with the requirements of UL Standard 1480A and UL Standard 2043. The loudspeaker shall be UL listed, CE marked, and shall be compliant with the RoHS directive. Warranty shall be five years.	6	
6	Biamp	SITC of 2 Channel class H amplifier 2 x 600 Watts (RMS @ 4 Ohms), 2 x 840 Watts (Dynamic @ 4 Ohms), variable fan cooled, Analogue Devices DSP processor, 2 U, 19" rackmount	1	

7	Biamp	SITC of Cable cubby, 2 universal power connectors	2	
8	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	2	
9	Biamp	The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
10	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
11	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
12	Biamp	SITC for Table stand for touch panel	1	
13	Sennheiser	SITC of Wireless Handheld Microphone. System- Audio link:470.2 - 526 MHz, frequency ranges:520 - 576 MHz,Audio frequency response:20 Hz - 20 kHz (-3 dB) @ 3 dBfs, Audio THD:≤ -60 dB for 1 kHz @ -3 dBfs input level, Dynamic range:134 dB, System latency:1.9 ms,Operating temperature:-10 °C - +55 °C (14 °F - 131 °F), Relative humidity:5 - 95 % (non-condensing),EW-D EM (Rack Receiver)- Input voltage:11 - 13 V , Input current:≤ 300 mA,Transmit power (radiated) BLE: max. 10 mW EIRP, Audio output power:18 dBu max., EW-D SKM-S (Handheld Transmitter)- Input voltage:2.0 - 4.35 V, Input current: < 300 mA, Power supply: 2 AA batteries 1.5 V (alkali manganese) or BA 70 rechargeable battery pack, Occupied bandwidth:200 kHz, Transmit power (radiated):Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP, MMD 835 (Microphone Module) - Transducer principle:dynamic, Sensitivity: 2.1 mV/Pa, Sound pressure level: 154 dB SPL, Pick-up pattern: cardioid. Approved make: Sennheiser/ Audio Technica/ Shure.	2	
14	NetRack	SITC of 22 U AV Rack closable doors. 22U Rack, 600W - 800D Front Glass Door - Cam Lock - Ventilation 3 Inch Castor Set, Monitor Tray - Ventilation Metal Cable Manager - 01U - Plastic Cable Loop's Mountable, Four Fan, Power Distribution Unit - 06/16 Amp Indian-Standard - 12 Socket - Single Pole / Screw Mountable / 32 Amp MCB / Alternating Current - Industrial Plug 32A with Power Cable 6 sq.mm 3 meter Length Mounting Hardware Packet { Containg 1 Nos Each Of 3 } - 20 Set. Any other	1	

		accessories as required for proper mounting, cable management & rack dressing to be considered. Approved Makes : Valrack / Netrack /Rittal/APC		
15	LG	SITC of 98" Propessional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
16	SIS	Cables & connector lot	1	
17	SIS	Installtion Testing & commissioning Charges	1	
<b>3rd Floor U Shape Conference Room Left Wing -II</b>				
1	Biamp	SITC of Chairman Telescopic Gooseneck Microphone for Microphone discussion system	2	
2	Biamp	SITC of Delegate Telescopic Gooseneck Microphone for Microphone discussion system	18	
3	Biamp	SITC of Interface and PSU for Microphone discussion system. Interface shall connects to any pre-amplifier or matrix with a MIC input with wide gain control (about +20dB of gain needed), allowing you to control the volume and/or use the record output for recording the meeting.	2	
4	Biamp	The PoE+ conferencing amplifier shall provide control data and digital audio over AVB via an RJ-45 connector. The PoE+ conferencing amplifier shall provide four software-configurable output channels of 3 watts of continuous power per channel into a 4-ohm load and an 8-ohm load. The PoE+ conferencing amplifier shall also provide burst power of 50 watts per channel into a 4-ohm load, and 30 watts per channel into an 8-ohm load in accordance with ANSI/CTA-2006-B. Burst mode will operate in accordance with U.S. Patent 10404218. The PoE+ conferencing amplifier shall provide connections to loudspeakers via RJ-45 connectors. The PoE+ conferencing amplifier shall be powered by PoE+ (IEEE 802.3at Class 4) and shall be suitable for use in air handling spaces in accordance with UL 2043. The PoE+ conferencing amplifier shall be capable of being attached directly to the back can of a ceiling speaker. The signal processing of the PoE+ conferencing amplifier shall be configurable via the design software including, but not limited to: volume control, filters, compressor/limiting, delay, speaker equalization and output sensitivity. The PoE+ conferencing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	
5	Biamp	The loudspeaker shall be a two-way, passive coaxial design intended for in-ceiling mounting. The loudspeaker shall be equipped with a 6.5-inch (165 mm) treated paper low frequency transducer ("woofer"), a 1-inch (25 mm) soft dome high frequency transducer ("tweeter"), and a passive crossover/protection circuit network. The high frequency transducer shall be physically separate from the low frequency transducer and shall be bridge-mounted above the low frequency transducer. The loudspeaker shall have a ported architecture and a nominal impedance of 8 ohms. The loudspeaker shall have a coverage angle of 130° from 1kHz to 6kHz. The loudspeaker enclosure shall be constructed of formed steel and UL94V-0 fire rated plastic. The loudspeaker shall include a terminal box that shall interface with conduit having an inside diameter of either 13 mm (0.5 inches) or 22 mm (0.875 inches). The loudspeaker shall be equipped with a four-position, 5.08 mm (0.2 inches) pluggable Euroblock connector and two RJ-45 connectors for audio signal connections. The loudspeaker shall be suitable for blind-mounting from below the ceiling and shall support a magnetically attached grille. The loudspeaker shall have an attachment point for connection via chain or wire to building structure as a secondary support point. The loudspeaker shall include mounting points for direct attachment of amplifier. The loudspeaker shall comply with the requirements of UL Standard 1480A and UL Standard 2043. The loudspeaker shall be UL listed, CE marked, and shall be compliant with the RoHS directive. Warranty shall be five years.	6	

6	Biamp	SITC of 2 Channel class H amplifier 2 x 600 Watts (RMS @ 4 Ohms), 2 x 840 Watts (Dynamic @ 4 Ohms), variable fan cooled, Analogue Devices DSP processor, 2 U, 19" rackmount	1	
7	Biamp	SITC of Cable cubby, 2 universal power connectors	2	
8	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	2	
9	Biamp	The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
10	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
11	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
12	Biamp	SITC for Table stand for touch panel	1	
13	Sennheiser	SITC of Wireless Handheld Microphone. System- Audio link:470.2 - 526 MHz, frequency ranges:520 - 576 MHz,Audio frequency response:20 Hz - 20 kHz (-3 dB) @ 3 dBfs, Audio THD:≤ -60 dB for 1 kHz @ -3 dBfs input level, Dynamic range:134 dB, System latency:1.9 ms,Operating temperature:-10 °C - +55 °C (14 °F - 131 °F), Relative humidity:5 - 95 % (non-condensing),EW-D EM (Rack Receiver)- Input voltage:11 - 13 V , Input current:≤ 300 mA, Transmit power (radiated) BLE: max. 10 mW EIRP, Audio output power:18 dBu max., EW-D SKM-S (Handheld Transmitter)- Input voltage:2.0 - 4.35 V, Input current: < 300 mA, Power supply: 2 AA batteries 1.5 V (alkali manganese) or BA 70 rechargeable battery pack, Occupied bandwidth:200 kHz, Transmit power (radiated):Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP, MMD 835 (Microphone Module) - Transducer principle:dynamic, Sensitivity: 2.1 mV/Pa, Sound pressure level: 154 dB SPL, Pick-up pattern: cardioid. Approved make: Sennheiser/ Audio Technica/ Shure.	2	
14	NetRack	SITC of 22 U AV Rack closable doors. 22U Rack, 600W - 800D Front Glass Door - Cam Lock - Ventilation 3 Inch Castor Set, Monitor Tray - Ventilation Metal Cable Manager - 01U - Plastic Cable Loop's Mountable, Four Fan, Power Distribution Unit - 06/16 Amp Indian-Standard - 12 Socket - Single	1	

		Pole / Screw Mountable / 32 Amp MCB / Alternating Current - Industrial Plug 32A with Power Cable 6 sq.mm 3 meter Length Mounting Hardware Packet { Containg 1 Nos Each Of 3 } - 20 Set. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. Approved Makes : Valrack / Netrack /Rittal/APC		
15	LG	SITC of 98" Propessional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
16	SIS	Cables & connector lot	1	
17	SIS	Installtion Testing & commissioning Charges	1	
<b>4th Floor U Shape Conference Room Left Wing -I</b>				
1	Biamp	SITC of Chairman Telescopic Gooseneck Microphone for Microphone discussion system	2	
2	Biamp	SITC of Delegate Telescopic Gooseneck Microphone for Microphone discussion system	18	
3	Biamp	SITC of Interface and PSU for Microphone discussion system. Interface shall connects to any pre-amplifier or matrix with a MIC input with wide gain control (about +20dB of gain needed), allowing you to control the volume and/or use the record output for recording the meeting.	2	
4	Biamp	The PoE+ conferencing amplifier shall provide control data and digital audio over AVB via an RJ-45 connector. The PoE+ conferencing amplifier shall provide four software-configurable output channels of 3 watts of continuous power per channel into a 4-ohm load and an 8-ohm load. The PoE+ conferencing amplifier shall also provide burst power of 50 watts per channel into a 4-ohm load, and 30 watts per channel into an 8-ohm load in accordance with ANSI/CTA-2006-B. Burst mode will operate in accordance with U.S. Patent 10404218. The PoE+ conferencing amplifier shall provide connections to loudspeakers via RJ-45 connectors. The PoE+ conferencing amplifier shall be powered by PoE+ (IEEE 802.3at Class 4) and shall be suitable for use in air handling spaces in accordance with UL 2043. The PoE+ conferencing amplifier shall be capable of being attached directly to the back can of a ceiling speaker. The signal processing of the PoE+ conferencing amplifier shall be configurable via the design software including, but not limited to: volume control, filters, compressor/limiting, delay, speaker equalization and output sensitivity. The PoE+ conferencing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	

5	Biamp	The loudspeaker shall be a two-way, passive coaxial design intended for in-ceiling mounting. The loudspeaker shall be equipped with a 6.5-inch (165 mm) treated paper low frequency transducer (“woofer”), a 1-inch (25 mm) soft dome high frequency transducer (“tweeter”), and a passive crossover/protection circuit network. The high frequency transducer shall be physically separate from the low frequency transducer and shall be bridge-mounted above the low frequency transducer. The loudspeaker shall have a ported architecture and a nominal impedance of 8 ohms. The loudspeaker shall have a coverage angle of 130° from 1kHz to 6kHz. The loudspeaker enclosure shall be constructed of formed steel and UL94V-0 fire rated plastic. The loudspeaker shall include a terminal box that shall interface with conduit having an inside diameter of either 13 mm (0.5 inches) or 22 mm (0.875 inches). The loudspeaker shall be equipped with a four-position, 5.08 mm (0.2 inches) pluggable Euroblock connector and two RJ-45 connectors for audio signal connections. The loudspeaker shall be suitable for blind-mounting from below the ceiling and shall support a magnetically attached grille. The loudspeaker shall have an attachment point for connection via chain or wire to building structure as a secondary support point. The loudspeaker shall include mounting points for direct attachment of amplifier. The loudspeaker shall comply with the requirements of UL Standard 1480A and UL Standard 2043. The loudspeaker shall be UL listed, CE marked, and shall be compliant with the RoHS directive. Warranty shall be five years.	6	
6	Biamp	SITC of 2 Channel class H amplifier 2 x 600 Watts (RMS @ 4 Ohms), 2 x 840 Watts (Dynamic @ 4 Ohms), variable fan cooled, Analogue Devices DSP processor, 2 U, 19" rackmount	1	
7	Biamp	SITC of Cable cubby, 2 universal power connectors	2	
8	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	2	
9	Biamp	The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
10	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
11	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	

12	Biamp	SITC for Table stand for touch panel	1	
13	Sennheiser	SITC of Wireless Handheld Microphone. System- Audio link:470.2 - 526 MHz, frequency ranges:520 - 576 MHz,Audio frequency response:20 Hz - 20 kHz (-3 dB) @ 3 dBfs, Audio THD:≤ -60 dB for 1 kHz @ -3 dBfs input level, Dynamic range:134 dB, System latency:1.9 ms,Operating temperature:-10 °C - +55 °C (14 °F - 131 °F), Relative humidity:5 - 95 % (non-condensing),EW-D EM (Rack Receiver)- Input voltage:11 - 13 V , Input current:≤ 300 mA, Transmit power (radiated) BLE: max. 10 mW EIRP, Audio output power:18 dBu max., EW-D SKM-S (Handheld Transmitter)- Input voltage:2.0 - 4.35 V, Input current: < 300 mA, Power supply: 2 AA batteries 1.5 V (alkali manganese) or BA 70 rechargeable battery pack, Occupied bandwidth:200 kHz, Transmit power (radiated):Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP, MMD 835 (Microphone Module) - Transducer principle:dynamic, Sensitivity: 2.1 mV/Pa, Sound pressure level: 154 dB SPL, Pick-up pattern: cardioid. Approved make: Sennheiser/ Audio Technica/ Shure.	2	
14	NetRack	SITC of 22 U AV Rack closable doors. 22U Rack, 600W - 800D Front Glass Door - Cam Lock - Ventilation 3 Inch Castor Set, Monitor Tray - Ventilation Metal Cable Manager - 01U - Plastic Cable Loop's Mountable, Four Fan, Power Distribution Unit - 06/16 Amp Indian-Standard - 12 Socket - Single Pole / Screw Mountable / 32 Amp MCB / Alternating Current - Industrial Plug 32A with Power Cable 6 sq.mm 3 meter Length Mounting Hardware Packet { Containg 1 Nos Each Of 3 } - 20 Set. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. Approved Makes : Valrack / Netrack / Rittal/APC	1	
15	LG	SITC of 98" Propessional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
16	SIS	Cables & connector lot	1	
17	SIS	Installtion Testing & commissioning Charges	1	
<b>4th Floor U Shape Conference Room Left Wing -II</b>				
1	Biamp	SITC of Chairman Telescopic Gooseneck Microphone for Microphone discussion system	2	
2	Biamp	SITC of Delegate Telescopic Gooseneck Microphone for Microphone discussion system	18	
3	Biamp	SITC of Interface and PSU for Microphone discussion system. Interface shall connects to any pre-amplifier or matrix with a MIC input with wide gain control (about +20dB of gain needed), allowing you to control the volume and/or use the record output for recording the meeting.	2	



4	Biamp	The PoE+ conferencing amplifier shall provide control data and digital audio over AVB via an RJ-45 connector. The PoE+ conferencing amplifier shall provide four software-configurable output channels of 3 watts of continuous power per channel into a 4-ohm load and an 8-ohm load. The PoE+ conferencing amplifier shall also provide burst power of 50 watts per channel into a 4-ohm load, and 30 watts per channel into an 8-ohm load in accordance with ANSI/CTA-2006-B. Burst mode will operate in accordance with U.S. Patent 10404218. The PoE+ conferencing amplifier shall provide connections to loudspeakers via RJ-45 connectors. The PoE+ conferencing amplifier shall be powered by PoE+ (IEEE 802.3at Class 4) and shall be suitable for use in air handling spaces in accordance with UL 2043. The PoE+ conferencing amplifier shall be capable of being attached directly to the back can of a ceiling speaker. The signal processing of the PoE+ conferencing amplifier shall be configurable via the design software including, but not limited to: volume control, filters, compressor/limiting, delay, speaker equalization and output sensitivity. The PoE+ conferencing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	
5	Biamp	The loudspeaker shall be a two-way, passive coaxial design intended for in-ceiling mounting. The loudspeaker shall be equipped with a 6.5-inch (165 mm) treated paper low frequency transducer (“woofer”), a 1-inch (25 mm) soft dome high frequency transducer (“tweeter”), and a passive crossover/protection circuit network. The high frequency transducer shall be physically separate from the low frequency transducer and shall be bridge-mounted above the low frequency transducer. The loudspeaker shall have a ported architecture and a nominal impedance of 8 ohms. The loudspeaker shall have a coverage angle of 130° from 1kHz to 6kHz. The loudspeaker enclosure shall be constructed of formed steel and UL94V-0 fire rated plastic. The loudspeaker shall include a terminal box that shall interface with conduit having an inside diameter of either 13 mm (0.5 inches) or 22 mm (0.875 inches). The loudspeaker shall be equipped with a four-position, 5.08 mm (0.2 inches) pluggable Euroblock connector and two RJ-45 connectors for audio signal connections. The loudspeaker shall be suitable for blind-mounting from below the ceiling and shall support a magnetically attached grille. The loudspeaker shall have an attachment point for connection via chain or wire to building structure as a secondary support point. The loudspeaker shall include mounting points for direct attachment of amplifier. The loudspeaker shall comply with the requirements of UL Standard 1480A and UL Standard 2043. The loudspeaker shall be UL listed, CE marked, and shall be compliant with the RoHS directive. Warranty shall be five years.	6	
6	Biamp	SITC of 2 Channel class H amplifier 2 x 600 Watts (RMS @ 4 Ohms), 2 x 840 Watts (Dynamic @ 4 Ohms), variable fan cooled, Analogue Devices DSP processor, 2 U, 19" rackmount	1	
7	Biamp	SITC of Cable cubby, 2 universal power connectors	2	
8	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	2	
9	Biamp	The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	

10	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
11	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
12	Biamp	SITC for Table stand for touch panel	1	
13	Sennheiser	SITC of Wireless Handheld Microphone. System- Audio link:470.2 - 526 MHz, frequency ranges:520 - 576 MHz,Audio frequency response:20 Hz - 20 kHz (-3 dB) @ 3 dBfs, Audio THD:≤ -60 dB for 1 kHz @ -3 dBfs input level, Dynamic range:134 dB, System latency:1.9 ms,Operating temperature:-10 °C - +55 °C (14 °F - 131 °F), Relative humidity:5 - 95 % (non-condensing),EW-D EM (Rack Receiver)- Input voltage:11 - 13 V , Input current:≤ 300 mA,Transmit power (radiated) BLE: max. 10 mW EIRP, Audio output power:18 dBu max., EW-D SKM-S (Handheld Transmitter)- Input voltage:2.0 - 4.35 V, Input current: < 300 mA, Power supply: 2 AA batteries 1.5 V (alkali manganese) or BA 70 rechargeable battery pack, Occupied bandwidth:200 kHz, Transmit power (radiated):Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP, MMD 835 (Microphone Module) - Transducer principle:dynamic, Sensitivity: 2.1 mV/Pa, Sound pressure level: 154 dB SPL, Pick-up pattern: cardioid. Approved make: Sennheiser/ Audio Technica/ Shure.	2	

14	NetRack	SITC of 22 U AV Rack closable doors. 22U Rack, 600W - 800D Front Glass Door - Cam Lock - Ventilation 3 Inch Castor Set, Monitor Tray - Ventilation Metal Cable Manager - 01U - Plastic Cable Loop's Mountable, Four Fan, Power Distribution Unit - 06/16 Amp Indian-Standard - 12 Socket - Single Pole / Screw Mountable / 32 Amp MCB / Alternating Current - Industrial Plug 32A with Power Cable 6 sq.mm 3 meter Length Mounting Hardware Packet { Containg 1 Nos Each Of 3 } - 20 Set. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. Approved Makes : Valrack / Netrack /Rittal/APC	1	
15	LG	SITC of 98" Propessional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
16	SIS	Cables & connector lot	1	
17	SIS	Installtion Testing & commissioning Charges	1	
<b>4th Floor U Shape Conference Room Right Wing -I</b>				
1	Biamp	SITC of Chairman Telescopic Gooseneck Microphone for Microphone discussion system	2	
2	Biamp	SITC of Delegate Telescopic Gooseneck Microphone for Microphone discussion system	18	
3	Biamp	SITC of Interface and PSU for Microphone discussion system. Interface shall connects to any pre-amplifier or matrix with a MIC input with wide gain control (about +20dB of gain needed), allowing you to control the volume and/or use the record output for recording the meeting.	2	
4	Biamp	The PoE+ conferencing amplifier shall provide control data and digital audio over AVB via an RJ-45 connector. The PoE+ conferencing amplifier shall provide four software-configurable output channels of 3 watts of continuous power per channel into a 4-ohm load and an 8-ohm load. The PoE+ conferencing amplifier shall also provide burst power of 50 watts per channel into a 4-ohm load, and 30 watts per channel into an 8-ohm load in accordance with ANSI/CTA-2006-B. Burst mode will operate in accordance with U.S. Patent 10404218. The PoE+ conferencing amplifier shall provide connections to loudspeakers via RJ-45 connectors. The PoE+ conferencing amplifier shall be powered by PoE+ (IEEE 802.3at Class 4) and shall be suitable for use in air handling spaces in accordance with UL 2043. The PoE+ conferencing amplifier shall be capable of being attached directly to the back can of a ceiling speaker. The signal processing of the PoE+ conferencing amplifier shall be configurable via the design software including, but not limited to: volume control, filters, compressor/limiting, delay, speaker equalization and output sensitivity. The PoE+ conferencing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	

5	Biamp	The loudspeaker shall be a two-way, passive coaxial design intended for in-ceiling mounting. The loudspeaker shall be equipped with a 6.5-inch (165 mm) treated paper low frequency transducer (“woofer”), a 1-inch (25 mm) soft dome high frequency transducer (“tweeter”), and a passive crossover/protection circuit network. The high frequency transducer shall be physically separate from the low frequency transducer and shall be bridge-mounted above the low frequency transducer. The loudspeaker shall have a ported architecture and a nominal impedance of 8 ohms. The loudspeaker shall have a coverage angle of 130° from 1kHz to 6kHz. The loudspeaker enclosure shall be constructed of formed steel and UL94V-0 fire rated plastic. The loudspeaker shall include a terminal box that shall interface with conduit having an inside diameter of either 13 mm (0.5 inches) or 22 mm (0.875 inches). The loudspeaker shall be equipped with a four-position, 5.08 mm (0.2 inches) pluggable Euroblock connector and two RJ-45 connectors for audio signal connections. The loudspeaker shall be suitable for blind-mounting from below the ceiling and shall support a magnetically attached grille. The loudspeaker shall have an attachment point for connection via chain or wire to building structure as a secondary support point. The loudspeaker shall include mounting points for direct attachment of amplifier. The loudspeaker shall comply with the requirements of UL Standard 1480A and UL Standard 2043. The loudspeaker shall be UL listed, CE marked, and shall be compliant with the RoHS directive. Warranty shall be five years.	6	
6	Biamp	SITC of 2 Channel class H amplifier 2 x 600 Watts (RMS @ 4 Ohms), 2 x 840 Watts (Dynamic @ 4 Ohms), variable fan cooled, Analogue Devices DSP processor, 2 U, 19" rackmount	1	
7	Biamp	SITC of Cable cubby, 2 universal power connectors	2	
8	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	2	
9	Biamp	The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
10	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
11	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	

12	Biamp	SITC for Table stand for touch panel	1	
13	Sennheiser	SITC of Wireless Handheld Microphone. System- Audio link:470.2 - 526 MHz, frequency ranges:520 - 576 MHz,Audio frequency response:20 Hz - 20 kHz (-3 dB) @ 3 dBfs, Audio THD:≤ -60 dB for 1 kHz @ -3 dBfs input level, Dynamic range:134 dB, System latency:1.9 ms,Operating temperature:-10 °C - +55 °C (14 °F - 131 °F), Relative humidity:5 - 95 % (non-condensing),EW-D EM (Rack Receiver)- Input voltage:11 - 13 V , Input current:≤ 300 mA,Transmit power (radiated) BLE: max. 10 mW EIRP, Audio output power:18 dBu max., EW-D SKM-S (Handheld Transmitter)- Input voltage:2.0 - 4.35 V, Input current: < 300 mA, Power supply: 2 AA batteries 1.5 V (alkali manganese) or BA 70 rechargeable battery pack, Occupied bandwidth:200 kHz, Transmit power (radiated):Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP, MMD 835 (Microphone Module) - Transducer principle:dynamic, Sensitivity: 2.1 mV/Pa, Sound pressure level: 154 dB SPL, Pick-up pattern: cardioid. Approved make: Sennheiser/ Audio Technica/ Shure.	2	
14	NetRack	SITC of 22 U AV Rack closable doors. 22U Rack, 600W - 800D Front Glass Door - Cam Lock - Ventilation 3 Inch Castor Set, Monitor Tray - Ventilation Metal Cable Manager - 01U - Plastic Cable Loop's Mountable, Four Fan, Power Distribution Unit - 06/16 Amp Indian-Standard - 12 Socket - Single Pole / Screw Mountable / 32 Amp MCB / Alternating Current - Industrial Plug 32A with Power Cable 6 sq.mm 3 meter Length Mounting Hardware Packet { Containg 1 Nos Each Of 3 } - 20 Set. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. Approved Makes : Valrack / Netrack /Rittal/APC	1	
15	LG	SITC of 98" Propessional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
16	SIS	Cables & connector lot	1	
17	SIS	Installtion Testing & commissioning Charges	1	
<b>5th Floor Conference Room Left Wing</b>				
1	Biamp	The room bundle shall include all the necessary equipment and cabling to provision a 6m x 6m meeting room with conferencing audio capabilities in concert with a UC room system. This equipment shall be two ceiling mounted loudspeakers, one Beamtracking® ceiling mounted microphone, one integrated PoE+ powered amplifier, and one room hub and audio digital signal processor that shall connect all other devices to an Ethernet network via RJ-45 connectors. The system shall connect to a UC Codec via a USB interface. The room bundle shall make use of Launch for automatic device discovery and tuning.	1	
2	Biamp	SITC of Cable cubby, 2 universal power connectors	1	
3	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	1	

4	Biamp	The UC compute and controller shall be supplied to support Microsoft Teams Rooms and include a Biamp-specific device image. It shall consist of a computing device (“UC Compute”) and an USB interface touch panel (“UC Controller”). The UC Compute shall have an Intel®i5-1145G7E microprocessor and 16GB of memory, configured with Microsoft Windows 11 IoT Enterprise SAC as the operating system and be pre-loaded with Microsoft Teams Rooms software. The UC Compute shall have mass storage of 256GB. The UC Compute shall have connectivity via 802.11ax WiFi (AKA Wi-Fi 6) and also Bluetooth® Low Energy (LE) 5.0. The UC Compute shall have the following ports: 2x USB-A 3.2 Gen 2; 1x USB-A 3.2 Gen 1; 1x USB-C 3.2 Gen 2; 1x USB-C 3.2 Gen 1 dedicated for the UC Controller; 2x HDMI out; 1x HDMI in; 1x RJ45 ethernet. The UC Compute shall be certified for Microsoft Teams Rooms. The UC Controller shall have a display with diagonal size 10.1” and support 1280x800 resolution at a 16:10 aspect ratio. The UC Controller shall have a display that is touch sensitive and be capable of 10point multi-touch. The UC Controller shall have the following ports: 1x USB-C 2.0; 1x combination audio jack supporting headphones and microphone. The UC Compute and Controller shall be CE marked, UL/cUL listed and shall be compliant with the RoHS directive. Warranty shall be 3 years.	1	
5	Biamp	The AV Switcher for BYOM shall be designed to mount behind a display or under a conference table. The AV Switcher for BYOM shall accept video and data signals from an in-room UC Compute via an HDMI 2.0 port and a USB 3.0 Type B port. The AV Switcher for BYOM shall accept video and data signals from a user laptop via an HDMI 2.0 port and a USB 3.0 Type B port. The AV Switcher shall enable network connectivity via a Gigabit ethernet port and support communication protocols to be compatible with the software application for monitoring and updating video conferencing bar. The AV Switcher for BYOM shall include a USB 3.0 Type C port with sufficient Power Delivery to support a video conferencing bar. The AV Switcher for BYOM shall have three additional USB 3.0 Type A ports for connecting to in-room peripheral devices. The AV Switcher for BYOM shall be CE marked, UL and cUL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	
6	LG	SITC of 98" Propessional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
7	Netrack	SITC of 12 U Equipment Rack. 12U - 600W - 600D - Double Fan Provision - Black Fine Tex. Single Fan For WallMount. Metal Cable Manager - 01U - Plastic Cable Loop's Mountable - Black Fine Tex. - Assembly. Power Distribution Unit - 06 Amp Universal - 06 Socket - 16 Amp Switch with Indicator - 06 Amp Fuse - 06 Amp 3 Pin Plug with Power Cable 0.75 sq.mm 1.5 meter Length alongwith Mounting Hardware Packet. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. <b>Approved Makes : Valrack / Netrack /Rittal/APC</b>	1	
8	DVDO	SITC of 4K/30 PTZ Camera with HDMI/IP/USB3.0 & AI Voice Tracking	1	

9	Biamp	The conferencing hub shall be designed to connect soft codec conferencing systems with in-room audio and video devices. The conferencing hub shall connect to a Windows® or Mac OS X computer via a Universal Serial Bus (USB) connection using a standard USB type B connector. The conferencing hub shall be equipped with one USB 3.0 type A port and two USB 2.0 type A ports. The conferencing hub shall be able to receive and transmit audio streams over USB via a USB Class 1 Audio device. The conferencing hub shall be equipped with one High-Definition Multimedia Interface (HDMI®) port to connect a monitor to a BYOD computer using DisplayLink USB graphics technology. The conferencing hub shall be equipped with one 3.5mm jack for analog stereo audio input and one 3.5mm jack for analog stereo audio output. The conferencing hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be three years	1	
10		Cables & connector lot	1	
11		Installtion Testing & commissioning Charges	1	
<b>5th Floor Conference Room Right Wing</b>				
1	Biamp	The room bundle shall include all the necessary equipment and cabling to provision a 6m x 6m meeting room with conferencing audio capabilities in concert with a UC room system. This equipment shall be two ceiling mounted loudspeakers, one Beamtracking® ceiling mounted microphone, one integrated PoE+ powered amplifier, and one room hub and audio digital signal processor that shall connect all other devices to an Ethernet network via RJ-45 connectors. The system shall connect to a UC Codec via a USB interface. The room bundle shall make use of Launch for automatic device discovery and tuning.	1	
2	Biamp	SITC of Cable cubby, 2 universal power connectors	1	
3	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	1	
4	Biamp	The UC compute and controller shall be supplied to support Microsoft Teams Rooms and include a Biamp-specific device image. It shall consist of a computing device ("UC Compute") and an USB interface touch panel ("UC Controller"). The UC Compute shall have an Intel®i5-1145G7E microprocessor and 16GB of memory, configured with Microsoft Windows 11 IoT Enterprise SAC as the operating system and be pre-loaded with Microsoft Teams Rooms software. The UC Compute shall have mass storage of 256GB. The UC Compute shall have connectivity via 802.11ax WiFi (AKA Wi-Fi 6) and also Bluetooth® Low Energy (LE) 5.0. The UC Compute shall have the following ports: 2x USB-A 3.2 Gen 2; 1x USB-A 3.2 Gen 1; 1x USB-C 3.2 Gen 2; 1x USB-C 3.2 Gen 1 dedicated for the UC Controller; 2x HDMI out; 1x HDMI in; 1x RJ45 ethernet. The UC Compute shall be certified for Microsoft Teams Rooms. The UC Controller shall have a display with diagonal size 10.1" and support 1280x800 resolution at a 16:10 aspect ratio. The UC Controller shall have a display that is touch sensitive and be capable of 10point multi-touch. The UC Controller shall have the following ports: 1x USB-C 2.0; 1x combination audio jack supporting headphones and microphone. The UC Compute and Controller shall be CE marked, UL/cUL listed and shall be compliant with the RoHS directive. Warranty shall be 3 years.	1	
5	Biamp	The AV Switcher for BYOM shall be designed to mount behind a display or under a conference table. The AV Switcher for BYOM shall accept video and data signals from an in-room UC Compute via an HDMI 2.0 port and a USB 3.0 Type B port. The AV Switcher for BYOM shall accept video and data signals from a user laptop via an HDMI 2.0 port and a USB 3.0 Type B port. The AV Switcher shall enable network connectivity via a Gigabit ethernet port and support communication protocols to be compatible with the software application for monitoring and updating video conferencing bar. The AV Switcher for BYOM shall include a USB 3.0 Type C port with sufficient Power Delivery to support a video conferencing bar. The AV Switcher for BYOM shall have three additional USB 3.0 Type A ports for connecting to in-room peripheral devices. The AV Switcher for BYOM shall be CE marked, UL and cUL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	

6	LG	SITC of 98" Professional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
7	Netrack	SITC of 12 U Equipment Rack. 12U - 600W - 600D - Double Fan Provision - Black Fine Tex. Single Fan For WallMount. Metal Cable Manager - 01U - Plastic Cable Loop's Mountable - Black Fine Tex. - Assembly. Power Distribution Unit - 06 Amp Universal - 06 Socket - 16 Amp Switch with Indicator - 06 Amp Fuse - 06 Amp 3 Pin Plug with Power Cable 0.75 sq.mm 1.5 meter Length alongwith Mounting Hardware Packet. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. <b>Approved Makes : Valrack / Netrack /Rittal/APC</b>	1	
8	DVDO	SITC of 4K/30 PTZ Camera with HDMI/IP/USB3.0 & AI Voice Tracking	1	
9	Biamp	The conferencing hub shall be designed to connect soft codec conferencing systems with in-room audio and video devices. The conferencing hub shall connect to a Windows® or Mac OS X computer via a Universal Serial Bus (USB) connection using a standard USB type B connector. The conferencing hub shall be equipped with one USB 3.0 type A port and two USB 2.0 type A ports. The conferencing hub shall be able to receive and transmit audio streams over USB via a USB Class 1 Audio device. The conferencing hub shall be equipped with one High-Definition Multimedia Interface (HDMI®) port to connect a monitor to a BYOD computer using DisplayLink USB graphics technology. The conferencing hub shall be equipped with one 3.5mm jack for analog stereo audio input and one 3.5mm jack for analog stereo audio output. The conferencing hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be three years	1	
10		Cables & connector lot	1	
11		Installation Testing & commissioning Charges	1	
<b>5th Floor Standing Committee</b>				
1	Biamp	The Conference Room DSP shall support Ethernet connection for programming and control on a RJ-45 connector. The Conference Room DSP shall have internal DSP processing. The Conference Room DSP shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The Conference Room DSP shall include a Universal Serial Bus (USB) connection on a standard USB-B type connector. The Conference Room DSP shall be software configurable to stream up to 2 channels of digital USB Class 1 Audio transmission either into or out of the Conference Room DSP or simultaneous input and output. The Conference Room DSP shall support port authentication via IEEE 802.1X. The Conference Room DSP shall provide 2 balanced input connections for receiving of microphone or line level analog audio signals on screw-down, removable connectors. Any network audio or analog audio connection may be assigned one of eight channels of Acoustic Echo Cancellation (AEC). Acoustic Echo Cancellation (AEC) hardware and firmware, the parameters, routing and operation of which shall be software programmable. The Conference Room DSP shall provide 2 balanced output channels for the transmission of microphone or line level analog audio signals on screw-down, removable connectors. Each individual channel shall have its own dedicated connection. The Conference Room DSP shall integrate to Voice Over Internet Protocol (VoIP) systems on a RJ-45 connector and shall support Session Initiation Protocol (SIP) v2.0 or later. The Conference Room DSP shall be capable of being deployed with zero programming or manual tuning and shall provide a post-commissioning status report via the use of Biamp Launch technology. The Conference Room DSP shall feature software-configurable signal processing, including but not limited to: signal routing and mixing, equalization, filtering, dynamics, and delay, as well as control, monitoring,	1	



		and diagnostic tools. The Conference Room DSP shall provide front panel LED identification of device power, status, alarm, and activity as well as system-wide alarm. The Conference Room DSP shall be surface mountable using the included mounting hardware. The Conference Room DSP shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.		
2	Biamp	The PoE+ conferencing amplifier shall provide control data and digital audio over AVB via an RJ-45 connector. The PoE+ conferencing amplifier shall provide four software-configurable output channels of 3 watts of continuous power per channel into a 4-ohm load and an 8-ohm load. The PoE+ conferencing amplifier shall also provide burst power of 50 watts per channel into a 4-ohm load, and 30 watts per channel into an 8-ohm load in accordance with ANSI/CTA-2006-B. Burst mode will operate in accordance with U.S. Patent 10404218. The PoE+ conferencing amplifier shall provide connections to loudspeakers via RJ-45 connectors. The PoE+ conferencing amplifier shall be powered by PoE+ (IEEE 802.3at Class 4) and shall be suitable for use in air handling spaces in accordance with UL 2043. The PoE+ conferencing amplifier shall be capable of being attached directly to the back can of a ceiling speaker. The signal processing of the PoE+ conferencing amplifier shall be configurable via the design software including, but not limited to: volume control, filters, compressor/limiting, delay, speaker equalization and output sensitivity. The PoE+ conferencing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	
3	Biamp	The loudspeaker shall be a two-way, passive coaxial design intended for in-ceiling mounting. The loudspeaker shall be equipped with a 6.5-inch (165 mm) treated paper low frequency transducer (“woofer”), a 1-inch (25 mm) soft dome high frequency transducer (“tweeter”), and a passive crossover/protection circuit network. The high frequency transducer shall be physically separate from the low frequency transducer and shall be bridge-mounted above the low frequency transducer. The loudspeaker shall have a ported architecture and a nominal impedance of 8 ohms. The loudspeaker shall have a coverage angle of 130° from 1kHz to 6kHz. The loudspeaker enclosure shall be constructed of formed steel and UL94V-0 fire rated plastic. The loudspeaker shall include a terminal box that shall interface with conduit having an inside diameter of either 13 mm (0.5 inches) or 22 mm (0.875 inches). The loudspeaker shall be equipped with a four-position, 5.08 mm (0.2 inches) pluggable Euroblock connector and two RJ-45 connectors for audio signal connections. The loudspeaker shall be suitable for blind-mounting from below the ceiling and shall support a magnetically attached grille. The loudspeaker shall have an attachment point for connection via chain or wire to building structure as a secondary support point. The loudspeaker shall include mounting points for direct attachment of amplifier. The loudspeaker shall comply with the requirements of UL Standard 1480A and UL Standard 2043. The loudspeaker shall be UL listed, CE marked, and shall be compliant with the RoHS directive. Warranty shall be five years.	6	
4	Biamp	SITC of Cable cubby, 2 universal power connectors	2	
5	Biamp	SITC of HDMI 2.0 - 50' (15m) 4k60 Active	2	
6	Biamp	The conferencing hub shall be designed to connect soft codec conferencing systems with in-room audio and video devices. The conferencing hub shall connect to a Windows® or Mac OS X computer via a Universal Serial Bus (USB) connection using a standard USB type B connector. The conferencing hub shall be equipped with one USB 3.0 type A port and two USB 2.0 type A ports. The conferencing hub shall be able to receive and transmit audio streams over USB via a USB Class 1 Audio device. The conferencing hub shall be equipped with one High-Definition Multimedia Interface (HDMI®) port to connect a monitor to a BYOD computer using DisplayLink USB graphics technology. The conferencing hub shall be equipped with one 3.5mm jack for analog stereo audio input and one 3.5mm jack for analog stereo audio output. The conferencing hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be	1	

		three years		
7	Biamp	The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
8	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
9	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
10	Biamp	SITC for Table stand for touch panel	1	
11	telvic	SITC of Digital Central Control Unit. Description-All in One Cat 5e Cable, Dante™: Easy Third-party Interfacing, Web Server with User-friendly Interface, Straightforward Recording, External Power Supply, Benefits- Rock-solid Network Performance, HD Audio, Closed Architecture, Open Interfacing, Self-healing Topology, Loop Cabling, Features-Easy built-in recording, No pc required for core functionality, Seamless combination of wired and wireless units, Wireless range extension, Combinations for wireless room split/combine application, USB port for expandable memory to record longer meetings (volumes up to 500 GB), Buttons & Modes: ON/OFF Power button, A volume dial on the front allows direct adjustment of the system volume, Single push button to start or stop recordings, LED indicator to show recording status (ON/OFF), DLP switch to enable and disable power to the Plixus, Connectivity: 2 Power connectors, 4 Conference network ports, DLP switch, 2 redundant Dante ports, 1 USB 2.0 ports, LAN port, 1 Balanced XLR audio input, 1 Balanced XLR audio output, 2 Unbalanced Cinch audio inputs, 2 Unbalanced Cinch audio outputs, Material: Steel, Certification: CE. Approved Make: Telvic/Sennheiser/Biamp	1	

12	telvic	SITC of Goosneck Microphone with Inbuilt Voting System & Deligate. Confidea F-DV- Features: Basic discussion function, Electronic voting function, Tactile microphone push button with integrated LED, 5 clear voting buttons with LED indicators: ++/+0/-/, RFID card reader, Integrated loudspeaker, Rounded corners for easy installation, Trademark natural Televic Sound, Available in custom colors, sizes, finishes, Material: Steel, Color: Tiger coating Carbon 01, Certification: CE. D-MIC40SL-Description: The removable gooseneck microphone is equipped with a screw lock connector for easy connection to the different delegate and interpreter units. Material: Brass, Color: Matt black, RAL 9011, Transducer principle: Back electret (condenser), Operating principle: Pressure gradient, Polar pattern: Unidirectional, cardioid, Signal to noise ratio: > 67 dB(A). Approved Make: Televic/Sennheiser/Biamp	22	
13	telvic	SITC of Chairmen Unit with Inbuilt Voting System & Deligate. Confidea F-CV-Features: Basic discussion function, Electronic voting function, Tactile microphone push button with integrated LED, Tactile Next-in-line push button, Tactile Priority push button, 5 clear voting buttons with LED indicators: ++/+0/-/- -- RFID card reader, Integrated loudspeaker, Rounded corners for easy installation, Trademark natural Televic Sound, Available in custom colors, sizes, finishes, Certification: CE. D-MIC40SL-Description: The removable gooseneck microphone is equipped with a screw lock connector for easy connection to the different delegate and interpreter units. Material: Brass, Color: Matt black, RAL 9011, Transducer principle: Back electret (condenser), Operating principle: Pressure gradient, Polar pattern: Unidirectional, cardioid, Signal to noise ratio: > 67 dB(A). Approved Make: Televic/Sennheiser/Biamp	1	
14	Netrack	SITC of 22 U AV Rack closable doors. 22U Rack, 600W - 800D Front Glass Door - Cam Lock - Ventilation 3 Inch Castor Set, Monitor Tray - Ventilation Metal Cable Manager - 01U - Plastic Cable Loop's Mountable, Four Fan, Power Distribution Unit - 06/16 Amp Indian-Standard - 12 Socket - Single Pole / Screw Mountable / 32 Amp MCB / Alternating Current - Industrial Plug 32A with Power Cable 6 sq.mm 3 meter Length Mounting Hardware Packet { Containg 1 Nos Each Of 3 } - 20 Set. Any other accessories as required for proper mounting, cable management & rack dressing to be considered. Approved Makes : Valrack / Netrack / Rittal/APC	1	
15	LG	SITC of 98" Propessional Display led display. 98" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
16	DVDO	SITC of 4K/30 PTZ Camera with HDMI/IP/USB3.0 & AI Voice Tracking	1	

17	Panasonic	<p>SITC of PTZ Camera.  Image Sensor : 1-Chip 1" MOS Sensor, Horizontal Resolution (TV Lines) : 1600 TV Lines, Gain : 0 to 42 dB (Expanded)  Signal-to-Noise Ratio : 60 dB, Sensitivity : f/9 at 2000 lux, White Balance : 2000 to 15,000K  Camera- Shutter Speed : 1/24 to 1/10,000 sec, Max Digital Zoom : 32x ( in 1080p), IR Cut Filter : Yes Lens- Optical Zoom Ratio : 20x, Focal Length : 8.8 to 176mm (35mm Equivalent Focal Length: 24.5 to 490mm), Field of View : Horizontal: 75.1 to 4°, Vertical : 46.7 to 2.3°, Vertical : 82.8 to 4.6°, Maximum Aperture : f/2.8 to 4.5, Minimum Focus Distance : Wide: 3.9" / 9.9 cm, Telephoto : 39.6" / 100.6 cm, Image Stabilization : Optical, Filter thread : 67 mm, Focus Control : Autofocus - Manual Focus, Video Output- Broadcast System Compatibility NTSC, PAL Output Formats SDI, HDMI, RJ45, Optical Fiber: 3840 x 2160p at 24, 25, 29.97, 50, 59.94 fps 1920 x 1080p at 25, 29.97, 50, 59.94 fps  1920 x 1080PsF at 23.98, 25, 29.97 fps 1920 x 1080i at 50, 59.94 fps 1280 x 720p at 50, 59.94 fps, Embedded Audio : HDMI and SDI IP Streaming H.264, H.265, MJPEG: 1080p, 720p at 25p, 30p, 50p, 60p (0.51 to 76.8 Mb/s)  Control- Move Speed Pan : 0.08 to 180°/sec, Tilt : 0.08 to 180°/sec, Movement Range- Pan : 350° (-175 to 175°), Tilt: 120° (-30 to 210°), Tally Light : Yes, Supported Control Protocols : RS-232 - RS-422, Interfaces- Video Output Connectors: 1 x HDMI Type A (HDMI 2.0) Male, 1 x BNC Male (Loop Output), 1 x BNC (3G-SDI) Male, Audio I/O : 1 x 1/8" / 3.5 mm Stereo Mic/Line Level Input, Control Interface : 1 x RJ45 (IP Control, RS-422), Other I/O : 1 x BNC (Genlock) Input, Expansion Slots : 1 x SFP+ Slot, Power- PoE Support : PoE++ 802.3bt, Power Connectors : 1 x Proprietary (10.8 to 13.2 VDC), Power Consumption : Power Supply: 10.8 to 13.2 VDC at 4 A, PoE: 42 to 57 VDC at 1.2 A, Environmental- Operating Temperature : 32 to 104°F / 0 to 40°C, Storage Temperature : -4 to 122°F / -20 to 50°C  Operating Humidity : 20 to 90%. Approved Makes : Lumens / Sony / Aver / Panasonic</p>	1	
18	Panasonic	<p>SITC of PTZ camera remote controller.  Power Requirements:12 V DC (10.8 V to 13.2 V), DC 42 V to 57 V (Camera Input, PoE+ power supply), Current Consumption:1.0 A (Connector Input), 0.6 A (PoE+ power supply), Ambient Operating Temperature:0 °C to 40 °C (32 °F to 104 °F), Allowable Humidity Ranges: 10 % to 90 % (no condensation), Storage Temperature: -20 °C to 50 °C (-4 °F to 122 °F), Input: DC 12 V IN, XLR 4-pin, 3G-SDI IN, SMPTE424M/SMPTE292 / 75 Ω (BNC x 1) Supported formats: 1080/59.94p*2, 1080/50p*3, 1080/59.94i, 1080/50i, 1080/23.98p, 1080/25p, 1080/23.98PsF, 1080/25PsF, Output:3G-SDI ACTIVE THRU OUT, SMPTE292 / 75 Ω (BNC x 1), Input/Output: IP CONT, 100BASE-TX PoE+ input Connection cable: LAN cable, max. 100 m (328 ft), When connecting the unit via a switching hub: Straight cable or a cross cable (category 5 cable), STP (Shielded Twisted Pair) cable recommended, When connecting the unit directly: Crossover cable (category 5 cable), STP (Shielded Twisted Pair) cable recommended, LCD Display:7-inch Touch Panel GUI Monitor (WVGA(800×480)), SD Memory Card Slot: SDHC / SDXC Memory Card Slot x 1. Approved Makes : Lumens / Sony / Aver / Panasonic</p>	1	
19	Panasonic	<p>SITC of Power supply for Panasonic Controller.  Power input AC100 V to 240 V/1.2 A, 50/60 Hz Power output DC12 V/3.0 A  Accessories Power cable x 1, DC cable with ø5.5 plug: Approx. 3 m x 1 DC cable with ø6.5, plug: Approx. 3 m x 1.  Approved Makes : Lumens / Sony / Aver / Panasonic</p>	1	

20		<p>SITC of Professional Recorder.  12G-SDI 4K/UHD/HD Recorder and Player- Multi-Channel HD Recorder with 2TB SSD Module. SDI Video Inputs: 1, SDI Video Outputs: 2, SDI Monitor Outputs: 1, SDI Rates: 270Mb, 1.5G, 3G, 6G, 12G, HDMI 2.0 Video Inputs: 1, HDMI 2.0 Video Outputs: 1, Built in Speaker: Mono, Audio Output: 1 x 6.35 mm headphone jack, Screen: 2.2 inch LCD, Timecode Connections: 1 x XLR In, 1 x XLR Out, Reference Connections: 1 x BNC In, 1 x BNC Out, Tri-Sync or Black Burst, SDI Audio Inputs: 16 channels embedded audio, SDI Audio Outputs: 16 channels embedded audio, HDMI Audio Inputs: 8 channels embedded audio, HDMI Audio Outputs: 8 channels embedded audio, Remote Control: 1 x RS-422 In, 1 x RS-422 Out, Recorder Configuration: Via user interface or Blackmagic HyperDeck Ethernet Protocol, Ethernet: 10Gb/s, Computer Interface: 1 x USB Type-C 3.1 Gen 2 (up to 10Gb/s), for external drive recording, webcam out, software configuration and updates, SD Video Standards: 525i59.94 NTSC, 625i50 PAL, HD Video Standards: 720p50, 720p59.94, 720p60 1080i50, 1080i59.94, 1080i60 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60 1080PsF23.98, 1080PsF24, 1080PsF25, 1080PsF29.97, 1080PsF30, 2K DCI Video Standards: 2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2Kp29.97 DCI, 2Kp30 DCI, Ultra HD Video Standards: 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60, 4K DCI Video Standards: 4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI, 4Kp29.97 DCI, 4Kp30 DCI, SDI Compliance: SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 424M, SMPTE 425M level A and B, SMPTE 2081-1, SMPTE 2081-10, SMPTE 2082-1, SMPTE 2082-10, SMPTE 2084 and SMPTE 2108-1, SDI Metadata Support: HD RP188 and closed captioning CEA-708. HDR Metadata supported on SDI, Supported HDMI Formats: 525i59.94 NTSC, 625i50 PAL, 720p50, 720p59.94, 720p60, 1080i50, 1080i59.94, 1080i60, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60, 2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2Kp29.97 DCI, 2Kp30 DCI, 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60, 4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI, 4Kp29.97 DCI, 4Kp30 DCI, Audio Sampling: Television standard 24-bit, 48 kHz sample rate, Video Sampling: 4:2:2 YUV, Color Precision: 10-bit, Operating Systems: Mac 10.15 Catalina, Mac 11.1 Big Sur or later, Windows 10, 64-bit, Power Supply: 2 x Internal 100 - 240V AC 50/60Hz, 1 x 4 pin XLR 12V DC In for external power supply or battery use, Power Usage: 100 W max. Approved Makes : Blackmagic / AJA</p>	1	
21	SIS	Cables & connector lot	1	
22	SIS	Installation Testing & commissioning Charges	1	
<b>5th Floor SUBJECT Committee</b>				

1	Biamp	<p>The Conference Room DSP shall support Ethernet connection for programming and control on a RJ-45 connector. The Conference Room DSP shall have internal DSP processing. The Conference Room DSP shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The Conference Room DSP shall include a Universal Serial Bus (USB) connection on a standard USB-B type connector. The Conference Room DSP shall be software configurable to stream up to 2 channels of digital USB Class 1 Audio transmission either into or out of the Conference Room DSP or simultaneous input and output. The Conference Room DSP shall support port authentication via IEEE 802.1X. The Conference Room DSP shall provide 2 balanced input connections for receiving of microphone or line level analog audio signals on screw-down, removable connectors. Any network audio or analog audio connection may be assigned one of eight channels of Acoustic Echo Cancellation (AEC). Acoustic Echo Cancellation (AEC) hardware and firmware, the parameters, routing and operation of which shall be software programmable. The Conference Room DSP shall provide 2 balanced output channels for the transmission of microphone or line level analog audio signals on screw-down, removable connectors. Each individual channel shall have its own dedicated connection. The Conference Room DSP shall integrate to Voice Over Internet Protocol (VoIP) systems on a RJ-45 connector and shall support Session Initiation Protocol (SIP) v2.0 or later. The Conference Room DSP shall be capable of being deployed with zero programming or manual tuning and shall provide a post-commissioning status report via the use of Biamp Launch technology. The Conference Room DSP shall feature software-configurable signal processing, including but not limited to: signal routing and mixing, equalization, filtering, dynamics, and delay, as well as control, monitoring, and diagnostic tools. The Conference Room DSP shall provide front panel LED identification of device power, status, alarm, and activity as well as system-wide alarm. The Conference Room DSP shall be surface mountable using the included mounting hardware. The Conference Room DSP shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.</p>	1	
2	Biamp	<p>The PoE+ conferencing amplifier shall provide control data and digital audio over AVB via an RJ-45 connector. The PoE+ conferencing amplifier shall provide four software-configurable output channels of 3 watts of continuous power per channel into a 4-ohm load and an 8-ohm load. The PoE+ conferencing amplifier shall also provide burst power of 50 watts per channel into a 4-ohm load, and 30 watts per channel into an 8-ohm load in accordance with ANSI/CTA-2006-B. Burst mode will operate in accordance with U.S. Patent 10404218. The PoE+ conferencing amplifier shall provide connections to loudspeakers via RJ-45 connectors. The PoE+ conferencing amplifier shall be powered by PoE+ (IEEE 802.3at Class 4) and shall be suitable for use in air handling spaces in accordance with UL 2043. The PoE+ conferencing amplifier shall be capable of being attached directly to the back can of a ceiling speaker. The signal processing of the PoE+ conferencing amplifier shall be configurable via the design software including, but not limited to: volume control, filters, compressor/limiting, delay, speaker equalization and output sensitivity. The PoE+ conferencing amplifier shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.</p>	1	

3	Biamp	The loudspeaker shall be a two-way, passive coaxial design intended for in-ceiling mounting. The loudspeaker shall be equipped with a 6.5-inch (165 mm) treated paper low frequency transducer (“woofer”), a 1-inch (25 mm) soft dome high frequency transducer (“tweeter”), and a passive crossover/protection circuit network. The high frequency transducer shall be physically separate from the low frequency transducer and shall be bridge-mounted above the low frequency transducer. The loudspeaker shall have a ported architecture and a nominal impedance of 8 ohms. The loudspeaker shall have a coverage angle of 130° from 1kHz to 6kHz. The loudspeaker enclosure shall be constructed of formed steel and UL94V-0 fire rated plastic. The loudspeaker shall include a terminal box that shall interface with conduit having an inside diameter of either 13 mm (0.5 inches) or 22 mm (0.875 inches). The loudspeaker shall be equipped with a four-position, 5.08 mm (0.2 inches) pluggable Euroblock connector and two RJ-45 connectors for audio signal connections. The loudspeaker shall be suitable for blind-mounting from below the ceiling and shall support a magnetically attached grille. The loudspeaker shall have an attachment point for connection via chain or wire to building structure as a secondary support point. The loudspeaker shall include mounting points for direct attachment of amplifier. The loudspeaker shall comply with the requirements of UL Standard 1480A and UL Standard 2043. The loudspeaker shall be UL listed, CE marked, and shall be compliant with the RoHS directive. Warranty shall be five years.	6	
4	Biamp	SITC of Cable cubby, 2 universal power connectors	2	
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6	Biamp	The conferencing hub shall be designed to connect soft codec conferencing systems with in-room audio and video devices. The conferencing hub shall connect to a Windows® or Mac OS X computer via a Universal Serial Bus (USB) connection using a standard USB type B connector. The conferencing hub shall be equipped with one USB 3.0 type A port and two USB 2.0 type A ports. The conferencing hub shall be able to receive and transmit audio streams over USB via a USB Class 1 Audio device. The conferencing hub shall be equipped with one High-Definition Multimedia Interface (HDMI®) port to connect a monitor to a BYOD computer using DisplayLink USB graphics technology. The conferencing hub shall be equipped with one 3.5mm jack for analog stereo audio input and one 3.5mm jack for analog stereo audio output. The conferencing hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be three years	1	
7	Biamp	The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/ video devices on their compatible computing devices via the use of custom USB drivers. The wireless presentation hub shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector. The wireless presentation hub shall be equipped with one High-Definition Multimedia Interface (HDMI) port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems and shall have installed the Modena Hub+ custom drivers and client software. The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
8	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller’s connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT	1	

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12	telvic	SITC of Goosneck Microphone with Inbuilt Voting System & Deligate. Confidea F-DV- Features: Basic discussion function, Electronic voting function, Tactile microphone push button with integrated LED, 5 clear voting buttons with LED indicators: ++/+/0/-/, RFID card reader, Integrated loudspeaker, Rounded corners for easy installation, Trademark natural Telvic Sound, Available in custom colors, sizes, finishes, Material: Steel, Color: Tiger coating Carbon 01, Certification: CE. D-MIC40SL-Description: The removable gooseneck microphone is equipped with a screw lock connector for easy connection to the different delegate and interpreter units. Material: Brass, Color: Matt black, RAL 9011, Transducer principle: Back electret (condenser), Operating principle: Pressure gradient, Polar pattern: Unidirectional, cardioid, Signal to noise ratio: > 67 dB(A). Approved Make: Telvic/Sennheiser/Biamp	22	
13	telvic	SITC of Chairmen Unit with Inbuilt Voting System & Deligate. Confidea F-CV-Features: Basic discussion function, Electronic voting function, Tactile microphone push button with integrated LED, Tactile Next-in-line push button, Tactile Priority push button, 5 clear voting buttons with LED indicators: ++/+/0/-/- - RFID card reader, Integrated loudspeaker, Rounded corners for easy installation, Trademark natural Telvic Sound, Available in custom colors, sizes, finishes, Certification: CE. D-MIC40SL-Description: The removable gooseneck microphone is equipped with a screw lock connector for easy connection to the different delegate and interpreter units. Material: Brass, Color: Matt black, RAL 9011, Transducer principle: Back electret (condenser), Operating principle: Pressure gradient, Polar pattern: Unidirectional, cardioid, Signal to noise ratio: > 67 dB(A). Approved Make: Telvic/Sennheiser/Biamp	1	



14	Netrack	<p>SITC of 22 U AV Rack closable doors.  22U Rack, 600W - 800D  Front Glass Door - Cam Lock - Ventilation  3 Inch Castor Set, Monitor Tray - Ventilation  Metal Cable Manager - 01U - Plastic Cable Loop's Mountable, Four Fan,  Power Distribution Unit - 06/16 Amp Indian-Standard - 12 Socket - Single Pole / Screw Mountable / 32 Amp MCB / Alternating Current - Industrial Plug 32A with Power Cable 6 sq.mm 3 meter Length  Mounting Hardware Packet { Containg 1 Nos Each Of 3 } - 20 Set. Any other accessories as required for proper mounting, cable management &amp; rack dressing to be considered. Approved Makes : Valrack / Netrack /Rittal/APC</p>	1	
15	LG	<p>SITC of 98" Propessional Display led display. 98" 4K UHD 400 nit LCD panel  Brightness should be 400 nit or better  Should support 3840 X 2160 Native resolution or better  Contrast ratio should be 1,200:1 or better  Viewing angle 178 degrees h/v  Video inputs - should have HDMI, USB 2.0  Should have built-in speakers  Approved Makes : Christie / LG / Sony</p>	1	
16	DVDO	<p>SITC of 4K/30 PTZ Camera with HDMI/IP/USB3.0 &amp; AI Voice Tracking</p>	1	
17	Panasonic	<p>SITC of PTZ Camera.  Image Sensor : 1-Chip 1" MOS Sensor, Horizontal Resolution (TV Lines) : 1600 TV Lines, Gain : 0 to 42 dB (Expanded)  Signal-to-Noise Ratio : 60 dB, Sensitivity : f/9 at 2000 lux, White Balance : 2000 to 15,000K  Camera- Shutter Speed : 1/24 to 1/10,000 sec, Max Digital Zoom : 32x ( in 1080p), IR Cut Filter : Yes Lens- Optical Zoom Ratio : 20x, Focal Length : 8.8 to 176mm (35mm Equivalent Focal Length: 24.5 to 490mm), Field of View : Horizontal: 75.1 to 4°, Vertical : 46.7 to 2.3°, Vertical : 82.8 to 4.6°, Maximum Aperture : f/2.8 to 4.5, Minimum Focus Distance : Wide: 3.9" / 9.9 cm, Telephoto : 39.6" / 100.6 cm, Image Stabilization : Optical, Filter thread : 67 mm, Focus Control : Autofocus - Manual Focus, Video Output- Broadcast System Compatibility NTSC, PAL Output Formats SDI, HDMI, RJ45, Optical Fiber: 3840 x 2160p at 24, 25, 29.97, 50, 59.94 fps 1920 x 1080p at 25, 29.97, 50, 59.94 fps  1920 x 1080PsF at 23.98, 25, 29.97 fps 1920 x 1080i at 50, 59.94 fps 1280 x 720p at 50, 59.94 fps, Embedded Audio : HDMI and SDI IP Streaming H.264, H.265, MJPEG: 1080p, 720p at 25p, 30p, 50p, 60p (0.51 to 76.8 Mb/s)  Control- Move Speed Pan : 0.08 to 180°/sec, Tilt : 0.08 to 180°/sec, Movement Range- Pan : 350° (-175 to 175°), Tilt: 120° (-30 to 210°), Tally Light : Yes, Supported Control Protocols : RS-232 - RS-422, Interfaces- Video Output Connectors: 1 x HDMI Type A (HDMI 2.0) Male, 1 x BNC Male (Loop Output), 1 x BNC (3G-SDI) Male, Audio I/O : 1 x 1/8" / 3.5 mm Stereo Mic/Line Level Input, Control Interface : 1 x RJ45 (IP Control, RS-422), Other I/O : 1 x BNC (Genlock) Input, Expansion Slots : 1 x SFP+ Slot, Power- PoE Support : PoE++ 802.3bt, Power Connectors : 1 x Proprietary (10.8 to 13.2 VDC), Power Consumption : Power Supply: 10.8 to 13.2 VDC at 4 A, PoE: 42 to 57 VDC at 1.2 A, Environmental- Operating Temperature : 32 to 104°F / 0 to 40°C, Storage Temperature : -4 to 122°F / -20 to 50°C  Operating Humidity : 20 to 90%. Approved Makes : Lumens / Sony / Aver / Panasonic</p>	1	

18	Panasonic	<p>SITC of PTZ camera remote controller.</p> <p>Power Requirements:12 V DC (10.8 V to 13.2 V), DC 42 V to 57 V (Camera Input, PoE+ power supply), Current Consumption:1.0 A (Connector Input), 0.6 A (PoE+ power supply), Ambient Operating Temperature:0 °C to 40 °C (32 °F to 104 °F), Allowable Humidity Ranges: 10 % to 90 % (no condensation), Storage Temperature: -20 °C to 50 °C (-4 °F to 122 °F), Input: DC 12 V IN, XLR 4-pin, 3G-SDI IN, SMPTE424M/SMPTE292 / 75 Ω (BNC x 1) Supported formats: 1080/59.94p*2, 1080/50p*3, 1080/59.94i, 1080/50i, 1080/23.98p, 1080/25p, 1080/23.98PsF, 1080/25PsF, Output:3G-SDI ACTIVE THRU OUT, SMPTE292 / 75 Ω (BNC x 1), Input/Output: IP CONT, 100BASE-TX PoE+ input Connection cable: LAN cable, max. 100 m (328 ft), When connecting the unit via a switching hub: Straight cable or a cross cable (category 5 cable), STP (Shielded Twisted Pair) cable recommended, When connecting the unit directly: Crossover cable (category 5 cable), STP (Shielded Twisted Pair) cable recommended, LCD Display:7-inch Touch Panel GUI Monitor (WVGA(800×480)), SD Memory Card Slot: SDHC / SDXC Memory Card Slot x 1. Approved Makes : Lumens / Sony / Aver / Panasonic</p>	1	
19	Panasonic	<p>SITC of Power supply for Panasonic Controller.</p> <p>Power input AC100 V to 240 V/1.2 A, 50/60 Hz Power output DC12 V/3.0 A Accessories Power cable x 1, DC cable with ø5.5 plug: Approx. 3 m x 1 DC cable with ø6.5, plug: Approx. 3 m x 1.</p> <p>Approved Makes : Lumens / Sony / Aver / Panasonic</p>	1	
20		<p>SITC of Professional Recorder.</p> <p>12G-SDI 4K/UHD/HD Recorder and Player- Multi-Channel HD Recorder with 2TB SSD Module. SDI Video Inputs: 1, SDI Video Outputs: 2, SDI Monitor Outputs: 1, SDI Rates: 270Mb, 1.5G, 3G, 6G, 12G, HDMI 2.0 Video Inputs: 1, HDMI 2.0 Video Outputs: 1, Built in Speaker: Mono, Audio Output: 1 x 6.35 mm headphone jack, Screen: 2.2 inch LCD, Timecode Connections: 1 x XLR In, 1 x XLR Out, Reference Connections: 1 x BNC In, 1 x BNC Out, Tri-Sync or Black Burst, SDI Audio Inputs: 16 channels embedded audio, SDI Audio Outputs: 16 channels embedded audio, HDMI Audio Inputs: 8 channels embedded audio, HDMI Audio Outputs: 8 channels embedded audio, Remote Control: 1 x RS-422 In, 1 x RS-422 Out, Recorder Configuration: Via user interface or Blackmagic HyperDeck Ethernet Protocol, Ethernet: 10Gb/s, Computer Interface: 1 x USB Type-C 3.1 Gen 2 (up to 10Gb/s), for external drive recording, webcam out, software configuration and updates, SD Video Standards: 525i59.94 NTSC, 625i50 PAL, HD Video Standards: 720p50, 720p59.94, 720p60 1080i50, 1080i59.94, 1080i60 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60 1080PsF23.98, 1080PsF24, 1080PsF25, 1080PsF29.97, 1080PsF30, 2K DCI Video Standards: 2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2Kp29.97 DCI, 2Kp30 DCI, Ultra HD Video Standards: 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60, 4K DCI Video Standards: 4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI, 4Kp29.97 DCI, 4Kp30 DCI, SDI Compliance: SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 424M, SMPTE 425M level A and B, SMPTE 2081-1, SMPTE 2081-10, SMPTE 2082-1, SMPTE 2082-10, SMPTE 2084 and SMPTE 2108-1, SDI Metadata Support: HD RP188 and closed captioning CEA-708. HDR Metadata supported on SDI, Supported HDMI Formats: 525i59.94 NTSC, 625i50 PAL, 720p50, 720p59.94, 720p60, 1080i50, 1080i59.94, 1080i60, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60, 2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2Kp29.97 DCI, 2Kp30 DCI, 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60, 4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI, 4Kp29.97 DCI, 4Kp30 DCI, Audio Sampling: Television standard 24-bit, 48 kHz sample rate, Video Sampling: 4:2:2 YUV, Color Precision: 10-bit, Operating Systems: Mac 10.15 Catalina, Mac 11.1 Big Sur or later, Windows 10, 64-bit, Power Supply: 2 x Internal 100 - 240V AC 50/60Hz, 1 x 4 pin XLR 12V DC In for external power supply or battery use, Power Usage: 100 W max. Approved Makes : Blackmagic / AJA</p>	1	
21	SIS	Cables & connector lot	1	
22	SIS	Installtion Testing & commissioning Charges	1	

**6th Lower Floor Mahasabha Hall**

1	Biamp	<p>The loudspeaker system shall be a two-way, full-range bass reflex design incorporating one 12 in. (305mm) ferrite LF driver with an inherently weather resistant cone and one 1.4 in. exit ferrite HF compression driver with a hybrid titanium/polyamide diaphragm mounted to a 90° x 60° rotatable fiberglass constant directivity horn. In Passive Mode, drivers shall be connected to an internal frequency dividing network with an acoustical crossover frequency of 1500 Hz. There shall be two sixterminal barrier strips and external jumper assembly to allow the selection of Passive or Biamp operating modes on a recessed powder-coated 2mm thick steel input panel. The loudspeaker enclosure shall be 30° trapezoidal in shape. It shall be constructed of 11-layer cross-laminated exterior grade 15mm thick Baltic birch plywood and shall be fitted with 15 x M10 flying/rigging inserts and finished with low gloss, uniformly textured coating. The front of the enclosure shall be fitted with a wraparound powder-coated 1.5mm perforated steel grille backed with color-matched acoustically transparent woven fabric. The system shall have an operating range of 37 Hz to 19 kHz (-10dB SPL). In Passive Mode, the system shall have a nominal impedance of 8 Ohms, an input capability of 69V, shall produce a sound pressure level of 94 dB (averaged SPL between -10 dB points) on axis at one meter with a power input of 1 Watt, and shall be capable of producing a continuous output of 122 dB SPL (with peak output of 128 dB SPL) on axis at one meter. In Biamp Mode, the low frequency section shall have a nominal impedance of 8 Ohms, an input capability of 63V, shall produce a sound pressure level of 95 dB (averaged SPL between -10 dB points) on axis at one meter with a power input of 1 Watt, and shall be capable of producing a continuous output of 122 dB SPL (with peak output of 128 dB SPL) on axis at one meter. The high frequency section shall have a nominal impedance of 8 Ohms, an input capability of 24V, shall produce a sound pressure level of 105 dB (averaged SPL between -10 dB points) on axis at one meter with a power input of 1 Watt, and shall be capable of producing a continuous output of 124 dB SPL (with peak output of 130 dB SPL) on axis at one meter. The nominal dispersion shall be 90° H x 60° V. The loudspeaker shall be 28.00 in. (711 mm) H x 14.50 in. (368 mm) W (front) x 5.83 in. (148 mm) W (rear) x 17.70 in. (449 mm) D, and weigh 64.0 lbs. (29.0 kg).</p>	2	
2	Biamp	SITC of U brackets for Loudspeakers.	2	
3	Biamp	<p>The loudspeaker system shall be a two-way, full-range design incorporating one 8 in. (203mm) ferrite LF driver with an inherently weather resistant cone and one 1 in. (25mm) exit advanced polymer diaphragm, ferrite compression driver. The drivers shall be connected to an internal frequency dividing network with an acoustical crossover frequency of 1800 Hz. There shall be one five-terminal barrier strip on a recessed powder-coated 2mm thick steel input panel. The modified trapezoidal loudspeaker enclosure shall be constructed of 11-layer cross-laminated exterior grade 15mm thick Baltic birch plywood and shall be fitted with (7) M10 and (4) M8 rigging inserts and finished with low gloss, uniformly textured coating. The front of the enclosure shall be fitted with a wraparound powder-coated 1.5mm perforated steel grille backed with acoustically transparent woven fabric. The system shall have an operating range of 53 Hz to 20 kHz (-10dB SPL). The system shall have a nominal impedance of 8 Ohms, an input capability of 45V, shall produce a sound pressure level of 95 dB (averaged SPL between -10 dB points) on axis at one meter with a power input of 1 Watt, and shall be capable of producing a continuous output of 119 dB SPL (with peak output of 125 dB SPL) on axis at one meter. The nominal dispersion shall be 90° H x 60° V. The loudspeaker shall be 18.75 in. (476 mm) H x 10.40 in. (264 mm) W (front) x 7.69 in. (195 mm) W (rear) x 10.63 in. (270 mm) D, and shall weigh 25.0lbs. (11.3 kg).</p>	10	
4	Biamp	SITC of U brackets for Loudspeakers.	10	
5	Biamp	The loudspeaker system shall be a low frequency subwoofer incorporating one 18 in. (457mm) long excursion ferrite	2	

		<p>LF driver with a 4" inside/outside wound voice coil and double-treated cone. The loudspeaker shall be acoustically and mechanically capable of integrating into a single array with and full range loudspeakers. Input connectors shall be two parallel-wired NL4 connectors and one four-terminal barrier strip. Two terminal pairs on the barrier terminal strip shall be wired in parallel to the NL4 +1/-1 connections, respectively and to the loudspeaker's internal passive circuitry. The NL4 +2/-2 connections shall be wired in parallel with no internal connections to the loudspeaker. The loudspeaker enclosure shall be rectangular in shape. It shall be constructed of a combination of 15mm and 18mm thick exterior grade Baltic birch plywood, finished with a low gloss, uniformly textured paintable coating, and shall be fitted with multiple integral steel plates on each side that bolt to aluminum color-matched adjustable rigging plates. Each side of the enclosure shall include a pair of integrated lifting handles. The front of the enclosure shall be fitted with a wraparound powdercoated 1.5mm perforated steel grille backed with color-matched acoustically transparent woven fabric with mounting fasteners that are accessible on each side of the enclosure. All rigging hardware, handles and other fasteners shall be concealed from view by removable side panels constructed from 15mm thick exterior grade Baltic birch with the same paintable finish as the enclosure. The system shall have an operating range of 37 Hz to 132Hz (-10dB SPL). The passive system shall have a nominal impedance of 8 Ohms, an input capability of 80V. In half space loading conditions, a single loudspeaker element shall produce a sound pressure level of 99 dB (averaged SPL between -10 dB points) on axis at one meter with a power input of 1 Watt, and shall be capable of producing a continuous output of 128 dB SPL (with peak output of 134 dB SPL) on axis at one meter. The loudspeaker shall be 28.12 in. (714 mm) W x 20.00 in. (508 mm) H x 28.08 in. (713 mm) D, and weigh 130.1 lbs. (59.0 kg).</p>		
6	Biamp	<p>The loudspeaker system shall be a compact, two-way, full-range coaxial design. The loudspeaker system shall have one 10-inch woofer and one 1.25-inch exit high frequency driver with 100 degree conical coverage. Drivers shall be connected to an integral crossover with a crossover frequency of 1 kHz. There shall be two NL4-compatible locking connectors and one 2-screw terminal strip. The loudspeaker enclosure shall be solid birch plywood with a 16-gauge perforated steel grille and finished with black paint. The system shall have an amplitude response of 90 Hz to 16 kHz (+/- 4 dB), input capability of 40V RMS, 99 dB sensitivity at one meter and 2.83V / 8 ohms nominal impedance. The nominal dispersion shall be 100°H x 100°V from 500 Hz to 6 kHz. The loudspeaker shall be 10.8 in. (275 mm) H x 12.6 in. (321 mm) W x 16.5 in. (419 mm) D and weigh 22 lbs (10 kg).</p>	2	
7	Biamp	<p>SITC of The Amplified Loudspeaker Controller that shall provide four channels of power amplification and digital signal processing with analog inputs. Total available power can be safely distributed asymmetrically across the outputs in any combination of low impedance and 70V/100V loads in single ended and/or bridged configurations. Power delivered from each output is individually monitored and automatically limited to the stated, safe operating ranges. shall include manufacturer-optimized equalization, high pass filters, multi-stage limiters, and other model-specific control settings tailored to each loudspeaker, ensuring consistent sound quality and complete loudspeaker protection. The amplifier shall have internal heat sinks cooled by a continuously variable speed fan with a Microprocessor Temperature Control. Airflow shall be from front to rear. The amplifier shall be able to drive low impedance loads (2/4/8 ohms) and 70V/100V distributed lines selectable per channel by using dipswitch settings at the rear panel of the amplifier. The amplifier shall deliver a maximum output power per channel of 1250W at 8Ω; 1400W at 4Ω; 1600W at 2Ω; 2800W at 8Ω bridged; 3200W at 4Ω bridged; 1600W at 100V and 1600W at 70V. The amplifier shall contain a DSP board for real-time audio processing not exceeding a 2.5ms fixed latency architecture. As part of the DSP the amplifier will offer a 4 x 4 matrix for all analog and digital inputs. The amplifier rear panel shall provide AC mains connector, Phoenix output connectors, Phoenix line input connector, Phoenix GPI connector, Phoenix GPO connector, Phoenix, RJ45 Ethernet connector, system configuration dip switches and output configuration dip switches.</p>	5	

		Approved Make : Biamp, AI acoustic, Lab gruppen		
8	Biamp	The loudspeaker system shall be a two-way, full-range compact system with a 5-inch low frequency transducer with patented Carbon Ring Cone Technology™ and a coaxially mounted 1-inch exit high frequency compression driver. The drivers shall be connected to an integral crossover with a crossover frequency of 1.6 kHz, with a self-resetting solid state circuit breaker for driver protection. The paintable enclosure shall be constructed of high-impact ABS plastic. The system shall have an amplitude response of 80 Hz to 20 kHz (+/- 5.2 dB) and a low impedance (8 ohm) input capability of 28V RMS. The sensitivity at 1W/1m shall be 93 dB (125 Hz to 12.5 kHz, 1/3 octave bands). The loudspeaker system shall have a conical coverage pattern of 130 degrees from 500 Hz to 6 kHz. The nominal system impedance shall be 8 ohms (in low impedance setting). The system shall be equipped with a 60W high performance autoformer for use in 70.7V or 100V distributed audio systems, with 60W, 30W, 15W and 7.5W taps available in 70.7V distributed systems (60W, 30W and 15W taps available in 100V distributed systems). An easily accessible front-face tap selector switch located behind a rotatable logo shall be available for selecting autoformer and low impedance settings. Dimensions shall be 12.9 inches (328 mm) high, 6.3 inches (160 mm) wide and 7.5 inches (191 mm) deep, with a loudspeaker weight of 10.3 lbs (4.7 kg).	2	
9	Biamp	SITC of 2 Channel class D amplifier 2 x 250 Watts (RMS @ 4 Ohms), 2 x 350 Watts (Dynamic @ 4 Ohms) or in bridge mode 1 x 500 Watts (RMS @ 8 Ohms), convection cooled, 1 U, 19" rackmount	1	
10	Biamp	The Conference Room DSP shall support Ethernet connection for programming and control on a RJ-45 connector. The Conference Room DSP shall have internal DSP processing. The Conference Room DSP shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The Conference Room DSP shall include a Universal Serial Bus (USB) connection on a standard USB-B type connector. The Conference Room DSP shall be software configurable to stream up to 2 channels of digital USB Class 1 Audio transmission either into or out of the Conference Room DSP or simultaneous input and output. The Conference Room DSP shall support port authentication via IEEE 802.1X. The Conference Room DSP shall provide 2 balanced input connections for receiving of microphone or line level analog audio signals on screw-down, removable connectors. Any network audio or analog audio connection may be assigned one of sixteen channels of Acoustic Echo Cancellation (AEC). Acoustic Echo Cancellation (AEC) hardware and firmware, the parameters, routing and operation of which shall be software programmable. The Conference Room DSP shall provide 2 balanced output channels for the transmission of microphone or line level analog audio signals on screw-down, removable connectors. Each individual channel shall have its own dedicated connection. The Conference Room DSP shall integrate to Voice Over Internet Protocol (VoIP) systems on a RJ-45 connector and shall support Session Initiation Protocol (SIP) v2.0 or later. The Conference Room DSP shall be capable of being deployed with zero programming or manual tuning and shall provide a post-commissioning status report via the use of Biamp Launch technology. The Conference Room DSP shall feature software-configurable signal processing, including but not limited to: signal routing and mixing, equalization, filtering, dynamics, and delay, as well as control, monitoring, and diagnostic tools. The Conference Room DSP shall provide front panel LED identification of device power, status, alarm, and activity as well as system-wide alarm. The Conference Room DSP shall be surface mountable using the included mounting hardware. The Conference Room DSP shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be five years.	1	

11	Biamp	The controller utilizes an Ethernet network via an RJ-45 connector for software configuration and control. The controller includes 3 bidirectional RS-232/IR port for controlling third party devices with feedback functionality; 2 unidirectional RS-232/IR ports for controlling third party devices; 8 general purpose input/output (GPIO) connections for sending or receiving logic signals; LAN control for 10 third-party and 4 assignable relays. The controller connects to and operates up to 5 touch panel interfaces. The controller's connections and operations are externally configurable. The controller is powered by PoE (IEEE 802.3at Class 3, 15W), and includes a PoE OUT connector to power an external device such as a touch panel. The controller shall have CE marked, UL listed, and compliant with the RoHS directive and covered by a five-year warranty.	1	
12	Biamp	The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control. The touch panel shall include a 10" capacitive touch high contrast LCD for function selection. The touch panel shall be made from PVC/ABS material with UV protection additive. The touch panel shall include sensors that detect ambient light levels and adjust display brightness automatically. The touch panel shall be powered by PoE (IEEE 802.3at Class 3, 15W). The touch panel shall be CE marked, UL listed, and compliant with the RoHS directive. Warranty shall be five years.	1	
13	Biamp	SITC for Table stand for touch panel	1	
14	Biamp	The video encoder shall utilize an AVB/TSN network for all media networking as well as software configuration and control. The video encoder shall provide one High-Definition Multimedia Interface (HDMI®) port and one DisplayPort™ 1.2 port. The video encoder shall accept video signals up to and including 4K60. End-to-end network transit latency shall be 1.5 frames (25ms at 60fps) or less. Compression shall be visually lossless using M-JPEG. The video encoder shall be equipped with one RJ-45 port to support AVB/TSN transmission at 1Gb, and one SFP+ port to transmit at 1Gb or 10Gb. The video encoder shall be equipped with a separate RJ-45 Ethernet port for control connection to third party control systems and configuration. The video encoder shall support port authentication via IEEE 802.1X. The video encoder shall provide two balanced input connections for receiving microphone or line level analog audio signals on screw-down, removable connectors. Analog-to-Digital conversion shall be 24-bit with a sampling rate of 48kHz. The video encoder shall support the transmission of HDCP 2.2 protected content. The video encoder shall provide front panel OLED display of device power, status, alarm, and activity as well as system-wide alarm. The video encoder shall be built in a half-rack chassis and feature software-configurable signal processing, including but not limited to: signal routing and mixing, levels, mute, delay, and audio embedding/de-embedding, as well as control, monitoring, and diagnostic tools. The video encoder shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The video encoder shall include a RS-232 connection for control data transmission into or out of the device and such operation shall be software programmable. The video encoder shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be 5 years.	8	

15	Biamp	The video decoder shall utilize an AVB/TSN network for all media networking as well as software configuration and control. The video decoder shall provide one High-Definition Multimedia Interface (HDMI®) port and shall output video signals up to and including 4K60. End-to-end network transit latency shall be 1.5 frames (25ms at 60fps) or less. Compression shall be visually lossless using M-JPEG. The video decoder shall be equipped with one RJ-45 port to support AVB/TSN transmission at 1Gb, and one SFP+ port to receive at 1Gb or 10Gb. The video decoder shall be equipped with a separate RJ-45 Ethernet port for control connection to third party control systems and configuration. The video decoder shall support port authentication via IEEE 802.1X. The video decoder shall provide two balanced output connections for transmitting microphone or line level analog audio signals on screw-down, removable connectors. Digital-to-Analog conversion shall be 24-bit with a sampling rate of 48kHz. The video decoder shall support the transmission of HDCP 2.2 protected content. The video decoder shall provide front panel OLED display of device power, status, alarm, and activity as well as system-wide alarm. The video decoder shall be built in a half-rack chassis and feature software-configurable signal processing, including but not limited to: signal routing and mixing, levels, mute, delay, and audio embedding/de-embedding, as well as control, monitoring, and diagnostic tools. The video decoder shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The video decoder shall include an RS-232 connection for control data transmission into or out of the device and such operation shall be software programmable. The video decoder shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be 5 years.	15	
16	Extreme	SITC 24 port avb switch for encoder dcoder. Layer 2 stackable POE+ managed 24 Port Gigabit Ethernet Switch, with minimum 2 numbers of fiber ports. Network switches shall be compatible with AVB, Dante and Cobranet. Approved Make- Netgear / Cisco/ Extreme	2	
17	Netrack	SITC of 42 U equipment Rack. AV Equipment Rack-42U. Floor Standing, 1000mm(W) x 800mm(D) AV Equipment Rack should have minimum requirements of Front Glass Door with Lock, Rear Door with Lock & vented at bottom, Side Panels with Latches & vented at bottom, Ventilated Top cover and Bottom cover with cable entry facility, Castors with front brakes, 19" mountable equipment shelf with a depth of 475mm and 1U height, Vertical cable manager, Vertical AC mains power distribution box upto Tenh5 amp power sockets, indicative main switch, and fuse for overload protection, Hardware Front Panel (Equipment mounting fasteners) in pkts of 15 - 20, 19" cooling fan tray ( 3 to 4 fan provision ), 9" sliding shelf with a min. depth of 475mm and 1U height, Equipment support angles (in pairs), 19" horizontal cable manager 1U + Hardware, Earth continuity kit comprising of earthing bar and earthing straps, Conforming to DIN 41494 - and industry standard practices etc.	1	
18	AOTO	Approved Makes : Valrack / Netrack / Rittal / APC	2	
19	Monitor	SITC of 55" Professional Display. 55" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have 2 nos. of HDMI Should have built-in speakers <b>Approved Makes : Christie / LG / Sony</b>	2	
20	DVDO	SITC of 4K/30 PTZ Camera with HDMI/IP/USB3.0 & AI Voice Tracking	1	

21	Televic	<p>SITC of Digital Central Control Unit.  Description-All in One Cat 5e Cable, Dante™: Easy Third-party Interfacing, Web Server with User-friendly Interface, Straightforward Recording, External Power Supply, Benefits- Rock-solid Network Performance, HD Audio, Closed Architecture, Open Interfacing, Self-healing Topology, Loop Cabling, Features-Easy built-in recording, No pc required for core functionality, Seamless combination of wired and wireless units, Wireless range extension, Combinations for wireless room split/combine application, USB port for expandable memory to record longer meetings (volumes up to 500 GB), Buttons &amp; Modes: ON/OFF Power button, A volume dial on the front allows direct adjustment of the system volume, Single push button to start or stop recordings, LED indicator to show recording status (ON/OFF), DLP switch to enable and disable power to the Plixus, Connectivity: 2 Power connectors, 4 Conference network ports, DLP switch, 2 redundant Dante ports, 1 USB 2.0 ports, LAN port, 1 Balanced XLR audio input, 1 Balanced XLR audio output, 2 Unbalanced Cinch audio inputs, 2 Unbalanced Cinch audio outputs, Material: Steel, Certification: CE. Approved Make: Televic/Sennheiser/Biamp</p>	1	
22	Televic	<p>SITC of Goosneck Microphone with Inbuilt Voting System &amp; Deligate. Confidea F-DV- Features: Basic discussion function, Electronic voting function, Tactile microphone push button with integrated LED, 5 clear voting buttons with LED indicators: ++/+0/-/, RFID card reader, Integrated loudspeaker, Rounded corners for easy installation, Trademark natural Televic Sound, Available in custom colors, sizes, finishes, Material: Steel, Color: Tiger coating Carbon 01, Certification: CE. D-MIC40SL-Description: The removable gooseneck microphone is equipped with a screw lock connector for easy connection to the different delegate and interpreter units. Material: Brass, Color: Matt black, RAL 9011, Transducer principle: Back electret (condenser), Operating principle: Pressure gradient, Polar pattern: Unidirectional, cardioid, Signal to noise ratio: &gt; 67 dB(A). Approved Make: Televic/Sennheiser/Biamp</p>	220	
23	Televic	<p>SITC of Chairmen Unit with Inbuilt Voting System &amp; Deligate. Confidea F-CV-Features: Basic discussion function, Electronic voting function, Tactile microphone push button with integrated LED, Tactile Next-in-line push button, Tactile Priority push button, 5 clear voting buttons with LED indicators: ++/+0/-/- -- RFID card reader, Integrated loudspeaker, Rounded corners for easy installation, Trademark natural Televic Sound, Available in custom colors, sizes, finishes, Certification: CE. D-MIC40SL-Description: The removable gooseneck microphone is equipped with a screw lock connector for easy connection to the different delegate and interpreter units. Material: Brass, Color: Matt black, RAL 9011, Transducer principle: Back electret (condenser), Operating principle: Pressure gradient, Polar pattern: Unidirectional, cardioid, Signal to noise ratio: &gt; 67 dB(A). Approved Make: Televic/Sennheiser/Biamp</p>	2	



24	<b>Panasonic</b>	<p>SITC of PTZ Camera.  Image Sensor : 1-Chip 1" MOS Sensor, Horizontal Resolution (TV Lines) : 1600 TV Lines, Gain : 0 to 42 dB (Expanded)  Signal-to-Noise Ratio : 60 dB, Sensitivity : f/9 at 2000 lux, White Balance : 2000 to 15,000K  Camera- Shutter Speed : 1/24 to 1/10,000 sec, Max Digital Zoom : 32x ( in 1080p), IR Cut Filter : Yes Lens- Optical Zoom Ratio : 20x, Focal Length : 8.8 to 176mm (35mm Equivalent Focal Length: 24.5 to 490mm), Field of View : Horizontal: 75.1 to 4°, Vertical : 46.7 to 2.3°, Vertical : 82.8 to 4.6°, Maximum Aperture : f/2.8 to 4.5, Minimum Focus Distance : Wide: 3.9" / 9.9 cm, Telephoto : 39.6" / 100.6 cm, Image Stabilization : Optical, Filter thread : 67 mm, Focus Control : Autofocus - Manual Focus, Video Output- Broadcast System Compatibility NTSC, PAL Output Formats SDI, HDMI, RJ45, Optical Fiber: 3840 x 2160p at 24, 25, 29.97, 50, 59.94 fps 1920 x 1080p at 25, 29.97, 50, 59.94 fps  1920 x 1080PsF at 23.98, 25, 29.97 fps 1920 x 1080i at 50, 59.94 fps 1280 x 720p at 50, 59.94 fps, Embedded Audio : HDMI and SDI IP Streaming H.264, H.265, MJPEG: 1080p, 720p at 25p, 30p, 50p, 60p (0.51 to 76.8 Mb/s)  Control- Move Speed Pan : 0.08 to 180°/sec, Tilt : 0.08 to 180°/sec, Movement Range- Pan : 350° (-175 to 175°), Tilt: 120° (-30 to 210°), Tally Light : Yes, Supported Control Protocols : RS-232 - RS-422, Interfaces- Video Output Connectors: 1 x HDMI Type A (HDMI 2.0) Male, 1 x BNC Male (Loop Output), 1 x BNC (3G-SDI) Male, Audio I/O : 1 x 1/8" / 3.5 mm Stereo Mic/Line Level Input, Control Interface : 1 x RJ45 (IP Control, RS-422), Other I/O : 1 x BNC (Genlock) Input, Expansion Slots : 1 x SFP+ Slot, Power- PoE Support : PoE++ 802.3bt, Power Connectors : 1 x Proprietary (10.8 to 13.2 VDC), Power Consumption : Power Supply: 10.8 to 13.2 VDC at 4 A, PoE: 42 to 57 VDC at 1.2 A, Environmental- Operating Temperature : 32 to 104°F / 0 to 40°C, Storage Temperature : -4 to 122°F / -20 to 50°C Operating Humidity : 20 to 90%. Approved Makes : Lumens / Sony / Aver / Panasonic</p>	6	
25	<b>Panasonic</b>	<p>SITC of PTZ camera remote controller.  Power Requirements:12 V DC (10.8 V to 13.2 V), DC 42 V to 57 V (Camera Input, PoE+ power supply), Current Consumption:1.0 A (Connector Input), 0.6 A (PoE+ power supply), Ambient Operating Temperature:0 °C to 40 °C (32 °F to 104 °F), Allowable Humidity Ranges: 10 % to 90 % (no condensation), Storage Temperature: -20 °C to 50 °C (-4 °F to 122 °F), Input: DC 12 V IN, XLR 4-pin, 3G-SDI IN, SMPTE424M/SMPTE292 / 75 Ω (BNC x 1) Supported formats: 1080/59.94p*2, 1080/50p*3, 1080/59.94i, 1080/50i, 1080/23.98p, 1080/25p, 1080/23.98PsF, 1080/25PsF, Output:3G-SDI ACTIVE THRU OUT, SMPTE292 / 75 Ω (BNC x 1), Input/Output: IP CONT, 100BASE-TX PoE+ input Connection cable: LAN cable, max. 100 m (328 ft), When connecting the unit via a switching hub: Straight cable or a cross cable (category 5 cable), STP (Shielded Twisted Pair) cable recommended, When connecting the unit directly: Crossover cable (category 5 cable), STP (Shielded Twisted Pair) cable recommended, LCD Display:7-inch Touch Panel GUI Monitor (WVGA(800×480)), SD Memory Card Slot: SDHC / SDXC Memory Card Slot x 1. Approved Makes : Lumens / Sony / Aver / Panasonic</p>	1	
26	<b>Panasonic</b>	<p>SITC of Power supply for Panasonic Controller.  Power input AC100 V to 240 V/1.2 A, 50/60 Hz Power output DC12 V/3.0 A Accessories Power cable x 1, DC cable with ø5.5 plug: Approx. 3 m x 1 DC cable with ø6.5, plug: Approx. 3 m x 1.  Approved Makes : Lumens / Sony / Aver / Panasonic</p>	6	

27		<p>SITC of Professional Recorder.  12G-SDI 4K/UHD/HD Recorder and Player- Multi-Channel HD Recorder with 2TB SSD Module. SDI Video Inputs: 1, SDI Video Outputs: 2, SDI Monitor Outputs: 1, SDI Rates: 270Mb, 1.5G, 3G, 6G, 12G, HDMI 2.0 Video Inputs: 1, HDMI 2.0 Video Outputs: 1, Built in Speaker: Mono, Audio Output: 1 x 6.35 mm headphone jack, Screen: 2.2 inch LCD, Timecode Connections: 1 x XLR In, 1 x XLR Out, Reference Connections: 1 x BNC In, 1 x BNC Out, Tri-Sync or Black Burst, SDI Audio Inputs: 16 channels embedded audio, SDI Audio Outputs: 16 channels embedded audio, HDMI Audio Inputs: 8 channels embedded audio, HDMI Audio Outputs: 8 channels embedded audio, Remote Control: 1 x RS-422 In, 1 x RS-422 Out, Recorder Configuration: Via user interface or Blackmagic HyperDeck Ethernet Protocol, Ethernet: 10Gb/s, Computer Interface: 1 x USB Type-C 3.1 Gen 2 (up to 10Gb/s), for external drive recording, webcam out, software configuration and updates, SD Video Standards: 525i59.94 NTSC, 625i50 PAL, HD Video Standards: 720p50, 720p59.94, 720p60 1080i50, 1080i59.94, 1080i60 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60 1080PsF23.98, 1080PsF24, 1080PsF25, 1080PsF29.97, 1080PsF30, 2K DCI Video Standards: 2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2Kp29.97 DCI, 2Kp30 DCI, Ultra HD Video Standards: 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60, 4K DCI Video Standards: 4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI, 4Kp29.97 DCI, 4Kp30 DCI, SDI Compliance: SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 424M, SMPTE 425M level A and B, SMPTE 2081-1, SMPTE 2081-10, SMPTE 2082-1, SMPTE 2082-10, SMPTE 2084 and SMPTE 2108-1, SDI Metadata Support: HD RP188 and closed captioning CEA-708. HDR Metadata supported on SDI, Supported HDMI Formats: 525i59.94 NTSC, 625i50 PAL, 720p50, 720p59.94, 720p60, 1080i50, 1080i59.94, 1080i60, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60, 2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2Kp29.97 DCI, 2Kp30 DCI, 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60, 4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI, 4Kp29.97 DCI, 4Kp30 DCI, Audio Sampling: Television standard 24-bit, 48 kHz sample rate, Video Sampling: 4:2:2 YUV, Color Precision: 10-bit, Operating Systems: Mac 10.15 Catalina, Mac 11.1 Big Sur or later, Windows 10, 64-bit, Power Supply: 2 x Internal 100 - 240V AC 50/60Hz, 1 x 4 pin XLR 12V DC In for external power supply or battery use, Power Usage: 100 W max. Approved Makes : Blackmagic / AJA</p>	1	
28	<b>Panasonic</b>	<p>SITC of Swicher.  Power Supply: AC 100 V to 240 V, 50 Hz/60 Hz, Current Consumption:1.5 A, Ambient Operating Temperature:0°C to 40 °C (32 °F to 104 °F), Ambient Operating Humidity: 10 % to 90 % (no condensation), Storage Temperature:0 °C to 40 °C (32 °F to 104 °F), Storage Humidity: 10 % to 90 % (no condensation), SDI IN 1 to SDI IN 8 Terminals: 8 lines (plus another maximum of 8 lines when using the OPTION unit), Connectors: BNC x 8, Video format inputs:720p/59.94 Hz, 720p/50 Hz, 1080i/59.94 Hz, 1080i/50 Hz, 1080p/59.94 Hz, 1080p/50 Hz, 1080p/29.97 Hz, 1080p/25 Hz, 1080p/24 Hz, 1080p/23.98 Hz, 2160p/59.94 Hz, 2160p/50 Hz, 2160p/29.97 Hz, 2160p/25 Hz, 2160p/24 Hz, 2160p/23.98 Hz, LAN Terminal: Compatible with 1000BASE-TX and AUTO-MDIX (For IP control) Connecting cable: LAN cable (CAT5e), max. 100 m (328 ft), STP (Shielded Twisted Pair) cable recommended, Connectors : RJ-45  Approved Makes : Lumens / Sony / Aver / Panasonic</p>	1	
29		Cables & connector lot	1	
30		Installtion Testing & commissioning Charges	1	
<b>Ante Room</b>				

1	LG	SITC of 43" 4K UHD 400 nit LCD panel with Weight Shape Bracket for angular floor Mount. Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers <b>Approved Makes : Christie / LG / Sony</b>	15	
2	Set top Box	<b>HD Set top box with commerical package ( Client Scope )</b>	15	
3	Biamp	The video decoder shall utilize an AVB/TSN network for all media networking as well as software configuration and control. The video decoder shall provide one High-Definition Multimedia Interface (HDMI®) port and shall output video signals up to and including 4K60. End-to-end network transit latency shall be 1.5 frames (25ms at 60fps) or less. Compression shall be visually lossless using M-JPEG. The video decoder shall be equipped with one RJ-45 port to support AVB/TSN transmission at 1Gb, and one SFP+ port to receive at 1Gb or 10Gb. The video decoder shall be equipped with a separate RJ-45 Ethernet port for control connection to third party control systems and configuration. The video decoder shall support port authentication via IEEE 802.1X. The video decoder shall provide two balanced output connections for transmitting microphone or line level analog audio signals on screw-down, removable connectors. Digital-to-Analog conversion shall be 24-bit with a sampling rate of 48kHz. The video decoder shall support the transmission of HDCP 2.2 protected content. The video decoder shall provide front panel OLED display of device power, status, alarm, and activity as well as system-wide alarm. The video decoder shall be built in a half-rack chassis and feature software-configurable signal processing, including but not limited to: signal routing and mixing, levels, mute, delay, and audio embedding/de-embedding, as well as control, monitoring, and diagnostic tools. The video decoder shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The video decoder shall include an RS-232 connection for control data transmission into or out of the device and such operation shall be software programmable. The video decoder shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be 5 years.	15	
4	Extreme	SITC 24 port avb switch for encoder dcoder. Layer 2 stackable POE+ managed 24 Port Gigabit Ethernet Switch, with minimum 2 numbers of fiber ports. Network switches shall be compatible with AVB, Dante and Cobranet. <b>Approved Make- Netgear / Cisco/ Extreme</b>	4	
5		Cables & connector lot	1	
6		Installtion Testing & commissioning Charges	1	
<b>Que Mangement</b>				
	LG	SITC of 43" 4K UHD 400 nit LCD panel with Weight Shape Bracket for angular floor Mount. Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers <b>Approved Makes : Christie / LG / Sony</b>	4	
1	Bracket	ELEGANT FULL-MOTION TV WALL MOUNT	4	
2	Set top Box	<b>HD Set top box with commerical package ( Client Scope )</b>	4	

3	Brightsign	SITC of Digital Signage media player. VIDEO ENGINE DECODER- Native 4K@60p and HDR10 video decoding, 4k60p video decoding, Single 1080p60 video decoding, Dual HD video decoding, MEDIA FORMATS- 4K Video codecs: H.265 at 60p and H.264 at 30p, 4K Video Containers: .ts, .mov, .mp4, .mkv, Full HD Video Codecs: H.265, H.264 (MPEG-4, Part 10), MPEG-2, Full HD Video Containers: .ts, .mpg, .vob, .mov, .mp4, .m2ts, Images: BMP, JPEG, PNG up to 4K resolution, Audio: MP2, MP3, AAC and WAV (AC3 is passed through), DISPLAY RESOLUTIONS- 4K Video Resolutions: 4096x2160,3840x2160, 3840x600, Full HD Resolutions: 1920x1080x23.97/24/25/29.97/30/50/59.94/60p, HARDWARE INTERFACES- Locking Power Connector, Primary micro SD card Slot, USB-A: provides 5V/1A power to peripheral devices, Audio: 3.5mm Output (Analog or SPDIF), HDMI Out 2.0a, HDMI 2.0a Input, Gigabit Ethernet, Power over Ethernet (PoE+), Optional Wi-Fi/Bluetooth: E Key M.2, Hardware OS: Linux, FEATURES- 4K Video, Support HDR10, HLG & Rec.2020/BT.2020, Free BrightSign App: update signs via iOS device, android,ACCESSORIES- MicroSD Class 10 Cards. Approved Makes : Brightsign	4	
4	Extreme	SITC 24 port avb switch for encoder dcoder. Layer 2 stackable POE+ managed 24 Port Gigabit Ethernet Switch, with minimum 2 numbers of fiber ports. Network switches shall be compatible with AVB, Dante and Cobranet. Approved Make- Netgear / Cisco/ Extreme	1	
5		SITC of Kiosk For Que Management.	2	
6		Server	1	
7		CPU	2	
8		Cables & connector lot	1	
9		Installtion Testing & commissioning Charges	1	
<b>Press TV</b>				
1	LG	SITC of 55" Professional Display. 55" 4K UHD 400 nit LCD panel Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have 2 nos. of HDMI Should have built-in speakers <b>Approved Makes : Christie / LG / Sony</b>	4	
2	Bracket	ELEGANT FULL-MOTION TV WALL MOUNT	4	
3	Set top Box	<b>HD Set top box with commerical package ( Client Scope )</b>	RO	
4	Extreme	SITC 24 port avb switch for encoder dcoder. Layer 2 stackable POE+ managed 24 Port Gigabit Ethernet Switch, with minimum 2 numbers of fiber ports. Network switches shall be compatible with AVB, Dante and Cobranet. Approved Make- Netgear / Cisco/ Extreme	2	

5	Biamp	The video decoder shall utilize an AVB/TSN network for all media networking as well as software configuration and control. The video decoder shall provide one High-Definition Multimedia Interface (HDMI®) port and shall output video signals up to and including 4K60. End-to-end network transit latency shall be 1.5 frames (25ms at 60fps) or less. Compression shall be visually lossless using M-JPEG. The video decoder shall be equipped with one RJ-45 port to support AVB/TSN transmission at 1Gb, and one SFP+ port to receive at 1Gb or 10Gb. The video decoder shall be equipped with a separate RJ-45 Ethernet port for control connection to third party control systems and configuration. The video decoder shall support port authentication via IEEE 802.1X. The video decoder shall provide two balanced output connections for transmitting microphone or line level analog audio signals on screw-down, removable connectors. Digital-to-Analog conversion shall be 24-bit with a sampling rate of 48kHz. The video decoder shall support the transmission of HDCP 2.2 protected content. The video decoder shall provide front panel OLED display of device power, status, alarm, and activity as well as system-wide alarm. The video decoder shall be built in a half-rack chassis and feature software-configurable signal processing, including but not limited to: signal routing and mixing, levels, mute, delay, and audio embedding/de-embedding, as well as control, monitoring, and diagnostic tools. The video decoder shall include 4 channels of General Purpose Input and Output connection (GPIO) for sending or receiving logic signals. The programming of the GPIO ports shall be software configurable. The video decoder shall include an RS-232 connection for control data transmission into or out of the device and such operation shall be software programmable. The video decoder shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be 5 years.	4	
6	SIS	Cables & connector lot	1	
7	SIS	Installtion Testing & commissioning Charges	1	
<b>VIP LIFT LOBBY</b>				
1	LG	SITC of 43" 4K UHD 400 nit LCD panel with Weight Shape Bracket for angular floor Mount. Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers <b>Approved Makes : Christie / LG / Sony</b>	7	
2	Bracket	ELEGANT FULL-MOTION TV WALL MOUNT	7	
3	Set top Box	<b>HD Set top box with commerical package ( Client Scope )</b>	0	
4	Brightsign	SITC of Digital Signage media player. VIDEO ENGINE DECODER- Native 4K@60p and HDR10 video decoding, 4k60p video decoding, Single 1080p60 video decoding, Dual HD video decoding, MEDIA FORMATS- 4K Video codecs: H.265 at 60p and H.264 at 30p, 4K Video Containers: .ts, .mov, .mp4, .mkv, Full HD Video Codecs: H.265, H.264 (MPEG-4, Part 10), MPEG-2, Full HD Video Containers: .ts, .mpg, .vob, .mov, .mp4, .m2ts, Images: BMP, JPEG, PNG up to 4K resolution, Audio: MP2, MP3, AAC and WAV (AC3 is passed through), DISPLAY RESOLUTIONS- 4K Video Resolutions: 4096x2160,3840x2160, 3840x600, Full HD Resolutions: 1920x1080x23.97/24/25/29.97/30/50/59.94/60p, HARDWARE INTERFACES- Locking Power Connector, Primary micro SD card Slot, USB-A: provides 5V/1A power to peripheral devices, Audio: 3.5mm Output (Analog or SPDIF), HDMI Out 2.0a, HDMI 2.0a Input, Gigabit Ethernet, Power over Ethernet (PoE+), Optional Wi-Fi/Bluetooth: E Key M.2, Hardware OS: Linux, FEATURES- 4K Video, Support HDR10, HLG & Rec.2020/BT.2020, Free BrightSign App: update signs via iOS device, android,ACCESSORIES- MicroSD Class 10 Cards. Approved Makes : Brightsign	RO	
5	Extreme	SITC 24 port avb switch for encoder dcoder. Layer 2 stackable POE+ managed 24 Port Gigabit Ethernet Switch, with minimum 2 numbers of fiber ports. Network switches shall be compatible with AVB, Dante and Cobranet. Approved Make- Netgear / Cisco/ Extreme	7	

6	SIS	Cables & connector lot	1	
7	SIS	Installation Testing & commissioning Charges	1	
<b>HOD &amp; SABHAPATI ROOM</b>				
1	LG	SITC of 43" 4K UHD 400 nit LCD panel with Weight Shape Bracket for angular floor Mount. Brightness should be 400 nit or better Should support 3840 X 2160 Native resolution or better Contrast ratio should be 1,200:1 or better Viewing angle 178 degrees h/v Video inputs - should have HDMI, USB 2.0 Should have built-in speakers Approved Makes : Christie / LG / Sony	1	
2	Set top Box		1	
3	Biamp	AVB video decoder; includes one HDMI 2.0 port. 8 channels of embedded PCM audio and includes 2 mic/line level analog outputs.	1	
4	Extreme	SITC 24 port avb switch for encoder decoder. Layer 2 stackable POE+ managed 24 Port Gigabit Ethernet Switch, with minimum 2 numbers of fiber ports. Network switches shall be compatible with AVB, Dante and Cobranet. Approved Make- Netgear / Cisco/ Extreme	1	
5		Cables & connector lot	1	
6		Installation Testing & commissioning Charges	1	

वर नमूद सुचित दर्शविलेल्या बाबींचे पुरवठा करणारे पुरवठादार/दुकानदार/उत्पादक/विक्रेते यांनी नमूद केलेल्या बाबीकरीता असलेले दर स्वतःच्या लेटरहेडवर महापालिकेच्या कार्यालयात अथवा ई-मेल द्वारे [pmcbandhkamdept01@gmail.com](mailto:pmcbandhkamdept01@gmail.com) यावर दिनांक ०४/०३/२०२४ पर्यंत पाठवावे ही विनंती, सदर दर हे अंदाजपत्रक तयार करणेसाठी गृहित धरणेत येणार आहेत.

*S. N. K.*

कार्यकारी अभियंता (प्रकल्प)  
पनवेल महानगरपालिका

जा.क्र पमपा/बांधकाम/2229 /प्र.क्र. ०३ / Ece/9 /2024  
दि. १०/०२/२०२४

प्रत माहितीस्तव —

१. प्रसिध्दीकरीता
२. माहिती फलक करीता