

UNIVERSITY OF KALYANI



NOTICE INVITING E-TENDER

NIT ID showing at <http://wbtenders.gov.in>: 2026 UOK 1004118 1

Tender Ref. No.: KU/NIET/RUSA/LNLB/2025-26/01

Dated: 11/02/2026

E-Tender is invited for **ESTABLISHMENT OF INTEGRATED INTERACTIVE LANGUAGE LEARNING LAB CUM HYBRID CLASSROOM & DIGITAL RECORDING STUDIO AT KALYANI UNIVERSITY** by the eligible vendors. Interested vendors may follow the instructions as given below for submission of their tenders under online mode:

TECH SPECIFICATION FOR ESTABLISHMENT OF INTEGRATED INTERACTIVE LANGUAGE LEARNING LAB CUM HYBRID CLASSROOM & DIGITAL RECORDING STUDIO AT KALYANI UNIVERSITY

Item	Description of Requirement
	For Teacher & Students Interactive Multimedia Platform with 5 years' warranty and Support
	The Digital Language Lab Control/communication Systems/Module 1 teacher and 39 Students. And 1 Teacher and 32 Students The learning system includes all the features and functions that are essential for effective and enjoyable teaching and learning, such as pre-set language learning activities, screen transfer features, audio and text communication tools, web browsing and program launch capabilities, file functions and classroom management and control features.
	The students can be divided into minimum six different groups. The sessions can be controlled separately and can simultaneously perform different activities for different groups
	The system should provide the teacher to control the whole class with different controlling tool like Lock students screen, lock Students keyboard and mouse, take remote control of student computer, shutdown student computer.
	The teacher should be able to send the instructor's screen, audio, video and text based content to student's consoles for teacher presentations. Or broadcast any students screen to other students and record screen activities with sound as movie.
	The teacher should be able to disable the student's stations from the teacher's station control panel.
	Teachers and students should be able to interact (speaking /listening) using headset with built-in microphone. Either for a single student or a group of student or whole class
	The teacher should be able to create session modules for students to access a content management library on the media activity dashboard for self-study even when the teacher is not

	present in class
	The System should facilitate teacher to create different group and perform group discussion or pair discussion for different groups simultaneously and record their discussion. Where there should not be any limitations to creating number of groups or putting number of students in a particular group.
	The System should be able to perform reading aloud activity for more than one student or for whole class at the same time without disturbing the others and record their reading. And where teacher can listen their reading student wise and give feedback to individual students.
	Imitation Students listen to and repeat after a model track to practice the stress rhythm and intonation of a foreign language, while their voices are recorded onto the student track. You can either use sources with ready-made pauses in them or manually pause the audio source during the activity
	Round table discussion – Round table discussion should allow teachers to set up small student groups with a designated chairman or a group leader, who leads the discussion and assigns turns during the discussion by passing a microphone around the group. The activity allows teachers to set up a meeting environment to help advanced language learners strengthen their oral presentation skills. Chairmen and participants for the groups can be defined either manually or with automatic options. Student applications display a list of discussion participants and chairman and students can request the microphone by clicking a request button. Teacher can listen in on each group and participate in the discussion when needed. Students should also allow to do text chat within the group during discussion and teacher should able to record the discussion.
	Content Exercise – The system should provide an activity is used together with either ready-made or custom content provided by reputed publisher. The activity should allow teacher to launch content files directly to students into an exercise window that includes all text, image and audio resources for the exercise. Report tool for the Content Exercise activity should allow teachers to view, edit and save a detailed listing of student scores.
	Vocabulary Test – The activity should allow teachers to easily conduct word quiz -type language learning tests. The teacher can either enter the quiz words manually or by importing a ready word list and students will then need to simply fill in their answers in a dialog that is launched on their screens. The activity allows teachers to create, launch and save tests, as well as collect results. Teachers are also able to display individual results to students and mark answers as correct or incorrect.
	The System should provide live telephone simulation activity which allows students to call each other, which lets teacher to perform a wide range of real-life based conversation exercises and to improve student engagement during discussion exercises, teacher should also able to create background noise during the activity for real life experience
	Pronunciation Activity- the System should provide an in- built pronunciation tool for teachers and students by integrating the Pronounce solution into a classroom. The Pronunciation activity should allow teachers to convert any text into a pronunciation exercise that can be launched directly to students. At the student end, a separate pronunciation application should open where they can proceed with the pronunciation exercise. Teacher should get report for every student – with students recording The Text should display with color code like Red, Green or yellow after students imitates the original sound generate by text to speech, Score Meter should also display the overall score in percentage of 1 to 100. Teacher should be able to automatic monitor, evaluate and collect student recording. Teacher application should display clear indication of student progress and performance for the students. When finished, full student work,

	student recordings or exercise reports can be collected for later evaluation. The speech recognition technology employed by application should provide teachers with objective results for each student.
	The System Should provide activity allow teacher to set up student pairs for a video chat using the students' Webcam images for a perfect variety of different exercises based on real-life interaction from simple everyday discussions to role- playing exercises and even sign-language discussions. Teacher should also be able to collect students recording in MP4 format
	Teachers should have the possibility to record full presentations with screen capture and audio . This allows students to practice giving presentations and to review their work, or teachers to record parts of their lesson for later use.
	The system should allow the teacher to use any audio file as content and also to add Subtitle to that file.
	The system should allow the teacher to browse any webpage and launch it to student Computer
	The system should allow the student to perform voice chat or written chat among themselves
	System should allow teacher add exercise, and instruction to any audio or video file.
	System should allow text to speech facility with specialize voice
	Conference Interpreting: System should provide option for additional activity for an authentic interpretation training environment. The activity simulates a real-life meeting with a live discussion that is simultaneously interpreted to different languages. Students can be assigned as Interpreters, Delegates and Observers. During the activity users are able to select whether to listen to the discussion or to an interpreter and interpretation recordings can be collected afterwards.
	System should allow users to rip audio from a CD, the Internet, or from an external source.
	The OEM should be an ISO 9001- and ISO 14001 Certified Organization
	English Content Should Contain for teacher computer to execute for all students: The Language Lab should include structured English content for higher education, with five modules: Elementary English, Basic Communication Skills, English Grammar and Fluency, Interview Preparation Skills, and Advanced English. It should be highly interactive, featuring audio and video compliant with the Common European Framework of Reference (CEFR). The content should be scenario-based, contextual, and situation-oriented, with levels ranging from A1, A2, B1, B2, C1, to C2.
	Phonetics Software: The International Phonemic Alphabet, Similar sounds gives extensive practice in recognizing and distinguishing similar-sounding letters (minimal – pairs) which can be problematic. The game-style format is very popular with learners. It should have following features as well: Word and phrasal stress, Stress and Rhythm section containing over 600 sound items, Rhythm from Rain land, there are 48 texts which you may access unit-by-unit or by topic area.
	Online Software Required :
	<p>Presentation Practice and improvement software for – Min 5 years' license</p> <ul style="list-style-type: none"> Should provide state-of-the-art learning experience features realistic 3D audiences with multiple rooms and avatars that react in real time to student's performance. If students 're dull, they'll yawn and look away. If students 're enthusiastic, they'll show interest! <p>Should provide feedback and personalized coaching on: 9 elements of student's delivery style including vocal variety, pitch, pace, pauses Gestures, Eye Contact and facial expressions</p>

	<p>Should also provide feedback for 16 features of student's content including language, conciseness, structure, slides etc.</p> <p>Access assignments for step-by-step instructions to develop and deliver a business presentation just like in a face-to-face or online training programs</p> <ul style="list-style-type: none"> • Should Compliant with latest security standards GDPR
	<p>Content Editor: The system must include a tool that allows teachers to create interactive, auto assessed worksheets directly from books, which can be used in the language lab or distributed to students for home practice</p>
	<p>Installation, Support, and Training:</p>
	<p>The vendor must provide-</p>
	<p>Complete installation</p>
	<p>Electronic documentation for a system user guide and for the system technology.</p>
	<p>On call online and offline support</p>
	<p>End-user training to on site the teachers.</p>
	<p>DEMO : A demo is mandatory for all participating bidder to show all the points mentioned yes in compliance sheet for Technical Evaluation</p>

Item	Description of Requirement
	Server Computer
Chassis	1U Rack Mountable
CPU	1 x Intel Xeon-Silver 4510 2.4GHz 12-core 150W Processor
Chipset	Intel® C741 Chipset
Memory	128GB (2x64GB) Dual Rank x4 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit
Bus Slots	Server should support up to three PCI-Express 5.0 x16 slots. Additional two x8 or higher PCIe 5.0 slots
SSD	2 x 1.92TB SATA 6G Read Intensive SFF BC Multi Vendor SSD
Controller	Embedded / PCIe based x16 RAID controller supporting RAID 0, 1, 10. Must support mix-and-match SAS, SATA, and NVMe drives to the same controller. Controller must support 6G SATA, 12G SAS, 16G NVMe. Controller must support following : <ol style="list-style-type: none"> 1. Expand Logical Drive 2. Instant Secure Erase 3. Migrate RAID/Stripe Size 4. Modifying Cache Write Policy 5. Move Logical Drive 6. Re-enable Failed Logical Drive
Networking features	1Gb 4-port (Base-T) network adaptors
Interfaces	Serial - 1 (Optional) USB support with Up to 5 total: 1 front, 2 rear, 2 internal. 1GbE Dedicated management port
Power Supply	Should support hot plug 800W redundant low halogen power supplies with minimum 94% efficiency
Industry Standard Compliance	ACPI 6.3 Compliant PCIe 5.0 Compliant WOL Support Microsoft® Logo certifications PXE Support Energy Star SMBIOS 3.2 UEFI 2.7 Redfish API IPMI 2.0 Secure Digital 4.0 Advanced Encryption Standard (AES) Triple Data Encryption Standard (3DES) SNMP v3 TLS 1.2 DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP) Active Directory v1.0 ASHRAE A3/A4
System Security	UEFI Secure Boot and Secure Start support Tamper-free updates - components digitally signed and verified Immutable Silicon Root of Trust Ability to rollback firmware FIPS 140-2 validation Secure erase of NAND/User data Common Criteria certification TPM (Trusted Platform Module) 1.2 option Configurable for PCI DSS compliance TPM (Trusted Platform Module) 2.0 option Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser Bezel Locking Kit option

	<p>Support for Commercial National Security Algorithms (CNSA) Chassis Intrusion detection option Secure Recovery - recover critical firmware to known good state on detection of compromised firmware</p>
Operating Systems and Virtualization Software Support	<p>Windows Server. Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) VMware ESXi. Canonical Ubuntu Oracle Linux and Oracle VM Citrix</p>
Provisioning	<ol style="list-style-type: none"> 1. Should support tool to provision server using RESTful API to discover and deploy servers at scale 2. Provision one to many servers using own scripts to discover and deploy with Scripting Tool (STK) for Windows and Linux or Scripting Tools for Windows PowerShell
Firmware security	<ol style="list-style-type: none"> 1. For firmware security, system should support remote management chip creating a fingerprint in the silicon, preventing servers from booting up unless the firmware matches the fingerprint. This feature should be immutable 2. Should maintain repository for firmware and drivers' recipes to aid rollback or patching of compromised firmware. Should also store Factory Recovery recipe preloaded to rollback to factory tested secured firmware
Embedded Remote Management and firmware security	<ol style="list-style-type: none"> 1. System remote management should support browser based graphical remote console along with Virtual Power button, remote boot using USB/CD/DVD Drive. It should be capable of offering upgrade of software and patches from a remote client using Media/image/folder; It should support server power capping and historical reporting and should have support for multifactor authentication 2. Server should have dedicated 1Gbps remote management port 3. Server should have storage space earmarked to be used as a repository for firmware, drivers and software components. The components can be organized in to install sets and can be used to rollback/patch faulty firmware 4. Server should support agentless management using the out-of-band remote management port 5. The server should support monitoring and recording changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur 6. Two factor Authentication 7. Local or Directory-based user accounts with Role based access control 8. Remote console sharing up to 6 users simultaneously during pre-OS and OS runtime operation, Console replay - Console Replay captures and stores for replay the console video during a server's last major fault or boot sequence. Microsoft Terminal Services Integration, 128 bit SSL encryption and Secure Shell Version 2 support. Should provide support for AES and 3DES on browser. Should provide remote firmware update functionality. Should provide support for Java free graphical remote console. 9. Should support managing multiple servers as one via <ul style="list-style-type: none"> Group Power Control Group Power Capping Group Firmware Update Group Configuration Group Virtual Media and Encrypted Virtual Media Group License Activation 10. Should support RESTful API integration 11. System should support embedded remote support to transmit

	<p>hardware events directly to OEM or an authorized partner for automated phone home support</p> <p>12. Server should have security dashboard : displaying the status of important security features, the Overall Security Status for the system, and the current configuration for the Security State and Server Configuration Lock features.</p> <p>13. One-button Secure Erase designed to decommission/repurpose servers</p> <p>14. NVMe wear level display</p> <p>15. Workload Performance Advisor - Provides server tuning recommendations to improve server performance</p>
Server Management	Software should support dashboard view to quickly scan the managed resources to assess the overall health of the data center. It should provide an at-a-glance visual health summary of the resources user is authorized to view.
	<p>The Dashboard minimum should display a health summary of the following:</p> <ul style="list-style-type: none"> • Server Profiles • Server Hardware • Appliance alerts
	The Systems Management software should provide Role-based access control
	Zero Touch Provisioning (ZTP) using SSDP with remote access
	Management software should support integration with popular virtualization platform management software like Vmware vCenter & vRealize Operations, and Microsoft System Center & Admin Center
	Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD.
	Should provide an online portal that can be accessible from anywhere. The portal should provide one stop, online access to the product, support information and provide information to track warranties, support contracts and status. The Portal should also provide a personalized dashboard to monitor device health, hardware events, contract and warranty status. Should provide a visual status of individual devices and device groups. The Portal should be available on premise (at our location - console based) or off premise (in the cloud).
	Should help to proactively identify out-of-date BIOS, drivers, and Server Management agents and enable the remote update of system software/firmware components.
	Should have dashboard for firmware baselines while performing minimum required firmware checks and highlighting out-of-compliance devices for updates with the selected firmware baseline
The Server Management Software should be of the same brand as of the server supplier.	
OS	Windows Server 2025 with 80 Nos User CAL Licenses Academic Version
Warranty	5Y Tech Care Basic Service

Items	Specification Name	Bid Requirement (Allowed Values)
		ALL In ONE Computer 73
Processor	Processor Make	Intel
	Processor Generation	14 or higher
	Number of Cores per Processor	14 or higher
	Processor Description	Intel Core i5 or higher
	Processor Number	Intel Core i5-14500 or higher
	Out of Band Management	Intel vPro or higher
Motherboard	Chipset Series	Intel Q Series or higher (Motherboard make from the same AIO OEM (OEM logo must be embossed in the motherboard))
	Chipset Number	Intel Q670 or higher
Operating System	Operating System (Factory Pre-Loaded)	Factory pre-install Windows 11 professional or higher with latest Service Pack and Preloaded License, Systems Hardware driver should be available in OEM website against the offered model. OEM letter confirming that Operating system pre- loaded / pre-installed from OEM factory only.
	OS Certification	Windows Certification. Windows certification must be available in Public Domain. Ubuntu Linux Certification. Linux Certification available in Public Domain.
Memory	RAM Size (GB)	16GB (1x16GB) DDR5 4800 MT/s or higher
	RAM Expandability up to	64 GB DDR5 4800 MT/s or higher
Storage	Type of Drives used to populate the Internal Bays	SSD (NVMe)
	Total SSD Capacity (TB)	1 TB or higher
Display	Display Size (INCHES)	23.8 or higher
	Display Type	Non-Touch Or higher

	Panel Technology	IPS or higher
	Display Resolution (PIXELS)	1920x1080 or higher
	Availability of Webcam integrated with Display	Yes
	If yes, Resolution of Webcam	FHD or higher
	Availability of Speakers integrated with Display	Yes
	If Yes, Number of Integrated Speakers available	2 or higher
Connectivity	Wireless Connectivity	Yes
	If Yes, Type of Wireless Connectivity	Intel AX211 Wi-Fi 6E vPro +Bluetooth 5.3 or higher
	Number of Ethernet Ports	1 or higher
	Type of Ethernet Ports	Intel 10/100/1000 Integrated Network Ports for vPRO
	Bluetooth Connectivity	Yes
Ports	USB Ports	Minimum 2 numbers USB 3.2 Gen1 Type-A ports or higher, Minimum 3 numbers USB 3.2 Gen2 Type-A ports or higher, Minimum 1 number USB 3.2 Gen2 Type-C port or higher
	Video Ports	Minimum 1 number Display Port or higher, Minimum 1 number HDMI-in port or higher and Minimum 1 number HDMI-out Port or higher
	Audio Port	1 number Universal Audio Port
Slots	M.2 Slots	Minimum 3 numbers M.2 Slots or higher
Security	TPM	Hardware based endpoint security controller TPM 2.0
Power	Power Supply	150W or higher
Cabinet	Form Factor	All-in-One

Input Devices	Keyboard	USB Keyboard (Same OEM make)-OEM logo must be embossed. Sticker will not be allowed.
	Mouse	USB optical scroll mouse (same OEM make)-OEM logo must be embossed. Sticker will not be allowed.
Generic	Stand	Adjustable Height Stand
Warranty	On Site OEM Warranty (Year)	5 years Next Business Day Onsite or higher (OEM supplied AIO model warranty must be visible in the OEM website in respect to each product serial number)
Additional Parameters		
1. Technical compliance must be on OEM letterhead.		
2. OS undertaking must be on OEM letterhead.		
3. Warranty undertaking must be on OEM letterhead.		
4. The quoted AIO model should have Microsoft Windows 11 certification and EPEAT Gold Certification (INDIA). Ubuntu Linux Certification. Linux Certification available in Public Domain.		
5. TCO 9.0 certification for All-in-One. EPR Authorization (OEM) & BEE/ Energy Star certified for the given Model. Model should be MIL-STD 810H certified. Brochure/Datasheet of the product offered should be available in Public Domain		
6. OEM of AIO should be ISO 9001, ISO 14001, ISO 20000-1, ISO 27001. AIO model should have RoHS, FCC, UL, CE certification.		
7. Pre-loaded operating system Windows 11 Pro. Factory preloaded Need confirmation from OEM on their letterhead.		
8. AIO OEM presence in Indian market minimum 15 years.		
9. AIO, Headphone with Microphone, Keyboard & Mouse must be same OEM make.		
10. Bid specific OEM authorization.		
11. Headphone with Microphone along with all AIO Desktops.		

Description of Requirement			
AI Interactive Commercial 86" Display			
1	Sizes	Required Sizes	86"
2	Display	Display Type, Resolution & Refresh Rate	IPS Ultra HD 4K A Display 3840*2160 (pixels)with 60ltz
			refresh rate,
		LED View Angle	Direct LED, HDR Display, with wide viewing angle of 178°(H)/
			178°(V)
		Led Lifetime	LED lifetime of 50,000 Hours.
		Surface	Matte finish AG Surface with 4mm Toughened Glass MoHS Level 7 hardness,
		Contrast Ratio	Dynamic Contrast 100,000: 1, 1300: 1 (typ.),
Brightness	450 nits (Max), 400 nits (Typ)		
3	Touch Technology	Technology	A9 Edge Optical Touch Technology
		Display & AG Glass Gap	No Gap between glass and display for touch accuracy
		Touch Points	Min 20 Simultaneous touch points
		Touch Resolution	32767x32767
		Accuracy	0.3 mm
		Response Time	<2 ms (typ.)
		Touch Object Size	≥1.6 mm
4	Chipset	CPU:	ARM Cortex™ A55 Quad Core 2.05 GHz
		GPU:	Mali G52 MCI
5	Wireless	Bluetooth 4.0	
		802.11 a/b/g/n Dual Band 2.4G and 5GHz	
		Hotspot Support	
6	Memory & Storage	RAM	8 GB
		Storage	128 GB Onboard with 15GB Cloud Storage on OEM Whiteboard
7	Speakers	Stereo Speakers with Surround Sound	Bottom Firing, Hi-Fi, Stereo Sound output with 20W x 2, with 82 impedances.
			Bass reflex with dual passive radiators.
8	Ports	Ports	Front: USB 3.0 x 2, Side: USB 3.0 x 2, USB 2.0 x 2, Touch x 1.HDMI (IN) x 3, DisplayPort DP (In) x 1, AV (iN) x 1, AV (Out)x1, Backside Bottom: HDMI Out x 1, VGA (IN) x 1, VGA Audiox 1, SPDIF x 1, LAN x 2, Mic (IN) x 1, Line (Out) x1, RS 232x1
9	Power Consumption	Voltage	Voltage: 100 V-240 V/AC, 50/60 Hz
		Power	Max watt with OPS: 140W
		Standby	Stand-by: <0.5 W
10	Environment	Temperature	Working Temp: 0°C-40°C, Storage Temp: Minus 10°C-60°C.
		Humidity	Working Humidity:20%-80% RH Non-Condensing, Storage Humidity: 10%-60% RH Non-Condensing
11	Accessories	In the box.	Remote, Power Cable, USB touch Cable, HDMI Cable, User Manual, Wall Mount
12	Wireless Casting &screen	Native Support for Airplay & Miracast	
		Multi-Device	Up to 2 Devices simultaneously

	Sharing	Casting	
13	Intelligent Features	Auto Lesson Creation on Any Topic with NEP Guidelines	
		Instant Customized Lesson Plan based on teaching Profile & difficulty levels	
		Auto Quiz Creation on Any Topic, with various level of Difficulty	
		Auto Assignment & Homework Creation Take Student Attendance from Panel Student & Parent app available on Play store	
14	Security & Privacy	Anti-Theft Feature	IFP must have built-in Anti-Theft feature, which can sent a notification 1.as soon as some unauthorize movement of the panel is detected 2.it can track the location of the panel even without being powered
			ON, and send the location coordinates to the Admin.
			3. It should work, even when the power of the panel is disconnected
15	Multi-User Collaboration	Cloud Sever location	Writing Software & file sharing cloud server located in India
		permissions for Students Live Multi Student Collaboration with Live cursor tracking Teacher Can manage & control Writing	
16	Managemen t Software	E notification	E-Notification software should support secure multi-format content management with intelligent scheduling (geo-location, weather, time-based) and interactive data integration (CSV, JSON, RSS, dashboards). It should provide enterprise-grade security with SSO, 2FA, role-based access, and full audit trails. The solution should ensure scalable deployment via Docker, cloud, self-hosted models with automated backup and load balancing. Cross-platform players like Android, Windows, webOS, Tizen should be supported with offline playback, proof-of-play, and real-time monitoring. The brand should be registered in India.
17	Advance AI Software	Teaching Learning Software	Ability to access online curated content curriculum for lessons creation 2. Import documents & multi-media in lessons, share lesson,3. Remotly Online collaboration with student on lessons, with Options to control which student has write access 4. Live Virtual Teaching using Audio & Video on Lesson consuming less than 1Mbps bandwidth, with option to control enable & disable Audio and video of remote students 5. Conduct live chat, polling during live class.6. Take Student attendance for remote & in class students. 7.Create and share assignments, tests, and get analytics & insights of the student performance,8. Always Ready to Connect to smart devices, like mobile and tablets, receive files wirelessly from mobile devices.9. STEM Tools draw shapes, use math tools, like protractor and compass, solve equations and formulas, and simulate physics and chemistry lab experiments 10. Whiteboard: Pen, colours, Highlighter and Eraser, Multi-background, Creativity Tools, Smart Draw, Shapes, 11. Presentation Tools: Screen Curtain, Spotlight, Presentation mode 12. Productivity Tools: Media import, (Docs, sheets, PDF, slides), Stopwatch & Document Scanner, Snipping tool 13. Built-in Chrome Browser for Secure and fast browsing experience, Built-in Office Viewer App. + 14. Support for installing MS Office Apps 15. Support for Android apk installation, Support for 3rd Party VC Apps like Microsoft Teams, Zoom, Google meet. 16. Infinite canvas with multi writing and palm erasing gesture support, 5

		finger touch to sleep/wake,16. Auto Lesson Creation on Any Topic with NEP Guidelines 17. Auto Customised Lesson Plan based on Class Profile, & various levels 18. Auto Quiz Creation on Any Topic, with various level of Difficulty,19. Auto Assignment & Homework creation on any topic.20. Student and Parent notification on their App.
18	AI/ML/Deep Learning	AI Deep Learning Engine to enhance energy savings by upto 30% over OS Savings using hyper personalized policies
19	Single Agent Support	A Single agent which supports Power Management along with asset, patching and productivity monitoring on specified platforms
20	Software Metering	Third party certified software energy meter on endpoints which measures energy consumption with up to +/- 10% accuracy
21	Secure communications	Should support TLS 1.2+ communication between agent and console
22	Security	Should support standard encryption for all agent and console communication
23	Agent behind Firewall, NAT	In the scenario where the agents are deployed behind a firewall with NAT, the agent and console should be able to communicate only with http(s)
24	Configurable Ports	The https ports used for agent-console communication should be configurable
25	Support for Proxy Servers	If there is a proxy server for communication between agent and console, the agent should be able to communicate via the proxy server to the console
26	Bandwidth Optimized	The agent-server communication should be optimized for bandwidth usage and should be able to work in a sub 64kbps, VSAT links for remote locations
27	Data protection	The agent should be able to function even if the communication with the console is not available or the console is down for up to 30 days. There should be no loss of data
28	Proven technology	Proven in a scenario where the technology is deployed in a single client in more than 10,000 locations and communicating to a single console
29	Policy and Configuration Synchronization	For devices which are not always connected to the enterprise lan, the agent should be able to synchronize its configuration & power policies as soon as it connects to the console. The agent should also post the savings and other data to the console without causing major overhead on the network bandwidth.
30	Panel Certificates	BIS, RoHS, CE, FCC, NSIC

Description Of Requirement		
4K 20X PTZ Camera		
1	Image Sensor	1/2.8inch CMOS Sony sensor
2	Min Lux	0.1Lux (F1.2)
3	Effective Pixel	8.5 MP
4	Signal	PAL/NTSC
5	Lens	20X Optical zoom
6	Shutter Speed	1 to 1/10000s
7	Horizontal View Angle	58.7° W) 3.2° T
8	Resolution	HDMI: 4K/30 ,4K/25 ,1080p/60,1080p/59.94, 1080p/50, 1080p/30, 1080p/29.97, 1080p/25,720 p/60, 720p/50 USB: 3840*2160,1920*1080,1280*720,800*600, 640*480,640*360,320*240
9	Focus Mode	Auto/ Manual
10	Exposure control	Auto/ Manual
11	Gain	Auto/ Manual
12	White Balance	Auto/Indoor/Outdoor/Manual
13	Image Effect	Full colour/ black and white/image flip
14	Video Interface	USB3.0 HDMI, IP
15	Video Compressed Format	YUY2 / MJPG / H264/H265
16	Control Interface	RS-232, RS-485
17	Control Agreement	SONY VISCA, PELCO P/D,VISCA over IP, ONVIF
18	Communicate Baud Rate	2400/4800/9600/11520/19200/38400
19	Power Interface	DC-038 power socket DC12V
20	Pan	+168°(max.speed:60°/s)
21	Tilt	-30° +90°(max. speed:60°/s)
22	Power Adapter	Input AC100V AC240V Output DC12V/2A
23	Decoder	Built in
24	Input voltage	DC12V
25	Power Consumption	12W(MAX
26	Storage Temperature and Humidity	-10°C +60°C
27	Working temperature and Humidity	Working temperature -0°C +40°C and Humidity
28	Operating Environment	Indoor

Description Of Requirements		
Digital Podium		
1	Premium Quality Material	Made of high-quality MS fabricated metallic sheets with two cooling fan, lowers for heat reduction, caster wheels and Fully Metallic Podium powder coated made up from 1.6mm metallic sheet. Elegant and cutter free design.it ensures long operating life than any other podium available in the market.

2	Inbuilt Computer	Slim cabinet (ATX/mATX), Intel Core i5 latest gen or equivalent AMD (4 cores/8 threads, 2.4–2.8 GHz+ base, 12 MB cache), 32 GB DDR4/DDR5 3200 MHz RAM, 512 GB NVMe SSD (3500 MB/s) + 2 TB HDD, 4 GB dedicated graphics card with HDMI/DP/DVI supporting DirectX 12 & OpenGL, motherboard with minimum 2 RAM slots (LGA1200 or newer), 500–600 W PSU, minimum 4×USB 2.0 & 2×USB 3.0 ports, minimum 1×HDMI port, Ethernet LAN with optional Wi-Fi.
3	Laptop Placement	IT has sliding top tray to place Laptop which allows presenter to display any multimedia file instantly.
4	Projector/Panel/any Display	It is fully compatible with all types of Projectors, Panel or any Display. It has switching plate with buttons on the top, which allows you to display desired projection output
5	Interactive Monitor	22-inch FHD (1920×1080) LED monitor with VA panel, 100 Hz refresh rate, 5 Ms GTG response time, 16:9 aspect ratio, 178° viewing angle, 250 cd/m ² brightness, 3000:1 contrast ratio, 72% NTSC Colour gamut, 16.7 million colours, HDCP support, 103 PPI, pixel pitch 0.2493×0.2410 mm, ports: 1×HDMI 1.4, 1×DisplayPort 1.2, 1×VGA, power consumption: 11.4 W (typ.), 25 W (max.). which mounted on the top.
6	Actuator Stroke	Industrial standard Actuator come with this podium
7	Central Controller	central control host, it can be used for the command control centre, office and building automation, multimedia environment and home automation centralized devices control, it combined programmable logic and protocol with programmable user interface together, provide full network and intelligent central control technology. It is essential equipment for command centre and C'ISR system, it is widely used for administration centre, building control, meeting room, training centre, exhibition centre, industry and home automation.
8	Amplifier	2-channel 550 W power amplifier with frequency response 20 Hz–20 kHz (+0 dB/–1 dB at 1 W), signal-to-noise ratio >97 dB, total harmonic distortion <0.5%, intermodulation distortion <0.3%, damping factor >200 (8 Ω, 10 Hz–400 Hz), crosstalk >85 dB at 1 kHz and >55 dB at 20 kHz (below rated 8 Ω power)
9	Mixer	6-channel mixer with 6 mic / 8 line inputs, MON : Ster mono-stereo inputs, ultra-low-noise preamps, one-knob compressor on 2 channels, built-in multi-EFX with 24 DSP presets, Aux routing to monitor via Aux 1, built-in USB MP3 player/recorder with Bluetooth, dual USB audio interface for PC recording/playback, 75 Hz low-cut and 3-band EQ on all channels, 2 Aux sends (pre/post + EFX), stereo Aux returns, balanced XLR and ¼" main outputs, 2 sub-groups with ¼" outputs, inserts on first 2 mono channels and main out, per-channel mute/solo/group/L-R routing with peak/comp/mute/solo LEDs, stereo RCA in/record out, headphone out with level control, global +48 V phantom power, 60 mm faders, dual 10-segment LED meters, ergonomic angled design, clutter-free rear I/O.
10	Speaker	2-way loudspeaker with 135 mm (5.25") LF driver and 19 mm (0.75") polycarbonate dome HF tweeter, frequency range 80 Hz–20 kHz (–10 dB), frequency response 100 Hz–18 kHz (±3 dB), power capacity 150 W, sensitivity 87 dB SPL (1 W/1 m), maximum SPL 108 dB continuous / 114 dB peak, directivity factor Q=6.0, directivity index 7.8 dB, nominal impedance 4 Ω, crossover frequency 4.2 kHz, with full-range Sonic Guard™ overload protection.
11	Gooseneck Mic	4-channel UHF wireless gooseneck microphone system with 4-channel non-diversity receiver, frequency response 50 Hz–16 kHz, cardioid polar pattern microphones, individual XLR outputs with mixed ¼" jack output, transmitters powered by 2×1.5 V AA batteries, and receiver powered by 240 V AC / 50 Hz adaptor (supplied).
12	Microphones	Wireless microphone system (620–950 MHz) with broadband FM, 25 MHz bandwidth, IR auto-tuning (100 channels), >110 dB dynamic range, ±45 kHz deviation, 60 Hz–18 kHz response, SNR >105 dB, THD <0.5%, super-heterodyne receiver, BNC antenna, balanced & unbalanced outputs, 10 mW/3 mW RF power, DC 11–16 V supply, AA×2 battery, ~8–12 h operation.,

13	Portable Mic	2.4 GHz wireless microphone system using GFSK (1–2 Mbps) with <20 dBm EIRP, operating at 2400–2483.5 MHz, Li-Po 1S batteries (320 mAh, 1.23 Wh, 3.85 V) in transmitter and receiver, max 5 V charging, 70-min charge time, operating time ~5–5.5 h, charging temp 5–45 °C, operating temp –10–45 °C, mic receiver size 47.44×32.21×17.35 mm, weight 24.9 g, and charging case with Li-Po 1S 2600 mAh (10 Wh, 3.87 V) battery, max 5 V/3.5 A input, capable of charging three devices simultaneously (~1.8×).
14	Audio Connector	USB audio interface with frequency response 20 Hz–20 kHz (+0.1 dB), signal-to-noise ratio 109 dB (A-weighted), THD+N 0.003% (min. gain, 0 dBu out), balanced ¼" (6.35 mm) TRS line input (–43 dBu sensitivity), direct mono/stereo gain range up to +54 dB/+60 dB, impedance-balanced ¼" TRS main outputs (L/R), ¼" TRS headphone output (60 mW/ch @ 32 Ω), headphone frequency response 20 Hz–20 kHz (+0.5 dB), headphone THD+N 0.02%, SNR 100 dB, and USB bus-powered operation
15	Min Power Consumption	All the equipment integrated in the podium are of international standards & consume efficient power.AC 220V, 50Hz power operation.
16	IWB Integration	Podium allows you to connect Digital Board/smart board with the projector directly, and helps you to conduct interactive lectures.
17	Cables/Connectors Management	All cables and connectors good quality and it has inside the podium are tagged and well managed to simplify the structure complexity with full internal/External integration of hardware.
18	Security	All the doors, drawers, trays and shelves are lockable to avoid unauthorised access. It has in-built anti-theft mechanism.
19	Switching/Splitting	Switcher helps to switch the projection among different devices, while splitter helps to split the display for multiple outputs.1 x Multimedia HDMI Controller on top with touchpad for switching among three input devices i.e., PC, Laptop and Visualiser,
20	Input/Output Ports	IT has all the required input/output ports such as USB, VGA in/out, HDMI in/out, SDI in/out ,2 LAN, Audio in/out, XLR, and Power
21	Document Camera /Visualiser Integration	It integrates full HD Document Camera which helps to project live document/object for audience with greater clarity, It should be Image sensor:3 Mega pixels,Resolution:2048x1536,Frame Rate:30,Dpi:280,Scan size:A4,Image color:24 Bit,Zoom:15x,Sensor:-CMOS,LED light: Natural + LED Supplement light, Document format: PDF, WORD, TXT, Image format :JPG / TIF / PDF / BMP / TGA / PCX / PNG / RAS, Video format: AVI / MV,Interface:USB2.0,OCR:More than 180 kinds of languages, Image Processing:-Brightness, Contrast, Sharpness, Saturation, Gamma, Rotation, Mirroring, etc
22	Front Logo Display	it has come front logo plate to display with flexibility to change of your institution/organization.
23	LED Light Integration	It has the provision (optional) to integrate LED light inside the podium
24	Podium inside Power	8 Metallic power sockets inside the podium with central power control having MCB
25	Controller Integration	Controller helps to operate all the electric & electronic devices using its touch screen it has come many connectivity i.e. .Top:- 1 HDMI input,1 VGA Input,1 Usb 2.0 for touch and 1 HDMI 2.0 data transfer,1 X3.5 Audio out,1X 3.5 Audio in ,1 RJ45, 1 Power Socket, sound control switch,1 Motorized Screen UP/Down Control, Power on/off Switch ,Switch for any input ,Down :- 2 VGA in ,2 VGA Out,2 HDMI in ,2 HDMI out,2 USB input ,1 RJ45 input ,2XAudio 3.5 in,2X Audio 3.5 out,1 pc Rs232 and 2 power ,1 power out and DP Switch
26	Easy-to-move	Podium has 4 caster wheels which enable it to move easily and effortlessly.
27	Easy-to-operate	This entire system is simple and easy to use; you don't need to be a technical expert to operate this Podium.
28	Podium Size	Front Height- 48-inch, Height (Presenter side)- 42-inch, Width- 24-inch, Depth- 21 inch.
29	Client Satisfaction	We have supplied our digital podiums in many reputed govt and private establishments and they are happy with the product.
30	Drawer/Tray/Door	Drawer for Visualiser, Key Board/Mouse tray and sliding top tray for Laptop.

SL. No	Description Of Requirements
	Wireless Presenter
1	Dual outputs support content sharing from same source or different sources
2	Support up to 4 sources shared in a single screen
3	Support wireless sharing from Airplay, Miracast, Chromecast, App, dongles
4	Support both 1080P and 4K dongles
5	Support 4K HDMI input as content sharing
6	Support USB cam/mic/speaker transmission over Wi-Fi
7	Support camera switching
8	Support USB devices switching between local room PC and wireless laptop
9	Support display content sharing to participant over video conference
10	Support 2 LAN ports for network isolating between staff and guest
11	Touch back function supported with both wired and wireless connection (App and dongles)
12	Provide analog audio breakout
13	Provide both RS232 and Telnet control
14	TA FW upgrade

SL No	Description Of Requirements	
	Commercial Display	
1	Memory Storage Capacity	16 GB
2	Ram Memory Installed Size	2 GB
3	Operating System	Web OS
4	Hardware Interface	USB, HDMI, Bluetooth 5.0
5	Graphics Coprocessor	G52 MC 1
6	Tuner Technology	PAL
7	Response Time	6 Milliseconds
8	Resolution	4K
9	Remote Control Type	IR
10	Display Technology	LED
11	Screen Display Size	55 Inches
12	Display Type	HDR 10 + HDR10 HLG
13	Viewing Angle	178 Degree
14	Images Aspect Ratio	0.672916667
15	Images Brightness	500 Nits
16	Image Contrast Ratio	50.00069444
17	Supported Image Type	GIF, JPEG
18	Intelligent voice recognition	Yes
19	Resolution	3840 X 2160 Pixels
20	Supported Audio Format	MP3_audio, Wma
21	Speaker Surround Sound Channel Configuration	Dolby Audio
22	Audio wattage	15 + 15 Watts
23	Speaker System	2.0 Ch
24	Wattage	165Watts
25	Power Consumption Standby Mode	>0.5W

26	Power Source	AC
29	Refresh Rate	60HZ
30	Total Usb Ports	2
31	Connector Type	USB*2, HDMI * 3, Ethernet*1, WIFI (802.11AC), Bluetooth 5.0
32	Refresh Rate	220 hz
33	Real Angle of View	178 Degrees

Technical Specification Cable and Accessories

Description Of Requirements

Cable and Accessories

10 Mtr USB 3G Cable for Camera

1	Ambient temperature	-25°C ~ + 70°C
2	Insulation resistance	≥100 MΩ
3	Contacts resistance	≤5mΩ
4	Insert/ Housing	PBT
5	Orientation	Straight
6	Wire Termination	Soldering
7	Cable jacket material	PVC
8	Connection type	Double ended cable
9	Reference Standard	USB3.0
10	Overmold/ Shell	PVC/TPU
11	Rated current	1.8 A

HDMI Cable

1	Conductor	Bare copper
2	Jacket	PVC
3	Connector	HDMI Plug 19P, Durable 24K gold plated
4	Housing	PVC moulded with metal shell
5	Shielding	Aluminium foil and Braiding
6	Colour	Black
7	Ferrite core	Yes
8	Application	widely used in HDTV, EVD, HDVD, AMP, Home Theatre, DVD player, projector, PS3, Xbox360, set-top boxes, Video wall etc.

PPT Presenter

1	Wireless Laser Presenter PowerPoint PPT Presenter Slide Changer Controller with USB Receiver Battery Indicator
---	--

Speaker Cable

1	Conductor Size	2x20 AWG
2	Material	Tinned Copper
3	Core	2 core, Red / Black PVC insulated, twisted & diameter 1.85 - 2mm
4	Drain Wire	20 AWG, Tinned Copper
5	Screening	AL-foil / Mylar overlap 25% Min.
6	Jacket	Black colour PVC insulated with diameter 5.5 - 5.8mm
7	Temperature Rating	75°C
8	Insulation Resistance	DC-500V 10mΩ/km Min at 20°C
9	Conductor Resistance	20AWG - 13.7Ω/km Max at 20°C
10	Impedance	40 - 100Ω
11	Length	100 Mtr

Audio Cable and Connector		
1	Number of Cores	2 Cores
2	Cable Jacket	Rubber High Flex Matt Finish PVC
3	Material	PURE COPPER
4	Power/Voltage	300V
5	24 AWG (25/0.10mm) x 2 core ATC copper conductor, PE insulated, core twisted in a circular form, covered with special moisture-proof polymer, spiral shielded (97%) with ATC copper, outer Jacketed with Matt finish High Flex Special PVC.	
6	Connector;	3 Pole
7	number of positions (w/o PE)	3
8	rated voltage	133 V
9	rated current (40 °C)	15 A
Power Cable		
1	Type	Power Cord
2	Cable Type	Standard 100 Mbps Speed
3	Connector 1	3 Pin Male
4	Connector 2	Female
5	Connector Material	Copper
6	Cable	Round
7	Cable Frequency	50 MHz
8	Compatible Devices	Computer, Printer, Panel, TV
9	Colour	Black/White
10	Conductor	Copper
11	Core	Copper
12	Jacket	PVC Jacket
13	Insulation	Copper Insulation
14	Corrosion Resistant	Yes
15	Maximum Current Rating	13 A
HDMI Splitter		
1	HDMI Source input port	1
2	Display Device output port	4
3	Source port connector	19pin HDMI
4	Display device port connector	19pin HDMI
5	HDCP compliant	Yes
6	Signal link range	1920x1080p@60Hz
7	Bandwidth	up to 225MHz
8	Signal Speed	Up to 6.75Gbps
9	Deep colour	30/36 Bit
10	HDMI version	HDMI 1.4v
11	The cable standard	26awg
12	Vertical frequency range	60Hz
13	Power consumption (max)	24 Watts
14	Working voltage	DC5V
15	Operation temperature	-15°C to 40°C
16	The Length of input cable	≤10M
17	The Length of Output cable	≤20M
Cat 6 Cable		
1	Material	CAT.6 CCA Patch Cord
2	Cable Colour	Red, Yellow, Blue, Gray, Black
3	Characteristic Impedance	100±150 @ 1 ~ 250MHz

4	Conductor Construction	Copper Coated Aluminium
5	Conductor Resistance	93.80/km/20°C max
6	Conductor Size	24AWG x 4pairs
7	Connector Type	50-micron gold-plated connector
8	Dielectric Strength	AC 1.75kV/0.15sec
9	Flame Retardant Test	CM
10	Operating Temperature	20°C ~ 85°C
11	Storage Temperature	40°C ~ 60°C
12	Insulation Material	HDPE
13	Jacket Diameter	5.9±0.15mm
14	Jacket Material	PVC
15	Mutual Capacitance	56pF/m max
16	Propagation Delay	536nS/100m max @ 550MHz
17	Rating	75°C, 300V
18	Spark Test	2.5kV
19	Standards Compliance	ISO/IEC 11801; TIA/EIA-568-B.2
20	Structural Return Loss	8.6dB min at 550MHz

TAB

1	Processor	MediaTek Helio G85 Processor (2.00 GHz)
2	Memory	4 GB LPDDR4X (Soldered)
3	Storage	128 GB EMMC
4	Operating System	Android 14 or later
5	Colour	Polar Blue
6	WIFI	802.11 a/b/g/n/ac & Bluetooth® 5.3
7	AC Adapter / Power Supply	20W
8	Screen Resolution	1920 x 1200

SN No	Parameters
	<u>48 Port 1G Base-T Access Switch</u>
	General Features
1	Switch should be 1U and rack mountable in standard 19" rack.
2	The switch should have minimum of 48 nos. 10/100/1000 Ethernet Ports and in addition 4 nos. of 10Gig SFP+ uplink ports loaded with 10G SR at least 2 quantities.
3	Switch must have dedicated stacking/uplink port.
4	Switch Should support physical stacking up to 8 switches in single stack with 40 Gbps of throughput
	Performance and Scalability
5	The switch should support non-blocking switching bandwidth up to 176 Gbps & Packet Forwarding Rate up to 131 Mpps
6	Switch should have minimum 512 MB RAM and 512 MB Flash.
7	Switch shall have minimum 16K MAC Addresses and 4096 active VLAN.
8	Should support minimum 480 IPv4 routes or more
9	Switch shall have 1K or more multicast routes.
10	Packet buffer : 3 MB or More
11	The switch should support Jumbo frames of 9K bytes or above
	Standards & Protocols
12	Switch should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p,
13	802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.

14	Switch must have functionality like static routing, RIP, PIM, OSPF, PBR, , IP SLA and QoS features from Day1.
15	Switch should support GVRP, VRRP, Flow Control, EEE from day 1.
16	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .
17	Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 DHCP Guard, IPv6 Neighbor Discovery Inspection and IPv6 Source Guard.
18	Switch should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment
19	The switch should support IGMP v1, v2 Snooping
	Operation and Management
20	Switch should support management features like SSHv2, SNMPv2c, SNMPv3
21	Management using CLI, GUI using Web interface should be supported
22	Switch should provide SDN-like architecture and management using a Centralized Controller and local management with Command Line Interface (CLI) using Telnet/SSH, TFTP, HTTP/HTTPS, RMON(v1/v2). The controller should be able to configure L2, L3, and Security Features, and also do OS and Config restore and backup. The Controller should be from the same OEM.
	Environment
23	Switch should be ROHS compliant
2	Operating temperature: 0°C to 65°C
25	Relative Humidity: 10% to 95% non-condensing
	Certifications
26	Switch should be Ipv6 logo ready certified from day 1
27	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.
28	Switch shall conform to EN 55032 Class A/B or CISPR32 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
29	Switch / Switch's Operating System should be tested for EAL 2/NDPP/VAPT or above under Common Criteria Certification.
30	The quoted switch product/family/series must be Type Approved by the Telecommunication Engineering Centre (TEC) as per the latest applicable TEC-ER issued by the Department of Telecommunications, Government of India. A valid Type Approval Certificate must be submitted along with the bid.
31	The OEM of active network devices to be quoted by the bidder should be present in the country from at least past 5 years.

SN No	Parameters
	<u>24 Port 1G Base-T Access Switch</u>
	General Features
1	Switch should be 1U and rack mountable in standard 19" rack.

2	The switch should have minimum of 24 nos. 10/100/1000 Ethernet Ports and in addition 4 nos. of 10Gig SFP+ uplink ports loaded with 10G SR at least 2 quantities.
3	Switch must have dedicated stacking/uplink port.
4	Switch Should support physical stacking up to 8 switches in single stack with 40 Gbps of throughput
	Performance and Scalability
5	The switch should support non-blocking switching bandwidth up to 128 Gbps & Packet Forwarding Rate up to 95 Mpps
6	Switch should have minimum 512 MB RAM and 512 MB Flash.
7	Switch shall have minimum 16K MAC Addresses and 4096 active VLAN.
8	Should support minimum 480 IPv4 routes or more
9	Switch shall have 1K or more multicast routes.
10	Packet buffer : 3 MB or More
11	The switch should support Jumbo frames of 9K bytes or above
	Standards & Protocols
12	Switch should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p,
13	802.1Q, 802.3, 802.3u, 802.3ab, 802.3z.
14	Switch must have functionality like static routing, RIP, PIM, OSPF, PBR, , IP SLA and QoS features from Day1.
15	Switch should support GVRP, VRRP, Flow Control, EEE from day 1.
16	Switch should support management features like SSHv2, SNMPv2c, SNMPv3, NTP, RADIUS and TACACS+ .
17	Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 DHCP Guard, IPv6 Neighbor Discovery Inspection and IPv6 Source Guard.
18	Switch should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment
19	The switch should support IGMP v1, v2 Snooping
	Operation and Management
20	Switch should support management features like SSHv2, SNMPv2c, SNMPv3
21	Management using CLI, GUI using Web interface should be supported
22	Switch should provide SDN-like architecture and management using a Centralized Controller and local management with Command Line Interface (CLI) using Telnet/SSH, TFTP, HTTP/HTTPS, RMON(v1/v2). The controller should be able to configure L2, L3, and Security Features, and also do OS and Config restore and backup. The Controller should be from the same OEM.
	Environment
23	Switch should be ROHS compliant
24	Operating temperature: 0°C to 65°C
25	Relative Humidity: 10% to 95% non-condensing
	Certifications
26	Switch should be Ipv6 logo ready certified from day 1
27	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.
28	Switch shall conform to EN 55032 Class A/B or CISPR32 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.
29	Switch / Switch's Operating System should be tested for EAL 2/NDPP/VAPT or above under Common Criteria Certification.
30	The quoted switch product/family/series must be Type Approved by the Telecommunication Engineering Centre (TEC) as per the latest applicable TEC-ER issued by the Department of Telecommunications, Government of India. A valid Type Approval Certificate must be submitted along with the bid.
31	The OEM of active network devices to be quoted by the bidder should be present in the country from at least past 5 years.

Sl. No.	Required Specifications
1. CAT6A LSZH CABLE	
1	Category 6A 4 pair LSZH cable should be compliant with TIA/EIA-568.2-D
2	Should be of 4 twisted pairs of 23 AWG solid conductors

3	Should support network line speed up to 10 Gigabits per second.
4	Shall be 4-pair twisted pair with a isolator (+), i.e. 4 pair cable should be individual screened pairs for electromagnetic interference (EMI) protection, meeting Category 6A tested to 700 MHz. (4 connector test report from ETL(Intertek) to be submitted with offer & must be available on Intertek site for verification).
5	Should be ETL verified to TIA/EIA-568.2-D Category 6A standard for 500MHz (ETL certificate to be enclosed along with the bid)
6	Must comply with ISO/IEC 11801, IEC 61156-5, IEEE 802.3bt
7	Conductor should be solid Copper 23 AWG
8	Pulling Force - Short Term - 400N
9	Insulator should be Polyethylene/Polyolefin
10	Jacket/ Sheath type should be LS0H (Low Smoke Zero Halogen) as per I & IEC 60332-1.
11	NVP should be 72% or better
12	Screen should be each individual pair enclosed in laminated aluminium foil with drain wire.
13	Mean Impedance should be $100\Omega \pm 6$ @ 1-500 MHz
14	Coupling Attenuation should be 45dB min @30-100 MHz 40-20 Log (f/100) @ 100-500 MHz
15	Operating Temperature should be : -20°C to +60°C
16	Should be RoHS Compliant
17	Should be certified by ETL/UL and should be tested @900 MHz & test report should submit along with bid.
1	Should be supplied with individually replaceable 24 numbers Category-6A I/O Jacks complying as per the ANSI/TIA-568.2 D.
2	Should be 19" rack mountable and of 1U height & complete with all mounting accessories
3	Should have label holder/cover for identification of ports
4	IDC Connector plastic housing should be polycarbonate and UL94V-0 rated.
5	Operating Life should be Minimum 20 reterminations and contact material should be copper alloy.
6	Material should be CRS (cold rolled steel)
7	Should be supplied with metallic integrated rear cable management shelf as for cable strain relief & for better cable dressing at the rear
8	Jack (I/O) operating Life should be minimum 750 insertion cycles and contact material should be copper alloy.
9	Jack (I/O) contact plating should be 50µ Gold/ 50µ Nickel minimum
10	Jack (I/O) on the panel must have protection from dust and contaminants.
11	Should be RoHS Compliant
12	Should be certified by ETL/UL
1	Category 6A Equipment cords (Length – 1/2/3/5 Mtr)
2	Conductors Should be of 4 twisted pairs of 26 AWG stranded copper for better flexibility
3	Patch cords should conform to ANSI/TIA-568.2-D for Cat 6A
4	Should have RJ-45 jacks with boot at both the ends.
5	All patch cords should be factory crimped and packed.
6	Anti-s snag slim strain relief slip on boots
7	Should have LSZH jacket for safety complied to IEC 60332-1-1 & IEC 61034-2
8	Operating Temperature should be -20°C to +60°C
9	Screen material should be aluminum/polyester with tinned copper drain wire.
10	Plug Insertion Life should be Minimum 750 times
11	Contact Plating should be 1.27µm gold or better
12	Shall be RoHS Compliant
13	Should be certified by ETL/UL.
1	Single square plate, 86x86mm,
2	Write on labels in transparent plastic window – supplied with plate

3	Screw hole covers – to be supplied with plate, Plug in Icons – Icon tree – to be supplied with plate
4	Should be able to support variety of jacks – Unshielded & Shielded
5	Shall be RoHS Compliant
1	Should be conform to Category-6A as per ANSI/TIA-568.2-D & ISO 11801
2	Should be support network line speeds up to 10 Gbps
3	Jack (I/O) Should support POE i.e IEEE 802.3bt from Type 1 to Type 4,
4	Jack (I/O) operating Life should be minimum 750 insertion cycles and contact material should be copper alloy.
5	Jack (I/O) contact plating should be 50μ Gold/ 50μ Nickel minimum
6	Jack (I/O) must have protection from dust and contaminants.
7	All information outlets for 22-24 AWG copper cable should be use insulation displacement connectors (IDC)
8	Operating Life should Minimum 20 re-terminations.
9	Interface Resistance: 20mΩ (mili Ohms)
10	Insulation Resistance: >100MΩ (Mega Ohms)
11	I/O should be terminated using industry standard punch-down tools.
12	Should be RoHS Compliant
13	Should be certified by ETL/UL
1	Should be confirm to Category 6A comply with IEC 60603-7-5
2	RJ-45 meets TIA-568.2-D Category 6A component performance.
3	IP 20 rated Cat 6A compliant; Backward compatible with C6/C5e MPTL
4	Plug Insertion Life should be Minimum 750 times
5	Should support for 23-26 AWG wire size
6	Should Supports 10GB networks
7	Should support POE i.e IEEE 802.3bt from Type 1 to Type 4,
8	Contact plating material should have 50u” gold plating
9	Shall be RoHS Compliant
10	Should be certified by ETL/UL.

Sl. No	Description
1	Racks manufactured out of steel sheet punched, formed, welded and Powder coated
2	Rack should be from ISO 14001 ,27000 Certified Company & UL Listed
3	Standard for Racks configuration will be welded frame with Integrated side panel and vented top cover
4	Rack should have Front tinted Glass door
5	Rack should have provision to mount racks on Wall
6	Rack should be 9U(1U = 44.45 mm) in Height.
7	It should be minimum 550MM Wide & 600MM Deep
8	Rack should Conforms to DIN 41494 or Equivalent EIA /ISO / EN/CEA Standard
9	Rack should have Adjustable mounting depth,
10	Rack 4 No Adjustable, 19” verticals with Punched 10mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offers greater mounting flexibility, maximizes usable mounting space.
11	Rack should have Numbered U positions,
12	Rack should have 100% assured compatibility with all equipment conforming to DIN 41494 (General industrial standard for equipment)
13	Powder coated finish with seven Tanks pre-treatment process meeting IS
14	Rack should have one Hoz. Cable Manager Loop 1U.

15	Rack should have one Cantilever shelf.
16	Rack should have Fan module Mount Provision on top Cover with minimum 1 no. 90 CFM Fan
17	Rack should have one Server /IT Rack mount power distribution unit, 1Ph, 230V, 8A, 50/60Hz, 2U standard with 6 X Indian Round Pin 5A, Inlet Plug type 6A Indian Round Pin, 8A Fuse - PDU Rating 1.8KVA/Side feed-1.5Mt/ Black
18	Rack should have provision for cable entry Exit from Both top & Bottom.
19	Rack should have 1 Packet of mounting hardware, Pack of 20.
27U Floor Mount Rack	
Sl. No	Description
1	Racks manufactured out of steel sheet punched, formed, welded and Powder coated
2	Rack should be from ISO 14001 ,27000 Certified Company & UL Listed
3	Standard for Racks configuration will be welded frame with side panel and vented top cover
4	Rack should have Front Toughened Glass door and Metal door at Rear.
5	Rack should have 2 no's of removable side panel with slam latch.
6	Rack should have provision to mount racks on Floor
7	Rack should be 27U(1U = 44.45 mm) in Height.
8	It should be 800MM Wide,1000MM Deep.
9	Rack should include adopter kit 1 no (loop type)
10	The Rack unit supported by casters static load of at least 225Kgs and by Levelers should support a static load of at least 480Kgs.
11	Rack should Conform to DIN 41494 or Equivalent EIA /ISO / EN Standard
12	Rack should have Adjustable mounting depth,
13	Rack 4 No Adjustable, 19" verticals with Punched 9mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offers greater mounting flexibility, maximizes usable mounting space.
14	Rack should have Numbered U positions,
15	Rack should have 100% assured compatibility with all equipment's conforming to DIN 41494 (General industrial standard for equipment's)
16	Powder coated finish with seven Tanks pretreatment process meeting IS
17	Rack should have Proper Grounding & Bonding
18	Rack should have Fan module Mount Provision on top Cover
19	Rack should have Fan tray with 4 no's 90 CFM Fan
20	Rack should have 1 No Fixed shelf with 715mm depth for mounting NON-Rack mountable Equipment's
21	Rack should have 1 No Key Board shelf with 715mm depth
22	Rack should have 1 Nos 1U Horizontal Cable manager
23	Rack should have 2 Number Server /IT Rack mount power distribution unit, 1Ph, 230V, 16A, 50/60Hz, 2U standard with 6 X Indian Round Pin 5/15A, Inlet Plug type 16A Indian Round Pin, 16A MCB - PDU Rating 3.6KVA/Side feed-1.5Mt/ Black
24	Rack should have provision for cable entry Exit from Both top & Bottom.
25	Rack should have 1 Packet of mounting hardware, Pack of 20.

Sl.No.	Minimum Technical Specifications	
1	Capacity (in kVA / kW)	2kVA/1600W 1-Phase Input / 1-Phase Output with IGBT Rectifier with Inbuilt Battery
2	Input Voltage Range	110-300VAC

3	Input Frequency Range	40 - 70Hz
4	Nominal Output voltage	200/208/220/230/240 VAC
5	O/P Voltage	200/208/220/230/240Vac
7	Efficiency(Min)	89%
8	Output Socket	Output Socket. Minimum 4 nos - Indian Socket to the UPS back
9	Battery VAH	Min.336 VAH
10	Display	LCD Display
11	USB Port should be available	Yes
12	RS232 Port	Yes
13	Product IP	IP 20
14	Inbuilt Automatic Bypass	Yes
15	Intelligent Battery Management	Yes
16	Battery Deep Discharge Protection	Yes
17	ECO Mode	Yes
18	Manufacturer	QMS: As per ISO 9001: 2015 EMS: As per ISO 14001: 2015 ISO 45001: 2018 Factory calibration lab of manufacturer shall be NABL accredited in India
19	ROHS	Yes
20	2 Years Warranty for UPS & 1year on Battery. OEM should have Turnover more than 400Crores for last 3 years.	

Sr.No.	Specification
1	1KVA /600Watt Line Interactive Micro Processor Controlled UPS
2	Input Volt. Range :140-300V (Full Load)
3	Nominal Input Freq: 50Hz
4	Output Volt. Range :230V +/- 10%(Batt. Mode)
5	Output Freq. Range :50Hz +/- 1%
6	Receptacle: 4 x Indian Socket
7	Internal Batt: 7AH X2
8	90% Batt. Recharge : 4-6Hrs.
9	Cold Start : Require
10	Operating Temp: 0-40*C
11	Surge Protection : Inbuilt
12	USB Port & LED Indicator Require

13	ISO 9001, ISO14001, ISO 45001: 2018
14	Min. Turnover of the OEM 300Crores for last 3years
15	Replacement Warranty : 2years on UPS & 1years on Batt.

Sr.No.	Specification
1	600VA /360 Watt Line Interactive Micro Processor Controlled UPS
2	Input Volt. Range :140-300V (Full Load)
3	Nominal Input Freq: 50Hz
4	Output Volt. Range :230V +/- 10%(Batt. Mode)
5	Output Freq. Range :50Hz +/- 1%
6	Receptacle: 3 x Indian Socket
7	Internal Batt: 7AH X1
8	90% Batt. Recharge : 4-6Hrs.
9	Cold Start : Require
10	Operating Temp: 0-40*C
11	LED Indicator Require
12	Surge Protection : Inbuilt
13	ISO 9001, ISO14001,ISO45001 :2018,
14	Turnover of OEM Min.300Crores for last 3years
15	Replacement Warranty : 2years on UPS & 1years on Batt.

Technical Specification for Studio Hardware

Description Of Requirements			
1	Sizes	Required Sizes	65"
2	Display	Display Type, Resolution & Refresh Rate	IPS Ultra HD 4K A Display 3840*2160 (pixels)with 60ltz refresh rate,
		LED View Angle	Direct LED, HDR Display, with wide viewing angle of 178°(H)/178°(V)
		Led Lifetime	LED lifetime of 50,000 Hours.
		Surface	Matte finish AG Surface with 4mm Toughened Glass MoHS Level 7 hardness,
		Contrast Ratio	Dynamic Contrast 100,000: 1, 1300: 1 (typ.),
		Brightness	450 nits (Max), 400 nits (Typ)
3	Touch Technology	Technology	A9 Edge Optical Touch Technology
		Display & AG Glass Gap	No Gap between glass and display for touch accuracy
		Touch Points	Min 20 Simultaneous touch points
		Touch Resolution	32767x32767
		Accuracy	0.3 mm
		Response Time	<2 ms (typ.)
Touch Object Size	≥1.6 mm		
4	Chipset	CPU:	ARM Cortex™ A55 Quad Core 2.05 GHz

		GPU:	Mali G52 MCI
5	Wireless	Bluetooth 4.0	
		802.11 a/b/g/n Dual Band 2.4G and 5GHz	
		Hotspot Support	
6	Memory & Storage	RAM	8 GB
		Storage	128GB Onboard with 15GB Cloud Storage on OEM Whiteboard
7	Speakers	Stereo Speakers with Surround Sound	Bottom Firing, Hi-Fi, Stereo Sound output with 20W x 2, with 82 impedances.
			Bass reflex with dual passive radiators.
8	Ports	Ports	Front: USB 3.0 x 2, Side: USB 3.0 x 2, USB 2.0 x 2, Touch x 1.HDMI (IN) x 3, DisplayPort DP (In) x 1, AV (in) x 1, AV (Out)x1, Backside Bottom: HDMI Out x 1, VGA (IN) x 1, VGA Audiox 1, SPDIF x 1, LAN x 2, Mic (IN) x 1, Line (Out) x1, RS 232x1
9	Power Consumption	Voltage	Voltage: 100 V-240 V/AC, 50/60 Hz
		Power	Max watt with OPS: 140W
		Standby	Stand-by: <0.5 W
10	Environment	Temperature	Working Temp: 0°C-40°C, Storage Temp: Minus 10°C-60°C.
		Humidity	Working Humidity:20%-80% RH Non-Condensing, Storage Humidity: 10%-60% RH Non-Condensing
11	Accessories	In the box.	Remote, Power Cable, USB touch Cable, HDMI Cable, User Manual, Wall Mount
12	Wireless Casting &screen Sharing	Native Support for Airplay & Miracast	
		Multi-Device Casting	Up to 2 Devices simultaneously
13	Intelligent Features	Auto Lesson Creation on Any Topic with NEP Guidelines	
		Instant Customised Lesson Plan based on teaching Profile & difficulty levels	
		Auto Quiz Creation on Any Topic, with various level of Difficulty	
		Auto Assignment & Homework Creation Take Student Attendance from Panel Student & Parent app available on Play store	
14	Security & Privacy	Anti-Theft Feature	IFP must have built-in Anti-Theft feature, which can sent a notification 1.as soon as some unauthorize movement of the panel is detected 2.it can track the location of the panel even without being powered
			ON, and send the location coordinates to the Admin.
			3. It should work, even when the power of the panel is disconnected
15	Multi-User	Cloud Sever location	Writing Software & file sharing cloud server located in India

	Collaboration	permissions for Students Live Multi Student Collaboration with Live cursor tracking Teacher Can manage & control Writing	
16	Management Software	E notification	E-Notification software should supports secure multi-format content management with intelligent scheduling (geo-location, weather, time-based) and interactive data integration (CSV, JSON, RSS, dashboards). It should provides enterprise-grade security with SSO, 2FA, role-based access, and full audit trails. The solution should ensures scalable deployment via Docker, cloud, self-hosted models with automated backup and load balancing. Cross-platform players like Android, Windows, webOS, Tizen should be supported with offline playback, proof-of-play, and real-time monitoring. The brand should be registered in India.
17	Advanced AI Software	Teaching Learning Software	Ability to access online curated content curriculum for lessons creation 2. Import documents & multi-media in lessons, share lesson,3. Remotely Online collaboration with student on lessons, with Options to control which student has write access 4. Live Virtual Teaching using Audio & Video on Lesson consuming less than 1Mbps bandwidth, with option to control enable & disable Audio and video of remote students 5. Conduct live chat, polling during live class.6. Take Student attendance for remote & in class students. 7.Create and share assignments, tests, and get analytics & insights of the student performance,8. Always Ready to Connect to smart devices, like mobile and tablets, receive files wirelessly from mobile devices.9. STEM Tools draw shapes, use math tools, like protractor and compass, solve equations and formulas, and simulate physics and chemistry lab experiments 10. Whiteboard: Pen, colours, Highlighter and Eraser, Multi-background, Creativity Tools, Smart Draw, Shapes, 11. Presentation Tools: Screen Curtain, Spotlight, Presentation mode 12. Productivity Tools: Media import, (Docs, sheets, PDF, slides), Stopwatch & Document Scanner, Snipping tool 13. Built-in Chrome Browser for Secure and fast browsing experience, Built-in Office Viewer App. + 14. Support for installing MS Office Apps 15. Support for Android apk installation, Support for 3rd Party VC Apps like Microsoft Teams, Zoom, Google meet. 16. Infinite canvas with multi writing and palm erasing gesture support, 5 finger touch to sleep/wake,16. Auto Lesson Creation on Any Topic with NEP Guidelines 17. Auto Customised Lesson Plan based on Class Profile, & various levels 18. Auto Quiz Creation on Any Topic, with various level of Difficulty,19. Auto Assignment & Homework creation on any topic.20. Student and Parent notification on their App.
18	AI/ML/Deep Learning		AI Deep Learning Engine to enhance energy savings by up to 30% over OS Savings using hyper personalized policies
19	Single Agent Support		A Single agent which supports Power Management along with asset, patching and productivity monitoring on specified platforms
20	Software Metering		Third party certified software energy meter on endpoints which measures energy consumption with up to +/- 10% accuracy
21	Secure communications		Should support TLS 1.2+ communication between agent and console
22	Security		Should support standard encryption for all agent and console communication
23	Agent behind Firewall, NAT		In the scenario where the agents are deployed behind a firewall with NAT, the agent and console should be able to communicate only with http(s)

24	Configurable Ports	The https ports used for agent-console communication should be configurable
25	Support for Proxy Servers	If there is a proxy server for communication between agent and console, the agent should be able to communicate via the proxy server to the console
26	Bandwidth Optimized	The agent-server communication should be optimized for bandwidth usage and should be able to work in a sub 64kbps, VSAT links for remote locations
27	Data protection	The agent should be able to function even if the communication with the console is not available or the console is down for up to 30 days. There should be no loss of data
28	Proven technology	Proven in a scenario where the technology is deployed in a single client in more than 10,000 locations and communicating to a single console
29	Policy and Configuration Synchronization	For devices which are not always connected to the enterprise lan, the agent should be able to synchronize its configuration & power policies as soon as it connects to the console. The agent should also post the savings and other data to the console without causing major overhead on the network bandwidth.
30	Panel Certificates	BIS, RoHS, CE, FCC, NSIC

SL No	4K 12X PTZ Camera	
	Description Of Requirements	
	4K 12X PTZ Camera	
	Camera Parameters	
1	Signal System	HDMI: 4KP30, 4KP299' 4KP25,1080P60, 1080P50. 1080!60.1080!50. 1080P30. 1080P25. 1080P29.97 etc.
2	Sensor	1/2.5 inches, CMOS, Effective Pixels: 8.51Megapixels
3	Scanning Mode	Progressive
4	Lens	12x, f=4.4mm-52.8mm. F1.8-F2.6
5	Digital Zoom	16x
6	Focus	Auto/ Manual
7	Minimum Illumination	0.5Lux@ (F1.8. AGC DN)
8	Shutter	1/30s - 1/10000s
9	White Balance	Auto, Indoor, Outdoor, One Push, Manual
10	Backlight Compensation	Yes
11	Digital Noise Reduction	3D Digital Noise Reduction
12	SNR	> 55dB
13	Horizontal FOV	71° - 8.2°
14	Vertical FOV	42.7° - 4.5
15	Pan Angle	±170°
16	Tilt Angle	-30° - +90°/s
17	Pan Speed	1.7°-76°/s
18	Tilt Speed	05° -15°/s

19	Image Flip	Yes
20	Image Freeze	Yes
21	PoE	Yes
22	Preset Position	255
23	Preset Accuracy	0.1°
24	Network Interface	1 x RJ45: 10M / 100M / 1000M adaptive Ethernet. Support PoE
25	Audio Interface	1 x Line In / Mic In, 3.5mm Jack
26	Control Interface	1 x RS485 : 2pin Phoenix port. Max Distance : 1200m, Protocol : VISCA / Pelco-0 / Pelco-P: 1 x RS232 IN : Spin Mini DIN, Max Distance : 30m, Protocol : VISCA / Pelco-0 / Pelco-P: 1 x RS232 OUT : Spin Mini DIN, Max Distance : 30m, Protocol : VISCA only
27	Restore Button	Yes
28	Power Interface	JEITA type (DC IN 12V)
29	Operating System Supported	Windows 7 (only supports UVCI.1 features). Windows 8 and above version, Mac OS X, Linux 2.4.6 and above version. Android needs to include the version of UVC- related drivers
30	Color System / Compression	YUY2 / H.264 / MJPEG
31	Video Format	YUY2 : Max.1080P30 (USB3.0) YUY2 : Max.1080P5 USB2.0 I H.264 AVC : Max.2160P30; H.265 HEVC : Max.2160P30; MJPEG : Max.2160P30
32	USB Audio	Yes
33	UVC PTZ Control	Yes
Network Specification		
34	Video Compression	H.265 / H.264 / MJPEG
35	Video Stream	First Stream, Second Stream
36	First Stream Resolution	3840 X 2160, 7920 X 1080, 7280 X 720 etc.
37	Second Stream Resolution	720 X 480, 320 X 240 etc.
38	Video Bit Rate	First Stream : 32kbps-51200kbps Second Stream : 32kbps-20480kbps
39	Bit Rate Control	VBR. CBR
40	Frame Rate	50Hz : 1fps-50fps. 60Hz : 1fps-60fps
41	Audio Compression	AAC. G711A
42	Audio Bit Rate	96Kbps, 128Kbps
43	Protocols	NDI@IHX2.SRT.TCP/IP. HTTP. RTSP. RTMP (Onvif, DHCP, GB/T 28181. Multicast, etc.

Studio Kit		
Description Of Requirements		
1	OPS/ Computer	Slim cabinet (ATX/mATX), Intel Core i5 latest gen or equivalent AMD (4 cores/8 threads, 2.4–2.8 GHz+ base, 12 MB cache), 32 GB DDR4/DDR5 3200 MHz RAM, 512 GB NVMe SSD (3500 MB/s) + 2 TB HDD, 4 GB dedicated graphics card with HDMI/DP/DVI supporting DirectX 12 & OpenGL, motherboard with minimum 2 RAM slots (LGA1200 or newer), 500–600 W PSU, minimum 4×USB 2.0 & 2×USB 3.0 ports, minimum 1×HDMI

		port, Ethernet LAN with optional Wi-Fi.
2	IPS Monitor	Supply, installation, testing & commissioning of 22" LED monitor with VA panel, Full HD (1920×1080) resolution, 16:9 aspect ratio, 100 Hz refresh rate, 250 cd/m ² brightness, 3000:1 native contrast ratio, 178°/178° viewing angle, ≤8 ms GTG (≤5 ms fast mode) response time, 16.7 million colors, 72% NTSC color gamut, LED edge-lit backlight, HDCP 1.4 support, 1× HDMI, 1× DisplayPort, 1× VGA, and low power consumption.
3	Portable Mic	2.4 GHz wireless microphone system using GFSK (1–2 Mbps) with <20 dBm EIRP, operating at 2400–2483.5 MHz, Li-Po 1S batteries (320 mAh, 1.23 Wh, 3.85 V) in transmitter and receiver, max 5 V charging, 70-min charge time, operating time ~5–5.5 h, charging temp 5–45 °C, operating temp –10–45 °C, mic receiver size 47.44×32.21×17.35 mm, weight 24.9 g, and charging case with Li-Po 1S 2600 mAh (10 Wh, 3.87 V) battery, max 5 V/3.5 A input, capable of charging three devices simultaneously (~1.8×).
4	HDMI Source Switcher & Mixer	Supply, installation, testing & commissioning of HDMI Source Switcher & Mixer supporting fast switching between 3 sources (1× USB 3.0 camera, 1× USB 2.0 camera, 1× HDMI 1.4 source), capable of mixing up to 2/3 video inputs into a single output with configurable layouts (single view, picture-in-picture, side-by-side, big & small) via Web GUI, providing 1× HDMI 2.0 output for local display (up to 4K@60Hz) and 1× USB-C (USB 3.0, UVC/UAC) output for PC/web conferencing/live streaming, supporting HDMI/USB/analog audio input & output, HDCP 1.4/2.2 compliance, LAN (RJ45 Gigabit with PoE option), RS-232 control, Web/Telnet/Key control, compact slim design (~18 mm height), driver-free operation, operating on 12V DC with max power consumption ≤15W.
5	Soundbar	Supply, installation, testing & commissioning of 2.1 channel sound bar speaker system comprising sound bar with wired subwoofer, having minimum 200 W output power, dynamic audio drivers with minimum 6.5-inch subwoofer and 1-inch tweeter, supporting multiple input interfaces including HDMI, USB, Optical, AUX and SD card, integrated Bluetooth (version 5.3 or higher) for wireless audio streaming, three-band EQ controls with bass boost function, remote-controlled operation, suitable for use with televisions, smartphones and tablets, supplied complete with sound bar, wired subwoofer, remote control, auxiliary cable and user manual, finished in black color, powered by AC mains with corded electric supply.
6	Software	Supply and installation of professional broadcasting software supporting real-time audio and video mixing, multiple source inputs (video capture, image, text, window and browser sources), scene creation with smooth and custom transitions, advanced audio mixer with filters and gain control, studio preview mode, low-latency high-performance streaming and simultaneous local recording, customizable hotkeys, scene collections, plugin extensibility, instant replay functionality, and cross-platform operation on Windows, macOS and Linux.
7	Audio Connector	USB audio interface with frequency response 20 Hz–20 kHz (+0.1 dB), signal-to-noise ratio 109 dB (A-weighted), THD+N 0.003% (min. gain, 0 dBu out), balanced ¼" (6.35 mm) TRS line input (–43 dBu sensitivity), direct mono/stereo gain range up to +54 dB/+60 dB, impedance-balanced ¼" TRS main outputs (L/R), ¼" TRS headphone output (60 mW/ch @ 32 Ω), headphone frequency response 20 Hz–20 kHz (+0.5 dB), headphone THD+N 0.02%, SNR 100 dB, and USB bus-powered operation
8	green screen backdrop	Supply of portable green screen backdrop of minimum size 8 ft × 10 ft, made of 100% polyester wrinkle-resistant fabric, suitable for full-body shots and large studio setups, complete with backdrop stand and carrying bag, usable for both photography and video production applications.
9	Tablet	Supply of tablet computer powered by octa-core processor equivalent to MediaTek Helio G85 (2.0 GHz), with minimum 4 GB LPDDR4X RAM, 128 GB eMMC storage, running Android 14 or higher, featuring display resolution of 1920 × 1200 pixels,

		supporting Wi-Fi 802.11 a/b/g/n/ac and Bluetooth 5.3 or higher, supplied with 20 W power adapter, in any standard colour.
10	Teleprompter	Supply of portable foldable teleprompter with minimum 10-inch display support, compatible with smartphones /PTZ and DSLR cameras, supporting wide-angle lenses with clear distortion-free text reflection, supplied with multiple lens adapter rings (49mm to 82mm), constructed from durable lightweight ABS material, featuring Bluetooth remote and mobile app control for script scrolling, quick and easy assembly, complete with protective carry case and all standard accessories including clamps, foam ring, sun hood and mounting screw, suitable for video production, live streaming, interviews and presentations.
11	Light	Supply of professional LED video lighting system comprising LED softbox light of minimum 37 W output and LED panel light of minimum 36 W output (size approx. 2 ft × 2 ft / 60 × 60 cm), with adjustable brightness, selectable colour temperature range (approx. 4000 K–6500 K / daylight equivalent), suitable for use with tripods, cameras and camcorders, constructed with durable aluminium/plastic housing, suitable for video recording, product photography, studio lighting and makeup shoots.

Technical Specification Wireless Presenter

Description Of Requirements

Wireless Presenter	
1	Dual outputs support content sharing from same source or different sources
2	Support up to 4 sources shared in a single screen
3	Support wireless sharing from Airplay, Miracast, Chromecast, App, dongles
4	Support both 1080P and 4K dongles
5	Support 4K HDMI input as content sharing
6	Support USB cam/mic/speaker transmission over Wi-Fi
7	Support camera switching
8	Support USB devices switching between local room PC and wireless laptop
9	Support display content sharing to participant over video conference
10	Support 2 LAN ports for network isolating between staff and guest
11	Touch back function supported with both wired and wireless connection (App and dongles)
12	Provide analog audio breakout
13	Provide both RS232 and Telnet control
14	TA FW upgrade

Technical Specification Commercial Display

Description Of Requirements

Commercial Display		
1	Memory Storage Capacity	16 GB
2	Ram Memory Installed Size	2 GB
3	Operating System	Web OS
4	Hardware Interface	USB, HDMI, Bluetooth 5.0
5	Graphics Coprocessor	G52 MC 1
6	Tuner Technology	PAL
7	Response Time	6 Milliseconds
8	Resolution	4K
9	Remote Control Type	IR
10	Display Technology	LED
11	Screen Display Size	43 Inches
12	Display Type	HDR 10 + HDR10 HLG
13	Viewing Angle	178 Degree
14	Images Aspect Ratio	0.672916667

15	Images Brightness	500 Nits
16	Image Contrast Ratio	50.00069444
17	Supported Image Type	GIF, JPEG
18	Intelligent voice recognition	Yes
19	Resolution	3840 X 2160 Pixels
20	Supported Audio Format	MP3_audio, Wma
21	Speaker Surround Sound Channel Configuration	Dolby Audio
22	Audio wattage	15 + 15 Watts
23	Speaker System	2.0 Ch
24	Wattage	165Watts
25	Power Consumption Standby Mode	>0.5W
26	Power Source	AC
29	Refresh Rate	60HZ
30	Total Usb Ports	2
31	Connector Type	USB*2, HDMI * 3, Ethernet*1, WIFI (802.11AC), Bluetooth 5.0
32	Refresh Rate	220 hz
33	Real Angle of View	178 Degrees

Technical Specifications Cable and Accessories

Description Of Requirements

Cable and Accessories

10 mtr USB 3G Cable for Camera

1	Ambient temperature	-25°C ~ + 70°C
2	Insulation resistance	≥100 MΩ
3	Contacts resistance	≤5mΩ
4	Insert/ Housing	PBT
5	Orientation	Straight
6	Wire Termination	Soldering
7	Cable jacket material	PVC
8	Connection type	Double ended cable
9	Reference Standard	USB3.0
10	Overmold/ Shell	PVC/TPU
11	Rated current	1.8 A

HDMI Cable

1	Conductor	Bare copper
2	Jacket	PVC
3	Connector	HDMI Plug 19P, Durable 24K gold plated
4	Housing	PVC moulded with metal shell
5	Shielding	Aluminium foil and Braiding
6	Color	Black
7	Ferrite core	Yes
8	Application	widely used in HDTV, EVD, HDVD, AMP, Home Theater, DVD player, projector, PS3, Xbox360, set-top boxes, Video wall etc.

PPT Presenter

1	Wireless Laser Presenter PowerPoint PPT Presenter Slide Changer Controller with USB Receiver Battery
---	--

Indicator		
Power Cable		
1	Type	Power Cord
2	Cable Type	Standard 100 Mbps Speed
3	Connector 1	3 Pin Male
4	Connector 2	Female
5	Connector Material	Copper
6	Cable	Round
7	Cable Frequency	50 MHz
8	Compatible Devices	Computer, Printer, Panel, TV
9	Color	Black/White
10	Conductor	Copper
11	Core	Copper
12	Jacket	PVC Jacket
13	Insulation	Copper Insulation
14	Corrosion Resistant	Yes
15	Maximum Current Rating	13 A
HDMI Splitter		
1	HDMI Source input port	1
2	Display Device output port	4
3	Source port connector	19pin HDMI
4	Display device port connector	19pin HDMI
5	HDCP compliant	Yes
6	Signal link range	1920x1080p@60Hz
7	Bandwidth	up to 225MHz
8	Signal Speed	Up to 6.75Gbps
9	Deep colour	30/36 Bit
10	HDMI version	HDMI 1.4v
11	The cable standard	26awg
12	Vertical frequency range	60Hz
13	Power consumption (max)	24 Watts
14	Working voltage	DC5V
15	Operation temperature	-15°C to 40°C
16	The Length of input cable	≤10M
17	The Length of Output cable	≤20M
Cat6 Cable		
1	Material	CAT.6 CCA Patch Cord
2	Cable Colour	Red, Yellow, Blue, Gray, Black
3	Characteristic Impedance	100±150 @ 1 ~ 250MHz
4	Conductor Construction	Copper Coated Aluminium

5	Conductor Resistance	93.80/km/20°C max
6	Conductor Size	24AWG x 4pairs
7	Connector Type	50-micron gold-plated connector
8	Dielectric Strength	AC 1.75kV/0.15sec
9	Flame Retardant Test	CM
10	Operating Temperature	20°C ~ 85°C
11	Storage Temperature	40°C ~ 60°C
12	Insulation Material	HDPE
13	Jacket Diameter	5.9±0.15mm
14	Jacket Material	PVC
15	Mutual Capacitance	56pF/m max
16	Propagation Delay	536nS/100m max @ 550MHz
17	Rating	75°C, 300V
18	Spark Test	2.5kV
19	Standards Compliance	ISO/IEC 11801; TIA/EIA-568-B.2
20	Structural Return Loss	8.6dB min at 550MHz

Technical Specifications for Furniture and other Interior Items

Description Of Requirements

Teacher Table: Providing /Placing and Installing TABLE with 1200(W) X 600(D) X 750(H).

Table TOP, Gable End, Modesty, are from *19mm thick plywood with decorative lamination on exposed side and balancing lamination on other side*. All exposed edges sealed with 2mm thick PVC edge-band *matching with the shade of lamination* and 0.45mm thick for Non- Exposed edges.

Should have a keyboard tray *fixed with telescopic channel*. Switch socket for computer with *wire manager*

<p>Students Table 3 seater: Supply & installation of Table Size: (mm) 2250(W), 450(D), 740(H) & top, side panel and modesty are made with 19 MM thick <i>with decorative lamination both side</i> FLAT EDGE DULY SEALED WITH 2MM THICK PVC BEADING. The table <i>will be divided in to 2 equal partitions of 900 mm each of 300mm height</i> and partition will be made with 12mm thick Plywood <i>with both side laminations</i>. 08mm thick glass (900mm x 300mm) with adequate fittings to be installed between the 19mm thick partitions on the front side. Should have a keyboard tray <i>fixed with telescopic channel</i>. <i>Switch socket for computer with wire manager provision</i></p>
<p>Students Table 2 seater: Supply & installation of Table Size: (mm) 1500(W), 450(D), 740(H) & top, side panel and modesty are made with 19 MM thick <i>with decorative lamination both side</i> FLAT EDGE DULY SEALED WITH 2MM THICK PVC BEADING. The table <i>will be divided in to 2 equal partitions of 900 mm each of 300mm height</i> and partition will be made with 12mm thick Plywood <i>with both side laminations</i>. 08mm thick glass (900mm x 300mm) with adequate fittings to be installed between the 19mm thick partitions on the front side. Should have a keyboard tray <i>fixed with telescopic channel</i>. <i>Switch socket for computer with wire manager provision</i>.</p>

<p>Chair: Students and Teacher Chair shall be of certified ergonomic design, with contoured backrest with lumbar support, cushioned seat, and sturdy arm support, suitable for continuous use in computer laboratories.</p>
<p>Wall Paneling for Language Labs: 12 mm synthetic foam, / 19 mm solid Ply, / 12 mm solid ply, Outer Laminate, Febical adhesive, Masking Tape, Pin, Interlock join Pin, interjoin T metal chennel. Wall Mount L type 12 mm solid ply partition fix on wall, in between wall and Outer Ply wall there will be 12 mm foam and Glass wool Wall Paneling area</p>
<p>Wall Panelling for Studio- Studio Inner wall 12 mm foam inside with glass wool and upper will be acoustic board 2ft x2ft panel board</p>
<p>False Ceiling: False Ceiling materials 1) 0.40 GI Channel like L Potti , Flat Potti , C Bim, Machine screw, Fast Nut, Washer, 3 ft x 3.5 ft customized POP board Dust POP, 2-inch Joint Tape, AsianPaints Wall Putty. colour for ceiling - putty + asian paint white water based and finish</p>
<p>Electrical works :Electrical point and warring, 2x2 Panel Light and 1x1 panel light, modular switch and plug point</p>

<p>Teacher Platform: For Room 1: Supplying and Fixing of Teacher Platform Made with 19mm Plywood with decorative laminate upper side – Size 4800 mm X 1650mm X 150 mm For Room 2 Supplying and Fixing of Teacher platform Made with 19mm Plywood with decorative laminate upper side – Size 5400 mm X 1500mm X 150 mm</p>
<p>Vertical Blinds: All window will be Fabric vertical Blinds</p>
<p>Studio Editing Table: Studio edition tale C type size 5 ft x 18 inch and 2.5 ft height, assistant table 3 ft x 18 inch and 2.5 ft heigh,</p>
<p>Studio Assistant Table: Size 3 ft 18-inch x 7 ft height (make 19 mm solid ply with Upper Laminates)</p>
<p>Studio Storage Rack- one Storage corner rack size- 7ft height 3ft. (W), 18” (D)</p>

Manpower Requirement:

The bidder shall depute one full-time, qualified and experienced technical resource for a period of five (05) years from the date of successful commissioning of the system for operation, management, and technical support of the Digital Studio and Language Laboratory.

The deployed manpower must have relevant educational qualifications in IT / Electronics / Audio-Video / Multimedia or related field, along with proven experience in handling studio equipment, language lab software, troubleshooting, user assistance, and routine maintenance. The cost of this resource shall be included in the bid.

ELIGIBILITY CRITERIA AND DOCUMENTS REQUIRED:

The following shall be the **mandatory and non-negotiable minimum eligibility criteria** for technical qualification of bidders. **Non-compliance with any clause shall result in outright rejection of the Technical Bid.**

1. Bidder Status & Authorization

- a. The bidder **must be the Original Equipment Manufacturer (OEM)** or an **OEM-authorized system integrator.**
 - o **Trading firms / dealers without direct OEM authorization shall not be eligible.**
 - o Authorization shall be **tender-specific**, addressed to the **Tendering Authority**, and valid **up to completion of warranty and AMC period.**
- b. **Back-to-back or generic OEM authorizations shall not be accepted.**

2. Mandatory OEM Authorizations

- a. **Bid-specific OEM authorization is mandatory** for the following items:
 - o Language Lab Software
 - o Server
 - o All-in-One Computers
 - o Studio Equipment
 - o Hybrid Classroom Hardware

Authorization must clearly mention:

- o Tender reference number
- o Scope of supply
- o Warranty period

- Service & support responsibility

3. Technical Compliance & Documentation

- A duly filled, signed, and stamped Technical Compliance Certificate for each line item** shall be submitted:
 - From respective OEM(s)
 - On OEM letterhead
 - Power of attorney or letter of authenticity of the signing authority should be provided by the All In One computer OEM along with compliance

Self-certification by the bidder shall not be accepted.

- All equipment offered must be supported with:
 - **Printed OEM catalogues / datasheets**
 - Exact **model numbers** quoted in BOQ
 - Compliance clearly marked against tender specifications
- Server OEM should be ranked within top3 as per IDC report for anyone of the previous four quarters in India for Servers.**
- For Computer and Server: Technical compliance statement of the offered products along with public URL of the quoted products in OEM letterhead to be submitted in the bid.

4. Proven Experience

- The **Language Lab Software OEM / Bidder** must have:
 - Successfully executed **minimum THREE (3)** similar **turnkey projects**
 - Scope must include **software, hardware, furniture, interiors, installation & commissioning**
- Experience shall be only from:
 - Government Universities
 - IITs / NITs
 - Central / State PSUs
- The bidder must submit:
 - Work orders for Servers and AIO
 - Client contact details for verification

5. ISO & Quality Certifications (Hard Compliance)

- The bidder **must possess** the following **valid certifications at the time of bid submission**:
 - ISO 9001:2015
 - ISO 14001:2015
 - ISO/IEC 27001
 - ISO/IEC 20000-1:2018
- The **Server OEM** must possess:
 - ISO/IEC 27001:2013
 - ISO 45001:2018
 - ISO 14001:2015

Certificates shall be issued by **accredited certification bodies only**.

6. For servers

- Management Feature -1:** Immutable Silicon Root of Trust, Continual Runtime firmware verification, dedicated repository for firmware, drivers and software components for rollback of faulty firmware, Remote console sharing up to 6 different users indifferent locations to collaborate using the shared remote console to troubleshoot, maintain and administer remote servers
- Management Feature -2:** Should have monitoring & analytics feature for the offered server/chassis along with its sub-components to predict, prevent, and auto-resolve problems and by providing automating case creation and log file submission for the problems that can't be auto resolved

7. Mandatory Technical Demonstration

- Technical demonstration of Language Learning Software is compulsory.**

- Demonstration shall strictly cover **100% of features marked “Yes”** in the compliance sheet
- Partial demonstration shall be treated as **non-compliance**
- b. The bidder shall arrange:
 - Live demo by **OEM-certified technical personnel only**
 - Any **misrepresentation during demo** shall result in rejection

8. Technical Specification Compliance

- No deviation, substitution, or up-gradation** from the published technical specifications shall be permitted **at any stage of bidding or execution.**
- Any deviation detected during:
 - Technical evaluation
 - Supply
 - Installation
 - Acceptance testing

shall result in **rejection of supplied material at bidder’s cost.**

9. Studio & Certification Requirements

For Studio setup:

- **All major hardware (excluding accessories) components must be from a single OEM**
- **BIS certification is mandatory for each component**

Mixing of OEMs **shall not be permitted under any circumstances.**

10. Service Support & Local Presence

The bidder must have:

- **local office in Eastern India**

11. OEM(s) of all major hardware must have a fully functional service centre within 100 km of Kalyani city limits.

- Proof of address
- Staffing details
- Escalation matrix

12. Bidder should have a toll-free number and an online call reporting system. The number should be provided and the URL should be mentioned. In case the bidder does not possess these facilities, it has to be created within 10 days of award of the contract if becomes L1. Undertaking in this regard has to be uploaded with the bid. Dishonoring this undertaking will attract penal action during the currency of the contract.

13. The bidder should be of positive net worth for the last three years ending 2024-25. Bidder and OEM should be in same line of business for last 10 years in India.

14. Bidder Must provide a Single point of contact for all communication related with after sales and support. Proposed server and computers should be from MII, certificate to be furnished clearly mentioning the Local content.

15. Consortium is not allowed

16. FOR OEM of Passive Network Components:

- The OEM of Passive Network Components should be present in the India for last 15 Years. (Document proof Required- Proof of Incorporation should be attached)
- The company should have a Valid PAN and a valid (GSTN)
- The Bidder should have 25-year Performance warranty; Warranty to cover Bandwidth of the specified and installed cabling system
- OEM must have ISO 9001:2008, ISO 9001:14001, ISO 45001 ISO 27001, Factory Test report must be provided for the product during supply. All the components/raw material used must be RoHS verified, OEM should have manufacturing Unit, Product design & development center in India.,OEM

Must have at least 1 RCDD person on the payroll.,OEM should be a TIA Member (Proof must be available on public platform)

- e) The entire passive components should be from single OEM.Quoted product part numbers must be available on OEM's official website

Dates & Information:

Sl.No.	Activities	Date & Time
1	Date of uploading of N.I.T. Documents in the e-tender portal of NIC : https://wbtenders.gov.in	11 th February, 2026
2	Documents download (online)	11 th February, 2026 (from 17.00 Hrs.)
3	Bid Submission Start Date(on line)	11 th February, 2026 (from 17.00 Hrs.)
4	Bid Submission Closing Date (Online)	7 th March, 2026 (up to 14.00 Hrs.)
5	Bid Opening Date (Online) – Technical Bid	9 th March, 2026 (from 14.00 Hrs.)
6	Date of uploading list for technically qualified bidder (online)	To be notified
7	Date of opening of Financial Bid	To be notified
8	Date of uploading of list of bidders along with the approved Rate	To be notified

1. General Instructions:

In the event of e-tendering, intending bidder may download the tender documents from the website: <http://wbtenders.gov.in> directly with the help of Digital Signature Certificate (DSC) or from the University of Kalyani's website www.klyuniv.ac.in.

2. Submission of bids:

Both Technical bid and Financial Bid are to be submitted concurrently duly digitally signed by the Company personnel who is in the pay roll of the Company (having Authorization from the Company management) in the website <http://wbtenders.gov.in>. All papers must be submitted in English language.

3. Time Schedules for the e-tender:

The Time Schedule for obtaining the Bid Documents, Pre Bid meetings, the submission of bids and other documents etc. will be as per the list provided in Clause No. 10 given below.

4. Eligibility for Quoting:

Manufacturers or Dealers/Distributors/Agents duly authorised by the manufacturers who are able to supply the assured quantities as per requirement & have requisite qualification for meeting the requirements as per this tender are only eligible for quoting.

Further, vendors who were declared black listed and/or insolvent by any Govt. Concern/any Institutions in the Country for particular item or items are not eligible to participate in the current tender for that item or items.

5. Annual Turnover Requirements:

Vender having average annual Turn Over for last three financial years is more than Rs.1 Crore in India for the year 2022-23, 2023-24 & 2024-25 in the said financial years are eligible to participate in the Tender.

6. Submission of Tenders

6.1 General process of submission

Tenders are to be submitted online through the website stated in Clause 1. All the documents uploaded by the Tender Inviting Authority form an integral part of the contract. Tenderers are required to upload all the tender documents along with the other documents, as asked for in the tender, through the above website within the stipulated date and time as given in the Tender. Tenders are to be submitted in two folders at a time, one is Technical Bid and the other is Financial Bid. The tenderer shall carefully go through the documents and prepare the required documents and upload the scanned documents of originals in Portable Document Format (PDF) to the portal in the designated locations/folders of Technical Bid. He needs to fill up the BOQ in the designated cell and upload the same in designated location of Financial Bid. The documents uploaded are virus scanned and digitally signed using the Digital Signature Certificate (DSC). Tenderers should specially take note of all the addendum/corrigendum related to the tender till the bid submission ends. Tenderers should in general upload the latest documents as part of the tender, however, in case of failure in uploading such documents, it will be deemed that they (tenderers) have taken note of such latest documents including addendum/corrigendum, if published till the bid submission ends.

6.2 Technical Bid

The Technical Bid should contain scanned copies and/or declarations in the following standardized formats in two covers (folders):

I. Technical File (Statutory Cover) containing:

1. Annexure –

- a) Basic Information (Vide Annexure I) *(to be submitted in “Annexure” folder)*
 - b) Application for Tender - (Vide Annexure II) *(to be submitted in “Annexure” folder)*
 - c) Authorization letter - (Vide Annexure III) *(to be submitted in “Annexure” folder)*
 - d) Affidavit Proforma - (Vide Annexure IV) *(to be submitted in “Annexure” folder)*
 - e) Technical Compliance/Deviation Sheet (Vide Annexure V) *(to be submitted in “Technical Folder”)*
 - f) DECLARATION ON NIT - (Vide Annexure VI) *(to be submitted in “Annexure” folder)*
2. Technical details of the Items Quoted (Bidders must submit Technical specification along with Catalogue of the item quoted in “**Technical Details**” Folders.
 3. Audited Annual Accounts for last three years **2022-23, 2023-24 & 2024-25** or during the period since formation of the Firm, if it was set up in less than such 3-year period. **(to be submitted in “Accounts” folder)**

II. My Document (Non-Statutory Cover) containing as follows:

Sl. No.	Category	Sub-Category	Sub-Category Description
1	Certificates	Certificates	PAN Card of the Bidder
			GST Registration Certificate
			Profession Tax Enrolment Certificate
			ISO Certificate
			Trade License/Enlistment Certificate
			Registration with Registrar of Companies

2	Company Details	Company Details 1	Memorandum of Articles for Limited Companies.
3	Credential	Credential 1	a) Copy of the purchase order for supplying Similar nature of items at least for said 3years in an Institute of Higher Learning b) Brief User List preferably for users in West Bengal in an Institute of Higher Learning
4	Financial Information	Payment Certificate 1	Income Tax Returns submitted for the Assessment year 2023-24
			Income Tax Returns submitted for the Assessment year 2024-25
			Income Tax Returns submitted for the Assessment year 2025-26
			GST Return for January'25, February'25 and March'25

NOTE:

1. If the company was set up less than three years ago, audited balance sheet for the no. of years since inception may be submitted)

2. Addenda/Corrigenda: if published, Contractors are to keep track of all the Addendum/Corrigendum issued with a particular NIT till the bid submission ends and in general upload the downloaded copies of the above documents and merge the Addenda/Corrigenda with respective NIT in the NIT folder. , however, in case of failure in uploading such documents, it will be deemed that they (tenderers) have taken note of such latest documents including addendum/corrigendum, if published till the bid submission ends, overriding any other terms/conditions if mentioned anywhere else in the concerned NIT.

3. Bidder must submit their documents through the appropriate folders as stated above. Submission of document not through proper folder(s) may be considered as non-submission. If University fails to identify the document because of such wrong submission or due to submission of documents not readable visibly or for any technical issue like not opening the files etc., it would be deemed that the bidder did not submit that particular document(s).

4. Others: Any other documents found necessary

6.3 Financial Bid

The Financial Bid should contain the following document in one cover (folder):

Bill of Quantities (BOQ): The tenderer should fill-up the designated cell as marked by the University in the BOQ sheet.

7. The tenderers are not required to submit hard copies of Technical File (Statutory) or My documents (Non-Statutory). Submission of hard copy of Financial Bid is strictly prohibited and only be submitted through on line through NIC portal.

8. Evaluation of the tenders

During the tender evaluation process, the “Technical Bid” will be opened first. Those Bidders who have qualified in respect of the essential & other requirements in “Technical Bid” will be identified and their financial bid will be opened. The financial bid of those Tenderer failing to meet the technical & other requirements laid down in the tender will not be opened and be rejected. The Tenderer offering the item found suitable and as per the tender specifications will only be selected. Final selection of the bidder in respect of Financial Bid is subject to further verification of several parameters allied with Financial Bid Evaluation. The Financial Bids of only those tenderers who have been considered as Technically Qualified will be opened.

9. TERMS & CONDITIONS REGARDING PURCHASE POLICY OF TENDERING AUTHORITY:

9.1 Bid Information:

- a) **Bidder must quote in INR in the BOQ Sheet.**
- b) The rate quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- c) **Bidder must follow the instruction for filling up BOQ as per Clause 6.3.**
- d) **Partial Quotation/Incomplete Quotation both for Technical and Commercial aspects may subject to cancellation of tender. However, University Authority is the sole authority to assess the Partial Quotation/Incomplete Quotation based on the tender evaluation status.**

9.2 Evaluation of Quotation: The Purchaser will evaluate and compare the quotations determined to be substantially responsive stage wise. Firstly, Technical Bid will be evaluated and thereafter Price Bid for technically qualified bidders will be evaluated for selection of vendor.

9.3 Award of Contract: The purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive both technically and commercially for both the equipment's. Purchaser reserves the right to reject any or all the tender, wholly or partly, without assigning any reason thereof and shall not be bound to accept the lowest bid.

9.4 University enjoys the discretion to select vendor either in full or in part (item wise) for the betterment for pursuing of tender objectives.

9.5 Warranty: The manufacturer should give guarantee/warranty for a period mentioned in the Item Specification from the date of successful installation to the satisfaction of the University. If the equipment installed at one location is subsequently shifted to another location, the warranty services shall continue to be provided at new location without any additional financial implications. Undertaking that during warranty period, if any defect in the supplied equipment is noticed by the Purchaser, the supplier or his representative shall rectify the defect or replace the defective item free of cost at the Purchaser's site at the earliest possible, latest within a period of 30 days of notification.

9.6 Adequate support service facility: The bidder/manufacturer should have adequate service and accessories support center in Kolkata/Kalyani or around 100 KM distance from University premises for any emergency service within 24 hours.

9.7 Bidder must be ISO certified. Necessary ISO certifications must be submitted.

9.8 Manufacturer's Authorisation: Bidder must have their own office for managing suitable task as to be needed for the University.

9.9 Bidder should submit copy of updated Trade Licence, GST, IT and P.Tax Return submission document.

9.10 Credentials: As mentioned in the Eligibility Criteria.

9.11 Penal Clause: University may impose penalty to the extent of 10% of the Order Value for the entire work assigned to the vendor in addition to the forfeiture of the Performance Security for the following circumstances:

- a) **If the vendor fails to deliver the work within the scheduled time as stipulated by the University**

b) If the vender fails to supply the items as per the specification stated in the tender

c) If the vender fails to supply the items as per the quality desired by the University and mutually agreed by the vender

d) For other reasons for which University faces loss of money/reputation to its stakeholders or for any other valid reasons

9.12 Bidder must be capable to deliver the required materials and items associated with the establishment of the Language Lab at its own risk and responsibility. Necessary Legal and Technical compliance should be followed by the bidder and the University will have no responsibility in this connection.

9.13 Statutory deduction for GST and other Government taxes will be made as per the law in force

9.14 Make & Model: Bidder must maintain Technical specification for the tendered items. For wooden/Ply items, bidder must mention the type of wood used for the manufacturing of the tendered items.

9.15 Time Schedule: The supply work must be completed within **60 days** from the date of receipt of the work order.

9.16 Validity of offer: A bidder should spell out in the tender that it shall remain valid for a minimum period of six months from the date of opening of the tender and during this period, the bidder shall not be entitled to revoke or cancel its offer.

9.17 After Sales Service

(i) The name and complete address of the company in India authorized by the manufacturer, to provide after sales service for the equipment should be mentioned. The appointed authorized service provider should be holding a valid certificate from the manufacturer to this effect.

(ii) The manufacturer should give an undertaking that after the warranty period, they shall provide spares and after sale service of the equipment in India for the normal life time of the equipment.

9.18 University reserves the discretion to issue work order either in full or phase wise depending upon the requirement and selected vendor will not charge any extra amount for such supply and delivery.

9.19 Place of delivery: As directed by the appropriate Authority of the University of Kalyani.

9.20 Payment Schedule: Payment be made after successful delivery and fittings of the items or by any other mode as to be decided by the University.

9.21 Performance Security:

Successful bidder should deposit Performance Security money equivalent to the **10%** of the order value in the form of **DD/ suitable negotiable instruments as to be decided by the University** immediately after issuing purchase order from the University. Such security will be refunded after completion of the warranty period in normal case without any accrued interest. In absence of any such deposit, equivalent sum will be deducted by the University from the Bill amount at the time of releasing payment to the vender. However, University may forfeit the Security Money in the event of the following circumstances:

- i) Selected bidder withdraws the bid before expiry of its validity but after receipt of the Purchase Order.
- ii) Selected bidder does not accept the order after issuing the same or fails to enter into a contract

within validity period of offer.

- iii) Selected bidder fails to supply the items within the scheduled time as specified in the Purchase Order
- iv) If before expiry of the warranty period, the supplied items break down or do not function satisfactorily due to the cause related with the item itself or for its installation and not for any reason caused by the University Authority and the supplier denies to take the responsibility to make the supplied items in order.
- v) In case of any false submission /statement by the bidder
- vi) In case of any refusal to abide by terms and conditions or refusal to enter into a written agreement as per prefixed terms and conditions

9.22 Quantity Changeability: Quantity as stated in the tender document may subject to change at the time of issuing purchase order due to the fund crunch or for other valid reasons.

9.23 Requisite Documents to be submitted: Bidder must have adequate documents relating to Trade License and updated returns for Income Tax, GST, Audited Statement of Accounts and other documents.

9.24 Instruction Made with Item Specification: Bidder must comply the instructions as provided with Item Specification.

9.25 Disposal of Disputes: In case of any dispute, the University's decision will be treated as the final and conclusive. All legal actions are subject to Kolkata jurisdiction only.

9.26 Conditional bid may be liable for rejection.

9.27 The supplied items are preferred to be manufactured in 2025 or later. If the supplied items are older than 1 year, vender must provide 2 years' additional onsite warranty with free of cost over and above OEM onsite warranty. Under no circumstances, items manufactured in 2024 or earlier will be accepted by the University. If it is noticed by the University regarding the manufacture of the supplied items in 2024 or its earlier, University may impose a penalty to the tune of 50% or more from the Bill Amount or take any other decision as to be deemed fit by the University and vender must accept the same as the final decision from the end of the University.

9.28 **Conflict of Interest:** Not more than one tender shall be submitted by one tenderer or tenderers having relationship. Under no circumstances will father and son(s) or other close relations who have business relationship with one another (i.e. when one or more partner(s)/director(s) are common) be allowed to tender for the same contract as separate competitors. A breach of this condition will render the tenders of both parties liable for rejection.

9.29 In case of Tie Bid arising after opening of price bid, University will follow the guideline as mentioned in the G.O. No. 2320-F(Y) dated 7/6/2022 issued by the Finance Department, Government of West Bengal.

9.30 **Discretion of the University:**

- (i) University may take decision about non-purchase of the said item even after selection of vendor due to its fund constraints.
- (ii) University may seek documents from the bidder in addition to the scanned documents sent by them at the time of uploading technical bid for verification and evaluation of tender.
- (iii) University reserves the right to cancel bid of the lowest bidder even after being technically qualified for any valid reason to ensure transparency and trustworthiness in vender selection process.

- (iv) University reserves the right to relax any clause as stated hereinabove for selection of responsive vendor.

10. Opening the financial bid as per schedule will BE NOTIFIED LATER ON.

Financial bid can be seen & accessed by the bidder through the NIC Portal on line after opening of financial bid on line. No objections raised by any Bidder in this respect will be entertained by the University. No informal tender will be entertained in the Bid further.

11. During the scrutiny, if it comes to the notice to tender inviting authority that the credential or any other paper found incorrect/ manufactured/ fabricated, that bidder would not allowed to participate in the tender and that application will be rejected outright without any prejudice.

12. The Tender Selection Committee reserves to right to cancel the N.I.T. due to unavoidable circumstances and no claim in this respect will be entertained.

Annexure I

FURNISHING BASIC INFORMATION

(To be furnished in the Company's official letter pad)

1.	Name of the Bidder	
2	Address for Communication	
3	Contact Number(s)	
4	E-mail ID	
5	Trade License No. (Please enclose copy of Trade License)	
6	PAN (Please enclose copy of PAN Card)	
7	GST No. (Please enclose copy of GST)	
8	Do you have previous experience for supplying similar nature of Items at Educational Institute of Higher Learning (Please enclose copy of Purchase order & user list, if yes)	Yes/No (Please put tick mark)
9	Annual Turnover as per Audited P/L ACCOUNTS & BALANCE SHEET	2022-23: Rs..... 2023-24: Rs..... 2024-25: Rs..... Average Annual Turnover: Rs.....
10	Status of the bidder (Please enclose copy authenticating your status)	Manufacturer/Dealer/Distributer/Selling Agent/Stockiest (Please put tick mark)

I hereby declare that the above information is true and correct to the best of my knowledge and belief. In case of any false/wrong/misleading information, I shall be bound to take the decision taken by the University.

Signature of the Bidder
(With Seal)

Annexure II
APPLICATION FOR TENDER

(To be furnished in the Company's official letter pad with full address and contact no, E mail address etc)

To
The Development Officer
University of Kalyani,
Kalyani-741235, Nadia,
West Bengal

Sub:NIT for **ESTABLISHMENT OF INTEGRATED INTERACTIVE LANGUAGE LEARNING
LAB CUM HYBRID CLASSROOM & DIGITAL RECORDING STUDIO AT KALYANI
UNIVERSITY.**

Ref: - **Tender Ref. No.: KU/NIET/RUSA/LNLB/2025-26/01**

Dated: 11/02/2026

Sir,

Having examined the pre-qualification & other documents published in the N.I.T, I /wehereby submit all the necessary information and relevant documents for evaluation:

1. That the application is made by me / us on behalf of
.....in the capacity.....duly authorized to submit the offer. The authorization letter from the Company is attached inAnnexure II.
2. We accept the terms and conditions as laid down in the tender document vide **Clause 9** and declare that we shall abide by it throughout the tender period including its extensions, if any.
3. We have gone through the Tender Document thoroughly and quoted the tendered items keeping in mind all sorts of information as furnished in the tender document including Corrigendum/Addendum as published from time to time
4. We are offering rate for the following item /items with printing capacity and assured supply to the University of Kalyani

Items	Make & Model No.	Warranty Offered

5. In the event of being selected, I will make the supply within the stipulated period excepting the condition which is beyond our control.

Date: -

Signature of applicant including title and capacity in
which application is made.

Contact No.:

Annexure III

(Authorization letter in favour of the applicant (other than Managing Director/ Proprietor/Partner)from the competent authority.)

FORMAT

(To be furnished in the Company’s official letter pad with full address and contact no, E mailAddress etc)

(TO WHOM IT MAY CONCERN)

This is to certify that Mr (Name),
Employee of this Organisation as (Official Designation) is
Hereby authorised to submit tender online, Vide NIT No,
Datedon behalf of the Organisation.

Signature of the competent authority with Seal

.....

(Signature of the Authorised Person)

Signature of Mr.....

.....is hereby attested.

Signature of the competent authority with Seal

ANNEXURE IV

(Affidavit Proforma)
(To be furnished in Non – Judicial Stamp paper
of appropriate value duly notarized)

Tender Ref. No.: KU/NIET/RUSA/LNLB/2025-26/01

Dated: 11/02/2026

I, Sri/Smt.....

The Managing Director/Proprietor (etc.) of the Firm.
..... (Name of the firm)

At (address).....

Do hereby solemnly affirm and declare as follows:

1. That I have not ever been convicted of any offence making myself liable to be disqualified to supply of Furnitures to any Govt. or Govt. undertaking Organization /Institution in the State of West Bengal or other State or States.
2. That no case is pending against me or against my firm in any criminal court of law to supply of Furniture's to the Govt. or Govt. undertaking Organization / Institution in the State of West Bengal or other State or States (If any case is pending, state the details).
3. That, I also declare that if any information subsequently found incorrect or false will it automatically render the tender submitted by me cancelled and make me liable for penal/legal action as per law of the country.
4. That my concern has not yet been declared bankrupt by any banking or money lending agency duly licensed by RBI nor has it been considered doubtful by any Government concern so far as the solvency of the organisation is concerned.
5. That I do further affirm that the statements made by me in this tender are true to the best of my knowledge and belief and all the documents attached are genuine & correct.

Deponent(s).

ANNEXURE VI

DECLARATION ON NIT

(To be typed in company letter pad, scanned and uploaded)

I, the undersigned, do hereby declare that in respect of **Tender Ref. No.:**

KU/NIET/RUSA/LNLB/2025-26/01

Dated: 11/02/2026

- On behalf of my organization, I will comply all the formalities that are required to be complied as per NIT and I will observe all clauses of the NIT (including Terms & conditions).
- In case of any non-observance of any clause(s) of NIT, my organization will be bound to follow the decisions taken by the University of Kalyani for taking decision related with the tender for which the said NIT was uploaded.

Date:

Place:

Validate

Print

Help

File BoQ

Tender Inviting Authority: University of Kalyani

Name of Work: ESTABLISHMENT OF INTEGRATED INTERACTIVE LANGUAGE LEARNING LAB CUM HYBRID CLASSROOM & DIGITAL RECORDING STUDIO AT KALYANI UNIVERSITY.

Contract No: KU/NIET/RUSA/LNLB/2025-26/01

Name of the Bidder/

PRICE SCHEDULE**(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)**

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	BASIC PRICE Per Unit allowing Educational Discount, if any Rs. P	GST on Basic Price Per Unit (if any) Rs. P	Any Other Charges in TOTAL Rs. P	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
1	2	4	5	13	15	17	53	55
1	Installation of Language Laboratory with Interactive, Software Integrated Learning System (ISILS) or similar University of Kalyani.							
2	Language Lab software with Perpetual License , Includes - English Content, Pronunciation for oral skill improvement-self learning. 5 Years Software Maintenance for Language Lab Platform	73	Nos				0.00	INR Zero Only

3	AI Enable Presentation Practise Software with 5 Years Subscription	73	Nos				0.00	INR Zero Only
4	AIO with 5 years warranty with Microphone.	73	Nos				0.00	INR Zero Only
5	600 VA UPS	73	Nos				0.00	INR Zero Only
6	1000 VA UPS	12	Nos				0.00	INR Zero Only
7	2000 VA Online	1	Nos				0.00	INR Zero Only
8	Server (Intel Xeon-Silver 4510 2.4GHz 12-core 150W Processor and 128GB RAM)	1	Nos				0.00	INR Zero Only
9	Windows Server 2025 Standard - 16 Core License Pack Perpetual Education	1	Nos				0.00	INR Zero Only
10	Windows Server 2025 - User CAL Perpetual Education	80	Nos				0.00	INR Zero Only
11	86 " IFP	2	Nos				0.00	INR Zero Only
12	4K Camera 20X camera	4	Nos				0.00	INR Zero Only
13	CPU/OPS (i5,12thgen,256GB SSD,4GB Ram,4GB Graphics)	2	Nos				0.00	INR Zero Only
14	Digital Podium (Podium Body,MultiMedia Controllor,21.5" Touch Screen,PDU)	2	Nos				0.00	INR Zero Only

15	Wireless Presenter BYOD	3	Nos				0.00	INR Zero Only
16	Central Controllor	2	Nos				0.00	INR Zero Only
17	300 Watts Amplifier	2	Nos				0.00	INR Zero Only
18	20 Wannts Speaker	8	Nos				0.00	INR Zero Only
19	10 Chanel Mixer	2	Nos				0.00	INR Zero Only
20	Handheld Mic	2	Nos				0.00	INR Zero Only
21	Protoble Wireless Mic (RX /TX @2) for Teacher	2	Nos				0.00	INR Zero Only
22	AI Connector	3	Nos				0.00	INR Zero Only
23	Document camera	2	Nos				0.00	INR Zero Only
24	TAB	2	Nos				0.00	INR Zero Only
25	55" Commercial Display	2	Nos				0.00	INR Zero Only
26	65 " IFP (Android 14 or higher ,8GB,128 GB)	1	Nos				0.00	INR Zero Only
27	4K Camera	1	Nos				0.00	INR Zero Only
28	CPU/OPS (i5,12thgen,256GB SSD,4GB Ram,4GB Graphics)	1	Nos				0.00	INR Zero Only

29	IPS 21.5" Monitor	2	Nos				0.00	INR Zero Only
30	Portable Wireless Mic (RX /TX @2) for Teacher	1	Nos				0.00	INR Zero Only
31	HDMI Source Switcher & Mixer	1	Nos				0.00	INR Zero Only
32	Soundbar	1	Nos				0.00	INR Zero Only
33	Green screen backdrop	1	Nos				0.00	INR Zero Only
34	TAB	1	Nos				0.00	INR Zero Only
35	Teleprompter	1	Nos				0.00	INR Zero Only
36	Stand light	3	Nos				0.00	INR Zero Only
37	43" Commercial Display	1	Nos				0.00	INR Zero Only
38	Cable and Accessories	1	Nos				0.00	INR Zero Only
39	24 Port 1G Copper Switch 4 x 10G Uplink with Transceivers	2	Nos				0.00	INR Zero Only
40	48 Port 1G Copper Switch 4 x 10G Uplink with Transceivers	2	Nos				0.00	INR Zero Only
41	4 Pair Cat 6A UTP cable (500 Mtr)	8	Nos				0.00	INR Zero Only
42	Cat 6A 24 Port Loaded Panel	6	Nos				0.00	INR Zero Only

43	Cat 6A I/O with Back Box	110	Nos				0.00	INR Zero Only
44	Single Port Face Plate	110	Nos				0.00	INR Zero Only
45	Cat 6A UTP patch cord - 1 Mtr	110	Nos				0.00	INR Zero Only
46	Cat 6A UTP patch cord - 2 Mtr	110	Nos				0.00	INR Zero Only
47	9U Wall Mount Rack with all accessories	2	Nos				0.00	INR Zero Only
48	27U Wall Mount Rack with all accessories	1	Nos				0.00	INR Zero Only
49	Laying of 4 pair UTP cable with supply PVC Conduit	4000	Mtr				0.00	INR Zero Only
50	Fixing & Termination of Cat6A Loaded Jack Panel	6	Nos				0.00	INR Zero Only
51	Fixing & Termination of Information Outlets & Face Plate	110	Nos				0.00	INR Zero Only
52	UTP nodes Testing (Penta Scanning)	110	Nos				0.00	INR Zero Only
53	False Ceiling	1658	Sq.Ft				0.00	INR Zero Only
54	Electrical	1658	Sq.Ft				0.00	INR Zero Only
55	Wall Paneling	2337	Sq.Ft				0.00	INR Zero Only
56	Students Table	71	Nos				0.00	INR Zero Only

57	Professor Table	2	Nos				0.00	INR Zero Only
58	Chairs	77	Nos				0.00	INR Zero Only
59	Professor Platform	2	Nos				0.00	INR Zero Only
60	Studio Editing Table	1	Nos				0.00	INR Zero Only
61	Studio Assistant Table	1	Nos				0.00	INR Zero Only
62	Studio Corner Storage Rack	1	Nos				0.00	INR Zero Only
63	Blinds	9	Nos				0.00	INR Zero Only
64	Implimentation Cost of Project with Training	1	Lot				0.00	INR Zero Only
65	Manpower per Month	60	Month				0.00	INR Zero Only
Total in Figures							0.00	Zero Only
Quoted Rate in Words		INR Zero Only						