

Revised Technical Specifications for Supply, Installation, Testing & Commissioning
of Integrated AV/IT Solutions for **Seminar Hall** at MTI Ayub Teaching Hospital
Abbottabad after Prebid meeting.

S. No	Item Name	Detailed Specifications (Revised & Standardized)	Qty
1.	55" Smart Signage Razor-Narrow Bezel Video Wall Panel	<p>SMART Signage Razor Narrow Bezel Video Wall for Front Wall.</p> <ul style="list-style-type: none"> ➤ Parameter / Required Specification ➤ Professional Smart Signage / Commercial Video Wall Panel, 55 inches screen size. ➤ IPS / VA commercial-grade professional panel. ➤ Pure genuine crystal-clear display with UHD/4K supported content display capability. ➤ Minimum Full HD 1920×1080 native resolution per panel; 4K UHD processing / content support preferred. ➤ Minimum 700 nits brightness. ➤ Razor-narrow bezel; 0.44 mm panel-to-panel / 0.88 mm bezel-to-bezel or equivalent ultra-narrow bezel. ➤ Suitable for 24/7 continuous commercial operation. ➤ Minimum 178° horizontal / 178° vertical viewing angle. ➤ Minimum 1100:1 contrast ratio or better. ➤ Response time 8 ms or better. ➤ Minimum 60 Hz refresh rate. ➤ Non-glare / anti-glare panel surface for high visibility. ➤ Factory calibration / color calibration technology for uniform brightness, color, and white balance across all panels. ➤ Built-in video wall compatibility with bezel compensation / image alignment support. ➤ Picture enhancement / image optimization technology for improved clarity, color, and contrast. ➤ Required input ports shall include HDMI, DisplayPort, RGB/VGA, Video, USB, and HDCP support or equivalent. 	9

		<ul style="list-style-type: none"> ➤ DisplayPort input shall be mandatory; DisplayPort output / daisy-chain support preferred. ➤ HDMI input shall be mandatory. ➤ USB port for media, service, and firmware support. ➤ RS-232C IN/OUT and RJ45/LAN control port. ➤ Approx. 270W power consumption per panel or better energy-efficient equivalent. ➤ Compatible with professional PDU-based installation; 2 panels per PDU or as per OEM recommendation. ➤ IP5X dust-resistant rating or equivalent protection preferred. ➤ EMC/EMCB or equivalent electromagnetic compatibility certification. ➤ ISTA-certified or equivalent transport-safe packaging preferred. ➤ VESA-compatible mounting; suitable for professional push-pull video wall mount. ➤ Landscape and portrait installation support. ➤ Accessories shall include remote, power cable, DP/HDMI cable, mounting accessories, manuals, and software where applicable. ➤ Minimum 3 years OEM warranty. ➤ Supply, installation, testing, commissioning, calibration, alignment, and user training shall be included. 	
2.	Push-Pull Service Wall Mount Brackets	<p>Push and Pull Bracket for Samsung Video Wall for Front Wall.</p> <ul style="list-style-type: none"> ➤ Pop-Out Extension: provides quick access for installation and maintenance ➤ Precise Display Alignment: height/depth adjustment for seamless digital signage ➤ Quick-Release Latch: locks/unlocks the display in place ➤ Pop-Out Lock System: ensures safety by reducing the possibility of accidental pop-outs 	9

		➤ Anti-Theft Locking Hole: for additional security preventing any unwanted removal	
3.	3x3 Video Wall Controller / Processor	<p>Multi-Screen Video Wall Controller including 12 (4K) Output Ports and 02 (4K) Input Ports.</p> <p>Supply, installation, testing and commissioning of industrial modular video wall controller meeting the following minimum specifications:</p> <ul style="list-style-type: none"> • Chassis: 19-inch 2.5U ATCA industrial rack-mount chassis • Architecture: PCI-E bus modular card design • Slots: Minimum 5 slots • Operating System: Embedded Linux • Video Wall Capacity: Support up to 32 LCD screens splicing with 3 additional outputs • Video Decoding: <ul style="list-style-type: none"> ○ 4 × 4K decoding @25fps ○ 16 × 1080P decoding @25fps ○ 32 × 720P decoding @25fps ○ 64 × D1 decoding @25fps ○ Support H.265 video decoding • Input Interfaces: HDMI / DVI-I / 3G-SDI / CVBS input cards • Output Interfaces: HDMI and 3G-SDI output cards • Multi-Window Processing: Support up to 32 layers window display • Control: PC client / Network keyboard / Tablet control • Network: Minimum 2 × Gigabit RJ-45 ports • Power: Redundant power supply supported • Cooling: Smart temperature-controlled fan system • Form Factor: Industrial rack-mount video wall controller system 	1
4.	Video Wall Metal Infrastructure	Custom fabricated powder-coated steel wall frame , alignment rails, leveling hardware, anchors, fasteners, vibration-free mounting	1
5.	AI-capable Workstation	AI-capable Workstation: Latest-gen Core Ultra 9 / Core i9 / Core i7-K class CPU (or equivalent), 32GB DDR5 RAM, 1TB NVMe Gen4 SSD, NVIDIA RTX 4070/4070Ti class GPU (≥12GB VRAM) with H.264/H.265/AV1 hardware encoding, minimum 4K multi-display outputs, 1xLAN (≥1GbE; 2.5GbE preferred), Windows 11 Pro genuine license.	1
6.	Professional LCD Monitor (Operator)	24" professional IPS monitor, FHD/2K resolution, HDMI & DP inputs, slim bezel, tilt/height adjustable	1

7.	24U Server / Network Rack Cabinet	Standard 19" rack, 24U height, lockable front & rear doors, fan tray, vertical cable managers, PDU shelf	1
8.	Rack-Mount Online UPS (6kVA + Batteries)	<p>Rack Mount Smart-UPS 06 kilo Watt with Long Backup</p> <p>Industrial grade online double conversion ups</p> <ul style="list-style-type: none"> ➤ Power Factor: 0.8, 0.9 & 1 (as required) ➤ Phase: Three Phase ➤ Display: Digital Display ➤ Communication Interface: ➤ Voltage Range: 380/400/415V Adjustable ➤ Frequency Handling: 10% Adjustable ➤ Soft Start: 0-100% 5Secs ➤ DC: 348V ➤ Charge Current: 10-25A Adjustable ➤ Transfer Time: ➤ Temperature: 0-50 degree ➤ Humidity: <95 % when 20 degree <p>Noise: 63 db</p>	1
9.	HDMI 4K Cables + Laying	HDMI 2.0/2.1 (active or fiber for long runs), 4K support, cable routing, dressing, labeling, testing	20
10.	Ceiling Speakers (10W)	10W conference-grade ceiling speakers, wide dispersion, metal grille, flush-mount	06
11.	Power Amplifier (120W class)	Mixer amplifier compatible with ceiling speakers & wireless mics	01
12.	Audio Mixer/ DSP	6-8 inputs, EQ, compressor, feedback suppression, balanced outputs	01
13.	Wireless Lavalier Presenter Mic System	UHF wireless system with diversity receiver, bodypack transmitter, lavalier microphone	03
14.	Wireless Handheld Mic	UHF wireless handheld microphone with diversity receiver	03
15.	Digital Presenter Pointer	Wireless presenter / air-mouse / laser pointer	01
16.	Core Ultra 5 All-in One PC (Presenter Touch System + Desk)	Intel Core Ultra 5, 16 GB RAM, 512 GB NVMe SSD, 23-24" display	01
17.	Smoke Detector	Addressable/conventional smoke detector with base, installation & commissioning (Complete System)	03
18.	Fire Extinguisher (12kg)	ABC/DCP 12kg, bracket, standard rating	2
19.	LaserJet Printer Wi-Fi/Network	Mono laser A4, duplex, Wi-Fi + LAN, ~40+ ppm class	1


20.	Installation / Small Accessories (Conference Room - Complete Scope)	Complete installation, integration, cabling, mounting, testing, commissioning, documentation and user training of all AV/IT systems, including all small accessories, consumables, ducts, connectors, terminations, audio/video tuning and safety works, required for a fully functional conference room.	1
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1. ~~One~~-year warranty is mandatory for the equipment.

Three



Revised after
pre-bid meeting



8/5/26