



**Government of Khyber Pakhtunkhwa  
Ayub Teaching Hospital  
Medical Teaching Institution, (ATH) Abbottabad**

**Standard Bidding Document**

**FOR**

**Supply, Installation, Testing & Commissioning of Integrated  
AV/IT Solutions for Hospital Director Conference Hall**

**Under National Competitive Bidding (NCB)**

**Tender (2026-27)**

## **PREFACE**

These Standard Bidding Documents have been prepared for use & prepared by the Ayub Medical & Teaching Institution Abbottabad, for procurement of IT Equipment, through National Competitive Bidding (NCB) Khyber Pakhtunkhwa via E-PADS.

The standard bidding documents for procurement of the said Bidding Documents are grouped in four parts.

Part-I	Mandatory Documents
Part-II	Instructions to Bidders (ITB)
Part-III	Technical Evaluation Performa
Part-IV	List of IT Equipment with Specifications and required Warranty

## **PART - I**

### **Mandatory Documents**

- a) Registration Certificate for NTN, STRN.
- b) Active on ATL for NTN & STRN.
- c) Last three-year bank statement.
- d) Last Year Tax return.
- e) Affidavit on judicial stamp paper duly attested mentioning following statements:
  - (i) 2% CDR is attached with financial bid.
  - (ii) The firm is not black listed.
  - (iii) Non-shareholder Certificate (That no employee of Ayub Teaching Hospital, Abbottabad is shareholder in the firm's business).
- f) Warranty as per bidding documents.
- g) Certificate of 100% compliance with purchaser's specifications shall be provided on Firm/Company letter head.

**Note: Any Documents Missing in the mandatory documents will leads to disqualification.**

## **PART - II**

### **Instructions to Bidders (ITB)**

#### **(A) General:**

##### **1. Scope of Bid**

AMTI invites bids for Supply, Installation, Testing & Commissioning of Integrated AV/IT Solutions for, Items specified in Schedule of Requirements along with Technical Specifications and related after sales services incidental thereto to meet the requirements AMTI Abbottabad with Bid Reference Number for the procurement activity as mentioned in Bid Data Sheet (BDS).

##### **2. Source of Funds**

AMTI Abbott bad

##### **3. Eligible Bidders**

3.1 This Invitation for Bidders (IFB) is open to all eligible registered manufacturers, registered importers and authorized dealers of IT Equipment. The Importer/Authorized dealer must possess valid authorization from the Principal origin. Furthermore, all the items quoted must be registered with the relevant forum.

3.2 Bidders under the declaration of ineligibility for corrupt and fraudulent practices issued by the Government (Federal, Provincial or Local) or a public sector organization are NOT ELIGIBLE.

##### **4. Corruption and Fraud**

4.1 The Government of Khyber Pakhtunkhwa defines Corrupt and Fraudulent Practices as, *“offering, giving ,receiving or soliciting of anything of value to influence the action of the public official or the supplier or the contractor in the procurement process or in contract execution to the detriment of the Procuring agencies; or misrepresentation of facts in order to influence a procurement process or the execution of contract, collusive practices among bidder (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive and any request for or solicitation of anything of value by any public official in the course of the exercise of this duty”*.

4.2 Indulgence in corruption and fraudulent practices is liable to result in rejection of Bids, cancellation of contract, debarring and blacklisting of the bidder, for a stated or indefinite period of time.

## 5. **Bidding for Selective Items**

A Bidder, if he so chooses, can bid for selective items from the list of goods provided for the schedule of Requirements. A Bidder is also at liberty to bid for all the goods mentioned in the Schedule of Requirements provided he fulfills the requirements.

However, a Bidder cannot bid for partial quantities of an item in the Schedule of Requirement. **THE BID MUST BE FOR THE WHOLE QUANTITY OF AN ITEM REQUIRED IN THE SCHEDULE OF REQUIREMENT**

### **(B) The Bidding Procedures:**

#### **1. The Governing Rules**

The Bidding procedure shall be governed by the Khyber Pakhtunkhwa Public Procurement of Goods, Works and Services KPPRA Rules, 2014.

#### **2. Applicable Bidding Procedure**

The bidding procedure is governed by thy Rule 06 Para (2) KPPRA Rules, 2014.

#### **3. The bidding procedure is explained below:**

Single Stage, Two Envelop Procedure (Rule 2(b) KPPRA 2014) via E-PADS KP-PPRA.

- i) The bid shall be submitted through E-PADS both the Technical Proposal and the Financial Proposal.
- ii) The files shall be marked as “TECHNICAL PROPOSAL” and “FINANCIAL PROPOSAL” **FOR** Supply, Installation, Testing & Commissioning of Integrated AV/IT Solutions for HD Conference Hall in bold and legible letters to avoid confusion.
- iii) Initially the “TECHNICAL PROPOSAL” shall be downloaded; technical proposal is to determine the technical strength and consideration of the illegibility of the firm for the bidding process, which is to be carried out before the opening the financial bids.
- iv) The “FINANCIAL PROPOSAL” shall be only be downloaded and opened after the successful technical evaluation.
- v) The Technical Evaluation Committee (TEC) shall evaluate the technical proposal, without reference to the price and reject any proposal which do not conform the specified requirements.
- vi) During the technical evaluation no amendments in the technical proposal shall be permitted.
- vii) The financial proposals of bids shall be opened publicly at a time, date and venue to be announced and communicated to the Bidders in advance in accordance with KP-PPRA Rules through procuring entity website and E-PADS.

- viii) After the evaluation and approval of the technical proposal the Purchase committee shall at a time within the bid validity period, publicly open the financial proposals of the technically accepted bids only.
- ix) The bid found to be the lowest offered price shall be accepted.

## **Preparation of Bids**

### **(A) The Bidding Documents:**

#### **1. Contents of the Bidding Documents**

The Bidding Documents include

#### **2. Language of Bids**

2.1 All Correspondences, communications associated with preparation of Bids, clarifications, amendments, submissions shall be written in English/Urdu. Supporting documents and printed literature furnished by the Bidder may be in any language provided they are accompanied by an accurate translation of the relevant passages in English/urdu, in which case, for purpose of interpretation of the Bid, the said translation shall take precedence.

#### **3. Bid Price**

3.1 The Bidders should quote the prices of the goods according to the technical specifications the technical specifications of goods; different from the required specifications shall straightway be rejected.

3.2 The Bidder is required to offer a competitive price which must include all the taxes, levies, duties, prescribed prices.

If there is no mention of taxes, the offered/quoted price shall be considered as inclusive of all prevailing taxes/duties, etc.

3.3 The benefit of exemption from or reduction in the taxes and duties shall be passed as per Govt. rules.

3.3 Prices offered should be for the entire quantity of an item demanded in the Schedule of Requirement; partial quantity offered shall be straightway rejected. Conditional or alternate offer shall also be considered as non-responsive bid.

3.4 While making a price quote, trends/inflation in the rate of goods and services in the market should be kept in mind. No request for increase in price due to market fluctuation in the cost of goods or services shall be entertained.

#### **4. Bid Currencies**

Price shall be quoted in Pakistani Rupees.

## **5. Bid Validity**

5.1 Bid Validity is for 90 days.

5.2 The TEC shall ordinarily be under an obligation to process and evaluate the bid within the stipulated bid validity period. However, under exceptional circumstances and for reason to be recorded in writing, if an extension is considered necessary, all those who have submitted their bids shall be asked to extend their respective bid validity period. Such extension shall be for not more than the period to the period of original bid validity.

5.3 Bidders who;

- a) Agree to the Competent Authority request for extension of bid validity period shall not be permitted to change the substance of their bids; and
- b) Do not agree an extension of the bid validity period shall be allowed to withdraw their bids without forfeiture of their bid securities.

## **6. Format and Signing of Bids**

6.1 The bidder shall prepare and submit its bid and provide original documents bas appropriate. Copies of any documents must be stamped and signed by the bidders.

6.2 The Bid shall be accompanied by the original receipt for the payments made for the purchase of the bidding document. In an event where the Bidder has downloaded the bidding document from the web, they will require to get the original payment receipt of the prescribed fee from the Procuring cell well before the date of submission of bid.

6.3 The original bid shall be typed or written in indelible ink and shall be signed by the bidder or a person or persons duly authorized to bind the bidder to Contract. The person or person signing the bid shall initial all pages of the bid form.

6.4 Any interlinear actions, erasures or overwriting shall valid only if they are initiated by the person or persons signing the bid.

6.5 Any tempering, illegitimate inclusion or exclusion in any part of the Standard Bidding Documents shall lead to disqualification of the bidder.

## **Submission Of Bids**

### **7. Submission of Bids**

The "TECHNICAL PROPOSAL" and "FINANCIAL PROPOSAL" of Laboratory chemical On Regent Basis shall be uploaded on E-PADS according to the dates mentioned in the advertisement.

**8. Late Bids**

Any bid if not uploaded to portal before the end time shall Not be entertained later.

**9. Withdrawal of Bids**

9.1 The Bidder may withdraw its bid after the bid's submission and prior to the deadline prescribed for opening of bids.

9.2 No bid may be withdrawn in the period between deadline for submission of bids and the expiration of the period of bid validity specified. Withdrawal of a bid during this period may result in forfeiture of the Bid Security submitted by the Bidder

**Opening and Evaluation of Bids**

**1. Opening of Bids by Procuring Agency**

1.1 All bids received through E-PADS shall be opened by the Tender opening committee (Purchase Committee) publicly in the presence of the Bidders or their representatives on the date, time and venue prescribed in Advertisement.

1.2 All Bidders in attendance shall sign an attendance sheet.

1.3 The Purchaser shall open one bid at a time and read out aloud its contents which may include name of the Bidder, the presence or absence of requisite bid security CDR, and such other details as the Purchaser, at its discretion, may consider appropriate if not in conflict with Khyber Pakhtunkhwa Public Procurement of Goods, Works and Services Rule 2014 specifically Rule 37.

1.4 The Procuring cell shall have the minutes of the Bid opening (technical and when applicable financial) recorded.

1.5 No Bid shall be rejected at technical proposal/bid opening, except for late bids, Tender fee receipt & non submission of Original CDR and judicial stamp papers.

1.6 The uploaded bid without Bid Security CDR shall not be accepted. However, the Chairman of the Purchase/Procurement Committee shall record a statement giving reasons for not accepting such bid(s).

**2. Clarification of Bids**

During evaluation of the bids the TEC may, at its discretion, ask the bidder for a clarification and the response shall be in writing and no change in the prices or substance of the bid shall be sought, offered or permitted.

### **3. Examination of Technical BIDS**

After opening of the bids by Purchase Committee, the bids will be forwarded to TEC FOR Technical Evaluations.

### **4. Examination of Financial BIDS**

4.1 The firms achieved the qualified marks in technical evaluation against the quoted items so as its financial bids will be opened by Purchase Committee.

4.2 In the financial bids the arithmetical errors shall be rectified on the following basis.

- a) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected.
- b) If the Bidder does not accept the correction of the error, its bid shall be rejected, and its Bid Security may be forfeited.
- c) If there is a discrepancy between words and figures, the amount in words shall prevail.

d) For the purpose of comparison of bids quoted in different currencies, the price shall be converted into Pak Rupees. The rate of exchange shall be the Selling rate, prevailing on the date of opening of bids specified in the bidding documents, as notified by the State Bank of Pakistan/National Bank of Pakistan on that day.

e) A bid once opened in accordance with the prescribed procedure shall be subject to only those rules, regulations and policies that are in force at the time of issue of notice for invitation of bids.

f) The procurement cell prepared the comparative statements of the product and purchase committee approved the items

### **5. Announcement of Evaluation Report**

The TEC may announce the results of the bid evaluation in form of a report through its website of the institution or display office notice board, giving justification for acceptance or rejection of bids at least ten days prior to the award of procurement Contract.

### **6. Re-Bidding**

6.1 If the TEC has rejected all bids under Rule 47, it may call for a re-bidding Khyber Pakhtunkhwa Public Procurement of Goods, Works & Services Rules 2014 (Rule-48).

6.2 The TEC before invitation for re-bidding shall assess the reasons of rejection and may revise specifications, evaluation criteria or any other condition for Bidders as it may deem necessary.

## **Award of Contract**

### **7. Acceptance of Bid and Award Criteria**

The Bidder, whose bid is found to be most closely conforming to the Evaluation Criteria and having the lowest evaluated responsive bid, if not in conflict with any other law, rule, regulation or policy of the Government of Khyber Pakhtunkhwa, shall be awarded to the Contract within the original or extended period of bid validity.

### **8. Competent Authority Right to vary quantities at the time of Award**

The competent Authority reserves the right at the time of the award of the Contract to increase or decrease, the quantity of goods originally specified in the Schedule of Requirements without any change in unit price or other terms or conditions

### **9. Notification of Award**

9.1 Prior to the expiration of the period of the bid validity, the procurement cell shall notify to the successful Bidder in writing that its bid has been accepted Rule 46 in conformity with provision of Section 31 of the act in these rules.

9.2 The notification of the award shall constitute the formation of the Contract between the competent authority and the successful Bidder.

9.3 The enforcement of the Contract shall be governed by the Rule 50 of the Khyber Pakhtunkhwa Public Procurement of Goods, Works & Services Rules 2014.

### **10. Limitation on Negotiations**

10.1 Negotiations that may be undertaken in finalization of the Contract shall not relate to the price or substance of bid specified by the Bidder but only to minor technical, contractual or logistical details.

10.2 Negotiations may relate to the following areas; (the list is being provided as guidance as only and under no circumstances be treated as exhaustive and final):

- Minor alternation to technical details, such as scope of work, the specification or drawings;
- Minor amendment to the Special Condition of Contract;
- Finalization of payment schedule and ancillary details;
- Mobilization arrangements;
- Agreement on final delivery or completion schedules to accommodate any changes required by the Procuring Agency;
- The proposed methodology or staffing;
- Inputs required from the Procuring Agency;
- Clarifying details that were not apparent or could not be finalized at the time of the bidding;
- The Bidder's tax liability in Pakistan, if a Bidder is a foreign company.

**11. Negotiations shall not be used to:**

- Substantially change the technical quality or details of the requirement, including the task and responsibilities of the Bidder or the performance of the goods;
- Substantially alter the terms & conditions of the Contract;
- Reduce unit rates or reimbursable costs;
- Substantially alter anything which formed a crucial or deciding factor in the evaluation of the bids or proposals;
- Alter the submitted financial bid.

**12. Signing of Contract**

- I. After the completion of Contract Negotiations, the Purchaser shall send the Bidder the Contract Agreement Form provided in Part-Two: Section IV of these Standard Bidding Documents, incorporating all agreements between the Parties.
- II. Within one week of the receipt of the Contract Agreement Form, the successful Bidder and the Purchaser shall sign the Contract in accordance with the legal requirements in vogue.

- III. Unless the procurement contract has already entered into force a contractor or supplier feeling aggrieved by the Order of a Purchaser accepting a bid may file an application for review.
- IV. If a successful Bidder, after completion of all codal formalities show an inability to sign the Contract then its Bid Security shall stand forfeiture and the firm may be blacklisted and de-barred from future participation, whether temporarily or permanently. In such situation the Purchaser may award the Contract to the next lowest evaluated Bidder or call for a new bid.
- V. The Contract shall become effective upon affixation of signature of the Purchaser and the selected Bidder on the contract document, shall be governed for the period of one year or till the finalization of new contract.
  - a) All Goods and related Services to be supplied under the contract that are required to be imported in Pakistan shall have their origin in eligible source countries as prescribed by the commercial polices of Federal Government Of Pakistan and all expenditures made under the contract shall be limited to such goods and services.
  - b) For purpose of this Clause “origin” means the place where the goods are produced, or the place where the related services are supplied. Goods are produced when, through manufacturing or processing.

## **PART - III**

### **TECHNICAL EVALUATION PERFORMA FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF INTEGRATED AV/IT SOLUTIONS**

**Technical Evaluation Performa**

Mandatory	Registration Certificate for NTN, STRN.	
	Active status on ATL for NTN & STRN	
	Last 03 years Bank Statement	
	Last Year Tax Return	
	Affidavit on stamp paper duly attested mentioning following statements: (a) 2% CDR is attached with financial bid. (b) The firm is not black listed (c) Non-Shareholder Certificate (That no employee of MTI ATH Abbottabad is shareholder in the Firm's business	
	03 Years warranty with parts	
	Certificate of 100% compliance with purchaser's specifications be provided on Firm/Company letter head	

S No	Parameters	Detail/Supporting Documents	Maximum Marks	Remarks
1	Additional Features in terms of Hardware, enhanced specifications	Additional Special Features <b>NOT</b> mentioned by the Purchaser (Maximum 05 marks depending upon the utility of additional feature offered)	<b>05</b>	
1	Physical resources	Established office within 600 Km from purchaser	<b>01</b>	Details with supporting documents must be attached.
		List of relevant and qualified employees	<b>01</b>	
		Official website of the Firm	<b>01</b>	
		List of spare parts available for quoted items	<b>01</b>	
		Availability of Technical Support (24/7)	<b>01</b>	
2	Past Performance of last five year	01 mark per institute. Maximum 10 marks (Only attach valid Purchase Orders reflecting financial effects of > 1 Mil)	<b>10</b>	Institutions include Govt, Semi Govt, Autonomous Bodies and renowned Private entities
3	Dealership Certification	1. Authorized Dealer: 10 2. General supplier : 02	<b>10</b>	

4	ISO Certification	Company ISO Certificate of Quality Management System 2 Marks per Certificate (Max 06)	<b>06</b>	
5	Last Year Turnover from Tax Return	Turnover 100Mil & above : 05 Turnover below 100 Mil : 02	<b>05</b>	
6	Warranty	01 years beyond asked warranty with parts: 03 02 years beyond asked warranty with parts: 06 03 years beyond asked warranty with parts: 09	<b>09</b>	
	<b>TOTAL MARKS</b>		<b>50</b>	

**In Technical Evaluation 70% (35/50) marks will be passing marks  
Lowest priced among technically qualified bids will be accepted**

**PART - IV**

**LIST OF EQUIPMENT WITH SPECIFICATIONS**  
**AND REQUIRED WARRANTY**

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

S.No	Item Name	Detailed Specifications (Revised & Standardized)	Qty
1.	Smart Signage 4K LED 98"	<p><b><u>98-inch Crystal UHD Signage – Stunning Performance for Large Format Digital Display</u></b></p> <p><b><u>Tender Technical Specifications</u></b></p> <ul style="list-style-type: none"> <li>• <b>Crystal UHD Professional Digital Signage Display</b></li> <li>• <b>1. Display Panel</b></li> <li>• Display Type: <b>Professional Crystal UHD Commercial Signage Panel</b></li> <li>• Screen Size: <b>Minimum 98" (as required)</b></li> <li>• Native Resolution: <b>3840 × 2160 (4K UHD)</b></li> <li>• Aspect Ratio: <b>16:9</b></li> <li>• Panel Technology: <b>VA / IPS Industrial Grade Panel</b></li> <li>• Brightness: <b>Minimum 500 nits</b></li> <li>• Contrast Ratio: <b>Minimum 4000:1</b></li> <li>• Color Gamut: <b>Minimum NTSC 72%</b></li> <li>• Haze Level: <b>25% anti-glare professional display coating</b></li> <li>• Pixel Pitch: <b>Approx. 0.245 – 0.487 mm depending on screen size</b></li> <li>• Operation Mode: <b>24/7 Continuous Commercial Operation</b></li> <li>• Orientation Support: <b>Landscape and Portrait mode</b></li> </ul> <hr/> <ul style="list-style-type: none"> <li>• <b>2. Image Processing Technology</b></li> <li>• Display must support <b>Dynamic Crystal Color technology</b> capable of producing <b>over 1 billion color shades</b>.</li> <li>• Integrated <b>Quantum Processor Lite 4K</b> for advanced <b>video processing and AI upscaling</b>.</li> <li>• Display must provide <b>consistent lifelike color reproduction and enhanced clarity for digital signage applications</b>.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• <b>3. Built-In Signage Platform</b></li> <li>• Integrated <b>Smart Signage Platform (SSSP) version 10.0 or higher</b></li> <li>• Built-in <b>Magic INFO S10 content management compatibility</b></li> <li>• Operating System: <b>Tizen OS version 7.0</b></li> <li>• Processor: <b>Quad-Core CA73 Processor (1.6 GHz or higher)</b></li> <li>• Internal Storage: <b>Minimum 16 GB</b></li> </ul> <hr/> <ul style="list-style-type: none"> <li>• <b>4. Connectivity</b></li> </ul> <p><b>Video Inputs</b></p> <ul style="list-style-type: none"> <li>• <b>Minimum 1 × DisplayPort 1.2</b></li> <li>• <b>Minimum 3 × HDMI 2.0</b></li> </ul> <p><b>USB</b></p> <ul style="list-style-type: none"> <li>• <b>Minimum 2 × USB 2.0 ports</b></li> </ul>	1

#### Control Interfaces

- RS-232C (In/Out)
- RJ-45 Ethernet LAN

#### Wireless Connectivity

- Built-in Wi-Fi (2.4 / 5 GHz dual band)
- Bluetooth connectivity

#### Audio

- Built-in 10W × 2 Channel speakers
- Stereo mini jack audio output

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#### 5. Mechanical Design

- Ultra Slim Industrial Design
- Maximum Panel Depth: **28.5 mm or slimmer**
- Even bezel design on all four sides
- VESA Mount Support:
  - 200 × 200 mm
  - 400 × 300 mm
  - 400 × 400 mm
- VESA Mount Screw: **M8 (12–14 mm)**

The display must support **centered VESA mounting holes for portrait installation.**

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#### 6. Advanced Features

The display must include the following integrated features:

- **SmartView+** wireless screen sharing
- **Smart Calibration** through Samsung mobile application
- **Automatic Source Switching & Recovery**
- **Director Mode**
- **Dicom Simulation Mode**
- **Video Conference compatibility**
- **Upgradable Web Engine**
- **Workspace (Microsoft 365 / VMware / Remote Desktop support)**

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#### 7. Sensors and Hardware Features

- Ambient Light Sensor
- Temperature Sensor
- Auto Level Function
- Center IR Receiver
- Second-Generation B2B Commercial Design

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#### 8. Environmental & Certification

- Safety Certification: **IEC 60950-1 / 62368-1**
- EMC: **Class B**
- Energy Efficiency: **ENERGY STAR 8.0**
- Environmental Compliance: **EPEAT Certified**
- Environmental Protection: **IP5x dust protection**
- Security: **802.1x WPA2 Enterprise Authentication**

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#### 9. Power

- Power Supply: **AC 100 – 240V, 50/60Hz**
- Standby Power Consumption: **Less than 0.5W**

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#### 10. Operating Conditions

- Operating Temperature: **0°C to 40°C**

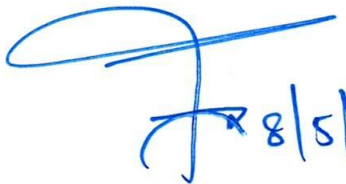
		<ul style="list-style-type: none"> <li>Humidity: <b>10% to 80% RH</b></li> </ul> <hr/> <ul style="list-style-type: none"> <li><b>11. Accessories</b></li> </ul> <p>The following accessories must be included:</p> <ul style="list-style-type: none"> <li>Remote Controller with Batteries</li> <li>Power Cord</li> <li>Quick Installation Guide</li> <li>Warranty Card</li> <li>RS-232C Gender Adapter</li> </ul> <p>Optional Accessories:</p> <ul style="list-style-type: none"> <li>Compatible <b>Slim Fit Wall Mount</b></li> </ul> <p>Compatible <b>Samsung Professional Stand</b>  <b>Minimum 3 years OEM warranty</b></p>	
2.	65 INCH 4k Smart LED	<p><b>65" QLED 4K Smart LED TV – Technical Specifications</b></p> <p><b>Display:</b></p> <ul style="list-style-type: none"> <li>Screen Size: 65 Inches</li> <li>Resolution: 3840 × 2160 (4K UHD)</li> <li>Refresh Rate: 100Hz (supports up to 120Hz via HDMI)</li> <li>Panel Type: QLED with 100% Color Volume</li> <li>Viewing Angle: Wide Viewing Angle</li> <li>Contrast Technology: Dual LED with Supreme UHD Dimming</li> </ul> <p><b>Video Features:</b></p> <ul style="list-style-type: none"> <li>Processor: Quantum Processor 4K with AI Upscaling</li> <li>HDR Support: Quantum HDR, HDR10+ (Adaptive &amp; Gaming), HLG</li> <li>Motion Technology: Motion Xcelerator Turbo+</li> <li>Picture Enhancements: Contrast Enhancer, Film Mode, Filmmaker Mode</li> </ul> <p><b>Audio System:</b></p> <ul style="list-style-type: none"> <li>Output Power: 20W RMS</li> <li>Speaker Type: 2CH</li> <li>Technologies: Object Tracking Sound (OTS Lite), Adaptive Sound+, Active Voice Amplifier</li> <li>Bluetooth Audio &amp; Dual Audio Support</li> </ul> <p><b>Smart Features:</b></p> <ul style="list-style-type: none"> <li>Operating System: Tizen™ Smart TV</li> <li>Built-in Voice Assistant: Bixby</li> <li>Smart Connectivity: SmartThings Hub, IoT Support, Mobile Mirroring</li> <li>Multi-View: Up to 2 screens</li> <li>Wireless DeX &amp; Microsoft 365 Support</li> </ul> <p><b>Gaming Features:</b></p> <ul style="list-style-type: none"> <li>Auto Low Latency Mode (ALLM)</li> <li>FreeSync Premium Pro</li> <li>Game Motion Plus, Dynamic Black EQ</li> <li>Super Ultra Wide Game View &amp; Mini Map Zoom</li> </ul> <p><b>Connectivity:</b></p> <ul style="list-style-type: none"> <li>HDMI Ports: 4 (All support 4K@120Hz)</li> <li>USB Ports: 2</li> <li>LAN (Ethernet): 1</li> <li>Wi-Fi: Wi-Fi 5</li> <li>Bluetooth: Version 5.2</li> <li>Audio Out: Optical (Digital)</li> <li>HDMI ARC: eARC/ARC</li> </ul> <p><b>Design &amp; Build:</b></p> <ul style="list-style-type: none"> <li>Design: AirSlim, 3 Bezel-less</li> </ul>	2

		<ul style="list-style-type: none"> <li>• Color: Titan Gray</li> <li>• Mounting: VESA 400 × 300 mm (Wall Mount Supported)</li> </ul> <p><b>Power:</b></p> <ul style="list-style-type: none"> <li>• Power Supply: AC 100–240V, 50/60Hz</li> <li>• Maximum Consumption: 250W</li> <li>• Energy Saving Features: Eco Sensor, Auto Power Off</li> </ul> <p><b>Dimensions &amp; Weight:</b></p> <ul style="list-style-type: none"> <li>• With Stand: 1451.7 × 900.4 × 285.6 mm</li> <li>• Without Stand: 1451.7 × 831.8 × 25.7 mm</li> <li>• Weight (with stand): 24.3 kg</li> </ul> <p><b>Additional Features:</b></p> <ul style="list-style-type: none"> <li>• Triple Protection (Dust, Humidity, Voltage Protection)</li> <li>• Built-in Zigbee/Thread Module</li> <li>• Ambient Mode+</li> <li>• Accessibility Features (Voice Guide, Audio Description, etc.)</li> </ul> <p><b>Accessories:</b></p> <ul style="list-style-type: none"> <li>• Remote Control (TM2360E)</li> <li>• Power Cable</li> <li>• Wall Mount Compatibility (Slim Fit / Full Motion Support)</li> <li>• User Manual &amp; E-Manual</li> </ul> <p><b>Minimum 3 years OEM warranty</b></p>	
3.	Video Wall Controller / Processor	<p><b>Multi-Screen Video Wall Controller including 08 (4K) Output Ports and 02 (4K) Input Ports.</b> Supply, installation, testing and commissioning of <b>industrial modular video wall controller</b> meeting the following minimum specifications:</p> <ul style="list-style-type: none"> <li>• <b>Chassis:</b> 19-inch <b>2.5U ATCA industrial rack-mount chassis</b></li> <li>• <b>Architecture:</b> <b>PCI-E bus modular card design</b></li> <li>• <b>Slots:</b> Minimum 5 slots</li> <li>• <b>Operating System:</b> <b>Embedded Linux</b></li> <li>• <b>Video Wall Capacity:</b> Support up to <b>32 LCD screens splicing with 3 additional outputs</b></li> <li>• <b>Video Decoding:</b> <ul style="list-style-type: none"> <li>○ <b>4 × 4K decoding @25fps</b></li> <li>○ <b>16 × 1080P decoding @25fps</b></li> <li>○ <b>32 × 720P decoding @25fps</b></li> <li>○ <b>64 × D1 decoding @25fps</b></li> <li>○ <b>Support H.265 video decoding</b></li> </ul> </li> <li>• <b>Input Interfaces:</b> HDMI / DVI-I / 3G-SDI / CVBS input cards</li> <li>• <b>Output Interfaces:</b> HDMI and 3G-SDI output cards</li> <li>• <b>Multi-Window Processing:</b> Support up to <b>32 layers window display</b></li> <li>• <b>Control:</b> PC client / Network keyboard / Tablet control</li> <li>• <b>Network:</b> Minimum <b>2 × Gigabit RJ-45 ports</b></li> <li>• <b>Power:</b> <b>Redundant power supply supported</b></li> <li>• <b>Cooling:</b> Smart temperature-controlled fan system</li> </ul> <p><b>Form Factor: Industrial rack-mount video wall controller system</b></p>	01

4.	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, 1×LAN (≥1GbE; 2.5GbE preferred), Windows 11 Pro genuine license.	1
5.	Professional LCD Monitor (Operator)	24" professional IPS monitor, FHD/2K resolution, HDMI & DP inputs, slim bezel, tilt/height adjustable	1
6.	24U Server / Network Rack Cabinet	Standard 19" rack, 24U height, lockable front & rear doors, fan tray, vertical cable managers, PDU shelf	1
7.	Rack-Mount Online UPS (6kVA + Batteries)	6 kVA online double-conversion UPS, rack-mount/tower type, external battery packs for extended backup, SNMP/monitoring slot	1
8.	HDMI Cable (4K)	HDMI 2.0/2.1, 4K@60Hz, 10m (or as required), good shielding, connectors + laying	1
9.	Conference System Control Unit	Digital discussion controller, mic modes, auto mic management, recording/output, camera tracking trigger, balanced I/O, expandable, support wireless microphone	1
10.	Chairman Unit (Motorized monitor lift + mic)	19" retractable monitor, integrated digital mic, priority control, voting/ID options, table cut-out & lift mechanism (Top Branded)	1
11.	Delegate Units (24 Seats)	Digital tabletop mic units, gooseneck mic, speaker, request-to-speak, headphone, ID/voting option	24
12.	Ceiling Speakers (10W)	6" ceiling speakers, 10W, 100V line, metal grille, clear speech tuning	6
13.	Power Amplifier (100-120W)	100V PA amplifier (100–120W), mixer inputs, protection, paging priority	2
14.	Wireless Lavalier Presenter Mic System	UHF wireless handheld microphone with diversity receiver	2
15.	Wireless Handheld Mic	UHF handheld, metal body, stable link, ~30-50m range	1
16.	Audio Mixer / DSP	6-8 mic/line inputs, digital EQ, compressor, feedback suppression, balanced outputs	1
17.	4K Dual-Eye Intelligent Tracking Camera	Dual-eye 4K PTZ camera, AI-based speaker/presenter tracking, auto-framing, USB plug-and-play	1
18.	Second PTZ / WideAngle Camera	PTZ or wide-angle camera for audience coverage, USB/HDMI output	1
19.	PTZ Joystick Controller	Professional PTZ joystick controller with presets, VISCA/IP control	1
20.	Managed PoE Network Switch	16-port PoE+ managed switch, VLAN, QOS, security features, 10G SFP+ uplinks	1
21.	Intelligent CCTV Camera (4MP AI)	4MP IP camera, AI analytics (human/vehicle), PoE, IR night vision, IP67	2

22.	Door Access / Smart Lock System	Smart door access controller with reader, power supply, access management	1
23.	Digital Pointer/ Presenter	Wireless presenter / air-mouse / laser pointer	1
24.	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	1
25.	Smoke Detector	Addressable/conventional smoke detector with base, installation & commissioning (Complete System)	1
26.	Fire Extinguisher (12kg)	ABC/DCP 12kg, bracket, standard rating	2
27.	LaserJet Printer Wi-Fi/Network	Mono laser A4, duplex, Wi-Fi + LAN, ~40+ ppm class	1
28.	USB Audio Interface	USB audio interface for VC mic feed, balanced I/O	
29.	Main electrical junction box / small DB	Safe power distribution	01
30.	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

1. ~~One~~-year warranty is mandatory for the equipment. (~~except~~ ~~LED~~)  
 Three

Revised after  
 Pre bid meeting  
  
 8/5/26