



Republic of the Philippine  
**TARLAC STATE UNIVERSITY**  
Romulo Blvd., San Vicente, Tarlac City  
Tel. No.: (045) 982 4630  
Website: www.tsu.edu.ph

# **Bidding Documents**

(This Bidding Documents is in conformance with the Sixth Edition of the Philippine Bidding Documents for the Procurement of Goods)

## **For the Project**

### **Supply, Delivery, Installation, and Configuration of Equipment for TSU Smart Classrooms**

**With an Approved Budget for the Contract (ABC) of  
Twenty Million Four Hundred Forty-Nine Thousand Pesos  
(₱ 20,449,000.00)**

**Invitation to Bid No. Goods 2023-034  
PhilGEPS Reference No.: 9924896**

**July 2020  
6<sup>th</sup> Edition**

# TABLE OF CONTENTS

<b>Glossary of Acronyms, Terms, and Abbreviations</b>	1
<b>Section I. Invitation to Bid</b>	4
<b>Section II. Instructions to Bidders</b>	6
1. Scope of Bid	6
2. Funding Information	6
3. Bidding Requirements	6
4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices	6
5. Eligible Bidders	6
6. Origin of Goods	7
7. Subcontracts	7
8. Pre-Bid Conference	7
9. Clarification and Amendment of Bidding Documents	7
10. Documents Comprising the Bid: Eligibility and Technical Components	7
11. Documents Comprising the Bid: Financial Component	7
12. Bid Prices	8
13. Bid and Payment Currencies	8
14. Bid Security	8
15. Sealing and Marking of Bids	8
16. Deadline for Submission of Bids	9
17. Opening and Preliminary Examination of Bids	9
18. Domestic Preference	9
19. Detailed Evaluation and Comparison of Bids	9
20. Post Qualification	10
21. Signing of the Contract	10
<b>Section III. Bid Data Sheet</b>	11
<b>Section IV. General Conditions of Contract</b>	12
1. Scope of Contract	12
2. Advance Payment and Terms of Payment	12
3. Performance Security	12
4. Inspection and Tests	12
5. Warranty	12
6. Liability of the Supplier	13
<b>Section V. Special Conditions of Contract</b>	14
<b>Section VI. Schedule of Requirements</b>	16
<b>Section VII. Technical Specifications</b>	17
<b>Section VIII. Checklist of Technical and Financial Documents</b>	27
<b>Section IX. Bidding Forms</b>	28

## ***Glossary of Acronyms, Terms, and Abbreviations***

**ABC** – Approved Budget for the Contract.

**BAC** – Bids and Awards Committee.

**Bid** – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

**Bidder** – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

**Bidding Documents** – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

**BIR** – Bureau of Internal Revenue.

**BSP** – Bangko Sentral ng Pilipinas.

**Consulting Services** – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

**CDA** - Cooperative Development Authority.

**Contract** – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

**CIF** – Cost Insurance and Freight.

**CIP** – Carriage and Insurance Paid.

**CPI** – Consumer Price Index.

**DDP** – Refers to the quoted price of the Goods, which means “delivered duty paid.”

**DTI** – Department of Trade and Industry.

**EXW** – Ex works.

**FCA** – “Free Carrier” shipping point.

**FOB** – “Free on Board” shipping point.

**Foreign-funded Procurement or Foreign-Assisted Project**– Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

**Framework Agreement** – Refers to a written agreement between a procuring entity and a supplier or service provider that identifies the terms and conditions, under which specific purchases, otherwise known as “Call-Offs,” are made for the duration of the agreement. It is in the nature of an option contract between the procuring entity and the bidder(s) granting the procuring entity the option to either place an order for any of the goods or services identified in the Framework Agreement List or not buy at all, within a minimum period of one (1) year to a maximum period of three (3) years. (GPPB Resolution No. 27-2019)

**GFI** – Government Financial Institution.

**GOCC** – Government-owned and/or –controlled corporation.

**Goods** – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

**GOP** – Government of the Philippines.

**GPPB** – Government Procurement Policy Board.

**INCOTERMS** – International Commercial Terms.

**Infrastructure Projects** – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

**LGUs** – Local Government Units.

**NFCC** – Net Financial Contracting Capacity.

**NGA** – National Government Agency.

**PhilGEPS** - Philippine Government Electronic Procurement System.

**Procurement Project** – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

**PSA** – Philippine Statistics Authority.

**SEC** – Securities and Exchange Commission.

**SLCC** – Single Largest Completed Contract.

**Supplier** – refers to a citizen, or any corporate body or commercial company duly organized and registered under the laws where it is established, habitually established in business and engaged in the manufacture or sale of the merchandise or performance of the general services covered by his bid. (Item 3.8 of GPPB Resolution No. 13-2019, dated 23 May 2019). Supplier as used in these Bidding Documents may likewise refer to a distributor, manufacturer, contractor, or consultant.

**UN** – United Nations.

# Section I. Invitation to Bid



Republic of the Philippine  
**TARLAC STATE UNIVERSITY**  
Romulo Blvd., San Vicente, Tarlac City  
Tel. No.: (045) 982 4630  
Website: www.tsu.edu.ph

## INVITATION TO BID

### For the Project

### Supply, Delivery, Installation, and Configuration of Equipment for TSU Smart Classrooms

#### Invitation to Bid No. Goods 2023-034

1. The Tarlac State University, through the General Appropriation Act (GAA) intends to apply the sum of Twenty Million Four Hundred Forty-Nine Thousand Pesos (₱ 20,449,000.00) to payments under the contract for the project: **Supply, Delivery, Installation, and Configuration of Equipment for TSU Smart Classrooms**, comprising of the following lots with their corresponding Approved Budget for the Contracts (ABCs)

Lot No.	Description	ABC, ₱
1	Smart Classroom System	13,099,000.00
2	Mobile Collaborative Board	7,350,000.00

Bids received in excess of the ABC for shall be automatically rejected at bid opening.

2. The Tarlac State University now invites bids for the project: **Supply, Delivery, Installation, and Configuration of Equipment for TSU Smart Classrooms**. Delivery of the Goods is required within one hundred twenty (120) calendar days from the receipt of the Notice to Proceed. Bidders must have completed, within the last five (5) years prior to the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II. Instructions to Bidders.
3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary “pass/fail” criterion as specified in the 2016 Revised Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184, otherwise known as the “Government Procurement Reform Act”.

Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines, and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, pursuant to RA 5183.

4. Interested bidders may obtain further information from **Tarlac State University** and inspect the Bidding Documents at the address given below during Tuesday to Friday from 7:00 A.M. to 6:00 P.M:

**BAC Secretariat**  
Motorpool and Administration Building  
Tarlac State University  
Romulo Blvd., San Vicente, Tarlac City  
Tel. No. (045) 606-8142 / 0998 846 0206  
Email: [bacsec@tsu.edu.ph](mailto:bacsec@tsu.edu.ph)

5. A complete set of Bidding Documents may be acquired by interested Bidders from **July 10, 2023 to August 1, 2023** from the aforementioned address upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, as indicated below.

Lot No.	Bidding Documents Fee, ₱
1	11,000.00
2	7,000.00

It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity, provided that Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids.

6. The Tarlac State University will hold a Pre-Bid Conference on **July 18, 2023 (2:00 P.M.)** at the Business Center Audio-Visual Room, 2nd Floor, Business Center Bldg., Tarlac State University, Romulo Blvd., San Vicente, Tarlac City, which shall be open to prospective bidders.
7. Bids must be duly received by the BAC Secretariat at the address below on or before **August 1, 2023, (2:00 P.M.)**.

**BAC Secretariat**  
Motorpool and Administration Building  
Tarlac State University  
Romulo Blvd., San Vicente, Tarlac City  
Tel. No. (045) 606-8142 / 0998 846 0206  
Email: [bacsec@tsu.edu.ph](mailto:bacsec@tsu.edu.ph)

8. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 14.
9. Bid opening shall be on **August 1, 2023, (2:00 P.M.)** at the Business Center Audio-Visual Room, 2nd Floor, Business Center Bldg., Tarlac State University, Romulo Blvd., San Vicente, Tarlac City. Bids will be opened in the presence of the bidders' representatives who choose to attend.
10. The Tarlac State University reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 Revised IRR of RA 9184, without thereby incurring any liability to the affected bidder or bidders.
11. For further information, please refer to:

Ms. Jhenna Micah A. Manankil/ Mr. Joshua Jonathan Jacinto  
BAC Secretariat  
Motorpool and Administration Building  
Tarlac State University  
Romulo Blvd., San Vicente, Tarlac City  
Tel. No. (045) 606-8142 / 0998 846 0206  
Email: [bacsec@tsu.edu.ph](mailto:bacsec@tsu.edu.ph)

**(SGD) DR. MURPHY P. MOHAMMED**  
BAC Chairperson

## Section II. Instructions to Bidders

### 1. Scope of Bid

- 1.1. The Tarlac State University wishes to receive Bids for the project: **Supply, Delivery, Installation, and Configuration of Equipment for TSU Smart Classrooms**, with identification number **Invitation to Bid No. Goods 2023-034**.
- 1.2. The procurement project (referred to herein as “Project”) is composed of two lots the details of which are described in Section VII. Technical Specifications.

### 2. Funding Information

- 2.1. The GOP through the source of funding as indicated below for **2023** in the amount of **₱ 20,449,000.00**.
- 2.2. The source of funding is the **General Appropriation Act**.

### 3. Bidding Requirements

- 3.1. The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.
- 3.2. Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or IB by the BAC through the issuance of a supplemental or bid bulletin.
- 3.3. The Bidder, by the act of submitting its Bid, shall be deemed to have verified and accepted the general requirements of this Project, including other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

### 4. Corrupt, Fraudulent, Collusive, and Coercive Practices

The Procuring Entity, as well as the Bidders and Suppliers, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

### 5. Eligible Bidders

- 5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.
- 5.2. Foreign ownership limited to those allowed under the rules may participate in this Project.
- 5.3. Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder must have a SLCC that is similar to the Project, as described in the **BDS**, with a value, adjusted to current prices using the PSA’s CPI, that is at least equivalent to fifty percent (50 %) of the ABC.
- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.1 of the 2016 IRR of RA No. 9184.

## 6. Origin of Goods

There is no restriction on the origin of goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN, subject to Domestic Preference requirements under **ITB** Clause 18.

## 7. Subcontracts

7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than twenty percent (20%) of the Project.

The Procuring Entity has prescribed that subcontracting is not allowed

## 8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and at the address indicated in paragraph 6 of the **IB**.

## 9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

## 10. Documents comprising the Bid: Eligibility and Technical Components

10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section VIII. Checklist of Technical and Financial Documents**.

10.2. The Bidder's **SLCC** as indicated in **ITB** Clause 5.3 should have been completed **within five (5) years** prior to the deadline for the submission and receipt of bids.

10.3. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. Similar to the required authentication above, for Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

## 11. Documents comprising the Bid: Financial Component

11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section VIII. Checklist of Technical and Financial Documents**.

11.2. If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification issued by DTI shall be provided by the Bidder in accordance with Section 43.1.3 of the 2016 revised IRR of RA No. 9184.

11.3. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.

11.4. For Foreign-funded Procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

## 12. Bid Prices

12.1. Prices indicated on the Price Schedule shall be entered separately in the following manner:

- a. For Goods offered from within the Procuring Entity's country:
  - i. The price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable);
  - ii. The cost of all customs duties and sales and other taxes already paid or payable;
  - iii. The cost of transportation, insurance, and other costs incidental to delivery of the Goods to their final destination; and
  - iv. The price of other (incidental) services, if any, listed in e.
- b. For Goods offered from abroad:
  - i. Unless otherwise stated in the **BDS**, the price of the Goods shall be quoted delivered duty paid (DDP) with the place of destination in the Philippines as specified in the **BDS**. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.
  - ii. The price of other (incidental) services, if any, as listed in **Section VII. Technical Specifications**.

## 13. Bid and Payment Currencies

13.1. For Goods that the Bidder will supply from outside the Philippines, the bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies, shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

13.2. Payment of the contract price shall be made in Philippine Pesos.

## 14. Bid Security

14.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

14.2. The Bid and bid security shall be valid until **November 29, 2023**. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

## 15. Sealing and Marking of Bids

15.1. Each Bidder shall submit one copy of the first and second components of its Bid.

15.2. The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

15.3. If the Procuring Entity allows the submission of bids through online submission or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be

digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

## **16. Deadline for Submission of Bids**

16.1. The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

## **17. Opening and Preliminary Examination of Bids**

17.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

17.2. The preliminary examination of bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

## **18. Domestic Preference**

18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 of the 2016 revised IRR of RA No. 9184.

## **19. Detailed Evaluation and Comparison of Bids**

19.1. The Procuring BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*," using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of the 2016 revised IRR of RA No. 9184.

19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe. In this case, the Bid Security as required by **ITB** Clause 15 shall be submitted for each lot or item separately.

19.3. The descriptions of the lots or items are indicated in **Section VII. Technical Specifications**, and the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.

19.4. The Project shall be awarded as one project having two lots that shall be awarded as separate contracts.

19.5. Except for bidders submitting a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation, all Bids must include the NFCC computation pursuant to Section 23.4.1.4 of the 2016 revised IRR of RA No. 9184, which must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder. For bidders submitting the committed Line of Credit, it must be at least equal to ten percent (10%) of the ABCs for all the lots or items participated in by the prospective Bidder.

## **20. Post-Qualification**

- 20.1. Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the **BDS**.

## **21. Signing of the Contract**

- 21.1. The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

## Section III. Bid Data Sheet

ITB Clause										
5.3	For this purpose, contracts similar to the Project shall be the supply and delivery of similar goods comprising the Project.									
7.1	No further instructions.									
12	The price of the Goods shall be quoted DDP Tarlac City, Philippines or the applicable International Commercial Terms (INCOTERMS) for this Project.									
14.1	<p>The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts:</p> <p style="margin-left: 40px;">a. The amount of not less than two percent (2 %) of ABC, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or</p> <p style="margin-left: 40px;">b. The amount of not less than five percent (5 %) of ABC if bid security is in Surety Bond.</p>									
19.3	<p>The ABC for the lots are:</p> <table border="1" style="margin-left: 40px; width: 100%;"> <thead> <tr> <th style="text-align: center;">Lot Number</th> <th style="text-align: center;">Description</th> <th style="text-align: center;">ABC, ₱</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Lot No. 1</td> <td>Smart Classroom System</td> <td style="text-align: right;">13,099,000.00</td> </tr> <tr> <td style="text-align: center;">Lot No. 2</td> <td>Mobile Collaborative Board</td> <td style="text-align: right;">7,350,000.00</td> </tr> </tbody> </table>	Lot Number	Description	ABC, ₱	Lot No. 1	Smart Classroom System	13,099,000.00	Lot No. 2	Mobile Collaborative Board	7,350,000.00
Lot Number	Description	ABC, ₱								
Lot No. 1	Smart Classroom System	13,099,000.00								
Lot No. 2	Mobile Collaborative Board	7,350,000.00								
20.2	No further requirements.									
21.2	No further requirements.									

## Section IV. General Conditions of Contract

### 1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

Additional requirements for the completion of this Contract shall be provided in the **Special Conditions of Contract (SCC)**.

### 2. Advance Payment and Terms of Payment

2.1. Advance payment of the contract amount is provided under Annex “D” of the revised 2016 IRR of RA No. 9184.

2.2. The Procuring Entity is allowed to determine the terms of payment on the partial or staggered delivery of the Goods procured, provided such partial payment shall correspond to the value of the goods delivered and accepted in accordance with prevailing accounting and auditing rules and regulations. The terms of payment are indicated in the **SCC**.

### 3. Performance Security

Within ten (10) calendar days from receipt of the Notice of Award by the Bidder from the Procuring Entity but in no case later than prior to the signing of the Contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR of RA No. 9184

### 4. Inspection and Tests

The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Project specifications at no extra cost to the Procuring Entity in accordance with the Generic Procurement Manual. In addition to tests in the **SCC, Section IV. Technical Specifications** shall specify what inspections and/or tests the Procuring Entity requires, and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

All reasonable facilities and assistance for the inspection and testing of Goods, including access to drawings and production data, shall be provided by the Supplier to the authorized inspectors at no charge to the Procuring Entity.

### 5. Warranty

6.1. In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier as provided under Section 62.1 of the 2016 revised IRR of RA No. 9184.

6.2. The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, repair or replace the

defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

## **6. Liability of the Supplier**

The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Supplier is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

## Section V. Special Conditions of Contract

GCC Clause	
1	<p><b>Delivery and Documents –</b></p> <p>For purposes of the Contract, “EXW,” “FOB,” “FCA,” “CIF,” “CIP,” “DDP” and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows:</p> <p>The delivery terms applicable to this Contract are delivered to Tarlac State University, Romulo Blvd., San Vicente, Tarlac City. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their destination.”</p> <p>Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI. Schedule of Requirements.</p>
	<p><b>Packaging –</b></p> <p>The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging case size and weights shall take into consideration, where appropriate, the remoteness of the Goods’ final destination and the absence of heavy handling facilities at all points in transit.</p> <p>The packaging, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified below, and in any subsequent instructions ordered by the Procuring Entity.</p> <p>The outer packaging must be clearly marked on at least four (4) sides as follows:</p> <p>Name of the Procuring Entity  Name of the Supplier  Contract Description  Final Destination  Gross weight  Any special lifting instructions  Any special handling instructions  Any relevant HAZCHEM classifications</p> <p>A packaging list identifying the contents and quantities of the package is to be placed on an accessible point of the outer packaging if practical. If not practical the packaging list is to be placed inside the outer packaging but outside the secondary packaging.</p>
	<p><b>Transportation –</b></p> <p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP, or DDP, transport of the Goods to the port of destination or such other named place of destination in the Philippines, as shall be specified in this Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.</p>

	<p>Where the Supplier is required under this Contract to transport the Goods to a specified place of destination within the Philippines, defined as the Project Site, transport to such place of destination in the Philippines, including insurance and storage, as shall be specified in this Contract, shall be arranged by the Supplier, and related costs shall be included in the contract price.</p> <p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, Goods are to be transported on carriers of Philippine registry. In the event that no carrier of Philippine registry is available, Goods may be shipped by a carrier which is not of Philippine registry provided that the Supplier obtains and presents to the Procuring Entity certification to this effect from the nearest Philippine consulate to the port of dispatch. In the event that carriers of Philippine registry are available but their schedule delays the Supplier in its performance of this Contract the period from when the Goods were first ready for shipment and the actual date of shipment the period of delay will be considered force majeure.</p> <p>The Procuring Entity accepts no liability for the damage of Goods during transit other than those prescribed by INCOTERMS for DDP deliveries. In the case of Goods supplied from within the Philippines or supplied by domestic Suppliers risk and title will not be deemed to have passed to the Procuring Entity until their receipt and final acceptance at the final destination.</p>
	<p><b>Intellectual Property Rights –</b></p> <p>The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.</p>
4	<p>The inspections and tests that will be conducted are: visual and sensory inspection and test.</p>

## **Section VI. Schedule of Requirements**

The delivery date for the Goods covered by the Contract shall be within one hundred twenty (120) calendar days upon receipt of the Notice to Proceed.

## Section VII. Technical Specifications

Item No.	Description
<b>Lot No. 1 – Smart Classroom System</b>	
1.	<p><b>Smart Collaboration Board</b></p> <p>Physical:            Net Weight: 86": 62.0 kg            Gross weight: 86": 73.5 kg            Product dimensions (W x H x D): 6": 1953.0 mm x 1157.0 mm x 91.8 mm            Color: Jade White</p> <p>Components:            Device x 1: 86"            OPS: i5            Remote Control: Optional</p> <p>Note: VESA mounting sizes are M8 x 25 mm (800 mm x 400 mm for 86") Screen            Stylus pens x 2: PET pen tip/anti-slip pen body/magnetic attachment            Cables: Power cable x 1            Wall-mounted bracket: Supports 86"</p> <p>Screen:            Resolution: UHD 4K (3840 x 2160)            Screen lamination: Zero-gap bonding            Number of touch points: 20            Screen brightness: 350 nits (typical luminance)            Viewing angle: 178°            Color depth: 10-bit (8-bit + FRC)            Screen refresh rate: 60 Hz            Contrast: 1200:1 (typical value)            Glass hardness: ≥7H            Backlight type: D-LED            Aspect ratio: 16:9</p> <p>Eye Protection:            Optical anti-blue light: Supported            Low Blue Light (Hardware Solution) Certification: √            Anti-glare: Supported            Eye Comfort Certification: √            Adaptive brightness: Supported</p> <p>Projection:            Wireless projection effect: Up to 4K30            Projection method: projection code, HDMI, Type-C wired projection            App Share Key: Projection through code            Wired projection effect: 4K60            Reverse control: Supported            Client OS: Android/Windows/iOS/macOS            Annotation during projection: Supported            Wireless Connection:            Dual Wi-Fi module: √            Wi-Fi frequency: 2.4 GHz/5 GHz</p> <p>Speaker:            Frequency domain: 100 Hz to 20 kHz            Speaker unit: 2 x full-frequency speaker; 2 x high-frequency speaker            Stereo sound: Supported</p> <p>System:            CPU: 4-core            OS: Android 9.0; Windows 10 (OPS)            RAM: 4GB            Flash: 32GB</p> <p>Ports:            Front-panel ports: USB Type-C x 1; USB Type-A 3.0 x 2            Side-panel ports: USB Type-A 3.0 x 1; USB Type-B x 1; HDMI (input) x 2; HDMI (output) x 1;            COM port x 1; RJ45 network port x 1; 80-pin OPS port x 1; 3.5 mm (line-in) x 1; 3.5 mm (line-out) x 1</p> <p style="text-align: right;">Accessories:            Wireless Sharing Button</p> <p><b>COMPATIBILITY</b>            Operating systems: Windows: Windows7/8/8.1/10, 32 and 64 bits</p>

	<p><b>VIDEO RESOLUTION</b>  PC Screen: 640x480, 800x600, 1024x768, 1152x864, 1280x600, 1280x720, 1280x768, 1280x800, 1280x960, 1280x1024, 1360x768, 1366x768, 1440x900, 1400x1050, 1600x900, 1600x1200, 1680x1050, 1920x1080, 1920x1200, 2048x1536, 2560x1600, 2880x1620, 2880x1800, 3200x1800, 3840x2160, Scaling is performed if the resolution exceeds the above.  Local Screen: Windows: 4K 15fps/ 1 080p 60fps</p> <p><b>AUDIO FEATURES</b>  Local Audio: 48K dual-channel lossless audio playback  Shared Audio: Share audio can be played at remote sites</p> <p><b>SECURITY and RELIABILITY</b>  Connect Distance: Less than or equal to 20m  Data Security: Tls encryption</p> <p><b>WIRELESS</b>  Protocols: 802.11 a/g/n  Mode: Client  Authentication: WPA2-PSK</p> <p><b>PORTS:</b>  USB Port: 1 X USB device type A port</p> <p><b>PHYSICAL SPECIFICATIONS:</b>  Dimensions(H x W x D): Product dimensions: 177.27 mm x 65 mm x 19.8 mm; Net weight: 85g  Electricity Supply Requirements: Maximum power consumption: Less than or equal to 1.5w  Environmental Requirements: Working temperature: 0-40 °C; Storage temperature: -20°C - 60°C;  Relative humidity: &lt;850/orh; Altitude: Less than or equal to 5000*</p>
2.	<p><b>Digital Board</b>  Outline size(single board) 1114*1166.1*45mm  Board active size: 1084.6*1091.2mm/60.6inch  Board material: Whiteboard (3 layers: cold steel surface with nano paint, anti-glare≥0.3mm, middle high density  poly-foam≥13mm, back galvanized steel sheet ≥0.2mm, paint thickness≥4H  Touch technology: Infrared sector oblique scanning induction mode  Response object: Finger, pen, chalk, any opaque object  Touchpoint: Single touch  Touch resolution: 32768*32768/4096*4096  Accuracy: ≤2mm  Interface Support: USB2.0/USB3.0  Waterproof/dustproof: ≥IP55  Work temperature: -10°C~45°C  Work humidity: 0%-90%  Work voltage: DC 4.6V-DC 5V  Power consumption: &lt;1W ( 200mA at 5V)  Gesture response: Eraser or cloth clean the board surface, digital mark also can be cleaned Display delay Digital board writing display on the IFPD ≤120ms  File save: Support digital board writing local save and share via QR code  Hotkey icons: Must have preview, page up, page down, red, white, yellow pens, save, vote, screen clean functions.  Interactivity: Digital board and IFPD support work separately, also support interactive work, the digital board writing can display on the IFPD, and other interactive operation.  Writing mode: Software support single board writing display on the full screen, also support dual boards display on the same screen, and can save the writing contents as original display ratio.  color: Digital mark can be red, white and yellow color  Vote function: Support quick voting and result statistics through QR code, including single voting, multiple voting or voting, without downloading software  Original handwriting restoration: IFPD display digital mark all the same as digital board writing  Display position: ABA structure, user can set both sides board contents display on the left or right side of the screen as wish</p>
3.	<p><b>Student Camera</b>  CAMERA:  Sensor: 1/2.5'', CMOS, Effective Pixel: 8.51M  Scanning Mode: Progressive  Lens Mount: M12  Lens 1 Focus: f=7.35mm, FOV: 46°  Lens 2(Default) Focus: f=3.5mm, FOV: 84°  Lens 1 Focus: f=2.8mm, FOV: 120°  Autofocus Support (120° does not support)  Digital zoom 8X  Minimal Illumination 0.5 Lux @ (F1.8, AGC ON)</p>

	<p>Shutter 1/30s ~ 1/10000s  1/30s ~ 1/10000s Auto, Indoor, Outdoor, One Push, Manual,  Specified color temperature  Digital Noise 2D, 3D digital noise reduction  Network Features:  Video Compression H.265 / H.264 / MJPEG  Video Stream The first, second, third, fourth stream  The First Stream 1920x1080, 1280x720, 1024x576, 960x540,640x480, 640x360  The Second Stream 3840x2160, 1920x1080, 1920x1080,1280x720, 1024x576, 720x576(50Hz),  720x480(60Hz),720x408,  640x360, 480x270, 320x240, 320x180  The Third Stream 1024x576, 960x540, 720x576(50Hz),720x480(60Hz), 720x408, 640x360,  480x270, 320x240,320x180  The Fourth Stream 1024x576, 960x540, 720x576(50Hz), 720x480(60Hz), 720x408, 640x360,  480x270,320x240,320x180  Video Bit Rate 32Kbps ~ 10240Kbps  Bit Rate Type Variable Rate, Fixed Rate  Frame Rate 50Hz: 1fps ~ 25fps, 60Hz: 1fps ~ 30fps  Audio Compression AAC  Audio Bit Rate 48Kbps, 64Kbps, 96Kbps, 128Kbps  Support protocols TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP,  Blacklight: Support  EPTZ: Support  PoE: Support  Auto Tracking: Teacher mode / Student mode (supported)  INPUT/OUTPUT INTERFACE  HD Output  1x3G-SDI: BNC type, 800mVp-p, 75Ω, Along to SMPTE 424M standard, Support PoC  USB Interface: 1xUSB2.0: Type A  Network Interface: 1xRJ45: 10M/100M/1000M Ethernet Interface, PoE Support  Audio Interface: 1-ch: Line In, 3pin Phoenix Port  Communication: 1xRS485: 2pin Phoenix Port, Max Distance: 1200m, Protocol: VISCA/Pelco-D/Pelco-P  Power Jack: DC005 type (DC 12V)  GENERAL SPECIFICATION  Input Voltage: DC 12V / PoE (IEEE802.3af) / PoC  Current: 0.5A(Max)  Operating: -10°C ~ 40°C (14°F ~ 104°F)  Storage: -40°C ~ 60°C (-40°F ~ 140°F)  Power Consumption: 6W(Max)  Size: 72mm x 60mm x 130mm (not include the protruding part)  Net Weight: 0.45kg  MTBF: 30000h</p>
4.	<p><b>Teacher Camera</b>  Sensor: 1/2.5", CMOS, Effective Pixel: 8.51M  Scanning Mode: Progressive  Lens Mount: M12  Lens 1 Focus: f=7.35mm, FOV: 46°  Lens 2(Default) Focus: f=3.5mm, FOV: 84°  Lens 1 Focus: f=2.8mm, FOV: 120°  Autofocus Support (120° does not support)  Digital zoom 8X  Minimal Illumination 0.5 Lux @ (F1.8, AGC ON)  Shutter 1/30s ~ 1/10000s  1/30s ~ 1/10000s Auto, Indoor, Outdoor, One Push, Manual,  Specified color temperature  Digital Noise 2D, 3D digital noise reduction  Network Features:  Video Compression H.265 / H.264 / MJPEG  Video Stream The first, second, third, fourth stream  The First Stream 1920x1080, 1280x720, 1024x576, 960x540,640x480, 640x360  The Second Stream 3840x2160, 1920x1080, 1920x1080,1280x720, 1024x576, 720x576(50Hz),  720x480(60Hz),720x408, 640x360, 480x270, 320x240, 320x180  The Third Stream 1024x576, 960x540, 720x576(50Hz),720x480(60Hz), 720x408, 640x360,  480x270, 320x240,320x180  The Fourth Stream 1024x576, 960x540, 720x576(50Hz), 720x480(60Hz), 720x408, 640x360,  480x270, 320x240,320x180</p>

	<p>Video Bit Rate 32Kbps ~ 10240Kbps  Bit Rate Type Variable Rate, Fixed Rate  Frame Rate 50Hz: 1fps ~ 25fps, 60Hz: 1fps ~ 30fps  Audio Compression AAC  Audio Bit Rate 48Kbps, 64Kbps, 96Kbps, 128Kbps  Support protocols TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP,  Blacklight: Support  EPTZ: Support  PoE: Support  Auto Tracking: Teacher mode / Student mode (supported)  INPUT/OUTPUT INTERFACE  HD Output  1x3G-SDI: BNC type, 800mVp-p, 75Ω, Along to SMPTE 424M standard, Support PoC  USB Interface: 1xUSB2.0: Type A  Network Interface: 1xRJ45: 10M/100M/1000M Ethernet Interface, PoE Support  Audio Interface: 1-ch: Line In, 3pin Phoenix Port  Communication: 1xRS485: 2pin Phoenix Port, Max Distance: 1200m, Protocol: VISCA/Pelco-D/Pelco-P  Power Jack: DC005 type (DC 12V)  GENERAL SPECIFICATION  Input Voltage: DC 12V / PoE (IEEE802.3af) / PoC  Current: 0.5A(Max)  Operating: -10°C ~ 40°C (14°F ~ 104°F)  Storage: -40°C ~ 60°C (-40°F ~ 140°F)  Power Consumption: 6W(Max)  Size: 72mm x 60mm x 130mm (not include the protruding part)  Net Weight: 0.45kg  MTBF: 30000h</p>
5.	<p><b>1-Unit Digital Sound Processor</b></p> <ol style="list-style-type: none"> <li>1. Industrial embedded Architecture, Embedded design, Stable and reliable;</li> <li>2. Audio signal can be transmitted through USB interface and analog interface, Remote software upgrade and parameter configuration are possible;</li> <li>3. Integrated automatic noise suppression technology, (Remove noise interference including air conditioner, exhaust fan, etc.) Ensure sound quality;</li> <li>4. 6-way microphone input, Support software 48V phantom power on and off;</li> <li>5. 3-channel mono line in input; 3.5mm interface and terminal double backup;</li> <li>6. 3-channel mono line out output; 3.5mm interface and terminal double backup;</li> <li>7. 6-balanced inputs can be processed with 16 EQ segments (Other inputs and outputs are not subject to EQ processing);</li> <li>8. Intelligent mixing function: Automatically adjust the output level of the system according to the number of microphones turned on;</li> <li>9. Reduce reverberation function: Automatic switching between wireless microphone and hanging microphone; The anti-reverberation level is adjustable;</li> <li>10. With one key debugging function: Briefly press the key on the host, and the host will automatically configure the corresponding equipment parameters according to the sound field data;</li> <li>11. Echo cancellation function: AEC process the microphone, the reference signal is remote audio signal, and the echo processing delay ability: 128ms, 256ms, 512ms;</li> <li>12. With AGC function, Prevent breaking sound when many people speak loudly;</li> <li>13. Built-in no less than two USB interfaces and one network interface, Software upgrade and parameter configuration are available;</li> <li>14. It has the function of environmental sound field detection, It can detect the reverberation time of different frequency bands, Background noise, STI, C50 and other acoustic parameters, to cope with all kinds of complex classroom acoustic environment;</li> <li>15. Echo rejection ratio: &gt;60dB</li> <li>16. sampling rate: 48K</li> <li>17. Sampling bits: 32位</li> <li>18. dynamic range: 90db</li> <li>19. Steady-state noise cancellation ratio: 30dB</li> <li>20. frequency response: 20Hz-20KHz</li> <li>21. Maximum gain: 59dB</li> </ol> <p>8-Units Ceiling Microphone  frequency response 100Hz~18KHz  Sensitivity -40dB±3 dB (re 0dB=1V/Pa@1kHz)  Pointing characteristics Ultra-Cardioid ≤135°  Output impedance 200Ω±30%  Output amplitude Max 300mV</p>

	<p>Maximum withstand sound pressure 110dB SPL (A计权@1KHzTHD≤1%)</p> <p>dynamic range 76dB (A)</p> <p>Signal to noise ratio 60dB (A) (re 94dBSPL=1Pa@1KHz)</p> <p>Power Supply DC48V</p> <p>Output connector XLR-3-12C</p> <p>Accessories Windproof sponge cover" 4-Units Speaker</p> <p>Loudspeaker 4.5" (4Ω)</p> <p>Sub box sensitivity (1m@2V) 87dB</p> <p>Frequency Response 80Hz~18KHz</p> <p>Rated power 30W</p> <p>output power L:15W R:15W</p> <p>Total harmonic distortion L:0.25% R:0.25%</p> <p>Input sensitivity 700mV</p> <p>Signal to noise ratio 74dB (power : 1W/4Ω)</p> <p>Input interface red (+) black (-)</p> <p>Speaker weight (Two) 5.8kg"</p>
6.	<p><b>Teacher Monitor</b></p> <p>Screen Size: 55"</p> <p>Resolution: 4K</p> <p>Screen materials: LCD</p> <p>Refresh Rate: 120hz</p> <p>Screen Brightness: 350 nits (typical luminance)</p> <p>Contrast: 5000:1 (typical value)</p> <p>Aspect Ratio: 16:9</p> <p>Backlight Type: Direct LED</p> <p>Operating System: Harmony OS</p> <p>Intelligent Ability: MeeTime Video Call, MeeTime Video Call Transfer, Home Camera, OneHop Projection,</p> <p>Mirror Control, Distributed Gaming, AI Voice, AI Speaker Mode</p> <p>Memory:</p> <p>Operation Memory (RAM): 3 GB</p> <p>Internal Storage (ROM): 32 GB</p> <p>Quantity of Speakers: Two 10 W full frequency speakers and two 10 W tweeters</p> <p>Remote Control: Bluetooth voice remote control and OneHop Projection by NFC technology</p> <p>Wi-Fi Frequency: 2.4 GHz/5 GHz</p> <p>Interface: HDMI 2.0 x 3, AV In x 1, USB 3.0 x 1, SPDIF (coaxial) x 1</p>
7.	<p><b>Access Point/Router</b></p> <p>WiFi Category: Wi-Fi 6</p> <ul style="list-style-type: none"> <li>• IEEE 802.11ax/ac/n/a 5 GHz</li> <li>• IEEE 802.11ax/n/b/g 2.4 GHz</li> </ul> <p>WiFi Speeds: AX7800</p> <ul style="list-style-type: none"> <li>• 5 GHz-1: 4804 Mbps (802.11ax, HE160)</li> <li>• 5 GHz-2: 2402 Mbps (802.11ax)</li> <li>• 2.4 GHz: 574 Mbps (802.11ax)</li> </ul> <p>WiFi Range: 4 Bedroom Houses</p> <p>8× Fixed High-Performance Antennas</p> <p>Multiple antennas form a signal-boosting array to cover more directions and large areas</p> <p>Beamforming</p> <p>Concentrates wireless signal strength towards clients to expand WiFi range</p> <p>High-Power FEM</p> <p>Improves transmission power to strengthen signal coverage</p> <p>4T4R</p> <p>Multiple streams in the same band strengthen the fault tolerance in transmission</p> <p>WiFi Capacity: Very High</p> <p>Tri-Band</p> <p>Allocate devices to different bands for optimal performance</p> <p>4×4 MU-MIMO</p> <p>Simultaneously communicates with multiple MU-MIMO clients</p> <p>OFDMA: Simultaneously communicates with multiple Wi-Fi 6 clients</p> <p>Airtime Fairness: Improves network efficiency by limiting excessive occupation</p> <p><b>HARDWARE</b></p> <p>Processor: 1.7 GHz Quad-Core CPU</p>

	<p>Ethernet Ports</p> <ul style="list-style-type: none"> <li>• 1× 2.5 Gbps WAN/LAN Port</li> <li>• 1× 1 Gbps WAN/LAN Port</li> <li>• 3× 1 Gbps LAN Ports</li> </ul> <p>SECURITY</p> <p>WiFi Encryption</p> <ul style="list-style-type: none"> <li>• WPA</li> <li>• WPA2</li> <li>• WPA3</li> <li>• WPA/WPA2-Enterprise (802.1x)</li> <li>• SPI Firewall</li> <li>• Access Control</li> <li>• IP &amp; MAC Binding</li> <li>• Application Layer Gateway</li> </ul> <p>FEATURES</p> <p>WAN TYPES: • Dynamic IP, Static IP, PPPoE, PPTP, L2TP</p> <p>Quality of Service: QoS by Device</p> <p>NAT Forwarding: Port Forwarding, Port Triggering, DMZ, UPnP</p> <p>DHCP: Address Reservation, DHCP Client List, Server</p>
8.	<p><b>PoE Switch</b></p> <p>Interface: 8 10/100/1000Mbps RJ45 Ports</p> <p>Network Media: 1000BASE-T: UTP category 5, 5e, 6 or above cable</p> <p>Packet Forwarding Rate: 11.904 Mpps</p> <p>PoE+ Ports(RJ45)                      Standard: 802.3af/at compliant</p> <p>PoE+ Ports: 8 Ports</p> <p>Mac Address Table: 4K</p> <p>Buffer Size:1.5Mbits</p> <p>Jumbo Frame: 16 KB</p> <p>Switching Capacity: 16Gbps</p> <p>Advanced Features: Compatible With IEEE 802.3af/at Compliant PDs, Priority Function, Mac Address Auto-Learning And Auto-Aging, IEEE802.3x Flow Control For Full-Duplex Mode And Backpressure For Half-Duplex Mode</p> <p>Transfer Method: Store-And-Forward</p>
9.	<p><b>Uninterrupted Power Supply (UPS)</b></p> <p>Main</p> <p>Main Input Voltage: 230 V</p> <p>Other Input Voltage: 220 V; 240 V</p> <p>Main Output Voltage: 230 V</p> <p>Rated power in W: 600 W</p> <p>Rated power in VA: 1000 VA</p> <p>Input Connection Type: IEC 320 C14</p> <p>Output connection type: 8 IEC 320 C13; 2 IEC Jumpers</p> <p>Battery type: Lead-acid battery</p> <p>Provided equipment: CD with software; Documentation CD; USB cable</p> <p>General</p> <p>Number of power module filled: 0 slots</p> <p>Number of power module free: slots 0</p> <p>Product web sub-family: Entry level</p> <p>Redundant: No</p> <p>Physical</p> <p>Color: Black</p> <p>Height: 21.9 cm</p> <p>Width: 17.1 cm</p> <p>Depth: 43.9 cm</p> <p>Net weight: 17.27 kg</p> <p>Mounting location: Front</p> <p>Mounting preference: No preference</p> <p>Mounting mode: Not rack-mountable</p> <p>Two post mountable: 0</p> <p>USB compatible: Yes</p> <p>Input</p> <p>Input voltage limits: 170...300 V adjustable; 180...287 V</p> <p>Network frequency: 50/60 Hz +/- 3 Hz auto-sensing</p> <p>Output</p> <p>Harmonic distortion: Less than 5 % at full load</p> <p>Maximum configurable power in VA: 1000 VA</p>

	<p>Maximum configurable power in W: 600 W  UPS type: Line interactive  Wave type: Sine wave  Output frequency: 50/60 Hz +/- 3 Hz sync to mains  Conformance  Product certifications: CE; CSA; GOST; VDE; EAC  Standards: EN/IEC 62040-1:2019/A11:2021; EN/IEC 62040-2:2006/AC:2006; EN/IEC 62040-2:2018  Environmental  Acoustic level: 41 dBA  Heat dissipation: 100 Btu/h  Operating altitude: 0...10000 ft  Ambient air temperature for operation: 0...40 °C  Ambient air temperature for storage: -15...45 °C  Storage altitude: 0.00...15240.00 m  Relative humidity: 0...95 %  Storage Relative Humidity: 0...95 %  Batteries &amp; Runtime  Extended runtime: 0  Number of battery filled slots: 0  Number of battery free slots: 0  Battery recharge time: 3 h  Number of battery replacement quantity: 1  Battery life: 3...5 year(s)  Battery power in VAH: 170 VAh runtime  Battery charger power: 56 W rated  Communications &amp; Management  Control panel: Multifunction LCD status and control console  Free slots: 0  Alarm: Alarm when on battery: distinctive low battery alarm: configurable delays  Surge Protection and Filtering  Surge energy rate: 455 J  Noise suppression: Full-time multi-pole noise filtering: 0.3% IEEE surge let-through: zero clamping response time: meets UL 1449</p>
10.	<p><b>Data Cabinet</b>  9U (600mm x 590mm x 510mm)  Toughed glass door w/ lock, Removable side panels (not vented), side locks (optional)  Cable entry on both of top cover and bottom panel, Powder coated, black  6-outlet all-usage PDU with main switch 2.5m-length cable (220V,3prong,10A)  2-Cooling fan 220V</p>
11.	<p>Acoustic Panel, 12x12 Acoustic Panels for soundproofing (Color: Gray) for Two (2) Smart Classrooms</p>
	<p>Scope of Work including Installation and Configuration  1. Mounting of Smart Collaboration Board, Digital Board, Student and Teacher Camera, ceiling microphone, speakers, data cabinet, and Teacher monitor  2. Cable laying of microphone, speakers, HDMI, UTP cable, and other accessories connection  3. Configuration of DSP, Student and Teacher camera, Refocus Student and Teacher camera, Smart Collaboration Board and Digital Board  4. Testing and fine-tuning  5. Admin. and user training including trouble shooting  6. All accessories are compatible with the Smart Collaboration Board  7. Installation of acoustic panel  Technical Support Service and Product Warranty for one (1) year  *Warranty for all components and workmanship of the project  *Warranty on all parts and labor by authorized technical support  Hardware replacement of the product in case On-Site Repair is not successful.  *With Email-Based Support  *With Phone-Based Support  *With Remote-Based Support  *On Site-Based Support, if necessary, shall be provided on the next business day.</p>
	<p><b>Lot No. 2 – Mobile Collaboration Board</b></p>
1.	<p><b>Smart Collaboration Board with Trolley</b>  Product Features:  Next-gen hardware platform: 8-core dual-engine driver  4K soft light screen: Optical anti-blue light, adaptive to ambient light  Ultra-narrow frame: Seamless zero-gap lamination and aerospace-grade nano-coating</p>

<p>Smart camera: Lens cover offers physical privacy protection</p> <p>Dual-system one-tap switchover: OPS swap-free</p> <p>Centralized front panel ports: NFC, Type-C, USB 3.0, and power button</p> <p>BYOM: Seamless transfer; Multiple transfer methods</p> <p>HD Intelligent Meeting: Supports 1080p audio and video, 4K data sharing, and dual-stream meetings; Features H.264 + H.265 dual protocols, HD hardware encoding and decoding, and fully upgraded on-premises conferences</p> <p>Powerful AI capabilities:</p> <p>Voice tracking: Always keep the speaker in the center</p> <p>Auto-Framing: Automatically identifies the best angle for multiple participants</p> <p>Acoustic baffle: Shields external noise and adapts to various meeting rooms</p> <p>4K video conferencing camera:</p> <p>4K 30 fps 1.5 <math>\mu</math>m optical sensor: Doubled signal-to-noise ratio (SNR)</p> <p>Circulating heat dissipation design: 3000-hour high-temperature test reassures consistent resolution even after long meetings</p> <p>3D stereo field for cinematic sound experience: Ultra-large sound cavity   Max. 95 dB sound pressure</p> <p>Acoustic Engine 2.0: 12-meter ultra-long-distance sound pickup; DNN-based dereverberation2; Audio echo cancellation algorithm</p> <p>Imaging algorithm: TV distortion &lt; 2% for natural image</p> <p>Wi-Fi 6 for Direct Projection:</p> <p>Dual-band dual-Wi-Fi module: No interference between internet connection and projection</p> <p>More projection methods: Share Key App with code; Type-C and HDMI cables for projection</p> <p>Intelligent Whiteboard:</p> <p>16 ms ultra-low writing latency: Synchronous and precise writing on screen</p> <p>Multiple pen thicknesses in full color: Optional handwriting thickness and unlimited color choices</p> <p>Multi-touch gestures: Select, move, zoom, and erase with gestures</p> <p>Scan to take away: Scan the QR code to take away whiteboard content</p> <p>Handwriting recognition: Converting handwriting and drawings to digital forms</p> <p>Full-screen annotation: Taking a snapshot of any page and pasting it to the whiteboard for annotation</p> <p>Remote bidirectional collaboration: Share whiteboard content for real-time collaboration</p> <p>Co-authoring: Two people can write on the whiteboard concurrently</p> <p>Boundless Collaboration for Smart Office:</p> <p>Multi-Window for efficient multitasking: Multiple local collaboration and discussion tasks can be displayed simultaneously; App switching-free during collaboration; Browse information while writing on the whiteboard at the same time; Supports multi-app screen linkage with adjustable window ratios (1:1/1:2), adapting to more scenarios</p> <p>App Multiplier for user-friendly interaction: Removes black bars of apps and optimizes multi-window display effect of more apps; App Multiplier is supported by more than 1,0001 apps; Displays an app in dual windows</p> <p>Open and Fast Integration:</p> <p>Open architecture: Adapts to the video hardware codec to provide 1080p HD video conferencing</p> <p>Open SDKs: Integrates the whiteboard and meeting SDK plug-ins into enterprise office apps</p> <p>App Manager for Intelligent O&amp;M:</p> <p>Remote management of multiple devices: Basic device configuration; Remote OTA updates; Remote shutdown; Boot screen and bulletin board push</p> <p>Fast and precise fault locating and diagnosis: Fault alarm notification; Self-service diagnosis of typical faults</p> <p>Customizable HiBoard Welcome Page: Multiple templates; Supports image import</p> <p>Bulletin Board for Enterprise Marketing: Unified management and scheduled push based on regions and organizations; Flexible advertising design allows up to 50 images to be played in turn</p> <p>Physical:</p> <p>Product dimensions (H x W x D): 86": 1212.0 mm x 1953.0 mm x 91.8 mm</p> <p>Net weight: 86": 62.0 kg</p> <p>Component:</p> <p>Rolling stand: 86"</p> <p>Stylus pen: 2</p> <p>Wall-mounted bracket: 86"</p> <p>Cable: 1 x power cable</p> <p>Screen:</p>
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<p>Resolution: 4K (3840 x 2160 pixels)  Backlight type: D-LED  Screen lamination: Zero-gap bonding</p> <p>Writing:  Latency: 16ms  Touch sensing distance: ≤ 1.5 mm  Intelligent writing recognition: Supports recognition of Chinese; English; 11 types of graphics</p> <p>Camera:  Resolution: 1800 lines  Horizontal FoV: 80°  Sensor pixel size: 1.5 μm x 1.5 μm  Zoom: 2x digital zoom  Lens cover: √  TV distortion: &lt;2%</p> <p>Speaker:  Frequency domain: 80 Hz to 20 kHz  Quantity: 2 x high-frequency speaker+2 x full-frequency speaker  Maximum power: 40W</p> <p>Microphone:  Sound pickup angle: 180°  Optimized sound pickup: Sound source location; echo cancellation; automatic gain control  Sound pickup distance: 12m  Frequency domain: 80 Hz to 20 kHz</p> <p>Conferencing:  Dual streams (audio/video + data sharing): On-premises conference: 1080p 30 fps + 1080p 30 fps/4K 8 fps</p> <p>AI Function:  Auto-Framing: Supported  Intelligent tracking: Supported  DNN-based dereverberation: Supported</p> <p>System:  CPU: 8-core A73  Operating system: Harmony OS; Windows  RAM: 8GB  Security: Embedded encryption chip that supports H.235; STARTTLS; TLS; SRTP encryption; secure boot; TEE  Flash: 64GB  Language: Simplified Chinese; English; French; Japanese; Arabic; Spanish</p> <p>Wireless Connection:  Wi-Fi module: Wi-Fi 6  Wi-Fi frequency: 2.4 GHz + 5 GHz  NFC: Supported</p> <p>Interface:  Video input: 1 x HDMI (up to 4K)  Video output: 1 x HDMI (up to 4K)  Audio input: 1 x 3.5 mm LINE IN; 1 x HD-AI  Audio output: 1 x 3.5 mm LINE OUT  Other ports: 3 x USB Type-A 3.0; 1 x USB Type-C; 1 x RJ45 (10/100/1000 Mbit/s LAN)</p> <p>Accessories:  Wireless Sharing Button</p> <p>COMPATIBILITY  Operating systems: Windows: Windows7/8/8.1/10, 32 and 64 bits</p> <p>VIDEO RESOLUTION  PC Screen: 640x480, 800x600, 1024x768, 1152x864, 1280x600, 1280x720, 1280x768, 1280x800, 1280x960, 1280x1024, 1360x768, 1366x768, 1440x900, 1400x1050, 1600x900, 1600x1200, 1680x1050, 1920x1080, 1920x1200, 2048x1536, 2560x1600, 2880x1620, 2880x1800, 3200x1800, 3840x2160, Scaling is performed if the resolution exceeds the above.  Local Screen: Windows: 4K 15fps/ 1 080p 60fps</p> <p>AUDIO FEATURES  Local Audio: 48K dual-channel lossless audio playback  Shared Audio: Share audio can be played at remote sites</p>
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	<p><b>SECURITY and RELIABILITY</b>  Connect Distance: Less than or equal to 20m  Data Security: Tls encryption</p> <p><b>WIRELESS</b>  Protocols: 802.11 a/g/n  Mode: Client  Authentication: WPA2-PSK</p> <p><b>PORTS:</b>  USB Port: 1 X USB device type A port</p> <p><b>PHYSICAL SPECIFICATIONS:</b>  Dimensions(H x W x D): Product dimensions: 177.27 mm x 65 mm x 19.8 mm; Net weight: 85g  Electricity Supply Requirements: Maximum power consumption: Less than or equal to 1.5w  Environmental Requirements: Working temperature: 0-40 °C; Storage temperature: -20°C - 60°C;  Relative humidity: &lt;85/orh; Altitude: Less than or equal to 5000*</p>
	<p>Technical Support Service and Product Warranty for one (1) year  *Warranty for all components and workmanship of the project  *Warranty on all parts and labor by authorized technical support  *Hardware replacement of the product in case On-Site Repair is not successful.  *With Email-Based Support  *With Phone-Based Support  *With Remote-Based Support  *On Site-Based Support, if necessary, shall be provided on the next business day.</p>

**Note:** Bidders must state in the Statement of Compliance either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provision of **ITB** Clause 4.

## Section VIII. Bid Documents Checklist

This Bid Documents Checklist is provided to guide the Bidder in preparing his/her bid. The checklist may be used by the Bidder to verify if the Bid includes all the prescribed documents.

The Bidder, in submitting the required documents, must use the prescribed forms found in Section X. Bidding Forms. However, should a bidder choose to use a different formatting style for a required document, the bidder must ensure that the substance in the form given in Section X for that particular document is substantially captured in the equivalent document.

<b>A. Eligibility and Technical Documents</b> ( <i>Contents of Envelope 1</i> )	
<input type="checkbox"/>	1. Photocopy of valid PhilGEPS Certificate of Registration (Revised and updated in accordance with GPPB Resolution No. 15-2021)
<input type="checkbox"/>	2. Photocopy of valid Certificate of Registration from SEC, DTI, or CDA, whichever is applicable
<input type="checkbox"/>	3. Photocopy of valid Mayor's/Business Permit
<input type="checkbox"/>	4. Photocopy of valid Tax Clearance
<input type="checkbox"/>	5. Statement of all on-going government and private contracts, including contracts awarded but not yet started, if any
<input type="checkbox"/>	6. Statement of Single Largest Completed Contract (SLCC), similar to the contract to be bid, in accordance with ITB Clause 5.3
<input type="checkbox"/>	7. NFCC computation
<input type="checkbox"/>	8. <i>If applicable</i> , a valid Joint Venture Agreement (JVA), in case the joint venture is already in existence, or duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful
<input type="checkbox"/>	9. Bid Securing Declaration or Bid Security, in the form, amount and validity period, as prescribed in ITB Clause 14.1
<input type="checkbox"/>	10. Bidder's Compliance to the Technical Specifications
<input type="checkbox"/>	11. Omnibus Sworn Statement, which shall be duly notarized
<b>A. Financial Documents</b> ( <i>Contents of Envelope 2</i> )	
<input type="checkbox"/>	1. Financial Bid Form in the prescribed form
<input type="checkbox"/>	2. Schedule of Prices

# Section IX. Bidding Forms

## TABLE OF CONTENTS

### A. Eligibility and Technical Documents

5. Statement of all on-going government and private contracts, including contracts awarded but not yet started, if any	29
6. Statement of Single Largest Completed Contract (SLCC), similar to the contract to be bid, in accordance with ITB Clause 5.3	30
8. NFCC computation	31
10. Bid Securing Declaration or Bid Security, in the form, amount and validity period, as prescribed in ITB Clause 14.1	32
11. Bidder's Compliance to the Technical Specifications	34
12. Omnibus Sworn Statement, which shall be duly notarized	45

### B. Financial Documents

1. Financial Bid Form	47
2. Schedule of Prices	48



*[Bidder's Letterhead]*

[Date]

To: Tarlac State University  
Re: Invitation to Bid No.

**Statement of Single Largest Completed Contract Similar to the Contract to be Bid**

Row 1: Name of Contract Row 2: Location	Contract Price	Row 1: Procuring Entity Row 2: Address Row 3: Contact Person/Tel. No.	Description of Goods	Date of Award	Date Completed

Attached herewith are the following documents: Contract Agreement, Notice of Award, Notice to Proceed, Official Receipt/Invoice, Certificate of Final Inspection, and Certificate of Acceptance, as evidences in support of the foregoing information.

I/We certify that the foregoing information and all of the supporting documents are true and correct.

[Signature]  
[Name of Bidder or Authorized Representative]  
[Position or Title]

# [Bidder's Letterhead]

[Date]

To: Tarlac State University  
Re: Invitation to Bid No.

## NET FINANCIAL CONTRACTING CAPACITY

Based on our Income Tax Return and Audited Financial Statement for the Fiscal Year [YEAR], duly submitted to the Bureau of Internal Revenue, and which form part of our Bid, the summary of our firm's financial condition is as given below:

		Year [YEAR]
1.	Total Assets	
2.	Current Assets	
3.	Total Liabilities	
4.	Current Liabilities	
5.	Net Worth (1-3)	
6.	Net Working Capital (2-4)	

Based on the aforementioned data and the Value of Outstanding Works from the Statement of All Ongoing Government and Private Contracts, which also form part of our Bid, our Net Financial Contracting Capacity (NFCC) is:

**NFCC** = [(current asset minus current liabilities) (**15**)] minus [value of all outstanding or uncompleted portions of the projects under ongoing contracts including awarded contracts yet to be started coinciding with the contract to be bid].

**NFCC** =

I/We certify that the foregoing information and all of the supporting documents are true and correct.

[Signature]  
[Name of Bidder or Authorized Representative]  
[Position or Title]

## Bid-Securing Declaration

Republic of the Philippines  
City/Municipality Of \_\_\_\_\_ ) S.S.

x-----x

**Invitation to Bid** [*Insert reference number*]

To: **Tarlac State University**

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid-Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1 (f), of the IRR of RA 9184; without prejudice to other legal action the government may undertake.
3. I/We understand that this Bid-Securing Declaration shall cease to be valid on the following circumstances:
  - a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
  - b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and
    - i) I/we failed to timely file a request for reconsideration or
    - ii) I/we filed a waiver to avail of said right;
  - c. I am/we are declared as the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

**IN WITNESS WHEREOF**, I/We have hereunto set my/our hand/s this \_\_\_\_ day of [*month*] [*year*] at [*place of execution*].

[*Signature*]  
[*Name of Bidder's Authorized Representative*]  
[*Signatory's legal capacity*]  
Affiant

**SUBSCRIBED AND SWORN** to before me this \_\_\_ day of *[month]* *[year]* at *[place of execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[insert type of government identification card used]*, with his/her photograph and signature appearing thereon, with no. \_\_\_\_\_.

Witness my hand and seal this \_\_\_ day of *[month]* *[year]*.

*[Name and Signature of Notary Public]*

**Serial No. of Commission** \_\_\_\_\_

**Notary Public for** \_\_\_\_\_ **until** \_\_\_\_\_

**Roll of Attorneys No.** \_\_\_\_\_

**PTR No.** \_\_, *[date issued]*, *[place issued]*

**IBP No.** \_\_, *[date issued]*, *[place issued]*

**Doc. No.** \_\_\_\_

**Page No.** \_\_\_\_

**Book No.** \_\_\_\_

**Series of** \_\_\_\_.

# [Bidder's Letterhead]

[Date]

To: Tarlac State University  
Re: Invitation to Bid No.

## Compliance to the Technical Specifications

Item No.	Description	Bidder's Compliance State "Comply" below if your offer is complying with the specifications, otherwise state "We are offering the same goods with the following specifications [State the complete specifications of the alternative offer]"
<b>Lot No. 1 – Smart Classroom System</b>		
1.	<p><b>Smart Collaboration Board</b></p> <p>Physical:            Net Weight: 86": 62.0 kg            Gross weight: 86": 73.5 kg            Product dimensions (W x H x D): 6": 1953.0 mm x 1157.0 mm x 91.8 mm            Color: Jade White</p> <p>Components:            Device x 1: 86"            OPS: i5            Remote Control: Optional            Note: VESA mounting sizes are M8 x 25 mm (800 mm x 400 mm for 86")</p> <p>Screen            Stylus pens x 2: PET pen tip/anti-slip pen body/magnetic attachment            Cables: Power cable x 1            Wall-mounted bracket: Supports 86"</p> <p>Screen:            Resolution: UHD 4K (3840 x 2160)            Screen lamination: Zero-gap bonding            Number of touch points: 20            Screen brightness: 350 nits (typical luminance)            Viewing angle: 178°            Color depth: 10-bit (8-bit + FRC)            Screen refresh rate: 60 Hz            Contrast: 1200:1 (typical value)            Glass hardness: ≥7H            Backlight type: D-LED            Aspect ratio: 16:9</p> <p>Eye Protection:            Optical anti-blue light: Supported            Low Blue Light (Hardware Solution) Certification: ✓            Anti-glare: Supported            Eye Comfort Certification: ✓            Adaptive brightness: Supported</p> <p>Projection:            Wireless projection effect: Up to 4K30            Projection method: projection code, HDMI, Type-C wired projection            App Share Key: Projection through code            Wired projection effect: 4K60            Reverse control: Supported            Client OS: Android/Windows/iOS/macOS            Annotation during projection: Supported            Wireless Connection:            Dual Wi-Fi module: ✓</p>	

	<p>Wi-Fi frequency: 2.4 GHz/5 GHz</p> <p>Speaker: Frequency domain: 100 Hz to 20 kHz Speaker unit: 2 x full-frequency speaker; 2 x high-frequency speaker Stereo sound: Supported</p> <p>System: CPU: 4-core OS: Android 9.0; Windows 10 (OPS) RAM: 4GB Flash: 32GB</p> <p>Ports: Front-panel ports: USB Type-C x 1; USB Type-A 3.0 x 2 Side-panel ports: USB Type-A 3.0 x 1; USB Type-B x 1; HDMI (input) x 2; HDMI (output) x 1; COM port x 1; RJ45 network port x 1; 80-pin OPS port x 1; 3.5 mm (line-in) x 1; 3.5 mm (line-out) x 1</p> <p>Accessories: Wireless Sharing Button</p> <p>COMPATIBILITY Operating systems: Windows: Windows7/8/8.1/10, 32 and 64 bits</p> <p>VIDEO RESOLUTION PC Screen: 640x480, 800x600, 1024x768, 1152x864, 1280x600, 1280x720, 1280x768, 1280x800, 1280x960, 1280x1024, 1360x768, 1366x768, 1440x900, 1400x1050, 1600x900, 1600x1200, 1680x1050, 1920x1080, 1920x1200, 2048x1536, 2560x1600, 2880x1620, 2880x1800, 3200x1800, 3840x2160, Scaling is performed if the resolution exceeds the above. Local Screen: Windows: 4K 15fps/ 1 080p 60fps</p> <p>AUDIO FEATURES Local Audio: 48K dual-channel lossless audio playback Shared Audio: Share audio can be played at remote sites</p> <p>SECURITY and RELIABILITY Connect Distance: Less than or equal to 20m Data Security: Tls encryption</p> <p>WIRELESS Protocols: 802.11 a/g/n Mode: Client Authentication: WPA2-PSK</p> <p>PORTS: USB Port: 1 X USB device type A port</p> <p>PHYSICAL SPECIFICATIONS: Dimensions(H x W x D): Product dimensions: 177.27 mm x 65 mm x 19.8 mm; Net weight: 85g Electricity Supply Requirements: Maximum power consumption: Less than or equal to 1.5w Environmental Requirements: Working temperature: 0-40 °C; Storage temperature: -20°C - 60°C; Relative humidity: &lt;850/orh; Altitude: Less than or equal to 5000*</p>	
2.	<p><b>Digital Board</b> Outline size(single board) 1114*1166.1*45mm Board active size: 1084.6*1091.2mm/60.6inch Board material: Whiteboard (3 layers: cold steel surface with nano paint, anti- glare≥0.3mm, middle high density poly-foam≥13mm, back galvanized steel sheet ≥0.2mm, paint thickness≥4H Touch technology: Infrared sector oblique scanning induction mode Response object: Finger, pen, chalk, any opaque object Touchpoint: Single touch Touch resolution: 32768*32768/4096*4096 Accuracy: ≤2mm Interface Support: USB2.0/USB3.0 Waterproof/dustproof: ≥IP55 Work temperature: -10°C~45°C Work humidity: 0%-90% Work voltage: DC 4.6V-DC 5V Power consumption: &lt;1W ( 200mA at 5V) Gesture response: Eraser or cloth clean the board surface, digital mark also can be cleaned Display delay Digital board writing display on the IFPD ≤120ms File save: Support digital board writing local save and share via QR code</p>	

	<p>Hotkey icons: Must have preview, page up, page down, red, white, yellow pens, save, vote, screen clean functions.</p> <p>Interactivity: Digital board and IFPD support work separately, also support interactive work, the digital board writing can display on the IFPD, and other interactive operation.</p> <p>Writing mode: Software support single board writing display on the full screen, also support dual boards display on the same screen, and can save the writing contents as original display ratio.</p> <p>color: Digital mark can be red, white and yellow color</p> <p>Vote function: Support quick voting and result statistics through QR code, including single voting, multiple voting or voting, without downloading software</p> <p>Original handwriting restoration: IFPD display digital mark all the same as digital board writing</p> <p>Display position: ABA structure, user can set both sides board contents display on the left or right side of the screen as wish</p>	
3.	<p><b>Student Camera</b></p> <p>CAMERA:</p> <p>Sensor: 1/2.5", CMOS, Effective Pixel: 8.51M</p> <p>Scanning Mode: Progressive</p> <p>Lens Mount: M12</p> <p>Lens 1 Focus: f=7.35mm, FOV: 46°</p> <p>Lens 2(Default) Focus: f=3.5mm, FOV: 84°</p> <p>Lens 1 Focus: f=2.8mm, FOV: 120°</p> <p>Autofocus Support (120° does not support)</p> <p>Digital zoom 8X</p> <p>Minimal Illumination 0.5 Lux @ (F1.8, AGC ON)</p> <p>Shutter 1/30s ~ 1/10000s</p> <p>1/30s ~ 1/10000s Auto, Indoor, Outdoor, One Push, Manual,</p> <p>Specified color temperature</p> <p>Digital Noise 2D, 3D digital noise reduction</p> <p>Network Features:</p> <p>Video Compression H.265 / H.264 / MJPEG</p> <p>Video Stream The first, second, third, fourth stream</p> <p>The First Stream 1920x1080, 1280x720, 1024x576, 960x540,640x480, 640x360</p> <p>The Second Stream 3840x2160, 1920x1080, 1920x1080,1280x720, 1024x576, 720x576(50Hz), 720x480(60Hz),720x408, 640x360, 480x270, 320x240,320x180</p> <p>The Third Stream 1024x576, 960x540, 720x576(50Hz),720x480(60Hz), 720x408, 640x360, 480x270, 320x240,320x180</p> <p>The Fourth Stream 1024x576, 960x540, 720x576(50Hz), 720x480(60Hz), 720x408, 640x360, 480x270, 320x240,320x180</p> <p>Video Bit Rate 32Kbps ~ 10240Kbps</p> <p>Bit Rate Type Variable Rate, Fixed Rate</p> <p>Frame Rate 50Hz: 1fps ~ 25fps, 60Hz: 1fps ~ 30fps</p> <p>Audio Compression AAC</p> <p>Audio Bit Rate 48Kbps, 64Kbps, 96Kbps, 128Kbps</p> <p>Support protocols TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP,</p> <p>Blacklight: Support</p> <p>EPTZ: Support</p> <p>PoE: Support</p> <p>Auto Tracking: Teacher mode / Student mode (supported)</p> <p>INPUT/OUTPUT INTERFACE</p> <p>HD Output</p> <p>1x3G-SDI: BNC type, 800mVp-p, 75Ω, Along to SMPTE 424M standard, Support PoC</p> <p>USB Interface: 1xUSB2.0: Type A</p> <p>Network Interface: 1xRJ45: 10M/100M/1000M Ethernet Interface, PoE Support</p> <p>Audio Interface: 1-ch: Line In, 3pin Phoenix Port</p> <p>Communication: 1xRS485: 2pin Phoenix Port, Max Distance: 1200m, Protocol: VISCA/Pelco-D/Pelco-P</p> <p>Power Jack: DC005 type (DC 12V)</p>	

	<p><b>GENERAL SPECIFICATION</b>  Input Voltage: DC 12V / PoE (IEEE802.3af) / PoC  Current: 0.5A(Max)  Operating: -10°C ~ 40°C (14°F ~ 104°F)  Storage: -40°C ~ 60°C (-40°F ~ 140°F)  Power Consumption: 6W(Max)  Size: 72mm x 60mm x 130mm (not include the protruding part)  Net Weight: 0.45kg  MTBF: 30000h</p>	
4.	<p><b>Teacher Camera</b>  Sensor: 1/2.5", CMOS, Effective Pixel: 8.51M  Scanning Mode: Progressive  Lens Mount: M12  Lens 1 Focus: f=7.35mm, FOV: 46°  Lens 2(Default) Focus: f=3.5mm, FOV: 84°  Lens 1 Focus: f=2.8mm, FOV: 120°  Autofocus Support (120° does not support)  Digital zoom 8X  Minimal Illumination 0.5 Lux @ (F1.8, AGC ON)  Shutter 1/30s ~ 1/10000s  1/30s ~ 1/10000s Auto, Indoor, Outdoor, One Push, Manual,  Specified color temperature  Digital Noise 2D, 3D digital noise reduction  Network Features:  Video Compression H.265 / H.264 / MJPEG  Video Stream The first, second, third, fourth stream  The First Stream 1920x1080, 1280x720, 1024x576, 960x540,640x480, 640x360  The Second Stream 3840x2160, 1920x1080, 1920x1080,1280x720, 1024x576,  720x576(50Hz), 720x480(60Hz),720x408, 640x360, 480x270, 320x240,  320x180  The Third Stream 1024x576, 960x540, 720x576(50Hz),720x480(60Hz),  720x408, 640x360, 480x270, 320x240,320x180  The Fourth Stream 1024x576, 960x540, 720x576(50Hz), 720x480(60Hz),  720x408, 640x360, 480x270, 320x240,320x180  Video Bit Rate 32Kbps ~ 10240Kbps  Bit Rate Type Variable Rate, Fixed Rate  Frame Rate 50Hz: 1fps ~ 25fps, 60Hz: 1fps ~ 30fps  Audio Compression AAC  Audio Bit Rate 48Kbps, 64Kbps, 96Kbps, 128Kbps  Support protocols TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP,  Blacklight: Support  EPTZ: Support  PoE: Support  Auto Tracking: Teacher mode / Student mode (supported)  <b>INPUT/OUTPUT INTERFACE</b>  HD Output  1x3G-SDI: BNC type, 800mVp-p, 75Ω, Along to SMPTE 424M standard,  Support PoC  USB Interface: 1xUSB2.0: Type A  Network Interface: 1xRJ45: 10M/100M/1000M Ethernet Interface, PoE Support  Audio Interface: 1-ch: Line In, 3pin Phoenix Port  Communication: 1xRS485: 2pin Phoenix Port, Max Distance: 1200m, Protocol:  VISCA/Pelco-D/Pelco-P  Power Jack: DC005 type (DC 12V)  <b>GENERAL SPECIFICATION</b>  Input Voltage: DC 12V / PoE (IEEE802.3af) / PoC  Current: 0.5A(Max)  Operating: -10°C ~ 40°C (14°F ~ 104°F)  Storage: -40°C ~ 60°C (-40°F ~ 140°F)  Power Consumption: 6W(Max)  Size: 72mm x 60mm x 130mm (not include the protruding part)  Net Weight: 0.45kg  MTBF: 30000h</p>	
5.	<p><b>1-Unit Digital Sound Processor</b>  1. Industrial embedded Architecture, Embedded design, Stable and reliable;  2. Audio signal can be transmitted through USB interface and analog interface,  Remote software upgrade and parameter configuration are possible;</p>	

	<p>3. Integrated automatic noise suppression technology, (Remove noise interference including air conditioner, exhaust fan, etc.) Ensure sound quality;</p> <p>4. 6-way microphone input, Support software 48V phantom power on and off;</p> <p>5. 3-channel mono line in input; 3.5mm interface and terminal double backup;</p> <p>6. 3-channel mono line out output; 3.5mm interface and terminal double backup;</p> <p>7. 6-balanced inputs can be processed with 16 EQ segments (Other inputs and outputs are not subject to EQ processing);</p> <p>8. Intelligent mixing function: Automatically adjust the output level of the system according to the number of microphones turned on;</p> <p>9. Reduce reverberation function: Automatic switching between wireless microphone and hanging microphone; The anti-reverberation level is adjustable;</p> <p>10. With one key debugging function: Briefly press the key on the host, and the host will automatically configure the corresponding equipment parameters according to the sound field data;</p> <p>11. Echo cancellation function: AEC process the microphone, the reference signal is remote audio signal, and the echo processing delay ability: 128ms, 256ms, 512ms;</p> <p>12. With AGC function, Prevent breaking sound when many people speak loudly;</p> <p>13. Built-in no less than two USB interfaces and one network interface, Software upgrade and parameter configuration are available;</p> <p>14. It has the function of environmental sound field detection, It can detect the reverberation time of different frequency bands, Background noise, STI, C50 and other acoustic parameters, to cope with all kinds of complex classroom acoustic environment;</p> <p>15. Echo rejection ratio: &gt;60dB</p> <p>16. sampling rate: 48K</p> <p>17. Sampling bits: 32位</p> <p>18. dynamic range: 90db</p> <p>19. Steady-state noise cancellation ratio: 30dB</p> <p>20. frequency response: 20Hz-20KHz</p> <p>21. Maximum gain: 59dB</p> <p>8-Units Ceiling Microphone  "frequency response 100Hz~18KHz  Sensitivity -40dB±3 dB (re 0dB=1V/Pa@1kHz)  Pointing characteristics Ultra-Cardioid ≤135°  Output impedance 200Ω±30%  Output amplitude Max 300mV  Maximum withstand sound pressure 110dB SPL (A计权@1KHzTHD≤1%)  dynamic range 76dB (A)  Signal to noise ratio 60dB (A) (re 94dB SPL=1Pa@1KHz)  Power Supply DC48V  Output connector XLR-3-12C  Accessories Windproof sponge cover" 4-Units  Speaker Loudspeaker 4.5" (4Ω)  Sub box sensitivity (1m@2V) 87dB  Frequency Response 80Hz~18KHz  Rated power 30W  output power L:15W R:15W  Total harmonic distortion L:0.25% R:0.25%  Input sensitivity 700mV  Signal to noise ratio 74dB (power : 1W/4Ω)  Input interface red (+) black (-)  Speaker weight (Two) 5.8kg"</p>	
6.	<p><b>Teacher Monitor</b>  Screen Size: 55"  Resolution: 4K  Screen materials: LCD  Refresh Rate: 120hz  Screen Brightness: 350 nits (typical luminance)  Contrast: 5000:1 (typical value)  Aspect Ratio: 16:9  Backlight Type: Direct LED  Operating System: Harmony OS</p>	

	<p>Intelligent Ability: MeeTime Video Call, MeeTime Video Call Transfer, Home Camera, OneHop Projection, Mirror Control, Distributed Gaming, AI Voice, AI Speaker Mode</p> <p>Memory:  Operation Memory (RAM): 3 GB  Internal Storage (ROM): 32 GB</p> <p>Quantity of Speakers: Two 10 W full frequency speakers and two 10 W tweeters</p> <p>Remote Control: Bluetooth voice remote control and OneHop Projection by NFC technology</p> <p>Wi-Fi Frequency: 2.4 GHz/5 GHz</p> <p>Interface: HDMI 2.0 x 3, AV In x 1, USB 3.0 x 1, SPDIF (coaxial) x 1</p>	
7.	<p><b>Access Point/Router</b></p> <p>WiFi Category: Wi-Fi 6</p> <ul style="list-style-type: none"> <li>• IEEE 802.11ax/ac/n/a 5 GHz</li> <li>• IEEE 802.11ax/n/b/g 2.4 GHz</li> </ul> <p>WiFi Speeds: AX7800</p> <ul style="list-style-type: none"> <li>• 5 GHz-1: 4804 Mbps (802.11ax, HE160)</li> <li>• 5 GHz-2: 2402 Mbps (802.11ax)</li> <li>• 2.4 GHz: 574 Mbps (802.11ax)</li> </ul> <p>WiFi Range: 4 Bedroom Houses</p> <p>8× Fixed High-Performance Antennas</p> <p>Multiple antennas form a signal-boosting array to cover more directions and large areas</p> <p>Beamforming  Concentrates wireless signal strength towards clients to expand WiFi range</p> <p>High-Power FEM  Improves transmission power to strengthen signal coverage</p> <p>4T4R  Multiple streams in the same band strengthen the fault tolerance in transmission</p> <p>WiFi Capacity: Very High</p> <p>Tri-Band  Allocate devices to different bands for optimal performance</p> <p>4×4 MU-MIMO  Simultaneously communicates with multiple MU-MIMO clients</p> <p>OFDMA: Simultaneously communicates with multiple Wi-Fi 6 clients</p> <p>Airtime Fairness: Improves network efficiency by limiting excessive occupation</p> <p><b>HARDWARE</b></p> <p>Processor: 1.7 GHz Quad-Core CPU</p> <p>Ethernet Ports</p> <ul style="list-style-type: none"> <li>• 1× 2.5 Gbps WAN/LAN Port</li> <li>• 1× 1 Gbps WAN/LAN Port</li> <li>• 3× 1 Gbps LAN Ports</li> </ul> <p><b>SECURITY</b></p> <p>WiFi Encryption</p> <ul style="list-style-type: none"> <li>• WPA</li> <li>• WPA2</li> <li>• WPA3</li> <li>• WPA/WPA2-Enterprise (802.1x)</li> <li>• SPI Firewall</li> <li>• Access Control</li> <li>• IP &amp; MAC Binding</li> <li>• Application Layer Gateway</li> </ul> <p><b>FEATURES</b></p> <p>WAN TYPES: • Dynamic IP, Static IP, PPPoE, PPTP, L2TP</p> <p>Quality of Service: QoS by Device</p> <p>NAT Forwarding: Port Forwarding, Port Triggering, DMZ, UPnP</p> <p>DHCP: Address Reservation, DHCP Client List, Server</p>	
8.	<p><b>PoE Switch</b></p> <p>Interface: 8 10/100/1000Mbps RJ45 Ports</p> <p>Network Media: 1000BASE-T: UTP category 5, 5e, 6 or above cable</p> <p>Packet Forwarding Rate: 11.904 Mpps</p>	

	<p>PoE+ Ports(RJ45) Standard: 802.3af/at compliant  PoE+ Ports: 8 Ports  Mac Address Table: 4K  Buffer Size:1.5Mbits  Jumbo Frame: 16 KB  Switching Capacity: 16Gbps  Advanced Features: Compatible With IEEE 802.3af/at Compliant PDs, Priority Function, Mac Address Auto-Learning And Auto-Aging, IEEE802.3x Flow Control For Full-Duplex Mode And Backpressure For Half-Duplex Mode  Transfer Method: Store-And-Forward</p>	
9.	<p><b>Uninterrupted Power Supply (UPS)</b>  Main  Main Input Voltage: 230 V  Other Input Voltage: 220 V; 240 V  Main Output Voltage: 230 V  Rated power in W: 600 W  Rated power in VA: 1000 VA  Input Connection Type: IEC 320 C14  Output connection type: 8 IEC 320 C13; 2 IEC Jumpers  Battery type: Lead-acid battery  Provided equipment: CD with software; Documentation CD; USB cable  General  Number of power module filled: 0 slots  Number of power module free: slots 0  Product web sub-family: Entry level  Redundant: No  Physical  Color: Black  Height: 21.9 cm  Width: 17.1 cm  Depth: 43.9 cm  Net weight: 17.27 kg  Mounting location: Front  Mounting preference: No preference  Mounting mode: Not rack-mountable  Two post mountable: 0  USB compatible: Yes  Input  Input voltage limits: 170...300 V adjustable; 180...287 V  Network frequency: 50/60 Hz +/- 3 Hz auto-sensing  Output  Harmonic distortion: Less than 5 % at full load  Maximum configurable power in VA: 1000 VA  Maximum configurable power in W: 600 W  UPS type: Line interactive  Wave type: Sine wave  Output frequency: 50/60 Hz +/- 3 Hz sync to mains  Conformance  Product certifications: CE; CSA; GOST; VDE; EAC  Standards: EN/IEC 62040-1:2019/A11:2021; EN/IEC 62040-2:2006/AC:2006; EN/IEC 62040-2:2018  Environmental  Acoustic level: 41 dBA  Heat dissipation: 100 Btu/h  Operating altitude: 0...10000 ft  Ambient air temperature for operation: 0...40 °C  Ambient air temperature for storage: -15...45 °C  Storage altitude: 0.00...15240.00 m  Relative humidity: 0...95 %  Storage Relative Humidity: 0...95 %  Batteries &amp; Runtime  Extended runtime: 0  Number of battery filled slots: 0  Number of battery free slots: 0  Battery recharge time: 3 h  Number of battery replacement quantity: 1  Battery life: 3...5 year(s)</p>	

	<p>Battery power in VAH: 170 VAh runtime  Battery charger power: 56 W rated  Communications &amp; Management  Control panel: Multifunction LCD status and control console  Free slots: 0  Alarm: Alarm when on battery: distinctive low battery alarm: configurable delays  Surge Protection and Filtering  Surge energy rate: 455 J  Noise suppression: Full-time multi-pole noise filtering: 0.3% IEEE surge let-through: zero clamping response time: meets UL 1449</p>	
10.	<p><b>Data Cabinet</b>  9U (600mm x 590mm x 510mm)  Toughed glass door w/ lock, Removable side panels (not vented), side locks (optional)  Cable entry on both of top cover and bottom panel, Powder coated, black  6-outlet all-usage PDU with main switch 2.5m-length cable (220V,3prong,10A)  2-Cooling fan 220V</p>	
11.	<p>Acoustic Panel, 12x12 Acoustic Panels for soundproofing (Color: Gray) for Two (2) Smart Classrooms</p>	
<p>Scope of Work including Installation and Configuration  1. Mounting of Smart Collaboration Board, Digital Board, Student and Teacher Camera, ceiling microphone, speakers, data cabinet, and Teacher monitor  2. Cable laying of microphone, speakers, HDMI, UTP cable, and other accessories connection  3. Configuration of DSP, Student and Teacher camera, Refocus Student and Teacher camera, Smart Collaboration Board and Digital Board  4. Testing and fine-tuning  5. Admin. and user training including trouble shooting  6. All accessories are compatible with the Smart Collaboration Board  7. Installation of acoustic panel</p> <p>Technical Support Service and Product Warranty for one (1) year  *Warranty for all components and workmanship of the project  *Warranty on all parts and labor by authorized technical support  *Hardware replacement of the product in case On-Site Repair is not successful.  *With Email-Based Support  *With Phone-Based Support  *With Remote-Based Support  *On Site-Based Support, if necessary, shall be provided on the next business day.</p>		
<b>Lot No. 2 – Mobile Collaboration Board</b>		
1.	<p><b>Smart Collaboration Board with Trolley</b>  Product Features:  Next-gen hardware platform: 8-core dual-engine driver  4K soft light screen: Optical anti-blue light, adaptive to ambient light  Ultra-narrow frame: Seamless zero-gap lamination and aerospace-grade nano-coating  Smart camera: Lens cover offers physical privacy protection  Dual-system one-tap switchover: OPS swap-free  Centralized front panel ports: NFC, Type-C, USB 3.0, and power button  BYOM: Seamless transfer; Multiple transfer methods  HD Intelligent Meeting: Supports 1080p audio and video, 4K data sharing, and dual-stream meetings; Features H.264 + H.265 dual protocols, HD hardware encoding and decoding, and fully upgraded on-premises conferences</p> <p>Powerful AI capabilities:  Voice tracking: Always keep the speaker in the center  Auto-Framing: Automatically identifies the best angle for multiple participants  Acoustic baffle: Shields external noise and adapts to various meeting rooms  4K video conferencing camera:  4K 30 fps 1.5 μm optical sensor: Doubled signal-to-noise ratio (SNR)  Circulating heat dissipation design: 3000-hour high-temperature test reassures consistent resolution even after long meetings  3D stereo field for cinematic sound experience: Ultra-large sound cavity   Max. 95 dB sound pressure  Acoustic Engine 2.0: 12-meter ultra-long-distance sound pickup; DNN-based dereverberation2; Audio echo cancellation algorithm</p>	

<p>Imaging algorithm: TV distortion &lt; 2% for natural image  Wi-Fi 6 for Direct Projection:  Dual-band dual-Wi-Fi module: No interference between internet connection and projection  More projection methods: Share Key App with code; Type-C and HDMI cables for projection</p> <p>Intelligent Whiteboard:  16 ms ultra-low writing latency: Synchronous and precise writing on screen  Multiple pen thicknesses in full color: Optional handwriting thickness and unlimited color choices  Multi-touch gestures: Select, move, zoom, and erase with gestures  Scan to take away: Scan the QR code to take away whiteboard content  Handwriting recognition: Converting handwriting and drawings to digital forms  Full-screen annotation: Taking a snapshot of any page and pasting it to the whiteboard for annotation  Remote bidirectional collaboration: Share whiteboard content for real-time collaboration  Co-authoring: Two people can write on the whiteboard concurrently  Boundless Collaboration for Smart Office:  Multi-Window for efficient multitasking: Multiple local collaboration and discussion tasks can be displayed simultaneously; App switching-free during collaboration; Browse information while writing on the whiteboard at the same time; Supports multi-app screen linkage with adjustable window ratios (1:1/1:2), adapting to more scenarios  App Multiplier for user-friendly interaction: Removes black bars of apps and optimizes multi-window display effect of more apps; App Multiplier is supported by more than 1,0001 apps; Displays an app in dual windows  Open and Fast Integration:  Open architecture: Adapts to the video hardware codec to provide 1080p HD video conferencing  Open SDKs: Integrates the whiteboard and meeting SDK plug-ins into enterprise office apps  App Manager for Intelligent O&amp;M:  Remote management of multiple devices: Basic device configuration; Remote OTA updates; Remote shutdown; Boot screen and bulletin board push  Fast and precise fault locating and diagnosis: Fault alarm notification; Self-service diagnosis of typical faults  Customizable HiBoard Welcome Page: Multiple templates; Supports image import</p> <p>Bulletin Board for Enterprise Marketing: Unified management and scheduled push based on regions and organizations; Flexible advertising design allows up to 50 images to be played in turn</p> <p>Physical:  Product dimensions (H x W x D): 86": 1212.0 mm x 1953.0 mm x 91.8 mm  Net weight: 86": 62.0 kg</p> <p>Component:  Rolling stand: 86"  Stylus pen: 2  Wall-mounted bracket: 86"  Cable: 1 x power cable</p> <p>Screen:  Resolution: 4K (3840 x 2160 pixels)  Backlight type: D-LED  Screen lamination: Zero-gap bonding</p> <p>Writing:  Latency: 16ms  Touch sensing distance: ≤ 1.5 mm  Intelligent writing recognition: Supports recognition of Chinese; English; 11 types of graphics  Camera:  Resolution: 1800 lines</p>	
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<p>Horizontal FoV: 80°  Sensor pixel size: 1.5 μm x 1.5 μm  Zoom: 2x digital zoom  Lens cover: ✓  TV distortion: &lt;2%</p> <p>Speaker:  Frequency domain: 80 Hz to 20 kHz  Quantity: 2 x high-frequency speaker+2 x full-frequency speaker  Maximum power: 40W</p> <p>Microphone:  Sound pickup angle: 180°  Optimized sound pickup: Sound source location; echo cancellation; automatic gain control  Sound pickup distance: 12m  Frequency domain: 80 Hz to 20 kHz</p> <p>Conferencing:  Dual streams (audio/video + data sharing): On-premises conference: 1080p 30 fps + 1080p 30 fps/4K 8 fps</p> <p>AI Function:  Auto-Framing: Supported  Intelligent tracking: Supported  DNN-based dereverberation: Supported</p> <p>System:  CPU: 8-core A73  Operating system: Harmony OS; Windows  RAM: 8GB  Security: Embedded encryption chip that supports H.235; STARTTLS; TLS; SRTP encryption; secure boot; TEE  Flash: 64GB  Language: Simplified Chinese; English; French; Japanese; Arabic; Spanish</p> <p>Wireless Connection:  Wi-Fi module: Wi-Fi 6  Wi-Fi frequency: 2.4 GHz + 5 GHz  NFC: Supported</p> <p>Interface:  Video input: 1 x HDMI (up to 4K)  Video output: 1 x HDMI (up to 4K)  Audio input: 1 x 3.5 mm LINE IN; 1 x HD-AI  Audio output: 1 x 3.5 mm LINE OUT  Other ports: 3 x USB Type-A 3.0; 1 x USB Type-C; 1 x RJ45 (10/100/1000 Mbit/s LAN)</p> <p>Accessories:  Wireless Sharing Button</p> <p>COMPATIBILITY  Operating systems: Windows: Windows7/8/8.1/10, 32 and 64 bits</p> <p>VIDEO RESOLUTION  PC Screen: 640x480, 800x600, 1024x768, 1152x864, 1280x600, 1280x720, 1280x768, 1280x800, 1280x960, 1280x1024, 1360x768, 1366x768, 1440x900, 1400x1050, 1600x900, 1600x1200, 1680x1050, 1920x1080, 1920x1200, 2048x1536, 2560x1600, 2880x1620, 2880x1800, 3200x1800, 3840x2160,  Scaling is performed if the resolution exceeds the above.  Local Screen: Windows: 4K 15fps/ 1 080p 60fps</p> <p>AUDIO FEATURES  Local Audio: 48K dual-channel lossless audio playback  Shared Audio: Share audio can be played at remote sites</p> <p>SECURITY and RELIABILITY  Connect Distance: Less than or equal to 20m  Data Security: Tls encryption</p> <p>WIRELESS  Protocols: 802.11 a/g/n  Mode: Client  Authentication: WPA2-PSK</p>	
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	<p>PORTS: USB Port: 1 X USB device type A port</p> <p>PHYSICAL SPECIFICATIONS: Dimensions(H x W x D): Product dimensions: 177.27 mm x 65 mm x 19.8 mm; Net weight: 85g Electricity Supply Requirements: Maximum power consumption: Less than or equal to 1.5w Environmental Requirements: Working temperature: 0-40 °C; Storage temperature: -20°C - 60°C; Relative humidity: &lt;850/orh; Altitude: Less than or equal to 5000*</p>	
	<p>Technical Support Service and Product Warranty for one (1) year *Warranty for all components and workmanship of the project *Warranty on all parts and labor by authorized technical support *Hardware replacement of the product in case On-Site Repair is not successful. *With Email-Based Support *With Phone-Based Support *With Remote-Based Support *On Site-Based Support, if necessary, shall be provided on the next business day.</p>	

Attached herewith are the manufacturer’s product literature(s) and certification(s) that we are authorized to sell the goods.

We certify that the foregoing information and the supporting documents are true and correct.

[Signature]  
[Name of Authorized Signatory]  
[Position/Title of Authorized Signatory]

## Omnibus Sworn Statement

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REPUBLIC OF THE PHILIPPINES )  
CITY/MUNICIPALITY OF \_\_\_\_\_ ) S.S.

### AFFIDAVIT

I, [Name of Affiant], of legal age, [Civil Status], [Nationality], and residing at [Address of Affiant], after having been duly sworn in accordance with law, do hereby depose and state that:

1. **Select one, delete the other:**

- b. *If a sole proprietorship:* I am the sole proprietor or authorized representative of [Name of Bidder] with office address at [address of Bidder];
- c. *If a partnership, corporation, cooperative, or joint venture:* I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];

2. **Select one, delete the other:**

- a. *If a sole proprietorship:* As the owner and sole proprietor, or authorized representative of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached duly notarized Special Power of Attorney;
  - b. *If a partnership, corporation, cooperative, or joint venture:* I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable)];
3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;
4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. **Select one, delete the rest:**

- a. *If a sole proprietorship:* The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;
- b. *If a partnership or cooperative:* None of the officers and members of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of

the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

- c. *If a corporation or joint venture:* None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the following responsibilities as a Bidder:

- a. Carefully examine all of the Bidding Documents;
- b. Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;
- c. Made an estimate of the facilities available and needed for the contract to be bid, if any; and
- d. Inquire or secure Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

10. In case advance payment was made or given, failure to perform or deliver any of obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to delivery certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_ day of \_\_\_, 20\_\_ at \_\_\_\_\_, Philippines.

\_\_\_\_\_  
Bidder's Representative/Authorized Signatory

**SUBSCRIBED AND SWORN** to before me this \_\_\_ day of *[month]* *[year]* at *[place of execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[insert type of government identification card used]*, with his/her photograph and signature appearing thereon, with no. \_\_\_\_\_ and his/her Community Tax Certificate No. \_\_\_\_\_ issued on \_\_\_ at \_\_\_\_\_.

Witness my hand and seal this \_\_\_ day of *[month]* *[year]*.

**NAME OF NOTARY PUBLIC**

Serial No. of Commission \_\_\_\_\_

Notary Public for \_\_\_\_\_ until \_\_\_\_\_

Roll of Attorneys No. \_\_\_\_\_

PTR No. \_\_\_\_\_ *[date issued]*, *[place issued]*

IBP No. \_\_\_\_\_ *[date issued]*, *[place issued]*

Doc. No. \_\_\_\_\_

Page No. \_\_\_\_\_

Book No. \_\_\_\_\_

Series of \_\_\_\_\_

# *[Bidder's Letterhead]*

[Date]

## FINANCIAL BID FORM

To: Tarlac State University  
Re: Invitation to Bid No.

Having examined the Bidding Documents [*insert if any or delete, if none: including Bid Bulletin Numbers [insert numbers], the receipt of which is hereby duly acknowledged*], we, the undersigned, offer to [*supply/deliver/perform*] [*description of the Goods*] in conformity with the said Bidding Documents for the sum of [*total Bid amount in words and figures*] or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

If our Bid is accepted, we commit to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we undertake to provide a performance security in the form, amounts, and within the times specified in the Bidding Documents.

We agree to abide by this Bid for the Bid Validity Period specified in **ITB** Clause 14.2 and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

We certify/confirm that we comply with the eligibility requirements as per **ITB** Clause 5 of the Bidding Documents.

We likewise certify/confirm that the undersigned, [*for sole proprietorships, insert: as the owner and sole proprietor or authorized representative of [Bidder], has the full power and authority to participate, submit the bid, and to sign and execute the ensuing contract, on the latter's behalf for the [Name of Project] of the Tarlac State University*] [*for partnerships, corporations, cooperatives, or joint ventures, insert: is granted full power and authority by the [Bidder], to participate, submit the bid, and to sign and execute the ensuing contract on the latter's behalf for [Name of Project] of the Tarlac State University*].

We acknowledge that failure to sign each and every page of this Financial Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

\_\_\_\_\_  
[signature]

\_\_\_\_\_  
[in the capacity of]

Duly authorized to sign Bid for and on behalf of \_\_\_\_\_

# [Bidder's Letterhead]

[Date]

To: Tarlac State University  
Re: Invitation to Bid No.

## SCHEDULE OF PRICES

Item No.	Description	Qty.	Unit	Unit Price	Total Price
<b>Lot No. 1 – Smart Classroom System</b>					
1.	<p><b>Smart Collaboration Board</b></p> <p>Physical: Net Weight: 86": 62.0 kg Gross weight: 86": 73.5 kg Product dimensions (W x H x D): 6": 1953.0 mm x 1157.0 mm x 91.8 mm Color: Jade White</p> <p>Components: Device x 1: 86" OPS: i5 Remote Control: Optional Note: VESA mounting sizes are M8 x 25 mm (800 mm x 400 mm for 86") Screen Stylus pens x 2: PET pen tip/anti-slip pen body/magnetic attachment Cables: Power cable x 1 Wall-mounted bracket: Supports 86" Screen: Resolution: UHD 4K (3840 x 2160) Screen lamination: Zero-gap bonding Number of touch points: 20 Screen brightness: 350 nits (typical luminance) Viewing angle: 178° Color depth: 10-bit (8-bit + FRC) Screen refresh rate: 60 Hz Contrast: 1200:1 (typical value) Glass hardness: ≥7H Backlight type: D-LED Aspect ratio: 16:9 Eye Protection: Optical anti-blue light: Supported Low Blue Light (Hardware Solution) Certification: √ Anti-glare: Supported Eye Comfort Certification: √ Adaptive brightness: Supported</p> <p>Projection: Wireless projection effect: Up to 4K30 Projection method: projection code, HDMI, Type-C wired projection App Share Key: Projection through code Wired projection effect: 4K60 Reverse control: Supported Client OS: Android/Windows/iOS/macOS Annotation during projection: Supported</p> <p>Wireless Connection: Dual Wi-Fi module: √ Wi-Fi frequency: 2.4 GHz/5 GHz</p> <p>Speaker: Frequency domain: 100 Hz to 20 kHz</p>	14	pc		

	<p>Speaker unit: 2 x full-frequency speaker; 2 x high-frequency speaker  Stereo sound: Supported  System:  CPU: 4-core  OS: Android 9.0; Windows 10 (OPS)  RAM: 4GB  Flash: 32GB  Ports:  Front-panel ports: USB Type-C x 1; USB Type-A 3.0 x 2  Side-panel ports: USB Type-A 3.0 x 1; USB Type-B x 1; HDMI (input) x 2; HDMI (output) x 1; COM port x 1; RJ45 network port x 1; 80-pin OPS port x 1; 3.5 mm (line-in) x 1; 3.5 mm (line-out) x 1  Accessories:  Wireless Sharing Button  <b>COMPATIBILITY</b>  Operating systems: Windows: Windows7/8/8.1/10, 32 and 64 bits  <b>VIDEO RESOLUTION</b>  PC Screen: 640x480, 800x600, 1024x768, 1152x864, 1280x600, 1280x720, 1280x768, 1280x800, 1280x960, 1280x1024, 1360x768, 1366x768, 1440x900, 1400x1050, 1600x900, 1600x1200, 1680x1050, 1920x1080, 1920x1200, 2048x1536, 2560x1600, 2880x1620, 2880x1800, 3200x1800, 3840x2160, Scaling is performed if the resolution exceeds the above.  Local Screen: Windows: 4K 15fps/ 1 080p 60fps  <b>AUDIO FEATURES</b>  Local Audio: 48K dual-channel lossless audio playback  Shared Audio: Share audio can be played at remote sites  <b>SECURITY and RELIABILITY</b>  Connect Distance: Less than or equal to 20m  Data Security: Tls encryption  <b>WIRELESS</b>  Protocols: 802.11 a/g/n  Mode: Client  Authentication: WPA2-PSK  <b>PORTS:</b>  USB Port: 1 X USB device type A port</p> <p><b>PHYSICAL SPECIFICATIONS:</b>  Dimensions(H x W x D): Product dimensions: 177.27 mm x 65 mm x 19.8 mm; Net weight: 85g  Electricity Supply Requirements: Maximum power consumption: Less than or equal to 1.5w  Environmental Requirements: Working temperature: 0-40 °C; Storage temperature: -20°C - 60°C; Relative humidity: &lt;850/orh; Altitude: Less than or equal to 5000*</p>				
2.	<p><b>Digital Board</b>  Outline size(single board) 1114*1166.1*45mm  Board active size: 1084.6*1091.2mm/60.6inch  Board material: Whiteboard (3 layers: cold steel surface with nano paint, anti-glare≥0.3mm, middle high density poly-foam≥13mm, back galvanized steel sheet ≥0.2mm, paint thickness≥4H  Touch technology: Infrared sector oblique scanning induction mode  Response object: Finger, pen, chalk, any opaque object  Touchpoint: Single touch</p>	14	set/pair		

	<p>Touch resolution: 32768*32768/4096*4096  Accuracy: ≤2mm  Interface Support: USB2.0/USB3.0  Waterproof/dustproof: ≥IP55  Work temperature: -10°C~45°C  Work humidity: 0%-90%  Work voltage: DC 4.6V-DC 5V  Power consumption: &lt;1W ( 200mA at 5V)  Gesture response: Eraser or cloth clean the board surface, digital mark also can be cleaned Display delay Digital board writing display on the IFPD ≤120ms  File save: Support digital board writing local save and share via QR code  Hotkey icons: Must have preview, page up, page down, red, white, yellow pens, save, vote, screen clean functions.  Interactivity: Digital board and IFPD support work separately, also support interactive work, the digital board writing can display on the IFPD, and other interactive operation.  Writing mode: Software support single board writing display on the full screen, also support dual boards display on the same screen, and can save the writing contents as original display ratio.  color: Digital mark can be red, white and yellow color  Vote function: Support quick voting and result statistics through QR code, including single voting, multiple voting or voting, without downloading software  Original handwriting restoration: IFPD display digital mark all the same as digital board writing  Display position: ABA structure, user can set both sides board contents display on the left or right side of the screen as wish</p>				
3.	<p><b>Student Camera</b>  CAMERA:  Sensor: 1/2.5'', CMOS, Effective Pixel: 8.51M  Scanning Mode: Progressive  Lens Mount: M12  Lens 1 Focus: f=7.35mm, FOV: 46°  Lens 2(Default) Focus: f=3.5mm, FOV: 84°  Lens 1 Focus: f=2.8mm, FOV: 120°  Autofocus Support (120° does not support)  Digital zoom 8X  Minimal Illumination 0.5 Lux @ (F1.8, AGC ON)  Shutter 1/30s ~ 1/10000s  1/30s ~ 1/10000s Auto, Indoor, Outdoor, One Push, Manual,  Specified color temperature  Digital Noise 2D, 3D digital noise reduction  Network Features:  Video Compression H.265 / H.264 / MJPEG  Video Stream The first, second, third, fourth stream  The First Stream 1920x1080, 1280x720, 1024x576, 960x540,640x480, 640x360  The Second Stream 3840x2160, 1920x1080, 1920x1080,1280x720, 1024x576, 720x576(50Hz), 720x480(60Hz),720x408, 640x360, 480x270, 320x240, 320x180  The Third Stream 1024x576, 960x540, 720x576(50Hz),720x480(60Hz), 720x408, 640x360, 480x270, 320x240,320x180</p>	14	pc		

	<p>The Fourth Stream 1024x576, 960x540, 720x576(50Hz), 720x480(60Hz), 720x408, 640x360, 480x270, 320x240,320x180</p> <p>Video Bit Rate 32Kbps ~ 10240Kbps  Bit Rate Type Variable Rate, Fixed Rate  Frame Rate 50Hz: 1fps ~ 25fps, 60Hz: 1fps ~ 30fps  Audio Compression AAC  Audio Bit Rate 48Kbps, 64Kbps, 96Kbps, 128Kbps  Support protocols TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP,  Blacklight: Support  EPTZ: Support  PoE: Support  Auto Tracking: Teacher mode / Student mode (supported)  INPUT/OUTPUT INTERFACE  HD Output  1x3G-SDI: BNC type, 800mVp-p, 75Ω, Along to SMPTE 424M standard, Support PoC  USB Interface: 1xUSB2.0: Type A  Network Interface: 1xRJ45: 10M/100M/1000M Ethernet Interface, PoE Support  Audio Interface: 1-ch: Line In, 3pin Phoenix Port  Communication: 1xRS485: 2pin Phoenix Port, Max Distance: 1200m, Protocol: VISCA/Pelco-D/Pelco-P  Power Jack: DC005 type (DC 12V)  GENERAL SPECIFICATION  Input Voltage: DC 12V / PoE (IEEE802.3af) / PoC  Current: 0.5A(Max)  Operating: -10°C ~ 40°C (14°F ~ 104°F)  Storage: -40°C ~ 60°C (-40°F ~ 140°F)  Power Consumption: 6W(Max)  Size: 72mm x 60mm x 130mm (not include the protruding part)  Net Weight: 0.45kg  MTBF: 30000h</p>				
4.	<p><b>Teacher Camera</b>  Sensor: 1/2.5", CMOS, Effective Pixel: 8.51M  Scanning Mode: Progressive  Lens Mount: M12  Lens 1 Focus: f=7.35mm, FOV: 46°  Lens 2(Default) Focus: f=3.5mm, FOV: 84°  Lens 1 Focus: f=2.8mm, FOV: 120°  Autofocus Support (120° does not support)  Digital zoom 8X  Minimal Illumination 0.5 Lux @ (F1.8, AGC ON)  Shutter 1/30s ~ 1/10000s  1/30s ~ 1/10000s Auto, Indoor, Outdoor, One Push, Manual,  Specified color temperature  Digital Noise 2D, 3D digital noise reduction  Network Features:  Video Compression H.265 / H.264 / MJPEG  Video Stream The first, second, third, fourth stream  The First Stream 1920x1080, 1280x720, 1024x576, 960x540,640x480, 640x360  The Second Stream 3840x2160, 1920x1080, 1920x1080,1280x720, 1024x576, 720x576(50Hz), 720x480(60Hz),720x408, 640x360, 480x270, 320x240, 320x180  The Third Stream 1024x576, 960x540, 720x576(50Hz),720x480(60Hz), 720x408, 640x360, 480x270, 320x240,320x180</p>	14	pc		

	<p>The Fourth Stream 1024x576, 960x540, 720x576(50Hz), 720x480(60Hz), 720x408, 640x360, 480x270, 320x240,320x180  Video Bit Rate 32Kbps ~ 10240Kbps  Bit Rate Type Variable Rate, Fixed Rate  Frame Rate 50Hz: 1fps ~ 25fps, 60Hz: 1fps ~ 30fps  Audio Compression AAC  Audio Bit Rate 48Kbps, 64Kbps, 96Kbps, 128Kbps  Support protocols TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP,  Blacklight: Support  EPTZ: Support  PoE: Support  Auto Tracking: Teacher mode / Student mode (supported)  INPUT/OUTPUT INTERFACE  HD Output  1x3G-SDI: BNC type, 800mVp-p, 75Ω, Along to SMPTE 424M standard, Support PoC  USB Interface: 1xUSB2.0: Type A  Network Interface: 1xRJ45: 10M/100M/1000M Ethernet Interface, PoE Support  Audio Interface: 1-ch: Line In, 3pin Phoenix Port  Communication: 1xRS485: 2pin Phoenix Port, Max Distance: 1200m, Protocol: VISCA/Pelco-D/Pelco-P  Power Jack: DC005 type (DC 12V)  GENERAL SPECIFICATION  Input Voltage: DC 12V / PoE (IEEE802.3af) / PoC  Current: 0.5A(Max)  Operating: -10°C ~ 40°C (14°F ~ 104°F)  Storage: -40°C ~ 60°C (-40°F ~ 140°F)  Power Consumption: 6W(Max)  Size: 72mm x 60mm x 130mm (not include the protruding part)  Net Weight: 0.45kg  MTBF: 30000h</p>				
5.	<p><b>1-Unit Digital Sound Processor</b>  1. Industrial embedded Architecture, Embedded design, Stable and reliable;  2. Audio signal can be transmitted through USB interface and analog interface, Remote software upgrade and parameter configuration are possible;  3. Integrated automatic noise suppression technology, (Remove noise interference including air conditioner, exhaust fan, etc.) Ensure sound quality;  4. 6-way microphone input, Support software 48V phantom power on and off;  5. 3-channel mono line in input; 3.5mm interface and terminal double backup;  6. 3-channel mono line out output; 3.5mm interface and terminal double backup;  7. 6-balanced inputs can be processed with 16 EQ segments (Other inputs and outputs are not subject to EQ processing);  8. Intelligent mixing function: Automatically adjust the output level of the system according to the number of microphones turned on;  9. Reduce reverberation function: Automatic switching between wireless microphone and hanging microphone; The anti-reverberation level is adjustable;  10. With one key debugging function: Briefly press the key on the host, and the host will automatically configure the corresponding equipment parameters according to the sound field data;</p>	14	set		

	<p>11. Echo cancellation function: AEC process the microphone, the reference signal is remote audio signal, and the echo processing delay ability: 128ms, 256ms, 512ms;</p> <p>12. With AGC function, Prevent breaking sound when many people speak loudly;</p> <p>13. Built-in no less than two USB interfaces and one network interface, Software upgrade and parameter configuration are available;</p> <p>14. It has the function of environmental sound field detection, It can detect the reverberation time of different frequency bands, Background noise, STI, C50 and other acoustic parameters, to cope with all kinds of complex classroom acoustic environment;</p> <p>15. Echo rejection ratio: &gt;60dB</p> <p>16. sampling rate: 48K</p> <p>17. Sampling bits: 32位</p> <p>18. dynamic range: 90db</p> <p>19. Steady-state noise cancellation ratio: 30dB</p> <p>20. frequency response: 20Hz-20KHz</p> <p>21. Maximum gain: 59dB</p> <p>8-Units Ceiling Microphone "frequency response 100Hz~18KHz Sensitivity -40dB±3 dB (re 0dB=1V/Pa@1kHz) ) Pointing characteristics Ultra-Cardioid ≤135° Output impedance 200Ω±30% Output amplitude Max 300mV Maximum withstand sound pressure 110dB SPL (A计权@1KHzTHD≤1%) dynamic range 76dB (A) Signal to noise ratio 60dB (A) (re 94dBSPL=1Pa@1KHz) Power Supply DC48V Output connector XLR-3-12C Accessories Windproof sponge cover" 4-Units Speaker Loudspeaker 4.5" (4Ω) Sub box sensitivity (1m@2V) 87dB Frequency Response 80Hz~18KHz Rated power 30W output power L:15W R:15W Total harmonic distortion L:0.25% R:0.25% Input sensitivity 700mV Signal to noise ratio 74dB (power : 1W/4Ω) Input interface red (+) black (-) Speaker weight (Two) 5.8kg"</p>				
6.	<p><b>Teacher Monitor</b> Screen Size: 55" Resolution: 4K Screen materials: LCD Refresh Rate: 120hz Screen Brightness: 350 nits (typical luminance) Contrast: 5000:1 (typical value) Aspect Ratio: 16:9 Backlight Type: Direct LED Operating System: Harmony OS Intelligent Ability: MeeTime Video Call, MeeTime Video Call Transfer, Home Camera, OneHop Projection, Mirror Control, Distributed Gaming, AI Voice, AI Speaker Mode Memory: Operation Memory (RAM): 3 GB Internal Storage (ROM): 32 GB</p>	14	pc		

	<p>Quantity of Speakers: Two 10 W full frequency speakers and two 10 W tweeters</p> <p>Remote Control: Bluetooth voice remote control and OneHop Projection by NFC technology</p> <p>Wi-Fi Frequency: 2.4 GHz/5 GHz</p> <p>Interface: HDMI 2.0 x 3, AV In x 1, USB 3.0 x 1, SPDIF (coaxial) x 1</p>				
7.	<p><b>Access Point/Router</b></p> <p>WiFi Category: Wi-Fi 6</p> <ul style="list-style-type: none"> <li>• IEEE 802.11ax/ac/n/a 5 GHz</li> <li>• IEEE 802.11ax/n/b/g 2.4 GHz</li> </ul> <p>WiFi Speeds: AX7800</p> <ul style="list-style-type: none"> <li>• 5 GHz-1: 4804 Mbps (802.11ax, HE160)</li> <li>• 5 GHz-2: 2402 Mbps (802.11ax)</li> <li>• 2.4 GHz: 574 Mbps (802.11ax)</li> </ul> <p>WiFi Range: 4 Bedroom Houses</p> <p>8× Fixed High-Performance Antennas</p> <p>Multiple antennas form a signal-boosting array to cover more directions and large areas</p> <p><b>Beamforming</b></p> <p>Concentrates wireless signal strength towards clients to expand WiFi range</p> <p><b>High-Power FEM</b></p> <p>Improves transmission power to strengthen signal coverage</p> <p><b>4T4R</b></p> <p>Multiple streams in the same band strengthen the fault tolerance in transmission</p> <p>WiFi Capacity: Very High</p> <p><b>Tri-Band</b></p> <p>Allocate devices to different bands for optimal performance</p> <p><b>4×4 MU-MIMO</b></p> <p>Simultaneously communicates with multiple MU-MIMO clients</p> <p><b>OFDMA:</b> Simultaneously communicates with multiple Wi-Fi 6 clients</p> <p><b>Airtime Fairness:</b> Improves network efficiency by limiting excessive occupation</p> <p><b>HARDWARE</b></p> <p>Processor: 1.7 GHz Quad-Core CPU</p> <p>Ethernet Ports</p> <ul style="list-style-type: none"> <li>• 1× 2.5 Gbps WAN/LAN Port</li> <li>• 1× 1 Gbps WAN/LAN Port</li> <li>• 3× 1 Gbps LAN Ports</li> </ul> <p><b>SECURITY</b></p> <p>WiFi Encryption</p> <ul style="list-style-type: none"> <li>• WPA</li> <li>• WPA2</li> <li>• WPA3</li> <li>• WPA/WPA2-Enterprise (802.1x)</li> <li>• SPI Firewall</li> <li>• Access Control</li> <li>• IP &amp; MAC Binding</li> <li>• Application Layer Gateway</li> </ul> <p><b>FEATURES</b></p> <p>WAN TYPES: • Dynamic IP, Static IP, PPPoE, PPTP, L2TP</p> <p>Quality of Service: QoS by Device</p> <p>NAT Forwarding: Port Forwarding, Port Triggering, DMZ, UPnP</p>	14	pc		

	DHCP: Address Reservation, DHCP Client List, Server				
8.	<p><b>PoE Switch</b></p> <p>Interface: 8 10/100/1000Mbps RJ45 Ports  Network Media: 1000BASE-T: UTP category 5, 5e, 6 or above cable  Packet Forwarding Rate: 11.904 Mpps  PoE+ Ports(RJ45) Standard: 802.3af/at compliant  PoE+ Ports: 8 Ports  Mac Address Table: 4K  Buffer Size:1.5Mbits  Jumbo Frame: 16 KB  Switching Capacity: 16Gbps  Advanced Features: Compatible With IEEE 802.3af/at Compliant PDs, Priority Function, Mac Address Auto-Learning And Auto-Aging, IEEE802.3x Flow Control For Full-Duplex Mode And Backpressure For Half-Duplex Mode  Transfer Method: Store-And-Forward</p>	14	pc		
9.	<p><b>Uninterrupted Power Supply (UPS)</b></p> <p>Main  Main Input Voltage: 230 V  Other Input Voltage: 220 V; 240 V  Main Output Voltage: 230 V  Rated power in W: 600 W  Rated power in VA: 1000 VA  Input Connection Type: IEC 320 C14  Output connection type: 8 IEC 320 C13; 2 IEC Jumpers  Battery type: Lead-acid battery  Provided equipment: CD with software; Documentation CD; USB cable</p> <p>General  Number of power module filled: 0 slots  Number of power module free: slots 0  Product web sub-family: Entry level  Redundant: No</p> <p>Physical  Color: Black  Height: 21.9 cm  Width: 17.1 cm  Depth: 43.9 cm  Net weight: 17.27 kg  Mounting location: Front  Mounting preference: No preference  Mounting mode: Not rack-mountable  Two post mountable: 0  USB compatible: Yes</p> <p>Input  Input voltage limits: 170...300 V adjustable; 180...287 V  Network frequency: 50/60 Hz +/- 3 Hz auto-sensing</p> <p>Output  Harmonic distortion: Less than 5 % at full load  Maximum configurable power in VA: 1000 VA  Maximum configurable power in W: 600 W  UPS type: Line interactive  Wave type: Sine wave  Output frequency: 50/60 Hz +/- 3 Hz sync to mains</p> <p>Conformance  Product certifications: CE; CSA; GOST; VDE; EAC  Standards: EN/IEC 62040-1:2019/A11:2021; EN/IEC 62040-2:2006/AC:2006; EN/IEC 62040-2:2018</p> <p>Environmental  Acoustic level: 41 dBA</p>	14	pc		

	<p>Heat dissipation: 100 Btu/h  Operating altitude: 0...10000 ft  Ambient air temperature for operation: 0...40 °C  Ambient air temperature for storage: -15...45 °C  Storage altitude: 0.00...15240.00 m  Relative humidity: 0...95 %  Storage Relative Humidity: 0...95 %  Batteries &amp; Runtime  Extended runtime: 0  Number of battery filled slots: 0  Number of battery free slots: 0  Battery recharge time: 3 h  Number of battery replacement quantity: 1  Battery life: 3...5 year(s)  Battery power in VAH: 170 VAh runtime  Battery charger power: 56 W rated  Communications &amp; Management  Control panel: Multifunction LCD status and control console  Free slots: 0  Alarm: Alarm when on battery: distinctive low battery alarm: configurable delays  Surge Protection and Filtering  Surge energy rate: 455 J  Noise suppression: Full-time multi-pole noise filtering: 0.3% IEEE surge let-through: zero clamping response time: meets UL 1449</p>				
10.	<p><b>Data Cabinet</b>  9U (600mm x 590mm x 510mm)  Toughed glass door w/ lock, Removable side panels (not vented), side locks (optional)  Cable entry on both of top cover and bottom panel, Powder coated, black  6-outlet all-usage PDU with main switch 2.5m-length cable (220V,3prong,10A)  2-Cooling fan 220V</p>	14	pc		
11.	<p>Acoustic Panel, 12x12 Acoustic Panels for soundproofing (Color: Gray) for Two (2) Smart Classrooms</p>	600	pc		
	<p>1. Mounting of Smart Collaboration Board, Digital Board, Student and Teacher Camera, ceiling microphone, speakers, data cabinet, and Teacher monitor  2. Cable laying of microphone, speakers, HDMI, UTP cable, and other accessories connection  3. Configuration of DSP, Student and Teacher camera, Refocus Student and Teacher camera, Smart Collaboration Board and Digital Board  4. Testing and fine-tuning  5. Admin. and user training including trouble shooting  6. All accessories are compatible with the Smart Collaboration Board  7. Installation of acoustic panel</p> <p>Technical Support Service and Product Warranty for one (1) year  *Warranty for all components and workmanship of the project  *Warranty on all parts and labor by authorized technical support  *Hardware replacement of the product in case On-Site Repair is not successful.  *With Email-Based Support  *With Phone-Based Support  *With Remote-Based Support  *On Site-Based Support, if necessary, shall be provided on the next business day.</p>				
<b>Total Bid Price</b>					

# [Bidder's Letterhead]

[Date]

To: Tarlac State University  
 Re: Invitation to Bid No.

## SCHEDULE OF PRICES

Item No.		Qty.	Unit	Unit Price	Total Price
<b>Lot No. 2 – Mobile Collaboration Board</b>					
1.	<p><b>Smart Collaboration Board with Trolley</b></p> <p>Product Features:</p> <p>Next-gen hardware platform: 8-core dual-engine driver</p> <p>4K soft light screen: Optical anti-blue light, adaptive to ambient light</p> <p>Ultra-narrow frame: Seamless zero-gap lamination and aerospace-grade nano-coating</p> <p>Smart camera: Lens cover offers physical privacy protection</p> <p>Dual-system one-tap switchover: OPS swap-free</p> <p>Centralized front panel ports: NFC, Type-C, USB 3.0, and power button</p> <p>BYOM: Seamless transfer; Multiple transfer methods</p> <p>HD Intelligent Meeting: Supports 1080p audio and video, 4K data sharing, and dual-stream meetings; Features H.264 + H.265 dual protocols, HD hardware encoding and decoding, and fully upgraded on-premises conferences</p> <p>Powerful AI capabilities:</p> <p>Voice tracking: Always keep the speaker in the center</p> <p>Auto-Framing: Automatically identifies the best angle for multiple participants</p> <p>Acoustic baffle: Shields external noise and adapts to various meeting rooms</p> <p>4K video conferencing camera:</p> <p>4K 30 fps 1.5 μm optical sensor: Doubled signal-to-noise ratio (SNR)</p> <p>Circulating heat dissipation design: 3000-hour high-temperature test reassures consistent resolution even after long meetings</p> <p>3D stereo field for cinematic sound experience: Ultra-large sound cavity   Max. 95 dB sound pressure</p> <p>Acoustic Engine 2.0: 12-meter ultra-long-distance sound pickup; DNN-based dereverberation2; Audio echo cancellation algorithm</p> <p>Imaging algorithm: TV distortion &lt; 2% for natural image</p> <p>Wi-Fi 6 for Direct Projection:</p> <p>Dual-band dual-Wi-Fi module: No interference between internet connection and projection</p> <p>More projection methods: Share Key App with code; Type-C and HDMI cables for projection</p> <p>Intelligent Whiteboard:</p>	10	pc		

<p>16 ms ultra-low writing latency: Synchronous and precise writing on screen</p> <p>Multiple pen thicknesses in full color: Optional handwriting thickness and unlimited color choices</p> <p>Multi-touch gestures: Select, move, zoom, and erase with gestures</p> <p>Scan to take away: Scan the QR code to take away whiteboard content</p> <p>Handwriting recognition: Converting handwriting and drawings to digital forms</p> <p>Full-screen annotation: Taking a snapshot of any page and pasting it to the whiteboard for annotation</p> <p>Remote bidirectional collaboration: Share whiteboard content for real-time collaboration</p> <p>Co-authoring: Two people can write on the whiteboard concurrently</p> <p>Boundless Collaboration for Smart Office:</p> <p>Multi-Window for efficient multitasking: Multiple local collaboration and discussion tasks can be displayed simultaneously; App switching-free during collaboration; Browse information while writing on the whiteboard at the same time; Supports multi-app screen linkage with adjustable window ratios (1:1/1:2), adapting to more scenarios</p> <p>App Multiplier for user-friendly interaction: Removes black bars of apps and optimizes multi-window display effect of more apps; App Multiplier is supported by more than 1,0001 apps; Displays an app in dual windows</p> <p>Open and Fast Integration:</p> <p>Open architecture: Adapts to the video hardware codec to provide 1080p HD video conferencing</p> <p>Open SDKs: Integrates the whiteboard and meeting SDK plug-ins into enterprise office apps</p> <p>App Manager for Intelligent O&amp;M:</p> <p>Remote management of multiple devices: Basic device configuration; Remote OTA updates; Remote shutdown; Boot screen and bulletin board push</p> <p>Fast and precise fault locating and diagnosis: Fault alarm notification; Self-service diagnosis of typical faults</p> <p>Customizable HiBoard Welcome Page: Multiple templates; Supports image import</p> <p>Bulletin Board for Enterprise Marketing: Unified management and scheduled push based on regions and organizations; Flexible advertising design allows up to 50 images to be played in turn</p> <p>Physical:</p> <p>Product dimensions (H x W x D): 86": 1212.0 mm x 1953.0 mm x 91.8 mm</p> <p>Net weight: 86": 62.0 kg</p> <p>Component:</p> <p>Rolling stand: 86"</p> <p>Stylus pen: 2</p> <p>Wall-mounted bracket: 86"</p> <p>Cable: 1 x power cable</p> <p>Screen:</p> <p>Resolution: 4K (3840 x 2160 pixels)</p> <p>Backlight type: D-LED</p> <p>Screen lamination: Zero-gap bonding</p> <p>Writing:</p> <p>Latency: 16ms</p>					
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<p>Touch sensing distance: <math>\leq 1.5</math> mm</p> <p>Intelligent writing recognition: Supports recognition of Chinese; English; 11 types of graphics</p> <p>Camera:</p> <p>Resolution: 1800 lines</p> <p>Horizontal FoV: 80°</p> <p>Sensor pixel size: 1.5 <math>\mu\text{m}</math> x 1.5 <math>\mu\text{m}</math></p> <p>Zoom: 2x digital zoom</p> <p>Lens cover: <math>\checkmark</math></p> <p>TV distortion: <math>&lt; 2\%</math></p> <p>Speaker:</p> <p>Frequency domain: 80 Hz to 20 kHz</p> <p>Quantity: 2 x high-frequency speaker+2 x full-frequency speaker</p> <p>Maximum power: 40W</p> <p>Microphone:</p> <p>Sound pickup angle: 180°</p> <p>Optimized sound pickup: Sound source location; echo cancellation; automatic gain control</p> <p>Sound pickup distance: 12m</p> <p>Frequency domain: 80 Hz to 20 kHz</p> <p>Conferencing:</p> <p>Dual streams (audio/video + data sharing): On-premises conference: 1080p 30 fps + 1080p 30 fps/4K 8 fps</p> <p>AI Function:</p> <p>Auto-Framing: Supported</p> <p>Intelligent tracking: Supported</p> <p>DNN-based dereverberation: Supported</p> <p>System:</p> <p>CPU: 8-core A73</p> <p>Operating system: Harmony OS; Windows</p> <p>RAM: 8GB</p> <p>Security: Embedded encryption chip that supports H.235; STARTTLS; TLS; SRTP encryption; secure boot; TEE</p> <p>Flash: 64GB</p> <p>Language: Simplified Chinese; English; French; Japanese; Arabic; Spanish</p> <p>Wireless Connection:</p> <p>Wi-Fi module: Wi-Fi 6</p> <p>Wi-Fi frequency: 2.4 GHz + 5 GHz</p> <p>NFC: Supported</p> <p>Interface:</p> <p>Video input: 1 x HDMI (up to 4K)</p> <p>Video output: 1 x HDMI (up to 4K)</p> <p>Audio input: 1 x 3.5 mm LINE IN; 1 x HD-AI</p> <p>Audio output: 1 x 3.5 mm LINE OUT</p> <p>Other ports: 3 x USB Type-A 3.0; 1 x USB Type-C; 1 x RJ45 (10/100/1000 Mbit/s LAN)</p> <p>Accessories:</p> <p>Wireless Sharing Button</p> <p>COMPATIBILITY</p> <p>Operating systems: Windows: Windows7/8/8.1/10, 32 and 64 bits</p> <p>VIDEO RESOLUTION</p> <p>PC Screen: 640x480, 800x600, 1024x768, 1152x864, 1280x600, 1280x720, 1280x768, 1280x800, 1280x960, 1280x1024, 1360x768, 1366x768, 1440x900, 1400x1050, 1600x900, 1600x1200, 1680x1050, 1920x1080, 1920x1200,</p>					
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<p>2048x1536, 2560x1600, 2880x1620, 2880x1800, 3200x1800, 3840x2160, Scaling is performed if the resolution exceeds the above.  Local Screen: Windows: 4K 15fps/ 1 080p 60fps  <b>AUDIO FEATURES</b>  Local Audio: 48K dual-channel lossless audio playback  Shared Audio: Share audio can be played at remote sites  <b>SECURITY and RELIABILITY</b>  Connect Distance: Less than or equal to 20m  Data Security: Tls encryption  <b>WIRELESS</b>  Protocols: 802.11 a/g/n  Mode: Client  Authentication: WPA2-PSK  <b>PORTS:</b>  USB Port: 1 X USB device type A port</p> <p><b>PHYSICAL SPECIFICATIONS:</b>  Dimensions(H x W x D): Product dimensions: 177.27 mm x 65 mm x 19.8 mm; Net weight: 85g  Electricity Supply Requirements: Maximum power consumption: Less than or equal to 1.5w  Environmental Requirements: Working temperature: 0-40 °C; Storage temperature: -20°C - 60°C; Relative humidity: &lt;850/orh; Altitude: Less than or equal to 5000*</p>				
<p>Technical Support Service and Product Warranty for one (1) year  *Warranty for all components and workmanship of the project  *Warranty on all parts and labor by authorized technical support  *Hardware replacement of the product in case On-Site Repair is not successful.  *With Email-Based Support  *With Phone-Based Support  *With Remote-Based Support  *On Site-Based Support, if necessary, shall be provided on the next business day.</p>				
				<b>Total Bid Price</b>

*[Signature]*  
[Name of Authorized Signatory]  
*[Position/Title of Authorized Signatory]*