



**development academy of the philippines**

**BIDS & AWARDS COMMITTEE** (SO No.2024-038 DATED FEBRUARY 28, 2024)

# **OFFICIAL BIDDING DOCUMENTS (OBD)**

**NOTE:** This OBD is compliant with the Philippine Bidding Documents (Goods)  
6<sup>th</sup> Edition as of July 2020 prepared by GPPB.

Some minor changes have been made to suit the requirements of the

**Development Academy of the Philippines (DAP)**

*as the Procuring Entity*

**for**

**“Idea Generation Hub (IGH) Phase 3: One (1) Lot Supply,  
Installation and Commissioning of Integrated Audio Visual  
Equipment and Information and Communication Technology  
Systems Inclusive of All Accessories for the IGH Facilities such as  
Multi-Media Room, Learning Room, Private Nooks, Café  
Lounge, and Garden Decks at the 7th Floor of DAP Building in  
Pasig City”**

**with Approved Budget for the Contract of 18,950,000.00**

**Invitation to Bid No.: IB24- 413103-02**

DAP Bldg., San Miguel Avenue, Pasig City 1600

Telephone: (632) 8631 0921 loc. 133

website: <http://www.dap.edu.ph>

email address of BAC Secretariat: [dapbacsec@dap.edu.ph](mailto:dapbacsec@dap.edu.ph)

# Preface

These Philippine Bidding Documents (PBDs) for the procurement of Goods through Competitive Bidding have been prepared by the Government of the Philippines for use by any branch, constitutional commission or office, agency, department, bureau, office, or instrumentality of the Government of the Philippines, National Government Agencies, including Government-Owned and/or Controlled Corporations, Government Financing Institutions, State Universities and Colleges, and Local Government Unit. The procedures and practices presented in this document have been developed through broad experience, and are for mandatory use in projects that are financed in whole or in part by the Government of the Philippines or any foreign government/foreign or international financing institution in accordance with the provisions of the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184.

The Bidding Documents shall clearly and adequately define, among others: (i) the objectives, scope, and expected outputs and/or results of the proposed contract or Framework Agreement, as the case may be; (ii) the eligibility requirements of Bidders; (iii) the expected contract or Framework Agreement duration, the estimated quantity in the case of procurement of goods, delivery schedule and/or time frame; and (iv) the obligations, duties, and/or functions of the winning bidder.

Care should be taken to check the relevance of the provisions of the PBDs against the requirements of the specific Goods to be procured. If duplication of a subject is inevitable in other sections of the document prepared by the Procuring Entity, care must be exercised to avoid contradictions between clauses dealing with the same matter.

Moreover, each section is prepared with notes intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They shall not be included in the final documents. The following general directions should be observed when using the documents:

- a. All the documents listed in the Table of Contents are normally required for the procurement of Goods. However, they should be adapted as necessary to the circumstances of the particular Procurement Project.
- b. Specific details, such as the “*name of the Procuring Entity*” and “*address for bid submission,*” should be furnished in the Instructions to Bidders, Bid Data Sheet, and Special Conditions of Contract. The final documents should contain neither blank spaces nor options.
- c. This Preface and the footnotes or notes in italics included in the Invitation to Bid, Bid Data Sheet, General Conditions of Contract, Special Conditions of Contract, Schedule of Requirements, and Specifications are not part of the text

of the final document, although they contain instructions that the Procuring Entity should strictly follow.

- d. The cover should be modified as required to identify the Bidding Documents as to the Procurement Project, Project Identification Number, and Procuring Entity, in addition to the date of issue.
- e. Modifications for specific Procurement Project details should be provided in the Special Conditions of Contract as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the Bid Data Sheet or Special Conditions of Contract, these terms shall be printed in bold typeface on Sections I (Instructions to Bidders) and III (General Conditions of Contract), respectively.
- f. For guidelines on the use of Bidding Forms and the procurement of Foreign-Assisted Projects, these will be covered by a separate issuance of the Government Procurement Policy Board.

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# *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.



## **INVITATION TO BID**

**FOR**

**“Idea Generation Hub (IGH) Phase 3: One (1) Lot Supply, Installation and Commissioning of Integrated Audio Visual Equipment and Information and Communication Technology Systems Inclusive of All Accessories for the IGH Facilities such as Multi-Media Room, Learning Room, Private Nooks, Café Lounge, and Garden Decks at the 7th Floor of DAP Building in Pasig City”**

**Per Invitation to Bid No.: IB24-413103-02**

1. The **Development Academy of the Philippines (DAP)**, through the **General Appropriations Act (GAA) for FY 2023**, intends to apply the sum of **EIGHTEEN MILLION NINE HUNDRED FIFTY THOUSAND PESOS (P18,950,000.00)** being the Approved Budget for the Contract (ABC) for **“IDEA GENERATION HUB (IGH) PHASE 3: ONE (1) LOT SUPPLY, INSTALLATION AND COMMISSIONING OF INTEGRATED AUDIO VISUAL EQUIPMENT AND INFORMATION AND COMMUNICATION TECHNOLOGY SYSTEMS INCLUSIVE OF ALL ACCESSORIES FOR THE IGH FACILITIES SUCH AS MULTI-MEDIA ROOM, LEARNING ROOM, PRIVATE NOOKS, CAFÉ LOUNGE, AND GARDEN DECKS AT THE 7TH FLOOR OF DAP BUILDING IN PASIG CITY”** per Invitation to Bid No.: **IB24-413103-02**. **Bids received in excess of the ABC shall be automatically rejected at bid opening.**
2. The **DAP** now invites bids for the above Project. Delivery of the Goods is required within **150 calendar days** after the receipt of the Notice to Proceed. Bidders should have completed a contract similar to the Project with a contract amount equivalent to at least fifty percent (50%) of the ABC. The qualifications 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) No. 9184.

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. The Prospective Bidders may obtain further information from DAP and inspect the Bidding Documents at the DAP Pasig address or through email or contact details provided below during 9:00AM to 4:30PM (except holidays and weekends).
5. A complete printed set or electronic copy of Bidding Documents may be acquired by interested Bidders starting **October 8, 2024 (Tue)** to **November 8, 2024 (Fri)** from



9:00AM to 4:30PM, (except holidays and weekends, for printed set), from the given address and website below, upon payment of the applicable fee for the Bidding Documents, pursuant to the latest guidelines issued by the GPPB, in the amount of **EIGHTEEN THOUSAND PESOS (P18,000.00)**.

6. The DAP shall allow the bidder to present its proof of payment for the fees in person, or through electronic means.

It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System ([www.philgeps.gov.ph](http://www.philgeps.gov.ph)) and the website of the DAP ([www.dap.edu.ph](http://www.dap.edu.ph)). However, **only bidders who have paid the non-refundable applicable fee not later than the deadline for submission of bids, shall qualify to participate and submit the bids.**

7. Interested bidders must make payment to:

Account Name:	Development Academy of the Philippines
Account Number:	0671-0105-40
Bank:	Landbank of the Philippines
Branch of Account:	Pasig Capitol Branch

A copy of proof of payment must be emailed to DAP's Finance Department at: [cashtreasury@dap.edu.ph](mailto:cashtreasury@dap.edu.ph) and copy furnish [dapbacsec@dap.edu.ph](mailto:dapbacsec@dap.edu.ph) for the issuance of Official Receipt (OR) and the BAC Secretariat will provide assistance to the On-line Bidder for the creation of "bidms account" and dedicated site in the [bidms.dap.edu.ph](http://bidms.dap.edu.ph).

8. The DAP will hold a Pre-Bid Conference on **October 16, 2024 (Wed), 10:00AM** via **Face-to-Face Modality at DAP Building, San Miguel Avenue, Ortigas Center, Pasig City**, which shall be opened to all interested Bidders upon formal request Letter of Intent through the BAC Secretariat. Requests shall be coursed through email at [dapbacsec@dap.edu.ph](mailto:dapbacsec@dap.edu.ph) and further instructions will be given by the BAC Secretariat.
9. Bids must be duly received by the BAC Secretariat at the address below on **12 November 2024 (Tue) and not later than 10:00AM**. All Bids must be will be opened in the presence of the bidders' authorized representative/s who are authorized to attend the proceedings. **LATE BIDS SHALL NOT BE ACCEPTED.**
10. Bid opening shall be on **12 November 2024 (Tue), 10:00AM** via **Face-to-Face Modality at DAP Building, San Miguel Avenue, Ortigas Center, Pasig City**. All bids will be opened in the presence of the bidders' authorized representative/s who are authorized to attend the proceedings, as evidenced by the **Bidders' Notarized Letter of Authorization (LOA)**. The **Authorized Representative** is a person who has been authorized by the company's owner, board, or management, and via a notarized document, to represent the company, to ask questions, answer questions, and make decisions on behalf of the company during the bid opening.
11. The **DAP** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time in accordance with the provisions of RA 9184 and its IRR, without thereby incurring any liability to the affected bidder or bidders.

12. For further information, please refer to:

**RODEL D. CASTILLO**

***Officer-in-Charge, BAC Secretariat Division***

Development Academy of the Philippines

1<sup>st</sup> Floor DAP Bldg., San Miguel Avenue, Pasig City 1600

*Telephone No.* : (632) 8631-0921 loc. 133

*BAC Secretariat email* : [dapbacsec@dap.edu.ph](mailto:dapbacsec@dap.edu.ph)

*Website address* : <https://www.dap.edu.ph>

13. You may visit the following websites:

**For downloading of Official Bidding Documents:** <https://www.dap.edu.ph/invitation-to-bid/>

Issued this 8<sup>th</sup> day of October 2024.

*For the DAP Bids and Awards Committee 2:*



**ALAN S. CAJES**  
Chairperson, BAC 2

## ***Section II. Instructions to Bidders***

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

The Procuring Entity, Development Academy of the Philippines wishes to receive Bids for the “**Idea Generation Hub (IGH) Phase 3: One (1) Lot Supply, Installation and Commissioning of Integrated Audio Visual Equipment and Information and Communication Technology Systems Inclusive of All Accessories for the IGH Facilities such as Multi-Media Room, Learning Room, Private Nooks, Café Lounge, and Garden Decks at the 7th Floor of DAP Building in Pasig City.**”

The Procurement Project is composed of **one (1) lot**, 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 the year 2024 in the amount of **EIGHTEEN MILLION NINE HUNDRED FIFTY THOUSAND PESOS (P18,950,000.00)**.

2.2. The source of funding is: the **General Appropriations Act (GAA) for FY 2023**.

### **3. Bidding Requirements**

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.

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.

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 shall have an SLCC that is at least one (1) contract similar to the Project the value of which, adjusted to current prices using the PSA's CPI, must be at least equivalent to:
  - a. For the procurement of Non-expendable Supplies and Services: The Bidder must have completed a single contract that is similar to the **Project** within the last **five (5) years** prior to the deadline for the submission and receipt of bids, equivalent to at least **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 through **Face-to-Face Modality at the DAP Building, Pasig City** as indicated in paragraph 7 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 the last **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 the **BDS**.
- 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 the **BDS**.

### **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<sup>1</sup> 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 within **One Hundred Twenty (120) Calendar Days from the date of submission of Bids**. 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**

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

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.

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<sup>1</sup> In the case of Framework Agreement, the undertaking shall refer to entering into contract with the Procuring Entity and furnishing of the performance security or the performance securing declaration within ten (10) calendar days from receipt of Notice to Execute Framework Agreement.

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 through online submission on the specified date and time as indicated in paragraph 8 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 Entity's 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 may be. In this case, the Bid Security as required by **ITB** Clause 14 shall be submitted for each lot or item separately.

19.3. The descriptions of the lots or items shall be indicated in **Section VII (Technical Specifications)**, although 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 several items that shall be awarded as one contract.
- 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, that it is one of the eligible bidders who have submitted bids that are found to be technically and financially compliant, 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	
<p style="text-align: center;">5.3</p> <p>Eligible Bidders</p>	<p>Bidders should have the following qualifications:</p> <ol style="list-style-type: none"> <li>a. Bidders must have at least five (5) years of experience in providing the required product and system and should provide at least a "very satisfactory" rating and/ or proof of satisfaction of a minimum of at least three (3) testimonials from clients inclusive of their contactable references.</li> <li>b. Bidders must have one (1) or more Accredited Service Center in National Capital Region (NCR) inclusive of submission of office address and contact information.</li> <li>c. Must have a certificate from and/or certified by Audiovisual and Integrated Experience Association (AVIXA) or its equivalent Organization which certifies that an individual or organization is committed to the best practices and standards of the AV industry inclusive of the submission of the appropriate AVIXA Certificate of Membership or Equivalent for 2 consecutive years and renewed within the period of the project.</li> <li>d. The Bidder must have completed a single contract that is similar to the Project within the last five (5) years prior to the deadline for the submission and receipt of bids, equivalent to at least fifty percent (50%) of the ABC.</li> </ol>
<p style="text-align: center;">7.1</p> <p>Subcontracts</p>	<p>Subcontracting is not allowed.</p>
<p style="text-align: center;">10.1</p> <p>Documents comprising the Bid: Eligibility and Technical Components</p>	<p>Bidders shall submit the following:</p> <p><b><u>FOR ELIGIBILITY &amp; TECHNICAL DOCUMENTS:</u></b></p> <ol style="list-style-type: none"> <li>1. Valid <b>PhilGEPS Certificate of Registration</b> under <b><u>PLATINUM CATEGORY</u></b> with the <b>current, updated, and clear</b> copy of the documents as follows: <ul style="list-style-type: none"> <li>• Clear and readable Photocopy of Registration Certificate from The Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI), or Cooperative Development Authority (CDA), whichever is applicable;</li> <li>• Clear and readable Photocopy of valid Mayor's/Business Permit or its Equivalent Document;</li> <li>• Clear and readable Photocopy of Tax Clearance Certificate for FY2023 issued by the Bureau of Internal Revenue (BIR);</li> <li>• Clear and readable Photocopy of Audited Financial Statements for</li> </ul> </li> </ol>

ITB Clause	
	<p>FY2023 stamped “<b>received</b>” by the BIR or its duly accredited and authorized institutions.</p> <ol style="list-style-type: none"> <li data-bbox="408 360 1383 573">2. Statement of <b>ALL its ongoing government and private contracts</b>, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid. Submit accomplished <b>FORM 6: STATEMENT OF ALL ONGOING CONTRACTS INCLUDING AWARDED BUT NOT YET STARTED</b>;</li> <li data-bbox="408 613 1383 864">3. Statement of its <b>Single Largest Completed Contract (SLCC)</b>, in accordance with BDS clause 5.3, similar to the contract to be bid and supported by a Certificate of Completion or Final Acceptance or any supporting documentary proof Final Acceptance of the project (e.g. Official Receipt or Sales Invoice) issued by the project owner. Submit accomplished <b>FORM 7: STATEMENT OF BIDDER’S SINGLE LARGEST COMPLETED CONTRACT (SLCC)</b>;</li> <li data-bbox="408 904 1383 969">4. <b>Bid Security</b> in accordance with BDS Clause 14.1. Submit accomplished <b>FORM 3: BID SECURING DECLARATION</b>;</li> <li data-bbox="408 1010 1383 1149">5. <b>Technical Specifications</b> - Bidders must state on the statement of compliance column whether the Bidder will “<b>Comply</b>” or “<b>Not Comply</b>” with the stated requirements; Submit accomplished <b>FORM 10. Technical Specifications Compliance</b></li> <li data-bbox="408 1173 1383 1238">6. <b>Duly Notarized Omnibus Sworn Statement</b>. Submit accomplished <b>FORM 5: OMNIBUS SWORN STATEMENT</b>;</li> <li data-bbox="408 1263 1383 1581">7. <b>Audited Financial Statements (AFS)</b> for Fiscal Year (FY) 2023 stamped “<b>received</b>” by the BIR or its duly accredited and authorized institutions, or in accordance to the Revenue Memorandum Circular 51-2024 issued on April 8, 2024, prescribes the guidelines in the filing of Annual Income Tax Return (AITR) for FY2023 and payment of corresponding taxes due thereon on or before April 15, 2024, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission and signed by bidder’s Certified Public Accountant;</li> <li data-bbox="408 1606 1383 1715">8. <b>NFCC computation of at least equal to the ABC in accordance with ITB Clause 5.4</b>. Submit accomplished <b>FORM 8: NET FINANCIAL CONTRACTING CAPACITY (NFCC)</b>;</li> <li data-bbox="408 1740 1383 1850">9. <b>Certificate of Site Inspection</b> duly signed by TWG –End User Representative or TWG Chairperson or the End User. Submit accomplished <b>FORM 9: CERTIFICATE OF SITE INSPECTION</b>;</li> <li data-bbox="408 1890 1383 2024">10. <b>Company Profile</b> inclusive in the minimum of: <ul style="list-style-type: none"> <li data-bbox="459 1962 794 1995">• Company Background</li> <li data-bbox="459 2002 794 2024">• Date of Establishment</li> </ul> </li> </ol>

ITB Clause	
	<ul style="list-style-type: none"> <li>• Our Team: Company Owners, Officers, and the Company Organizational Chart</li> <li>• Products/ Services Offered</li> <li>• All Completed Projects Within the Last 5 Years Inclusive Of: <ul style="list-style-type: none"> <li>10..1. Client Name</li> <li>10..2. Address/ Contact Reference</li> <li>10..3. Type Of Project</li> <li>10..4. Project Title</li> <li>10..5. Total Project Cost</li> <li>10..6. Project Date, And</li> <li>10..7. Any Or All IT/AV Equipment, Systems, Accessories Provided</li> <li>10..8. Total Cost of any or all IT/AV Equipment, Systems, Accessories provided</li> </ul> </li> <li>• Fill out and Complete Company Profile <b>Form 11</b>.</li> </ul> <p><b>11. Proof of Satisfaction</b> of a minimum of at least three (3) testimonials from clients inclusive of their contactable references.</p> <p><b>12. List of one (1) or more Accredited Service Centers</b> in National Capital Region (NCR) inclusive of submission of office address and contact information.</p> <p><b>13. Certificate from Audiovisual and Integrated Experience Association (AVIXA) or its equivalent Organization</b> for 2 consecutive years and renewed within the period of the project;</p> <p><b>14. Joint Venture Agreement (JVA)</b>, if applicable. Submit requirements as required by Section 23.1 (b) for Goods. If not applicable, the bidder must indicate in writing that they will not be partaking in a Joint Venture for this project.</p>
<p>11.1</p> <p>Documents comprising the Bid: Financial Component</p>	<p>Bidders shall submit the following:</p> <p><b><u>FINANCIAL DOCUMENTS:</u></b></p> <p><b>Financial Bid Form or “F01”</b> – duly signed and accomplished by the bidder. (please refer to FORM 1: FINANCIAL BID FORM); and</p> <p><b>Price Schedule or “F02”</b> – duly signed and accomplished by the bidder. (please refer to FORM 2: PRICE SCHEDULE).</p>
<p>12</p> <p>Bid Prices</p>	<p>The price of the Goods shall be quoted in <b>Philippine Peso</b> and valid for only 120 calendar days.</p>
<p>14.1</p>	<p>The bid security shall be in the form of a Bid Securing Declaration, <b>or</b> any of the following forms and amounts:</p>

<b>ITB Clause</b>	
Bid Security	<p>a. The amount of not less than <b>THREE HUNDRED SEVENTY-NINE THOUSAND PESOS ONLY (P379,000.00)</b> or 2% of the ABC, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or</p> <p>b. The amount of not less than <b>NINE HUNDRED FORTY SEVEN THOUSAND FIVE HUNDRED PESOS ONLY (P947,500.00)</b> or 5% of the ABC, if bid security is in Surety Bond.</p>
19.3  Detailed Evaluation and Comparison of Bids	<b>“Idea Generation Hub (IGH) Phase 3: One (1) Lot Supply, Installation and Commissioning of Integrated Audio Visual Equipment and Information and Communication Technology Systems Inclusive of All Accessories for the IGH Facilities such as Multi-Media Room, Learning Room, Private Nooks, Café Lounge, and Garden Decks at the 7th Floor of DAP Building in Pasig City.</b>
20.1  Post-Qualification	<p><b>Post-Qualification</b></p> <p>The Lowest/Single Calculated Bidder (L/SCB) shall submit the certified true copies of the following documents as part of the post-qualification requirements:</p> <ol style="list-style-type: none"> <li>1. Registration Certificate from Securities and Exchange Commission (SEC), <u>or</u> Department of Trade and Industry (DTI) for sole proprietorship, <u>or</u> Cooperative Development Authority (CDA) for cooperatives <u>or</u> its equivalent document;</li> <li>2. Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas; Note: If the Mayor's or Business Permit has been issued subject to compliance with certain condition/s, please submit any of the following: <ol style="list-style-type: none"> <li>a) Certification from the Business Permits and Licensing Department of the issuing City or Municipality that the Mayor's/Business Permit is still <b>VALID</b>; <b>or</b></li> <li>b) Copy of updated Business/Mayor's permit indicating compliance with the ancillary clearance/s (e.g. Fire Safety Inspection Certificate, etc.)</li> </ol> <p>Failure to submit any of the above-cited documents on time or a finding against the veracity of such document can be a ground for disqualification.</p> </li> <li>3. Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR);</li> <li>4. The bidder's audited financial statements, showing, among others, the bidder's total and current assets and liabilities, stamped “received” by the</li> </ol>

ITB Clause	
	<p>BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission;</p> <p><i>Note: An AFS filed/submitted electronically will be accepted<sup>2</sup> by DAP: Provided, it is supported by a system-generated Transaction Reference Number and electronic mail sent to the filer/taxpayer as proof of submission in lieu of the manual “Received” stamping.</i></p> <p>5. Latest Income Tax Returns filed and paid through BIR Electronic Filing and Payment System (eFPS), including proof of filing and payment; and</p> <p>6. Business Tax Returns (those covering the previous six (6) months preceding the date of bid submission) filed and paid through the BIR Electronic Filing and Payment System (eFPS), including proof of filing and payment.</p> <p><i>Note:</i></p> <p><i>In the event that two or more of the bidders are post-qualified as LCRB, they shall be subjected to a non-discretionary and non-discriminatory tie-breaking based on a sheer luck of chance using “draw lots” in accordance with Appendix 116 of the Updated 2016 Revised IRR.</i></p>
21.1	<i>No further instructions</i>

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<sup>2</sup> Pursuant to BIR Revenue Memorandum Circular No. 43-2021 on the Revised Guidelines on the Use of the Electronic Audited Financial Statements System

# ***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 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 VII (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**

- 5.1 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.
- 5.2 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 Scope of Contract	<p><b>Delivery and Documents</b></p> <p>The delivery terms applicable to this Contract are delivered to <b>Development Academy of the Philippines, DAP Building, San Miguel Ave, Ortigas Center, Pasig, Metro Manila</b>. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final 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>For purposes of this Clause the Procuring Entity’s Representative at the Project Site is <b>ENGR. MARJORIE WAJE-BAGANG</b></p> <p><b>Incidental Services –</b></p> <p>The Supplier is required to provide all of the following services, including additional services, if any, specified in Section VI. Schedule of Requirements:</p> <ol style="list-style-type: none"> <li>a. Provide material board for approval by End-User;</li> <li>b. Provide shop/fabrication drawings;</li> <li>c. Perform and supervise installation, testing and commissioning of Audio Visual Equipment and Information and Communication Technology Systems Inclusive of All Accessories;</li> <li>d. Submit statement of assurance that all spare parts are available for the next five (5) years;</li> <li>e. Furnish all tools required for assembly and/or maintenance of the supplied goods;</li> <li>f. Submit detailed operations and maintenance manuals for each appropriate unit of the supplied goods;</li> <li>g. Supervise, maintain and/or repair supplied goods for a period covered by the warranty, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract;</li> <li>h. Provide service unit to the Procuring Entity during claims of replacement or repair within the warranty period;</li> <li>i. Provide product demo and technical expertise for the supplied goods; and</li> <li>j. Provide training for DAP Engineering, AV technicians and IT personnel.</li> </ol> <p>The Contract price for the Goods shall include the prices charged by the Supplier for incidental services and shall not exceed the prevailing rates</p>



GCC Clause	
	<p>charged to other parties by the Supplier for similar services.</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> <ul style="list-style-type: none"> <li>Name of the Procuring Entity</li> <li>Name of the Supplier</li> <li>Contract Description</li> <li>Final Destination</li> <li>Gross Weight</li> <li>Any special lifting instructions</li> <li>Any special handling instructions</li> <li>Any relevant HAZCHEM classifications</li> </ul> <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</p>

GCC Clause	
	<p>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> 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> <p><b>Installation of the Audio Visual Equipment and Information and Communication Technology Systems Inclusive of All Accessories -</b> The Supplier shall do the installation of the Audio Visual Equipment and Information and Communication Technology Systems Inclusive of All Accessories within the prescribed DAP location.</p>
2.2 Terms of Payment	<p>1<sup>st</sup> Progress billing: Completed and commissioned AV Equipment and ICT Systems including all accessories at Multi-Media room;</p> <p>2<sup>nd</sup> Progress billing: Completed and commissioned AV Equipment and ICT Systems including all accessories at Learning room;</p> <p>3<sup>rd</sup> Progress billing: Completed and commissioned AV Equipment and ICT Systems including all accessories at Private Nooks, Café Lounge, and Garden deck level 7A and 7B. and Complete submission of all Post Installation Document.</p>

<b>GCC Clause</b>								
<p data-bbox="204 286 376 389">3 Performance Security</p>	<p data-bbox="400 286 1390 465">In accordance with Section 39 of the 2016 Revised IRR of RA 9184, and to guarantee the faithful performance by the winning bidder of its obligations under the contract, it shall post a performance security within a maximum period of ten (10) calendar days from the receipt of the Notice of Award from the Procuring Entity and in no case later than the signing of the contract.</p> <p data-bbox="400 501 1390 645">The Performance Security shall be denominated in Philippine Pesos and posted in favor of the Procuring Entity in an amount not less than the percentage of the total contract price in accordance with the following schedule:</p> <table border="1" data-bbox="438 712 1351 1491"> <thead> <tr> <th data-bbox="438 712 970 898"><b>Form of Performance Security</b></th> <th data-bbox="970 712 1351 898"><b>AMOUNT of Performance Security (Not less than the required % of the Total Contract Price)</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="438 898 970 1010"><b>(a)</b> Cash or cashier's/manager's check issued by a Universal or Commercial Bank.</td> <td data-bbox="970 898 1351 1305" rowspan="2"><b>Five percent (5%) of the Bid Amount</b></td> </tr> <tr> <td data-bbox="438 1010 970 1305"><b>(b)</b> Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.</td> </tr> <tr> <td data-bbox="438 1305 970 1491"><b>(c)</b> Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.</td> <td data-bbox="970 1305 1351 1491"><b>Thirty percent (30%) of the Bid Amount</b></td> </tr> </tbody> </table> <p data-bbox="400 1563 1390 1890">Failure of the successful Bidder to comply with the above-mentioned requirement shall constitute sufficient ground for the annulment of the award and forfeiture of the bid security, in which event the Procuring Entity shall have a fresh period to initiate and complete the post qualification of the second Lowest Calculated Bid. The procedure shall be repeated until the LCRB is identified and selected for recommendation of contract award. However, if no Bidder passes post-qualification, the BAC shall declare the bidding a failure and conduct a re-bidding with re-advertisement, if necessary.</p>	<b>Form of Performance Security</b>	<b>AMOUNT of Performance Security (Not less than the required % of the Total Contract Price)</b>	<b>(a)</b> Cash or cashier's/manager's check issued by a Universal or Commercial Bank.	<b>Five percent (5%) of the Bid Amount</b>	<b>(b)</b> Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	<b>(c)</b> Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.	<b>Thirty percent (30%) of the Bid Amount</b>
<b>Form of Performance Security</b>	<b>AMOUNT of Performance Security (Not less than the required % of the Total Contract Price)</b>							
<b>(a)</b> Cash or cashier's/manager's check issued by a Universal or Commercial Bank.	<b>Five percent (5%) of the Bid Amount</b>							
<b>(b)</b> Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.								
<b>(c)</b> Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.	<b>Thirty percent (30%) of the Bid Amount</b>							
<p data-bbox="220 1928 360 2020">4 Inspection and Tests</p>	<p data-bbox="411 1928 1086 1962">The inspections and tests that will be conducted are:</p> <p data-bbox="411 2002 1294 2036"><b>Inspection, testing, and commissioning of installed Audio Visual</b></p>							

<b>GCC Clause</b>	
	<b>Equipment and Information and Communication Technology Systems Inclusive of All Accessories.</b>
5  Warranty	<p>A warranty security is required for a minimum period of two (2) years.</p> <p>Two (2) years warranty in the case of expendable supplies and a minimum of One (1) year in the case of non-expendable supplies.</p> <p>Warranty shall start from the date of the issuance of the Certificate of Completion.</p> <p>Upon the Supplier's and Owner's agreed joint diagnosis of unserviceable goods, the Supplier shall replace it with a new unit/component (same or better compatible model) within fifteen (15) calendar days.</p> <p>The obligation for the warranty shall be covered by retention money equivalent to 5% of every progress billing.</p>

# *Section VI. Schedule of Requirements*

## **I. Background**

The Idea Generation Hub (IGH) is part of the knowledge management projects of the DAP. The facilities of the IGH are located at Level 7th of the DAP Pasig Building constituting 4 major areas: Interior 1, Interior 2, the Café Lounge with Covered Walkway and the Garden Decks at Levels 7A and 7B.

The IGH is an innovation facility intended to enable an immersive experience on information sharing, discussion, decision making and generation of new and pioneering ideas through technology. The focus is on having collaborative spaces with state-of-the-art working and learning facility.

The interior and exterior spaces of the IGH are aimed at facilitating collaboration activities through an effective and efficient spatial experience by providing a perception of being surrounded by, and therefore a part of a distinctly unique and altered environment from what is familiar or the norm through the quality of space and diverse cutting-edge multimedia technology.

The IGH Interior 1 is comprised of the Foyer, Reception Area, and the Learning Room. Interior 2 is comprised of the Multi Media Room, the Private Nooks (3) and the Reading Lounge.

The Café Lounge is an informal space that links IGH Interior 1 and Interior 2 bridging the activities of both while providing an enhanced place for coffee and food or “Roast and Toast” in an atmosphere that enriches the immersive experience so that the café also serves as an extension for information sharing and ideas generation.

The Deck Gardens in Levels 7A and 7B

The deck garden at Level 7A is an open space that connects the interior spaces of IGH (Interiors 1 & 2 and the Café Lounge) with the exterior deck area providing for an opportunity for a wider green space extension for work as well as being a green social place. The deck garden at Level 7B is an added green expansion area at another level also providing more landscape spaces for work as well as social engagements.

## **II. AV Equipment /ICT Systems Requirements for the IGH**

For this Project, AV Equipment/ICT Systems as the means for the immersive experience will be provided for the Learning Room in Interior 1 and the Multi Media Room and Private Nooks (3) in Interior 2 which are already completed and ready for installation of the equipment specified in these technical requirements.

Included too in this Project are AV Equipment/ICT Systems for the Café Lounge which is currently under construction with a target completion in the first quarter of 2025 and the AV Equipment/ICT Systems for the Deck Gardens at Levels 7A and 7B, the construction of

which will commence in the first quarter of 2025 with a target completion in the third quarter of 2025.

## **II.A Learning Room**

The AV Equipment/ICT Systems listed below are for the Learning Room in Interior 1 of IGH, Level 7A.

Overall, the equipment in general for the Learning Room comprises a LED Wall and an Interactive Board inclusive of all materials, equipment accessories and supervision/labor for the complete supply, installation, and commissioning of all the listed and specified AV Equipment/ICT Systems.

The AV Equipment/ICT Systems specified for the Learning Room is expected to create and enhance this space for information exchange resulting in knowledge creation. As such the following must be met in terms of the functional and operational quality and capacity of the inclusive AV Equipment/ICT Systems:

The link between the Interactive Board and the LED Wall must be secure, smooth and have optimal connectivity at all times.

In particular, the LED Wall is expected to operate to fully support the immersive experience on information sharing, discussion, decision making and generation of new and pioneering ideas. The flexibility of a full LED wall or simultaneous multi-screen use is required as per the needs of the users. A fluid and complete connectivity of THE LED Wall and Interactive Board to the DAP Data Center in 2A must also be met including video conferencing.

All connections are expected to be wireless for a neat and orderly equipment and spatial arrangement.

## **II.B The same description for Multi-Media AV Equipment/ICT Systems except there are 2 Interactive Board and a more expansive LED Wall**

## **II.C Café Lounge**

The AV Equipment/ICT Systems listed below is for the Café Lounge with Covered Walkway.

The equipment required for the Café Lounge is an AV System that provides a sophisticated quality sound experience with leading edge sound manipulation flexibility to enhance the café space for coffee “aficionados”, but also create a café space as an extension area for information exchange also as an immersive experience that allows for data exchange engendering new ideas via casual meetings and relaxed discussions while enjoying a “round of coffee and patisserie or a “kuchen” or two”.

All connections are expected to be wireless for a neat and orderly equipment and spatial arrangement.

## II.D. Deck Gardens Levels 7A and 7B

The AV Equipment/ICT Systems Equipment listed below are for the Deck Gardens Levels 7A and 7B.

The equipment required for the Deck Garden Level A is seen as part and extension of the sound system of the Café Lounge that will provide the quality sound experience for the deck garden at this level. The sound experience is seen to be two (2) fold and includes: 1. The appropriate background music at levels which will allow the gardens to be of use as working and information sharing spaces as well as 2. Providing the appropriate audio systems for events and programs to be conducted in the gardens as extensions of the immersive activities of the DAP/IGH programs including socials that balance the formal uses of the gardens.

The equipment required for the Deck Garden Level B includes an AV Equipment/ICT Systems that allows for screen presentations and productions to support the activity of immersive data sharing and info origination inclusive of a quality audio system that provides an opportunity for work activities and socials.

The audio system at Decks Level 7A and 7B must have the capacity to be synchronized when both decks will be in use simultaneously for a singular activity such that the same background sound and information will be possible for both areas.

All connections are expected to be wireless for a neat and orderly equipment and spatial arrangement.

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

<b>Item Number</b>	<b>MILESTONE ACTIVITIES</b>	<b>Qty</b>	<b>DELIVERED, WEEKS/MONTHS</b>
1	Supply of Supervision, Labor, Materials, and Equipment for the Installation of Complete AV Equipment/ICT Systems at Multi-media Room Inclusive of All Accessories	1 lot	Within 150 calendar days from the receipt of Notice to Proceed
2	Supply of Supervision, Labor, Materials, and Equipment for the Installation of Complete AV Equipment/ICT Systems at Learning Room Inclusive of All Accessories	1 lot	Within 150 calendar days from the receipt of Notice to Proceed
3	Supply of Supervision, Labor, Materials, and Equipment for the Installation of Complete AV Equipment/ICT Systems at Private Nooks Inclusive of All Accessories	1 lot	Within 150 calendar days from the receipt of Notice to Proceed

4	Supply of Supervision, Labor, Materials, and Equipment for the Installation of Complete AV Equipment/ICT Systems at Café Lounge and Extensions to Deck Level 7A and 7B Inclusive of All Accessories	1 lot	Within 150 calendar days from the receipt of Notice to Proceed
5	Supply of Supervision, Labor, Materials, and Equipment for the Installation of Complete AV Equipment/ICT Systems at Deck Level 7B Inclusive of All Accessories	1 lot	Within 150 calendar days from the receipt of Notice to Proceed
6	Supply of Supervision, Equipment and Materials for the Installation of electrical wiring, cables, circuit breakers, and other needed accessories including wall mounting framing works	1 lot	Within 150 calendar days from the receipt of Notice to Proceed
7	Testing and Commissioning	1 lot	Within 150 calendar days from the receipt of Notice to Proceed
8	Restore to its original condition all affected facilities, areas, fixtures, etc. due to AV Equipment/ICT Systems installation works;	1 lot	Within 150 calendar days from the receipt of Notice to Proceed
9	Turn-over the entire project for acceptance of DAP	1 lot	Within 150 calendar days from the receipt of Notice to Proceed
10	Submission of Post Installation Documents (Signed and Sealed As-built Plans, Manuals, Warranty Certificate, Photos of Before, During, and After Installation, etc.)	1 lot	Within 150 calendar days from the receipt of Notice to Proceed
<b>&gt;&gt;&gt;Nothing Follows&lt;&lt;&lt;</b>			

**CONFORME:**

Name: \_\_\_\_\_

Legal Capacity: \_\_\_\_\_

Signature: \_\_\_\_\_

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



## *Section VII. Technical Specifications*

**Instructions:** Bidders must state here 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 Bidder's 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.

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

### **A. Audio Visual Equipment and Information and Communication Technology Systems’ Specifications**

SYSTEM/ EQUIPMENT	TECHNICAL SPECIFICATIONS		UNIT	QTY
<b>1. LEARNING ROOM</b>				
<b>Main Led and Interactive Screen</b>	P1.8 Customized Curve Indoor LED	Atleast 5.12m(Width) x 1.8m(Height) Pixel pitch (mm): atleast 0.9 – 1.86 Color temperature (K): atleast 2500-9500 Panel dimensions (WxHxD)/(mm): atleast 640x360x65 Driving type: 1/43 Panel weight (kg): 6 Viewing angle (H/V) (°): 160/140 Panel material: Die casting aluminum Power consumption (Max/ave)(W/m²): 520/173 Brightness (nit): 800 IP rating (front/rear): IP40/IP21 Refresh rate: (Hz): ≥3840 Maintenance: Front Gray Scale (bit): 14 Contrast ratio: 4000:1	set	1
	Video Wall Splicer	HDMI Input Card: Support for 10-bit input source, accompanied audio and 144hz input does not support interlaced signal input Four connectors are all used for input. Each connector the maximum resolution of 2048x1152@60hz, and the minimum resolution of 800x600@60hz Custom resolutions: Max. width 2560 pixels (2560x972@60hz) Max. height: 2560 pixels (884x2560@60hz)	unit	1

		H_16xRJ45+2xFiber Sending Card: LED 4k sending card load up to 10,400,000 pixels (max. width 10,240 pixels, max. height: 10,240 pixels) 16x RJ45 Gigabit Ethernet Outputs Bit depth: 8- bit a single ethernet port loads up up to 650,000 pixels Bit depth 10-bit A single ethernet ports load up to 320,000 pixels Backup between ethernet ports Support 144Hz output Power consumption: 210 W		
	65" Interactive Whiteboard with Floorstand	Resolution: 3840(H) ×2160 (V) HDMI Input: 4 Pixel Pitch: 0.372mm x 0.372mm HDMI Output: 1 Brightness: ≥ 400cd/m2 USB: Public USB3.0*1, Public USB2.0*1, Android UB3.0*1 Chipset: RK3588 Touch out USB 3.0: 1 CPU: A76*4+A55*4+6T NPU 2.4Ghz RS232: 1 GPU: OLDIN MC4 RJ-45: 2 ( in/out,10M/100M /1000M) DDR: 8GB (max32GB) Bluetooth 5.2: 1 EMMC: 64GB (max256GB)	unit	1
	Touchpad Controller	Processor: Intel core i5-1145G7E IoTG vPro Processor Operating system: Windows 10 IoT Enterprise SA 64 bit Memory: 8 GB (Dual-channel) DDR4 3200MHz Graphics: Intel Iris Xe graphics Storage: 256GB PCIe TLC SSD Display: 10.1" 10- point touch (HD 1280x800. 16:10 aspect ratio, <340 nits), rotatable 30° & 60°	unit	1
<b>Video Conferencing System</b>	4k Dual Lens PTZ Conferencing Camera	Signal: USB HD: 1920x1080p@60/59.97/50/30/29.97/25 Hz White balance: Auto/Manual/One push/ 3000k - 6500k 1920x1080i@60/59.94/50 Hz Focus: Auto/Manual 1280x720p@60/59.94/50 Hz Aperture: Auto/Manual Color Space: YUV, RGB Electronic shutter: Auto/Manual Chroma Subsampling: 4:4:4, 4:2:2, 4:2:0 BLC: ON/OFF Video compression: H.264/ H.265 Pan rotation: ±170° Protocol: TCP, UDP, RTMP, RTSP Tilt rotation: -30° ~ +90° Bitrate: 46 kbps - 40960 kbps	unit	1

		Preset number: 255 (10 presets using the included IR remote control) Sensor: 1/2.8" HD CMOS HDMI out: 1- Type A, 19- pin, female Effective Pixels: 16:9, 2.07 MP USB: 1 x USB, Type A Optical zoom: f= 4.7 ~ 47mm LAN: 1 x RJ45, 100Base-T View angle: 6.43° (telephoto), 60.9° (wide-angle) RS-232: 2 x 9- pin DIN Av: f/1.6 - f/3.0 Digital zoom: 10X		
	Wireless Collaboration	Ethernet: 100/1000 Mbs, auto- switching, autonegotiating, autodiscovery, full/half duplex, TCP/IP, UDP/IP, DHCP, SSL, TLS <sup>3</sup> , SSH, SFTP, (SSH File Transfer protocol), IEEE 802.1x, active directory authentication, HTTPS web browser setup and XiO cloud service, 802.3af compliant HDMI output resolutions: 1280x720@50Hz (720p50), 1280x720@50Hz (720p60), 1280x800@60Hz, 1366x768@60Hz, 1440x900@60Hz 1600x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@50Hz, (1080p50), 1920x1080@60Hz (1080p60) 3840x2160@30Hz (2160p30), 3840x2160@50Hz (2160p50), 3840x2160@60Hz (2160p60) OS Support (Airmedia Application): Windows 10, Windows 11 OS Support (Airmedia connect adaptor): Windows 10, Windows 11, macOS 11 or later Supported conferencing services: Zoom software Input signal types: Airmedia; simultaneous display of up to four sources with airmedia canvas Maximum input resolutions: Airmedia presentation 1920x1080@30Hz (1080p30); Airmedia connect adapter 3840x2160@30Hz (4k30)	unit	1
<b>Wireless System</b>	Series 3 Connect Adaptor	WI-FI: Wifi 6 (802.11ax) USB: USB 2.0 OS Support: Windows 10, Windows 11, macOS 11 or newer Input signal types: Display port Alt Mode over USB-C Output signal types (Video): Network stream over wi-fi, received by a paired airmedia series 3 receivers Maximum resolution (Video): 3840x2160@30Hz (2160p30); output resolution is determined by the HDMI output on a paired Airmedia series 3 receiver Input	unit	1

		<p>signal types (Audio): DisplayPort Alt mode over USB-C</p> <p>Output signal type (Audio): Network stream over wifi received by a paired Airmedia Series 3 receiver</p> <p>Part 15 Class B</p>		
	Ceiling Microphone	<p>Transducer principle: Pre-polarized condenser microphone</p> <p>Max. sound pressure level: 104 dB SPL</p> <p>Microphone capsules: 28 x KE 10-237</p> <p>Dynamic range: 93 dB (A)</p> <p>Sensitivity: 0 dBV/Pa (988 mV/Pa)</p> <p>Dante: Dante interface with two RJ-45 sockets primary and secondary</p> <p>Pick-up pattern: Beam pattern</p> <p>Ethernet: RJ-45 socket for network control and PoE</p>	unit	1
<b>Audio System</b>	2 Way Ceiling Speaker	<p>Woofer: 6.5 inch (165 mm) polypropylene w/ ring mode decoupled cloth surround &amp; steel basket</p> <p>Tweeter: 0.98 inch (25 mm) titanium dome, horn loaded</p> <p>Crossover frequency: 2.5 kHz</p> <p>Impedance: 8 Ohms nominal with transformer set to "8Ω"</p> <p>Transformer taps: 3.75W/7.5W/15W/30W/60W at 70V; 7.5W/15W/30W/60W at 100V</p> <p>Frequency response: 50 Hz to 20 kHz (±3 dB)</p> <p>Frequency range: 40 Hz to 20 kHz (-10 dB)</p> <p>Power handling: 125 Watts program (8 Ohms)</p> <p>Sensitivity: 88.5 dB @ 1W/1m</p> <p>Coverage: 100° conical (nominal)</p>	unit	4
	Digital Signal Processor	<p>Analog-To-Digital Conversion: 24-bit 48 kHz</p> <p>Digital-To-Analog Conversion: 24-bit 48 kHz</p> <p>Frequency Response: 20 Hz to 20 kHz ±0.5 dB</p> <p>THD: 0.001%, 20 Hz to 20 kHz, 0 dB gain, +4 dBu input;</p> <p>0.01%, 22 Hz to 22 kHz, 54 dB gain, -50 dBu input</p> <p>EIN: -125 dBu, 22 Hz to 22 kHz, no weighting</p> <p>Dynamic Range: 110 dB, 22 Hz to 22 kHz, 0 dB gain</p> <p>Crosstalk: -85 dB, 1 kHz, +4 dBu input, channel to channel</p> <p>-75 dB, 1 kHz, -50 dBu input, channel to channel</p> <p>Latency: 3.0 ms (analog in to analog out)</p>	unit	1
	4 Channel Network Amplifier	<p>Maximum Power Output: 2,000 W</p> <p>Input impedance: &gt;8k balanced and &gt;4k unbalanced</p> <p>Typical Distortion: 8Ω; 0.02 - 0.05%</p> <p>Continuously variable: Vrms 1.23 mV to 17.35 V</p> <p>4Ω; 0.04 - 0.1% dBu -56 to 27</p> <p>Maximum Distortion: 4 Ω - 8 Ω; 1.0%</p>	unit	1

		<p>dBv -58.2 to 24.8  Frequency Response (8 Ω): 20 Hz - 20 kHz  +0.2 dB / -0.7 dB  Noise: Unweighted output unmuted; &gt;102 dB  Weighted output muted; &gt;106 dB  Damping factor: &gt;100</p>		
	Network Audio Wall	<p>Input Types: 2 x XLR (Balanced and RF Filtered) Compliance: FCC CFR 47 Parts 15B Class A 2 x RCA (Stereo Unbalanced)  ICES-003  1 x 3.5 mm (Stereo unbalanced)  CE (EN55022) Gain: -18, -3, +25, and +40 dB, Software Selectable (Inputs 1/2)  RoHS  Input Impedance: &gt;1.8 Kiloohms at any Gain (Inputs 1/2) REACH  &gt;10 Kiloohms (Inputs 3/4 A &amp; B) Output Impedance: 200 Ohms Balanced  100 Ohms Unbalanced  Maximum Output Levels: +12 dBu at 0 dB Attenuation (Output 1/2 A)  +20 dBu at 0 dB Attenuation (Output 1/2 B)</p>	unit	1
	Virtual Control Server	<p>Processor: Intel Core® <a href="#">i5-10500T CPU @ 2.30GHz</a> RAM: 8 GB DDR4 2666MT/s  Storage: 256 GB SSD  Graphics: Intel® UHD Graphics 630 Ethernet: 100/1000 Mbps  USB: USB 3.2 host ports for mouse and keyboard (used for optional configuration through command line interface)  BACnet Network/IP: Supports up to 10000 BACnet objects3</p>	unit	1
<b>Control System</b>	PoE Switch	<p>Ports: (2) 10/100/1000 base-T auto-sensing gigabit ethernet  (24) 10/100/1000 auto-sensing gigabit ethernet w/PoE+  (4) 10 gigabit Base-x SFP+ Network Standards: IEEE 802.3af.3at Mac address: Up to 16k  Switch Fabric: 132 Gbps non-blocking</p>	unit	1
	SFP Module	<p>10 gigabit compatible with proposed switch including fiber cable backbone and patch cord</p>	unit	2
	Wireless Access Point	<p>Wi-Fi Standards: IEEE 802.11a/b/g/n/ac/ax  Supported Rates: 802.11ax: 4 to 1774 Mbps, 802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80), 802.11n: 6.5 Mbps to 300Mbps (MCS0 to MCS15), 802.11a/g: 6 to 54 Mbps, 802.11b: 1 to 11 Mbps  Supported Channels: 2.4GHz: 1-13, 5GHz: 36-64, 100-144, 149-165  MIMO: 2x2 SU-MIMO, 2x2 MU-MIMO</p>	unit	1

		<p>Spatial Streams: 2 streams SU/MU MIMO 5GHz, 2 streams SU/MU MIMO 2.4GHz  Radio Chains and Streams: 2x2:2 (5GHz), 2x2:2 (2.4GHz)  Channelization: 20, 40, 80MHz  Security: WPA-PSK, WPA-TKIP, WPA2 AES, WPA3-Personal, WPA3-Enterprise, 802.11i, Dynamic PSK, OWE, WIPS/WIDS  Other Wi-Fi Features: WMM, Power Save, Tx Beamforming, LDPC, STBC, 802.11r/k/v, Hotspot, Hotspot 2.0, Captive Portal, WISPr  Antenna Type: BeamFlex+ adaptive antennas with polarization diversity, Adaptive antenna that provides up to 64 unique antenna patterns per band  Antenna Gain (max): Up to 3dBi  Peak Transmit Power (Tx port/chain + Combining gain): 2.4GHz: 26 dBm, 5GHz: 25 dBm  Frequency Bands: ISM (2.4-2.484GHz), U-NII-1 (5.15-5.25GHz), U-NII-2A (5.25-5.35GHz), U-NII-2C (5.47-5.725GHz), U-NII-3 (5.725-5.85GHz)  Controller Platform Support: ZoneDirector 1200  IP: IPv4, IPv6, dual-stack  VLAN: 802.1Q (1 per BSSID or dynamic per user based on RADIUS), VLAN Pooling, Port-based  802.1x: Authenticator &amp; Supplicant  Tunnel: L2TP, GRE, Soft-GRE  Policy Management Tools: Application Recognition and Control, Access Control Lists, Device Fingerprinting, Rate Limiting  IoT Capable: Integrated BLE and ZigBee, (1 radio, switchable)  Ethernet: 2 x 1GbE Ethernet ports, Power over Ethernet (802.3af/at) with Category 5/5e/6 cable, LLDP  USB: 1 USB 2.0 port, Type A  With compatible mounting bracket  With compatible power injector  With license for ZoneDirector 1200 controller</p>		
	10.9" Tablet	<p>8- core CPU with 4 performance cores and 4 efficiency cores 8- core GPU  16- core neural engine 8GB ram  Hardware accelerated H.264 and HEVC Video decode engine  Video encode engine</p>	unit	1
	Tablet for Control + App	<p>Devices: Requires iOS 14 (or later) and a mobile broadband or Wi-Fi® network connection<sup>3</sup>; devices must have at least 1 GB of RAM for reliable performance.</p>	unit	1

		Streaming formats: H.264 (MPEG-4 part 10 AVC), MJPEG; Requires purchase of full app functionality. Intercom audio feedback formats: Support RAVA SIP Intercom MP3 Standard app functionality: Two pages and one subpage Full (paid) app functionality: Unlimited (dependent upon available device memory)		
Network AV Encoder Wall Plate		Video Resolutions: HDMI with deep color and 4k60 4:2:0 support Audio formats: Multichannel (up to 8- channel LPCM or encoded HBR 7.1 surround sound) Bit rates: Fixed: 200 to 950 MBPS. Adaptive: Based on input resolution of the stream Streaming protocols: RTP, SDP Input signal types (Video): HDMI with deep color and 4k60 4:2:0 support (Dual-Mode display port interface and DVI compatible) Copy rotection: HDCP 2.3 Input signals type (Audio): HDMI (Dual-Mode display port interface compatible), analog stereo Digital formats (Audio): Dolby digital, dolby digital EX, dolby digital plus, dolby trueHD, dolby atmos, DTS, DTS ES, DTS 96/24	unit	1
1080p Network AV Encoder		Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound) Bit rates: Fixed: 200 to 950 Mbps Adaptive: Based on input resolution of the stream Streaming protocols: RTP, SDP Container: MPEG-2 transport stream (.ts) Session Initiation: Multicast via secure RTSP Copy protection: HDCP 1.4, AES-128, PKI	unit	3
Switching Appliance, 80 Endpoints		Endpoints: Supports 80 DM NVX devices, each configured as an encoder or decoder Domains: Supports a single domain (all endpoints are grouped together as a single system) Ethernet: 100/1000 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SSH, IPv4, HTTPS web browser setup and control, Crestron 3-Series® or later control system integration DM NVX (via Ethernet): HDCP 2.2, AES audio/video content encryption, RTP, RTSP, SDP, ONVIF, IGMPv2, IGMPv3, SMPTE 2022, FEC (Forward Error Correction)	unit	1
Network AV Decoder		Stream Type: Default support for DM-NVX-E10/E20 Series; Support available for 4K60 4:4:4 encoders when using DM-NVX-D10 supported resolutions	unit	1

		Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color sampling, and Deep Color support Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound) Bit Rates: Based on the stream received from the encoder Streaming Protocols: RTP, SDP Container: MPEG-2 transport stream (.ts)		
	Tap Scheduler	Display: 8 inch capacitive touch with antifingerprint treatment Connectivity: Wi-Fi 802.11 a/b/g/n Ethernet: RJ-45, 10/100/1000 Mbit PoE & PoE + IEEE 802.3af RFID/NFC: 13.56 MHz reader Supports MIFARE 4K/1K card (does not support ISO/IEC 15693 or MIFARE Ultralight C)	unit	1
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, fiber cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT System at Learning Room	lot	1
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT System;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT System installation works;</li> <li>• Clean areas before turn-over;</li> <li>• Turnover of the AV Equipment and ICT System at Learning Room</li> </ul>	lot	1
<b>2. MULTI-MEDIA ROOM</b>				
<b>Main Led and Interactive Screen</b>	P1.8 Customized Curve Indoor LED	At least 8.32m(Width) x 1.8m(Height) Pixel pitch (mm): at least 0.9-1.86 Color temperature (K): 2500-9500 Panel dimensions (WxHxD)/(mm): 640x360x65  Driving type: 1/43 Panel weight (kg): 6 Viewing angle (H/V) (°): 160/140 Panel material: Die casting aluminum Power consumption (Max/ave)(W/m²): 520/173 Brightness (nit): 800 IP rating (front/rear): IP40/IP21 Refresh rate: (Hz): ≥3840 Maintenance: Front Gray Scale (bit): 14 Contrast ratio: 4000:1	set	1
	Video Wall Splicer	HDMI Input Card: Support for 10-bit input source, accompanied audio and 144hz input	unit	1



		<p>does not support interlaced signal input Four connectors are all used for input.</p> <p>Each connector the aximum resolution of 2048x1152@60hz, and the minimum resolution of 800x600@60hz Custom resolutions: Max. width 2560 pixels (2560x972@60hz) Max. height: 2560 pixels (884x2560@60hz)</p> <p>H_16xRJ45+2xFiber Sending Card: LED 4k sending card load up to 10,400,000 pixels (max. width 10,240 pixels, max. height: 10,240 pixels) 16x RJ45 Gigabit Ethernet Outputs Bit depth: 8- bit a single ethernet port loads up up to 650,000 pixels Bit depth 10-bit A single ethernet ports load up to 320,000 pixels Backup between ethernet ports Support 144Hz output Power consumption: 210 W</p>		
		Supply of Supervision, Equipment and Materials for the Installation of electrical wiring, cables, circuit breakers, and other needed accessories including wall mounting framing works	lot	1
	65" Interactive Whiteboard with Floorstand	<p>Resolution: 3840(H) ×2160 (V) HDMI Input: 4 Pixel Pitch: 0.372mm x 0.372mm HDMI Output: 1 Brightness: ≥ 400cd/m2 USB: Public USB3.0*1, Public USB2.0*1, Android UB3.0*1 Chipset: RK3588 Touch out USB 3.0: 1 CPU: A76*4+A55*4+6T NPU 2.4Ghz RS232: 1 GPU: OLDIN MC4 RJ-45: 2 (in/out,10M/100M /1000M) DDR: 8GB (max32GB) Bluetooth 5.2: 1 EMMC: 64GB (max256GB)</p>	unit	2
	Touchpad Controller	<p>Processor: Intel core i5-1145G7E IoTG vPro Processor Operating system: Windows 10 IoT Enterprise SA 64 bit Memory: 8 GB (Dual-channel) DDR4 3200MHz Graphics: Intel Iris Xe graphics Storage: 256GB PCIe TLC SSD Display: 10.1" 10- point touch (HD 1280x800. 16:10 aspect ratio, &lt;340 nits), rotatable 30° &amp; 60°</p>	unit	1
<b>Video Conferencing System</b>	4k Dual Lens PTZ Conferecing Camera	<p>Signal: USB HD: 1920x1080p@60/59.97/50/30/29.97/25 Hz White balance: Auto/Manual/One push/3000k - 6500k 1920x1080i@60/59.94/50 Hz Focus: Auto/Manual 1280x720p@60/59.94/50 Hz Aperture: Auto/Manual</p>	unit	1

		<p>Color Space: YUV, RGB Electronic shutter: Auto/Manual          Chroma Subsampling: 4:4:4, 4:2:2, 4:2:0          BLC: ON/OFF          Video compression: H.264/ H.265 Pan rotation: ±170°          Protocol: TCP, UDP, RTMP, RTSP Tilt rotation: -30° ~ +90°          Bitrate: 46 kbps - 40960 kbps Preset number: 255 (10 presets using the included IR remote control)          Sensor: 1/2.8" HD CMOS HDMI out: 1- Type A, 19- pin, female          Effective Pixels: 16:9, 2.07 MP USB: 1 x USB, Type A          Optical zoom: f= 4.7 ~ 47mm LAN: 1 x RJ45, 100Base-T View angle: 6.43° (telephoto), 60.9° (wide- angle) RS-232: 2 x 9- pin DIN          Av: f/1.6 - f/3.0 Certification: CE, FCC          Digital zoom: 10X</p>		
	Wireless Collaboration	<p>Ethernet: 100/1000 Mbs, auto- switching, autonegotiating, autodiscovery, full/half duplex, TCP/IP, UDP/IP, DHCP, SSL, TLS<sup>3</sup>, SSH, SFTP,          (SSH File Transfer protocol), IEEE 802.1x, active directory authentication, HTTPS web browser setup and XiO cloud service, 802.3af compliant          HDMI output resolutions: 1280x720@50Hz (720p50), 1280x720@50Hz (720p60), 1280x800@60Hz, 1366x768@60Hz, 1440x900@60Hz 1600x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@50Hz, (1080p50), 1920x1080@60Hz (1080p60)          3840x2160@30Hz (2160p30), 3840x2160@50Hz (2160p50), 3840x2160@60Hz (2160p60)          OS Support (Airmidia Application): Windows 10, Windows 11          OS Support (Airmidia connect adaptor): Windows 10, Windows 11, macOS 11 or later          Supported conferencing services: Zoom software          Input signal types: Airmidia; simultaneous display of up to four sources with airmidia canvas          Maximum input resolutions: Airmidia presentation 1920x1080@30Hz (1080p30); Airmidia connect adaptor 3840x2160@30Hz (4k30)</p>	unit	1
<b>Wireless System</b>	Series 3 Connect Adaptor	<p>WI-FI: Wifi 6 (802.11ax)          USB: USB 2.0</p>	unit	1

		<p>OS Support: Windows 10, Windows 11, macOS 11 or newer  Input signal types: Display port Alt Mode over USB-C  Output signal types (Video): Network stream over wi-fi, received by a paired airmedia series 3 receiver  Maximum resolution (Video): 3840x2160@30Hz (2160p30); output resolution is determined by the HDMI output on a paired Airmedia series 3 receiver  Input signal types (Audio): DisplayPort Alt mode over USB-C  Output signal type (Audio): Network stream over wifi received by a paired Airmedia Series 3 receiver  Compliance: Listed for US &amp; Canada, CE, IC, FCC, Part 15 Class B</p>		
	Ceiling Microphone	<p>Transducer principle: Pre-polarized condenser microphone  Max. sound pressure level: 104 dB SPL  Microphone capsules: 28 x KE 10-237  Dynamic range: 93 dB (A)  Sensitivity: 0 dBV/Pa (988 mV/Pa)  Dante: Dante interface with two RJ-45 sockets primary and secondary  Pick-up pattern: Beam pattern  Ethernet: RJ-45 socket for network control and PoE</p>	unit	1
<b>Audio System</b>	2 Way Ceiling Speaker	<p>Woofer: 6.5 inch (165 mm) polypropylene w/ ring mode decoupled cloth surround &amp; steel basket  Tweeter: 0.98 inch (25 mm) titanium dome, horn loaded  Crossover frequency: 2.5 kHz  Impedance: 8 Ohms nominal with transformer set to "8Ω"  Transformer taps: 3.75W/7.5W/15W/30W/60W at 70V; 7.5W/15W/30W/60W at 100V  Frequency response: 50 Hz to 20 kHz (±3 dB)  Frequency range: 40 Hz to 20 kHz (-10 dB)  Power handling: 125 Watts program (8 Ohms)  Sensitivity: 88.5 dB @ 1W/1m  Coverage: 100° conical (nominal)</p>	unit	8
	Digital Signal Processor	<p>Analog-To-Digital Conversion: 24-bit 48 kHz  Digital-To-Analog Conversion: 24-bit 48 kHz  Frequency Response: 20 Hz to 20 kHz ±0.5 dB  THD: 0.001%, 20 Hz to 20 kHz, 0 dB gain, +4 dBu input;  0.01%, 22 Hz to 22 kHz, 54 dB gain, -50 dBu input  EIN: -125 dBu, 22 Hz to 22 kHz, no weighting  Dynamic Range: 110 dB, 22 Hz to 22 kHz, 0 dB gain  Crosstalk: -85 dB, 1 kHz, +4 dBu input, channel to channel  -75 dB, 1 kHz, -50 dBu input, channel to channel  Latency: 3.0 ms (analog in to analog out)</p>	unit	1

		Dante I/O: 32 channels in, 32 channels out, at up to 24-bit 48 kHz		
	4 Channel Network Amplifier	Maximum Power Output: 2,000 W Input impedance: >8k balanced and >4k unbalanced Typical Distortion: 8Ω; 0.02 - 0.05% Continuously variable: Vrms 1.23 mV to 17.35 V 4Ω; 0.04 - 0.1% dBu - 56 to 27 Maximum Distortion: 4 Ω - 8 Ω; 1.0% dBv - 58.2 to 24.8 Frequency Response (8 Ω): 20 Hz - 20 kHz +0.2 dB / -0.7 dB Noise: Unweighted output unmuted; >102 dB Weighted output muted; >106 dB Damping factor: >100	unit	1
	Network Audio Wall	Input Types: 2 x XLR (Balanced and RF Filtered) Compliance: FCC CFR 47 Parts 15B Class A 2 x RCA (Stereo Unbalanced) ICES-003 1 x 3.5 mm (Stereo unbalanced) CE (EN55022) Gain: -18, -3, +25, and +40 dB, Software Selectable (Inputs 1/2) RoHS Input Impedance: >1.8 Kiloohms at any Gain (Inputs 1/2) REACH >10 Kiloohms (Inputs 3/4 A & B) Output Impedance: 200 Ohms Balanced 100 Ohms Unbalanced Maximum Output Levels: +12 dBu at 0 dB Attenuation (Output 1/2 A) +20 dBu at 0 dB Attenuation (Output 1/2 B)	unit	1
	Virtual Control Server	Processor: Intel Core® <b>i5-10500T CPU @ 2.30GHz</b> RAM: 8 GB DDR4 2666MT/s Storage: 256 GB SSD Graphics: Intel® UHD Graphics 630 Ethernet: 100/1000 Mbps USB: USB 3.2 host ports for mouse and keyboard (used for optional configuration through command line interface) BACnet Network/IP: Supports up to 10000 BACnet objects3	unit	1
<b>Control System</b>	PoE Switch	Ports: (2) 10/100/1000 base-T auto-sensing gigabit ethernet (24) 10/100/1000 auto-sensing gigabit ethernet w/PoE+ (4) 10 gigabit Base-x SFP+ Network Standards: IEEE 802.3af.3at Mac address: Up to 16k Switch Fabric: 132 Gbps non-blocking	unit	1
	SFP Module	10 gigabit compatible with proposed switch including fiber cable backbone and patch cord	unit	2
	Wireless Access Point	Device Interfaces: 1xRJ45 console port, 1x2.5 Gbps ethernet LAN (PoE), 1x 10/100/1000 Mbps ethernet LAN, factory reset, power input	unit	1

		<p>Antennas: 4x internal (2.4 GHz), 4x internal (5 GHz)</p> <p>Antenna Gain: 3.5 dBi (2.4 GHz), 5.5 dBi (5 GHz)</p> <p>Maximum Output Power: 28 dBm (2.4 GHz) 25.5 dBm (5 GHz) Data Signal Rate: Up to 3600 Mbps</p> <p>Standards: IEEE 802.11a/b/g/n/ac/ax, IEEE 802.3u/ab, IEEE 802.3az energy-efficient ethernet (EEE), IEEE802.3at PoE Operating frequency: 2.4-2.483 GHz, 5.15-5.35 GHz, 5.47 - 5.85 GHz</p> <p>Security Protocol: WPA/WPA2/WPA3 Personal enterprise, WEP 64/ 128-bit, SSID broadcast disable MAC address access control, internal radius server</p>		
	10.9" Tablet	<p>8-core CPU with 4 performance cores and 4 efficiency cores 8-core GPU</p> <p>16-core neural engine 8GB ram</p> <p>Hardware accelerated H.264 and HEVC Video decode engine</p> <p>Video encode engine</p>	unit	1
	Tablet for Control + App	<p>Devices: Requires Apple iOS 14 (or later) and a mobile broadband or Wi-Fi® network connection; iPad® devices must have at least 1 GB of RAM for reliable performance.</p> <p>Streaming formats: H.264 (MPEG-4 part 10 AVC), MJPEG; Requires purchase of full app functionality. Intercom audio feedback formats: Support RAVA SIP Intercom MP3</p> <p>Standard app functionality: Two pages and one subpage</p> <p>Full (paid) app functionality: Unlimited (dependent upon available device memory)</p>	unit	1
	1080p Network AV Encoder	<p>Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color</p> <p>Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound)</p> <p>Bit rates: Fixed: 200 to 950 Mbps Adaptive: Based on input resolution of the stream</p> <p>Streaming protocols: RTP, SDP</p> <p>Container: MPEG-2 transport stream (.ts)</p> <p>Session Initiation: Multicast via secure RTSP</p> <p>Copy protection: HDCP 1.4, AES-128, PKI</p>	unit	4
	Network AV Decoder	<p>Stream Type: Default support for DM-NVX-E10/E20 Series; Support available for 4K60 4:4:4 encoders when using DM-NVX-D10 supported resolutions</p> <p>Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color sampling, and Deep Color support Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound)</p>	unit	4

		Bit Rates: Based on the stream received from the encoder Streaming Protocols: RTP, SDP Container: MPEG-2 transport stream (.ts)		
	HDMI Passive Plate	Provide one HDMI pass- thru connection for wall plates or lecterns HDCP 1.4 and 2.0 compatible Compact single gang Decora plate form factor Decora wall plate included	unit	1
	HDMI Extender with IR control	Interfaces: 1 x HDMI Type A Female Compliance: HDMI (3D, deep color); HDP compatible Impedance: 100 ohms Max resolution/distance: Up to 1080p @40m; 1080i @ 60m Max distance: 3 m(2L-7D03H) IR: 1 x Mini stereo jack female Max. data rate: 6.75 Gbps (2.25 Gbps per lane) Max. Pixel clock: 225 MHz	pair	1
	Tap Scheduler	Display: 8 inch capacitive touch with antifingerprint treatment Connectivity: Wi-Fi 802.11 a/b/g/n Ethernet: RJ-45, 10/100/1000 Mbit PoE & PoE + IEEE 802.3af RFID/NFC: 13.56 MHz reader Supports MIFARE 4K/1K card (does not support ISO/IEC 15693 or MIFARE Ultralight C)	unit	1
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT System at Multimedia Room	lot	1
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT System;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT System installation works;</li> <li>• Clean areas before turn-over;</li> </ul> Turnover of the AV Equipment and ICT System at Multimedia Room	lot	1
<b>3. PRIVATE NOOK</b>				
<b>LFD Screen</b>	32" LFD Screen with Cantilever Bracket	Resolution: 3,840 x 2,160 (16:9)Output: Stereo mini Jack Brightness (Typ.): 500 nit includes 3 pcs cantilever Bracket Orientation: Landscape/Portrait include 1 pc LFD Mobile Cart Haze: 25% Contrast ratio (Typ.): 4000:1 (IPS-1200:1) Type: VA/IPS	units	3

	LFD Mobile Cart		unit	1
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT System at Private Nook	lot	1
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT System;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT System installation works;</li> <li>• Clean areas before turn-over;</li> </ul> Turnover of the AV Equipment and ICT System at Private Nook	lot	1
<b>4. CAFÉ LOUNGE and DECKS LEVEL 7A AND 7B</b>				
<b>Audio System</b>	Dm3se Surface Mounted Speaker (Wht)	80 – 20,000 Hz Frequency Response 140° conical Nominal Coverage 135° conical Nominal Coverage Angle 1.7 kHz passive crossover 80 Hz with recommended 24 dB / octave filter recommended High-Pass Protection	pair	9
	Cc-1 Controller Center (Wht)	Two (2) RJ-45, allows for daisy-chaining, TIA/EIA 568B wiring standard connectors Channel selection via 8-DIP switch bank settings Passive controller type, linear potentiometer 0–10 kΩ Cat 5 cable requirement	unit	1
	B1x14/Cv1 Wireless Presenter System	at least 300 ft (91 m) line of sight operating range Between 524–865 MHz available frequencies 50–15,000 Hz audio range 100 dB A-weighted dynamic range Bodypack Transmitter with rechargeable 2 AA Batteries (included) and wireless receiver Tie Clip and Windscreen	set	3
	Mg12x 12-Channel Mixing Console	Maximum of 6 Mic / 12 Line Inputs (4 mono + 4 stereo) “D-PRE” mic preamps with an inverted Darlington circuit High-grade effects: SPX with 24 programs 24-bit / 192kHz 2in / 2out USB Audio functions Includes Cubase AI DAW software download version Works with the iOS devices (2 or later) through the iOS Camera Connection Kit / Lightning to USB Camera Adapter	unit	1

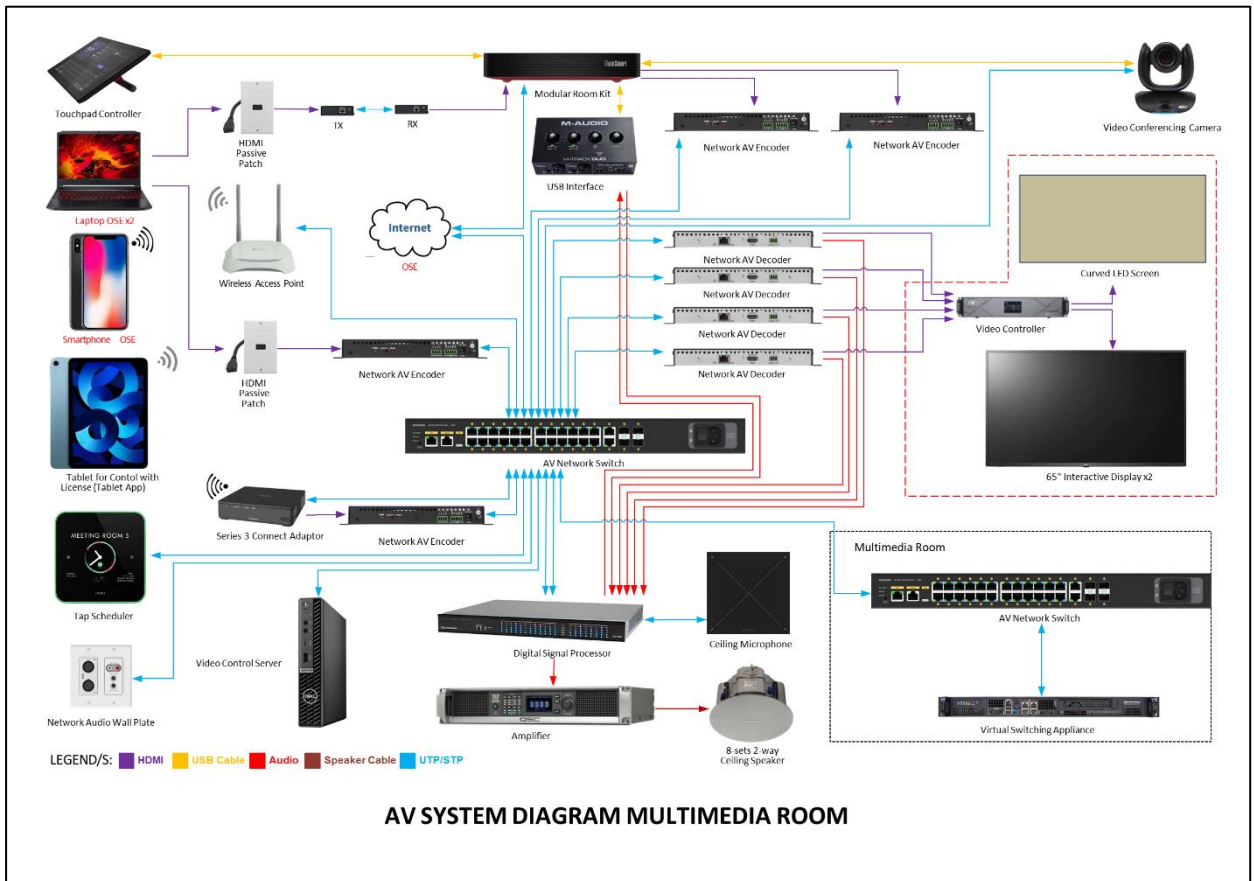
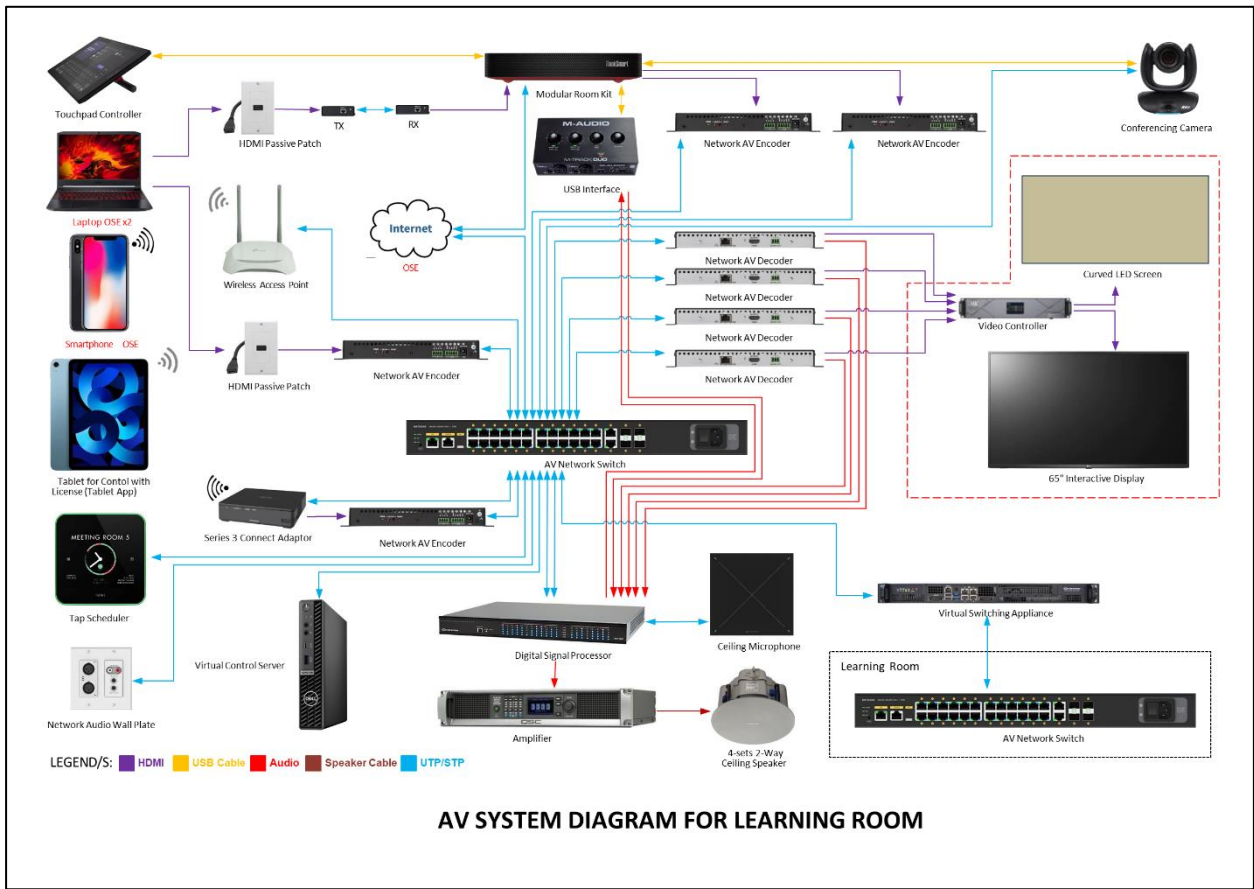
	Prm-Ust Music Source	SD/USB memory capacity of up to 32 GB (up to 8000 tracks) and the option to connect the USB either on the front or rear panel. 87 — 108 MHz FM frequency range 30 Hz — 12 kHz +/-3 dB frequency response >50 dB signal-to-noise ratio	unit	1
	B1 Bluetooth Reciever	Bluetooth inputs RCA stereo, optical (SPDIF) outputs 2.0V RMS Full-scale output 50-60 ohms output impedance 10Hz - 20kHz Frequency response aptX, A2DP and AVRCP Supported bluetooth profiles up to 100 feet operation range	unit	1
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT System at Café Lounge, Decks Level 7A and 7B.	lot	1
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT System;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT System installation works;</li> <li>• Clean areas before turn-over;</li> </ul> Turnover of the AV Equipment and ICT System at Café Lounge, Decks Level 7A and 7B.	lot	1
<b>5. DECK LEVEL 7B</b>				
<b>Outdoor Screen</b>		Waterproofed screen 4mW x 2.5mH with audio system and complete accessories including bracket and support	set	1
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT System at Deck Level 7B.	lot	1
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT System;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT System installation works;</li> <li>• Clean areas before turn-over;</li> </ul> Turnover of the AV Equipment and ICT System at Deck Level 7B.	lot	1

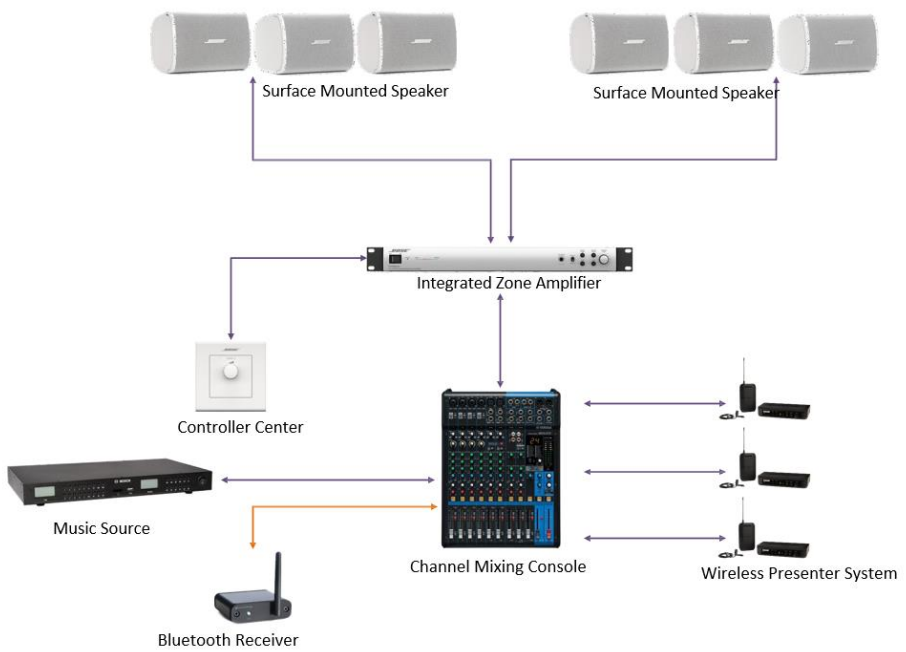


<b>6. PROVISION OF POST INSTALLATION DOCUMENT</b>		
Four (4) copies of as-built plan signed and sealed by the Professional Electronics and Communication Engineer in A3 size complete with legend, technical specifications, test result, start-up report and measurements	lot	1
Certification from the Contractor specifying two (2) years Warranty in the case of expendable supplies and a minimum of one (1) year in the case of non-expendable supplies from the date receipt of Certificate of Completion and Final Acceptance issued by the DAP GSD	lot	1
Knowledge Transfer and Issuance of Certificate of Training for ten (10) DAP Personnel <ul style="list-style-type: none"> <li>• 2 to 3 days Operations and Maintenance Training</li> </ul>	lot	1
Submit the hardcopy in A3 size and soft copy in flash drive of before, on-going, and after picture with date and time stamp	lot	1



## B.2. AV System Diagram





**CAFÉ LOUNGE AV SYSTEM DIAGRAM**

## Section VIII. Checklist of Technical and Financial Documents

01. All submissions of the Bidder must clearly indicate the paper the document number. For example, photocopy of valid PhilGEPS registration papers (i.e., 5pcs) of "Bidder Corporation", **Technical Component** should be marked "TC01~1", "TC01~2", "TC01~3", "TC01~4", and "TC01~5".
02. On this checklist; the column "As Checked" shall be marked ...
  - ✓ "PASSED" to indicate that said document was available; or
  - ✓ "FAILED" when the document listed is not available in the bid proposal submitted; or
  - ✓ "NO NEED" if the item in the checklist will not be appropriate
03. At any stage of the procurement process, a proposal may still be declared "not eligible" if the contents/substance of the document are missing, or its found inappropriate or does not comply with the given requirements for this transaction.
04. The BAC shall be checking the submitted documents of each Bidder against this checklist to ascertain if they are all present, using a non-discretionary "pass/fail" criterion pursuant to Section 30 of the 2016 revised IRR of RA No. 9184.

<b>Bidding No.</b>	<b>IB24-413103-02</b>	<b>Total ABC:</b>	<b>P18,950,000.00</b>
<b>Particulars:</b>	<b>"IDEA GENERATION HUB (IGH) PHASE 3: ONE (1) LOT SUPPLY, INSTALLATION AND COMMISSIONING OF INTEGRATED AUDIO VISUAL EQUIPMENT AND INFORMATION AND COMMUNICATION TECHNOLOGY SYSTEMS INCLUSIVE OF ALL ACCESSORIES FOR THE IGH FACILITIES SUCH AS MULTI-MEDIA ROOM, LEARNING ROOM, PRIVATE NOOKS, CAFÉ LOUNGE, AND GARDEN DECKS AT THE 7TH FLOOR OF DAP BUILDING IN PASIG CITY"</b>		
<b>Venue of Bid Opening</b>	<b>Via Google Meet Platform</b>	<b>DATE &amp; TIME of Bid Opening</b>	<b>November 12, 2024 (Tuesday) at 10:00AM</b>

<b>BIDDER'S INFORMATION</b>	<b>COMPANY NAME:</b>
	<b>COMPANY HEAD OFFICE MAILING ADDRESS:</b>
	<b>COMPANY WEBSITE OR EMAIL ADDRESS:</b>
<b>Representative attending the Bidding:</b>	<b>NAME OF THE COMPANY REPRESENTATIVE:</b>
	<b>POSITION TITLE OF THE COMPANY REPRESENTATIVE:</b>
<b>JV Info:</b>	<b>IS THE BIDDER INTO JOINT VENTURE AGREEMENT WITH ANOTHER ENTITY/IES? YES /NO</b>

CLASS "A" LEGAL DOCUMENTS	mark	As Checked
1. Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR, <b>per BDS Clause 10.1, item no. 1;</b>	<b>TC01</b>	<input type="checkbox"/> <b>Passed</b> <input type="checkbox"/> <b>Failed</b>
2. Statement of Bidder's <b>all ongoing government and private contracts</b> , including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid. (Using the editable prescribed form, in Excel file), <b>per BDS Clause 10.1, item no. 2.;</b>	<b>TC02</b>	<input type="checkbox"/> <b>Passed</b> <input type="checkbox"/> <b>Failed</b>

CLASS "A" LEGAL DOCUMENTS		mark	As Checked
<p>The statement shall include, for each contract the following:</p> <p>a. Name of the Contract;</p> <p>b. Duration of the Contract; and</p> <p>c. Amount of Contract and Value of Outstanding Contracts.</p>			
3.	Statement of its Single Largest Completed Contract (SLCC), in accordance with BDS clause 5.3, similar to the contract to be bid and supported by a Certificate of Completion or Final Acceptance or any supporting proof of documents to the Final Acceptance of the project (e.g. Official Receipt or Sales Invoice) issued by the project owner., within the relevant period as provided in the Bidding Documents per <b>BDS Clause 10.1, item no. 3;</b>	<b>TC03</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
4.	Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission <u>or</u> Original copy of Notarized Bid Securing Declaration, per <b>BDS Clause 10.1, item no. 4;</b>	<b>TC04</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
5.	Conformity with the Technical Specifications, which may include the engagement schedule and manpower requirements, per <b>BDS Clause 10.1, item no. 5;</b>	<b>TC05</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
6.	Duly Notarized Omnibus Sworn Statement (OSS) per <b>BDS Clause 10.1, item no. 6,</b> with the attached duly notarized copy of: <p>a. Secretary's Certificate in case of a corporation, partnership, or cooperative; <u>or</u></p> <p>b. Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.</p>	<b>TC06</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
7.	The Supplier's Audited Financial Statements (AFS) for Calendar Year (FY) 2023 stamped "received" by the BIR or its duly accredited and authorized institutions, or in accordance to the Revenue Memorandum Circular 51-2024 issued on April 8, 2024, prescribes the guidelines in the filing of Annual Income Tax Return (AITR) for FY2023 and payment of corresponding taxes due thereon on or before April 15, 2024, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission and signed by bidder's Certified Public Accountant, per <b>BDS Clause 10.1, item no. 7;</b>	<b>TC07</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
8.	The prospective bidder's computation of Net Financial Contracting Capacity (NFCC) or A committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation.	<b>TC08</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
CLASS "B" DOCUMENTS			
9.	<i>If applicable</i> , 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	<b>TC09</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed <input type="checkbox"/> N/A



CLASS "B" DOCUMENTS		
enter into and abide by the provisions of the JVA in the instance that the bid is successful, shall be included in the bid.  <i>If not applicable</i> , the Bidder is still required to issue a Statement, written in its letterhead, clearly indicating that the Bidder will not enter into any JVA for this Project or just put N/A.		
10. Certificate of Site Inspection duly signed by TWG-End-user representative or TWG Chairperson or the End-User, <b>per BDS Clause 10.1, item no. 9;</b>	<b>TC10</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
11. Company Profile, <b>per BDS Clause 10.1, item no.10</b> in the minimum of: <ul style="list-style-type: none"> <li>• Company Background</li> <li>• Date of Establishment</li> <li>• Our Team: Company Owners, Officers, And the Company Organizational Chart</li> <li>• Products/ Services Offered</li> <li>• All Completed Projects Within the Last 5 Years Inclusive Of: <ul style="list-style-type: none"> <li>○ Client name</li> <li>○ Address/ contact reference</li> <li>○ Type of project</li> <li>○ Project title</li> <li>○ Total project cost</li> <li>○ Project date, and</li> <li>○ Any or all IT/AV Equipment, Systems, accessories provided</li> <li>○ Total Cost of any or All It/Av Equipment, Systems, accessories provided</li> </ul> </li> </ul>	<b>TC11</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
12. Proof of Satisfaction of a minimum of at least three (3) testimonials from clients inclusive of their contactable references, <b>per BDS Clause 10.1, item no.11;</b>	<b>TC12</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
13. <b>List of one (1) or more Accredited Service Centers</b> in National Capital Region inclusive of submission of office address and contact information, <b>per BDS Clause 10.1, item no.12;</b>	<b>TC13</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
14. <b>Certificate from Audiovisual and Integrated Experience Association (AVIXA) or its Equivalent Organization</b> for 2 consecutive years and renewed within the period of the project, <b>per BDS Clause 10.1, item no.14.;</b>	<b>TC14</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
15. USB Thumb Drive containing electronic-copies of the submitted bid proposal (eligibility documents and technical documents).	<b>TC15</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
<b>END OF ELIGIBILITY AND TECHNICAL DOCUMENTS CHECKLIST</b>		
<b>BAC's Remarks:</b>	<input type="checkbox"/> <b>PASSED</b>	<input type="checkbox"/> <b>FAILED</b>
	<input type="checkbox"/> <b>FOR RECONSIDERATION</b>	
<b>DOCUMENTS RECEIVED BY:</b>	<b>CHECKED BY:</b>	<b>NOTED BY:</b>
<b>RODEL D. CASTILLO</b> Officer-in-Charge, BAC Secretariat Division	<b>ENGR. VENER V. MADERAJE</b> TWG Chairperson	<b>ALAN S. CAJES</b> BAC Chairperson

## BID DOCUMENT CHECKLIST No.2: FINANCIAL DOCUMENTS

01. All submissions of the Bidder must clearly indicate the paper the document number. For example, Financial Component (i.e., 4pcs) should be marked **“FC01~1”**, **“FC01~2”**.
02. On this checklist; the column “As Checked” shall be marked ...
  - ✓ **“PASSED”** to indicate that said document was available; or
  - ✓ **“FAILED”** when the document listed is not available in the bid proposal submitted; or
03. *At any stage of the procurement process, a proposal may still be declared “not eligible” if the contents/substance of the document are missing, or its found inappropriate or does not comply with the given requirements for this transaction.*

Bidding No.	<b>IB24-413103-02</b>	Total ABC:	<b>P18,950,000.00</b>
Particulars:	<b>“IDEA GENERATION HUB (IGH) PHASE 3: ONE (1) LOT SUPPLY, INSTALLATION AND COMMISSIONING OF INTEGRATED AUDIO VISUAL EQUIPMENT AND INFORMATION AND COMMUNICATION TECHNOLOGY SYSTEMS INCLUSIVE OF ALL ACCESSORIES FOR THE IGH FACILITIES SUCH AS MULTI-MEDIA ROOM, LEARNING ROOM, PRIVATE NOOKS, CAFÉ LOUNGE, AND GARDEN DECKS AT THE 7TH FLOOR OF DAP BUILDING IN PASIG CITY”</b>		
Venue of Bid Opening	<b>Via Google Meet Platform</b>	DATE & TIME of Bid Opening	<b>November 12, 2024 (Tue) at 10:00AM</b>

<b>BIDDER'S INFORMATION</b>	<i>COMPANY NAME:</i>
	<i>COMPANY HEAD OFFICE MAILING ADDRESS:</i>
	<i>COMPANY WEBSITE OR EMAIL ADDRESS:</i>
Representative attending the Bidding:	<i>NAME OF THE COMPANY REPRESENTATIVE:</i>
	<i>POSITION TITLE OF THE COMPANY REPRESENTATIVE:</i>
JV Info:	<i>IS THE BIDDER INTO JOINT VENTURE AGREEMENT WITH ANOTHER ENTITY/IES? YES /NO</i>

FINANCIAL DOCUMENTS	Mark	As Checked
1. Original of duly signed and accomplished Financial Bid Form.	<b>FC01</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
2. Original of duly signed and accomplished Price Schedule(s).	<b>FC02</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed
3. USB Thumb Drive containing electronic-copies of the submitted bid proposal (financial documents).	<b>FC03</b>	<input type="checkbox"/> Passed <input type="checkbox"/> Failed

**END OF FINANCIAL DOCUMENTS CHECKLIST**

BAC's Remarks:	<input type="checkbox"/> <b>PASSED</b>	<input type="checkbox"/> <b>FAILED</b>	<input type="checkbox"/> <b>FOR RECONSIDERATION</b>
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<b>DOCUMENTS RECEIVED BY:</b>	<b>CHECKED BY:</b>	<b>NOTED BY:</b>
<b>RODEL D. CASTILLO</b> <small>Officer-in-Charge, BAC Secretariat Division</small>	<b>ENGR. VENER V. MADERAJE</b> <small>TWG Chairperson</small>	<b>ALAN S. CAJES</b> <small>BAC Chairperson</small>



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# Bidder's LETTERHEAD

## FORM 1: FINANCIAL BID FORM

### INSTRUCTIONS to BIDDERS:

01. THIS FORM SHOULD BE ACCOMPLISHED USING THE BIDDER'S LETTERHEAD, SIGNED COPY SHOULD BE SUBMITTED AS PART OF THE FINANCIAL DOCUMENTS MARKED AS "FC01";
02. THE SIGNED COPY OF THIS DOCUMENT (IN PDF OR JPEG FORMAT) MUST BE PART OF THE ELECTRONIC FILES THAT SHOULD BE CONTAINED IN THE SUBMITTED ELECTRONIC BID; AND,
03. THE FILENAME STRUCTURE SHOULD BE "FC01\_XXX=FINANCIAL\_BID\_FORM=<BIDDERNAME>".

## BID FORM

Issued by the GPPB through GPPB Resolution 16-2020, dated 16 September 2020

Date: \_\_\_\_\_

Invitation to Bid No.: **IB24-413103-02**

### **BIDS & AWARDS COMMITTEE**

Development Academy of the Philippines

1<sup>st</sup> Floor, DAP Bldg., San Miguel Avenue, Pasig City 1600

*Telephone:* (632) 8631-0921 loc. 133

*BAC Secretariat email:* [dapbacsec@dap.edu.ph](mailto:dapbacsec@dap.edu.ph)

*Website address:* <https://www.dap.edu.ph>

Having examined the Bidding Documents, including the Supplemental or Bid Bulletin Numbers *[insert numbers]*, the receipt of which is hereby duly acknowledge, we undersigned, offer to supply, install and deliver for the Contract: **"IDEA GENERATION HUB (IGH) PHASE 3: ONE (1) LOT SUPPLY, INSTALLATION AND COMMISSIONING OF INTEGRATED AUDIO VISUAL EQUIPMENT AND INFORMATION AND COMMUNICATION TECHNOLOGY SYSTEMS INCLUSIVE OF ALL ACCESSORIES FOR THE IGH FACILITIES SUCH AS MULTI-MEDIA ROOM, LEARNING ROOM, PRIVATE NOOKS, CAFÉ LOUNGE, AND GARDEN DECKS AT THE 7TH FLOOR OF DAP BUILDING IN PASIG CITY."** with the said OBDs for the sum of: *[insert Total Bid amount in words \_\_\_\_\_ and in figures Php\_\_\_\_\_]* or the total calculated bid price as evaluated and corrected for computational errors, and other bid modifications in accordance with the Price Schedules attached herewith and made part of this Bid. The total bid price includes the cost of all taxes, such as, but not limited to (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties, which are itemized herein or in the Price Schedules.

If our Bid is accepted, we undertake:

- a. to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements of the OBD;
- b. to provide a performance security in the form, amounts, and within the times prescribed in the OBD;

- c. to abide by the Bid Validity Period specified in the PBDs and it shall remain binding upon us at any time before the expiration of that period;

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below<sup>3</sup>:

Name and address of agent	Amount and Currency	Purpose of Commission or gratuity
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

NOTE: if none, state “**None**”

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 or any Bid you may receive.

We certify/confirm that we complied with the eligibility requirements pursuant to the OBD.

The undersigned is authorized to submit the bid on behalf of [*insert name of the bidder*] as evidenced by the attached [*state the written authority*].

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

	Yours sincerely,
<b>SIGNATURE OF THE AUTHORIZED REPRESENTATIVE</b>	
NAME OF THE AUTHORIZED REPRESENTATIVE	
POSITION TITLE OF SIGNATORY:	
NAME OF FIRM\BIDDER:	
POSTAL ADDRESS:	
TELEPHONE NUMBER:	
EMAIL ADDRESS:	

<sup>3</sup>Applicable only if the Funding Source is the ADB, JICA or WB.

# *Bidder's LETTERHEAD*

## FORM 2: PRICE SHEDULE (AS PER GPPB RESOLUTION NO. 16-2020)

**INSTRUCTIONS to BIDDERS:**

01. THIS FORM SHOULD BE ACCOMPLISHED USING THE BIDDER'S LETTERHEAD, SIGNED COPY SHOULD BE SUBMITTED AS PART OF THE FINANCIAL COMPONENT MARKED AS "FC02";
02. THE SIGNED COPY OF THIS DOCUMENT (IN PDF OR JPEG FORMAT) **MUST BE PART OF THE ELECTRONIC FILES THAT SHOULD BE CONTAINED IN THE SUBMITTED ELECTRONIC BID;**
03. DO NOT LEAVE BLANK CELLS. KINDLY PUT **N/A** IF "NOT APPLICABLE";
04. KINDLY USE ADDITIONAL SHEETS IF NECESSARY; AND
05. THE FILENAME STRUCTURE SHOULD BE "**FC02\_XXX=PRICE\_SCHEDULE=<BIDDERNAME>**".

### FOR GOODS OFFERED FROM WITHIN THE PHILIPPINES

Name of Bidder: \_\_\_\_\_

Page \_\_\_ of \_\_\_.

Invitation to Bid Number: **IB24-412107-01**

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin/Quantity	Unit	Unit price EX W per item	Transportation and Insurance and all other costs incidental to delivery, per item	Sales and other taxes payable if Contract is awarded, per item	Cost of Incident al Services, if applicabl e, per item	Total Price, per unit (col 5+6+7+8 )	Total Price delivered Final Destination (col 9) x (col 4)
<b>LEARNING ROOM</b>									
<b>Main Led and Interactive Screen</b>	P1.8 Customized Curve Indoor LED	Atleast 5.12m(Width) x 1.8m(Height) Pixel pitch (mm): atleast 0.9 – 1.86 Color temperature (K): atleast 2500-9500 Panel dimensions (WxHxD)/(mm): atleast 640x360x65 Driving type: 1/43 Panel weight (kg): 6 Viewing angle (H/V) (°): 160/140 Panel material: Die casting aluminum	1	set					

		<p>Power consumption (Max/ave)(W/m<sup>2</sup>): 520/173</p> <p>Brightness (nit): 800</p> <p>IP rating (front/rear): IP40/IP21</p> <p>Refresh rate: (Hz): ≥3840</p> <p>Maintenance: Front</p> <p>Gray Scale (bit): 14</p> <p>Certificate: CCC,CE,ETL,FC C</p> <p>Contrast ratio: 4000:1</p>							
Video Wall Splicer	<p>HDMI Input Card: Support for 10-bit input source, accompanied audio and 144hz input does not support interlaced signal input</p> <p>Four connectors are all used for input.</p> <p>Each connector the maximum resolution of 2048x1152@60hz, and the minimum resolution of 800x600@60hz</p> <p>Custom resolutions: Max. width 2560 pixels (2560x972@60hz)</p> <p>Max. height: 2560 pixels (884x2560@60hz)</p> <p>H_16xRJ45+2xFiber Sending Card: LED 4k sending card load up to 10,400,000 pixels</p>	1	unit						

		(max. width 10,240 pixels, max. height: 10,240 pixels) 16x RJ45 Gigabit Ethernet Outputs Bit depth: 8- bit a single ethernet port loads up up to 650,000 pixels Bit depth 10-bit A single ethernet ports load up to 320,000 pixels Backup between ethernet ports Support 144Hz output Power consumption: 210 W								
	Installation Works	Supply of Supervision, Equipment and Materials for the Installation of electrical wiring, cables, circuit breakers, and other needed accessories including wall mounting framing works	1	lot						
	65" Interactive Whiteboard with Floorstand	Resolution: 3840(H) ×2160 (V) HDMI Input: 4 Pixel Pitch: 0.372mm x 0.372mm HDMI Output: 1 Brightness: ≥ 400cd/m2 USB: Public USB3.0*1, Public USB2.0*1, Android UB3.0*1 Chipset: RK3588 Touch out USB 3.0: 1	1	unit						

		<p>CPU: A76*4+A55*4+6 T NPU 2.4Ghz RS232: 1 GPU: OLDIN MC4 RJ-45: 2 (in/out,10M/100M/1000M) DDR: 8GB (max32GB) Bluetooth 5.2: 1 EMMC: 64GB (max256GB)</p>								
<b>Video Conferencing System</b>	Touchpad Controller	<p>Processor: Intel core i5-1145G7E IoTG vPro Processor Operating system: Windows 10 IoT Enterprise SA 64 bit Memory: 8 GB (Dual-channel) DDR4 3200MHz Graphics: Intel Iris Xe graphics Storage: 256GB PCIe TLC SSD Display: 10.1" 10-point touch (HD 1280x800. 16:10 aspect ratio, &lt;340 nits), rotatable 30° &amp; 60°</p>	1	unit						
	4k Dual Lens PTZ Conferencing Camera	<p>Signal: USB HD: 1920x1080p@60/59.97/50/30/29.97/25 Hz White balance: Auto/Manual/One push/ 3000k - 6500k 1920x1080i@60/59.94/50 Hz Focus: Auto/Manual 1280x720p@60/59.94/50 Hz</p>	1	unit						

		<p>Aperture: Auto/Manual</p> <p>Color Space: YUV, RGB</p> <p>Electronic shutter: Auto/Manual</p> <p>Chroma</p> <p>Subsampling: 4:4:4, 4:2:2, 4:2:0</p> <p>BLC: ON/OFF</p> <p>Video compression: H.264/ H.265 Pan rotation: <math>\pm 170^\circ</math></p> <p>Protocol: TCP, UDP, RTMP,</p> <p>RTSP Tilt rotation: <math>-30^\circ \sim +90^\circ</math></p> <p>Bitrate: 46 kbps - 40960 kbps Preset number: 255 (10 presets using the included IR remote control)</p> <p>Sensor: 1/2.8" HD CMOS HDMI out: 1- Type A, 19- pin, female</p> <p>Effective Pixels: 16:9, 2.07 MP</p> <p>USB: 1 x USB, Type A</p> <p>Optical zoom: f= 4.7 ~ 47mm LAN: 1 x RJ45, 100Base- T View angle: <math>6.43^\circ</math> (telephoto), <math>60.9^\circ</math> (wide- angle)</p> <p>RS-232: 2 x 9- pin DIN</p> <p>Av: f/1.6 - f/3.0</p> <p>Certification: CE, FCC</p> <p>Digital zoom: 10X</p>								
<b>Wireless System</b>	Wireless Collaboration	Ethernet: 100/1000 Mbs, auto-switching, autonegotiating, autodiscovery,	1	unit						



		<p>full/half duplex, TCP/IP, UDP/IP, DHCP, SSL, TLS<sup>3</sup>, SSH, SFTP, (SSH File Transfer protocol), IEEE 802.1x, active directory authentication, HTTPS web browser setup and XiO cloud service, 802.3af compliant HDMI output resolutions:</p> <p>1280x720@50Hz (720p50),  1280x720@50Hz (720p60),  1280x800@60Hz,  1366x768@60Hz,  1440x900@60Hz  1600x900@60Hz,  1600x1200@60Hz</p> <p>,</p> <p>1680x1050@60Hz</p> <p>,</p> <p>1920x1080@50Hz  , (1080p50),  1920x1080@60Hz  (1080p60)  3840x2160@30Hz  (2160p30),  3840x2160@50Hz  (2160p50),  3840x2160@60Hz  (2160p60)</p> <p>OS Support (Airmedia Application):  Windows 10,  Windows 11</p> <p>OS Support (Airmedia connect adaptor): Windows 10, Windows 11, macOS 11 or later</p> <p>Supported conferencing</p>							
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		<p>services: Zoom software</p> <p>Input signal types: Airmedia; simultaneous display of up to four sources with airmedia canvas</p> <p>Maximum input resolutions: Airmedia presentation 1920x1080@30Hz (1080p30); Airmedia connect adapter 3840x2160@30Hz (4k30)</p>								
Series 3 Connect Adaptor	<p>WI-FI: Wifi 6 (802.11ax) USB: USB 2.0</p> <p>OS Support: Windows 10, Windows 11, macOS 11 or newer</p> <p>Input signal types: Display port Alt Mode over USB-C</p> <p>Output signal types (Video): Network stream over wi-fi, received by a paired airmedia series 3 reciever</p> <p>Maximum resolution (Video): 3840x2160@30Hz (2160p30); output resolution is determined by the HDMI output on a paired Airmedia series 3 reciever</p> <p>Input signal types (Audio): DisplayPort Alt mode over USB-C</p>	1	unit							

		Output signal type (Audio): Network stream over wifi recieved by a paired Airmedia Series 3 reciever Compliance: Listed for US & Canada, CE, IC, FCC, Part 15 Class B								
<b>Audio System</b>	Ceiling Microphone	Transducer principle: Pre-polarized condenser microphone  Max. sound pressure level: 104 dB SPL Microphone capsules: 28 x KE 10-237 Dynamic range: 93 dB (A) Sensitivity: 0 dbV/Pa (988 mV/Pa) Dante: Dante interface with two RJ-45 sockets primary and secondary Pick- up pattern: Beam pattern Ethernet: RJ-45 socket for network control and PoE	1	unit						
	2 Way Ceiling Speaker	Woofers: 6.5 inch (165 mm) polypropylene w/ ring mode decoupled cloth surround & steel basket Tweeter: 0.98 inch (25 mm) titanium dome, horn loaded Crossover frequency: 2.5 kHz Impedance: 8 Ohms nominal	4	unit						

	<p>with transformer set to “8Ω”</p> <p>Transformer taps: 3.75W/7.5W/15W /30W/60W at 70V; 7.5W/15W/30W/60W at 100V</p> <p>Frequency response: 50 Hz to 20 kHz (±3 dB)</p> <p>Frequency range: 40 Hz to 20 kHz (-10 dB) Power handling: 125 Watts program (8 Ohms) Sensitivity: 88.5 dB @ 1W/1m Coverage: 100° conical (nominal)</p>								
Digital Signal Processor	<p>Analog-To-Digital Conversion: 24-bit 48 kHz Digital-To-Analog Conversion: 24-bit 48 kHz Frequency Response: 20 Hz to 20 kHz ±0.5 dB THD: 0.001%, 20 Hz to 20 kHz, 0 dB gain, +4 dBu input; 0.01%, 22 Hz to 22 kHz, 54 dB gain, -50 dBu input EIN: -125 dBu, 22 Hz to 22 kHz, no weighting</p> <p>Dynamic Range: 110 dB, 22 Hz to 22 kHz, 0 dB gain Crosstalk: -85 dB, 1 kHz, +4 dBu input, channel to channel -75 dB, 1 kHz, -50 dBu input, channel to channel</p> <p>Latency: 3.0 ms (analog in to analog out)</p>	1	unit						

4 Channel Network Amplifier	<p>Maximum Power Output: 2,000 W  Input impedance: &gt;8k balanced and &gt;4k unbalanced  Typical Distortion: 8Ω; 0.02 - 0.05%  Continuously variable: Vrms 1.23 mV to 17.35 V 4Ω; 0.04 - 0.1%  dBu -56 to 27  Maximum Distortion: 4 Ω - 8 Ω; 1.0%dBv -58.2 to 24.8  Frequency Response (8 Ω): 20 Hz - 20 kHz +0.2 dB / -0.7 dB  Noise: Unweighted output unmuted; &gt;102 dB  Weighted output muted; &gt;106 dB  Damping factor: &gt;100</p>	1	unit								
Network Audio Wall	<p>Input Types: 2 x XLR (Balanced and RF Filtered)  Compliance: FCC CFR 47 Parts 15B Class A 2 x RCA (Stereo Unbalanced)  ICES-003  1 x 3.5 mm (Stereo unbalanced) CE (EN55022) Gain: -18, -3, +25, and +40 dB, Software Selectable (Inputs 1/2)  RoHS  Input Impedance: &gt;1.8 Kilohms at</p>	1	unit								

		any Gain (Inputs 1/2) REACH >10 Kilohms (Inputs 3/4 A & B) Output Impedance: 200 Ohms Balanced 100 Ohms Unbalanced Maximum Output Levels: +12 dBu at 0 dB Attenuation (Output 1/2 A) +20 dBu at 0 dB Attenuation (Output 1/2 B)							
<b>Contro I System</b>	Virtual Control Server	Processor: Intel Core® <a href="#"><u>i5-10500T CPU @ 2.30GHz</u></a> RAM: 8 GB DDR4 2666MT/s Storage: 256 GB SSD Graphics: Intel® UHD Graphics 630 Ethernet: 100/1000 Mbps USB: USB 3.2 host ports for mouse and keyboard (used for optional configuration through command line interface) BACnet Network/IP: Supports up to 10000 BACnet objects3	1	unit					
	PoE Switch	Ports: (2) 10/100/1000 base-T auto-sensing gigabit ethernet (24) 10/100/1000 auto-sensing gigabit ethernet w/PoE+ (4) 10 gigabit Base-x SFP+ Network	1	unit					

		Standards: IEEE 802.3af.3at Mac address: Up to 16k Switch Fabric: 132 Gbps non-blocking								
	SFP Module	10 gigabit compatible with proposed switch including fiber cable backbone and patch cord	unit	2						
	Wireless Access Point	<p>Wi-Fi Standards: IEEE 802.11a/b/g/n/ac/ax</p> <p>Supported Rates: 802.11ax: 4 to 1774 Mbps, 802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80), 802.11n: 6.5 Mbps to 300Mbps (MCS0 to MCS15), 802.11a/g: 6 to 54 Mbps, 802.11b: 1 to 11 Mbps</p> <p>Supported Channels: 2.4GHz: 1-13, 5GHz: 36-64, 100-144, 149-165</p> <p>MIMO: 2x2 SU-MIMO, 2x2 MU-MIMO</p> <p>Spatial Streams: 2 streams SU/MU MIMO 5GHz, 2 streams SU/MU MIMO 2.4GHz</p> <p>Radio Chains and Streams: 2x2:2 (5GHz), 2x2:2 (2.4GHz)</p> <p>Channelization: 20, 40, 80MHz</p>	1	unit						

		<p>Security: WPA-PSK, WPA-TKIP, WPA2 AES, WPA3-Personal, WPA3-Enterprise, 802.11i, Dynamic PSK, OWE, WIPS/WIDS</p> <p>Other Wi-Fi Features: WMM, Power Save, Tx Beamforming, LDPC, STBC, 802.11r/k/v, Hotspot, Hotspot 2.0, Captive Portal, WISPr</p> <p>Antenna Type: BeamFlex+ adaptive antennas with polarization diversity, Adaptive antenna that provides up to 64 unique antenna patterns per band</p> <p>Antenna Gain (max): Up to 3dBi</p> <p>Peak Transmit Power (Tx port/chain + Combining gain): 2.4GHz: 26 dBm, 5GHz: 25 dBm</p> <p>Frequency Bands: ISM (2.4-2.484GHz), U-NII-1 (5.15-5.25GHz), U-NII-2A (5.25-5.35GHz), U-NII-2C (5.47-5.725GHz), U-NII-3 (5.725-5.85GHz)</p> <p>Controller Platform Support: ZoneDirector 1200</p> <p>IP: IPv4, IPv6, dual-stack</p>							
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		<p>VLAN: 802.1Q (1 per BSSID or dynamic per user based on RADIUS), VLAN Pooling, Port-based 802.1x: Authenticator &amp; Supplicant Tunnel: L2TP, GRE, Soft-GRE Policy Management Tools: Application Recognition and Control, Access Control Lists, Device Fingerprinting, Rate Limiting IoT Capable: Integrated BLE and ZigBee, (1 radio, switchable) Ethernet: 2 x 1GbE Ethernet ports, Power over Ethernet (802.3af/at) with Category 5/5e/6 cable, LLDP USB: 1 USB 2.0 port, Type A With compatible mounting bracket With compatible power injector With license for ZoneDirector 1200 controller</p>								
	10.9" Tablet	<p>8- core CPU with 4 performance cores and 4 efficiency cores 8- core GPU 16- core neural engine 8GB ram Hardware accelerated H.264</p>	1	unit						

		and HEVC Video decode engine Video encode engine								
Tablet for Control + App		Devices: Requires Apple iOS 14 (or later) and a mobile broadband or Wi-Fi® network connection3; iPad® devices must have at least 1 GB of RAM for reliable performance. Streaming formats: H.264 (MPEG-4 part 10 AVC), MJPEG; Requires purchase of full app functionality. Intercom audio feedback formats: Support RAVA SIP Intercom MP3 Standard app functionality: Two pages and one subpage Full (paid) app functionality: Unlimited (dependent upon available device memory)	1	unit						
Network AV Encoder Wall Plate		Video Resolutions: HDMI with deep color and 4k60 4:2:0 support Audio formats: Multichannel (up to 8- channel LPCM or encoded HBR 7.1 surround sound) Bit rates: Fixed: 200 to 950 MBPS. Adaptive: Based on input resolution of the stream Streaming	1	unit						

		<p>protocols: RTP, SDP</p> <p>Input signal types (Video): HDMI with deep color and 4k60 4:2:0 support (Dual-Mode display port interface and DVI compatible) Copy protection: HDCP 2.3</p> <p>Input signals type (Audio): HDMI (Dual-Mode display port interface compatible), analog stereo</p> <p>Digital formats (Audio): Dolby digital, dolby digital EX, dolby digital plus, dolby trueHD, dolby atmos, DTS, DTS ES, DTS 96/24</p>							
1080p Network AV Encoder	<p>Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color</p> <p>Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound) Bit rates: Fixed: 200 to 950 Mbps Adaptive: Based on input resolution of the stream</p> <p>Streaming protocols: RTP, SDP</p> <p>Container: MPEG-2 transport stream (.ts)</p> <p>Session Initiation: Multicast via</p>	3	unit						

		secure RTSP Copy protection: HDCP 1.4, AES-128, PKI								
	Switching Appliance, 80 Endpoints	Endpoints: Supports 80 DM NVX devices, each configured as an encoder or decoder Domains: Supports a single domain (all endpoints are grouped together as a single system) Ethernet: 100/1000 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SSH, IPv4, HTTPS web browser setup and control, Crestron 3-Series® or later control system integration DM NVX (via Ethernet): HDCP 2.2, AES audio/video content encryption, RTP, RTSP, SDP, ONVIF, IGMPv2, IGMPv3, SMPTE 2022, FEC (Forward Error Correction)	1	unit						
	Network AV Decoder	Stream Type: Default support for DM-NVX-E10/E20 Series; Support available for 4K60 4:4:4 encoders when using DM-NVX-D10 supported resolutions	1	unit						

		<p>Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color sampling, and Deep Color support</p> <p>Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound)</p> <p>Bit Rates: Based on the stream received from the encoder</p> <p>Streaming Protocols: RTP, SDP</p> <p>Container: MPEG-2 transport stream (.ts)</p>								
<b>Room Scheduler</b>	Tap Scheduler	<p>Display: 8 inch capacitive touch with antifingerprint treatment</p> <p>Connectivity: Wi-Fi 802.11 a/b/g/n</p> <p>Ethernet: RJ-45, 10/100/1000 Mbit PoE &amp; PoE + EEE 802.3af</p> <p>RFID/NFC: 13.56 MHz reader</p> <p>Supports MIFARE 4K/1K card (does not support ISO/IEC 15693 or MIFARE Ultralight C)</p>	1	unit						
<b>Overall Services</b>		<p>Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable,</p>	1	lot						

		cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT System at Learning Room								
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT System;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works;</li> <li>• Clean areas before turnover; Turnover of the AV Equipment and ICT Systems at Learning Room</li> </ul>	1	lot						
<b>MULTIMEDIA ROOM</b>										
<b>Main Led and Interactive Screen</b>	P1.8 Costumized Curve Indoor LED	8.32m(Width) x 1.8m(Height) Pixel pitch (mm): 1.86 Color temperature (K): 2500-9500 Panel dimensions (WxHxD)/(mm): 640x360x65 Driving type: 1/43	1	set						

	<p>Panel weight (kg): 6 Viewing angle (H/V) (°): 160/140 Panel material: Die casting aluminum Power consumption (Max/ave)(W/m²): 520/173 Brightness (nit): 800IP rating (front/rear): IP40/IP21 Refresh rate: (Hz): ≥3840 Maintenance: Front Gray Scale (bit): 14 Certificate: CCC,CE,ETL,FC C Contrast ratio: 4000:1</p>								
Video Wall Splicer	<p>HDMI Input Card: Support for 10-bit input source, accompanied audio and 144hz input does not support interlaced signal input Four connectors are all used for input. Each connector the aximum resolution of 2048x1152@60hz, and the minimum resolution of 800x600@60hz Custom resolutions: Max. width 2560 pixels (2560x972@60hz) Max. height: 2560 pixels (884x2560@60hz)  H_16xRJ45+2xFi ber Sending Card: LED 4k sending</p>	1	unit						

	card load up to 10,400,000 pixels (max. width 10,240 pixels, max. height: 10,240 pixels) 16x RJ45 Gigabit Ethernet Outputs Bit depth: 8- bit a single ethernet port loads up up to 650,000 pixels Bit depth 10-bit A single ethernet ports load up to 320,000 pixels Backup between ethernet ports Support 144Hz output Power consumption: 210 W								
	Supply of Supervision, Equipment and Materials for the Installation of electrical wiring, cables, circuit breakers, and other needed accessories including wall mounting framing works	1	lot						
65" Interactive Whiteboard with Floorstand	Resolution: 3840(H) ×2160 (V) HDMI Input: 4 Pixel Pitch: 0.372mm x 0.372mm HDMI Output: 1 Brightness: ≥ 400cd/m2 USB: Public USB3.0*1, Public USB2.0*1, Android UB3.0*1 Chipset: RK3588 Touch out USB 3.0: 1	2	unit						



		<p>CPU: A76*4+A55*4+6 T NPU 2.4Ghz RS232: 1</p> <p>GPU: OLDIN MC4RJ-45: 2 (in/out,10M/100M/1000M)</p> <p>DDR: 8GB (max32GB)</p> <p>Bluetooth 5.2: 1</p> <p>EMMC: 64GB (max256GB)</p>							
<b>Video Conferencing System</b>	Touchpad Controller	<p>Processor: Intel core i5-1145G7E IoTG vPro Processor</p> <p>Operating system: Windows 10 IoT Enterprise SA 64 bit Memory: 8 GB (Dual-channel) DDR4 3200MHz Graphics: Intel Iris Xe graphics Storage: 256GB PCIe TLC SSD Display: 10.1" 10-point touch (HD 1280x800. 16:10 aspect ratio, &lt;340 nits), rotatable 30° &amp; 60°</p>	1	unit					
	4k Dual Lens PTZ Conferencing Camera	<p>Signal: USB HD: 1920x1080p@60/59.97/50/30/29.97/25 Hz White balance: Auto/Manual/One push/ 3000k - 6500k 1920x1080i@60/59.94/50 Hz Focus: Auto/Manual 1280x720p@60/59.94/50 Hz Aperture: Auto/Manual</p>	1	unit					

		<p>Color Space: YUV, RGB</p> <p>Electronic shutter: Auto/Manual</p> <p>Chroma Subsampling: 4:4:4, 4:2:2, 4:2:0</p> <p>BLC: ON/OFF</p> <p>Video compression: H.264/ H.265</p> <p>Pan rotation: <math>\pm 170^\circ</math></p> <p>Protocol: TCP, UDP, RTMP,</p> <p>RTSP Tilt rotation: <math>-30^\circ \sim +90^\circ</math></p> <p>Bitrate: 46 kbps - 40960 kbps</p> <p>Preset number: 255 (10 presets using the included IR remote control)</p> <p>Sensor: 1/2.8" HD CMOS</p> <p>HDMI out: 1- Type A, 19- pin, female</p> <p>Effective Pixels: 16:9, 2.07 MP</p> <p>USB: 1 x USB, Type A</p> <p>Optical zoom: f= 4.7 ~ 47mm</p> <p>LAN: 1 x RJ45, 100Base-T</p> <p>View angle: 6.43° (telephoto), 60.9° (wide- angle)</p> <p>RS-232: 2 x 9- pin DIN</p> <p>Av: f/1.6 - f/3.0</p> <p>Certification: CE, FCC</p> <p>Digital zoom: 10X</p>							
<b>Wireless System</b>	Wireless Collaboration	<p>Ethernet: 100/1000 Mbs, auto-switching, autonegotiating, autodiscovery, full/half duplex, TCP/IP, UDP/IP,</p>	1	unit					

		<p>DHCP, SSL, TLS<sup>3</sup>, SSH, SFTP, (SSH File Transfer protocol), IEEE 802.1x, active directory authentication, HTTPS web browser setup and XiO cloud service, 802.3af compliant HDMI output resolutions:</p> <p>1280x720@50Hz (720p50),  1280x720@50Hz (720p60),  1280x800@60Hz,  1366x768@60Hz,  1440x900@60Hz  1600x900@60Hz,  1600x1200@60Hz</p> <p>,</p> <p>1680x1050@60Hz</p> <p>,</p> <p>1920x1080@50Hz , (1080p50),  1920x1080@60Hz (1080p60)  3840x2160@30Hz (2160p30),  3840x2160@50Hz (2160p50),  3840x2160@60Hz (2160p60)</p> <p>OS Support (Airmedia Application):  Windows 10, Windows 11</p> <p>OS Support (Airmedia connect adaptor): Windows 10, Windows 11, macOS 11 or later</p> <p>Supported conferencing services: Zoom software</p>							
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		<p>Input signal types:  Airmedia;  simultaneous  display of up to  four sources with  airmedia canvas  Maximum input  resolutions:  Airmedia  presentation  1920x1080@30Hz  (1080p30);  Airmedia connect  adapter  3840x2160@30Hz  (4k30)</p>								
Series 3 Connect Adaptor	<p>WI-FI: Wifi 6  (802.11ax)  USB: USB 2.0  OS Support:  Windows 10,  Windows 11,  macOS 11 or  newer Input signal  types: Display port  Alt Mode over  USB-C  Output signal  types (Video):  Network stream  over wi-fi,  received by a  paired airmedia  series 3 reciever  Maximum  resolution (Video):  3840x2160@30Hz  (2160p30); output  resolution is  determined by the  HDMI output on a  paired Airmedia  series 3 reciever  Input signal types  (Audio):  DisplayPort Alt  mode over USB-C  Output signal type  (Audio): Network  stream over wifi</p>	1	unit							

		recieved by a paired Airmedia Series 3 reciever Compliance: Listed for US & Canada, CE, IC, FCC, Part 15 Class B								
<b>Audio System</b>	Ceiling Microphone	Transducer principle: Pre-polarized condenser microphone Max. sound pressure level: 104 dB SPL Microphone capsules: 28 x KE 10-237 Dynamic range: 93 dB (A) Sensitivity: 0 dbV/Pa (988 mV/Pa) Dante interface with two RJ-45 sockets primary and secondary Pick- up pattern: Beam pattern Ethernet: RJ-45 socket for network control and PoE	1	unit						
	2 Way Ceiling Speaker	Woofer: 6.5 inch (165 mm) polypropylene w/ ring mode decoupled cloth surround & stell basket Tweeter: 0.98 inch (25 mm) titanium dome, horn loaded Crossover frequency: 2.5 kHz Impedance: 8 Ohms nominal with transformer set to "8Ω" Transformer taps: 3.75W/7.5W/15W /30W/60W at 70V;	8	unit						

	7.5W/15W/30W/60W at 100V Frequency response: 50 Hz to 20 kHz ( $\pm 3$ dB) Frequency range: 40 Hz to 20 kHz (-10 dB) Power handling: 125 Watts program (8 Ohms) Sensitivity: 88.5 dB @ 1W/1m Coverage: 100° conical (nominal)								
Digital Signal Processor	Analog-To-Digital Conversion: 24-bit 48 kHz Digital-To-Analog Conversion: 24-bit 48 kHz Frequency Response: 20 Hz to 20 kHz $\pm 0.5$ dB THD: 0.001%, 20 Hz to 20 kHz, 0 dB gain, +4 dBu input; 0.01%, 22 Hz to 22 kHz, 54 dB gain, -50 dBu input EIN: -125 dBu, 22 Hz to 22 kHz, no weighting Dynamic Range: 110 dB, 22 Hz to 22 kHz, 0 dB gain Crosstalk: -85 dB, 1 kHz, +4 dBu input, channel to channel -75 dB, 1 kHz, -50 dBu input, channel to channel Latency: 3.0 ms (analog in to analog out) Dante I/O: 32 channels in, 32 channels out, at up to 24-bit 48 kHz	1	unit						
4 Channel	Maximum Power Output: 2,000 W	1	unit						

Network Amplifier	<p>Input impedance:  &gt;8k balanced and  &gt;4k unbalanced  Typical Distortion:  8Ω; 0.02 - 0.05%  Continuously  variable: Vrms  1.23 mV to 17.35  V 4Ω; 0.04 - 0.1%</p> <p>dBu -56 to 27  Maximum  Distortion: 4 Ω - 8  Ω; 1.0%dBv -58.2  to 24.8  Frequency  Response (8 Ω): 20  Hz - 20 kHz +0.2  dB / -0.7 dB  Noise:  Unweighted output  unmuted; &gt;102 dB  Weighted output  muted; &gt;106 dB  Damping factor:  &gt;100</p>										
Network Audio Wall	<p>Input Types: 2 x  XLR (Balanced  and RF Filtered)  Compliance: FCC  CFR 47 Parts 15B  Class A 2 x RCA  (Stereo  Unbalanced)</p> <p>ICES-003  1 x 3.5 mm (Stereo  unbalanced) CE  (EN55022) Gain: -  18, -3, +25, and  +40 dB, Software  Selectable (Inputs  1/2) RoHS  Input Impedance:  &gt;1.8 Kilohms at  any Gain (Inputs  1/2) REACH  &gt;10 Kilohms  (Inputs 3/4 A &amp; B)  Output Impedance:</p>	1	unit								

		200 Ohms Balanced 100 Ohms Unbalanced Maximum Output Levels: +12 dBu at 0 dB Attenuation (Output 1/2 A) +20 dBu at 0 dB Attenuation (Output 1/2 B)								
<b>Contro I System</b>	Virtual Control Server	Processor: Intel Core® <a href="#"><u>i5-10500T CPU @ 2.30GHz</u></a> RAM: 8 GB DDR4 2666MT/s Storage: 256 GB SSD Graphics: Intel® UHD Graphics 630 Ethernet: 100/1000 Mbps USB: USB 3.2 host ports for mouse and keyboard (used for optional configuration through command line interface) BACnet Network/IP: Supports up to 10000 BACnet objects3	1	unit						
	PoE Switch	Ports: (2) 10/100/1000 base- T auto-sensing gigabit ethernet (24) 10/100/1000 auto-sensing gigabit ethernet w/PoE+ (4) 10 gigabit Base-x SFP+ Network Standards: IEEE 802.3af.3at Mac address: Up to 16k Switch Fabric: 132 Gbps non-blocking	1	unit						



	SFP Module	10 gigabit compatible with proposed switch including fiber cable backbone and patch cord	unit	2						
	Wireless Access Point	<p>Wi-Fi Standards: IEEE 802.11a/b/g/n/ac/ax</p> <p>Supported Rates: 802.11ax: 4 to 1774 Mbps, 802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80), 802.11n: 6.5 Mbps to 300Mbps (MCS0 to MCS15), 802.11a/g: 6 to 54 Mbps, 802.11b: 1 to 11 Mbps</p> <p>Supported Channels: 2.4GHz: 1-13, 5GHz: 36-64, 100-144, 149-165</p> <p>MIMO: 2x2 SU-MIMO, 2x2 MU-MIMO</p> <p>Spatial Streams: 2 streams SU/MU MIMO 5GHz, 2 streams SU/MU MIMO 2.4GHz</p> <p>Radio Chains and Streams: 2x2:2 (5GHz), 2x2:2 (2.4GHz)</p> <p>Channelization: 20, 40, 80MHz</p> <p>Security: WPA-PSK, WPA-TKIP, WPA2 AES, WPA3-Personal, WPA3-Enterprise, 802.11i, Dynamic</p>	1	unit						

		<p>PSK, OWE, WIPS/WIDS</p> <p>Other Wi-Fi Features: WMM, Power Save, Tx Beamforming, LDPC, STBC, 802.11r/k/v, Hotspot, Hotspot 2.0, Captive Portal, WISPr</p> <p>Antenna Type: BeamFlex+ adaptive antennas with polarization diversity, Adaptive antenna that provides up to 64 unique antenna patterns per band</p> <p>Antenna Gain (max): Up to 3dBi</p> <p>Peak Transmit Power (Tx port/chain + Combining gain): 2.4GHz: 26 dBm, 5GHz: 25 dBm</p> <p>Frequency Bands: ISM (2.4-2.484GHz), U-NII-1 (5.15-5.25GHz), U-NII-2A (5.25-5.35GHz), U-NII-2C (5.47-5.725GHz), U-NII-3 (5.725-5.85GHz)</p> <p>Controller</p> <p>Platform Support: ZoneDirector 1200</p> <p>IP: IPv4, IPv6, dual-stack</p> <p>VLAN: 802.1Q (1 per BSSID or dynamic per user based on RADIUS), VLAN</p>							
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		Pooling, Port-based 802.1x: Authenticator & Supplicant Tunnel: L2TP, GRE, Soft-GRE Policy Management Tools: Application Recognition and Control, Access Control Lists, Device Fingerprinting, Rate Limiting IoT Capable: Integrated BLE and ZigBee, (1 radio, switchable) Ethernet: 2 x 1GbE Ethernet ports, Power over Ethernet (802.3af/at) with Category 5/5e/6 cable, LLDP USB: 1 USB 2.0 port, Type A With compatible mounting bracket With compatible power injector With license for ZoneDirector 1200 controller									
	10.9" Tablet	8- core CPU with 4 performance cores and 4 efficiency cores 8- core GPU 16- core neural engine 8GB ram Hardware accelerated H.264 and HEVC Video decode engine Video encode engine	1	unit							
	Tablet for	Devices: Requires Apple iOS 14 (or	1	unit							

Control + App	<p>later) and a mobile broadband or Wi-Fi® network connection3; iPad® devices must have at least 1 GB of RAM for reliable performance.</p> <p>Streaming formats: H.264 (MPEG-4 part 10 AVC), MJPEG; Requires purchase of full app functionality.</p> <p>Intercom audio feedback formats: Support RAVA SIP Intercom MP3 Standard app functionality: Two pages and one subpage</p> <p>Full (paid) app functionality: Unlimited (dependent upon available device memory)</p>										
1080p Network AV Encoder	<p>Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color</p> <p>Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound) Bit rates: Fixed: 200 to 950 Mbps Adaptive: Based on input resolution of the stream Streaming protocols: RTP, SDP</p> <p>Container: MPEG-2 transport stream (.ts)</p>	4	unit								

		Session Initiation: Multicast via secure RTSP Copy protection: HDCP 1.4, AES-128, PKI								
Network AV Decoder	Stream Type: Default support for DM-NVX- E10/E20 Series; Support available for 4K60 4:4:4 encoders when using DM-NVX-D10 supported resolutions Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color sampling, and Deep Color support Audio Formats: Multicha nnel (up to 8- channel LPCM or encoded HBR 7.1 surround sound) Bit Rates: Based on the stream received from the encoder Streaming Protocols: RTP, SDP Container: MPEG- 2 transport stream (.ts)	4	unit							
HDMI Passive Plate	Provide one HDMI pass-thru connection for wall plates or lecterns HDCP 1.4 and 2.0 compatible Compact single gang Decora plate form factor Decora wall plate included	1	unit							
HDMI Extende	Interfaces: 1 x HDMI Type A	1	pair							

	r with IR control	Female Compliance: HDMI (3D, deep color); HDP compatible Impedance: 100 ohms Max resolution/ distance: Up to 1080p @40m; 1080i @ 60m Max distance: 3 m(2L-7D03H) IR: 1 x Mini stereo jack female Max. data rate: 6.75 Gbps (2.25 Gbps per lane) Max. Pixel clock: 225 MHz								
<b>Room Scheduler</b>	Tap Scheduler	Display: 8 inch capacitive touch with antifingerprint treatment Connectivity: Wi-Fi 802.11 a/b/g/n Ethernet: RJ-45, 10/100/1000 Mbit PoE & PoE + EEE 802.3af RFID/NFC: 13.56 MHz reader Supports MIFARE 4K/1K card (does not support ISO/IEC 15693 or MIFARE Ultralight C)	1	unit						
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling,	1	lot						

		termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems at Multimedia Room								
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works;</li> <li>• Clean areas before turn-over;</li> </ul> Turnover of the AV Equipment and ICT Systems at Multimedia Room	1	lot						
<b>PRIVATE NOOK</b>										
LDF Screen	32" LFD Screen with Cantilever Bracket	Resolution: 3,840 x 2,160 (16:9) Output: Stereo mini Jack Brightness (Typ.): 500 nit includes 3 pcs cantilever Bracket	3	unit						

		Orientation: Landscape/Portrait include 1 pc LFD Mobile Cart Haze: 25% Contrast ratio (Typ.): 4000:1 (IPS-1200:1) Type: VA/IPS Color gamut: NTSC 72% Operation hour: 24/7 Input: DP1.2 (1), HDMI 2.0 (3), USB 2.0 x 2								
	LFD Mobile Cart		1	unit						
<b>Overall Service s</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems at Private Nooks	1	lot						
<b>Assess ment, Cleani ng, Clearin g, and Turnov er</b>		• Complete assessment inclusive of testing and commissioning of all installed AV Equipment	1	lot						



		and ICT Systems; • Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works; • Clean areas before turn-over; • Turnover of the AV Equipment and ICT Systems at Private Nooks								
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**CAFÉ LOUNGE AND DECKS LEVEL 7A AND 7B**

<b>Audio System</b>	Iza 2120-Hz Integrated Zone Amplifier	At least 2 x 120 W @ 70/100V Power Amplifier 50 Hz - 20 kHz (+0/-3 dB, @ 1 W reference 1 kHz) frequency response $\leq -58$ dBu (below rated power, 1 kHz) channel separation at least 88 dB dynamic range 24-bit / 48 kHz A/D and D/A Converters Loudspeaker EQ, Opti-Voice paging, Dynamic equalization Processing Functions High-pass filter, FS2C/SE/P, FS4CE/SE, DM2C-LP/S, and SUB (55 - 100Hz) Loudspeaker Presets at least 10.4 ms (any input	1	unit						
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		to speaker output or aux output) Audio Latency								
	Dm3se Surface Mounte d Speaker (Wht)	80 – 20,000 Hz Frequency Response 140° conical Nominal Coverage 135° conical Nominal Coverage Angle 1.7 kHz passive crossover 80 Hz with recommended 24 dB / octave filter recommended High-Pass Protection	9	pair						
	Cc-1 Controll er Center (Wht)	Two (2) RJ-45, allows for daisy- chaining, TIA/EIA 568B wiring standard connectors Channel selection via 8-DIP switch bank settngs Passive controller type, linear potentiometer 0– 10 kΩ Cat 5 cable requirement	1	unit						
	Blx14/C vl Wireless Presente r System	at least 300 ft (91 m) line of sight operating range Between 524–865 MHz available frequencies 50– 15,000 Hz audio range 100 dB A- weighted dynamic range Bodypack Transmitter with 2 AA Batteries (included) and wireless reciever	3	set						

		Tie Clip and Windscreen								
	Mg12x 12-Channel Mixing Console	Maximum of 6 Mic / 12 Line Inputs (4 mono + 4 stereo) “D-PRE” mic preamps with an inverted Darlington circuit High-grade effects: SPX with 24 programs 24-bit / 192kHz 2in / 2out USB Audio functions Includes Cubase AI DAW software download version Works with the iPad (2 or later) through the Apple iPad Camera Connection Kit / Lightning to USB Camera Adapter	1	unit						
	Prm-Ust Music Source	SD/USB memory capacity of up to 32 GB (up to 8000 tracks) and the option to connect the USB either on the front or rear panel. 87 — 108 MHz FM frequency range 30 Hz — 12 kHz +/-3 dB frequency response >50 dB signal-to-noise ratio	1	unit						
	B1 Bluetooth Receiver	Bluetooth inputs RCA stereo, optical (SPDIF) outputs 2.0V RMS Full-scale output 50-60 ohms output impedance 10Hz - 20kHz Frequency response	1	unit						

		aptX, A2DP and AVRCP Supported bluetooth profiles up to 100 feet operation range								
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems Café Lounge, and Decks Level 7A and 7B	1	lot						
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works;</li> </ul>	1	lot						

		<ul style="list-style-type: none"> <li>• Clean areas before turn-over;</li> <li>• Turnover of the AV Equipment and ICT Systems at Café Lounge and Decks Level 7A and 7B.</li> </ul>								
<b>DECK LEVEL 7B</b>										
<b>Outdoor Screen</b>		Waterproofed screen 4mWx2.5mH with audio system and complete accessories to include bracket and support	set	1						
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems at Deck Level 7B	1	lot						
<b>Assessment, Cleaning, Clearing, and</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment</li> </ul>	1	lot						

Turnover		and ICT Systems; <ul style="list-style-type: none"> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works;</li> <li>• Clean areas before turn-over;</li> <li>• Turnover of the AV Equipment and ICT Systems at Deck Level 7B</li> </ul>								
<b>PROVISION OF POST INSTALLATION DOCUMENTS</b>										
		Four (4) copies of as-built plan signed and sealed by the Professional Electronics and Communication Engineer in A3 size complete with legend, technical specifications, test result, start-up report and measurements	1	lot						
		Certification from the Contractor specifying two (2) years Warranty in the case of expendable supplies and a minimum of one (1) year in the case of non-expendable supplies from the date receipt of Certificate of Completion and Final Acceptance issued by the DAP GSD	1	lot						

		Knowledge and Issuance of Certificate of Training for ten (10) DAP Personnel	1	lot						
		Submit the hardcopy in A3 size and soft copy in flash drive of before, on-going, and after picture with date and time stamp	1	lot						

	Yours sincerely,
<b><i>SIGNATURE OF THE AUTHORIZED REPRESENTATIVE</i></b>	
NAME OF THE AUTHORIZED REPRESENTATIVE	
POSITION TITLE OF SIGNATORY:	
NAME OF FIRM\BIDDER:	
POSTAL ADDRESS:	
TELEPHONE NUMBER:	
EMAIL ADDRESS:	

## FOR GOODS OFFERED FROM ABROAD

Name of Bidder: \_\_\_\_\_

Page \_\_\_ of \_\_\_.

Invitation to Bid Number: **IB24-413103-02**

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin/ Quantity	Unit	Unit price EXW per item	Transportation and Insurance and all other costs incidental to delivery, per item	Sales and other taxes payable if Contract is awarded, per item	Cost of Incidental Services, if applicable, per item	Total Price, per unit (col 5+6+7+8)	Total Price delivered Final Destination (col 9) x (col 4)
<b>LEARNING ROOM</b>									
<b>Main Led and Interactive Screen</b>	P1.8 Customized Curve Indoor LED	Atleast 5.12m(Width) x 1.8m(Height) Pixel pitch (mm): atleast 0.9 – 1.86 Color temperature (K): atleast 2500-9500 Panel dimensions (WxHxD)/(mm): atleast 640x360x65 Driving type: 1/43 Panel weight (kg): 6 Viewing angle (H/V) (°): 160/140 Panel material: Die casting aluminum Power consumption (Max/ave)(W/m <sup>2</sup> ): 520/173 Brightness (nit): 800	1	set					



	<p>IP rating (front/rear): IP40/IP21 Refresh rate: (Hz): ≥3840 Maintenance: Front Gray Scale (bit): 14 Certificate: CCC,CE,ETL,FC C Contrast ratio: 4000:1</p>								
Video Wall Splicer	<p>HDMI Input Card: Support for 10-bit input source, accompanied audio and 144hz input does not support interlaced signal input Four connectors are all used for input. Each connector the maximum resolution of 2048x1152@60hz, and the minimum resolution of 800x600@60hz Custom resolutions: Max. width 2560 pixels (2560x972@60hz) Max. height: 2560 pixels (884x2560@60hz) H_16xRJ45+2xFiber Sending Card: LED 4k sending card load up to 10,400,000 pixels (max. width 10,240 pixels, max. height: 10,240 pixels) 16x RJ45 Gigabit Ethernet Outputs</p>	1	unit						

		<p>Bit depth: 8- bit a single ethernet port loads up up to 650,000 pixels</p> <p>Bit depth 10-bit A single ethernet ports load up to 320,000 pixels</p> <p>Backup between ethernet ports</p> <p>Support 144Hz output</p> <p>Power consumption: 210 W</p>								
	Installation Works	<p>Supply of Supervision, Equipment and Materials for the Installation of electrical wiring, cables, circuit breakers, and other needed accessories including wall mounting framing works</p>	1	lot						
	65" Interactive Whiteboard with Floorstand	<p>Resolution: 3840(H) ×2160 (V)</p> <p>HDMI Input: 4</p> <p>Pixel Pitch: 0.372mm x 0.372mm</p> <p>HDMI Output: 1</p> <p>Brightness: ≥ 400cd/m2</p> <p>USB: Public USB3.0*1, Public USB2.0*1,</p> <p>Android UB3.0*1</p> <p>Chipset: RK3588</p> <p>Touch out USB 3.0: 1</p> <p>CPU: A76*4+A55*4+6T NPU 2.4Ghz</p> <p>RS232: 1</p> <p>GPU: OLDIN MC4</p>	1	unit						

		RJ-45: 2 (in/out, 10M/100M/1000M) DDR: 8GB (max 32GB) Bluetooth 5.2: 1 EMMC: 64GB (max 256GB)								
<b>Video Conferencing System</b>	Touchpad Controller	Processor: Intel core i5-1145G7E IoTG vPro Processor Operating system: Windows 10 IoT Enterprise SA 64 bit Memory: 8 GB (Dual-channel) DDR4 3200MHz Graphics: Intel Iris Xe graphics Storage: 256GB PCIe TLC SSD Display: 10.1" 10-point touch (HD 1280x800. 16:10 aspect ratio, <340 nits), rotatable 30° & 60°	1	unit						
	4k Dual Lens PTZ Conferencing Camera	Signal: USB HD: 1920x1080p@60/59.97/50/30/29.97/25 Hz White balance: Auto/Manual/One push/ 3000k - 6500k 1920x1080i@60/59.94/50 Hz Focus: Auto/Manual 1280x720p@60/59.94/50 Hz Aperture: Auto/Manual Color Space: YUV, RGB Electronic shutter: Auto/Manual	1	unit						

		<p>Chroma Subsampling: 4:4:4, 4:2:2, 4:2:0 BLC: ON/OFF</p> <p>Video compression: H.264/ H.265 Pan rotation: ±170°</p> <p>Protocol: TCP, UDP, RTMP, RTSP Tilt rotation: -30° ~ +90°</p> <p>Bitrate: 46 kbps - 40960 kbps Preset number: 255 (10 presets using the included IR remote control)</p> <p>Sensor: 1/2.8" HD CMOS HDMI out: 1- Type A, 19- pin, female</p> <p>Effective Pixels: 16:9, 2.07 MP</p> <p>USB: 1 x USB, Type A</p> <p>Optical zoom: f= 4.7 ~ 47mm LAN: 1 x RJ45, 100Base-T View angle: 6.43° (telephoto), 60.9° (wide- angle)</p> <p>RS-232: 2 x 9- pin DIN</p> <p>Av: f/1.6 - f/3.0</p> <p>Certification: CE, FCC</p> <p>Digital zoom: 10X</p>							
<b>Wireless System</b>	Wireless Collaboration	<p>Ethernet: 100/1000 Mbps, auto-switching, autonegotiating, autodiscovery, full/half duplex, TCP/IP, UDP/IP, DHCP, SSL, TLS<sup>3</sup>, SSH, SFTP, (SSH File Transfer protocol), IEEE</p>	1	unit					

		802.1x, active directory authentication, HTTPS web browser setup and XiO cloud service, 802.3af compliant HDMI output resolutions: 1280x720@50Hz (720p50), 1280x720@50Hz (720p60), 1280x800@60Hz, 1366x768@60Hz, 1440x900@60Hz 1600x900@60Hz, 1600x1200@60Hz , 1680x1050@60Hz , 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60) 3840x2160@30Hz (2160p30), 3840x2160@50Hz (2160p50), 3840x2160@60Hz (2160p60) OS Support (Airmedia Application): Windows 10, Windows 11 OS Support (Airmedia connect adaptor): Windows 10, Windows 11, macOS 11 or later Supported conferencing services: Zoom software Input signal types: Airmedia; simultaneous display of up to							
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		four sources with airmedia canvas Maximum input resolutions: Airmedia presentation 1920x1080@30Hz (1080p30); Airmedia connect adapter 3840x2160@30Hz (4k30)							
Series 3 Connect Adaptor	WI-FI: Wifi 6 (802.11ax) USB: USB 2.0 OS Support: Windows 10, Windows 11, macOS 11 or newer Input signal types: Display port Alt Mode over USB-C Output signal types (Video): Network stream over wi-fi, received by a paired airmedia series 3 reciever Maximum resolution (Video): 3840x2160@30Hz (2160p30); output resolution is determined by the HDMI output on a paired Airmedia series 3 reciever Input signal types (Audio): DisplayPort Alt mode over USB-C Output signal type (Audio): Network stream over wifi recieved by a paired Airmedia Series 3 reciever Compliance:	1	unit						

		Listed for US & Canada, CE, IC, FCC, Part 15 Class B								
<b>Audio System</b>	Ceiling Microphone	<p>Transducer principle: Pre-polarized condenser microphone</p> <p>Max. sound pressure level: 104 dB SPL</p> <p>Microphone capsules: 28 x KE 10-237 Dynamic range: 93 dB (A)</p> <p>Sensitivity: 0 dBV/Pa (988 mV/Pa) Dante: Dante interface with two RJ-45 sockets primary and secondary</p> <p>Pick-up pattern: Beam pattern</p> <p>Ethernet: RJ-45 socket for network control and PoE</p>	1	unit						
	2 Way Ceiling Speaker	<p>Woofer: 6.5 inch (165 mm) polypropylene w/ ring mode decoupled cloth surround &amp; stell basket</p> <p>Tweeter: 0.98 inch (25 mm) titanium dome, horn loaded</p> <p>Crossover frequency: 2.5 kHz</p> <p>Impedance: 8 Ohms nominal with transformer set to "8Ω"</p> <p>Transformer taps: 3.75W/7.5W/15W /30W/60W at 70V; 7.5W/15W/30W/60W at 100V</p>	4	unit						

		<p>Frequency response: 50 Hz to 20 kHz (<math>\pm 3</math> dB)</p> <p>Frequency range: 40 Hz to 20 kHz (-10 dB) Power handling: 125 Watts program (8 Ohms) Sensitivity: 88.5 dB @ 1W/1m Coverage: 100° conical (nominal)</p>								
Digital Signal Processor	<p>Analog-To-Digital Conversion: 24-bit 48 kHz Digital-To-Analog Conversion: 24-bit 48 kHz Frequency Response: 20 Hz to 20 kHz <math>\pm 0.5</math> dB THD: 0.001%, 20 Hz to 20 kHz, 0 dB gain, +4 dBu input; 0.01%, 22 Hz to 22 kHz, 54 dB gain, -50 dBu input EIN: -125 dBu, 22 Hz to 22 kHz, no weighting Dynamic Range: 110 dB, 22 Hz to 22 kHz, 0 dB gain Crosstalk: -85 dB, 1 kHz, +4 dBu input, channel to channel -75 dB, 1 kHz, -50 dBu input, channel to channel Latency: 3.0 ms (analog in to analog out)</p>	1	unit							
4 Channel Network Amplifier	<p>Maximum Power Output: 2,000 W Input impedance: &gt;8k balanced and &gt;4k unbalanced Typical Distortion: 8<math>\Omega</math>; 0.02 - 0.05% Continuously</p>	1	unit							



	<p>variable: <math>V_{rms}</math>  1.23 mV to 17.35  V 4<math>\Omega</math>; 0.04 - 0.1%</p> <p>dBu -56 to 27  Maximum  Distortion: 4 <math>\Omega</math> - 8  <math>\Omega</math>; 1.0%dBv -58.2  to 24.8  Frequency  Response (8 <math>\Omega</math>): 20  Hz - 20 kHz +0.2  dB / -0.7 dB  Noise:  Unweighted output  unmuted; &gt;102 dB  Weighted output  muted; &gt;106 dB  Damping factor:  &gt;100</p>								
Network Audio Wall	<p>Input Types: 2 x  XLR (Balanced  and RF Filtered)  Compliance: FCC  CFR 47 Parts 15B  Class A 2 x RCA  (Stereo  Unbalanced)</p> <p>ICES-003  1 x 3.5 mm (Stereo  unbalanced) CE  (EN55022) Gain: -  18, -3, +25, and  +40 dB, Software  Selectable (Inputs  1/2)</p> <p>RoHS  Input Impedance:  &gt;1.8 Kilohms at  any Gain (Inputs  1/2) REACH  &gt;10 Kilohms  (Inputs 3/4 A &amp; B)  Output Impedance:  200 Ohms  Balanced  100 Ohms  Unbalanced</p>	1	unit						

		Maximum Output Levels: +12 dBu at 0 dB Attenuation (Output 1/2 A) +20 dBu at 0 dB Attenuation (Output 1/2 B)								
<b>Control System</b>	Virtual Control Server	Processor: Intel Core® <a href="#"><u>i5-10500T CPU @ 2.30GHz</u></a> RAM: 8 GB DDR4 2666MT/s Storage: 256 GB SSD Graphics: Intel® UHD Graphics 630 Ethernet: 100/1000 Mbps USB: USB 3.2 host ports for mouse and keyboard (used for optional configuration through command line interface) BACnet Network/IP: Supports up to 10000 BACnet objects3	1	unit						
	PoE Switch	Ports: (2) 10/100/1000 base-T auto-sensing gigabit ethernet (24) 10/100/1000 auto-sensing gigabit ethernet w/PoE+ (4) 10 gigabit Base-x SFP+ Network Standards: IEEE 802.3af.3at Mac address: Up to 16k Switch Fabric: 132 Gbps non-blocking	1	unit						
	SFP Module	10 gigabit compatible with proposed switch including fiber	unit	2						

		cable backbone and patch cord								
	Wireless Access Point	<p>Wi-Fi Standards: IEEE 802.11a/b/g/n/ac/ax</p> <p>Supported Rates: 802.11ax: 4 to 1774 Mbps, 802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80), 802.11n: 6.5 Mbps to 300Mbps (MCS0 to MCS15), 802.11a/g: 6 to 54 Mbps, 802.11b: 1 to 11 Mbps</p> <p>Supported Channels: 2.4GHz: 1-13, 5GHz: 36-64, 100-144, 149-165</p> <p>MIMO: 2x2 SU-MIMO, 2x2 MU-MIMO</p> <p>Spatial Streams: 2 streams SU/MU MIMO 5GHz, 2 streams SU/MU MIMO 2.4GHz</p> <p>Radio Chains and Streams: 2x2:2 (5GHz), 2x2:2 (2.4GHz)</p> <p>Channelization: 20, 40, 80MHz</p> <p>Security: WPA-PSK, WPA-TKIP, WPA2 AES, WPA3-Personal, WPA3-Enterprise, 802.11i, Dynamic PSK, OWE, WIPS/WIDS</p> <p>Other Wi-Fi Features: WMM,</p>	1	unit						

		<p>Power Save, Tx Beamforming, LDPC, STBC, 802.11r/k/v, Hotspot, Hotspot 2.0, Captive Portal, WISPr</p> <p>Antenna Type: BeamFlex+ adaptive antennas with polarization diversity, Adaptive antenna that provides up to 64 unique antenna patterns per band</p> <p>Antenna Gain (max): Up to 3dBi</p> <p>Peak Transmit Power (Tx port/chain + Combining gain): 2.4GHz: 26 dBm, 5GHz: 25 dBm</p> <p>Frequency Bands: ISM (2.4-2.484GHz), U-NII-1 (5.15-5.25GHz), U-NII-2A (5.25-5.35GHz), U-NII-2C (5.47-5.725GHz), U-NII-3 (5.725-5.85GHz)</p> <p>Controller</p> <p>Platform Support: ZoneDirector 1200</p> <p>IP: IPv4, IPv6, dual-stack</p> <p>VLAN: 802.1Q (1 per BSSID or dynamic per user based on RADIUS), VLAN Pooling, Port-based</p> <p>802.1x: Authenticator &amp; Supplicant</p>							
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	<p>Tunnel: L2TP, GRE, Soft-GRE  Policy Management  Tools: Application Recognition and Control, Access Control Lists, Device Fingerprinting, Rate Limiting  IoT Capable: Integrated BLE and ZigBee, (1 radio, switchable)  Ethernet: 2 x 1GbE Ethernet ports, Power over Ethernet (802.3af/at) with Category 5/5e/6 cable, LLDP  USB: 1 USB 2.0 port, Type A  With compatible mounting bracket  With compatible power injector  With license for ZoneDirector 1200 controller</p>								
10.9" Tablet	<p>8- core CPU with 4 performance cores and 4 efficiency cores  8- core GPU  16- core neural engine  8GB ram  Hardware accelerated H.264 and HEVC Video decode engine  Video encode engine</p>	1	unit						
Tablet for Control + App	<p>Devices: Requires Apple iOS 14 (or later) and a mobile broadband or Wi-Fi® network connection;  iPad® devices</p>	1	unit						

		<p>must have at least 1 GB of RAM for reliable performance.</p> <p>Streaming formats: H.264 (MPEG-4 part 10 AVC), MJPEG; Requires purchase of full app functionality.</p> <p>Intercom audio feedback formats: Support RAVA SIP Intercom MP3 Standard app functionality: Two pages and one subpage</p> <p>Full (paid) app functionality: Unlimited (dependent upon available device memory)</p>								
	Network AV Encoder Wall Plate	<p>Video Resolutions: HDMI with deep color and 4k60 4:2:0 support</p> <p>Audio formats: Multichannel (up to 8- channel LPCM or encoded HBR 7.1 surround sound) Bit rates: Fixed: 200 to 950 MBPS. Adaptive: Based on input resolution of the stream Streaming protocols: RTP, SDP</p> <p>Input signal types (Video): HDMI with deep color and 4k60 4:2:0 support (Dual-Mode display port interface and DVI compatible) Copy</p>	1	unit						

	<p>rotection: HDCP 2.3</p> <p>Input signals type (Audio): HDMI (Dual-Mode display port interface compatible), analog stereo</p> <p>Digital formats (Audio): Dolby digital, dolby digital EX, dolby digital plus, dolby trueHD, dolby atmos, DTS, DTS ES, DTS 96/24</p>								
1080p Network AV Encoder	<p>Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color</p> <p>Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound) Bit rates: Fixed: 200 to 950 Mbps Adaptive: Based on input resolution of the stream Streaming protocols: RTP, SDP</p> <p>Container: MPEG-2 transport stream (.ts)</p> <p>Session Initiation: Multicast via secure RTSP Copy protection: HDCP 1.4, AES-128, PKI</p>	3	unit						
Switching Appliance, 80 Endpoints	<p>Endpoints: Supports 80 DM NVX devices, each configured as an encoder or decoder</p> <p>Domains: Supports a single domain</p>	1	unit						

		(all endpoints are grouped together as a single system) Ethernet: 100/1000 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SSH, IPv4, HTTPS web browser setup and control, Crestron 3-Series® or later control system integration DM NVX (via Ethernet): HDCP 2.2, AES audio/video content encryption, RTP, RTSP, SDP, ONVIF, IGMPv2, IGMPv3, SMPTE 2022, FEC (Forward Error Correction)								
Network AV Decoder	Stream Type: Default support for DM-NVX-E10/E20 Series; Support available for 4K60 4:4:4 encoders when using DM-NVX-D10 supported resolutions Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color sampling, and Deep Color support Audio Formats: Multichannel (up to 8-channel LPCM or	1	unit							



		<p>encoded HBR 7.1 surround sound)          Bit Rates: Based on the stream received from the encoder          Streaming Protocols: RTP, SDP          Container: MPEG-2 transport stream (.ts)</p>								
<b>Room Scheduler</b>	Tap Scheduler	<p>Display: 8 inch capacitive touch with antifingerprint treatment          Connectivity: Wi-Fi 802.11 a/b/g/n          Ethernet: RJ-45, 10/100/1000 Mbit PoE &amp; PoE + EEE 802.3af          RFID/NFC: 13.56 MHz reader          Supports MIFARE 4K/1K card (does not support ISO/IEC 15693 or MIFARE Ultralight C)</p>	1	unit						
<b>Overall Services</b>		<p>Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of</p>	1	lot						

		the AV Equipment and ICT Systems at Learning Room								
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works;</li> <li>• Clean areas before turn-over;</li> <li>• Turnover of the AV Equipment and ICT Systems at Learning Room</li> </ul>	1	lot						
<b>MULTIMEDIA ROOM</b>										
<b>Main Led and Interactive Screen</b>	P1.8 Costumized Curve Indoor LED	8.32m(Width) x 1.8m(Height) Pixel pitch (mm): 1.86 Color temperature (K): 2500-9500 Panel dimensions (WxHxD)/(mm): 640x360x65 Driving type: 1/43 Panel weight (kg): 6 Viewing angle (H/V) (°): 160/140 Panel material: Die casting aluminum Power consumption (Max/ave)(W/m²): 520/173	1	set						

	<p>Brightness (nit): 800IP rating (front/rear): IP40/IP21 Refresh rate: (Hz): ≥3840 Maintenance: Front Gray Scale (bit): 14 Certificate: CCC,CE,ETL,FC C Contrast ratio: 4000:1</p>								
Video Wall Splicer	<p>HDMI Input Card: Support for 10-bit input source, accompanied audio and 144hz input does not support interlaced signal input Four connectors are all used for input. Each connector the aximum resolution of 2048x1152@60hz, and the minimum resolution of 800x600@60hz Custom resolutions: Max. width 2560 pixels (2560x972@60hz) Max. height: 2560 pixels (884x2560@60hz)</p> <p>H_16xRJ45+2xFiber Sending Card: LED 4k sending card load up to 10,400,000 pixels (max. width 10,240 pixels, max. height: 10,240 pixels) 16x RJ45 Gigabit Ethernet Outputs</p>	1	unit						

	Bit depth: 8-bit a single ethernet port loads up to 650,000 pixels Bit depth 10-bit A single ethernet ports load up to 320,000 pixels Backup between ethernet ports Support 144Hz output Power consumption: 210 W								
	Supply of Supervision, Equipment and Materials for the Installation of electrical wiring, cables, circuit breakers, and other needed accessories including wall mounting framing works	1	lot						
65" Interactive Whiteboard with Floorstand	Resolution: 3840(H) ×2160 (V) HDMI Input: 4 Pixel Pitch: 0.372mm x 0.372mm HDMI Output: 1 Brightness: ≥ 400cd/m2 USB: Public USB3.0*1, Public USB2.0*1, Android UB3.0*1 Chipset: RK3588 Touch out USB 3.0: 1 CPU: A76*4+A55*4+6T NPU 2.4Ghz RS232: 1 GPU: OLDIN MC4RJ-45: 2 (in/out,10M/100M/1000M)	2	unit						

		DDR: 8GB (max32GB) Bluetooth 5.2: 1 EMMC: 64GB (max256GB)								
<b>Video Conferencing System</b>	Touchpad Controller	Processor: Intel core i5-1145G7E IoTG vPro Processor Operating system: Windows 10 IoT Enterprise SA 64 bit Memory: 8 GB (Dual-channel) DDR4 3200MHz Graphics: Intel Iris Xe graphics Storage: 256GB PCIe TLC SSD Display: 10.1" 10-point touch (HD 1280x800. 16:10 aspect ratio, <340 nits), rotatable 30° & 60°	1	unit						
	4k Dual Lens PTZ Conferencing Camera	Signal: USB HD: 1920x1080p@60/59.97/50/30/29.97/25 Hz White balance: Auto/Manual/One push/ 3000k - 6500k 1920x1080i@60/59.94/50 Hz Focus: Auto/Manual 1280x720p@60/59.94/50 Hz Aperture: Auto/Manual Color Space: YUV, RGB Electronic shutter: Auto/Manual Chroma Subsampling: 4:4:4, 4:2:2, 4:2:0 BLC: ON/OFF	1	unit						

		<p>Video compression:  H.264/ H.265 Pan rotation: <math>\pm 170^\circ</math>  Protocol: TCP, UDP, RTMP, RTSP  Tilt rotation: <math>-30^\circ \sim +90^\circ</math>  Bitrate: 46 kbps - 40960 kbps Preset number: 255 (10 presets using the included IR remote control)  Sensor: 1/2.8" HD CMOS  HDMI out: 1- Type A, 19- pin, female  Effective Pixels: 16:9, 2.07 MP  USB: 1 x USB, Type A  Optical zoom: f= 4.7 ~ 47mm  LAN: 1 x RJ45, 100Base-T  View angle: <math>6.43^\circ</math> (telephoto), <math>60.9^\circ</math> (wide- angle)  RS-232: 2 x 9- pin DIN  Av: f/1.6 - f/3.0  Certification: CE, FCC  Digital zoom: 10X</p>							
<b>Wireless System</b>	Wireless Collaboration	<p>Ethernet: 100/1000 Mbs, auto-switching, autonegotiating, autodiscovery, full/half duplex, TCP/IP, UDP/IP, DHCP, SSL, TLS<sup>3</sup>, SSH, SFTP, (SSH File Transfer protocol), IEEE 802.1x, active directory authentication, HTTPS web browser setup and</p>	1	unit					

		<p>           XiO cloud service,            802.3af compliant            HDMI output            resolutions:            1280x720@50Hz            (720p50),            1280x720@50Hz            (720p60),            1280x800@60Hz,            1366x768@60Hz,            1440x900@60Hz            1600x900@60Hz,            1600x1200@60Hz            ,            1680x1050@60Hz            ,            1920x1080@50Hz            , (1080p50),            1920x1080@60Hz            (1080p60)            3840x2160@30Hz            (2160p30),            3840x2160@50Hz            (2160p50),            3840x2160@60Hz            (2160p60)            OS Support            (Airmedia            Application):            Windows 10,            Windows 11            OS Support            (Airmedia connect            adaptor): Windows            10, Windows 11,            macOS 11 or later            Supported            conferencing            services: Zoom            software            Input signal types:            Airmedia;            simultaneous            display of up to            four sources with            airmedia canvas            Maximum input            resolutions:            Airmedia            presentation         </p>							
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		1920x1080@30Hz (1080p30); Airmedia connect adapter 3840x2160@30Hz (4k30)								
	Series 3 Connect Adaptor	WI-FI: Wifi 6 (802.11ax) USB: USB 2.0 OS Support: Windows 10, Windows 11, macOS 11 or newer Input signal types: Display port Alt Mode over USB-C Output signal types (Video): Network stream over wi-fi, received by a paired airmedia series 3 reciever Maximum resolution (Video): 3840x2160@30Hz (2160p30); output resolution is determined by the HDMI output on a paired Airmedia series 3 reciever Input signal types (Audio): DisplayPort Alt mode over USB-C Output signal type (Audio): Network stream over wifi recieved by a paired Airmedia Series 3 reciever Compliance: Listed for US & Canada, CE, IC, FCC, Part 15 Class B	1	unit						



<b>Audio System</b>	Ceiling Microphone	Transducer principle: Pre-polarized condenser microphone Max. sound pressure level: 104 dB SPL Microphone capsules: 28 x KE 10-237 Dynamic range: 93 dB (A) Sensitivity: 0 dbV/Pa (988 mV/Pa) Dante: Dante interface with two RJ-45 sockets primary and secondary Pick-up pattern: Beam pattern Ethernet: RJ-45 socket for network control and PoE	1	unit								
	2 Way Ceiling Speaker	Woofer: 6.5 inch (165 mm) polypropylene w/ ring mode decoupled cloth surround & stell basket Tweeter: 0.98 inch (25 mm) titanium dome, horn loaded Crossover frequency: 2.5 kHz Impedance: 8 Ohms nominal with transformer set to "8Ω" Transformer taps: 3.75W/7.5W/15W /30W/60W at 70V; 7.5W/15W/30W/60W at 100V Frequency response: 50 Hz to 20 kHz (±3 dB) Frequency range: 40 Hz to 20 kHz (-10 dB) Power	8	unit								

		handling: 125 Watts program (8 Ohms) Sensitivity: 88.5 dB @ 1W/1m Coverage: 100° conical (nominal)							
	Digital Signal Processor	Analog-To-Digital Conversion: 24-bit 48 kHz Digital-To-Analog Conversion: 24-bit 48 kHz Frequency Response: 20 Hz to 20 kHz ±0.5 dB THD: 0.001%, 20 Hz to 20 kHz, 0 dB gain, +4 dBu input; 0.01%, 22 Hz to 22 kHz, 54 dB gain, -50 dBu input EIN: -125 dBu, 22 Hz to 22 kHz, no weighting Dynamic Range: 110 dB, 22 Hz to 22 kHz, 0 dB gain Crosstalk: -85 dB, 1 kHz, +4 dBu input, channel to channel -75 dB, 1 kHz, -50 dBu input, channel to channel Latency: 3.0 ms (analog in to analog out) Dante I/O: 32 channels in, 32 channels out, at up to 24-bit 48 kHz	1	unit					
	4 Channel Network Amplifier	Maximum Power Output: 2,000 W Input impedance: >8k balanced and >4k unbalanced Typical Distortion: 8Ω; 0.02 - 0.05% Continuously variable: Vrms 1.23 mV to 17.35	1	unit					

		<p>V 4Ω; 0.04 - 0.1%  dBu -56 to 27  Maximum  Distortion: 4 Ω - 8  Ω; 1.0%dBv -58.2  to 24.8  Frequency  Response (8 Ω): 20  Hz - 20 kHz +0.2  dB / -0.7 dB  Noise:  Unweighted output  unmuted; &gt;102 dB  Weighted output  muted; &gt;106 dB  Damping factor:  &gt;100</p>							
Network Audio Wall	<p>Input Types: 2 x  XLR (Balanced  and RF Filtered)  Compliance: FCC  CFR 47 Parts 15B  Class A 2 x RCA  (Stereo  Unbalanced)</p> <p>ICES-003  1 x 3.5 mm (Stereo  unbalanced) CE  (EN55022) Gain: -  18, -3, +25, and  +40 dB, Software  Selectable (Inputs  1/2) RoHS  Input Impedance:  &gt;1.8 Kilohms at  any Gain (Inputs  1/2) REACH  &gt;10 Kilohms  (Inputs 3/4 A &amp; B)  Output Impedance:  200 Ohms  Balanced  100 Ohms  Unbalanced  Maximum Output  Levels: +12 dBu at  0 dB Attenuation  (Output 1/2 A)</p>	1	unit						

		+20 dBu at 0 dB Attenuation (Output 1/2 B)								
<b>Contro I System</b>	Virtual Control Server	Processor: Intel Core® <a href="#"><u>i5-10500T CPU @ 2.30GHz</u></a> RAM: 8 GB DDR4 2666MT/s Storage: 256 GB SSD Graphics: Intel® UHD Graphics 630 Ethernet: 100/1000 Mbps USB: USB 3.2 host ports for mouse and keyboard (used for optional configuration through command line interface) BACnet Network/IP: Supports up to 10000 BACnet objects3	1	unit						
	PoE Switch	Ports: (2) 10/100/1000 base-T auto-sensing gigabit ethernet (24) 10/100/1000 auto-sensing gigabit ethernet w/PoE+ (4) 10 gigabit Base-x SFP+ Network Standards: IEEE 802.3af.3at Mac address: Up to 16k Switch Fabric: 132 Gbps non-blocking	1	unit						
	SFP Module	10 gigabit compatible with proposed switch including fiber cable backbone and patch cord	unit	2						

	Wireless Access Point	<p>Wi-Fi Standards: IEEE 802.11a/b/g/n/ac/ax</p> <p>Supported Rates: 802.11ax: 4 to 1774 Mbps, 802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80), 802.11n: 6.5 Mbps to 300Mbps (MCS0 to MCS15), 802.11a/g: 6 to 54 Mbps, 802.11b: 1 to 11 Mbps</p> <p>Supported Channels: 2.4GHz: 1-13, 5GHz: 36-64, 100-144, 149-165</p> <p>MIMO: 2x2 SU-MIMO, 2x2 MU-MIMO</p> <p>Spatial Streams: 2 streams SU/MU MIMO 5GHz, 2 streams SU/MU MIMO 2.4GHz</p> <p>Radio Chains and Streams: 2x2:2 (5GHz), 2x2:2 (2.4GHz)</p> <p>Channelization: 20, 40, 80MHz</p> <p>Security: WPA-PSK, WPA-TKIP, WPA2 AES, WPA3-Personal, WPA3-Enterprise, 802.11i, Dynamic PSK, OWE, WIPS/WIDS</p> <p>Other Wi-Fi Features: WMM, Power Save, Tx Beamforming,</p>	1	unit								
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		<p>LDPC, STBC, 802.11r/k/v, Hotspot, Hotspot 2.0, Captive Portal, WISPr</p> <p>Antenna Type: BeamFlex+ adaptive antennas with polarization diversity, Adaptive antenna that provides up to 64 unique antenna patterns per band</p> <p>Antenna Gain (max): Up to 3dBi</p> <p>Peak Transmit Power (Tx port/chain + Combining gain): 2.4GHz: 26 dBm, 5GHz: 25 dBm</p> <p>Frequency Bands: ISM (2.4-2.484GHz), U-NII-1 (5.15-5.25GHz), U-NII-2A (5.25-5.35GHz), U-NII-2C (5.47-5.725GHz), U-NII-3 (5.725-5.85GHz)</p> <p>Controller</p> <p>Platform Support: ZoneDirector 1200</p> <p>IP: IPv4, IPv6, dual-stack</p> <p>VLAN: 802.1Q (1 per BSSID or dynamic per user based on RADIUS), VLAN Pooling, Port-based</p> <p>802.1x: Authenticator &amp; Supplicant</p> <p>Tunnel: L2TP, GRE, Soft-GRE</p>							
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		<p>Policy Management  Tools: Application Recognition and Control, Access Control Lists, Device Fingerprinting, Rate Limiting  IoT Capable: Integrated BLE and ZigBee, (1 radio, switchable)  Ethernet: 2 x 1GbE Ethernet ports, Power over Ethernet (802.3af/at) with Category 5/5e/6 cable, LLDP  USB: 1 USB 2.0 port, Type A  With compatible mounting bracket  With compatible power injector  With license for ZoneDirector 1200 controller</p>								
	10.9" Tablet	<p>8- core CPU with 4 performance cores and 4 efficiency cores  8- core GPU  16- core neural engine  8GB ram  Hardware accelerated H.264 and HEVC Video decode engine  Video encode engine</p>	1	unit						
	Tablet for Control + App	<p>Devices: Requires Apple iOS 14 (or later) and a mobile broadband or Wi-Fi® network connection;  iPad® devices must have at least 1 GB of RAM for</p>	1	unit						

		<p>reliable performance.</p> <p>Streaming formats: H.264 (MPEG-4 part 10 AVC), MJPEG; Requires purchase of full app functionality.</p> <p>Intercom audio feedback formats: Support RAVA SIP Intercom MP3 Standard app functionality: Two pages and one subpage</p> <p>Full (paid) app functionality: Unlimited (dependent upon available device memory)</p>								
1080p Network AV Encoder	<p>Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color</p> <p>Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound) Bit rates: Fixed: 200 to 950 Mbps Adaptive: Based on input resolution of the stream Streaming protocols: RTP, SDP</p> <p>Container: MPEG-2 transport stream (.ts)</p> <p>Session Initiation: Multicast via secure RTSP Copy protection: HDCP 1.4, AES-128, PKI</p>	4	unit							



Network AV Decoder	Stream Type: Default support for DM-NVX-E10/E20 Series; Support available for 4K60 4:4:4 encoders when using DM-NVX-D10 supported resolutions Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color sampling, and Deep Color support Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound) Bit Rates: Based on the stream received from the encoder Streaming Protocols: RTP, SDP Container: MPEG-2 transport stream (.ts)	4	unit						
HDMI Passive Plate	Provide one HDMI pass-thru connection for wall plates or lecterns HDCP 1.4 and 2.0 compatible Compact single gang Decora plate form factor Decora wall plate included	1	unit						
HDMI Extender with IR control	Interfaces: 1 x HDMI Type A Female Compliance: HDMI (3D, deep color); HDP compatible	1	pair						

		Impedance: 100 ohms Max resolution/ distance: Up to 1080p @40m; 1080i @ 60m Max distance: 3 m(2L-7D03H) IR: 1 x Mini stereo jack female Max. data rate: 6.75 Gbps (2.25 Gbps per lane) Max. Pixel clock: 225 MHz								
<b>Room Scheduler</b>	Tap Scheduler	Display: 8 inch capacitive touch with antifingerprint treatment Connectivity: Wi-Fi 802.11 a/b/g/n Ethernet: RJ-45, 10/100/1000 Mbit PoE & PoE + EEE 802.3af RFID/NFC: 13.56 MHz reader Supports MIFARE 4K/1K card (does not support ISO/IEC 15693 or MIFARE Ultralight C)	1	unit						
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all	1	lot						

		necessary accessories to complete the commissioning of the AV Equipment and ICT Systems at Multimedia Room								
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works;</li> <li>• Clean areas before turn-over;</li> </ul> Turnover of the AV Equipment and ICT Systems at Multimedia Room	1	lot						
<b>PRIVATE NOOK</b>										
LDF Screen	32" LFD Screen with Cantilever Bracket	Resolution: 3,840 x 2,160 (16:9) Output: Stereo mini Jack Brightness (Typ.): 500 nit includes 3 pcs cantilever Bracket Orientation: Landscape/Portrait include 1 pc LFD Mobile Cart Haze: 25%	3	unit						

		Contrast ratio (Typ.): 4000:1 (IPS-1200:1) Type: VA/IPS Color gamut: NTSC 72% Operation hour: 24/7 Input: DP1.2 (1), HDMI 2.0 (3), USB 2.0 x 2								
	LFD Mobile Cart		1	unit						
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems at Private Nooks	1	lot						
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> <li>• Restore to its original condition all affected areas,</li> </ul>	1	lot						

		fixtures, etc. due to AV Equipment and ICT Systems installation works; <ul style="list-style-type: none"> <li>• Clean areas before turn-over;</li> <li>• Turnover of the AV Equipment ICT Systems at Private Nooks</li> </ul>								
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**CAFÉ LOUNGE AND DECKS LEVEL 7A AND 7B**

<b>Audio System</b>	Iza 2120-Hz Integrated Zone Amplifier	At least 2 x 120 W @ 70/100V Power Amplifier 50 Hz - 20 kHz (+0/-3 dB, @ 1 W reference 1 kHz) frequency response $\leq -58$ dBu (below rated power, 1 kHz) channel separation at least 88 dB dynamic range 24-bit / 48 kHz A/D and D/A Converters Loudspeaker EQ, Opti-Voice paging, Dynamic equalization Processing Functions High-pass filter, FS2C/SE/P, FS4CE/SE, DM2C-LP/S, and SUB (55 - 100Hz) Loudspeaker Presets at least 10.4 ms (any input to speaker output or aux output) Audio Latency	1	unit						
	Dm3se Surface Mounted	80 – 20,000 Hz Frequency Response	9	pair						

d Speaker (Wht)	140° conical Nominal Coverage 135° conical Nominal Coverage Angle 1.7 kHz passive crossover 80 Hz with recommended 24 dB / octave filter recommended High-Pass Protection								
Cc-1 Controller Center (Wht)	Two (2) RJ-45, allows for daisy-chaining, TIA/EIA 568B wiring standard connectors Channel selection via 8-DIP switch bank settings Passive controller type, linear potentiometer 0–10 kΩ Cat 5 cable requirement	1	unit						
Blx14/Cvl Wireless Presenter System	at least 300 ft (91 m) line of sight operating range Between 524–865 MHz available frequencies 50–15,000 Hz audio range 100 dB A-weighted dynamic range Bodypack Transmitter with 2 AA Batteries (included) and wireless receiver Tie Clip and Windscreen	3	set						
Mg12x 12-Channel	Maximum of 6 Mic / 12 Line Inputs (4 mono + 4 stereo) “D-PRE”	1	unit						

Mixing Console	mic preamps with an inverted Darlington circuit High-grade effects: SPX with 24 programs 24-bit / 192kHz 2in / 2out USB Audio functions Includes Cubase AI DAW software download version Works with the iPad (2 or later) through the Apple iPad Camera Connection Kit / Lightning to USB Camera Adapter								
Prm-Ust Music Source	SD/USB memory capacity of up to 32 GB (up to 8000 tracks) and the option to connect the USB either on the front or rear panel. 87 — 108 MHz FM frequency range 30 Hz — 12 kHz +/-3 dB frequency response >50 dB signal-to-noise ratio	1	unit						
B1 Bluetooth Receiver	Bluetooth inputs RCA stereo, optical (SPDIF) outputs 2.0V RMS Full-scale output 50-60 ohms output impedance 10Hz - 20kHz Frequency response aptX, A2DP and AVRCP Supported bluetooth profiles up to 100 feet operation range	1	unit						

<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems Café Lounge, and Decks Level 7A and 7B	1	lot						
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works;</li> <li>• Clean areas before turnover;</li> <li>• Turnover of the AV Equipment and ICT</li> </ul>	1	lot						



		Systems at Café Lounge and Decks Level 7A and 7B.								
<b>DECK LEVEL 7B</b>										
<b>Outdoor Screen</b>		Waterproofed screen 4mWx2.5mH with audio system and complete accessories to include bracket and support	set	1						
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems at Deck Level 7B	1	lot						
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> <li>• Restore to its original condition all affected areas,</li> </ul>	1	lot						

		fixtures, etc. due to AV Equipment and ICT Systems installation works; <ul style="list-style-type: none"> <li>• Clean areas before turn-over;</li> <li>• Turnover of the AV Equipment and ICT Systems at Deck Level 7B</li> </ul>								
<b>PROVISION OF POST INSTALLATION DOCUMENTS</b>										
		Four (4) copies of as-built plan signed and sealed by the Professional Electronics and Communication Engineer in A3 size complete with legend, technical specifications, test result, start-up report and measurements	1	lot						
		Certification from the Contractor specifying two (2) years Warranty in the case of expendable supplies and a minimum of one (1) year in the case of non-expendable supplies from the date receipt of Certificate of Completion and Final Acceptance issued by the DAP GSD	1	lot						
		Knowledge Transfer and Issuance of Certificate of Training for ten (10) DAP Personnel	1	lot						

		Submit the hardcopy in A3 size and soft copy in flash drive of before, on-going, and after picture with date and time stamp	1	lot						
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	Yours sincerely,
<b><i>SIGNATURE OF THE AUTHORIZED REPRESENTATIVE</i></b>	
NAME OF THE AUTHORIZED REPRESENTATIVE	
POSITION TITLE OF SIGNATORY:	
NAME OF FIRM\BIDDER:	
POSTAL ADDRESS:	
TELEPHONE NUMBER:	
EMAIL ADDRESS:	

# Bidder's LETTERHEAD

## FORM 3: BID SECURING DECLARATION

### INSTRUCTIONS to BIDDERS:

01. THIS FORM SHOULD BE ACCOMPLISHED USING THE BIDDER'S LETTERHEAD, SIGNED COPY SHOULD BE SUBMITTED AS PART OF THE TECHNICAL COMPONENT MARKED AS "TC04";
02. THE SIGNED COPY OF THIS DOCUMENT (IN PDF OR JPEG FORMAT) MUST BE PART OF THE ELECTRONIC FILES THAT SHOULD BE CONTAINED IN THE SUBMITTED ELECTRONIC BID;
03. THE FILENAME STRUCTURE SHOULD BE "TC04\_XXX=BID\_SECURING\_DECLARATION=<BIDDERNAME>".

REPUBLIC OF THE PHILIPPINES)  
CITY OF \_\_\_\_\_) S.S.  
X-----X

## BID-SECURING DECLARATION

*Invitation to Bid No. IB24-413103-02*

To: **Development Academy of the Philippines**  
[dapbacsec@dap.edu.ph](mailto:dapbacsec@dap.edu.ph)

**I/We**<sup>4</sup>, 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 procurement 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 the 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 No. 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;

<sup>4</sup> **Select one and delete the other.** Adopt the same instruction for similar terms throughout the document.

- (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 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]*.

	AFFIANT
<b>SIGNATURE OF THE AUTHORIZED REPRESENTATIVE</b>	
NAME OF THE AUTHORIZED REPRESENTATIVE	
POSITION TITLE OF SIGNATORY:	
NAME OF FIRM\BIDDER:	
POSTAL ADDRESS:	
TELEPHONE NUMBER:	
EMAIL ADDRESS:	

**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 two (2) government identification cards used]*, with his/her photograph and signature appearing thereon, with 1<sup>st</sup> ID No. \_\_\_\_\_ issued on \_\_\_\_\_ at \_\_\_\_\_ and 2<sup>nd</sup> ID 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 \_\_\_\_\_

## FORM 4: CONTRACT AGREEMENT FORM

### CONTRACT AGREEMENT

*Invitation to Bid No. IB24-413103-02*

THIS AGREEMENT made the \_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ between Development Academy of the Philippines hereinafter called “DAP” of the one part and *[name of Supplier]* of *[city and country of Supplier]* (hereinafter called “the Supplier”) of the other part:

WHEREAS the Entity invited Bids for certain goods and ancillary services, viz., **“Idea Generation Hub (IGH) Phase 3: One (1) Lot Supply, Installation and Commissioning of Integrated Audio Visual Equipment and Information and Communication Technology Systems Inclusive of All Accessories for the IGH Facilities such as Multi-Media Room, Learning Room, Private Nooks, Café Lounge, and Garden Decks at the 7th Floor of DAP Building in Pasig City.”** and has accepted a Bid by the Supplier for the supply of those goods and services in the sum of *[contract price in words and figures]* (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as part of this Agreement, viz.:
  - i. The Official Bidding Documents (OBDs) including its sections as follows:
    - i. Schedule of Requirements;
    - ii. Technical Specifications;
    - iii. Instruction to Bidders;
    - iv. Bid Data Sheet;
    - v. General and Special Conditions of Contract;
    - vi. Supplemental or Bid Bulletins, if any
  - ii. Winning bidder’s bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted; Bid form, including all the documents/statements contained in the Bidder’s bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder’s response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity’s bid evaluation;

- iii. Performance Security;
  - iv. Notice of Award of Contract and the Bidder's conforme thereto; and
  - v. Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. **Winning bidder agrees that additional contract documents or information prescribed by the GPPB that are subsequently required for submission after the contract execution, such as the Notice to Proceed, Variation Orders, and Warranty Security, shall likewise form part of the Contract.**
3. In consideration for the sum of [total contract price in words and figures] or such other sums as may be ascertained, [Named of the bidder] agrees to [state the object of the contract] in accordance with his/her/its Bid.
4. The **DAP** agrees to pay the above-mentioned sum in accordance with the terms of the Bidding.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of the Republic of the Philippines on the day and year first above written.

<i>for the Development Academy of the Philippines ("DAP"):</i>	<i>for the {name of the Firm of the Winning Bidder} ("SUPPLIER"):</i>
<b>MAJAH-LEAH V. RAVAGO, PhD</b> <i>President and CEO</i>	name of Authorized Representative. <i>position-title of "Supplier"</i>
***witnesses***	
Witness1 of DAP <i>position-title of "DAP's Witness1"</i>	Witness1 of the Bidder <i>position-title of "Supplier's Witness1"</i>
Witness2 of DAP <i>position-title of "DAP's Witness2"</i>	Witness2 of the Bidder <i>position-title of "Supplier's Witness2"</i>

**REMINDER:** [Addendum showing the corrections, if any, made during the bid evaluation and/or negotiation should be attached to this Contract]

# Bidder's LETTERHEAD

## FORM 5: OMNIBUS SWORN STATEMENT

### INSTRUCTIONS to BIDDERS:

01. THIS FORM SHOULD BE ACCOMPLISHED USING THE BIDDER'S LETTERHEAD, SIGNED COPY SHOULD BE SUBMITTED AS PART OF THE TECHNICAL COMPONENT MARKED AS "TC06";
02. THE SIGNED COPY OF THIS DOCUMENT (IN PDF OR JPEG FORMAT) MUST BE PART OF THE ELECTRONIC FILES THAT SHOULD BE CONTAINED IN THE SUBMITTED ELECTRONIC BID; AND
03. THE FILENAME STRUCTURE SHOULD BE "TC06\_XXX=OMNIBUS\_SWORN\_STATEMENT=<BIDDERNAME>".

REPUBLIC OF THE PHILIPPINES)  
CITY OF \_\_\_\_\_) S.S.  
X-----X

## 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:

*If a sole proprietorship:* I am the sole proprietor of [*Name of Bidder*] with office address at [*address of Bidder*];

*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:

*[If a sole proprietorship:]* As the owner and sole proprietor, 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 **“Idea Generation Hub (IGH) Phase 3: One (1) Lot Supply, Installation and Commissioning of Integrated Audio Visual Equipment and Information and Communication Technology Systems Inclusive of All Accessories for the IGH Facilities such as Multi-Media Room, Learning Room, Private Nooks, Café Lounge, and Garden Decks at the 7th Floor of DAP Building in Pasig City.”** of the *Development Academy of the Philippines*, as shown in the attached duly notarized Special Power of Attorney;

*“[If a sole proprietorship:]* As 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 **“Idea Generation Hub (IGH) Phase 3: One (1) Lot Supply, Installation and**



**Commissioning of Integrated Audio Visual Equipment and Information Technology and Communication Systems Inclusive of All Accessories for the IGH Facilities such as Multi-Media Room, Learning Room, Private Nooks, Café Lounge, and Level 7B Garden Deck at the 7th Floor of DAP Building in Pasig City.”** as shown in the attached duly notarized Special Power of Attorney;

*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 the **“Idea Generation Hub (IGH) Phase 3: One (1) Lot Supply, Installation and Commissioning of Integrated Audio Visual Equipment and Information and Communication Technology Systems Inclusive of All Accessories for the IGH Facilities such as Multi-Media Room, Learning Room, Private Nooks, Café Lounge, and Garden Decks at the 7th Floor of DAP Building in Pasig City.”** and/or to represent the *[Name of Bidder]* in the bidding as shown in the attached *[state title of attached document showing proof of authorization (e.g., duly notarized Secretary’s Certificate issued by the corporation or the members of the joint venture)]*;

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 **Development Academy of the Philippines** or its duly authorized representative(s) to verify all the documents submitted;
6. **Select one, delete the rest:**

*[If a sole proprietorship:]* I am not related by consanguinity or affinity up to the third civil degree to the Head of the **Development Academy of the Philippines**, members of the Bids and Awards Committee (BAC), the Technical Working Group, the BAC Secretariat, and the end-user unit;

*[If a partnership or cooperative:]* None of the officers and members of *[Name of Bidder]* is related by consanguinity or affinity up to the third civil degree to the Head of the **Development Academy of the Philippines**, members of the Bids and Awards Committee (BAC), the Technical Working Group, the BAC Secretariat, and the end-user unit;

*[If a corporation or joint venture:]* None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related by consanguinity or affinity up to the third civil degree to the Head of the **Development Academy of the Philippines**, members of the Bids and Awards Committee (BAC), the Technical Working Group, the BAC Secretariat, and the end-user unit;

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 examined all of the Bidding Documents;
  - b) Acknowledged 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) Inquired or secured Supplemental/Bid Bulletin(s) issued for the **“Idea Generation Hub (IGH) Phase 3: One (1) Lot Supply, Installation and Commissioning of Integrated Audio Visual Equipment and Information and Communication Technology Systems Inclusive of All Accessories for the IGH Facilities such as Multi-Media Room, Learning Room, Private Nooks, Café Lounge, and Garden Decks at the 7th Floor of DAP Building in Pasig City.**
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 the 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 deliver 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.

	AFFIANT
<b>SIGNATURE OF THE AUTHORIZED REPRESENTATIVE</b>	
NAME OF THE AUTHORIZED REPRESENTATIVE	
POSITION TITLE OF SIGNATORY:	
NAME OF FIRM\BIDDER:	
POSTAL ADDRESS:	
TELEPHONE NUMBER:	
EMAIL ADDRESS:	

**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 two (2) government identification cards used]*, with his/her photograph and signature appearing thereon, with 1<sup>st</sup> ID No. \_\_\_\_\_ issued on \_\_\_\_\_ at \_\_\_\_\_ and 2<sup>nd</sup> ID 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*

## FORM 6: STATEMENT OF ALL ONGOING CONTRACTS INCLUDING CONTRACTS AWARDED BUT NOT YET STARTED

### INSTRUCTIONS to BIDDERS:

01. THIS FORM SHOULD BE ACCOMPLISHED USING THE BIDDER'S LETTERHEAD, SIGNED COPY SHOULD BE SUBMITTED AS PART OF THE TECHNICAL COMPONENT MARKED AS "TC02";
02. IF THERE IS NO ONGOING INCLUDING AWARDED BUT NOT YET STARTED GOVERNMENT OR PRIVATE CONTRACTS, STATE "NONE", OR EQUIVALENT TERM;
03. THE TOTAL AMOUNT OF THE ONGOING AND AWARDED BUT NOT YET STARTED CONTRACTS SHOULD BE CONSISTENT WITH THOSE FIGURES USED IN THE NET FINANCIAL CONTRACTING CAPACITY (NFCC);
04. THE SIGNED COPY OF THIS DOCUMENT (IN PDF OR JPEG FORMAT) **MUST BE PART OF THE ELECTRONIC FILES THAT SHOULD BE CONTAINED IN THE SUBMITTED ELECTRONIC BID; AND**
03. THE FILENAME STRUCTURE SHOULD BE "TC02\_XXX=ALL\_ONGOING\_CONTRACTS=<BIDDERNAME>".

**Note: Excel file marked as "TC02" will be provided through email, which forms part of the OBD bought by the Bidder.**

# *Bidder's LETTERHEAD*

## FORM 7: STATEMENT OF BIDDER'S SINGLE LARGEST COMPLETED CONTRACT (SLCC)

### INSTRUCTIONS to BIDDERS:

01. THIS FORM SHOULD BE ACCOMPLISHED USING THE BIDDER'S LETTERHEAD, SIGNED COPY SHOULD BE SUBMITTED AS PART OF THE TECHNICAL COMPONENT MARKED AS "TC03";
02. ATTACHED PHOTOCOPY OF THE CERTIFICATE OF FINAL ACCEPTANCE OR OFFICIAL RECEIPT ISSUED (OR) TO THE PROCURING ENTITY OR ANY EQUIVALENT DOCUMENT WITH THE INDICATED AMOUNT;
03. THE TOTAL AMOUNT OF THE COMPLETED CONTRACT/S SHOULD BE EQUIVALENT TO AT LEAST FIFTY PERCENT (50%) OF THE ABC;
04. THE SIGNED COPY OF THIS DOCUMENT (IN PDF OR JPEG FORMAT) **MUST BE PART OF THE ELECTRONIC FILES THAT SHOULD BE CONTAINED IN THE SUBMITTED ELECTRONIC BID; AND**
05. THE FILENAME STRUCTURE SHOULD BE "TC03\_XXX=SINGLE\_LARGEST\_COMPLETED\_CONTRACTS=<BIDDERNAME>".

**Note: Excel file marked as "TC03" will be provided in email, which forms part of the OBD bought by the Bidder.**

# *Bidder's LETTERHEAD*

## FORM 8: NET FINANCIAL CONTRACTING CAPACITY

**INSTRUCTIONS to BIDDERS:**

- 01.** THIS FORM SHOULD BE ACCOMPLISHED USING THE BIDDER'S LETTERHEAD, SIGNED COPY SHOULD BE SUBMITTED AS PART OF THE TECHNICAL COMPONENT MARKED AS "TC08";
- 02.** THE SIGNED COPY OF THIS DOCUMENT (IN PDF OR JPEG FORMAT) **MUST BE PART OF THE ELECTRONIC FILES THAT SHOULD BE CONTAINED IN THE SUBMITTED ELECTRONIC BID;** AND
- 03.** THE FILENAME STRUCTURE SHOULD BE "TC08\_XXX=NFCC=<BIDDERNAME>".

### NET FINANCIAL CONTRACTING CAPACITY

- A. Summary of the Applicant/Bidder's assets and liabilities on the basis of the attached income tax return and audited financial statement, stamped "RECEIVED" by the Bureau of Internal Revenue or BIR authorized collecting agent, for the immediately preceding year and a certified copy of Schedule of Fixed Assets particularly the list of construction equipment.

	Particulars	FY2023
1	Total Assets	
2	Current Assets	
3	Total Liabilities	
4	Current Liabilities	
5	Net Worth (1-3)	
6	Net Working Capital (2-4)	

- B. The Net Financial Contracting Capacity (NFCC) based on the above data is computed as follows:

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].

**The values of the domestic bidder's current assets and current liabilities shall be based on the latest Audited Financial Statements submitted to the BIR.**

	Particulars	Source Document	Amount
1	Current Assets	Balance Sheet Audited FS (2023)	
2	Minus: Current Liabilities	Balance Sheet Audited FS (2023)	
3	<b>Net Current Assets =</b>		
4	Multiplied by 15		
5	<b>Sub-Total =</b>		
6	Minus: Value of Outstanding Contracts	Financial Document "TC08"	
7	<b>NFCC</b>		

Herewith attached are certified true copies of the Income Tax Return (*filed through the Electronic Filing and Payments System (EFPS)*) and Audited Financial Statement: stamped “RECEIVED” by the BIR or BIR authorized collecting agent for the immediately preceding year.

<b>SIGNATURE OF THE AUTHORIZED REPRESENTATIVE</b>	
NAME OF THE AUTHORIZED REPRESENTATIVE	
POSITION TITLE OF SIGNATORY:	
NAME OF FIRM\BIDDER:	
POSTAL ADDRESS:	
TELEPHONE NUMBER:	
EMAIL ADDRESS:	

NOTE: If Partnership or Joint Venture, each Partner or Member Firm of Joint Venture shall submit the above requirements.

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# *Bidder's LETTERHEAD*

## FORM 9: SITE INSPECTION CERTIFICATE

**INSTRUCTIONS to BIDDERS:**

- 01.** THIS FORM SHOULD BE ACCOMPLISHED USING THE BIDDER'S LETTERHEAD, SIGNED COPY SHOULD BE SUBMITTED AS PART OF THE TECHNICAL DOCUMENTS MARKED AS "TC10";
- 02.** THE SIGNED COPY OF THIS DOCUMENT (IN PDF OR JPEG FORMAT) MUST BE PART OF THE ELECTRONIC FILES THAT SHOULD BE CONTAINED IN THE SUBMITTED ELECTRONIC BID; AND
- 03.** THE FILENAME STRUCTURE SHOULD BE "TCH\_XXX=CERTIFICATE\_SITE\_INSPECTION=<BidderName>".

<b>CERTIFICATE OF SITE INSPECTION</b>	
Bidding No.: <b>IB24-413103-02</b>	Total ABC: <b>P18,950,000.<sup>00</sup></b>
<p><b>Project:</b> "IDEA GENERATION HUB (IGH) PHASE 3: ONE (1) LOT SUPPLY, INSTALLATION AND COMMISSIONING OF INTEGRATED AUDIO VISUAL EQUIPMENT AND INFORMATION AND COMMUNICATION TECHNOLOGY SYSTEMS INCLUSIVE OF ALL ACCESSORIES FOR THE IGH FACILITIES SUCH AS MULTI-MEDIA ROOM, LEARNING ROOM, PRIVATE NOOKS, CAFÉ LOUNGE, AND GARDEN DECKS AT THE 7TH FLOOR OF DAP BUILDING IN PASIG CITY.</p>	
Bidder's Name	
Bidder's Rep.#1 Name /Position	
Bidder's Rep.#2 Name / Position	
DAP's Rep during the Tour	
Date of Inspection:	Duration/Time of Inspection:
<p>This is to certify that we have adequately toured the <b>DAP Pasig City</b> facilities and was able to get enough info/data pertaining to the above stated Project.</p> <p>By Bidder's Authorized Signatory:</p> <p>Signature: _____</p> <p>Name: _____</p> <p>Position Title: _____</p>	<p>This is to certify that the above named Bidder's Rep's had indeed visited/site inspected the <b>DAP Pasig City</b> facilities in reference to the above stated Project.</p> <p>By:</p> <p>Signature: _____</p> <p>Name: _____</p> <p>Position Title: _____</p>

# *Bidder's LETTERHEAD*

## FORM 10: CONFORMITY WITH THE TECHNICAL SPECIFICATIONS

**INSTRUCTIONS to BIDDERS:**

- 01.** THIS FORM SHOULD BE ACCOMPLISHED USING THE BIDDER'S LETTERHEAD, SIGNED COPY SHOULD BE SUBMITTED AS PART OF THE TECHNICAL COMPONENT MARKED AS "TC05";
- 02.** THE SIGNED COPY OF THIS DOCUMENT (IN PDF OR JPEG FORMAT) MUST BE PART OF THE ELECTRONIC FILES THAT SHOULD BE CONTAINED IN THE SUBMITTED ELECTRONIC BID; AND
- 03.** THE FILENAME STRUCTURE SHOULD BE "TC05\_XXX=CONFORMITY\_WITH\_TECH-SPECS=<BIDDERNAME>".

### CONFORMITY WITH THE TECHNICAL SPECIFICATIONS

**Instructions:** Bidders must state here 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 Bidder's 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 applicable laws and issuances.

#### A. Audio Visual/IT System and Equipment’s Specifications

System/ Equipment	Technical Specifications	Unit	Qty	Statement of compliance Comply / Not Comply	
<b>1. LEARNING ROOM</b>					
<b>Main Led and Interactive Screen</b>	P1.8 Customized Curve Indoor LED	Atleast 5.12m(Width) x 1.8m(Height) Pixel pitch (mm): atleast 0.9 – 1.86 Color temperature (K): atleast 2500-9500	set	1	



		<p>Panel dimensions (WxHxD)/(mm): at least 640x360x65</p> <p>Driving type: 1/43</p> <p>Panel weight (kg): 6</p> <p>Viewing angle (H/V) (°): 160/140</p> <p>Panel material: Die casting aluminum</p> <p>Power consumption (Max/ave)(W/m²): 520/173</p> <p>Brightness (nit): 800</p> <p>IP rating (front/rear): IP40/IP21</p> <p><b>Refresh rate: (Hz): ≥3840</b></p> <p>Maintenance: Front</p> <p>Gray Scale (bit): 14</p> <p>Contrast ratio: 4000:1</p>			
	Video Wall Splicer	<p>HDMI Input Card: Support for 10-bit input source, accompanied audio and 144hz input does not support interlaced signal input</p> <p>Four connectors are all used for input.</p> <p>Each connector the maximum resolution of 2048x1152@60hz, and the minimum resolution of 800x600@60hz</p> <p>Custom resolutions: Max. width 2560 pixels (2560x972@60hz)</p> <p>Max. height: 2560 pixels (884x2560@60hz)</p> <p>H_16xRJ45+2xFiber Sending Card: LED 4k sending card load up to 10,400,000 pixels (max. width 10,240 pixels, max. height: 10,240 pixels) 16x RJ45 Gigabit Ethernet Outputs</p> <p>Bit depth: 8- bit a single ethernet port loads up up to 650,000 pixels</p> <p>Bit depth 10-bit A single ethernet ports load up to 320,000 pixels</p> <p>Backup between ethernet ports</p> <p>Support 144Hz output</p> <p>Power consumption: 210 W</p>	unit	1	
	65" Interactive Whiteboard with Floorstand	<p>Resolution: 3840(H) ×2160 (V)</p> <p>HDMI Input: 4</p> <p>Pixel Pitch: 0.372mm x 0.372mm</p> <p>HDMI Output: 1</p>	unit	1	

		<p>Brightness: <math>\geq 400\text{cd/m}^2</math>  USB: Public USB3.0*1, Public USB2.0*1, Android UB3.0*1  Chipset: RK3588  Touch out USB 3.0: 1  CPU: A76*4+A55*4+6T NPU 2.4Ghz  RS232: 1  GPU: OLDIN MC4  RJ-45: 2 ( in/out,10M/100M /1000M)  DDR: 8GB (max32GB)  Bluetooth 5.2: 1  EMMC: 64GB (max256GB)</p>			
	Touchpad Controller	<p>Processor: Intel core i5-1145G7E  IoT vPro Processor Operating system: Windows 10 IoT Enterprise SA 64 bit Memory: 8 GB (Dual- channel) DDR4 3200MHz Graphics: Intel Iris Xe graphics  Storage: 256GB PCIe TLC SSD  Display: 10.1" 10- point touch (HD 1280x800. 16:10 aspect ratio, &lt;340 nits), rotatable 30° &amp; 60°</p>	unit	1	
<b>Video Conferencing System</b>	4k Dual Lens PTZ Conferencing Camera	<p>Signal: USB  HD:  1920x1080p@60/59.97/50/30/29.97/25 Hz  White balance: Auto/Manual/One push/ 3000k - 6500k  1920x1080i@60/59.94/50 Hz  Focus: Auto/Manual  1280x720p@60/59.94/50 Hz  Aperture: Auto/Manual  Color Space: YUV, RGB  Electronic shutter: Auto/Manual  Chroma Subsampling: 4:4:4, 4:2:2, 4:2:0  BLC: ON/OFF  Video compression: H.264/ H.265</p> <p>Pan rotation: <math>\pm 170^\circ</math>  Protocol: TCP, UDP, RTMP, RTSP  Tilt rotation: <math>-30^\circ \sim +90^\circ</math>  Bitrate: 46 kbps - 40960 kbps</p>	unit	1	

		<p>Preset number: 255 (10 presets using the included IR remote control)</p> <p>Sensor: 1/2.8" HD CMOS</p> <p>HDMI out: 1- Type A, 19- pin, female</p> <p>Effective Pixels: 16:9, 2.07 MP</p> <p>USB: 1 x USB, Type A</p> <p>Optical zoom: f= 4.7 ~ 47mm</p> <p>LAN: 1 x RJ45, 100Base-T</p> <p>View angle: 6.43° (telephoto), 60.9° (wide- angle)</p> <p>RS-232: 2 x 9- pin DIN</p> <p>Av: f/1.6 - f/3.0</p> <p>Digital zoom: 10X</p>			
	Wireless Collaboration	<p>Ethernet: 100/1000 Mbs, auto-switching, autonegotiating, autodiscovery, full/half duplex, TCP/IP, UDP/IP, DHCP, SSL, TLS<sup>3</sup>, SSH, SFTP, (SSH File Transfer protocol), IEEE 802.1x, active directory authentication, HTTPS web browser setup and XiO cloud service, 802.3af compliant</p> <p>HDMI output resolutions:  1280x720@50Hz (720p50),  1280x720@50Hz (720p60),  1280x800@60Hz,  1366x768@60Hz,  1440x900@60Hz  1600x900@60Hz,  1600x1200@60Hz,  1680x1050@60Hz,  1920x1080@50Hz, (1080p50),  1920x1080@60Hz (1080p60)  3840x2160@30Hz (2160p30),  3840x2160@50Hz (2160p50),  3840x2160@60Hz (2160p60)</p> <p>OS Support (Airmedia Application): Windows 10, Windows 11</p> <p>OS Support (Airmedia connect adaptor): Windows 10, Windows 11, macOS 11 or later Supported conferencing services: Zoom software</p>	unit	1	

		Input signal types: Airmedia; simultaneous display of up to four sources with airmedia canvas Maximum input resolutions: Airmedia presentation 1920x1080@30Hz (1080p30); Airmedia connect adapter 3840x2160@30Hz (4k30)			
<b>Wireless System</b>	Series 3 Connect Adaptor	WI-FI: Wifi 6 (802.11ax) USB: USB 2.0 OS Support: Windows 10, Windows 11, macOS 11 or newer Input signal types: Display port Alt Mode over USB-C Output signal types (Video): Network stream over wi-fi, received by a paired airmedia series 3 receivers Maximum resolution (Video): 3840x2160@30Hz (2160p30); output resolution is determined by the HDMI output on a paired Airmedia series 3 receiver Input signal types (Audio): DisplayPort Alt mode over USB-C Output signal type (Audio): Network stream over wifi received by a paired Airmedia Series 3 receiver Part 15 Class B	unit	1	
	Ceiling Microphone	Transducer principle: Pre-polarized condenser microphone  Max. sound pressure level: 104 dB SPL Microphone capsules: 28 x KE 10-237 Dynamic range: 93 dB (A) Sensitivity: 0 dbV/Pa (988 mV/Pa)  Dante: Dante interface with two RJ-45 sockets primary and secondary Pick- up pattern: Beam pattern  Ethernet: RJ-45 socket for network control and PoE	unit	1	
<b>Audio System</b>	2 Way Ceiling Speaker	Woofer: 6.5 inch (165 mm) polypropylene w/ ring mode decoupled cloth surround & stell basket	unit	4	

		<p>Tweeter: 0.98 inch (25 mm) titanium dome, horn loaded  Crossover frequency: 2.5 kHz  Impedance: 8 Ohms nominal with transformer set to "8Ω"  Transformer taps:  3.75W/7.5W/15W/30W/60W at 70V; 7.5W/15W/30W/60W at 100V  Frequency response: 50 Hz to 20 kHz (±3 dB)  Frequency range: 40 Hz to 20 kHz (-10 dB)  Power handling: 125 Watts program (8 Ohms)  Sensitivity: 88.5 dB @ 1W/1m  Coverage: 100° conical (nominal)</p>			
	Digital Signal Processor	<p>Analog-To-Digital Conversion: 24-bit 48 kHz  Digital-To-Analog Conversion: 24-bit 48 kHz  Frequency Response: 20 Hz to 20 kHz ±0.5 dB  THD: 0.001%, 20 Hz to 20 kHz, 0 dB gain, +4 dBu input;  0.01%, 22 Hz to 22 kHz, 54 dB gain, -50 dBu input  EIN: -125 dBu, 22 Hz to 22 kHz, no weighting  Dynamic Range: 110 dB, 22 Hz to 22 kHz, 0 dB gain  Crosstalk: -85 dB, 1 kHz, +4 dBu input, channel to channel  -75 dB, 1 kHz, -50 dBu input, channel to channel  Latency: 3.0 ms (analog in to analog out)</p>	unit	1	
	4 Channel Network Amplifier	<p>Maximum Power Output: 2,000 W  Input impedance: &gt;8k balanced and &gt;4k unbalanced  Typical Distortion: 8Ω; 0.02 - 0.05%  Continuously variable: Vrms 1.23 mV to 17.35 V 4Ω; 0.04 - 0.1%  dBu -56 to 27  Maximum Distortion: 4 Ω - 8 Ω; 1.0%  dBv -58.2 to 24.8  Frequency Response (8 Ω): 20 Hz - 20 kHz +0.2 dB / -0.7 dB  Noise: Unweighted output unmuted; &gt;102 dB  Weighted output muted; &gt;106 dB  Damping factor: &gt;100</p>	unit	1	

	Network Audio Wall	<p>Input Types: 2 x XLR (Balanced and RF Filtered)  Compliance: FCC CFR 47 Parts 15B Class A 2 x RCA (Stereo Unbalanced)  ICES-003  1 x 3.5 mm (Stereo unbalanced)</p> <p>CE (EN55022) Gain: -18, -3, +25, and +40 dB, Software Selectable (Inputs 1/2)  RoHS  Input Impedance: &gt;1.8 Kiloohms at any Gain (Inputs 1/2) REACH &gt;10 Kiloohms (Inputs 3/4 A &amp; B)  Output Impedance: 200 Ohms Balanced  100 Ohms Unbalanced  Maximum Output Levels: +12 dBu at 0 dB Attenuation (Output 1/2 A)  +20 dBu at 0 dB Attenuation (Output 1/2 B)</p>	unit	1	
	Virtual Control Server	<p>Processor: Intel Core® <a href="#">i5-10500T CPU @ 2.30GHz</a> RAM: 8 GB DDR4 2666MT/s  Storage: 256 GB SSD  Graphics: Intel® UHD Graphics 630 Ethernet: 100/1000 Mbps  USB: USB 3.2 host ports for mouse and keyboard (used for optional configuration through command line interface)  BACnet Network/IP: Supports up to 10000 BACnet objects3</p>	unit	1	
<b>Control System</b>	PoE Switch	<p>Ports: (2) 10/100/1000 base-T auto-sensing gigabit ethernet  (24) 10/100/1000 auto-sensing gigabit ethernet w/PoE+  (4) 10 gigabit Base-x SFP+  Network Standards: IEEE 802.3af.3at Mac address: Up to 16k  Switch Fabric: 132 Gbps non-blocking</p>	unit	1	
	SFP Module	10 gigabit compatible with proposed switch including fiber cable backbone and patch cord	unit	2	
	Wireless Access Point	Wi-Fi Standards: IEEE 802.11a/b/g/n/ac/ax	unit	1	

		<p>Supported Rates: 802.11ax: 4 to 1774 Mbps, 802.11ac: 6.5 to 867Mbps (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80), 802.11n: 6.5 Mbps to 300Mbps (MCS0 to MCS15), 802.11a/g: 6 to 54 Mbps, 802.11b: 1 to 11 Mbps</p> <p>Supported Channels: 2.4GHz: 1-13, 5GHz: 36-64, 100-144, 149-165</p> <p>MIMO: 2x2 SU-MIMO, 2x2 MU-MIMO</p> <p>Spatial Streams: 2 streams SU/MU MIMO 5GHz, 2 streams SU/MU MIMO 2.4GHz</p> <p>Radio Chains and Streams: 2x2:2 (5GHz), 2x2:2 (2.4GHz)</p> <p>Channelization: 20, 40, 80MHz</p> <p>Security: WPA-PSK, WPA-TKIP, WPA2 AES, WPA3-Personal, WPA3-Enterprise, 802.11i, Dynamic PSK, OWE, WIPS/WIDS</p> <p>Other Wi-Fi Features: WMM, Power Save, Tx Beamforming, LDPC, STBC, 802.11r/k/v, Hotspot, Hotspot 2.0, Captive Portal, WISPr</p> <p>Antenna Type: BeamFlex+ adaptive antennas with polarization diversity, Adaptive antenna that provides up to 64 unique antenna patterns per band</p> <p>Antenna Gain (max): Up to 3dBi</p> <p>Peak Transmit Power (Tx port/chain + Combining gain): 2.4GHz: 26 dBm, 5GHz: 25 dBm</p> <p>Frequency Bands: ISM (2.4-2.484GHz), U-NII-1 (5.15-5.25GHz), U-NII-2A (5.25-5.35GHz), U-NII-2C (5.47-5.725GHz), U-NII-3 (5.725-5.85GHz)</p> <p>Controller Platform Support: ZoneDirector 1200</p> <p>IP: IPv4, IPv6, dual-stack</p> <p>VLAN: 802.1Q (1 per BSSID or dynamic per user based on RADIUS), VLAN Pooling, Port-based</p>			
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		<p>802.1x: Authenticator &amp; Supplicant  Tunnel: L2TP, GRE, Soft-GRE  Policy Management Tools: Application Recognition and Control, Access Control Lists, Device Fingerprinting, Rate Limiting  IoT Capable: Integrated BLE and ZigBee, (1 radio, switchable)  Ethernet: 2 x 1GbE Ethernet ports, Power over Ethernet (802.3af/at) with Category 5/5e/6 cable, LLDP  USB: 1 USB 2.0 port, Type A  With compatible mounting bracket  With compatible power injector  With license for ZoneDirector 1200 controller</p>			
	10.9" Tablet	<p>8- core CPU with 4 performance cores and 4 efficiency cores 8- core GPU  16- core neural engine 8GB ram  Hardware accelerated H.264 and HEVC Video decode engine  Video encode engine</p>	unit	1	
	Tablet for Control + App	<p>Devices: Requires iOS 14 (or later) and a mobile broadband or Wi-Fi@ network connection<sup>3</sup>; devices must have at least 1 GB of RAM for reliable performance.  Streaming formats: H.264 (MPEG-4 part 10 AVC), MJPEG;  Requires purchase of full app functionality. Intercom audio feedback formats: Support RAVA SIP Intercom MP3  Standard app functionality: Two pages and one subpage  Full (paid) app functionality: Unlimited (dependent upon available device memory)</p>	unit	1	
	Network AV Encoder Wall Plate	<p>Video Resolutions: HDMI with deep color and 4k60 4:2:0 support  Audio formats: Multichannel (up to 8- channel LPCM or encoded HBR 7.1 surround sound) Bit rates: Fixed: 200 to 950 MBPS. Adaptive: Based on input resolution of the stream Streaming protocols: RTP, SDP</p>	unit	1	



		<p>Input signal types (Video): HDMI with deep color and 4k60 4:2:0 support (Dual-Mode display port interface and DVI compatible)  Copy rotection: HDCP 2.3  Input signals type (Audio): HDMI (Dual-Mode display port interface compatible), analog stereo  Digital formats (Audio): Dolby digital, dolby digital EX, dolby digital plus, dolby trueHD, dolby atmos, DTS, DTS ES, DTS 96/24</p>			
1080p Network AV Encoder	<p>Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color  Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound) Bit rates: Fixed: 200 to 950 Mbps Adaptive: Based on input resolution of the stream Streaming protocols: RTP, SDP  Container: MPEG-2 transport stream (.ts)  Session Initiation: Multicast via secure RTSP Copy protection: HDCP 1.4, AES-128, PKI</p>	unit	3		
Switching Appliance, 80 Endpoints	<p>Endpoints: Supports 80 DM NVX devices, each configured as an encoder or decoder Domains: Supports a single domain (all endpoints are grouped together as a single system)  Ethernet: 100/1000 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SSH, IPv4, HTTPS web browser setup and control, Crestron 3-Series® or later control system integration  DM NVX (via Ethernet): HDCP 2.2, AES audio/video content encryption, RTP, RTSP, SDP, ONVIF, IGMPv2, IGMPv3, SMPTE 2022, FEC (Forward Error Correction)</p>	unit	1		
Network AV Decoder	<p>Stream Type: Default support for DM-NVX-E10/E20 Series; Support available for 4K60 4:4:4</p>	unit	1		

		<p>encoders when using DM-NVX-D10 supported resolutions</p> <p>Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color sampling, and Deep Color support</p> <p>Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound)</p> <p>Bit Rates: Based on the stream received from the encoder</p> <p>Streaming Protocols: RTP, SDP</p> <p>Container: MPEG-2 transport stream (.ts)</p>			
	Tap Scheduler	<p>Display: 8 inch capacitive touch with antifingerprint treatment</p> <p>Connectivity: Wi-Fi 802.11 a/b/g/n</p> <p>Ethernet: RJ-45, 10/100/1000 Mbit PoE &amp; PoE + IEEE 802.3af</p> <p>RFID/NFC: 13.56 MHz reader</p> <p>Supports MIFARE 4K/1K card (does not support ISO/IEC 15693 or MIFARE Ultralight C)</p>	unit	1	
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems at Learning Room	lot	1	
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works;</li> <li>• Clean areas before turn-over;</li> </ul> <p>Turnover of the AV Equipment and ICT Systems at Learning Room</p>	lot	1	
<b>2. MULTI-MEDIA ROOM</b>					
<b>Main Led and Interactive Screen</b>	P1.8 Customized Curve Indoor LED	Atleast 8.32m(Width) x 1.8m(Height) Pixel pitch (mm): atleast 0.9-1.86	set	1	

	<p>Color temperature (K): 2500-9500  Panel dimensions (WxHxD)/(mm): 640x360x65</p> <p>Driving type: 1/43  Panel weight (kg): 6  Viewing angle (H/V) (°): 160/140  Panel material: Die casting aluminum  Power consumption (Max/ave)(W/m²): 520/173  Brightness (nit): 800  IP rating (front/rear): IP40/IP21  <b>Refresh rate: (Hz): ≥3840</b></p> <p>Maintenance: Front  Gray Scale (bit): 14  Contrast ratio: 4000:1</p>			
Video Wall Splicer	<p>HDMI Input Card: Support for 10-bit input source, accompanied audio and 144hz input does not support interlaced signal input Four connectors are all used for input.  Each connector the aximum resolution of 2048x1152@60hz, and the minimum resolution of 800x600@60hz Custom resolutions: Max. width 2560 pixels (2560x972@60hz) Max. height: 2560 pixels (884x2560@60hz)</p> <p>H_16xRJ45+2xFiber Sending Card: LED 4k sending card load up to 10,400,000 pixels (max. width 10,240 pixels, max. height: 10,240 pixels) 16x RJ45 Gigabit Ethernet Outputs  Bit depth: 8- bit a single ethernet port loads up up to 650,000 pixels  Bit depth 10-bit A single ethernet ports load up to 320,000 pixels  Backup between ethernet ports  Support 144Hz output  Power consumption: 210 W</p>	unit	1	
	Supply of Supervision, Equipment and Materials for the Installation of electrical wiring, cables, circuit breakers, and other needed	lot	1	

		accessories including wall mounting framing works			
	65" Interactive Whiteboard with Floorstand	Resolution: 3840(H) ×2160 (V) HDMI Input: 4 Pixel Pitch: 0.372mm x 0.372mm HDMI Output: 1 Brightness: ≥ 400cd/m2 USB: Public USB3.0*1, Public USB2.0*1, Android UB3.0*1 Chipset: RK3588 Touch out USB 3.0: 1 CPU: A76*4+A55*4+6T NPU 2.4Ghz RS232: 1 GPU: OLDIN MC4 RJ-45: 2 (in/out,10M/100M/1000M) DDR: 8GB (max32GB) Bluetooth 5.2: 1 EMMC: 64GB (max256GB)	unit	2	
	Touchpad Controller	Processor: Intel core i5-1145G7E IoT vPro Processor Operating system: Windows 10 IoT Enterprise SA 64 bit Memory: 8 GB (Dual-channel) DDR4 3200MHz Graphics: Intel Iris Xe graphics Storage: 256GB PCIe TLC SSD Display: 10.1" 10-point touch (HD 1280x800. 16:10 aspect ratio, <340 nits), rotatable 30° & 60°	unit	1	
<b>Video Conferencing System</b>	4k Dual Lens PTZ Conferencing Camera	Signal: USB HD: 1920x1080p@60/59.97/50/30/29.97/25 Hz White balance: Auto/Manual/One push/ 3000k - 6500k 1920x1080i@60/59.94/50 Hz Focus: Auto/Manual 1280x720p@60/59.94/50 Hz Aperture: Auto/Manual Color Space: YUV, RGB Electronic shutter: Auto/Manual Chroma Subsampling: 4:4:4, 4:2:2, 4:2:0 BLC: ON/OFF Video compression: H.264/ H.265 Pan rotation: ±170° Protocol: TCP, UDP, RTMP, RTSP Tilt rotation: -30° ~ +90° Bitrate: 46 kbps - 40960 kbps Preset number: 255 (10	unit	1	

		<p>presets using the included IR remote control)  Sensor: 1/2.8" HD CMOS  HDMI out: 1- Type A, 19-pin, female  Effective Pixels: 16:9, 2.07 MP  USB: 1 x USB, Type A  Optical zoom: f= 4.7 ~ 47mm  LAN: 1 x RJ45, 100Base-T  View angle: 6.43° (telephoto), 60.9° (wide- angle) RS-232: 2 x 9-pin DIN  Av: f/1.6 - f/3.0  Certification: CE, FCC  Digital zoom: 10X</p>			
	Wireless Collaboration	<p>Ethernet: 100/1000 Mbs, auto-switching, autonegotiating, autodiscovery, full/half duplex, TCP/IP, UDP/IP, DHCP, SSL, TLS<sup>3</sup>, SSH, SFTP, (SSH File Transfer protocol), IEEE 802.1x, active directory authentication, HTTPS web browser setup and XiO cloud service, 802.3af compliant  HDMI output resolutions:  1280x720@50Hz (720p50),  1280x720@50Hz (720p60),  1280x800@60Hz,  1366x768@60Hz,  1440x900@60Hz  1600x900@60Hz,  1600x1200@60Hz,  1680x1050@60Hz,  1920x1080@50Hz, (1080p50),  1920x1080@60Hz (1080p60)  3840x2160@30Hz (2160p30),  3840x2160@50Hz (2160p50),  3840x2160@60Hz (2160p60)  OS Support (Airmedia Application): Windows 10, Windows 11  OS Support (Airmedia connect adaptor): Windows 10, Windows 11, macOS 11 or later Supported conferencing services: Zoom software  Input signal types: Airmedia; simultaneous display of up to four sources with airmedia canvas</p>	unit	1	

		Maximum input resolutions: Airmedia presentation 1920x1080@30Hz (1080p30); Airmedia connect adapter 3840x2160@30Hz (4k30)			
<b>Wireless System</b>	Series 3 Connect Adaptor	WI-FI: Wifi 6 (802.11ax) USB: USB 2.0 OS Support: Windows 10, Windows 11, macOS 11 or newer Input signal types: Display port Alt Mode over USB-C Output signal types (Video): Network stream over wi-fi, received by a paired airmedia series 3 reciever Maximum resolution (Video): 3840x2160@30Hz (2160p30); output resolution is determined by the HDMI output on a paired Airmedia series 3 reciever Input signal types (Audio): DisplayPort Alt mode over USB-C Output signal type (Audio): Network stream over wifi recieved by a paired Airmedia Series 3 reciever Compliance: Listed for US & Canada, CE, IC, FCC, Part 15 Class B	unit	1	
	Ceiling Microphone	Transducer principle: Pre- polarized condenser microphone Max. sound pressure level: 104 dB SPL Microphone capsules: 28 x KE 10-237 Dynamic range: 93 dB (A) Sensitivity: 0 dbV/Pa (988 mV/Pa) Dante: Dante interface with two RJ-45 sockets primary and secondary Pick- up pattern: Beam pattern Ethernet: RJ-45 socket for network control and PoE	unit	1	
<b>Audio System</b>	2 Way Ceiling Speaker	Woofer: 6.5inch (165 mm) polypropylene w/ ring mode decoupled cloth surround & stell basket Tweeter: 0.98inch (25 mm) titanium dome, horn loaded Crossover frequency: 2.5 kHz Impedance: 8 Ohms nominal with transformer set to “8Ω”	unit	8	

		Transformer taps: 3.75W/7.5W/15W/30W/60W at 70V; 7.5W/15W/30W/60W at 100V Frequency response: 50 Hz to 20 kHz ( $\pm 3$ dB) Frequency range: 40 Hz to 20 kHz (-10 dB) Power handling: 125 Watts program (8 Ohms) Sensitivity: 88.5 dB @ 1W/1m Coverage: 100° conical (nominal)			
	Digital Signal Processor	Analog-To-Digital Conversion: 24-bit 48 kHz Digital-To-Analog Conversion: 24-bit 48 kHz Frequency Response: 20 Hz to 20 kHz $\pm 0.5$ dB THD: 0.001%, 20 Hz to 20 kHz, 0 dB gain, +4 dBu input; 0.01%, 22 Hz to 22 kHz, 54 dB gain, -50 dBu input EIN: -125 dBu, 22 Hz to 22 kHz, no weighting Dynamic Range: 110 dB, 22 Hz to 22 kHz, 0 dB gain Crosstalk: -85 dB, 1 kHz, +4 dBu input, channel to channel -75 dB, 1 kHz, -50 dBu input, channel to channel Latency: 3.0 ms (analog in to analog out) Dante I/O: 32 channels in, 32 channels out, at up to 24-bit 48 kHz	unit	1	
	4 Channel Network Amplifier	Maximum Power Output: 2,000 W Input impedance: $>8k$ balanced and $>4k$ unbalanced Typical Distortion: 8 $\Omega$ ; 0.02 - 0.05% Continuously variable: Vrms 1.23 mV to 17.35 V 4 $\Omega$ ; 0.04 - 0.1% dBu -56 to 27 Maximum Distortion: 4 $\Omega$ - 8 $\Omega$ ; 1.0% dBv -58.2 to 24.8 Frequency Response (8 $\Omega$ ): 20 Hz - 20 kHz +0.2 dB / -0.7 dB Noise: Unweighted output unmuted; $>102$ dB Weighted output muted; $>106$ dB Damping factor: $>100$	unit	1	
	Network Audio Wall	Input Types: 2 x XLR (Balanced and RF Filtered) Compliance: FCC CFR 47 Parts 15B Class A 2 x RCA (Stereo Unbalanced) ICES-003	unit	1	

		<p>1 x 3.5 mm (Stereo unbalanced)  CE (EN55022) Gain: -18, -3, +25, and +40 dB, Software Selectable (Inputs 1/2)  RoHS  Input Impedance: &gt;1.8 Kiloohms at any Gain (Inputs 1/2) REACH  &gt;10 Kiloohms (Inputs 3/4 A &amp; B)  Output Impedance: 200 Ohms Balanced  100 Ohms Unbalanced  Maximum Output Levels: +12 dBu at 0 dB Attenuation (Output 1/2 A)  +20 dBu at 0 dB Attenuation (Output 1/2 B)</p>			
	Virtual Control Server	<p>Processor: Intel Core® <b><u>i5-10500T CPU @ 2.30GHz</u></b> RAM: 8 GB  DDR4 2666MT/s  Storage: 256 GB SSD  Graphics: Intel® UHD Graphics 630  Ethernet: 100/1000 Mbps  USB: USB 3.2 host ports for mouse and keyboard (used for optional configuration through command line interface)  BACnet Network/IP: Supports up to 10000 BACnet objects3</p>	unit	1	
<b>Control System</b>	PoE Switch	<p>Ports: (2) 10/100/1000 base-T auto-sensing gigabit ethernet  (24) 10/100/1000 auto-sensing gigabit ethernet w/PoE+  (4) 10 gigabit Base-x SFP+  Network Standards: IEEE 802.3af.3at  Mac address: Up to 16k  Switch Fabric: 132 Gbps non-blocking</p>	unit	1	
	SFP Module	<p>10 gigabit compatible with proposed switch including fiber cable backbone and patch cord</p>	unit	2	
	Wireless Access Point	<p>Device Interfaces: 1xRJ45 console port, 1x2.5 Gbps ethernet LAN (PoE), 1x 10/100/1000 Mbps ethernet LAN, factory reset, power input  Antennas: 4x internal (2.4 GHz), 4x internal (5 GHz)  Antenna Gain: 3.5 dBi (2.4 GHz), 5.5 dBi (5 GHz)</p>	unit	1	



		<p>Maximum Output Power: 28 dBm (2.4 GHz) 25.5 dBm (5 GHz) Data Signal Rate: Up to 3600 Mbps</p> <p>Standards: IEEE 802.11a/b/g/n/ac/ax, IEEE 802.3u/ab, IEEE 802.3az energy-efficient ethernet (EEE), IEEE802.3at PoE</p> <p>Operating frequency: 24-2.483 GHz, 5.15-5.35 GHz, 5.47 - 5.85 GHz</p> <p>Security Protocol: WPA/WPA2/WPA3 Personal enterprise, WEP 64/ 128- bit, SSID broadcast disable MAC address access control, internal radius server</p>			
	10.9" Tablet	<p>8- core CPU with 4 performance cores and 4 efficiency cores 8- core GPU</p> <p>16- core neural engine 8GB ram</p> <p>Hardware accelerated H.264 and HEVC Video decode engine</p> <p>Video encode engine</p>	unit	1	
	Tablet for Control + App	<p>Devices: Requires Apple iOS 14 (or later) and a mobile broadband or Wi-Fi® network connection3; iPad® devices must have at least 1 GB of RAM for reliable performance.</p> <p>Streaming formats: H.264 (MPEG-4 part 10 AVC), MJPEG;</p> <p>Requires purchase of full app functionality. Intercom audio feedback formats: Support RAVA SIP Intercom MP3</p> <p>Standard app functionality: Two pages and one subpage</p> <p>Full (paid) app functionality: Unlimited (dependent upon available device memory)</p>	unit	1	
	1080p Network AV Encoder	<p>Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color</p> <p>Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound) Bit rates: Fixed: 200 to 950 Mbps</p> <p>Adaptive: Based on input resolution of the stream</p> <p>Streaming protocols: RTP, SDP</p>	unit	4	

		Container: MPEG-2 transport stream (.ts) Session Initiation: Multicast via secure RTSP Copy protection: HDCP 1.4, AES-128, PKI			
Network AV Decoder		Stream Type: Default support for DM-NVX-E10/E20 Series; Support available for 4K60 4:4:4 encoders when using DM-NVX-D10 supported resolutions Video Resolutions: Up to 1920x1080@60Hz (1080p), 4:4:4 color sampling, and Deep Color support Audio Formats: Multichannel (up to 8-channel LPCM or encoded HBR 7.1 surround sound) Bit Rates: Based on the stream received from the encoder Streaming Protocols: RTP, SDP Container: MPEG-2 transport stream (.ts)	unit	4	
HDMI Passive Plate		Provide one HDMI pass-thru connection for wall plates or lecterns HDCP 1.4 and 2.0 compatible Compact single gang Decora plate form factor Decora wall plate included	unit	1	
HDMI Extender with IR control		Interfaces: 1 x HDMI Type A Female Compliance: HDMI (3D, deep color); HDP compatible Impedance: 100 ohms Max resolution/ distance: Up to 1080p @40m; 1080i @ 60m Max distance: 3 m(2L-7D03H) IR: 1 x Mini stereo jack female Max. data rate: 6.75 Gbps (2.25 Gbps per lane) Max. Pixel clock: 225 MHz	pair	1	
Tap Scheduler		Display: 8 inch capacitive touch with antifingerprint treatment Connectivity: Wi-Fi 802.11 a/b/g/n Ethernet: RJ-45, 10/100/1000 Mbit PoE & PoE + EEE 802.3af RFID/NFC: 13.56 MHz reader Supports MIFARE 4K/1K card	unit	1	

		(does not support ISO/IEC 15693 or MIFARE Ultralight C)			
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems at Multimedia Room	lot	1	
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works;</li> <li>• Clean areas before turn-over;</li> </ul> Turnover of the AV Equipment and ICT Systems at Multimedia Room	lot	1	
<b>3. PRIVATE NOOK</b>					
<b>LFD Screen</b>	32" LFD Screen with Cantilever Bracket	Resolution: 3,840 x 2,160 (16:9) Output: Stereo mini Jack Brightness (Typ.): 500 nit includes 3 pcs cantilever Bracket Orientation: Landscape/Portrait include 1 pc LFD Mobile Cart Haze: 25% Contrast ratio (Typ.): 4000:1 (IPS-1200:1) Type: VA/IPS	units	3	
	LFD Mobile Cart		unit	1	
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems at Private Nook	lot	1	
<b>Assessment, Cleaning, Clearing, and</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> </ul>	lot	1	

<b>Turnover</b>		<ul style="list-style-type: none"> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and IT System installation works;</li> <li>• Clean areas before turn-over;</li> </ul> Turnover of the AV Equipment and ICT Systems at Private Nook			
<b>4. CAFÉ LOUNGE AND DECKS LEVEL 7A AND 7B</b>					
<b>Audio System</b>	Dm3se Surface Mounted Speaker (Wht)	80 – 20,000 Hz Frequency Response 140° conical Nominal Coverage 135° conical Nominal Coverage Angle 1.7 kHz passive crossover 80 Hz with recommended 24 dB / octave filter recommended High-Pass Protection	pair	9	
	Cc-1 Controller Center (Wht)	Two (2) RJ-45, allows for daisy-chaining, TIA/EIA 568B wiring standard connectors Channel selection via 8-DIP switch bank settings Passive controller type, linear potentiometer 0–10 kΩ Cat 5 cable requirement	unit	1	
	Blx14/Cvl Wireless Presenter System	at least 300 ft (91 m) line of sight operating range Between 524–865 MHz available frequencies 50–15,000 Hz audio range 100 dB A-weighted dynamic range Bodypack Transmitter with rechargeable 2 AA Batteries (included) and wireless receiver Tie Clip and Windscreen	set	3	
	Mg12x 12-Channel Mixing Console	Maximum of 6 Mic / 12 Line Inputs (4 mono + 4 stereo) “D-PRE” mic preamps with an inverted Darlington circuit High-grade effects: SPX with 24 programs 24-bit / 192kHz 2in / 2out USB Audio functions Includes Cubase AI DAW software download version Works with the iOS devices (2 or later) through the iOS Camera Connection Kit / Lightning to USB Camera Adapter	unit	1	

	Prm-Ust Music Source	SD/USB memory capacity of up to 32 GB (up to 8000 tracks) and the option to connect the USB either on the front or rear panel. 87 — 108 MHz FM frequency range 30 Hz — 12 kHz +/-3 dB frequency response >50 dB signal-to-noise ratio	unit	1	
	B1 Bluetooth Reciever	Bluetooth inputs RCA stereo, optical (SPDIF) outputs 2.0V RMS Full-scale output 50-60 ohms output impedance 10Hz - 20kHz Frequency response aptX, A2DP and AVRCP Supported bluetooth profiles up to 100 feet operation range	unit	1	
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems at Café Lounge and Decks Level 7A and 7B	lot	1	
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works;</li> <li>• Clean areas before turn-over;</li> </ul> Turnover of the AV Equipment and IT System at Café Lounge and Decks Level 7A and 7B	lot	1	
<b>5. DECK LEVEL 7B</b>					
<b>Outdoor Screen</b>		Waterproofed screen 4mWx2.5mH with audio system and complete accessories to include bracket and support			
<b>Overall Services</b>		Supply of Supervision, Labor, Equipment, Materials, and Engineering Services including wires, circuit breaker, brackets, braces, supports, tf cable, fiber cable, cable	lot	1	

		pulling, termination and testing, rough-ins installation of conduit, chipping works, and all necessary accessories to complete the commissioning of the AV Equipment and ICT Systems at Deck Level 7B			
<b>Assessment, Cleaning, Clearing, and Turnover</b>		<ul style="list-style-type: none"> <li>• Complete assessment inclusive of testing and commissioning of all installed AV Equipment and ICT Systems;</li> <li>• Restore to its original condition all affected areas, fixtures, etc. due to AV Equipment and ICT Systems installation works;</li> <li>• Clean areas before turn-over; Turnover of the AV Equipment and ICT Systems at Deck Level 7B</li> </ul>	lot	1	
<b>6. PROVISION OF POST INSTALLATION DOCUMENT</b>					
		Four (4) copies of as-built plan signed and sealed by the Professional Electronics and Communication Engineer in A3 size complete with legend, technical specifications, test result, start-up report and measurements	lot	1	
		Certification from the Contractor specifying two (2) years Warranty in the case of expendable supplies and a minimum of one (1) year in the case of non-expendable supplies from the date receipt of Certificate of Completion and Final Acceptance issued by the DAP GSD	lot	1	
		Knowledge Transfer and Issuance of Certificate of Training for ten (10) DAP Personnel <ul style="list-style-type: none"> <li>• 2 to 3 days Operational and Maintenance Training</li> </ul>	lot	1	
		Submit the hardcopy in A3 size and soft copy in flash drive of before, on-going, and after picture with date and time stamp	lot	1	

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

<b>SIGNATURE OF THE AUTHORIZED REPRESENTATIVE</b>	
NAME OF THE AUTHORIZED REPRESENTATIVE	
POSITION TITLE OF SIGNATORY:	
NAME OF FIRM\BIDDER:	
POSTAL ADDRESS:	
TELEPHONE NUMBER:	
EMAIL ADDRESS:	
DATE SIGNED:	

# *Bidder's LETTERHEAD*

## FORM 11: COMPANY PROFILE

### **INSTRUCTIONS to BIDDERS:**

- 01.** THIS FORM SHOULD BE ACCOMPLISHED USING THE BIDDER'S LETTERHEAD, SIGNED COPY SHOULD BE SUBMITTED AS PART OF THE TECHNICAL COMPONENT MARKED AS "TC11";
- 02.** THE SIGNED COPY OF THIS DOCUMENT (IN PDF OR JPEG FORMAT) **MUST BE PART OF THE ELECTRONIC FILES THAT SHOULD BE CONTAINED IN THE SUBMITTED ELECTRONIC BID; AND**
- 03.** THE FILENAME STRUCTURE SHOULD BE "TC11\_XXX=COMPLETED\_CONTRACTS=<BIDDERNAME>".

***Note: Word file marked as "TC11" will be provided in email, which forms part of the OBD bought by the Bidder.***

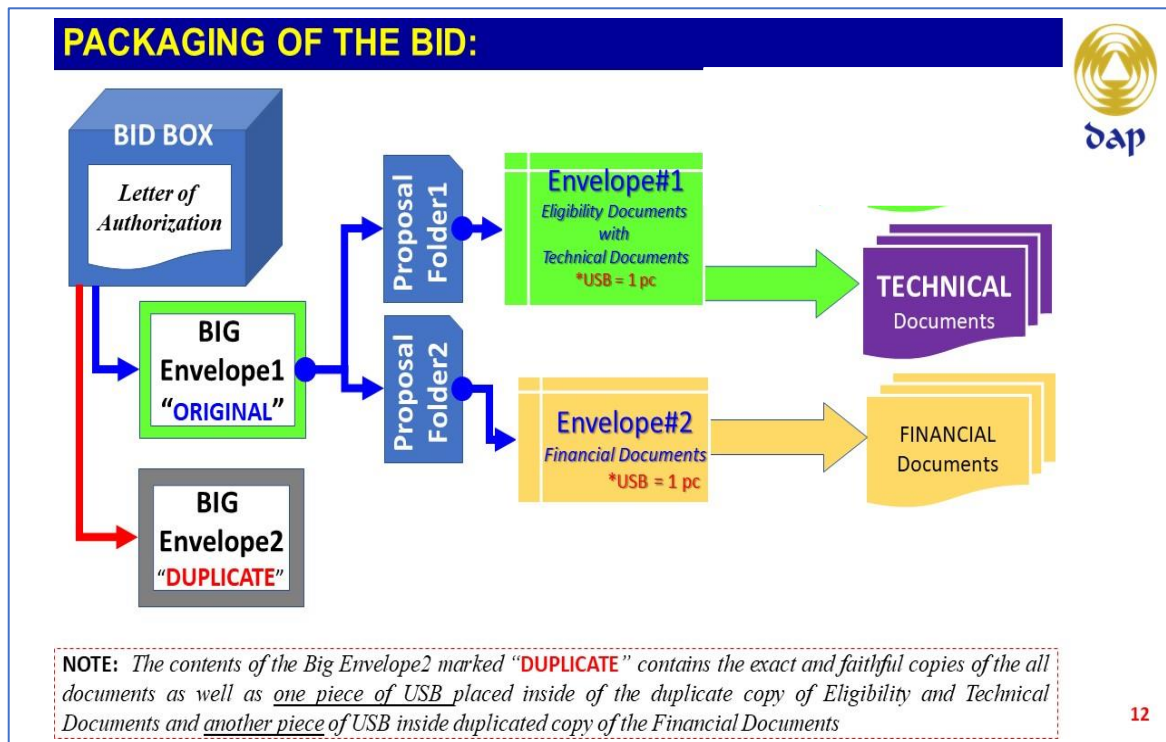
## SECTION IX. FILENAMES

### Notes to the Bidders:

This Section of the OBD provides the information necessary for interested Bidders to prepare responsive bids, in accordance with the requirements of DAP.

The tendered Bid shall be assessed on the basis of what is deemed advantageous to DAP, in particular, and to the Government, in general before an award will be served.

This Section contains provisions that are to be used unchanged. For illustration purposes, the following shall be packaged as follows:



Below are information and step-by-step guide in preparing the FILENAMES acceptable to DAP:

1. The submitted secured [zip/rar.file](#)-bid should contain the Technical and Financial Components of the Bid. The e-files that can be found in the said secured [zip/rar.file](#)-bid must be certified by the Bidder as the faithful electronic copies of the submitted requirements.
2. The Bidder certifies that all of the electronic files with suffix **<BidderName>** had been diligently and carefully examined;
3. The Bidder must ensure that each file is inspected, and the files enumerated here below are saved in the USB Thumb drive.



<b>FILENAME</b>		<b>Filetype</b>
<b>N</b>	<p><b>INSTRUCTIONS:</b> * The structure of the "final-filename" followed the file structure below. The first 3 characters of the filename refers to the document-tag;</p> <p>* The "<b>XXX</b>" represents the page-number of the file (if in jpg-format), or the last page-number if the file is in pdf-format. In case there is only one page, "<b>XXX</b>" will be "<b>000</b>"; and,</p> <p>* The suffix "&lt;BidderName&gt;" was replaced by the Company Name of the Bidder.</p>	
<b>01</b>	<p>LOA_XXX=signed_Letter_of_Authorization=&lt;BidderName&gt;</p> <p><b><i>INSTRUCTIONS: The duly adjusted/filled-out, printed, and signed LOA should be placed prior to the Opening of the secured zip-file bid. The LOA can be read without opening any part of the submitted bid.</i></b></p>	Pdf, or jpg, or word
<b>I. ELIGIBILITY DOCUMENTS</b>		
<b>02</b>	TC01_XXX=PhilGEPS_REGISTRATION=<BidderName>	pdf or jpg
<b>03</b>	TC02_XXX=EXCEL_ALL_ONGOING_CONTRACTS=<BidderName>	EXCEL
	TC02_XXX=IMAGE_ALL_ONGOING_CONTRACTS=<BidderName>	pdf or jpg
<b>04</b>	TC03_XXX=EXCEL_SINGLE_LARGEST_COMPLETED_CONTRACT=<BidderName>	EXCEL
	TC03_XXX=IMAGE_SINGLE_LARGEST_COMPLETED_CONTRACT=<BidderName>	pdf or jpg
<b>05</b>	TC04_XXX=BID_SECURITY=<BidderName>	pdf or jpg
<b>06</b>	TC05_XXX=CONFORMITY_TECHNICAL_SPECIFICATIONS=<BidderName>	pdf or jpg
<b>07</b>	TC06_XXX=OMNIBUS_SWORN_STATEMENT =<BidderName>	pdf or jpg
<b>08</b>	TC07_XXX=AUDITED_FINANCIAL_STATEMENT =<BidderName>	pdf or jpg
<b>09</b>	TC08_XXX= NFCC_COMPUTATION=<BidderName>	pdf or jpg
<b>10</b>	TC09_XXX=VALID_JVA=<BidderName>	pdf or jpg
	<p><b><i>INSTRUCTIONS: If applicable, 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, shall be included in the bid.</i></b></p> <p><i>If not applicable, the Bidder is still required to issue a Statement, written in its letterhead, clearly indicating that the Bidder will not enter into any JVA for this Project or just put N/A.</i></p>	
<b>11</b>	TC10_XXX= CERTIFICATE_OF_SITE_INSPECTION=<BidderName>	pdf or jpg
<b>12</b>	TC11_XXX= COMPANY_PROFILE=<BidderName>	pdf or jpg
<b>13</b>	TC12_XXX= PROOF_OF_TRANSACTION=<BidderName>	pdf or jpg
<b>14</b>	TC13_XXX= LIST_OF_ACCREDITED_SERVICE_CENTERS=<BidderName>	pdf or jpg
<b>15</b>	TC14_XXX= CERTIFICATE_FROM_ORGANIZATION=<BidderName>	pdf or jpg
<b>II. FINANCIAL COMPONENTS</b>		
<b>16</b>	FC01_XXX=FINANCIAL_BID_FORM=<BidderName>	pdf or jpg
<b>17</b>	FC02_XXX=PRICE_SCHEDULE=<BidderName>	pdf or jpg

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## ***SECTION X. PACKAGING AND MARKINGS OF BIDS***

1. The submitted Bid must be placed in a sealed “BID-box” that should contain...
  - ✓ A sealed BIG ENVELOPE1 marked “ORIGINAL COPY”; and,
  - ✓ A sealed BIG ENVELOPE2 marked “DUPLICATE COPY”;
2. A “LETTER OF AUTHORIZATION (LOA)” should be placed/pasted on the one side/face of the submitted “BID-box”.
3. The sealed BIG ENVELOPE1 marked “ORIGINAL COPY” must have two (2) items:
  - ✓ Sealed Proposal Folder#1 containing ...
    - a sealed envelope marked “TECHNICAL COMPONENT”;  
plus,
  - ✓ Sealed Proposal Folder#2 containing ...
    - a sealed envelope marked the “FINANCIAL COMPONENT”.

### **NOTE:**

- 1) A Second sealed “Big Envelope” which must be marked “DUPLICATE COPY” must have the duplicate copies of all documents contained inside the sealed “Big Envelope” marked as “ORIGINAL COPY”;
- 2) All documents in all envelopes must be properly marked or tagged in accordance with the Checklist found on Page of the OBD; and,
- 3) The first page of every required document must have an “ear-tab” indicating the tag# or marker# of the said document.



**development academy of the philippines**

BIDS & AWARDS COMMITTEE per SO#2024-038 dated February 28, 2024

**NOTHING  
FOLLOWS**

1st Floor DAP Bldg., San Miguel Avenue, Pasig City 1600

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