

**TENDER FOR THE SUPPLY AND INSTALLATION OF
SCHOOL HALL EQUIPMENT ENHANCEMENT WORK**

TENDER FORM

Name and Address of School

ST. PETER'S SECONDARY SCHOOL

21 Aberdeen Reservoir Road, HK

School Ref. No.: T2425-001

Tender Closing Date and Time: 4:00p.m. on 28th October, 2024

PART I

The undersigned hereby offers to undertake the service as described in the tender schedule within the period of time as specified therein from the date of a firm order placed by the school at the price or prices quoted in the tender schedule including labour, materials, all other charges and in accordance with the details provided by the school. In so doing, the undersigned acknowledges that all items not otherwise specified shall be provided in accordance with such details; tenders shall REMAIN OPEN FOR 90 DAYS after the Closing Date; and the school is not bound to accept the lowest or any tender and reserves the right to accept all or any part of any tender within the period during which the tenders remain open. The undersigned also warrants that his Company's Business Registration and Employees' Compensation Insurance Policy are currently in force and that the service which his Company offers to undertake will not cause any damage to the school's premises.

The bidder, its employees and agents shall not offer any advantage (as defined in the Prevention of Bribery Ordinance, Cap. 201) to the school employees, IMC members, or any parent or student representative in a committee responsible for considering any matters in relation to this contract. Any such offer by the bidder or its employees or agent may constitute an offence under the Prevention of Bribery Ordinance and may render the contract null and void. The school may also cancel the contract awarded and hold the bidder liable for any loss or damage the school may sustain.

PART II

RECONFIRMATION OF TENDER VALIDITY

With reference to Part I of this tender document, it is reconfirmed that the validity of tender offered by this company remains open for 90 days from _____.

The undersigned also agrees to accept the fact that once the validity of tender is reconfirmed, the pre-printed clause specified in the Company's tender forms in regard to this nature shall NOT apply.

PART III

SAFEGUARDING NATIONAL SECURITY

The undersigned acknowledges that notwithstanding anything to the contrary in the quotation/tender documents, the school reserves the right to disqualify this company on the grounds that this company has engaged, is engaging, or is reasonably believed to have engaged or be engaging in acts or activities that are likely to cause or constitute the occurrence of offences endangering national security or otherwise the exclusion is necessary in the interest of national security, or is necessary to protect the public interest of Hong Kong, public morals, public order or public safety.

The undersigned also acknowledges that the school may immediately terminate the contract upon the occurrence of any of the following events:

- (a) This company has engaged or is engaging in acts or activities that are likely to cause or constitute the occurrence of offences endangering national security or which would otherwise be contrary to the interest of national security;
- (b) The continued engagement of this company or the continued performance of the contract is contrary to the interest of national security; or
- (c) The school reasonably believes that any of the events mentioned above is about to occur.

Dated this _____ day of _____ 20 _____.

Name (in block letters) : _____

Signature _____ in the capacity of _____.
(State official position, e.g. Director, Manager, Secretary, etc.)

Duly authorized to sign tenders for and on behalf of : -

whose registered office is situated at _____

_____, Hong Kong.

Telephone No.: _____

Fax No.: _____

**TENDER FOR THE SUPPLY AND INSTALLATION OF
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TERMS OF TENDER

1. Tender Document

The Tender Document identified as T2425-001 consists of:

- (a) Invitation to Tender
- (b) Tender Form
- (c) Terms of Tender
- (d) Special Conditions of Contract
- (e) Tender Schedule
- (f) Summary of Tender
- (g) Specifications
- (h) Statement of Compliance

2. Suppliers are required to submit tender in **DUPLICATE**. The Tender Form shall be duly signed and submitted **before** the Tender Closing Date and time, otherwise, supplier's tender **will not be considered** further.

3. Quotation

(a) Suppliers shall provide the unit price, total amount and grand total amount in Part A of the Tender Schedule covering the cost of labour and materials for the supply and installation of School Hall Equipment Enhancement work with **1-year free on-site warranty maintenance** from the date of acceptance, including repair service and replacement of defective parts.

(b) Suppliers shall also provide detailed information for ALL hardware proposed in this project with product brochures and/or technical documentations and details of the installation schedule in Part B of the Tender Schedule for evaluation purpose.

4. Essential Requirement

Suppliers shall have relevant experience in schools' hall lighting, projection and monitoring system installation **within two year immediately preceding the Tender Closing Date**. Suppliers failed to comply with this essential requirement will render its tender invalid and not to be considered further.

5. Information and Documents to be submitted

In relation to the essential requirement as mentioned in Clause 4 above, suppliers are required to provide supporting documents (such as contracts, orders, letters of acceptance, etc.) showing suppliers' relevant experience in the installation of schools' hall equipment for **at least two (2) completed contracts/orders within five (5) years immediately preceding the Tender Closing Date** each with contract/order value **over HK\$100,000** before the Tender Closing Date for evaluation purpose.

Failure to submit the aforesaid information and documents before the Tender Closing Date may render the tender not to be considered further.

6. Site Visit

Suppliers are advised to conduct a site visit to acquaint themselves of the tender requirements. Suppliers can contact the person below for registration of conducting the site visit. Details are as follows:

School address	Date and Time available for Site Visit	Contact Person and Telephone No.
St. Peter's Secondary School 21 Aberdeen Reservoir Road, Aberdeen	From 14 th October, 2024 to 17 th October, 2024 11:00 a.m. to 2:00 p.m. 18 th October, 2024 4:00 p.m. to 5:00 p.m.	Mr. Wan / Mr. Fan Tel: 2552 0080

7. Basis of Acceptance

Suppliers' tenders will be considered on an "**OVERALL**" basis. Partial or incomplete quotation **will not be considered**. Suppliers should quote the unit price against each item for consideration. The School is not bound to accept the lowest quotation or any quotation and reserves the right to accept all or any part of the quotation at any time within the quotation validity period.

8. Prices quoted

(a) The prices to be quoted by the supplier are to be in Hong Kong dollars. Such prices shall be net prices allowing for all trade and cash discounts and shall include the cost of all freights, packing, delivery, on-site inspection/measurement service, installation service, 1-year free on-site warranty maintenance and/or any other charges for the fulfillment of obligations for this Contract.

(b) It will be assumed, unless suppliers clearly stipulate otherwise, that their tenders will remain valid for the duration of the Contract. Therefore, **no request for price variation will be considered**. If, however, a supplier wishes to submit a conditional offer which contains a price variation clause, it may do so, with the clear understanding that such an offer may prejudice the award of the Contract. In such case the basis of the price variation formula should be clearly stipulated and accepted by School in writing.

9. Statement of Compliance

A supplier shall complete and submit the Statement of Compliance before the Tender Closing Date and time. Otherwise, its tender **will not be considered** further. A supplier shall confirm in the Statement of Compliance that its tender submitted comply fully with the essential requirement in the Terms of Tender and all the requirements in the Specifications. Failing which, its tenders **will not be considered** further.

10. Offer of Products

The School **will not accept** any quotation of used or refurbished products or equipment.

11. Evaluation of Tenders

Tenders will be evaluated as follows:

(a) A quotation will be assessed if it complies with the essential requirement stipulated in the Terms of Tender and all the requirements as specified in the Specifications. A quotation that fails to comply with the essential requirement stipulated in the Terms of Tender and all the requirements specified in the Specifications will be disqualified and **will not be considered** further.

(b) The quotation that has complied with the essential requirement stipulated in the Terms of Tender and all the requirements as specified in the Specifications will be assessed on the "Grand Total Amount" quoted in Part A of the Tender Schedule. The tender with the lowest "Grand Total Amount" will normally be recommended for acceptance.

12. Consideration of Tenders

The School is not bound to consider a tender in the event of a claim being received by the School alleging or the School having grounds to believe that the goods or products or materials to be supplied by the supplier under the invitation to quotation are infringing copyrights or have otherwise infringed the intellectual property rights in the goods or products or materials of a third party.

13. Negotiation

The School reserves the right to negotiate with any supplier about the terms of its tender.

14. Acceptance

The successful supplier will receive a letter of acceptance as an indication of acceptance. This letter of acceptance shall constitute a binding Contract. Suppliers who do not receive any notification within the quotation validity period mentioned in the Tender Form shall assume that their tenders have not been accepted.

15. Supplementary Information / Tender Addenda

All supplementary information or tender addenda to this tender will be provided by the School with content and number of pages described and forwarded to all suppliers who are known to receive the Tender Document by post. Such supplementary information or tender addenda will be formed as part of the Contract afterwards.

16. Contractors' Performance Monitoring

Suppliers are advised that should they be awarded the Contract their subsequent performance will be monitored and may be taken into account when their future quotations/tenders are evaluated.

17. Consent to Disclosure

The School shall have the right to disclose whenever it considers appropriate or upon request by any third party (written or otherwise) information on the awarded contract, without any further reference to the successful supplier, the name and address of the successful supplier, product description, brand name, model number, country of origin and contract amount.

18. Cancellation of Invitation to Tender

Without prejudice to the School's right to cancel the invitation to tender acting in the public interests, where there are changes of requirements after the Tender Closing Date for operational or whatever reasons, the School is not bound to accept any conforming tender and reserves the right to cancel this invitation to tender or otherwise re-issue this invitation to tender on such terms as School deems fit.

19. Clarification of Tenders

In the event that the School determines that clarification of any tender is necessary or certain factual document or information is missing in the tender due to unintentional error, it may, but not obliged to, request the supplier concerned to make the necessary clarification or provide such factual document or information. Each supplier shall thereafter within five (5) working days or such other period as specified in the School's request for clarification, submit such clarification, document or information in the manner specified by the School. **Tenders may not be considered** if complete information is not provided as required by the School. As an alternative to seeking clarification or submission, **the School may disqualify the tender** or proceed to evaluate the tender on an as is basis.

20. Cost of Tender

Supplier shall submit its tender at its own cost and expense. The School will not be liable for any costs and expenses whatsoever incurred by the supplier in connection with the preparation or submission of its tender or in any related communication with the School, whether before, on or after the Tender Closing Date.

21. Disqualification of Tender

The School reserves the right to disqualify any supplier who submits a tender that directly or indirectly attempts to preclude or limit the effect of any provisions of the Terms of Tender and its supplement.

22. No Warranty

(a) While any information and documentation provided for or on behalf of the School in relation to this invitation for tender and the bidding process have been prepared in good faith, they have not been independently verified or checked for completeness or accuracy of such information or documentation. The School does not warrant the adequacy, accuracy or completeness of such information or documentation and does not accept any liability or responsibility as to, or in relation to, the adequacy, accuracy or completeness of information contained in the Tender Document or any other written or oral information which is, has been or will be provided or made available to any supplier.

(b) Each supplier must at its own costs and expense, satisfy itself as to all matters and things relevant to its proposal from its own investigations and sources.

23. Complaints about Tender Process or Contract Awards

The tender process is subject to internal monitoring to ensure that contracts are awarded properly and fairly. Any supplier who feels that its tender has not been fairly evaluated may write to the Principal who will personally examine the complaint and refer it to the approving authority for consideration if it relates to the tender system or procedures followed.

24. Personal Data Provided

(a) A supplier's personal data provided in the tender will be used for tender evaluation and contract award purposes. **If insufficient and inaccurate information is provided, its tender may not be considered.**

(b) A supplier has the right of access and correction with respect to personal data as provided for in Sections 18 and 22 and Principle 6 of Schedule 1 of the Personal Data (Privacy) Ordinance. The right of access includes the right to obtain a copy of the supplier's personal data provided in the tender.

(c) Enquiries concerning the personal data collected by means of the tender, including the making of access and corrections, should be addressed to the Principal of the School.

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SCHOOL HALL EQUIPMENT ENHANCEMENT WORK**

SPECIAL CONDITIONS OF CONTRACT

1. General

Relevant clauses in the Terms of Tender shall apply to this Contract where applicable. In case of conflict between the provisions of these Conditions and other requirements as follows or laid down in the Particular Specifications, the latter shall prevail.

2. Contract Period

The duration of the Contract shall be for the period from the date of letter of acceptance referred to in Clause 14 of the Terms of Tender until the completion by the Contractor of all its contractual obligations under the Contract to the satisfaction of the School Representative.

3. Delivery and Installation Requirement

The requirement details are as follows:

- (a) The equipment is to be delivered to and installed in the Hall located at 21 Aberdeen Reservoir Road, Aberdeen, St. Peter's Secondary School.
- (b) The school is not obligated to open on **Sundays and Public Holidays** for carrying out the delivery and installation work.
- (c) The campus is available for installation work from 9:00a.m. to 6:00p.m. on normal teaching days and from 9:00 a.m. to 6:00 p.m. on Saturdays within the period for installation as determined by the School Representative.
- (d) The delivery and installation of the School Hall Equipment Enhancement Work shall be completed (including testing) **on or before 3rd January, 2025.**
- (e) Installation
 - (i) The Contractor shall be responsible to fulfil all requirements of the School Hall Equipment Enhancement Work.
 - (ii) The Contractor shall be responsible to remove all obsolete equipment with their conduits where unused carrying cables are connected.
 - (iii) The Contractor shall be responsible to mount all new equipment securely.
 - (iv) The Contractor shall be responsible to configure the new equipment and integrate them with existing equipment.

4. Scope of Work

(a) The Scope of Works of this project comprises the removal, supply, installation and configuration of School Hall Equipment Enhancement and associated Works at the Site as stated in Clause 3 above.

(b) The Contractor shall provide labour, materials, necessary tools and equipment to carry out the Works as stated in the attached Particular Specifications to the satisfaction of School Representatives.

(c) The appointed Contractor is responsible for all wiring / trunking and associated works.

5. Damages for Non-completion

If the Contractor fails to complete the Installation Work within the period as stated in Clause 3 or within any extended time approved by School Representatives, the Contractor shall pay the School a sum calculated at a rate of 1% of the Contract Sum per each day of delay as Liquidated and Ascertained Damages for the period during which the Works shall so remain or have remained incomplete, and the School may deduct such sum from any monies due or to become due to the Contractor under this Contract.

6. Variation Order

The School shall have absolute power to make any variation in the form, quality or quantity of any Works or materials as well as the specifications and designs detailed in the Tender Schedule hereof and the Contract Sum will be adjusted accordingly.

7. Safety Precautions and Requirements

(a) All Works should be carried out in the greatest care for the safety of workers and any third party within School to prevent bodily injuries and property damages.

(b) The Contractor shall display adequate warning lights and / or signage during the period of Works.

8. Standard and Workmanship

The Contractor shall ensure that his works will be performed in the best workmanship and standard acceptable to the trade.

9. Protection of the Works

The Contractor shall execute adequate protection for all ceiling, trunking and equipment at the working area. Utmost care should be exercised in the course of Works to avoid damage to the existing installation and building. In the event of such happening, the Contractor shall be required to make good to the satisfaction of the School any damage without delay at his own expenses, failing which the School shall authorize the repair by others and charge the cost to the Contractor's account.

10. Cleaning and Removal of Rubbish

The nearby Site of the Works under this Contract must be kept clean and tidy. All rubbish and wastes should be removed and dispose off site.

11. Test and Acceptance

- (a) The Contractor shall conduct the functional test for the supply and installation of the school surveillance system in compliance with the required specifications.
- (b) The supply and installation of the school surveillance system will be accepted upon the completion of installation, configuration, training and reliability test to the satisfaction of the School Representative.

12. Illegal Staff

- (a) The Contractor undertakes not to employ any person who is not lawfully employable under the Immigration Ordinance (Chapter 115 of the Laws of Hong Kong) or under the provisions of any enactment for the time being in force or under any other law enforceable in Hong Kong in the execution of any government contracts. Should the Contractor be found to have employed illegal staff in breach of this undertaking, the School may by notice in writing, terminate the Contract forthwith and the Contractor is not entitled to claim any compensation.

- (b) The Contractor shall be liable for all the costs and expenses reasonably incurred by the School as a result of the termination of the Contract under Clause 13(a) hereof.

13. Terms of Payment

The schedule of payment will be as follows:

- (a) 40% of the contract sum will be made upon confirmation of the contract.
- (b) The remaining of the contract sum upon acceptance as stipulated in Clause 11 and completion of training required.

14. Payment Correspondence

Invoice and correspondence concerning payment shall be forwarded to St. Peter's Secondary School. Invoice submitted by the Contractor shall state the Tender Reference Number, particulars and the total amount payable by the School. The School shall not be responsible for any delay in payment if invoice and correspondences are not properly addressed or filled in or contained incomplete or inadequate information. Such invoice will be paid normally within thirty (30) days of the date after acceptance of Goods or receipt of invoice by the School Representative, whichever is the later.

15. Contracts (Rights of Third Parties) Ordinance

The parties hereby declare that nothing in this Contract confers or purports to confer on any third party any benefit or any right to enforce any term of this Contract pursuant to the Contracts (Rights of Third Parties) Ordinance (Chapter 623 of the Laws of Hong Kong).

**TENDER FOR THE SUPPLY AND INSTALLATION OF
SCHOOL HALL EQUIPMENT ENHANCEMENT WORK**

PRICE SCHEDULE

PART A

Section 1: Hall Lighting System Upgrade

Suppliers must read Clause 7 of the Terms of Tender before completing this Price Schedule. Suppliers shall provide the unit price, total amount and grand total amount with **1-year free on-site warranty maintenance** from date of completing (including repair service and replacement of defective parts) for all the equipment in this Price Schedule as follows:

(Columns 2, 5 and 6 to be completed by Supplier)

(1) Item No.	(2) Description	(3) Qty.	(4) Unit	(5) Unit Price (HK\$)	(6) Total Amount (HK\$)
		(a)		(b)	(a) x (b)
1	RGBLI Fixed LED Wash Light (Brand :) (Model :)	4	Set		
2	LED Cyclorama Light (Brand :) (Model :)	8	Set		
3	RGBW LED Moving Head Wash with Zoom (Brand :) (Model :)	4	Set		

(1) Item No.	(2) Description	(3) Qty.	(4) Unit	(5) Unit Price (HK\$)	(6) Total Amount (HK\$)
		(a)		(b)	(a) x (b)
4	RGBW LED Spot Moving Head with Zoom (Brand :) (Model :)	3	Set		
5	RGBW LED Spot Moving Head with Zoom (Brand :) (Model :)	9	Set		
6	Dual White Color Wash Light (Brand :) (Model :)	6	Set		
7	LED Profile Wash Light (Brand :) (Model :)	6	Set		
8	LED Zooming Spot Light (Brand :) (Model :)	4	Set		
9	White LED Moving Head Spot Wash Light (Brand :) (Model :)	2	Set		

(1) Item No.	(2) Description	(3) Qty. (a)	(4) Unit	(5) Unit Price (HK\$) (b)	(6) Total Amount (HK\$) (a) x (b)
10	New Light Bar (On Stage)	1	Set		
11	New Light Bar (Front of Hall)	1	Set		
	Installation	1	Job		
	Other Items required to complete the Hall Lighting System Please specify:				

Section 2: Hall Projection System Upgrade

Suppliers must read Clause 7 of the Terms of Tender before completing this Price Schedule. Suppliers shall provide the unit price, total amount and grand total amount with **1-year free on-site warranty maintenance** from date of completing (including repair service and replacement of defective parts) for all the equipment in this Price Schedule as follows:

(Columns 2, 5 and 6 to be completed by Supplier)

(1) Item No.	(2) Description	(3) Qty.	(4) Unit	(5) Unit Price (HK\$)	(6) Total Amount (HK\$)
		(a)		(b)	(a) x (b)
12	High Brightness Laser Projector (Front Projection) (Brand :) (Model :)	1	Set		
13	Zoom Lens for Front Projection Projector (Brand :) (Model :)	1	Set		
14	Supporting Laser Projector Left and Right Projection) with Wall Extension arm mount (Brand :) (Model :)	2	Set		
15	HDMI Video Signal Extender (Brand :) (Model :)	8	Set		

(1) Item No.	(2) Description	(3) Qty.	(4) Unit	(5) Unit Price (HK\$)	(6) Total Amount (HK\$)
		(a)		(b)	(a) x (b)
16	HDMI Video Matrix (Brand :) (Model :)	1	Set		
17	Control Console (Brand :) (Model :)	1	Set		
18	Keypad for Projection System Quick Control (Brand :) (Model :)	2	Set		
19	RF Remote Control for Electric Screen (Brand :) (Model :)	2	Set		
20	Network Switch (Brand :) (Model :)	1	Set		
21	Tablet Computer (Brand :) (Model :)	2	Set		

(1) Item No.	(2) Description	(3) Qty.	(4) Unit	(5) Unit Price (HK\$)	(6) Total Amount (HK\$)
		(a)		(b)	(a) x (b)
22	Tablet Computer Stand (Brand :) (Model :)	1	Set		
23	Tablet App (Brand :) (Model :)	1	Set		
24	WiFi Router (Brand :) (Model :)	1	Set		
	Installation	1	Job		
	Other Items required to complete the Hall Projection System Upgrade Please specify:				

Section 3: Hall Stage Monitor System

Suppliers must read Clause 7 of the Terms of Tender before completing this Price Schedule. Suppliers shall provide the unit price, total amount and grand total amount with **1-year free on-site warranty maintenance** from date of completing (including repair service and replacement of defective parts) for all the equipment in this Price Schedule as follows:

(Columns 2, 5 and 6 to be completed by Supplier)

(1) Item No.	(2) Description	(3) Qty. (a)	(4) Unit	(5) Unit Price (HK\$) (b)	(6) Total Amount (HK\$) (a) x (b)
25	Fixed Dome Network Camera (Brand :) (Model :)	6	Set		
26	8-Channel Network Video Recorder for monitoring (Brand :) (Model :)	1	Set		
27	LCD Monitor (Brand :) (Model :)	1	Set		
	Installation	1	Job		

(1) Item No.	(2) Description	(3) Qty.	(4) Unit	(5) Unit Price (HK\$)	(6) Total Amount (HK\$)
		(a)		(b)	(a) x (b)
	Other Items required to complete the Hall Stage Monitoring System Please specify:				

Section 4: Live Streaming System

Suppliers must read Clause 7 of the Terms of Tender before completing this Price Schedule. Suppliers shall provide the unit price, total amount and grand total amount with **1-year free on-site warranty maintenance** from date of completing (including repair service and replacement of defective parts) for all the equipment in this Price Schedule as follows:

(Columns 2, 5 and 6 to be completed by Supplier)

(1) Item No.	(2) Description	(3) Qty. (a)	(4) Unit	(5) Unit Price (HK\$) (b)	(6) Total Amount (HK\$) (a) x (b)
28	Video Streaming Encoder Appliance (Brand :) (Model :)	1	Set		
29	Live Streaming Switcher (Brand :) (Model :)	1	Set		
30	Streaming Camera (Brand :) (Model :)	3	Set		
31	Remote Controller for Streaming Camera (Brand :) (Model :)	2	Set		

(1) Item No.	(2) Description	(3) Qty.	(4) Unit	(5) Unit Price (HK\$)	(6) Total Amount (HK\$)
		(a)		(b)	(a) x (b)
32	HDMI Video Signal Extender (Brand :) (Model :)	3	Set		
	Installation	1	Job		
	Other Items required to complete the Hall Stage Monitoring System Please specify:				

Part B

In accordance with Clause 3(b) and Clause 5 of the Terms of Tender, suppliers are required to provide the following information for evaluation:

(Please attach separate sheet(s) if space provided below is not sufficient.)

- (1) Brand and model of all hardware used in this project with product brochures and/or Technical Documentations

- (2) Details of the Installation Schedule

- (3) Supporting documents (such as contracts, orders, letters of acceptance, etc.) showing suppliers' relevant experience in the supply and installation of School's Hall Equipment for at least **two (2) completed contracts/orders** each with contract/order value **over HK\$100,000** within five years immediately preceding the Tender Closing Date.

- (4) Other relevant Documents/Information, if any

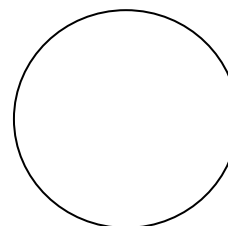
**TENDER FOR THE SUPPLY AND INSTALLATION OF
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SUMMARY OF TENDER

Section	Amount (HK\$)
Section 1: Hall Lighting System Upgrade	
Section 2: Hall Projection System Upgrade	
Section 3: Hall Stage Monitoring System	
Section 4: Live Streaming System	
Total Amount:	

We/I understand that if we/I fail to supply the stores or services as offered in our/my tender upon accepting school's order, we are/I am prepared to pay the price difference to the school if such stores or services are obtained from elsewhere.

Name of Supplier:



Company Chop

Name and Signature of Person authorized to sign Tender

Name (in block letters):

Signature:

Date: _____

TENDER FOR THE SUPPLY AND INSTALLATION OF SCHOOL HALL EQUIPMENT ENHANCEMENT WORK

TECHNICAL SPECIFICATIONS

Part A: Product Specifications

Section 1: Hall Lighting System Upgrade

1. RGBLI Fixed LED Wash Light

- Power Supply: 100V-240V
- Power Input: Mains input via P-Con, mounting version
- Power Output: P-Con, mounting version
- Lamp Source: RGBLI LED (Red, Green, Blue, Indigo, Lime)
- Lifetime of LED Light Source: at least 50,000 Hours
- Color Temperature: 2,700K to 6,500K
- Dimming: 0%-100% Linear
- Strobe Speed: 0-20Hz
- Supported Protocol: DMX512
- Data Connection: 3-Pin XLR Input and Thru
- Channel Mode: 9 Standard DMX Controlling Channels
- IP Rating: IP20

2. LED Cyclorama Light

- Power Supply: 100V-240V
- Power Input: Mains input via P-Con, mounting version
- Power Output: P-Con, mounting version
- Lamp Source: 32pcs 10W RGBW LED
- Lifetime of LED Light Source: at least 50,000 Hours
- Beam Angle: 60°
- Dimming: 0%-100% Linear
- Supported Protocol: DMX512
- Data Connection: 3-Pin XLR Input and Thru
- Channel Mode: 12 Channels
- IP Rating: IP20

3. RGBW LED Moving Head Wash with Zoom

- Power Supply: 100V-240V
- Power Input: Mains input via P-Con, mounting version
- Power Output: P-Con, mounting version
- Lamp Source: 19pcs 15W 4-in-1 RGBW LED
- Lifetime of LED Light Source: at least 50,000 Hours
- Optics
 - 19pcs specific optic lens of highly efficient elements
 - Optimized light pipe for higher LED efficiency
 - 10° - 60° Smooth and quiet linear motorized zoom
- PAN movement: 540° (8/16bit)
- Tilt movement: 270° (8/16bit)
- Movement
 - Smooth, fast and precise resolution for Pan/Tilt movement with low noise operation
 - Scan position memory, auto reposition after unexpected movement
 - Pan/Tilt reversible

- Dimming: 0%-100% Linear
- Strobe Speed: 0-25Hz
- Supported Protocol: DMX512
- Data Connection: 3-Pin XLR Input and Thru
- Channel Mode: 14 Channels

4. RGBW LED Spot Moving Head with Zoom

- Power Supply: 100V-240V
- Power Input: Mains input via P-Con, mounting version
- Power Output: P-Con, mounting version
- Lamp Source: 500W 8,000K LED Engine
- Color Temperature Output: 7,000K
- Total Lumen Output (Ra>70): 16,000 lumens
- HCRI Mode Output (Ra>90): 11,500 lumens
- Lifetime of LED Light Source: at least 20,000 Hours
- High-efficiency zoom optical system
- Zoom Range: 3°-50°
- PAN movement: 540°
- Tilt movement: 270°
- Pan/Tilt Lock
- Smooth CMY Color Mixing
- Linear CTO Color Correction: 2,700K-7,000K
- 1 x Color Wheel: 6 complementary colors, 1 CRI Optimizer Filter, 1 CTB Filter, plus open
- 1 x Static Gobo Wheel: 13 high-precision glass gobos, plus open
- 1 x Rotating and interchangeable Gobo Wheel: 7 high-precision glass gobos, plus open
 - Gobo Diameter: 22.5 mm
 - Image Diameter: 11 mm
 - Gobo Thickness: 1.1 mm
- 1 x Animation Wheel
 - A graphic animation wheel with continuous rotation in both directions, used alone or in combination with gobos to create the splendid water wave and flame effect, and can be changed into other wheels.
- Adjustable-speed rotating gobo in both directions
- Outstanding strobe effect with variable speed
- Motorized Zoom and Focus
- 4 Dimming Curves: Variable light adjustment from 0 to 100%
- Supported Protocol: DMX512, RDM, Art-Net, sACN
- Data Connection: 3-Pin XLR Input and Thru
- DMX Protocol Modes: 2
- Control Channels: 30/24
- IP Rating: IP20

5. RGBW LED Spot Moving Head with Zoom

- Power Supply: 100V-240V
- Power Input: Mains input via P-Con, mounting version
- Power Output: P-Con, mounting version
- Lamp Source: 1x 250W COB Warm White, 8x 3W Amber, 36x 3W 3-in-1 RGB
- Lifetime of LED Light Source: at least 20,000 Hours
- Beam Angle: 33°
- Floor Angle: 57°
- 4 Dimming Curves: Variable light adjustment from 0 to 100%
- Supported Protocol: DMX512
- Data Connection: 3-Pin XLR Input and Thru
- Channel Mode: 10/11/12/13
- IP Rating: IP65

6. Dual White Color Wash Light

- Power Supply: 100V-240V
- Lamp Source: 42x Warm white LED, 12x Cool White LED
- Lifetime of LED Light Source: at least 50,000 Hours
- Beam Angle: 40°
- Color Temperature: 3,200K - 6,000K
- Dimming: 0%-100% Linear
- Strobe Speed: 0-20Hz
- Supported Protocol: DMX512
- Data Connection: 3-Pin XLR Input and Thru
- Channel Mode: 4 Channels
- IP Rating: IP20

7. LED Profile Wash Light

- Power Supply: 100V-240V
- Lamp Source: COB White LED
- Luminous flux: 7,000 lumens – 8,000 lumens
- Lifetime of LED Light Source: at least 50,000 Hours
- Color Temperature: 3200K, 5600K
- CRI ≥85Ra or ≥95Ra
- Beam Angle: 45°
- Dimming: 0%-100% Linear
- Strobe Speed: 0-20Hz
- Supported Protocol: DMX512
- Data Connection: 3-Pin XLR Input and Thru
- Channel Mode: 2 Channels
- IP Rating: IP20

8. LED Zooming Spot Light

- Power Supply: 100V-240V
- Lamp Source: COB White LED
- Lifetime of LED Light Source: at least 50,000 Hours
- Beam Angle: 15° - 28°
- Color Temperature: 3200K
- CRI ≥85Ra or ≥95Ra
- Luminous flux: 17,000 lumens - 18,000 lumens
- Dimming: 0%-100% Linear
- Strobe Speed: 0-20Hz
- Supported Protocol: DMX512
- Data Connection: 3-Pin XLR Input and Thru
- Channel Mode: 2 Channels
- IP Rating: IP20

9. White LED Moving Head Spot Wash Light

- Power Supply: 100V-240V
- Lamp Source: White LED
- Lifetime of LED Light Source: at least 50,000 Hours
- Zoom Range: 9°-36°
- PAN movement: 540° / 630° / 360°
- Tilt movement: 270° / 180° / 90°
- Color Temperature: 7500K
- Gobo Size: 22.9mm (External Dimensions) / 16mm (Inner Dimensions)
- 1 Static Gobo Wheel with 11 Gobos Plus Open
- 1 Rotating Gobo Wheel with 6 Gobos Plus Open
- 1 Color Wheel with 9 colors plus open
- Dimming: 0%-100% Linear
- Strobe Speed: 0-25Hz
- Supported Protocol: DMX512
- Data Connection: 3-Pin XLR Input and Thru
- Channel Mode: 18 Channels
- IP Rating: IP20

10. New Light Bar (On Stage)

- Type: Fixed Height
- Ceiling mounted
- Location: Behind the mid-curtain
- Bar Length: 9,000mm
- Weight-bearing Capacity (Load): 250kg
- Pole Diameter: 50mm
- Metal / Aluminum Truss Tube
- Truss Tube Thickness: 3mm
- Structural Safety Certificate endorsed by RSE is required.

11. New Light Bar (Audience Area)

- Type: Fixed Height
- Ceiling mounted
- Location: Between the first and second beam of the Auditorium
- Bar Length: 9,000mm
- Weight-bearing Capacity (Load): 250kg
- Pole Diameter: 50mm
- Metal / Aluminum Truss Tube
- Truss Tube Thickness: 3mm
- Structural Safety Certificate endorsed by RSE is required.

Section 2: Hall Projection System Upgrade

12. High Brightness Laser Projector (Front Projection)

- Projection System: 3LCD, 3-chip technology
- Projection Method: Front mount
- Driving Method: Poly-silicon TFT Active Matrix
- Pixel Number: 2,304,000 dots (1920 x 1200 x 3)
- Native Resolution: WUXGA with 4K Enhancement Technology
- Signal Input
 - Maximum Display Resolution: 4096 x 2160
 - Display Resolution: 1920 x 1200
- Aspect Ratio: Supports 4:3, 16:9, 16:10
- Pixel Arrangement: Cross stripe
- Illumination Technology: Laser Diode
- Light Source Life: 20,000 Hours
- Brightness
 - Color Light Output: 13,000 lumens
 - White Light Output: 13,000 lumens
- Contrast Ratio: 2,500,000:1 (Dynamic Contrast: On)
- Brightness Uniformity (Typical): 85%
- Color Reproduction: Up to 1.07 billion colors
- Lens Shift
 - Vertical: $\pm 60\%$
 - Horizontal: $\pm 18\%$
- Keystone Correction
 - Vertical: ± 45 degrees
 - Horizontal: ± 30 degrees
- Input Interface
 - 3G-SDI in/out
 - HDMI x1
 - HDBaseT x1
 - DVI-D x1
 - VGA x1
 - Serial: RS-232C x 1 (9-pin)
 - Network: RJ-45 x1

13. Zoom Lens for Front Projection Projector

- Compatible with Item 12
- Throw Ratio Range: 3.54–5.41

14. Supporting Laser Projector (Left and Right Projection)

- Projection System: 3LCD, 3-chip technology
- Driving Method: Poly-silicon TFT Active Matrix
- Pixel Number: 2,073,600 dots (1920 x 1080) x3
- Native Resolution: Full HD with 4K Enhancement Technology
- Signal Input
 - Maximum Display Resolution: 4096 x 2160
 - Display Resolution: 1920 x 1200
- Aspect Ratio: Supports 4:3, 16:9, 16:10
- Pixel Arrangement: Cross stripe
- Illumination Technology: Laser Diode
- Light Source Life: 20,000 Hours
- Brightness: 5,000 lumens
- Contrast Ratio: 2,500,000:1 (Dynamic Contrast: On)
- Color Reproduction: Up to 1.07 billion colors
- Projection Lens:
 - Lens
 - ◇ F-number: 1.8
 - ◇ Focal Length: 2.3mm
 - Zoom
 - ◇ Optical Manual Zoom
 - ◇ Ratio: 1 – 1.35
 - Manual Focus
 - Screen Size (Wide): 80” – 160”
 - Throw Ratio
 - ◇ Wide: 0.16
 - ◇ Tele: 0.22
- Input Interface
 - HDMI in x 2
 - HDMI out x 1
 - HDBaseT x 1
 - Serial: RS-232C x 1 (9-pin)
 - Network: RJ-45 x1
- Wall Extension arm mount is required

15. HDMI Video Signal Extender

- Extend HDMI Signal up to 120m (4K/2K), 150m (1080p) via CAT6 cable
- Support Power Over Cable (PoC)
- Transmitter x 1
 - Input
 - ✧ 1 x HDMI Type A Female
 - Output
 - ✧ 1 x HDMI Type A Female
 - ✧ 1 x HDBT Out (RJ-45, 8-pin female)
 - Control
 - ✧ 1 x IR In (3.5mm Stereo Mini-jack)
 - ✧ 1 x IR Out (3.5mm Stereo Mini-jack)
 - ✧ 1 x RS-232 (Phoenix jack)
 - ✧ 1 x Service Port (Mini-USB)
- Receiver x 1
 - Input
 - ✧ 1 x HDBT In (RJ-45, 8-pin female)
 - Input
 - ✧ 1 x HDMI Type A Female
 - ✧ 1 x Audio Out (3.5mm Stereo Mini-jack)
 - Control
 - ✧ 1 x IR In (3.5mm Stereo Mini-jack)
 - ✧ 1 x IR Out (3.5mm Stereo Mini-jack)
 - ✧ 1 x RS-232 (Phoenix jack)
 - ✧ 1 x Service Port (Mini-USB)
- HDCP Compliance: HDCP 2.2 / HDCP 1.4
- Video Bandwidth: 18Gbps
- Video Resolution:
 - 4K2K 50/60Hz 4:4:4, 4K2K 50/60Hz 4:2:2, 4K2K 50/60Hz 4:2:0
 - 4K2K 30Hz 4:4:4
 - 1080p, 1080i, 720p, 720i, 480p, 480i All HDMI 3D TV formats
 - All PC resolutions including 1920 x 1200
- Color Space: RGB / YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
- Color Depth:
 - 8/10/12-bit (1080P60Hz, 4K30Hz, 4K60Hz YCbCr 4:2:2/4:2:0)
 - 8-bit (4K60Hz 4:4:4)
- HDMI Audio Format:
 - LPCM 2.0/2.1/5.1/6.1/7.1
 - Dolby Digital
 - Dolby TrueHD
 - Dolby digital Plus (DD+)
 - DTS-ES
 - DTS HD Master
 - DTS HD-HRA
 - DTS-X
- L/R Audio Format: PCM 2.0
- Power Supply
 - Input: AC 100 - 240V 50/60Hz
 - Output: DC 24V/1A
 - Locking connector
- Housing: Metal Enclosure

16. HDMI Video Matrix

- Video Input: 8 x HDMI Type A Female
- Video Output: 9 x HDMI Type A Female
- Audio Output: 1 x 3.5mm Stereo Jack Female
- Video:
 - Max. Data Rate: 10.2 Gbps (3.4 Gbps per lane)
 - Max. Pixel Clock: 340MHz
- Video Compliance:
 - HDMI (3D, Deep Color, 4K)
 - HDCP 2.2 Compatible
 - Consumer Electronics Control (CEC)
- Max. Resolution:
 - 4096 x 2160 / 3840 x 2160 @ 60 Hz (4:2:0)
 - 4096 x 2160 / 3840 x 2160 @ 30 Hz (4:4:4)
- Audio Output: 1 x Mini Stereo Jack Female
- Support 4K Scaling Technology to convert various input resolutions into the display's native resolution
- Provide continuous video streams, real-time switching, and stable signal transmissions
- Support high-speed switching between all input and output ports – supporting TMDS high data transfer rates of up to 4K @ 60 Hz to minimize latency
- Control:
 - 1 x RS-232 DB-9 Female
 - 1 x RJ-45 Female
- Housing: Metal Enclosure

17. Control Console

- Central controller for all hardware of the Hall Projection System
- Projectors' power on/off control, signal source switching, screen output switching
- Electric Projection Screen up/down control
- Communications:
 - Ethernet
 - ✧ 100/1000Mbps
 - USB
 - ✧ Supports USB mass storage class devices via the rear panel USB 2.0 host port
 - ✧ Supports computer console via the front panel USB 2.0 device port
 - RS-232/422/485
 - ✧ For 2-way device control and monitoring
 - IR/Serial
 - ✧ Supports 1-way device control via infrared up to 1.2 MHz or serial TTL/RS-232 (0–5V) up to 115.2k baud
- Memory
 - SDRAM: 2GB
 - Flash: 8GB
 - Memory Card: Supports SD and SDHC cards up to 32 GB
 - External Storage: Supports USB mass storage devices up to 1 TB
- Connectors and Card Slots
 - RELAY OUTPUT
 - ✧ Comprises (8) normally open, isolated relays
 - ✧ 2x 8-pin 3.5 mm detachable terminal blocks
 - ✧ Rated 1 A, 30 VAC/VDC
 - I/O

- ✧ Comprises (8) Versiport digital input/output or analog input ports (referenced to GND)
- ✧ 1x 9-pin 3.5 mm detachable terminal block
- ✧ Digital Input: Rated for 0–24 VDC, input impedance 20k Ω , logic threshold >3.125 V low/0 and <1.875 V high/1
- ✧ Digital Output: 250 mA sink from maximum 24 VDC, catch diodes for use with real world loads
- ✧ Analog Input: Rated for 0–10 VDC, protected to 24 VDC maximum, input impedance 21k Ω with pull-up resistor disabled
- ✧ Programmable 5 V, 2k Ω pull-up resistor per pin
- IR - SERIAL OUTPUT
 - ✧ 2x 8-pin 3.5 mm detachable terminal blocks
 - ✧ Comprises (8) IR output ports
 - ✧ IR output up to 1.2 MHz
 - ✧ 1-way serial TTL/RS-232 (0–5 V) up to 115.2k baud
- COM
 - ✧ 1x 5-pin 3.5 mm detachable terminal block
 - ✧ Bidirectional RS-232/422/485 port
- COM
 - ✧ 2x 3-pin 3.5 mm detachable terminal blocks
 - ✧ Bidirectional RS-232 ports
- USB
 - ✧ 1x USB 2.0 Type A Female connector
- LAN
 - ✧ 1x 8-pin RJ-45 Female connector

18. Keypad for Projection System Quick Control

- Compatible with Item 17
- Keypad buttons: 2 to 8 configurable single-action pushbuttons
- Button Events: Programmable for Normal, Tap, Double-Tap, and Press and Hold
- LED Indicators for status feedback

19. RF Remote Control for Electric Screen

- Compatible with Item 17
- Allow quick and independent up/down control of existing Front Projection Screen and Rear Projection Screen

20. Network Switch

- 8x 10/100/1000Mbps RJ45 Ethernet Port
- PoE Support
 - Standard: 802.3 af compliant
 - At least 4 Port support PoE function
 - Power Supply: 55W
- Backbone bandwidth: 16Gbps
- Mac Address Table: 4K
- Transmission Method: Store and Forward
- Advanced Functions
 - Compatible with IEEE 802.3af Compliant PDs
 - Mac Address Auto-Learning And Auto-Aging
 - IEEE802.3x Flow Control
 - 802.1p/DSCP QoS

21. Tablet Computer

- Connect Control Console (Item 17) to remote control all hardware of the Hall Projection System
- Processor: A14 Bionic chip with 64-bit architecture or equivalent
- Display
 - 10.9-inch (diagonal) LED-backlit Multi-Touch display with IPS technology or equivalent
 - 2360-by-1640-pixel resolution at 264 ppi
 - 500nits brightness
 - Fingerprint-resistant oleophobic coating
- Internal Storage: 64GB
- WiFi
 - Support 802.11ax (WiFi-6) with 2x2 MIMO
 - Support simultaneous dual band (2.4GHz and 5GHz)

22. Tablet Computer Stand

- Compatible with Item 21
- Tablet Computer Stand for desk
- Adjustable hinges provide optimal viewing in either portrait or landscape position

23. Tablet App

- Compatible with Item 21
- Allow Tablet Computer to connect the Control Console (Item 17) for various operations
- Include custom made user interface to control all hardware of the Hall Projection System remotely

24. WiFi Router

- Allow Tablet Computer (Item 17) to connect to the Control Console (Item 14) wirelessly
- Wireless
 - WiFi Standard: WiFi-6
 - ◇ IEEE 802.11ax/ac/n/a 5 GHz
 - ◇ IEEE 802.11ax/n/b/g 2.4 GHz
 - WiFi Capacity
 - ◇ Tri-Band: Allocate devices to different bands for optimal performance
 - ◇ OFDMA: Simultaneously communicates with multiple Wi-Fi 6 clients
 - ◇ Airtime Fairness: Improves network efficiency by limiting excessive occupation
 - ◇ DFS: Access an extra band to reduce congestion
 - Working Modes
 - ◇ Router Mode
 - ◇ Access Point Mode
- Hardware
 - Processor: Quad-Core CPU
 - Ethernet Ports: 1x Gigabit WAN Port, 4x Gigabit LAN Ports

Section 3: Hall Stage Monitoring System

25. Fixed Dome Network Camera

- Image Sensor: 1/2.7" Progressive CMOS
- Max. Resolution: 2560 x 1920 (5MP)
- Lens Type: Motorized, Vari-focal, Remote Focus
- Focal Length: f = 2.8-12mm
- Aperture: F1.4 - F2.8
- Iris: Fixed
- Field of View:
 - Horizontal: 90°-30°, Vertical: 65°-23°
 - Diagonal: 115°-38°
- Shutter Time: 1/5 sec. to 1/32,000 sec.
- Built-in IR illuminators, effective up to 30 meters with Smart IR, IR LED*2
- Minimum Illumination:
 - Color: 0.035 lux @ F1.4
 - B/W: <0.005 lux @ F1.4
 - 0 lux with IR illumination on
- Pan Range: 353°
- Tilt Range: 75°
- Rotation Range: 350°
- Video Compression: H.265, H.264, MJPEG
- Maximum Frame Rate: 20fps @ 2560x1920
- Maximum Streams: 3 video streams
- S/N Ratio: 61dB
- Dynamic Range: 120dB
- Network Protocols: 802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMPv3, IPv4, IPv6, NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS 1.2, UDP, UPnP
- Network Interface: 10 Base-T/100 Base-TX Ethernet (RJ-45)

26. 8-Channel Network Video Recorder for monitoring

- LiveView Display: 8 Channels
- Video Output: HDMI x1, VGA x1
- Display Resolution (HDMI): 3840x2160, 1920x1080, 1280x720
- Display Resolution (VGA): 1920x1080, 1280x720
- Video
 - Video Format: H.265, H.264, MJPEG
 - Graphic Decoder: Hardware Decoder
 - Decoding Resolution: Up to 7680x2560
- Network
 - Ethernet: 10/100/1000Mbps (RJ-45) x2
 - Network Throughput Total: Input/Output 224Mbps
 - PoE: 802.3at/af compliant PoE ports x 8 (Total Power: Max. 120W)
 - Protocols:
 - IPv4, IPv6, TCP/IP, HTTP, HTTPS, UPnP, RTSP/RTP/RTCP, SMTP, FTP, DHCP, NTP, DNS, DDNS
- Camera Integration: ONVIF Profile S

27. LCD Monitor

- Screen Size: 27 inch
- Maximum Resolution: 1920 x 1080
- Brightness: 300 cd/m² (typical)
- Aspect Ratio: 16:9
- Contrast Ratio: 1300:1
- Backlight: WLED
- Viewing Angle: 178° / 178°
- Stand: Tilt (-5° / 22°)
- Color Coverage: 99% sRGB
- Color Depth: 8-bit
- Color Support: 16.7 Million
- Connection:
 - 2 x HDMI 1.4
 - 1 x VGA
 - 1 x Audio Out (3.5mm)
- Kensington Lock: Yes

Section 4: Live Streaming System

28. Video Streaming Encoder Appliance

- Video Format
 - (HD) 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
 - (HD) 1080i 50, 59.94, 60
 - (HD) 720p 50, 59.94, 60
 - (SD) 525i, 625i
- Video Codec Support
 - H.264/MPEG-4(part 10) Encoder
- Video Encoding Parameters
 - 100 kbps to 20 Mbps.
 - Bit rate may be set independently for Encoder 1 and Encoder 2.
 - Up to 1080p60
 - Supports Baseline, Main and High Profiles
- Audio Encoding Parameters
 - 32 kbps to 256 kbps
 - 48 kHz 2-channel stereo
 - MPEG-4 AAC-LC
- Protocols
 - RTMP
 - RTMPS
 - RTMPT
 - RTMPE
 - RTMPTE
 - RTMPTS
 - RTSP
 - HLS RTP-TS/UDP-TS Unicast and Multicast
 - SRT (caller mode).
- Storage
 - 1x USB port (USB 2.0 and USB 3.0 media, exFAT or FAT32)
 - 1x SD card slot, SD, SDHC, SDXC cards (exFAT)
 - Mounted Network Share (SMB or NFS)

- Video Input Digital
 - 1x 3G-SDI, SMPTE-259/292/296/424, 10-bit
 - Single Link 4:2:2 (1x BNC)
 - 1x HDMI Standard Type A connector
 - HDMI v1.4a, RGB or YCbCr
- Video Output Digital
 - 1x 3G-SDI, SMPTE-259/292/296/424, 10-bit
 - Single Link 4:2:2 (1x BNC)
 - 1x HDMI Standard Type A connector
 - HDMI v1.4a, RGB or YCbCr
- Audio Input Digital
 - 2-channel, 24-bit SDI embedded audio, 48 kHz sample rate, synchronous
 - 2-channel, 24-bit HDMI embedded audio, 48 kHz sample rate, synchronous
- Audio Input Analog
 - 2-channel, Analog
(-10dBV Line Level, Unbalanced stereo 1x 3.5mm TRS connector)
- Audio Output Digital
 - 2-channel, 24-bit SDI embedded audio, 48 kHz sample rate, synchronous
 - 2-channel, 24-bit HDMI embedded audio, 48 kHz sample rate, synchronous
- Audio Output Analog
 - 2-channel, Analog (Line Level, Unbalanced stereo 1x 3.5mm TRS connector)
- Network Interface
 - 10/100/1000 Ethernet (RJ-45)
 - Embedded web server for Configuration and Control

29. Live Streaming Switcher

- Video Input Interface: 8x HDMI Type A
- Video Output Interface: 2x HDMI Type A
- Audio Input Interface: 2x 3.5mm Stereo mini jack
- Audio Output Interface: 1x 3.5mm Stereo mini jack
- Network Interface: 10/100/1000 BaseT
- USB Interface: 2 x USB Type C 3.1 Gen 1
- HD Video Input Standards
 - 720p50, 720p59.94, 720p60
 - 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60
 - 1080i50, 1080i59.94, 1080i60
- HD Video Output Standards
 - 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60
- Video Streaming Standards
 - 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60
- Video Sampling: 4:2:2 YUV
- Color Precision: 10-bit
- Color Space: Rec 709
- Upstream Keyers: 4
- Downstream Keyers: 2
- Advanced Chroma Keyers: Up to 4
- Linear/Luma Keyers: Up to 4
- Transition Keyer: DVE only
- Total Number of Layers: 9

- Pattern Generators: 5
- Color Generators: 2
- DVE with Borders and Drop Shadow: 2
- Audio Mixer: 11 input x 2 channel mixer

30. Streaming Camera

- Sensor
 - 1/1.8inch CMOS
 - Max. Effective Pixel: 8.42M
- Zoom
 - 20x Optical
 - 16x Digital
- Focal Length: f = 6.25-125mm
- Aperture: F1.58 – F3.95
- Shutter: 1/30s – 1/10000s
- Minimum Illumination: 0.5 Lux @ F1.8
- Resolution
 - HDMI
 - ✧ 4K/60, 4K/50, 4K/25, 4K/59.94, 4K/29.97
 - ✧ 1080p/60, 1080p/50, 1080p/59.94, 1080p/30, 1080p/29.97
 - ✧ 1080i/60, 1080i/50, 1080i/59.94, 1080i/30, 1080i/29.97
 - ✧ 720p/60, 720p/59.94
 - 3G-SDI
 - ✧ 1080p/60, 1080p/50, 1080p/59.94, 1080p/30, 1080p/29.97, 1080p/25
 - ✧ 1080i/60, 1080i/50, 1080i/59.94
 - ✧ 720p/60, 720p/59.94
- Horizontal Rotation Range: $\pm 170^\circ$
- Vertical Rotation Range: $-30^\circ - +90^\circ$
- Pan Speed Range: $1.7^\circ - 100^\circ /s$
- Tilt Speed Range: $1.7^\circ - 69.9^\circ /s$
- H & V Flip: Support
- Audio In Interface: 1 x 3.5mm Stereo Jack Female
- Audio Out Interface: 1 x 3.5mm Stereo Jack Female
- Control Interface: RS-485, RS-232
- Network Interface: RJ-45
- Video Output Interface:
 - 3G-SDI x 1
 - HDMI x 1
- USB Interface: USB 3.0 Type C Female x 1

31. Remote Controller for Streaming Camera

- Compatible with Item 18
- Joystick with zoom/focus lock for single hand operation
- Quick control of exposure, shutter speed, iris, compensation, white balance, focus, pan, tilt, zoom
- Network Interface: RJ-45
- Support PoE and 12V DC power supplies

32. HDMI Video Signal Extender

- Extend HDMI Signal up to 120m (4K/2K), 150m (1080p) via CAT6 cable
- Support Power Over Cable (PoC)
- Transmitter x 1

- Input
 - ✧ 1 x HDMI Type A Female
- Output
 - ✧ 1 x HDMI Type A Female
 - ✧ 1 x HDBT Out (RJ-45, 8-pin female)
- Control
 - ✧ 1 x IR In (3.5mm Stereo Mini-jack)
 - ✧ 1 x IR Out (3.5mm Stereo Mini-jack)
 - ✧ 1 x RS-232 (Phoenix jack)
 - ✧ 1 x Service Port (Mini-USB)
- Receiver x 1
 - Input
 - ✧ 1 x HDBT In (RJ-45, 8-pin female)
 - Input
 - ✧ 1 x HDMI Type A Female
 - ✧ 1 x Audio Out (3.5mm Stereo Mini-jack)
 - Control
 - ✧ 1 x IR In (3.5mm Stereo Mini-jack)
 - ✧ 1 x IR Out (3.5mm Stereo Mini-jack)
 - ✧ 1 x RS-232 (Phoenix jack)
 - ✧ 1 x Service Port (Mini-USB)
- HDCP Compliance: HDCP 2.2 / HDCP 1.4
- Video Bandwidth: 18Gbps
- Video Resolution:
 - 4K2K 50/60Hz 4:4:4
 - 4K2K 50/60Hz 4:2:2
 - 4K2K 50/60Hz 4:2:0
 - 4K2K 30Hz 4:4:4
 - 1080p, 1080i, 720p, 720i, 480p, 480i All HDMI 3D TV formats
 - All PC resolutions including 1920 x 1200
- Color Space: RGB / YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
- Color Depth:
 - 8/10/12-bit (1080P60Hz, 4K30Hz, 4K60Hz YCbCr 4:2:2/4:2:0)
 - 8-bit (4K60Hz 4:4:4)
- HDMI Audio Format:
 - LPCM 2.0/2.1/5.1/6.1/7.1
 - Dolby Digital
 - Dolby TrueHD
 - Dolby digital Plus (DD+)
 - DTS-ES
 - DTS HD Master, DTS HD-HRA
 - DTS-X
- L/R Audio Format: PCM 2.0
- Power Supply
 - Input: AC 100 - 240V 50/60Hz
 - Output: DC 24V/1A
 - Locking connector
- Housing: Metal Enclosure

Part B: Installation Work

- (a) The contractor shall commence the actual site work from 2nd December, 2024 and complete the work on or before 3rd January, 2025.
- (b) The contractor shall give the list of external workers to the school for registration before the start of actual site work.
- (c) The contractor shall propose the design of the lighting system, projection system, monitoring system and streaming system to fulfil School's requirements.
- (d) The contractor shall propose all equipment to fulfil School's requirement.
- (e) The contractor shall propose a project time schedule to School.
- (f) The contractor shall dismantle all obsolete equipment and remove all unused wiring and conduit.
- (g) The contractor shall make sure all electrical works has to be done by Registered Electric Workers. School representative reserves the right to check such certificates before electrical work starts and reject workers with no such certificates to carry out the work.
- (h) The contractor shall retain existing light bars to install new lighting fixtures and install TWO (2) new light bars to fulfil School's requirements.
- (i) The contractor shall prove Truss Tube's diameter, thickness, material to School before installation of the New Light Bar.
- (j) The contractor shall replace existing VGA source input panels with HDMI source input panels for the projection system. Input panels' location: Stage Left x 1, Front of Hall x 1, Control Room x 2 (Total: 4).
- (k) The contractor shall make sure the projection system is compatible with school's current equipment.
- (l) The contractor shall supply and install all necessary cables, panels with PVC conduits to fulfil School's requirements.
- (m) The contractor shall use matt black paint to paint all PVC conduits installed at the stage.
- (n) The contractor shall install and mount all new equipment to the designated location.
- (o) The contractor shall make all necessary configuration work to complete all systems
- (p) The contractor shall clean and dispose all unnecessary items and cleanup work area during installation work.
- (q) The contractor shall perform UAT with school representatives after installation work is completed.
- (r) The contractor shall provide one-time user training on operating the equipment.
- (s) The contractor shall provide a report to the School after installation is completed. The report shall include the following items:
 - Equipment Inventory List
 - Drawings to show the final design of the Lighting System.

Part C: Policy of Insurance and Compensation

- (a) The Contractor shall effect a policy of insurance at least HK\$10,000,000.00 against all claims, demands or liability under the Contract with an insurance company approved by School (which approval shall not be unreasonable withheld) and shall continue such insurance during the continuance of the Contract and shall when required, deposit with the School Representatives for safe keeping during the Contract Period such policy of insurance together with the receipt of payment of the current premium.
- (b) If the Contractor shall fail to effect and keep in force the insurance referred to or any other insurance which he may be required to effect under the terms of the Contract then and in such cases School may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by School as aforesaid from any moneys due or which may become due to the Contractor or receive the same as a debt due from the Contractor.
- (c) In the event of any of the Contractor's employees or agents suffering any injury or death in the course of or arising out of Contract and whether there be a claim for compensation or not, the Contractor shall within 7 clear working days give notice in writing of such injury or death to the School Representative.

Part D: Maintenance

The Contractor shall provide **1-year free on-site warranty maintenance** from the date of acceptance including the details of the following:

- (a) To provide 1-year free on-site warranty maintenance for the Lighting System, Projection System, Monitoring System and Streaming System including labour, repair service and replacement of defective parts (except for abnormal use leads to damage).
- (b) To render repair services for genuine approval parts and materials; provide the replacement, clearance or repairing for the defective parts and materials which is under warranty period and normal use, while the product is out of order and verified by the company.

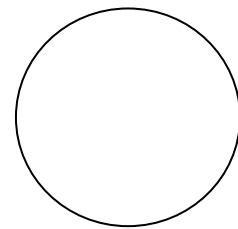
**TENDER FOR THE SUPPLY AND INSTALLATION OF
SCHOOL HALL EQUIPMENT ENHANCEMENT WORK**

STATEMENT OF COMPLIANCE

A supplier shall confirm whether its tender submitted complies fully with the essential requirement in the Terms of Tender and all the requirements in the Technical Specifications by putting a “✓” in the box below. In accordance with Clause 9 of Terms of Tender, a supplier shall **complete and submit this Statement of Compliance before the Tender Closing Date and time**. Failing which, its tender **will not be considered** further.

<input type="checkbox"/>	Yes	Our / My tender complies fully with the essential requirement in the Terms of Tender and all the requirements in the Technical Specifications.
<input type="checkbox"/>	No	Our / My tender does not comply with the essential requirement in the Terms of Tender and all the requirements in the Tender Specifications. Note: Tender that fails to comply with the essential requirement in the Terms of Tender and all the requirements in the Tender Specifications will be disqualified and will not be considered further.

Name of Supplier:



Company Chop

Name and Signature of Person authorized to sign Tender

Name (in block letters):

Signature:

Date: _____

THE SUPPLY AND INSTALLATION OF
SCHOOL HALL EQUIPMENT ENHANCEMENT WORK
For St. Peter's Secondary School
At 21 Aberdeen Reservoir Road, Hong Kong

Tender Reply Label

CONFIDENTIAL
(Tender Document)

Tender Box
General Office, St. Peter's Secondary School,
21 Aberdeen Reservoir Road, Hong Kong.

Tender Ref.: T2425-001

Tender for the
THE SUPPLY AND INSTALLATION OF
SCHOOL HALL EQUIPMENT ENHANCEMENT WORK
for St. Peter's Secondary School

Tender Closing Date: **4:00p.m. 28th October, 2024**