

**中華基督教會燕京書院**  
**供應學校 Wi-Fi 設置和訂閱服務（36 個月）**  
(投標商不可在投標文件封面上顯示 貴公司的身份)

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學校檔號： WiFi900\_2026-29

日期： 15/12/2025

執事先生：

**承投供應學校 Wi-Fi 設置和訂閱服務（36 個月）**

本校招商承投供應學校 Wi-Fi 設置和訂閱服務（36 個月），服務合約期由 2026 年 7 月 4 日至 2029 年 7 月 3 日，特此誠邀各承辦商按以下所列各項要求提交投標書。

1. 投標表格及其他交回之附件必須正本一式兩份，否則投標資格會被取消，並放置信封內封密。信封面應清楚註明：

承投供應學校 Wi-Fi 設置和訂閱服務（36 個月）項目投標書

投標書應寄往青衣牙鷹洲街12號中華基督教會燕京書院校務處，並須於 2026 年 1 月 9 日中午十二時前送達上述地址，逾期的投標，概不受理。若截標當天上午九時至中午十二時期間，天文台發出黑色暴雨警告或八號或以上颱風信號，截標時間將順延至下一個工作天(星期六、星期日和公眾假期除外)中午十二時。並請注意投標信封面不得寫上投標者的身分。投標者如在密封信封上披露身份，投標資格會被取消。投標書有效期為180天，由上述截標日期起計。如在該180天內仍未接獲訂單，則是次投標可視作落選論。另請注意，每位投標者只可對本項目遞交一次及一式之標書，而投標者亦必須填妥投標表格第III部分及投標附表內容，否則標書概不受理。

2. 各投標表格及附件內容，如需修改，必須用原子筆畫線刪去錯處，並在旁更正，及加上負責人簽名與公司印章，茲證明投標者核實修改內容。並請留意同一內容不能多於一次修改，如有需要，請投標者於標期內登入本校網頁：[www.yenching.edu.hk](http://www.yenching.edu.hk) 下載相關的標書文件及表格重新填寫。投標者不可使用塗改液或改錯帶覆蓋內文，如有違規，投標書將被作廢。

3. 承辦商如需實地視察及查詢標書內容，請於**2025年12月19日上午10時正到達本校E603室**出席標書簡介會，如有預約或疑問，可致電本校與校務處譚小姐查詢(電話：2387 9988)。

4. 倘 貴公司未能或不擬投標，亦請盡快把投標表格寄回上述地址，並列明不擬投標的原因。
5. 學校邀請招標承投所需物品/服務時，會以「整批」或「部分」形式考慮接受供應商的投標。本校有權選取任何一份或部份標書，而不限於最低價格者。
6. 為確保服務質素，請注意下列各項：
- (a) 若事先未獲法團校董會書面同意，承辦商不得分判、轉讓或出讓或處置合約或其任何部分或下述任何權利及義務。
  - (b) 若事先未獲法團校董會書面同意，承辦商不得就履行合約的任何部分，與任何人訂立任何分判合約。如承辦商認為有需要分判部分工作或服務，承辦商便必須提交建議的分判合約予法團校董會審批。法團校董會保留權利批准分判，以及決定合約的條款及條件。
  - (c) 若承辦商即使就履行合約的任何部分訂立分判合約，仍須承擔全部責任，不可免除下述任何義務，並須就次承辦商、其僱員及代理人的作為、失責或疏忽行為負責。
7. 投標者付予受其僱用以執行合約的本地工人的每月工資如低於香港政府所訂的最低工資，可導致合約無效。學校亦可取消批出的合約，而競投人須為學校所蒙受的任何損失或損害負上法律責任。
8. 承辦商若因服務所需安排工作人員提供服務，須為其工作購買合適保險。
9. 競投人、其僱員及代理人不得向學校僱員、法團校董會成員，或負責考慮與本合約相關事宜的有關委員會的任何家長或學生代表提供利益(香港法例第 201 章《防止賄賂條例》所界定的「利益」)。競投人、其僱員或代理人向有關人士提供任何利益，根據《防止賄賂條例》可構成罪行，並可導致合約無效。學校亦可取消批出的合約，而競投人須為學校所蒙受的任何損失或損害負上法律責任。
10. 根據本校政策，屬下教職員在未獲得學校法團校董會之特別批准前，不得在執行校務時索取或收受任何禮物、金錢或其他形式的利益，如有違反，會遭受紀律處分，而本校亦會考慮向廉署舉報，假若 貴公司遇有本校教職員索取利益，請盡快通知本人。
11. 評審過程中，可能需要邀請投標者派員向本校教務委員會講解及闡釋投標書內所列內容，但評核仍以投標書內容為準。
12. 本校只接受以公司名義者投標，並須持有有效商業登記證。請附上該有效登記證副本作參考。

- 13.本校將考慮投標者所提供之服務質素為重點，並保留選擇供應商/承辦商之最終決定權。任何投標表格及有關文件一概不會發還。
- 14.投標者必須確保擬備標書的過程並無涉及與任何其他人士就價格、入標程序或任何標書條款等，作任何協議、安排、溝通、諒解、許諾或承諾（下文的不合謀投標確認書第3段中所述者除外）。如任何投標者違反本條款，本校保留將該名投標者提交的標書作廢及追討損害賠償的權利。
- 15.圍標本質上違反競爭條例，在《競爭條例》（第619章）下屬嚴重反競爭行為。從事圍標行為的投標者或須根據《競爭條例》承擔被判處罰款的法律責任及其他制裁。
- 16.投標者在提交標書時，須連同一份由其獲授權人士簽署的不合謀投標確認書，提交予本校。
17. 如供應商/承辦商觸犯以下條款，基於國家安全理由，校方有權取消供應商／承辦商的資格和終止相關合約：

- (a) 即使報價／招標文件中有任何相反的規定，校方保留以供應商／承辦商曾經、正在或有理由相信供應商／承辦商曾經或正在作出可能構成或導致發生危害國家安全罪行的行為或活動為由，取消其供應商／承辦商資格的權利，又或為維護國家安全，或為保障香港的公眾利益、公共道德、公共秩序或公共安全，而有必要剔除有關供應商／承辦商。
- (b) 若出現下列任何一種情況，校方可立即終止合約：
  - (1) 承辦商／承辦商曾經或正在作出可能構成或導致發生危害國家安全罪行或不利於國家安全的行為或活動；
  - (2) 繼續僱用承辦商／承辦商或繼續履行合約不利於國家安全；或
  - (3) 學校合理地認為上述任何一種情況即將出現。

中華基督教會燕京書院

校長

謹啟

夏麗珠

2025 年 12 月 15 日

## 投標表格

承投 供應學校 Wi-Fi 設置和訂閱服務（36 個月） 項目

學校名稱及地址：中華基督教會燕京書院 青衣牙鷹洲街 12 號

學校檔號：WiFi900 2026-29

截標日期 / 時間：2026 年 1 月 9 日 中午十二時正

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### 第 I 部份

下方簽署人願意按照正式訂單上訂明的日期及所列的價格，包括勞工、材料及其他所有費用，以及校方所提出的細則，提供投標附表上所列項目的服務。下方簽署人知悉，所有未經特別註明的項目，均須按照該細則的規定提供服務；投標書由上述截標日期起計 180 天內仍屬有效；校方不一定採納索價最低的投標書或任何一份投標書，並有權在投標書有效期內，採納某份投標書的全部或部份內容。下方簽署人亦保證其公司的商業登記及僱員補償保險均屬有效，而其公司所提供的服務不會損壞學校的校舍。

### 第 II 部分

#### 再行確定投標書的有效期

有關本投標書的第 I 部分，現再確定本公司的投標書有效期由 2026 年 1 月 9 日起計為 180 天。

下方簽署人亦同意，投標文件的有效期限一經再行確定，其公司就該事項註明於投標表格內的預印條文，即不再適用。

### 第 III 部分

#### 維護國家安全

下方簽署人確認即使報價／招標文件中有任何相反的規定，學校保留以其公司曾經、正在或有理由相信其公司曾經或正在作出可能構成或導致發生危害國家安全罪行的行為或活動為由，取消其公司資格的權利，又或為維護國家安全，或為保障香港的公眾利益、公共道德、公共秩序或公共安全，而有必要剔除其公司。

下方簽署人確認若出現下列任何一種情況，學校可以立即終止合約：

- (i) 其公司曾經或正在作出可能構成或導致發生危害國家安全罪行或不利於國家安全的行為或活動；
- (ii) 繼續僱用其公司或繼續履行合約不利於國家安全；或
- (iii) 學校合理地認為上述任何一種情況即將出現。

日期： \_\_\_\_\_ (年/月/日)

姓名： \_\_\_\_\_ 先生/女士 (請以正楷填寫)

簽署： \_\_\_\_\_ 職銜： \_\_\_\_\_  
(請註明職位，例如董事、經理、秘書等)

上方簽署人已獲授權，代表：

\_\_\_\_\_ 公司簽署投標書，該公司在香港註冊的辦事處

地址為： \_\_\_\_\_

電話號碼： \_\_\_\_\_ 傳真號碼： \_\_\_\_\_

投標附表 (Part 1 - Part 4)

(須填妥一式兩份) (空白表格須由供應商填寫)

**PART 1 : Background, Objective and the Whole Design**

***a) Background & Objective***

- 1) The School will enhance / top up the IT infrastructure so as to set up the necessary Wi-Fi environment in the school premises (full Wi-Fi coverage in required classrooms, see appendix for details) for supporting e-learning in class.

***b) The Whole Design***

- 1) A contractor will be hired to design, build, operate and maintain the whole Wi-Fi infrastructure; and to pay for the service by subscription thereafter, through a subscription model, for a period of 36 months.
- 2) The setup need to make good use of school existing Wi-Fi equipments and devices so as to lower the cost and be more environmental friendly. If used, must fully integrate the devices to the newly established Wi-Fi System. (Remark : Integrate in terms of connection, AP management and monitoring)

i. School Existing Wi-Fi equipments and devices

☆ 66 AP rent from other contractor (Wi-Fi 900 Network)

✧ Coverage areas:

✧ Classrooms

▲ Main Building

- 1/F : E101, E103, E104, E105, E106, E107
- 2/F : E201, E203, E204, E205, E206, E207
- 3/F : E301, E303, E304, E305, E306, E307
- 4/F : E401, E403, E404, E405, E406, E407
- 5/F : E501, E503, E504, E505, E506, E507
- 6/F : E601, E603, E605, E606

✧ Special Rooms

▲ Main Building

- G/F : E001 General Office, E010, E015, E016, Lobby,
- 1/F : N101, N102, S101, S102, S103, School History Gallery
- 2/F : Hall, N201, N202
- 3/F : N301, N303, N304
- 4/F : N401, N402
- 5/F : N501, N503
- 6/F : N601, N602
- 7/F : E701, E703 Staff Room, N701A, N701B

▲ Open Area

- G/F : Cover Playground

- G/F : Playground 1
- G/F : Playground 2

## **PART 2 : Standard Provision**

Specifications of Standard Provision of School Wi-Fi Setup & Subscription Services (36 months)

### **a) Basic / Minimum Specification**

<b>Item</b>	<b>General Description</b> (For details, please refer to Annex 1)	<b>Applicable</b> (Yes / No)	<b>If not, please provide detail</b>
<b>1</b>	<b><i>Wi-Fi services starts</i></b> ☆ 04 July 2026		
<b>2</b>	<b><i>Wi-Fi subscription period</i></b> ☆ 36 months, starting from 04 July, 2026		
<b>3</b>	<b><i>Wi-Fi Standard and Coverage</i></b> ☆ use Wi-Fi 6 or Wi-Fi 7 network or above in a standard classroom. The minimum number of classrooms to be covered shall be at least equal to the number of approved classes for the 2025/26 school year, that is 24 classrooms. ☆ Classrooms ◇ Main Building ▲ 1/F. : E101, E103, E104, E105, E106, E107 ▲ 2/F. : E201, E203, E204, E205, E206, E207 ▲ 3/F. : E301, E303, E304, E305, E306, E307 ▲ 4/F. : E401, E403, E404, E405, E406, E407 ▲ 5/F. : E501, E503, E504, E505, E506, E507 ▲ 6/F. : E601, E603, E605, E606 ☆ Special Rooms ◇ Main Building ▲ G/F. :General Office, E010, E015, E016, Lobby ▲ 1/F. : N101, N102, S101, S102, S103, School History Gallery ▲ 2/F. : Hall, N201, N202 ▲ 3/F. : N301, N303, N304 ▲ 4/F. : N401, N402		



	<ul style="list-style-type: none"> <li>▲ 5/F. : N501, N503</li> <li>▲ 6/F. : N601, N602</li> <li>▲ 7/F. : E701, E703 Staff Room, N701A, N701B</li> <li>◇ Open Area</li> <li>▲ G/F. : Cover Playground</li> <li>▲ G/F. : Playground 1</li> <li>▲ G/F. : Playground 2</li> </ul>		
Item	General Description (For details, please refer to Annex 1)	Applicable (Yes / No)	If not, please provide detail
4	<p><b><i>Number of Concurrent Connection per classroom</i></b></p> <ul style="list-style-type: none"> <li>☆ commensurate with maximum 40 devices in a classroom with at least Wi-Fi 6 &lt;2.5 Mbps/expected &gt; upload / download bandwidth per connection or above. The contractor shall provide a PoC to prove that the required bandwidth can be supported for 500 devices at the same time before tender award</li> </ul>		
5	<p><b><i>Number of classrooms using Wi-Fi concurrently</i></b></p> <ul style="list-style-type: none"> <li>☆ 24 classrooms</li> </ul>		
6	<p><b><i>SSID &amp; Authentication Method</i></b></p> <ul style="list-style-type: none"> <li>☆ Support Multiple SSID co-exist through an AP</li> <li>☆ Different SSID can have different authentication method</li> <li>☆ Authentication method : Support MAC address filter (School can have the ability to add / edit / remove MAC address permit / deny to Wi-Fi connection)</li> <li>☆ Authentication method : use 802.1x standard based authentication and Hong Kong Education City single sign-on services</li> </ul>		
7	<p><b><i>Session Control</i></b></p> <ul style="list-style-type: none"> <li>☆ Hong Kong Education City authentication service can support one device or multiple devices to connect based on user group</li> </ul>		

	(student, teachers)		
8	<p><b><i>Internet Content Filtering Service</i></b></p> <ul style="list-style-type: none"> <li>☆ Cloud based Internet Content filtering profile in Hong Kong commonly adopted by most schools with ability to create black / White list filters and managed by vendors and school.</li> </ul>		
9	<p><b><i>Relationship with Existing Network Infrastructure and Facilities</i></b></p> <ul style="list-style-type: none"> <li>☆ not rely on any existing network facilities and cabling of the School, nor interfere with the existing Wi-Fi network of the School. The Wi-Fi network shall be physically separated from the school network</li> <li>☆ provide independent physical firewall for the Wi-Fi network for controlling and securing the network traffic in and out the network</li> <li>☆ if school existing trunks / conduits do not have enough space, new trunks / conduits are required to install for the connection</li> <li>☆ if school existing floor cabinets (racks) do not have enough space, new racks are required to install for the network connecting devices and related equipments</li> <li>☆ All new trunks, conduits and cabinets are required to compromise with school re the installation / mounting before actual installation / mounting</li> </ul>		
<b>Item</b>	<b>General Description</b> (For details, please refer to Annex 1)	<b>Applicable</b> (Yes / No)	<b>If not, please provide detail</b>
10	<p><b><i>Broadband Network</i></b></p> <ul style="list-style-type: none"> <li>☆ use separate broadband for the Wi-Fi service</li> <li>☆ supplier should provide independent fibre access for the Internet connection of the Wi-Fi network</li> <li>☆ provide at least 1Gbps Internet connection</li> </ul>		

	<p>at school for the Wi-Fi service and allowing upgrade to 2Gbps</p> <p><i>if counter-propose other Internet connection method instead of providing independent Broadband, please specify clearly</i></p>		
11	<p><b><i>Managed Service</i></b></p> <ul style="list-style-type: none"> <li>☆ operate the Wi-Fi network and the dedicated broadband line, using managed service model, by a self-owned network operation centre with international quality management, IT service management and information security certification grant, provide end-to-end service with single point of contact including configuration, provisioning of service, proactive monitoring, maintenance and regular reporting</li> </ul>		
12	<p><b><i>Service Level Agreement</i></b></p> <ul style="list-style-type: none"> <li>☆ ensure at least 99.7% availability of the Wi-Fi services</li> <li>☆ support four-hour response time and four-hour service recovery with active monitoring and helpdesk support</li> <li>☆ Services can be provided both remotely and onsite (if necessary)</li> <li>☆ support hours from Mon to Sat 08:00 am to 6:00 pm</li> <li>☆ provide monthly monitoring reports for the School</li> </ul>		
13	<p><b><i>Contract End Arrangement</i></b></p> <ul style="list-style-type: none"> <li>☆ All provisions of trunks, conduits, cables, LAN ports and power points shall be considered as fixture of the School and shall become the property of the School, the Contractor shall remove or keep those provisions according to the instruction of the School</li> <li>☆ Contractor can remove the network equipment such as switch, routers, and access points</li> </ul>		

### **PART 3 : Add-on Provision**

Specifications of Add-On Provision of School Wi-Fi Setup & Subscription Services (36 months)

#### **a) Basic / Minimum Specification**

<b>Item</b>	<b>General Description</b> (For details, please refer to Annex 1)	<b>Applicable</b> (Yes / No)	<b>If not, please provide detail</b>
<b>1</b>	<b><i>Additional Wi-Fi Coverage &amp; Number of Concurrent Connection</i></b> ☆ Special Rooms ◇ Main Building ▲ G/F : Conference Room inside Cover Playground (40 connections) ▲ 8/F : E801 (40 connections), E802 (40 connections), E803(40 connections)		
<b>2</b>	<b><i>Authentication Method</i></b> ☆ Authentication method shall includes WPA2 Enterprise, WPA3, OAuth 2.0 and well as MAC address filtering and user account system being used by school, etc.		
<b>3</b>	<b><i>Others are same as Part 2</i></b>		

## **Part 4 : Pricing Scheme, Site Visits, related information**

### **Pricing Scheme**

School is looking for a financial scheme for

<b>Part</b>	<b>Pricing (HKD)</b>	<b>Remark</b> (like any deviation of your provided system from school specification expectation)
<b>Part 2 : Standard Provision</b>	(i) Wifi 6 Solution:	
	(ii) Wifi 7 Solution:	
<b>Part 3 : Add-on Provision</b>	Item 1: Additional Wi-Fi Coverage & Number of Concurrent Connection	
	Item 2: Authentication Method	

- The Service Provider is required to provide a breakdown on the service charges for each of the service items above. Failure in complying with this requirement may render the tender disqualification.
- Set up cost will not be considered as a part of the cost in subscription mode

### **Information to be provided by Service Provider**

The Service Provider is required to submit the following information and document

- A Statement of Compliance to provide response that the quotation complies with all requirements stated in this Specification.
- No upfront cost or one off cost schools shall be paid throughout the entire subscription period.
- Proposed AP location mark on the Floor plan.
- Proposed Network infrastructure show on the Network Diagram.
- Implementation Plan.
- WiFi Access Point certificates issued by OFCA.

- Quantity and Model of the following equipments and devices by filling in the table below :

<b>Equipments and devices</b>	<b>Quantity</b>	<b>Model</b>
WiFi Controllers		
Access Points		
Router/Firewall		
Core Switch		
Access PoE Switches		
LAN Cables		
Others (please specify)		

- Product information including technical and descriptive literature and catalogues.  
Information provided by the manufacturer shall be able to substantiate that the products offered meet the mandatory Technical Specification.
- Details of following of all the sub-contract service involved in the proposal for the project implementation, service operation and maintenance, by filling in the table below :

<b>Name of Sub-Contractor</b>	<b>Sub-contract service</b>	<b>Roles and responsibility</b>

- Will the new Wi-Fi System establishment use school existing Wi-Fi equipments (as stated in Part 2) :

<b>Will the new Wi-Fi System establishment use school existing Wi-Fi equipments (Y / N) ?</b>	
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**Site Visit(s):**

- Site visit will be arranged at 2025-12-19 (Fri) AM 10:00 . Interested parties please registered at 2387 9988 (Ms. Tan) for the site visit.
- Q&A raised at the site visit will not be posted out for others reference

### **Selection criteria**

School is looking for a contractor based on the following criteria

- Proposed pricing fit with school budget
- Solution suitability to school
- Equipment and services level that can offer
- Case reference
- Other useful information

### **Terms of Payment**

The subscription will be paid in arrears of each month during the subscription period.

#### **注意事項：**

1. 以上各項必須由承辦商提供安裝、測試及送貨服務。
2. 承投標書之公司必須持有相關工程所需之牌照，如電牌、小型工程註冊証證明，標書亦需連同相關證明之副本文件交回。
3. 請在標書中附加近五年的工作參考，並填妥上表，否則該標書將不獲考慮。另如有附注，請另紙詳列。
4. 請提供有關產品及裝修物料詳細資訊。

本公司/本人明白，如收到學校訂單後未能供應投標書上所列服務，須負責賠償學校從另處採購上述服務的差價。

投標者：

\_\_\_\_\_



公司印鑑

獲授權簽署投標書的代表的姓名及署名：

姓名： \_\_\_\_\_ 先生/ 女士 簽署： \_\_\_\_\_  
(請以正楷填寫)

日期： \_\_\_\_\_

## 不合謀投標確認書

致：中華基督教會燕京書院

敬啟者：

### 承辦供應學校 Wi-Fi 設置和訂閱服務（36 個月）項目 的不合謀投標確認書

1. 我們\_\_\_\_\_（投標者姓名／名稱），  
地址：\_\_\_\_\_  
（投標者地址），現就是次招標有關合約及我們就是次招標所作的投標  
作出以下陳述。

#### 不合謀

2. 我們就是次招標作出如下陳述及保證：
- (a) 我們的標書乃真誠、獨立地撰寫，而提交標書的用意是於獲批合約時履行有關合約；
  - (b) 我們擬備標書，並無與任何人士（包括任何其他投標者或競爭對手）就下列事項作出協議、安排、溝通、諒解、許諾或承諾：
    - i) 價格；
    - ii) 計算價格所用的方法、因素或公式；
    - iii) 入標或不入標的意向或決定；
    - iv) 撤回投標的意向或決定；
    - v) 提交不符合是次招標要求的標書；
    - vi) 是次招標涉及的產品或服務的質素、數量、規格或交付詳情；及
    - vii) 標書的條款；而我們亦承諾，在有關合約批出之前，我們不會作出或從事上述任何行為。
3. 與下列各方的協議、安排、溝通、諒解、許諾或承諾，不受本確認書 2(b) 段所限：
- (a) 中華基督教會燕京書院；
  - (b) 聯營企業夥伴，而中華基督教會燕京書院亦獲通知有關聯營安排的情況；
  - (c) 顧問或分判商，但有關溝通必須嚴格保密及只限於促成該特定顧問安排或分判合約所需的資料；



- (d) 專業顧問，但有關溝通必須嚴格保密及只限於供該名顧問就是次招標提供其專業意見所需的資料；
- (e) 為獲得保險報價而聯絡的承保人或經紀，但有關溝通必須嚴格保密及只限於促成該特定保險安排所需的資料；及
- (f) 為就有關合約獲得融資而聯絡的銀行，但有關溝通必須嚴格保密及只限於促成該次融資所需的資料。

#### **披露分判安排**

4. 我們明白，我們必須向（採購一方）披露是次招標準備作出的所有分判安排，包括在有關合約批出後才訂立的分判安排。我們保證，我們一直及將會繼續向（採購一方）妥善披露有關安排。

#### **違反或不遵守本確認書的後果**

5. 我們明白，如違反或不遵守本確認書內的任何保證或承諾，（採購一方）可運用其酌情權將我們的標書作廢、在其日後的招標中將我們剔除於招標名單以外、向我們追討損害賠償或其他形式的補救（包括但不限於因延誤、重新招標產生的成本及費用和所招致的其他成本的損害賠償），及／或終止有關合約（如我們獲批有關合約）。
6. 根據《競爭條例》，圍標屬嚴重反競爭行為。我們明白（採購一方）可運用其酌情權，向競爭事務委員會（「競委會」）舉報所有懷疑圍標的情況，並向競委會提供任何有關資料，包括但不限於我們的標書資料及個人資料。

#### **代行和代表（投標者）簽署**

簽署：

姓名：

職位：

日期：

## Technical Detail of Equipment & detail of Services

### 1. Wi-Fi Network

- 1.1. The Wireless LAN (WLAN) System of the Wi-Fi network shall support simultaneous dual-operation-mode that is FAT Access Point (AP) and Thin Access Points are both supported together with Cloud-based WLAN Controller in Managed model. Thus local Controller in school is not acceptable. The Cloud-based WLAN Controller shall be located in Hong Kong and is capable of fully centralized provisioning, configuration and monitoring all APs functionalities; a backup of the Cloud-based WLAN Controller shall be available in Hong Kong.
- 1.2. The thin client WLAN Access Point (AP) shall be a high performance wireless network access device, which shall be connected with the Power over Ethernet (PoE) Access Switches via Structured Cabling System.
- 1.3. The WLAN APs shall be compatible on Wi-Fi 6 with IEEE 802.11a/b/g/n/ac/ax standard or above, support dual band of minimum 2x2:2 in 2.4GHz and 2x2:2 in 5GHz as well as OFDMA, MU-MIMO and Internal antennas.
- 1.4. The Contractor shall design the WLAN System to provide the coverage for the required wireless coverage place. The received signal strength measurement from the Wi-Fi Service at the Wi-Fi client device (such as tablet PC or notebook computer) is no worse than -68 dBm. The Contractor shall provide certificate or test report to illustrate that the Wi-Fi client device for testing satisfies the power emission requirement.
- 1.5. The WLAN AP shall support DHCP, PoE, VLANs, WPA2, IEEE 802.1x and certificate authentication.
- 1.6. The WLAN System shall support automatic channel selection, protocol filtering, multicast/broadcast storm filtering and load balancing.
- 1.7. The WLAN system shall allow single or multiple devices per user account to be authenticated using 802.1x and Hong Kong Education City single sign-on service.
- 1.8. Each WLAN AP shall be able to support at least concurrent 40 users connecting to the network simultaneously. In no circumstance shall the speed of data transmission symmetrically fall below the data rate requirement at any place or any corner or any highly congested area within the areas being covered. In case the transmission speed is below the said data rates, the Contractor shall be responsible for all remedial measures to rectify or configure fine-tuning of antenna or even increase the quantity of the WLAN AP at Contractor's own costs in order to meet the data rate requirement as mentioned in the Specification. A complete set of catalogues with brand and model shall be submitted and highlighted for reference. The catalogues shall show all the features and technical specifications of the products and systems.
- 1.9. The system shall provide bandwidth control per connection.
- 1.10. The WLAN shall allow different authentications by using Service Set Identifiers (SSIDs).

- 1.11. The SSIDs shall be able to be set hidden from searching by Wi-Fi devices. The devices have to manually set SSID to make connection.
- 1.12. Individual APs shall be allowed to be assigned by more than one SSIDs.
- 1.13. The SSIDs shall be isolated by VLANs, so different users under different SSIDs could be bind to corresponding firewall secure policy control and integration purpose.
- 1.14. Antennas of APs shall be capable of detecting user locations in real time for direction switching while devices in motion, beam forming.
- 1.15. The DHCP server shall support at least 30 queries/sec.
- 1.16. The WLAN system shall suspend the session of the user once the session control is expired and the suspension time shall be configured by the school.
- 1.17. The Contractor shall in provision of the service comply with non-interference requirements of and shall not cause interference prohibited under the Telecommunication Ordinance (Cap 106) or any other laws or regulation of Hong Kong.
- 1.18. The WLAN System shall provide termination of idle sessions and control of the duration features.
- 1.19. The WLAN System shall support client roaming across Access Points.
- 1.20. The WLAN system shall cover all areas specified under this tender.
- 1.21. The quotation shall include the cost to provide sufficient quantity and its cabling work required, including but not limited to supply and install the Fibre optics, Cat 6 cable, Conduit, cable patch panel, cable faceplate, Cable patch cord.
- 1.22. The Contractor shall provide complete set of WLAN Systems which consist of Wireless Access Point, Connection Cable, Authentication System, Wireless LAN Controller, PoE Switch, horizontal UTP Cat 6 cable/OM3 Fiber, patch cable UTP Cat 6 / OM3 Fiber Optics, any required license and all associated accessories.
- 1.23. All access points (AP) shall be certified by OFCA and copy of certificates issued by OFCA shall be attached to the proposals.
- 1.24. The Contractor shall ensure that there is no interference between WLAN Access Points due to limited non-overlapping channels assignment when the WLAN AP is installed. The Contractor shall be responsible at his own costs for providing solution to eliminate the interferences including but not limited to reassignment of the non-overlapping channels, adding extra APs with lower transmission power and/or replacement of the WLAN AP.
- 1.25. The WLAN System shall support Web GUI management.
- 1.26. FTP service shall not be allowed in the Wi-Fi network (to avoid exchanging credential and files in plain text without any encryption).
- 1.27. The WLAN System shall support IPV6 addressing method.
- 1.28. The WLAN system deployed shall be non-Asian brand, but not limited to well-known brand in the market.
- 1.29. The contractor shall be authorized by the WLAN vendor to bid for this project to avoid any faked or low quality products are deployed. A vendor certificate shall be provided during the tender submission.

- 1.30. The contractor shall have at least 5 x certified engineers on the proposed WLAN brand for at least 6 months.
- 1.31. Those certified engineers shall be permanent staff of the contractors for at least 6 months in order to ensure the service quality on deployment and after-sales services can be maintained. The Contractor shall submit those supporting documents during tender submission.
- 1.32. The cabling deployed in the Wi-Fi network shall be non-Asian brand, but not limited to well-known brand (e.g. Systimax, AMP, Krone, Brandrex, 3M & etc...).
- 1.33. The contractor shall be authorized by the cabling vendor to bid for this project to avoid any faked or low quality products are deployed. A vendor certificate shall be provided during the tender submission.

## **2. Core Switch**

- 2.1. The Core Switch would be responsible for connecting all PoE access switches in typical floors for WLAN AP while the Core switch shall be a non PoE switch (i.e. The Access Point shall not connect to the core switch directly).
- 2.2. The Core Switch shall be capable of providing the required bandwidth, QoS, and policy-based routing to carry all sorts of information including video, voice, data, image, etc.
- 2.3. The Core switch shall not be the same equipment as the Broadband Router or Firewall. A separate core switch must be provided.
- 2.4. Each Core Switch shall provide a Gigabit Ethernet connection to each PoE Access Switch in typical floors.
- 2.5. The Core Switch shall support Layer 2 and Layer 3 switching and capable of providing the wired speed performance.
- 2.6. The Core Switch shall support basic IP unicast routing protocols, Static route, Routing Information Protocol (RIPv1, RIPv2), inter VLAN routing.
- 2.7. The Core Switch shall support Internet Group Management Protocol (IGMP) snooping and multicast and unicast storm control, Spanning-Tree Protocol.
- 2.8. The Core Switch shall support WebGUI Management, Access Control Lists (ACLs), DHCP Interface and SNMP.
- 2.9. The Core Switch shall support VLANs including support for IEEE 802.1Q and IEEE 802.1p.

## **3. PoE Access Switch**

- 3.1. The Access Switches shall be deployed to provide high performance interconnectivity between the Core Switches and the WLAN APs on typical floor.
- 3.2. The Access Switch shall consist of 8/12/24/48 x 10/100/1000Base-T Ethernet ports, with minimum of 1 x 1000Base-T / 1000Base-SX SFP Gigabit Ethernet uplink ports connected with the Core Switch.
- 3.3. The Access Switch shall be used for connecting the WLAN APs. The Contractor shall determine the Maximum power loading of the devices to be connected with the PoE Access

Switches. The Contractor shall provide additional PoE Access Switch(es) if the total power loading summed up from the PoE devices exceeds the maximum power loading capacity of the PoE Access Switch.

- 3.4. The Access Switches shall support VLAN configuration.
- 3.5. The Access Switches shall be at wired speed.
- 3.6. The Access Switches shall be provided sufficient port density to meet all the required links.
- 3.7. The Access Switches shall support PoE and shall conform to IEEE 802.af / IEEE 802.3af standard, which delivers power over single copper UTP cable for WLAN AP.
- 3.8. The Access Switches shall support Internet Group Management Protocol (IGMP) snooping and multicast and unicast storm control, IEEE 802.1D Spanning-Tree Protocol.
- 3.9. The Access Switches shall support Virtual local area network (VLANs) including support for IEEE 802.1Q and IEEE 802.1p.
- 3.10. The Access Switches shall support WebGUI Management, Access Control Lists (ACLs), DHCP Relay and SNMP.

#### **4. Firewall**

- 4.1. The performance of the Firewall shall not be degraded with 100% Internet bandwidth utilization.
- 4.2. Network Address Translation (NAT) is required.
- 4.3. Access Control Policy is required.
- 4.4. The configuration settings of the appliance shall be allowed to export to files for backup and restore for rapid recovery and shall control all incoming and outgoing Internet traffic, serving as the sole entry and exit point between the Internet and the WLANs in all locations.
- 4.5. The configuration settings of the appliance shall support blocking specific network ports, including ports of Transmission Control Protocol (TCP) and User Datagram Protocol (UDP). Blocking denial of service (DoS) attacks and malformed packet attacks shall also be configured.
- 4.6. The firewall policy should be applied to control network traffic such that public users should be prohibited to access the internal network segments of the School.
- 4.7. The router policy should be applied to shape the guest user VLAN traffic to designated bandwidth requested by School to preserve the e-learning in class which is the primary purpose of School Wi-Fi.

#### **5. Service Requirements**

- 5.1. The Contractor shall be responsible for the total project management and shall assign a person to act as the single contact point to the School regarding all related activities of the contract. This single contact point cannot be transferred to a sub-contractor unless explicitly agreed by the School. Contractor should formally inform the School in writing if there is a change of contact point.
- 5.2. The project manager of this project shall be the permanent staff of the contractor for at least 6

- months. The contractor shall prove that the project manager is the permanent staff by providing supporting documents during tender submission.
- 5.3. The project manager shall attend the project meeting before completion of the project.
  - 5.4. The Contractor shall provide rack/cabinet or use existing school rack if there is available rack space. All switches/firewall shall be properly installed into wall mounted cabinet or rack.
  - 5.5. Cables shall be labeled with connected port and its device id.
  - 5.6. All the equipment shall be labeled with an identifiable id.
  - 5.7. The placement of cables, cabinets, racks and appliances shall be shown on the network diagram.
  - 5.8. Switches and/or other appliances shall be properly installed into cabinet/rack with appropriate ventilation.
  - 5.9. 13A power cord(s) shall be bundled with appliance(s).
  - 5.10. Cable shall be properly set up onto appropriate cable management guide.
  - 5.11. Contractor should make sure that the actual environment is suitable for the installation and operation of equipment with School agreement in advance, and make necessary suggestions, if any.

## **6. Service Level Requirements**

- 6.1. The Contractor shall provide incident/problem report to the School within 5 working days after each incident and the resolution taken.
- 6.2. The Contractor shall derive mechanism, including forms and reference tables for measuring and recording the Service Level Measures, to ease the administration and monitoring by the School.
- 6.3. Advance notice by at least 2 weeks shall be given to the School prior to all scheduled maintenance. At most 4 scheduled maintenances per year are excluded from the calculation of Service Levels. No more than 1 hour service interruption or an agreed time slot is accepted for each scheduled maintenance.
- 6.4. Service Level, expressed in percentage, is the ratio of actual available time to the scheduled available time for the Wi-Fi network of the School and is calculated according to the following formula:
  - ◆ Service Availability Level = (Schedule Uptime within the month– Unscheduled Downtime within the month) / Scheduled Uptime within the month, where
    - ◇ Scheduled Uptime: The duration, in unit of minutes, for the Wi-Fi network of the School is scheduled to be available for the month. The duration will exclude the scheduled downtime, which is defined as duration agreed between the School and the Contractor during which the service may be deliberately made unavailable to users.
    - ◇ Unscheduled Downtime: The amount of time, in unit of minutes, that the service are unavailable due to equipment failure or other reasons under the responsibility of the Contractor.

## 7. Service Level Rebates

- 7.1. The Service Rebates to the School operate as liquidated damages for the performance fallen short of the target service levels over a period of one month. The service measures stipulated in 4.6 will be used to determine the Service Rebates in Service Availability (S1) and Service Resumption Time (S2).
- 7.2. The application of the Service Level Rebates adjustment to the monthly charge will commence with effective from the acceptance of the reliability test.
- 7.3. For each month, the Service Rebates for different service measures (S1, S2) will be calculated as below if the Contractor cannot meet the target Service Levels for the Wi-Fi network of the School under the availability agreed:  
**$$\text{Failure Hour} \times [(\text{Yearly Subscription Fee}) / (365 \times 24)] \times 2$$**  
*where Failure Hour: The unscheduled downtime or the time to resume the network due to the failure of hardware or software which is provided by the Contractor. Failure Hour is calculated in the increment of 0.5 Hour.*
- 7.4. The Service Rebates of the Wi-Fi network of the School, if any, will be paid by crediting the invoice of the following month.

## 8. Helpdesk Service

- 8.1. The Helpdesk Service shall maintain dedicated hotline, including phone, email and fax, for enquiries and complaints.
- 8.2. The Helpdesk Service shall answer enquiries and complaints originated from the School concerning the Service.
- 8.3. The Helpdesk Service shall operate from Mon to Sat 7:00 am to 5:00 pm.
- 8.4. The Helpdesk Service shall maintain call logs on enquiries and complaints. The information shall be included but not be limited to date, time, description of issues, contact information, and follow-up actions. The Contractor shall observe and comply with Personal Data (Privacy) Ordinance in handling all information relating to these enquiries and complaints.
- 8.5. The Contractor shall provide the following information concerning the Helpdesk service related to the implementation of the Service:
  - ◆ Detailed information of the helpdesk office, such as address, phone number, fax number; and
  - ◆ Facilities, computer systems and equipment provided in the helpdesk office, such as private branch exchange (PBX), keyline telephone system (KTS), interactive voice response system (IVRS) and voice recording system.
- 8.6. The Contractor shall provide helpdesk staff with the necessary tools, including but not limited to hardware and software, related training for supporting the Service.
- 8.7. The Contractor shall not make use of the Helpdesk Service to transmit any message or conduct any activity to the School, which is not connected with the provision of the Service. The School shall have the full discretion to determine whether any such message or activity is in breach of this provision. The Contractor shall forthwith stop transmitting such message

or conducting such activity and refrain from doing it further once the School has notified the Contractor in writing or verbally of its determination.

## **9. User Acceptance Test**

- 9.1. The Contractor shall conduct tests with the School before the service is officially accepted and subscription started. Tests shall include User Acceptance Test for reliability and performance of the hardware and software, and also the monitoring, operation support and all other aspects related to the Service Level Agreement of the Service. At least 14 school working days of trial period is expected for service monitoring after testing.
- 9.2. The contractor will be required to perform test making reference to the User Acceptance Test and System Test documents at [www.edb.gov.hk/ited/Wi-Fi900](http://www.edb.gov.hk/ited/Wi-Fi900). They include the types of testing to be performed, the requirements to be tested, the testing environment, testing tools and pass/fail criteria as reference to the Contractor.
- 9.3. The Contractor shall upon request by the School arrange briefings to the School and/or Responsible Parties of the School, with briefing materials, prior to the User Acceptance Test when required.
- 9.4. The Contractor shall provide detailed acceptance test plan and a step by step testing procedure with expected results against the requirements set out in this specification.
- 9.5. The Contractor shall provide, configure and set up the proper software and hardware for the School to carry out the User Acceptance Test.
- 9.6. The Contractor shall be required to carry out tests to demonstrate that the equipment and system meet the specification and other contractual requirements. The Contractor shall also be responsible for the timely preparation and compilation of all test schedules, test procedures and test reports.
- 9.7. The Contractor shall follow the agreed standards as laid down in this specification for the testing methods and procedures.
- 9.8. The Contractor shall submit a schedule of site performance and commissioning tests at least 3 working days prior to the commencement of the scheduled commissioning date.
- 9.9. Special tools, test equipment, test objects and simulators required for the demonstration of either bench or commissioning tests shall be made available by the Contractor at no extra charge to the School.
- 9.10. All test equipment used by the Contractor shall be properly and periodically calibrated. Measuring standards used in calibration shall be traceable to international or national measurement standards, or to an industry recognized manufacturer's reference, subject to approval of the School.
- 9.11. Calibration procedures and results shall be documented and signed by certifying body where applicable. The Contractor may be requested to show evidence of calibration of test equipment by submission of copies of these calibration records prior to conduction of any tests.
- 9.12. The Contractor shall submit the User Acceptance Test report within 3 working days. The



acceptance of the installation will only be granted after receiving a satisfactorily UAT report from the Contractor.

- 9.13. All equipment to be installed may be subject to inspection and bench testing. The Contractor shall meet the cost of deliveries for bench test. Notwithstanding, the Contractor shall have carried out the tests in accordance with the requirements and procedures stipulated in this specification and submitted the associated test reports for inspection.

## **10. Termination of Service**

10.1. The School reserves the right to terminate all or part of the Service at any time with written notice of 10 working days in advance if:

- ◆ The Contractor fails to meet the target service levels under Service Level Requirements for two consecutive months, or three months in total within the committed subscription period;
- ◆ The School suspects that unauthorized activity has occurred or is occurring in relation to the Service;
- ◆ The provision of the Service will cause the School to be in breach of any applicable law;

10.2. The Contractor shall provide to the School and implement the Exit Plan in accordance with:

- ◆ The Contractor shall provide to the School an Exit Plan with feasible arrangements before the committed subscription contract date;
- ◆ If the School considers the Exit Plan as not satisfactory, it will notify the Contractor with comments. The Contractor shall revise the Exit Plan by taking into consideration of the School's comments and provide to the School with five (5) working days after the date of receiving the School's comments. If the Exit Plan has been considered as not satisfactory for three or more times, the School shall have the right to terminate this Contract by giving 10 days' notice in writing;
- ◆ Detailed exit procedures, disengagement timetable and actions to be taken by both the Contractor and the School for smooth termination of all or any part of the Service;
- ◆ The Exit Plan shall aim at enabling the School or its authorized parties to perform in substitution for the Contractor and to eliminate or minimize any disruption or deterioration of the Service. The Exit Plan shall contain, but not limited to the following information:
  - ◇ Detailed exit procedures, disengagement timetable and actions to be taken by both the Contractor and the School for smooth termination of all or any part of the Service;
  - ◇ Any information that is necessary for the School or a new service provider to continue the provision of the Service;
  - ◇ Details of the Contractor's personnel and other resources that will assist the School or the School's authorized parties during the handover;
  - ◇ All provisions of facilities such as trunks, conduits, cables, LAN ports and power points, shall be considered as fixture of the School venues and shall become the

property of the School. The Contractor shall remove or keep those provisions according to the instruction of the School. Contractor can remove the network equipment such as switch, routers, and access points.

- ◆ The Contractor shall be responsible for the implementation and execution of the Exit Plan and shall ensure that the exit plan is carried out in a timely and orderly manner.

## **11. Wi-Fi Project Reference**

- 11.1. The Contractor shall list out 3 Wi-Fi 100 / Wi-Fi 900 reference cases with compliment letters.
- 11.2. The compliment letters shall be provided during the tender submission
- 11.3. To prove that the Contractor has the capability on Wi-Fi system design and maintenance, The Contractor shall list out 20 reference cases in non-subscription model which uses the same wireless solution vendor as the proposed brand in last 3 years while the cases in a single year shall not be less than 5.
- 11.4. The project references shall be provided during tender submission.

## **12. Sub-Contracts**

- 12.1. The Tenderer shall be the prime Contractor for all the services specified in Part X and Part Y of this contract. The Tenderer shall be the single point of contact for all contractual matters.
- 12.2. The Tenderer shall be liable for the performance or breach of any provisions of the contract by Sub-Contractors.
- 12.3. The Tenderer shall provide details of the sub-contract service for the Wi-Fi operation and maintenance of the Sub-Contractors in the format listed on Section 5 of Part Y. The hierarchy of the sub-contracting shall also be clearly stated below. If there are no Sub-Contractors, please enter nil.
- 12.4. No Sub-Contractor(s) specified in Section 5 of Part Y shall be replaced unless prior written consent has been given by the School.
- 12.5. The Tenderer shall ensure that the quality of the service rendered by the Tenderer shall not be affected due to any change of Sub-Contractors;
- 12.6. The Tenderer shall not be relieved from any of its obligations hereunder by entering into any sub-contract for the performance of any part of this contract. If request by the School, the Tenderer shall describe which part of the service shall be performed by the Sub-Contractor(s) in the sub-contract(s) between the tenderer and its Sub-Contractor(s).

## **13. Schedule of Work**

The Contractor shall provide the service according to the following schedule.

Phase	Items	Starting Date	Ending Date	Service fee
I	Build up of Wi-Fi network	On or before July 2026	3 July 2026	0
II	Subscription of service	04 July 2026	03 July 2029	Quoted price

## **14. Deliverables**

- 14.1. The Contractor is required to provide the following deliverables for the WiFi network design:

- ◆ Master Activity Plan
- ◆ Network Configuration Report and Network Diagram
- ◆ Network Test Plan and Network Test Result Report
- ◆ Operation Manual for End User
- ◆ User Acceptance Test Plan
- ◆ Exit Plan

14.2. The Contractor is required to provide the monthly monitoring report with the following items:

- ◆ Network Health Report
- ◆ Network Usage Report
- ◆ Reporting of security incidents
- ◆ Reporting on trend and statistics of incident and their analysis
- ◆ Reporting of the failure rate for all equipment with detailed fault analysis
- ◆ Problem log and incident log for critical failure of the network
- ◆ Statistical report on the type and no. of calls
- ◆ Summary of the outstanding enquiry for the month-to-date

## 評審標書評分制度 及 強制規定

本校使用本評分制度來評估標書。品質評估及價格評估會分別獲給予得分比重(50%及 50%)。評分制度包括以下四個階段：

### (1) 第一階段 - 強制規定評審階段

在第一階段，學校將會評估標書是否符合「投標附表」的所有強制規定。標書如未能符合強制規定／未有遞交所有文件正本一式兩份／在密封信封上披露身分／標書內容使用塗改液或改錯帶／在必須修改的位置未有負責人簽名及公司蓋章以核實修改之內容，將會被取消資格，不准進入第二階段接受評估。

### (2) 第二階段 - 品質評審階段

在第二階段，通過第一階段強制規定的標書會根據投標者在「投標附表」內的服務內容及範圍、經驗等進行品質評估。若最高的品質分數為：100分，而標書必須取得整體及格分數：50分，否則標書將不會繼續獲得考慮。取得及格分數的標書，其品質得分會按下列公式計算：

$$\text{第二階段得分} = 50 \times \frac{\text{該份通過第二階段評估的標書所得的品質評分}}{\text{通過第二階段評估的標書最高的品質評分}}$$

### (3) 第三階段 - 價格評審階段

在第三階段，通過第二階段評估的標書，其價格建議書會獲得評估。出價最低的標書獲得50分的最高價格得分。每份標書的價格得分按下列公式計算：

$$\text{第三階段得分} = 50 \times \frac{\text{所有通過第二階段評估的標書最低的出價}}{\text{每份通過第二階段評估的標書的出價}}$$

### (4) 第四階段 - 品質及價格合併分數階段

在第四階段，按照第二及第三階段的品質及價格評估，標書的總得分計算方法如下：

$$\text{總得分} = \text{第二階段得分} + \text{第三階段得分}$$

獲得第四階段最高總得分的標書一般會獲推薦採納。倘若第四階段有兩份或以上的標書總得分相同，學校便會根據第三階段的得分再度評估這些標書，而在第三階段獲得最高得分的標書一般會獲推薦採納。

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