

第一部分

澳門培正中學「2020-2021 學年資訊科技教育項目」購置標書

報價項目	
A. 升級及保養方案 (項目包括 A1 ~ A3) 目標：優化本校的網絡相關設備、有效監測及管理網絡，並善用頻寬，令網上教學暢通。	
A1. 校園網絡及無線網絡設備延續保養服務 (1 年)	見附件 A1
A2. 伺服器設備延續保養服務 (1 年)	見附件 A2
A3. 重拉 C、D、E 座教學樓教室網絡線	見附件 A3
B. 更換伺服器	見附件 B
C. e-Class 網上學習平台 (C1-C4)	
• C1. e-Class 網上學習平台相關服務	見附件 C1
• C2. eSchoolPad MDM Service (1 年)	見附件 C2
• C3. 研發校本 eClass 大數據平台-數據應用	見附件 C3
• C4. eLibrary plus 中文電子圖書	見附件 C4
• C5. eClass iPortfolio 帳號	見附件 C5
D. 伺服器機櫃背板冷凍系統保養服務	見附件 D
E. 增加數據中心後備電源	見附件 E
F. 人工智能課程	見附件 F
H. 配合 eClass 對外服務租用高速校聯網光纖 (500M 本地 + 20M 海外 + 16 x IP) 服務年費	
I. 配合 eClass 及其他 API 發送短訊之服務費或年費 (以 3200 名學生計算) 包括 25,000 條短訊	
J. 租用光纖寬頻服務 1G (2 條)	

報價注意事項：

- 一、報價單請用澳門幣作貨幣單位
- 二、有效期應超越 2020 年 9 月 1 日
- 三、請列明交貨日期、安裝、保養方法、期限及付款方式
- 四、以上各項目可以個別報價，請列明是否可作部份項目購置
- 五、可提供同類產品
- 六、諮詢請電 28529333 內線 109 陳德明副主任
- 七、報價單請於 **2020 年 7 月 6 日下午 4 時前**，密封後交總務處 郭敬文副校長收，信封面請寫上

“2020-2021 學年資訊科技教育項目標書”

附件 A1

A1. Cisco 校園網絡及無線網絡設備延續保養服務 (1 年)

目的 :

為本校的網絡及無線網絡設備延續保養及提供為期 1 年的技術支援及保養服務。

設備內容 :

Item	Item Description	Qty	Unit Price (Mop)	Total Price (Mop)
a-1	- CM Hardware Maintenance and Service for Wi-Fi Network	1		
	MaintenanceBelow items maintenace period - 1 YEAR, 8x5xNBDPeriod from : 2020-Jul-1 to 2021-Jun-30	hw/year		
	30AIR-CAP3602I-N-K9, 802.11n CAP w/CleanAir; 4x4:3SS; Mod; Int Ant; N Reg Domain	64		
	WS-C2960S-48FPD-L, Catalyst 2960S 48 GigE PoE 740W, 2 x 10G SFP+ LAN Base	1		
	WS-C3750X-24P-L, Catalyst 3750X 24 Giga Port PoE LAN Base, with 715W AC power	1		
	AIR-CT5508-50-K9, 5508 Series Controller for up to 50 Aps	2		
	AIR-CAP3602E-N-K9, 802.11n CAP w/CleanAir; 4x4:3SS; Mod; Ext Ant; N Reg DomailItem	6		
	WS-C2960S-24PD-L, Catalyst 2960S 24 GigE PoE 370W, 2 x 10G SFP+ LAN Base	1		
a-2	- CM Hardware Maintenance and Service for New Wi-Fi Network	1		
	Below items maintenance period - 1 YEAR, 8x5xNBD Period from 1/9/2020~31/8/2021	hw/year		
	AIR-CAP2702I-S-K9, 802.11ac CAP w/CleanAir; 3x4:3SS; Mod; Int Ant; S Reg Domain	16		
	Peplink 710 Multi-WAN Router	2		
	FortiGate - 500D Firewall (include Gateway AV, NIDP, Content Filtering,Web Filtering & Antispam)	2		
	WS-C2960X-24TS-S, Catalyst 2960X 24 GigE , 2 x SFP+ LAN Lite	1		
	NetworkWS-C3750X-24T-S, Catalyst 3750X 24 Giga Port IP Base, with 350W AC power supply	1		
	Cisco ACS 5.X Software Maintenance	1		
	AIR-AP2802I-S-K9, 802.11ac CAP w/CleanAir; 4x4:3MU/SS; Mod; Int Ant; S Reg Domain	3		

a-3	- Professional Maintenance/Admin Service	1 year		
	Cisco equipment is per list in item A1 & A2			
	Service scope is as per below, & service under level 8x5xNBD			
			Total :	

Service Scope:

(A) Service requirement:

- 1) 8x5xNBD (9.00am~5.30pm), excl public holidays, Saturday & Sunday by the proper response time, or work to remedy by mutual arrangement.
- 2) System is under good air-condition, stable electricity, safe/secure space.
- 3) Supported by phone/e-mail/remote/on-site (fix, review, visit or meeting)
- 8x5xNBD on site (min 2 hours a trip), 8x5 on phone/e-mail/fax/remote.
- 4) Client provides 1st line support for daily work, e.g. w/ IT co-ordinator; and we supply 2nd line support for the system admin, tuning or remedy.
- 5) Equipment datasheets and Cisco information are from www.cisco.com.
- 6) When co-adm, all related docu, IP, master passwords and also have a latest system back-up copy on client's hand and required to release.

(B) Service work:

1. Perform a health check on-site/remote once maintenance has confirmed; to validate if the equipment is in good condition to continue maintenance.
2. All relevant passwords and docus are ready to work and sync together.
3. System fine-tune work only (not rebuild, migrate or relocate the system) unless the system has been corrupted naturally. It is recovered by (B) 5).
4. Problem identify and fix issues with minor modification and fine-tunning, and it is not limit to hardware failure, but any issue relates to the network.
5. Reload backup/config to the replaced devices and ensure proper running.
6. Update patch and bug fix on condition (patches or fixes are from Cisco).
7. Provide rigid advices where applicable for other systems integration, inclliaison w/ other project parties, also recommendation of new firewalls, etc.
8. System review/re-training/care 2 times for 1 year (upon client's arrangement), and each time of system review/re-training will be conducting 4 hours.
9. System log report will provide to Pui Ching by monthly.
10. Network documentation report will produce and update a year.

Item Description		Qty	Unit Price (Mop)	Total Price (Mop)
b-1	Cisco Hardware Maintenance and Service for Data Network (1Year)			
	Below items maintenace period - 1 YEAR, 8x5xNBD, Period from 1/7/2020~30/6/2021	hw/ year		
	WS-C3750G-12S-S, Catalyst 3750 12 SFP Standard Multilayer Image	2		
	WS-C3750G-24TS-S1U, Catalyst 3750 24 10/100/1000 + 4 SFP Std Multilayer;1RU	2		
	WS-C2960S-48TS-S, Catalyst 2960S 48 GigE, 4 x 1G SFP+ LAN Base	2		
	WS-C2960X-24TD-L, Catalyst 2960X 24 GigE, 2 x 10G SFP+ LAN Base	1		
b-2	Professional Maintenance/Admin Service (1Year)	1 year		
	- Cisco equipment is per list in item b1 - Service scope is as per below, & service under level 8x5xNBD			
			Total :	

Service Scope:

(A) Service requirement:

- 1) 8x5xNBD (9.00am~5.30pm), excl public holidays, Saturday & Sunday by the proper response time, or work to remedy by mutual arrangement.
- 2) System is under good air-condition, stable electricity, safe/secure space.
- 3) Supported by phone/e-mail/remote/on-site (fix, review, visit or meeting) -8x5xNBD on site (min 2 hours a trip), 8x5 on phone/email/fax/remote.
- 4) Client provides 1st line support for daily work, e.g. w/ IT co-ordinator; and we supply 2nd line support for the system admin, tuning or remedy.
- 5) Equipment datasheets and Cisco information are from www.cisco.com.
- 6) When co-adm, all related docu, IP, master passwords and also have a latest system back-up copy on client's hand and required to release.

(B) Service work:

1. Perform a health check on-site/remote once maintenance has confirmed;to validate if the equipment is in good condition to continue maintenance.
2. All relevant passwords and docus are ready to work and sync together.
3. System fine-tune work only (not rebuild, migrate or relocate the system) unless the system has

been corrupted naturally. It is recovered by (B) 5).

4. Problem identify and fix issues with minor modification and fine-tuning, and it is not limit to hardware failure, but any issue relates to the network.

5. Reload backup/config to the replaced devices and ensure proper running.

6. Update patch and bug fix on condition (patches or fixes are from Cisco).

7. Provide rigid advices where applicable for other systems integration, incl liaison w/ other project parties, also recommendation of new firewalls, etc.

8. System review/re-training/care 1 times for 1 year (upon client's arrangement), and each time of system review/re-training will be conducting 4 hours.

9. System log report will provide to Pui Ching by monthly.

10. Network documentation report will produce and update a year.

Item Description		Qty	Unit Price (Mop)	Total Price (Mop)
c-1	Professional Maintenance/Admin Service for Ruckus WiFi Equipment (1Year)	1 year		
	- Equipments: Ruckus R710 AP x 57 Ruckus SmartZone 100 x 2 - Professional Maintenance/Admin Service - equipment is per list in Equipment List - Service scope is as per below, & service under level 8x5xNBD -			
			Total :	

Service Scope:

(A) Service requirement:

- 1) 8x5xNBD (9.00am~5.30pm), excl public holidays, Saturday & Sunday by the proper response time, or work to remedy by mutual arrangement.
- 2) system is under good air-condition, stable electricity, safe/secure space.
- 3) supported by phone/e-mail/remote/on-site (fix, review, visit or meeting) - 8x5xNBD on site (min 2 hours a trip), 8x5 on phone/e-mail/fax/remote.
- 4) client provides 1st line support for daily work, e.g. w/ IT co-ordinator; and we supply 2nd line support for the system admin, tuning or remedy.
- 5) equipment datasheets and Ruckus information are from www.ruckuswireless.com
- 6) when co-adm, all related docu, IP, master passwords and also have a latest system back-up copy on client's hand and required to release.

(B) Service work:

1. Perform a health check on-site/remote once maintenance has confirmed; to validate if the equipment is in good condition to continue maintenance.
2. All relevant passwords and docu are ready to work and sync together.
3. system fine-tune work only (not rebuild, migrate or relocate the system) unless the system has been corrupted naturally.
4. Problem identify and fix issues with minor modification and fine-tuning, and it is not limit to hardware failure, but any issue relates to the network.
5. Reload backup/config to the replaced devices and ensure proper running.
6. Update patch and bug fix on condition (patches or fixes are from Ruckus).
7. Provide rigid advices where applicable for other systems integration, incl liaison w/ other project parties, also recommendation of new firewalls, etc.
8. System review/re-training/care 1 times for 1 year (upon client's arrangement), and each time of system review/re-training will be conducting 4 hours.

附件 A2

A2. 伺服器設備延續保養服務 (1 年)

目的 :

為本校的檔案系統及設備延續保養及服務 1 年。

設備內容 :

Item Description		Quantity	Unit Price(Mop)	Total Price(Mop)
1	POWEREDGE R730	2		
	Serial Number : 8T7YJ82, 4HPPG62 Service Level : PSP-4HR(7*24) Service Period : 01-Jan-2020 to 31-Dec-2020			
2	POWEREDGE R730	1		
	Serial Number : HN84MD2 Service Level : PSP-4HR(7*24) Service Period :16-Aug-2020 to 31-Dec-2021			
2	HP DL380p Gen8 E5-2620 Base AP Svr	1		
	Serial Number : 6CU4151P43 Service Period : 2020 Jul 1 to 2021 Jun 30 HPE Foundation Care NBD SVC			
			Total :	

附件 A3

A3. 重拉 C、D、E 座教學樓教室網絡線

目的：更換 C、D、E 座課室有線網絡(連接桌上電腦)的網絡線，提升網絡的連線速度及穩定性。

工期：2020 年 8 月 3 日至 2020 年 8 月 25 日期間進行。

工程內容：

Item Description		Quantity	Unit Price(Mop)	Total Price(Mop)
1	更換 C 座網絡線			
	<ul style="list-style-type: none"> • 重接 C 座 33 個教室的有線網絡網線，每室一個位置。 • 移除原有網線。 • 由三樓集線箱拉 CAT6 網線至每個教室的桌面電腦位置，集線箱端打水晶頭及記錄網線位置標記，安裝課室 AMP 網線座。 • 報價包括所需材料及人工。 	1		
2	更換 D、E 座網絡線			
	<ul style="list-style-type: none"> • 重接 D、E 座教學樓二、三樓共 14 個教室的有線網絡網線，每室一個位置。 • 移除原有網線。 • 由 D 座四樓機房拉 CAT6 網線至每個教室的桌面電腦位置，集線箱端打水晶頭及記錄網線位置標記，安裝課室 AMP 網線座。 • 報價包括所需材料及人工。 	1		
			Total :	

附件 B

B. 更換伺服器

目的：

為配合學習平台發展更新伺服器。

內容：

- 以下設備可提供具同等或以上功能的產品
- 所有新購設備需提供未來 5 年之保養及支援服務
- **Service Level : (7x24) 4-hour Onsite Service**

Item Description		Qty	Unit Price (Mop)	Total Price (Mop)
1	PowerEdge R740 Server - PowerEdge R740/R740XD Motherboard - Intel Xeon Gold 6126 2.6G, 12C/24T, 10.4GT/s , 19.25M Cache, Turbo, HT (125W) DDR4-2666 - 4 x 16GB RDIMM, 2666MT/s, Dual Rank - 6 x 300GB 15K RPM SAS 12Gbps 512n 2.5in Hot-plug Hard Drive - PERC H730P+ RAID Controller, 2GB NV Cache, Adapter, Full Height - DVD+/-RW,SATA,Int - Dual, Hot-plug, Redundant Power Supply (1+1), 750W - 1 Broadcom 5720 QP 1Gb Network Daughter Card Software - OME Server Configuration Management - 2 x vSphere Standard 1CPU License, 3Y Subscription w/Dwngrd Rights	1		
			Total :	

附件 C1

e-Class 網上學習平台相關服務 (1 年)

內容 :

Item Description		Qty	Unit Price (Mop)	Total Price (Mop)
1	eClass Parent App	1 year		
2	eClass Teacher App	1 year		
3	PowerLesson App Connection Service	1 year		
4	Flipped Channels(100G)	1 year		
5	PowerLesson Implementation & Training Services	6 sessions		
6	Annual managed maintenance service	1 year		
7	eClass Maintenance Package Renewal	1 year		
8	Hardware Maintenance Renewal of Cisco Switch <ul style="list-style-type: none"> · CON-SMBS-WSC24TDL · SMB SA 8x5xNBD for WS-C2960X-24TD-L (1 year hardware maintenance only) · S/N: FOC1820S0PX · Covered Period: 9 Oct 2020 - 8 Oct 2021 	1 year		
			Total :	

附件 C2

eSchoolPad MDM Service (1 年)

內容 :

Item Description		Qty	Unit Price (Mop)	Total Price (Mop)
1	eSchoolPad MDM Service(IOS) Service Period: 1 year Covered Period: 1 Jan 2021 to 31 Dec 2021	650		
			Total :	

附件 C3

研發校本 eClass 大數據平台-數據應用

內容：

Item Description		Qty	Unit Price (Mop)	Total Price (Mop)
1	<p>PowerLesson Project Phase 3 互動課堂計劃第三階段</p> <p>■ 系統功能一： 透過建立跨學科的統一題目庫，教師為自己任教的科目匯入題目，以不同標籤包括以難度、題型、主題和學習重點等多個維度分類，通過課前、課中和課後的活動和小測驗記錄所有學生的跨課室學習表現數據。系統同時自動換算每個評估的平均分數，久而久之，在系統內積存的數據將會演化為給予學生參考的預估成績，讓學生初步了解自己相對於其他同儕的水平。系統亦會根據批改好的小測結果給予針對學生表現較弱的範圍派發題目以作輔導和跟進，構建個性化的學習環境，期望長遠能發揮無線網絡和活用課餘時間的優勢，協助學生在家延伸學習。</p> <ul style="list-style-type: none"> · 建立數據庫，讓老師可建立各科的教學大綱及能力指標 <p>■ 系統功能二： 系統會擷取學生每道題目的回應時間，綜合評估學生於每個評估的表現，從而偵測異常數據，例如快捷回應但是分數偏低或快捷回應兼分數優異，從而協助教師更客觀地運用數據，優化教學策略，針對性幫助學習能力較弱的學生及提拔具潛質的學生，鞏固所學。</p> <ul style="list-style-type: none"> · 跨學科的統一題目庫 · 以不同標籤(難度、題型、主題和學習重點)為題目庫的題目分類 <p>■ 系統功能三：</p>	1		

		<p>此計劃亦考慮納入 STEM 教學大綱及能力指標為藍本，引入 STEM 評估模塊，記錄學生的實驗活動分數及作品照片，讓校方能夠以多個維度跨學科評估學生的綜合素質。</p> <ul style="list-style-type: none"> · 以學生成績作報告，預估成績，及讓 · 學生初步了解自己相對於其他同儕的水平於學生成績作報告中，綜合評估學生於每個評估的表現，從而偵測異常數據 · 自學小測活動 			
			Total :		

附件 C4

eLibrary plus 中文電子圖書：

內容：

Item Description		Qty	Unit Price (Mop)	Total Price (Mop)
1	<p>中文電子圖書</p> <p>-870 中文流行 讀物系列</p> <p>_2019</p> <ul style="list-style-type: none"> ● 870 本中文流行讀物圖書數目 ● 適合中小學程度 ● 可作學科的參考書籍或課後讀物 <ul style="list-style-type: none"> ◆ 關於全套「中文流行讀物系列」。系列圖書：心靈勵志、成長自助、科普讀物、旅遊、健康、飲食文化、宗教、藝術、語文、教育、數學、通識、環保、小說、散文、詩集、中外名人傳記、歷史故事、神話故事、童話故事、漫畫繪本等。 ◆ 系列出版社：天行者、天窗、爸媽學堂、青春、青桐社、青馬、青源、青藍、信報財經新聞、皇冠、突破、匯識教育、螢火蟲、藍鯨工作室等 ● Covered Period: 8 Nov 2020 - 7 Nov 2021 	1 year		
			Total :	

附件 C5

eClass iPortfolio 帳號：

內容：

Item Description			Qty	Unit Price (Mop)	Total Price (Mop)
1	eClass iPortfolio Account	■ A unique account for each student	300		
				Total :	

附件 D

伺服器機櫃背板冷凍系統保養服務 (1 年)

目的 :

維持資料中心內的伺服器穩定運作。

設備內容 :

Item	Item Description	Qty	Unit Price (Mop)	Total Price (Mop)
	- Rear Door Heat Exchanger Cooling System			
D1	7x24x365, 4 Hours, Parts (Repair or Replace, Excluded Pump Unit) & Labor for cooling system	1 year		
	<ul style="list-style-type: none"> ■ Coolcentric Rear Door Heat Exchanger Lite Version (LRDHx)/8-12Kw/42U H/ 600mm W ■ Coolcentric VT-20 6U Rackmount /20Kw Capacity, 230V Single Phase, 50/60Hz, Full Unit ■ 3/4" Brass Quick Coupling Pair (QCCFM) ■ High Pressure Hose, 350psi/Meter (HKJPHKT) ■ Manifold (CDU-XUFQ3B. 4 way with brass quick coupling connection) 			
D2	7x24x365, 4 Hours, Parts (Repair or Replace) & Labor for air cooled chiller system	1 year		
	Air Cooled Chiller <ul style="list-style-type: none"> ■ 22.5KW air cooled chilled (York Model: YCGA022SSE50/Carrier Model: 30RB021) ■ 32mm dia. Chilled water pipe with thermal insulation from chiller to CDU ■ Fresh water pipe to chiller ■ Power supply to chiller 			
D3	Provide preventive maintenance for chiller and RDHx quarterly	1 year		

附件 E

E. 增加數據中心後備電源

目的：

增加數據中心的後備電源，保障資訊設備的供電穩定，並在斷電情況下有足夠電力完成正常關機程序。

系統要求：

- 每台 UPS 額定容量 5000VA，共 4 台，為 4 個機櫃(在 UPS 5 安裝位置距離 5 米內)提供電力；
- Rackmount convertible；
- Bypass ready (need external bypass panel to function) & built-in network management card, INCLUDE EXTERNAL SERVICE BYPASS

報價包括以下內容：

- 硬體設備或所需附件；
- 軟件等程式(如需要)；
- 硬體設備安裝工程；
- 5 年硬件保養及系統支援服務。

參考方案：(接受同等功能或更佳方案)

Item	Item Description	Qty	Unit Price (Mop)	Total Price (Mop)
	APC UPS			
1	BUNDLE PACKAGE (SRT5KXLI / WPRJ /SBP5000RMI2U/ SRT001) SMART-UPS SRT 5000VA, 230V, Tower / Rackmount convertible (*Required SRTRK2. Total 5U with SBP) - Bypass ready (need external bypass panel to function) & built-in network management card, INCLUDE EXTERNAL SERVICE BYPASS (SBP5000RMI2U)	4		
2	APC 2-Post Mounting Rail Kit for Smart-UPS SRT 5/6/8/10kVA (for 2-Post Rack ONLY)	4		
3	APC Smart-UPS SRT 192V 5kVA and 6kVA Battery Pack, Tower / Rackmount convertible (3U - Required SRTRK2). Optional extension cable: SRT002 *Smart 5K/6K RT, Bundle Package free 2pcs installation charge	4		
4	APC Smart-UPS SRT 5kVA Output HW Kit	4		
5	APC Smart-UPS SRT 15ft Extension Cable for 192VDC External Battery Packs 5/6kVA UPS only	4		
6	Installation	1		

附件 F

F. 人工智能課程

目的：

在中學設置人工智能課程，包括課程內容、線上實驗平台、線下硬體實教具，使學生了解人工智能初步技術，體驗人工智能技術應用。

設備或內容：

Item	Item Description	Qty	Unit Price (Mop)	Total Price (Mop)
F1	SenseStudy GPU 硬件實驗平台維護費	1 year		
F2	SenseStudy 平台課程			
F2.1	人工智能入門課程（上）- 學習平台	1 year		
F2.2	人工智能基礎課程 - 學習平台	1 year		
F2.3	Rover Pro 無人駕駛實驗包 - 學習平台	1 year		
F2.4	Storm Lego 智能車課程 - 學習平台 基礎版、提高版、進階版	1 year		
F3	教具：Storm Lego 機器人教具套件	25		
F4	導師培訓	5		

第二部分

澳門培正中學「2020-2021 學年資訊科技設備」購置標書

報價項目	
P1. 資訊科技教育 - 手提電腦	見附件 P1
P2. 平板電腦	見附件 P2
P3. 軟件	見附件 P3
P4. Keyboard for iPad	見附件 P4
P5. Lego spike prime set	90 套
P6. Lego WEDO 2.0 Core Set	35 套

報價注意事項：

- 一、報價單請用澳門幣作貨幣單位
- 二、有效期應超越 2020 年 9 月 1 日
- 三、請列明交貨日期、安裝、保養方法、期限及付款方式
- 四、以上各項目可以個別報價，請列明是否可作部份項目購置
- 五、可提供同類產品
- 六、諮詢請電 28529333 內線 109 陳德明副主任
- 七、報價單請於 **2020 年 7 月 6 日下午 4 時前**，密封後交總務處 郭敬文副校長收，信封面請寫上

“2020-2021 學年資訊科技教育項目標書”

附件 P1

P1. 資訊科技教育—手提電腦

數量&報價要求：請參考以下表格

Item	Description	Qty	U/Price MOP	Total Amount MOP
1	Lenovo ThinkPad T490 Notebook - Intel Core i7-10510U - 16GB DDR4-2666Mhz Memory - 1TB SSD M.2 PCIe-NVMe - 14" FHD (1920 x 1080), IPS, Anti-Glare, 250 nits - Intel Wi-Fi 6 AX201 2x2 AX, Bluetooth 5.0 - 720P HD Camera with Mic, Fingerprint Reader - Backlit KB, 3Cell 50Wh Internal Battery - 65W USB-C AC adapter - W10 Professional - 4 Years warranty for parts & labour - USB Mouse + Carrying Case	6		
1.2	ThinkPad UltraSlim USB DVD Burner	6		
2	Lenovo ThinkPad X390 Yoga Notebook - Intel Core i7-8565U - 16GB DDR4-2400 Ram - 512GB M.2 2280, NVMe SSD - 13.3" FHD (1920x1080) IPS, Anti Reflection, 300nits, Multi-Touch - Integrated graphics, 3 cell 50Wh internal battery - Intel 9560 Wifi, BT, FPR, ThinkPad Pen Pro - Win 10 Pro - 2D-Webcam, Backlit KB - 4 Years warranty for parts & labour - USB Mouse + Carrying Case	10		
2.2	ThinkPad UltraSlim USB DVD Burner	10		

Item	Description	Qty	U/Price MOP	Total Amount MOP
3.1	<p>Apple 13-inch MacBook Air</p> <ul style="list-style-type: none"> - 1.6GHz Duad-core 8th-generation Intel Core i5 processor - 8GB 2133MHz LPDDR3 memory - 128GB SSD storage - Intel UHD Graphics 617 - Two Thunderbolt 3 ports - Backlit Keyboard - US English - AppleCare Protection for upgrading to 3 years warranty 	8		
3.2	Upgrade to 256GB SSD storage	8		
4	<p>Apple 16-inch MacBook Pro - Space Grey</p> <ul style="list-style-type: none"> - 2.3GHz 8 core 9th generation Intel Core i9 processor, - Turbo Boost up to 4.8GHz - AMD Radeon Pro 5500M with 4GB of GDDR6 memory - 16GB 2666MHz DDR4 memory - 1TB SSD storage - Retina display with True Tone - Four Thunderbolt 3 ports - Touch Bar and Touch ID - Backlit Keyboard - US English - Warranty: 3 years for parts & labour 	5		

附件 P2

P2. 平板電腦

數量&報價要求：請參考以下表格

Item	Description	Qty	U/Price MOP	Total Amount MOP
1	Apple iPad Air 3 256GB WiFi 10.5 吋 - Color: Space Gray - Warranty: 1 year for parts & labour (On-site Service)	142		
2	Apple iPad (7th) 128GB WiFi 10.2 吋 - Color: Space Gray - Warranty: 1 year for parts & labour (On-site Service)	282		

附件 P3

P3. 軟件


目標：教學(學生)及教職員使用的軟件。

軟件名稱	數量及授權方法
Parallels Desktop for Mac - Parallels Desktop for Mac Business Edition Acad Renewal 1Yr (per user) (License type)	47 套 & 1 year
Microsoft Office 365 Home (1-year Subscription; 5 Licenses)	14 套 & 1 year
Microsoft OfficeStd 2019 SNGL OLP NL Acdmc	16
Microsoft OfficeMacStd 2019 SNGL OLP NL Acdmc	13
Apple Pro Apps Bundle for Education (Includes Final Cut Pro X, Logic Pro X, Motion 5, Compressor 4, and MainStage 3)	5

附件 P4

P4. Keyboard for iPad

數量&報價要求：請參考以下表格

Item	Description	Qty	U/Price MOP	Total Amount MOP
1	<p>keyboard for ipad</p> <ol style="list-style-type: none"> 1. Keyboard type:78keys 2. Suitable for IPAD system 3. Plug and Play, easy to operate 4. Colour: Black and white 5. Solution: Apple original CPIC/connector 6. The first Apple Wireless Keyboard product to meet Apple's MFI certification 7. Customized for iPad5 and above version , It is mainly applied to the field of education . 8. With 8-Pin connection 	250		