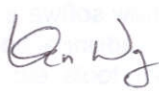



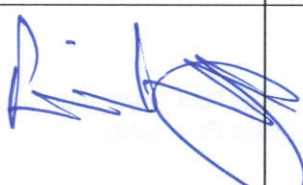


INFORMATION TECHNOLOGY

REFERENCE NO. IT030

OA COMPUTER SOFTWARE AND HARDWARE STANDARDS

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IT030
OA Computer Software and Hardware Standards

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Document Change Record

Issue Number	Description of Change	Person Making Change	Date of Issue
1.0	Initial version	Y L Tam	May 2003
1.1	Section 2.9 Home Use Software Standard is added to incorporate the old policy IT014. Appendix A, B standard item lists are updated	Venus Chan	July 2005
1.2	Section 2.7 Display Devices Standard is updated to put 17" LCD monitor as the new standard. Appendix A, B standard item lists are updated	Venus Chan	November 2005
1.3	Changed unit to department. Updated Section 2.3.1 with new software, e.g. Project Planning tools; Traditional and Simplified Chinese Translation tools, etc. Updated Section 2.8 Peripheral Standard with a guideline of different kinds of printer deployment. Added Section 4.0 Exception to Standards. Updated new standard items in Appendix A, B.	Yvonne Ma	24 February 2010
1.4	Include smartphone in the standard	Yvonne Ma	6 May 2011
1.5	Revised on: The document name as "OA Computer Software and Hardware Standards" Section 1.2 Revised the Scope is for OA Computer Software and Hardware. Section 2.3 Laptop/Notebook/PDA/Smartphone as Mobile Computing Standard Section 3.2 Estimated useful lives criteria	Ken Wong	02 April 2013

	<p>Appendix A - Computer Software and Hardware Standard List.</p> <p>DVD/CD writer/rom removed from Desktop computer standard</p> <p>Removed:</p> <p>Section 2.1 Application systems & COTO software standard (moved to IT029)</p> <p>Section 2.2 IT Infrastructure standard (moved to IT029)</p> <p>Section 2.4 Telecommunication equipment standard</p> <p>Section 2.5 Wireless Lan Equipment Standard</p> <p>Section 2.9 Home Use Software Standard</p> <p>Appendix B – IT end user computing resources centre</p> <p>Reviewed and Incorporated the comments from all Senior Managers of IT Department</p>		
1.6	<p>Section 2.2</p> <p>Revised that line manager's endorsement is required for requesting additional software and procurement of additional software is by user's department cost but the license shall be managed by ITHD</p> <p>Section 2.5</p> <p>Revised additional printer or other than standard request shall be evaluated by ITHD</p> <p>Appendix A</p> <p>Section 4. Adobe Acrobat DC is added for additional software</p> <p>Section 5. Lenovo X250 is added for light weight laptop</p> <p>Section 6. Lenovo T450 is added for all-in-one laptop</p> <p>Section 6. Printer M605, M750 and M806 are added as new standard for medium to large scale printing</p>	Ken Wong	09 Oct 2015

IT030
OA Computer Software and Hardware Standards

Issue no.
1.6

Effective Date: 26 Oct 2015

Table of Contents

INFORMATION TECHNOLOGY	1
REFERENCE NO. IT030	1
OA COMPUTER SOFTWARE AND HARDWARE STANDARDS	1
1.0 INTRODUCTION.....	5
1.1 PURPOSE OF THESE STANDARDS	5
1.2 KEY INFORMATION.....	5
2.0 COMPUTER SOFTWARE AND HARDWARE STANDARDS.....	6
2.1 DESKTOP COMPUTER STANDARD	6
2.2 ADDITIONAL DESKTOP COMPUTER SOFTWARE.....	7
2.3 MOBILE COMPUTING STANDARD	8
2.4 DISPLAY DEVICES STANDARD	8
2.5 PERIPHERALS STANDARD	9
3.0 EVALUATION CRITERIA.....	10
3.1 GENERIC EVALUATION CRITERIA	10
3.2 ESTIMATED USEFUL LIVES CRITERIA.....	10
4.0 EXCEPTION TO STANDARDS.....	11
APPENDIX A – COMPUTER SOFTWARE AND HARDWARE STANDARDS.....	12

IT030
OA Computer Software and Hardware Standards

Issue no.
1.6

Effective Date: 26 Oct 2015

1.0 INTRODUCTION

1.1 PURPOSE OF THESE STANDARDS

The purpose of these standards is to define the list of applicable computer software and hardware, as well as the considerations for granting their use by staff.

1.2 KEY INFORMATION

Owner:	Chief Information Officer
Custodian:	Senior Manager, IT Operations
Classification:	Authority-wide
Target user:	All the Authority users of computer software and hardware.
Scope:	These Standards set out the principles and requirements that must be followed across the Authority for OA computer software and hardware provisions.
Related policies /standards /procedures:	Finance Internal Control, Policies and Procedures Manual Purchasing Procedures Manual IT029 – Computer Software and Hardware Policy ITFRM023 – Information Technology Services Request Form (ITSR) ITFRM048 – Declaration on User Custodian of IT Equipment
Supersedes:	IT020 – Desktop and Desktop Peripherals Standards IT014 – Software For Home Use

2.0 COMPUTER SOFTWARE AND HARDWARE STANDARDS

The corporate computer software and hardware shall only be assign and given to those user with need to use automation tools and/or application systems to perform the Authority's duties.

All users shall follow the defined corporate IT hardware and software standard for compatibility, standardization and correspondingly flexibility in subsequent redeployment, also with lower maintenance cost.

Computer software and hardware standards will be reviewed from time to time based on prevalent technology, business and operational needs.

Department can propose their business and operational needs with justification including both qualitative and quantitative factors for IT Department (ITD) to translate these needs into technical specifications and evaluate against the IT standards. The assessment of the resources will be considered based on the generic evaluation criteria and the estimated useful lives of the equipment. In some cases, specific evaluation criteria are prescribed to optimize the resources utilization within the Authority.

2.1 DESKTOP COMPUTER STANDARD

A corporate standard desktop computer with software shall only be given to user with the need to use office automation tools and/or application systems to perform the Authority's duties. Different access level and services enjoyed will be assigned based on the guidelines as stated in IT029 "Computer software and hardware policy"

The corporate standard for Desktop Computer Software and Hardware is listed in Appendix A-1 and A3. DVD/CD Writer/ROM is excluded from the standard configuration. Exemption would be given in consideration of operation need and justification provided.

2.2 ADDITIONAL DESKTOP COMPUTER SOFTWARE

Business justification will be required with line manager endorsement if users request to install and use additional desktop computer software, including but not limited to the following:

- Language translation tools (e.g. Traditional Chinese to Simplified Chinese)
- Project Planning tools
- Chart, Graph Drawing and image manipulation tools
- Drawing tools
- Publishing tools
- Web Publishing tools
- Web Page Design tools

IT Helpdesk (ITHD) shall consider the configuration of the user's desktop and advise the best approach to install the said additional desktop computer software. Users should aware that there may have a minimum hardware requirement (e.g. CPU type, memory requirement) before software can installed.

Procurement of the software is required if the software is not freeware. The cost of the software shall be borne by user's department and the license shall be managed by ITHD.

The additional desktop computer software standards are listed in Appendix A-4.

2.3 MOBILE COMPUTING STANDARD

Laptop / Notebook / PDA / Smartphone / Tablet are classified as Mobile Computing. All are adhering to standards defined in Appendix A-5, A-6, A-7 and A-8. Users are required to complete the Declaration on User Custodian of IT Equipment (ITFRM048) and submit together with the IT service request form. Justification is required to demonstrate that the mobile devices are only for the purpose to support his / her duties in the corporate.

Users are required to adhere to the AAIT policies, including but not limited to regular health check, maintenance, disposal, etc.

2.4 DISPLAY DEVICES STANDARD

Desktop computer display device shall adhere to the standard defined in Appendix A-2.

2.5 PERIPHERALS STANDARD

Printers are provided to users for business and operational use only.
Peripherals standard is defined in Appendix A-9

The following is the guideline for deploying different kinds of printers:

User size	Printer Type	Consideration
1 user	Lower model of A4 black and white printer	<ul style="list-style-type: none">• Local printer for senior managers or above
Small size of users (2 – 4 users)	Lower model of A4 printer (black and white or colour)	<ul style="list-style-type: none">• Network printer for small size of users
Medium size of users (4 – 8 users)	Higher model of A4 printer (black and white or colour)	<ul style="list-style-type: none">• Network printer for medium size of users
Large size of users (6 – 20+ users)	Large volume printer of A4 and A3 (black and white or colour printer)	<ul style="list-style-type: none">• Number of pages per day on average and at peak• Document types and resolution requirements for colour printers• Special paper size printer with business requirements, frequency and volume.

ITD deploys large volume printers (both black and white and colour) at each of the department. ITD does not recommend user to own local printer unless with strong business justification.

For requesting additional printers or other printer type as recommended, the users have to submit request to ITHD with endorsement from their department heads and justification. The request shall be evaluated by ITHD. Discussion may be made and the user shall be notified the decision by ITHD.

3.0 EVALUATION CRITERIA

3.1 GENERIC EVALUATION CRITERIA

The following are the generic evaluation criteria considered by ITD when assessing the needs from users. Other business justification can be provided by users for ITD's consideration as exception or new standards.

- Number of hours per week for use of computer software and hardware.
- Frequency of use such as the number of times per day.
- Number of users within the department for computer software and hardware.
- The total number of users across different departments with use of computer software and hardware.
- Availability of computer software and hardware from centralized pool for redeployment.
- Estimated cost of licenses, maintenance and support
- Criticality to business continuity and operational needs

3.2 ESTIMATED USEFUL LIVES CRITERIA

The estimated useful lives table may apply for retiring computer software and hardware item after exhausting all possible means in extending their use.



COMPUTER SOFTWARE AND HARDWARE ITEMS	ESTIMATED USEFUL LIVES (YEARS)
Application Systems & COTS software	5
Desktop computers	3
Mobile computing	3
Display Device	3
Peripherals	3

4.0 EXCEPTION TO STANDARDS

For any exception to the standards or guideline listed, the users shall require to get their department head's approval. ITD will follow the exception handling procedure as documented in IT029-Computer Software and Hardware Policy to consider the requirement.

APPENDIX A – COMPUTER SOFTWARE AND HARDWARE STANDARDS




1. DESKTOP COMPUTER MODEL

ITEM	BRAND	MODEL	CONFIGURATION
1	Lenovo	LENOVO ThinkCentre M910q Tiny 	<ul style="list-style-type: none"> ◆ Intel Core i5-6500T/ i7-6600T / i7-6700T ◆ Q270 Chipset ◆ 4GB DDR4 RAM ◆ (Optional) 128 GB M.2 SSD / 512 GB SSD ◆ 500GB 7200RPM SATA internal harddisk ◆ Gigabit LAN interface port ◆ Intel 8265AC Wifi ◆ 5 x USB port equipped ◆ VESA Mount ◆ USB Full Eng/Chi Keyboard ◆ USB Mouse ◆ Win 7 Pro 32 with Win 10 Pro Lic ◆ 3 years on-site service warranty
2	Lenovo	LENOVO ThinkCentre M910 SFF 	<ul style="list-style-type: none"> ◆ Intel Core i5-6500 ◆ Q170 Chipset ◆ 4GB DDR4 RAM ◆ 500GB 7200RPM SATA internal harddisk ◆ Gigabit LAN interface port ◆ DVDRW or DVD-ROM or Dummy drive ◆ 6 x USB port equipped & Card Reader ◆ USB Full Eng/Chi Keyboard ◆ USB Mouse ◆ Win 7 Pro 32 with Win 10 Pro Lic ◆ 3 years on-site service warranty






IT030
OA Computer Software and Hardware Standards



Issue no.
1.6.6

Effective Date: 1 Oct 2017

ITEM	BRAND	MODEL	CONFIGURATION
3	Lenovo	LENOVO ThinkStation P310 TWR 	<ul style="list-style-type: none"> Intel Core i7-6700 Intel C236 Chipset 16GB DDR4 RAM 2133 NON-ECC UDIMM RAM 1TB 7200RPM HDD NVIDIA QUADRO K1200 4GB DVDRW Integrated Gigabit Ethernet Integrated HD Audio USB Full Eng/Chi Keyboard USB Optical Mouse 400W PSU Win10 Pro Lic 3 years on-site service warranty
4	Lenovo	LENOVO ThinkStation P410 TWR 	<ul style="list-style-type: none"> Intel Xeon E5-1620 v4 Intel C612 Platform Controller Hub 32GB DDR4 RAM 256GB SSD 1TB HDD NVIDIA QUADRO M4000 8GB DVDRW Integrated Gigabit Ethernet Integrated HD Audio USB Full Eng/Chi Keyboard USB Mouse 450W PSU Win10 Pro Lic 3 years on-site service warranty
5	Lenovo	LENOVO ThinkStation P510 TWR 	<ul style="list-style-type: none"> Intel Xeon E5-2690 v4 Intel C612 Platform Controller Hub 32GB DDR4 PC4-2400 ECC RDIMM 512GB SSD 1TB HDD NVIDIA QUADRO M5000 9-in-1 card reader DVDRW Integrated Gigabit Ethernet Integrated HD Audio USB Full Eng/Chi Keyboard USB Mouse 650W PSU Win7 Pro 64 with Win10 Pro Lic 3 years on-site NBD warranty

2. DESKTOP COMPUTER MONITOR

ITEM	BRAND	MODEL	CONFIGURATION
1	Lenovo	TC Tiny-in-One 22, 21.5" Wide LED Display 	<ul style="list-style-type: none"> Resolution 1920 x 1080 pixels Contrast Ratio 1000:1 Aspect ratio: 16:9 Max Colors Built in 16.7 million Brightness 250 cd/m2 3 in 1, DP Response time 14ms
2	Lenovo	TC Tiny-in-One 24, 23.8" Wide LED Display 	<ul style="list-style-type: none"> Resolution 1920 x 1080 pixels Contrast Ratio 1000:1 Aspect ratio: 16:9 Max Colors Built in 16.7 million Brightness 250 cd/m2 3 in 1, DP Response time 14ms
3	Asus	24 inch LED DISPLAY PA249Q 	<ul style="list-style-type: none"> Resolution 1920 x 1200 pixels Contrast Ratio 80000000:1 Aspect ratio: 16:10 Max Colors Built in 1073.7M (10bit) Brightness 350 cd/m2 HDMI, D-Sub, DisplayPort, DVI-D Response time 6ms
4	Asus	VE228HR 21.5" LED Monitor 	<ul style="list-style-type: none"> Resolution 1920 x 1080 pixels Contrast Ratio 80000000:1 Aspect ratio: 4:3 Max Colors Built in 16.7 million Brightness 250 cd/m2 HDMI, VGA and DVI-D Connector Response time 5ms
5	Lenovo	Lenovo ThinkVision X1 Wide 27" Wide UHD IPS Monitor 	<ul style="list-style-type: none"> Resolution 3840 x 2160 pixels Contrast Ratio 1300:1 Aspect ratio: 16:9 Max Colors Built in 16.7 million Brightness 300 cd/m2 HDMI, Display Port and USB Connector Response time 6ms

ITEM	BRAND	MODEL	CONFIGURATION
6	Samsung	LS22F350FHCXXK 22" LCD Monitor 	<ul style="list-style-type: none">♦ Resolution 1920 x 1080 pixels♦ Contrast Ratio 3000:1♦ Aspect ratio: 16:9♦ Max Colors Built in 16.7 million♦ Brightness 250 cd/m2♦ VGA and HDMI Connector♦ Response time 5ms
7	Samsung	LS24F350FHCXXK 24" LCD Monitor 	<ul style="list-style-type: none">♦ Resolution 1920 x 1080 pixels♦ Contrast Ratio 3000:1♦ Aspect ratio: 16:9♦ Max Colors Built in 16.7 million♦ Brightness 250 cd/m2♦ VGA and HDMI Connector♦ Response time 5ms

3. Desktop Software

ITEM	VENDOR	SOFTWARE
1	Microsoft	Microsoft Windows 7 Professional SP1
2	Microsoft	Internet Explorer 11
3	Microsoft	Microsoft Office 2013 Professional Plus
4	Microsoft	Microsoft Visio Viewer 2010
5	Microsoft	Microsoft Media Player 11
6	Microsoft	Microsoft Office IME 2010
7	Microsoft	Microsoft SCCM agent
8	Symantec	Symantec Endpoint Protection 12
9	Adobe	Adobe Reader DC
10	Adobe	Flash 10.1.85.3
11	Apple	Quick time 7.71
12	Winzip	Winzip 21
13	Oracle	Java Runtime 6 Update 20
14	Oracle	Oracle Client 8
15	Oracle	TNS Names.ora (Nov 2009)
16	Corel	Corel Burn Now
17	Webex	WebEx Client (Plug in)

4. Additional Computer Desktop Software

ITEM	TYPE	SOFTWARE
1	Traditional and Simplified Chinese Translation	Microsoft Multilanguage Pack
2	Project Planning	Project 2013 Project 2016
3	Databse, Chart and Graph Drawing	Visio 2013 (Professional) Access 2010
4	Web Publishing	Adobe Acrobat 9 / 10 / 11 / 12 (DC)
5	Web Page Design	<ul style="list-style-type: none"> Macromedia DreamWeaver 3 / 4 / 8 / CS3 v9 / MX / MX 2004 / CS6 v12 Macromedia Firework 4 / MX Macromedia Flash 5 / MX / MX 2004
6	Drawing	<ul style="list-style-type: none"> Adobe Corel Draw 8 / 9 / 10 / 11 / 12 / 14 / 15 Adobe PhotoShop 5 / 5.5 / 6 / 7 / CS / CS2 / CS3 v9 / CS3 v10 / CS4 v11 / CS5 v12 / CS6 v13 Adobe Illustrator CS2 v12 / CS3 v13 / CS4 v14 / CS5 v15 / CS6 v16 Adobe PageMaker 7.0
7	Photo Management	ACDSee
8	Web Browser	FireFox
9	Media Player	NV Light Player
10	Technical design viewer	DWG Viewers Bentley View V8i Naviswork Freedom
11	Miscellaneous	OCR Software: OmniPage – English File Compression: PowerLite File Search: Copernic Desktop Search Apple Device management: iTunes Google Earth Pro




REMARK: STANDARDS TO BE SUPPORTED WITH BUSINESS JUSTIFICATION

IT030
OA Computer Software and Hardware Standards

Issue no.
 1.6.6

Effective Date: 1 Oct 2017

4. Laptop Computer / Notebook (Light Weight with docking station)

ITEM	BRAND	MODEL	CONFIGURATION
1	Lenovo	LENOVO ThinkPad X270 	<ul style="list-style-type: none"> • Intel i5 6200U • 8G DDR4 – 2133 RAM • 12.5" HD IPS • Web camera • Intel HD Graphic Card • 500GB 7200rpm Harddisk • Internal Speaker with Stereo feature • Gigabit LAN interface port • 3 cell + 3 cell swappable • Bluetooth ready • Fingerprint login facilities • Intel 8260 AC • Eng keyboard • Win 7 Pro Preload
2	Lenovo	LENOVO ThinkPad X1 Carbon G5 	<ul style="list-style-type: none"> • Intel i7-7500U • 8GB DDR3L-1866 On-Board RAM • 256GB SSD Opal 2.0 • Intel HD graphics 520 • 14" FHD (1920 x 1080) • Rapid charge battery • Intel 8265 AC, BT, FPR • Win 10 Pro • 720p WebCam • Backlit KB • USB 3.0*3, HDMI, Mini-DP • 3 years warranty
3	Lenovo	LENOVO ThinkPad X1 Yoga Gen 2 	<ul style="list-style-type: none"> • Intel i7-7500U • 8GB DDR3L-1600 (No extra RAM slot) • 256G SSD • 14" FHD IPS Multi-Touch (1920 x 1080) • Intel HD graphics 520 • Intel 8265 AC • 720p Webcam, Backlit KB, USB 3.0*2, HDMI, Mini-DP • BT, FPR, W7P Preload • 3 years on-site warranty


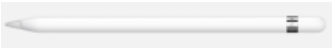


ITEM	BRAND	MODEL	CONFIGURATION
4	Lenovo	LENOVO ThinkPad X270 Laptop 	<ul style="list-style-type: none"> • Intel Core i5 6200U • 12.5" HD IPS • 4 GB DDR3L Ram • 500GB Hard Disk Drive, 7200rpm • Web camera • Two USB 3.0, VGA port (DB-15), Microphone/line-in • Ethernet (RJ-45), ExpressCard, 4-1 Card Reader slot, • 3 Cell Lithium-Ion Enhanced Battery + 3 Cell swappable • Preload Eng Windows 7 license
5	FUJITSU	FUJITSU Lifebook U937 	<ul style="list-style-type: none"> • Intel i7-7500U • 12GB DDR4 (8GB+4GB) RAM • 256 GB SSD NVMe M.2 • 13.3" FHD LED non-Touch • HD Camera • TPM 2.0 ,W-LAN Antenna • Smart Card reader • Intel wireless AC+BT • Smart Card CARDOS V4.4. 2PCS • 4 Cell 50Wh battery • Recovery DVD Win 10 Pro 64 • Win 10 Pro 64 (MM) - MUI (ENG, SC, THK)

5. Personal Digital Assistant / Smartphone (Commodity Grade)

ITEM	BRAND	MODEL	CONFIGURATION
1	Apple	Apple iPhone 7 	Size: 138.3 x 67 x 7.1 mm Weight: 138 g Display: 1334 x 750 4.7 inches Flash Storage: 128GB / 256GB Camera: 12MP Card slot: No OS: iOS 10 or above FaceTime: Wifi or Cellular Simcard nano-sim
2	Apple	Apple iPhone 7 Plus 	Size: 158.2 x 77.9 x 7.3 mm Weight: 188 g Display: 1920x 1080 5.5 inches Flash Storage: 128GB / 256GB Camera: 12MP Card slot: No OS: iOS 10.x or above FaceTime: Wifi or Cellular Simcard: nano-sim

6. Tablet

ITEM	BRAND	MODEL	CONFIGURATION
1	Apple	Apple iPad Air 5 th 	Size: 240 x 169.5 x 7.5 mm Weight: 469 g (WiFi) / 478 g (Wifi+ Cellular) CPU: A9 Display: 2048 x 1536 pixels, 9.7 inches Flash Storage: 32GB /128GB Camera: 12MP / front, 8MP / back OS: iOS 10.x or higher FaceTime: Wifi or Cellular Video Recording: 1080p HD Simcard: nano-sim
2	Apple	Apple iPad mini 4 	Size: 203.2 x 134.8 x 6.1 mm Weight: 298.8 g (WiFi) / 304 g (Wifi+ Cellular) CPU: A8 Display: 2048 x 1536 pixels, 7.9 inches Flash Storage: 128GB Camera: 1.2MP / front, 8MP / back OS: iOS 10.x or higher FaceTime: Wifi or Cellular Video Recording: 1080p HD Simcard: nano-sim
3	Apple	Apple 10.5-inch iPad Pro 	Size: 250.6 x 174.1 x 6.1 mm Weight: 469 g (WiFi) / 447 g (Wifi+ Cellular) CPU: A10X Display: 2224 x 1668 pixels, 10.5 inches Flash Storage: 64GB / 256GB /512GB Camera: 12MP / front, 7MP / back OS: iOS 10.x or above FaceTime: Wifi or Cellular Video Recording: 4K video recording at 30 fps Simcard: nano-sim Accessories only support iPad Pro: Apple Pencil and Smart Keyboard

ITEM	BRAND	MODEL	CONFIGURATION
4	Apple	Apple iPad Pro 12.9  Accessories for iPad Pro: Apple Pencil:  Smart Keyboard: 	Size: 305.7 x 220.6 x 6.9 mm Weight: 677 g (WiFi) / 692 g (Wifi+ Cellular) CPU: A10X Display: 2732 x 2048 pixels, 12.9 inches Flash Storage: 64GB / 256GB / 512GB Camera: 12MP / front, 7MP / back OS: iOS 10.x or above FaceTime: Wifi or Cellular Video Recording: 4K video recording at 30 fps Simcard: nano-sim Accessories only support iPad Pro: Apple Pencil and Smart Keyboard
5	HP	HP Stream 8 Tablet 	Size: 209 x 124 x 8.9 mm Weight: 408 g CPU: Intel Atom Z3735G Display: 1280 x 800 pixels, 8 inches Flash Storage: 32GB Camera: 2MP / front, 5MP / back OS: Windows 8.1 with Bing

ITEM	BRAND	MODEL	CONFIGURATION
6	Samsung	Samsung Andorid tablet (Samsung Galaxy 10.5 inch) 	Size: 177.3 x 247.3 x 6.6 mm Weight: 465 g CPU: 1.9GHz Octa-Core Display: 2560 x 1600 pixels, 10.5 inches Flash Storage: 16GB Camera: 2.1MP / front, 8MP / back OS: Android
7	Microsoft	Surface Pro 5 	Size: 292.10 x 201.42 x 8.45 mm Weight: 784g CPU: Intel Core i7 Display: 2736 x 1824 pixels (267 PPI), 12.3 inches SSD Storage: 256GB Camera: 5MP / front, 8MP / back OS: Win 10 Pro Accessory: Surface Pen
8	Lenovo	LENOVO ThinkPad X1 Tablet 	Size: 291.5 x 209.5 x 0.51 mm Weight: 767g CPU: Intel Core m7 vPro Display: 2160 x 1440 pixels, 12 inches SSD Storage: 512GB Web camera: 720p OS: Win 10 Pro Video Recording: 1080p HD Simcard: microSD Card reader Port: Mini Display Port

7. Peripherals

PRINTER				
ITEM	CLASS	BRAND	MODEL	CONFIGURATION
1	Single	HP	HP LaserJet Pro 400 M401D	Black and White A4 size Local printer for senior manager or above (for 1 user)
2	Single	HP	HP LaserJet CP1025	Color Laser A4 size Local printer for senior manager or above (for 1 user)
3	Small	HP	HP LaserJet P3015DN	Black and White A4 size Network printer for small size of users (2 to 4 users)
4	Medium	HP	HP LaserJet Enterprise 600 M602dn/M602x/M605	Black and White A4 size Network printer for medium size of users (4 to 8 users)
5	Medium	HP	HP LaserJet 5200DTN	Black and White A3/A4 size Network printer for medium size of users (4 to 8 users)
6	Small to Medium	HP	HP Color LaserJet M551dn	Color Laser A4 size Network printer for small and medium size of users (2 to 8 users)
7	Large	HP	HP LaserJet 9050DN	Black and White A3/A4 size High speed network printer for large size of users (6 – 20+ users)
8	Large	HP	HP Color LaserJet CP5525dn	Color Laser A3/A4 size High speed network printer for large size of users (6 – 20+ users)
9	Large	HP	HP LaserJet M712dn	Black and White A3/A4 size High speed network printer for large size of users (6 – 20+ users)
10	Large	HP	HP LaserJet M750dn	Color Laser A3/A4 size High speed network printer for large size of users (6 – 20+ users)
11	Large	HP	HP LaserJet M806dn	Color Laser A3/A4 size High speed network printer for large size of users (6 – 20+ users)

SCANNER			
ITEM	BRAND	MODEL	CONFIGURATION
1	Fujitsu	Fujitsu Fi-6230C Duplex Scanner (Flatbed & ADF)	A4 size Heavy duty scanning for specific system use only
2	Fujitsu	Kodak i2600 Duplex Scanner (ADF Only)	A4 size Heavy duty scanning for specific system use only
3	Fujitsu	Kodak Scan Station 500 Scanner (ADF Only)	A4 size Heavy duty standalone scanning device for pool use
4	Epson	Epson Expression GT-20000 Scanner (Flatbed / Flatbed & ADF)	A3 size For pool use
5	Fujitsu	Fujitsu Fi-5530C2 Duplex Scanner (ADF Only)	A3 size Heavy duty scanning for specific system use only
6	Kodak	Kodak i1420 Duplex Scanner (Flatbed & ADF)	A3 size Heavy duty scanning for specific system use only
7	Kodak	Kodak i3200 Scanner	A3 size Heavy duty scanning for specific system use only
8	Penpower	WorldCard Office	Business Card size

PROJECTOR			
ITEM	BRAND	MODEL	CONFIGURATION
1	ESPON	Projector EB-97	LCD™ Display Technology 2700 ANSI Lumens 1024 x 768 Native Resolution 4:3 Native Aspect Ratio 6 lbs
2	ESPON	Projector EB-935W	LCD™ Display Technology 3700 ANSI Lumens 1280 x 800 Native Resolution 4:3 Native Aspect Ratio 7.5 lbs
3	ESPON	Projector EB-U32	3LCD™ Display Technology 3200 ANSI Lumens 1920 x 1200 Native Resolution 16:10 Native Aspect Ratio 5.7 lbs

OTHER			
ITEM	BRAND	MODEL	CONFIGURATION
1	Penpower	Hand Writing Broad series	2" X 1.5"
2	Lenovo	ThinkPad External USB DVD Burner	USB connectivity also offers easy installation to desktop and notebook computers It's super slim, lightweight, sturdy and attractive USB 2.0 interface (compatible with USB 1.1) Powered by USB or AC adapter (Both adapters are included) Work with any laptop and desk pc with USB port Windows 98SE / ME / 2000 / XP / Vista / 7 compatible Slim and portable