ANNEX "A"

Section VI. Schedule of Requirements

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

Item No.	Description	Qty.	Total	Delivered, Weeks/Months *Please refer to the Technical Specifications (Section VII)*
1	➢ **DESKTOP COMPUTER**			
	End-user: Electrical Engineering (6) Mechanical (7) Puntod (10) Telin (2) HRTM (13) **Specifications:** Processor: Intel Core i3-7100 Processor (3M Cache, 3.90 GHz) Memory: 4GB DDR4 2133MHz Hard Drive: 1 TB 3.5-inch 7200 RPM Optical Drive: 8X Super-Multi drive, 9.0 mm slim, tray-load Graphics: Integrated Intel HD Graphics Audio: Integrated high-definition, 5.1-channel surround sound Networking: 802.11ac/a/b/g/n wireless LAN and Bluetooth® 4.0 LE Front I/O Ports: Front/Side I/O connectors reader: Yes Audio jack(s): 2 USB 3.0 port(s): 2 Rear I/O Ports: HDMI port(s): 2 (out) LAN port(s): 1 Audio jack(s): 3 USB 2.0 port(s): 4 USB 3.0 port(s): 1 Accessories: Wireless keyboard and mouse Speakers: USB Speakers Operating System: Win 10 SL 64 Bit Monitor / Screen : 21.5" KA220HQ Monitor Warranty: 1 year warranty on parts and labor	38 units	38 units	**45 CD**
	End-user: Computer Engineering (10) Puntod (5) Telin (25) UQAO (1) AREC (1) CONFOR (1) **Specifications:** Form Factor : 16L Tower + Monitor Bundle Processor: Intel Core i3-8100 Processor (6M Cache, 3.60 GHz) Memory: 8GB DDR4 2666 MHz UDIMM Storage: 1TB 3.5-inch 7200 RPM Optical Drive: 8X DVD-Writer, 9.0 mm slim	43 units	43 units	**45 CD**

	Graphics: NVIDIA GeForce GT 730 with 2 GB of DDR3 (supporting: DVI, HDMI) Operating System: Win 10 Home Display: Size: 21.5"" Input: VGA only Max Res.: 1920 x 1080 @ 60 Hz Technology: TN Colors: 16.7million, Glare: None Response Time: 5ms (G to G)" Warranty:1 Year Parts - 1 Year Labor Only (1-1-0)				
	End-user: Drafting (Mr. Tahil) **Specifications**: Intel Core i5-8400/8GB/1TB/2GB GT1030/Win10 w/ 24-in Monitor	1 unit	1 unit	**45 CD**	
2	➢ **LAPTOP**				
	End-user: ITSO **Specifications:** Processor: Intel Core i7-8550U (1.8GHz), Memory: 8GB LPDDR3-2133 SDRAM (onboard), Storage: 360 GB Pcle NVMe M.2 SSD, Optical Drive: NO ODD, Operating System: Windows 10, Battery: 4-cel, 53.2 Wh Li-ion polymer, Display: 13.3" diagonal FHD IPS BrightView micro-edge, WLED-backlit edge-to-edge glass (1920x 1080), Graphics: NVIDIA GeForce MX150 (2GB GDDR5 dedicated), Connectivity: Intel 802.11b/g/n/ac (2x2) Wi-Fi and Bluetooth 4.2 Combo, Audio: Bang & Olufsen; Quad speakers; Audio Boost 2.0	1 unit	1 unit	**45 CD**	
	End-user: Mechanical Eng'g **Specifications:** Processor: Intel Core i3-7100U Processor (3M Cache, 2.40 GHz) Memory: 4GB of DDR4 system memory, upgradable to 32 GB using two soDIMM modules Storage : 1TB SATA HDD Display : 14 HD 1366 x 768 resolution, high-brightness Crystal LED backlit TFT LCD 16:9 aspect ratio Ultra-slim design Mercury free, environment friendly Graphics: NVIDIA GeForce MX150 with 2 GB of dedicated GDDR5 VRAM, Optical Drive: DVD Super Multi Burner Wireless: WLAN 802.11a/b/g/n/ac wireless LAN Operates at 2.4 GHz and 5 GHz 1x1 MU-MIMO technology WPAN Bluetooth 4.1 LAN Gigabit Ethernet, Wake-on-LAN ready Operating System: Windows 10 Home I/O Port : Two USB 3.0 ports with one featuring power-off USB charging USB 2.0 port SD Card reader Ethernet (RJ-45) port HDMI port with HDCP support External display (VGA) port 3.5 mm headphone/speaker jack, supporting headsets with built-in microphone	2 units	2 units	**45 CD**	
	End-user: Computer Eng'g Specifications:	3 units	3 units		

	Processor: Intel Core i5 8250U Processor Operating System: Windows 10 Home Chipset: Integrated Intel CPU Memory: 4GB DDR4 2400MHz SDRAM Display: 15.6" (16:9) LED backlit HD Anti-Glare Panel with 45% Storage: Hard Drives: 1TB 5400RPM SATA HDD			**45 CD**
	End-user: DIT (Garzon, Orais, Calope) **Specifications:** Processor: Intel Core i3-7020U Processor (3M Cache, 2.30 GHz) Operating System: Windows 10 Home Memory: 4GB DDR4 2400MHz SDRAM Display: 14.0" (16:9) LED backlit HD (1366x768) 60Hz Anti-Glare Panel with 45% Dimensions: 328 x 246 x 21.9 mm (WxDxH) Weight: 1.5 kg with Battery	3 units	3 units	**45 CD**
	End-user: Food Prep. & Service Tech. (Cejas, Baclayon) **Specifications:** Processor: Intel Core i3-7020U Processor (3M Cache, 2.30 GHz) Operating System: Windows 10 Home Memory: 4GB DDR4 2400MHz SDRAM Display: 14.0" (16:9) LED backlit HD (1366x768) 60Hz Anti-Glare Panel with 45% Dimensions: 328 x 246 x 21.9 mm (WxDxH) Weight: 1.5 kg with Battery	2 units	2 units	**45 CD**
	End-user: HRMO **Specifications:** Intel Core i3 6006U Processor Operating System: Windows Home Chipset: Integrated Intel CPU Mmory: 4GB DDR4 Display: 15.6" (16:9) LED backlit FHD (1920x1080) 60Hz Anti-Glare Panel with 45% NTSC Graphic: nVidia MX110 2GB VRAM Storage: Hard Drives: 1TB 5400RPM SATA HDD Keyboard: Chiclet Keyboard Card Reader: Multi-format card reader WebCam: VGA Web Camera Networking: Wi-Fi: integrated 802.11b/g/n Bluetooth: Builti-in Bluetooth V4.2 Interface: 1x COMBO audio jack, 1 x Type C USB3.0 (USB3.1 GEN1), 1 x Type A USB3.0 (USB3.1 GEN1), 2 x USB 2.0 port(s), 1 x HDMI Audio: Built-in Stereo 2 W Speakers and Microphone Battery: 3 Cells 33 Whrs Battery Power Adapter: Plug Type: 4(mm) Output: 19V DC, 3.42 A, 65W Input: 100-240V AC, 50/60Hz universal Dimensions: 365x266x21.9m (WxDxH) Weight: 1.68kg.	1 unit	1 unit	**45 CD**
	End-user: BOR	1 unit	1 unit	

		Specifications: 14-in HD Intel® Pentium® Silver Quad-core N5000/4GB/500GB/Win10 Operating System: Windows 10 Home Processor: Intel® Pentium® Silver N5000 1.10 GHz Processor (4M Cache, up to 2.70 GHz) Memory: 4GB DDR4, Up to 8 GB (maximum) Card Reader: SD Card Optical Drive: NO ODD Storage: 500 GB hard drive Screen: 14" HD (1366 x 768) resolution Graphics: Intel® UHD Graphics 605 Connectivity: 802.11ac wireless LAN/Gigabit LAN Audio & Video: 640 x 480 webcam Microphone: 2 x Speaker, 300 Kilopixel (Front camera) I/O Ports: 1x USB 3.0, 2x USB 2.0 Network (RJ-45): HDMI Output/Input Devices: TouchPad Battery: 2-cell 4810 mAh Li-Polymer Adapter: 45 W Dimensions: 343 mm x 245 mm x 19.95 mm Weight: 1.65 kg			**45 CD**
3	➤ **PINTER**				
		End-user: Printer (InduTech-OJT , Medical/Dental, DIT, ITSO, CAFES(2) Specifications: Printer Type: Print, Scan, Copy Photo Default - 10 x 15 cm / 4 x 6 ": Approx. 69 sec per photo (Border) / 90 sec per photo (Borderless) *1Draft, A4 (Black / Colour): Up to 33 ppm / 15 ppm *1ISO 24734, A4 Simplex (Black / Colour): Up to 10 ipm / 5.0 ipm *1First Page Out Time from Ready Mode (Black / Colour): Approx. 10 sec / 16 sec *1 Copy Speed: Copy Quality: Colour / Black-and-White; Draft / StandardMaximum Copies from Standalone: 20 copiesMaximum Copy Size: A4, LetterISO 29183, A4, Simplex (Black / Colour): Up to 7.0 ipm / 1.7 ipmMax Copy Resolution: 300 x 300 dpi	6 units	6 units	**45 CD**
		End-user: BOR **Specifications:** Nozzle Configuration: 180 Nozzles Black, 59 Nozzles per Color Minimum Droplet Size: 3 pl, With Variable-Sized Droplet Technology Ink Technology: Dye Ink Printing Resolution: 5,760 x 1,440 DPI Application: Home, Home Office All-in-One Functions: Print, Scan, Copy PRINT Printing Speed ISO/IEC 24734: 10 pages/min Monochrome, 5 pages/min Colour	1 unit	1 unit	**45 CD**

Printing Speed: 15 pages/min Colour (plain paper 75 g/mÂ²), 69 Seconds per 10 x 15 cm photo (Premium Glossy Photo Paper), 33 pages/min Monochrome (plain paper 75 g/mÂ²) GENERAL Energy Use: 3.9 Watt (ready), 0.2 Watt (Power off), ENERGY STARÂ® qualified, 12 Watt (standalone copying, ISO/IEC 24712 pattern), 0.4 Watt (sleep mode) Supply Voltage: AC 220 V - 240 V Noise Level: 5.2 B (A) with Premium Glossy Photo Paper / Photo RPM mode - 39 dB (A) with Premium Glossy Photo Paper / Photo RPM mode Compatible Operating Systems: Mac OS 10.10.x, Mac OS 10.7.x, Mac OS 10.8.x, Mac OS 10.9.x, Mac OS X 10.6.8 or later, Windows 10, Windows 7, Windows 7 x64, Windows 8, Windows 8 (32/64 bit), Windows 8.1, Windows 8.1 x64 Edition, Windows Vista, Windows Vista x64, Windows XP, Windows XP x64, XP Professional x64 Edition			
End-user: BOR **Specifications:** Printer Type: Print, Scan, Copy Printing Technology: Print Method: Precision Core Printhead Minimum Ink Droplet Volume: 3.3 pl Printer Language: ESC / P-R Print Direction: Bi-directional printing, Uni-directional printing Nozzle Configuration: 400 nozzles Black, 128 nozzles per colour (Cyan, Magenta, Yellow) Maximum Resolution: 4800 x 1200 dpi (with Variable-Sized Droplet Technology) Automatic 2-sided printing: Yes (up to A4) Print Speed: Photo Default - 10 x 15 cm / 4 x 6 " *2: Approx. 69 sec per photo (Border) *1 Approx. 92 sec per photo (Borderless) *1 Draft, A4 (Black / Colour): Up to 33 ppm / 20 ppm *1 ISO 24734, A4 Simplex (Black / Colour): Up to 15 ipm / 8.0 ipm *1 ISO 24734, A4 Duplex (Black / Colour): Up to 6.5 ipm / 4.5 ipm *1	1 unit	1 unit	**45 CD**
End-user: PPDMO, AREC Center, CONFOR, Accounting **Specifications:** Print, Scan, Copy Photo Default - 10 x 15 cm / 4 x 6 ": Approx. 69 sec per photo (Border) / 90 sec per photo (Borderless) *1Draft, A4 (Black / Colour): Up to 33 ppm / 15 ppm *1ISO 24734, A4 Simplex (Black / Colour): Up to 10 ipm / 5.0 ipm *1First Page Out Time from Ready Mode (Black / Colour): Approx. 10 sec / 16 sec *1	4 units	4 units	**45 CD**

Printer Software: Operating System Compatibility: Windows XP / Vista / 7 / 8 / 8.1 / 10 Windows Server 2003 / 2008 / 2012 / 2016 only printing and scanning functions are supported for Windows Server OS Mac OS X 10.6.8 or later Interface: USB: USB 2.0Network: Wi-Fi IEEE 802.11b/g/n, Wi-Fi Direct Network Protocol: TCP/IPv4, TCP/IPv6Network Management Protocols: SNMP, HTTP, DHCP, APIPA, PING, DDNS, mDNS, SLP, WSD, LLTD			
End-user: SHS(1), Supply (1), Electrical Eng'g (1) **Specifications:** Printer Type: Print, Scan, Copy Print Method: On-demand inkjet (piezoelectric)Minimum Ink Droplet Volume: 3 pl Printer Language: ESC / P-R Print Direction: Bi-directional printing, Uni-directional printing Nozzle Configuration: 180 nozzles Black, 59 nozzles per colour (Cyan, Magenta, Yellow)Maximum Resolution: 5760 x 1440 dpi (with Variable-Sized Droplet Technology)Automatic 2-sided printing: No Print Speed: Photo Default - 10 x 15 cm / 4 x 6 " [2]: Approx. 69 sec per photo (Border) [1] Approx. 92 sec per photo (Borderless) [1]Draft, A4 (Black / Colour): Up to 33 ppm / 15 ppm [1]ISO 24734, A4 Simplex (Black / Colour): Up to 10.5 ipm /5.0 ipm [1]	3 units	3 units	**45 CD**
End-user: UQAO **Specifications:** Printer Type: Print, Scan, Copy, Fax with ADF Printing Technology: Ink Droplet Volume: 2.8 pl Print Direction: Bi-directional printing, Uni-directional printing, Nozzle Configuration:400 x 2 nozzles Black, 128 x 2 nozzles per colour (Cyan, Magenta, Yellow)Maximum Resolution:4,800 x 2,400 dpi (with Variable-Sized Droplet Technology) Automatic 2-sided printing: Yes (up to A3) Print Speed: Photo Default - 10 x 15 cm / 4 x 6 " [2]:Approx. 42 sec per photo (with Border) [1]Draft, A4 (Black / Colour): Up to 32 ppm / 20 ppm [1]ISO 24734, A4 Simplex (Black / Colour): Up to 18 ipm / 10 ipm [1], ISO 24734, A4 Duplex (Black / Colour): Up to 8.7 ipm / 6.0 ipm [1], ISO 24734.2, A3 Simplex (Black / Colour): Up to 10 ipm / 5 ipm [1], ISO 24734.2, A3 Duplex (Black / Colour): Up to 6.0 ipm / 3.7 ipm [1] Copy Function: Reduction / Enlargement:25 - 400%, Auto Fit Function, Maximum Copy Size:A3Copy Resolution:600 x 600 dpiMax Copies:999 copies	1 unit	1 unit	**45 CD**

Copy Speed: Copy Quality: Normal / Best Quality, ISO 29183, A4, Simplex (Black / Colour): Up to 16 ipm / 8.8 ipm Scan Function: Scanner Type: Flatbed colour image scanner Sensor Type: CIS, Optical Resolution:1200 x 2400 dpi, Maximum Scan Area:297.18 x 431.8 mm (11.7 x 17")Scanner Bit Depth (Colour): 48-bit input, 24-bit output, Scanner Bit Depth (Grayscale):16-bit input, 8-bit output, Scanner Bit Depth (Black & White):16-bit input, 1-bit output Scan Speed: Flatbed (Black / Colour): 200 dpi: 6.0 sec / 12 sec, ADF Monochrome (Simplex / Duplex):200 dpi: 8.3 ppm / -ADF Colour (Simplex / Duplex):200 dpi: 4.8 ppm / - ADF Specifications: Support Paper Thickness:64-95 g/m2ADF Capacity:35 pages (75 g/m2) Fax Function: Type Of Fax: Walk-up black-and-white and colour fax capability, Receive Memory / Page Memory:6MB, Page memory Up to 550 pages (ITU-T No.1 chart)Error Correction Mode: ITU Group3 fax with Error Correction Mode, Fax Speed (Data Transfer Rate):Up to 33.6 kbps, Approx. 3 sec/page, Fax Resolution: Up to 200 x 200 dpi, Transmission Paper Size (Flatbed):A5, Half Letter, B5 (JIS), Letter, A4, Legal, B4 (JIS), A3, 11 x 17 in, Transmission Paper Size (ADF):A5, B5 (JIS), Letter, A4, Legal, B4 (JIS), A3, 11 x 17 in, Receiving Paper Size:A5, Half Letter, B5 (JIS), Letter, A4, Legal, B4 (JIS), A3, 11 x 17 in, Speed Dial / Group Dial: Up to 200 numbers, 199 groups, Fax Features: PC Fax (Transmission / Receive), Automatic Redial, Address Book, Delay Send, Broadcast Fax (Mono Only), Transmit Reservation (200 case)				
End-user: Guidance **Specifications:** Printer Type: Printer Type: Print, Scan, Copy Printing Technology: Print Method: On-demand inkjet (piezoelectric)Minimum Ink Droplet Volume: 3 pl Printer Language: ESC / P-R, Print Direction: Bi-directional printing, Uni-directional printing, Nozzle Configuration: 180 nozzles Black, 59 nozzles per colour (Cyan, Magenta, Yellow)Maximum Resolution: 5760 x 1440 dpi (with Variable-Sized Droplet Technology)Automatic 2-sided printing: Yes (up to A4) Print Speed: Photo Default - 10 x 15 cm / 4 x 6 " *2: Approx. 69 sec per photo (Border) *1	1 unit	1 unit	**45 CD**	

	Approx. 92 sec per photo (Borderless) *1Draft, A4 (Black / Colour): Up to 33 ppm / 15 ppm *1ISO 24734, A4 Simplex (Black / Colour): Up to 10.5 ipm / 5.0 ipm *1, ISO 24734, A4 Duplex (Black / Colour): Up to 6.0 ipm / 4.0 ipm *1			
	End-user: Accounting **Specifications:** Print Speed: Photo Default - 10 x 15 cm / 4 x 6 ": Approx. 69 sec per photo (Border) / 90 sec per photo (Borderless) *1 Draft, A4 (Black / Colour): Up to 33 ppm / 15 ppm *1 ISO 24734, A4 Simplex (Black / Colour): Up to 10 ipm / 5.0 ipm *1 First Page Out Time from Ready Mode (Black / Colour): Approx. 10 sec / 16 sec *1 Printer Software: Operating System Compatibility: Windows XP / Vista / 7 / 8 / 8.1 / 10 Windows Server 2003 / 2008 / 2012 / 2016 Only printing and scanning functions are supported for Windows Server OS Mac OS X 10.6.8 or later Interface: USB: USB 2.0 Network: Wi-Fi IEEE 802.11b/g/n, Wi-Fi Direct Network Protocol: TCP/IPv4, TCP/IPv6 Network Management Protocols: SNMP, HTTP, DHCP, APIPA, PING, DDNS, mDNS, SLP, WSD, LLTD	1 unit	1 unit	**45 CD**
4	➢ **SMART TV**			
	End-user: Automotive **Specifications:** TV Type: LED , Smart TV, Screen Size: 55 inches Resolution: 1920x1080, Full HD: 4K UHD LED Backlight: yes, HDMI: 3 x Component terminal: yes *Connections* LAN terminal: yes, DLNA: yes *Network* Wall-mounted: yes Dimensions (WxHxD): 124.0x788.6x293mm (with base) *Others* Weight: 17.1 kg (w/stand)	1 unit	1 unit	**45 CD**
	End-user: Computer Engineering **Specifications:** TV Type LED , Smart TV SIZE: 55" BACKLIGHT: Direct LED Display Resolution: PAL/NTSC	5 units	5 units	**45 CD**

HDR: Ultra HD 3840×2160 DYNAMIC CONTRAST RATIO: 3,000,000:1 ASPECT RATIO: 16:9 BRIGHTNESS: 500 cd/m2 VIEWING ANGLES (H/V): 1780/1780 WIFI / LAN: ✓, DLNA: ✓ BLUETOOTH: ✓ USB 3.0: JPEG, MP3, MKV x1 USB 2.0: JPEG, MP3, MKV x1 HDMI INPUT: x2 (2.0), x2 (1.4) ANTENNA INPUT: x2 (NTSC) Composite Audio /Video Input: x1 SPDIF: x1 (Optical) EARPHONE OUTPUT: x1 INVISIBLE SPEAKERS: ✓, WAKE ON LAN: ✓ OSD MULTI LANGUAGE: SLEEP TIMER 120 MIN: ✓ General Power Requirement : 100-240V 50/60Hz AC POWER CONSUMPTION: 170W STANDBY POWER CONSUMPTION: <1W NET/GROSS WEIGHT (KG): 16.0Kg/21.0Kg WARRANTY: 2 Years REMOTE CONTROL: ✓, WALL BRACKET: ✓ DIGITAL ANTENNA: ✓, WIFI MODULE: Built-in			
End-user: MIS (1) Teacher Education (1) **Specifications:** TV Type LED , Smart TV SIZE" 50" Backlight: Direct LED Display Resolution: PAL/NTSC HDR: Ultra HD 3840×2160 Dynamic Contrast Ratio: 3,000,000:1 Aspect Ratio: 16:9 Brightness: 500 Cd/M2 Viewing Angles (H/V): 1780/1780 WIFI / LAN: ✓ DLNA: ✓ Bluetooth: ✓ USB 3.0: JPEG, MP3, MKV x1 USB 2.0: JPEG, MP3, MKV x1 HDMI Input: X2 (2.0), X2 (1.4) Antenna Input : x2 (NTSC) Composite Audio /Video Input: x1 SPDIF: x1 (Optical) Earphone Output: X1 Invisible Speakers: ✓ Wake On LAN: ✓ OSD Multi Language: ✓ Sleep Timer 120 Mins: ✓ General Power Requirement: 100-240V 50/60Hz AC Power Consumption: 170w Standby Power Consumption: <1w Net/Gross Weight (Kg): 16.0kg/21.0kg	2 units	2 units	**45 CD**

	Warranty: 2 Years Remote Control: ✓ Wall Bracket: ✓ Digital Antenna: ✓ WIFI Module: Built-In				
5	➢ **Mini PC**				
	End-user: Internet Café **Specifications:** Form Factor: Mini PC Processor: Intel Core i3-8100T 3.10 GHz Processor: Main Features 64 bit Quad-Core Processor Cache Per Processor: 6 MB L3 Cache Memory: 4GB DDR4 2400 Storage: 500 GB 7200 RPM Graphics: Intel UHD Graphics 630 Power Supply: 65W Operating System: Windows 10 Pro 64-Bit Communications LAN Speed: 10/100/1000Mbps WLAN: 802.11ac Wireless LAN Bluetooth: Bluetooth 4.0 Front Panel Ports: 1xUSB3.1Gen1Type-C 4 x USB 3.1 Gen 1 Type-A (1 w/ quick charging) 1 x Headphone out, 1 x Mic-in 1 Display Port, 1 HDMI Rear USB: 1xUSB3.1Gen1Type-A, 2 x USB 2.0 RJ45: 1 port, USB Keyboard, USB Mouse 35.56 mm x 175.26 mm x 175.26 mm, 1.80 kg	2 units	2 units	**45 CD**	
6	➢ **LCD Projector**				
	End-user: NSTP-CWTS **Specifications:** Projection System: 3LCD Technology, RGB liquid crystal shutter LCD Panel: 0.55 inch with D7 Image Colour Light Output: 3,300 Lumen- 2,050 Lumen (economy) In accordance with IDMS15.4 White Light Output: 3,300 Lumen - 2,050 Lumen (economy) In accordance with ISO 21118:2012 Resolution SVGA, 800 x 600, 4:3 Aspect Ratio 4:3 Contrast Ratio 15,000 : 1 Light source Lamp Lamp UHE, 210 W, 6,000 h durability, 10,000 h durability (economy mode) Keystone Correction Auto vertical: Â± 30 Â°, Manual horizontal Â± 30 Â° Colour Processing 10 Bits 2D Vertical Refresh Rate 100 Hz - 120 Hz Colour Reproduction Upto 1.07 billion colours Optical	1 unit	1 unit	**45 CD**	

	Projection Ratio 1.45 - 1.96:1 Zoom Digital, Factor: 1.35 Lens Optical Image Size 30 inches - 350 inches Projection Distance Wide/Tele 1.77 m - 2.4 m (60 inch screen) Projection Lens F Number 1.44 Focal Distance 16.7 mm Focus Manual: Offset 8 : 1 Connectivity USB Display Function 2 in 1: Image / Mouse Interfaces USB 2.0 Type A, USB 2.0 Type B, VGA in, HDMI in, Composite in, Cinch audio in, Wireless LAN IEEE 802.11b/g/n (optional)			
	End-user: RDP **Specifications:** White and Colour Brightness at 4,000lm, XGA resolution, 12,000 hours lamp life in eco-mode, MHL-enabled, Multi-PC Projection, Horizontal Keystone SliderConnectivity, Network: Wired LAN:1, Wireless LAN: Optional (using ELPAP10), Analog RGB Input: D-Sub 15Pin: 2 (Blue Molding), Analog input: Composite: RCA x 1 (Yellow) , Digital Input: HDMI: 2 (1 with MHL support), Analog Output: D-Sub 15Pin:1, Audio Input: Stereo Mini Jack:1, Mic I/O: Stereo Mini Jack:1, Control I/O: RS-232C:1, USB Input: USB Type A: 1 (For USB Memory, USB Document Camera, Wireless LAN and Firmware Update), USB Type B: 1 (For USB Display, Mouse, K/B, Control and Firmware Update)	1 unit	1 unit	**45 CD**
7	➢ **PROJECTOR**			
	End-user: MIS **Specifications:** Projection Technology: Projection Technology: RGB liquid crystal shutter projection system Brightness*2: White Light Output (Normal/Eco):3,600lm / 2,235lm Colour Light Output: 3,600lm Connectivity: USB Interface: USB Type A: 1 (for USB Memory, USB Document Camera, for Wireless LAN Unit, Firmware Update) USB Type B: 1 (for USB Display, Mouse, K/B, Control, Firmware Update)Analog Input: D-Sub 15pin: 1 (Blue molding) Composite: RCA x 1 (Yellow)Digital Input: HDMI: 1 (MHL supported)Audio Input:2 RCA (White / Red): 1 Contrast Ratio:15,000:1 Wireless Specifications: Supported Speed for Each Mode: IEEE 802.11b (2.4GHz): 11Mbps IEEE 802.11g (2.4GHz): 54 Mbps IEEE 802.11n (2.4GHz): 130 Mbps	1 unit	1 unit	**45 CD**

	Wireless LAN Security: Quick Mode: WPA2-PSK, Advanced Mode: WPA/WPA2-PSKSupported Connection Mode: Infrastructure, Access Point Screen Size (Projected Distance): Standard Size:60" screen 1.68 - 2.02 m Zoom : Wide:33" - 320" [0.91 - 9.07 m]Zoom : Tele:33" - 320" [1.10 - 10.89 m] Internal Speaker(s): Sound Output:2W Mono Direct Power On/Off: Direct Power On/Off: Yes Dimension Excluding Feet (W x H x D): Dimension Excluding Feet (W x H x D):302 x 77 x 234 mm Weight: 2.5kg Maintenance Cycle*4:(Normal / Eco): 6,000 hours / 10,000 hours Fan Noise (Normal / Eco):37dB / 28dB Network: Wireless: Yes (Optional) 6,000 hours / 10,000 hours				
8	➢ **SCANNER**				
	End-user: GIS (1) BAC (1) VPAF (1) **Specifications:** Scan Function: Scanner Type: A4 sheet-fed, simplex colour scanner Sensor Type: CIS Light Source: RGB LED Optical Resolution: 600 x 600dpi Output Resolution: 50 – 1,200 dpi (in 1 dpi increments)Scanner Bit Depth (Colour): 48-bit input, 24-bit output, Scanner Bit Depth (Grayscale): 16-bit input, 8-bit output, Scanner Bit Depth (Black & White): 16-bit input, 1-bit output, Max Document Size: 216 x 1,117mmOutput File Formats: JPEG, TIFF, Multi-TIFF, PDF, Searchable PDF, BMP, PNG Document Capture Pro (Win): JPEG, BMP, PDF, Searchable PDF, TIFF, Multi-TIFF, PNG, DOCX, XLSX, PPTX Scan Speed: ADF Monochrome (Simplex / Duplex): 200 dpi: 25ppm / 50ipm, 5.0ppm / 10ipm (USB Bus Power) 300 dpi: 25ppm / 50ipm 5.0ppm / 10ipm (USB Bus Power) 600 dpi: 5.0ppm / 10ipm 5.0ppm / 10ipm (USB Bus Power)ADF Colour (Simplex / Duplex): 200 dpi: 25ppm / 50ipm 5.0ppm / 10ipm (USB Bus Power) 600 dpi: 5.0ppm / 10ipm 5.0ppm / 10ipm (USB Bus Power) Scanner Type: A4 Sheet-fed, one-pass duplex colour scanner Optical Sensor: CIS, Light Source:	3 units	3 units	**45 CD**	

	RGB LED, Optical Resolution: 600 x 600 dpi, Output Resolution: 50 dpi - 1,200 dpi (1 dpi increments)Min Document Size: 50.8 x 70mmMax Document Size: 216 x 1,117mmSupport Paper Thickness: 51.8 – 128gsmADF Capacity: 20 sheets, Automatic Duplex Scanning: Yes, Daily Duty Cycle: up to 500 pages / day, Multi-feed Detection: Length Detection			
9	➢ **CAMERA**			
	End-user: Extension Mirrorless Camera with 35mm f/1.4 R lens Product Highlights(Specs) • 24.3MP APS-C X-Trans CMOS III Sensor • X-Processor Pro Image Processor • 36m-Dot Electronic Viewfinder • 0" 1.04m-Dot Tilting Touchscreen LCD • UHD 4K Video Recording at 30p • Built-In Wi-Fi • Extended ISO 51200, Shooting to 14 fps • 91-Point AF with Custom AF-C Settings • Film Simulation for Photos and Videos • 35mm f/1.4 R lens o X-mount Lens o Very Fast f/1.4 Maximum Aperture o Equivalent to 53mm "Normal" Lens o Aspheric and ED Elements o Super EBC Lens Coating o Maximum Magnification of 0.17x o 1/3 Stop Click Stops	1 unit	1 unit	**45 CD**
10	➢ **Accessories**			
	Wifi-Router *End-user: (Electrical Eng'g, Computer Eng'g)* **Specifications:** HARDWARE FEATURES Interface 4 10/100Mbps LAN ports1 10/100Mbps WAN port Button: WPS/Wi-Fi Button Reset Button: Power On/Off Button External Power Supply 9V/0.6A(EU), 9V/0.85A(US) Dimensions (W x D x H) 9.1 x 5.7 x 1.4 in. (230 x 144 x 35mm) Antenna 2 × 2.4GHz Antennas 1 × 5GHz Antenna SOFTWARE FEATURES Quality of Service WMM, Bandwidth Control Management Access Control Local Management Remote Management Port Forwarding Virtual Server, Port Triggering, UPnP, DMZ Dynamic DNS DynDns, Comexe, NO-IP VPN Pass-Through PPTP, L2TP, IPSec Access Control Parental Control, Local Management Control, Host List, Access Schedule, Rule Management Firewall Security DoS, SPI Firewall, IP Address Filter/Domain Filter, IP and MAC Address Binding Protocols Supports IPv4 and IPv6	2 units	2 units	**45 CD**

	Guest Network 2.4GHz guest network×1 5GHz guest network×1 WIRELESS FEATURES Wireless Standards IEEE 802.11ac/n/a 5GHz IEEE 802.11b/g/n 2.4GHz Frequency 2.4GHz and 5GHz Signal Rate 5GHz: Up to 433Mbps 2.4GHz: Up to 300Mbps Reception Sensitivity 5GHz:11a 54M: -76dBm; 11ac VHT20 MCS8: -71dBm;11ac VHT40 MCS9: -66dBm; 11ac VHT80 MCS9:-62dBm 2.4GHz:11g 54M: -76dBm11n; HT20 MCS7: -73dBm;11n HT40 MCS7: -71dBm Wireless Functions Enable/Disable Wireless Radio, WDS Bridge, WMM, Wireless Statistics Wireless Security 64/128-bit WEP,WPA / WPA2,WPA-PSK/ WPA2-PSK encryption Transmission Power CE:<20dBm(2.4GHz)<23dBm(5GHz) OTHERS Certification RoHS Package Contents AC750 Wireless Dual Band Router Archer C20 Power Adapter RJ45 Ethernet Cable Quick Installation Guide Box Dimensions (W X D X H) 14 x 8.8 x 2.7 in. (357x223x68mm)			
	HDMI to HDMI Cable (5m) *End-user: Civil Engineering*	7 units	7 units	**45 CD**
	Computer Optical Mouse *End-user: Civil Engineering* (CAD Room)	15 units	15 units	**45 CD**
	Computer Keyboard *End-user: Civil Engineering* (CAD Room)	15 units	15 units	**45 CD**
	Load Balancer Broadband router *End-user: MIS* Specifications: Standards and Protocols IEEE 802.3, 802.3u, 802.3ab TCP/IP, DHCP, ICMP, NAT, PPPoE, SNTP, HTTP, DNS, IPsec, PPTP, L2TP Interface 1 Fixed 10/100/1000Mbps WAN Port 3 Free Changeable 10/100/1000Mbps WAN/LAN Ports 1 Fixed 10/100/1000Mbps LAN/DMZ Port 1 Console Port (RJ-45 On RS232) Network Media 10BASE-T: UTP category 3, 4, 5 cable (Max 100m) EIA/TIA-568 100Ω STP (Max 100m) 100BASE-TX: UTP category 5, 5e cable (Max 100m) EIA/TIA-568 100Ω STP (Max 100m) 1000BASE-T: UTP category 5, 5e, 6 cable (Max 100m) Button Reset Button	1 unit	1 unit	**45 CD**

	Power Supply Internal Universal Power Supply AC100-240V~ 50/60Hz Input Flash 8MB DRAMDDRII 128MB LED PWR, SYS, Link/Act, Speed, WAN, DMZ 19-inch Standard Rack-Mount Width, 1U Height PERFORMANCE Concurrent Session 120000 NAT Throughput 350Mbps ADVANCED FUNCTIONS Load Balance Intelligent Load Balance Policy Routing Protocol Binding Link Backup (Timing, Failover) Online Detection NAT One-to-One NAT Multi-nets NAT Virtual Server, DMZ Host, Port Triggering, UPnP FTP/H.323/SIP/IPsec/PPTP ALG Routing Static Routing Dynamic Routing (RIP v1/v2) System Mode NAT, Non-NAT, Classical Routing Traffic Control IP-based Bandwidth Control Guarantee & Limited Bandwidth Time-scheduled Policy IP-based Session Limit			
	Pull down/wall screen (*End-user: MIS)* Specifications: Manual Pull Down Projector Screen 100" (70"x70") 1:1 format	1 unit	1 unit	**45 CD**
	End-user: MIS Specifications	1 unit	1 unit	**45 CD**
	Projector ceiling kit/Bracket *End-user: MIS* Specifications: **Wireless Presenter** Connection Type: Bluetooth and 2.4GHz wireless connection Wireless range: 30 m Indicator Lights (LED): Battery and Connectivity LED Battery Details: Rechargeable Lithium Polymer, 85mAh Battery Life (rechargeable): 3 months* * It may vary based on use and computing conditions. Cable Length: 140 mm Sensor: 3D accelerometer and Gyroscope Sensor technology: Motion sensor	1 unit	1 unit	**45 CD**
	Gigabit Switch (8 ports +4 poe ports) *End-user: MIS*	2 units	2 units	

	Specifications: Standards and Protocols IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3af, IEEE 802.3x, IEEE 802.1q, IEEE 802.1p Interface 8 10/100/1000Mbps RJ45 Ports AUTO Negotiation/AUTO MDI/MDIX Network Media 10BASE-T: UTP category 3, 4, 5 cable (maximum 100m) EIA/TIA-568 100Ω STP (maximum 100m) 100BASE-TX: UTP category 5, 5e cable (maximum 100m)EIA/TIA-568 100Ω STP (maximum 100m) 1000BASE-T: UTP category 5, 5e, 6 or above cable (maximum 100m)EIA/TIA-568 100Ω STP (maximum 100m) Fan Quantity Fanless Power Supply External Power Adapter(Output: 48VDC / 1.25A) PoE Ports (RJ45) Standard: 802.3 af compliant PoE Ports: Port 1- Port 4 PoE Power Budget: 55W Max Power Consumption 5.2W with no PoE device connected 65.2W with 55W PoE devices connected PERFORMANCE Switching Capacity 16Gbps Packet Forwarding Rate 1.9Mpps MAC Address Table 4K Packet Buffer Memory 1.5Mb Jumbo Frame 15KB SOFTWARE FEATURES Quality of Service Support Port-Based/802.1p/DSCP priority Support 4 priority queues Rate Limit Storm Control L2 Features IGMP Snooping V1/V2/V3 Link Aggregation Port Mirroring Cable Diagnostics Loop Prevention VLAN Supports up to 32 VLANs simultaneously (out of 4K VLAN IDs) MTU/Port/Tag VLAN Management Web-based GUI Easy Smart Configuration Utility Transmission Method Store-And-Forward			**45 CD**
	Gigabit Switch (16 ports) *End-user: MIS* Specifications: Total Number of Network Ports:16 Number of PoE (RJ-45) Ports:8 Number of Network (RJ-45) Ports : 8 Port/Expansion Slot Details : 16 x Gigabit Ethernet Network Media Type Supported Twisted Pair Ethernet Technology Gigabit Ethernet Network Technology10/100/1000Base-T Network & Communication: Layer Supported:b2 Management & Protocols: Manageable: No Physical Characteristics:	2 units	2 units	**45 CD**

	Form Factor : Wall Mountable Rack-mountable Height 1.8" Width 11" Depth 6.7" Weight (Approximate) 4.15 lb			
	Wireless Access Point **Wireless Radio Specifications** *End-user: MIS* Specifications: AP type: Indoor, dual radio, 5GHz 802.11ac 4x4 MIMO and 2.4GHz 802.11n 2x2 MIMO Software-configurable dual radio supports 5GHz (Radio 0) and 2.4GHz (Radio 1) 5GHz: Four spatial stream Single User (SU) MIMO for up to 1,733Mbps wireless data rate to individual 4x4 VHT80 or 2x2 VHT160 client devices 2.4GHz: Two spatial stream Single User (SU) MIMO for up to 400 Mbps wireless data rate to individual 2x2 VHT40 client devices (300Mbps for HT40 802.11n client devices) 5GHz: Four spatial stream Multi User (MU) MIMO for up to 1,733 Mbps wireless data rate to up to three MU-MIMO capable client devices simultaneously Support for up to 255 associated client devices per radio, and up to 16 BSSIDs per radio **Supported radio technologies:** 802.11b: Direct-sequence spread-spectrum (DSSS) 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM) Supported modulation types: 802.11b: BPSK, QPSK, CCK 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM Maximum (conducted) transmit power (limited by local regulatory requirements): 2.4GHz band: +18 dBm per chain, +21dBm aggregate (2x2) 5GHz band: +18 dBm per chain, +24dBm aggregate (4x4) Note: conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain Supported data rates (Mbps): 802.11b: 1, 2, 5.5, 11 /802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 / 802.11n (2.4GHz): 6.5 to 300 (MCS0 to MCS15) 802.11n (5GHz): 6.5 to 600 (MCS0 to MCS31) / 802.11ac: 6.5 to 1,733 (MCS0 to MCS9, NSS = 1 to 4 for VHT20/40/80, NSS = 1 to 2 for VHT160) / 802.11ac very high throughput (VHT) support: VHT 20/40/80/160 **Wi-Fi Antennas**	4 units	4 units	**45 CD**

	Four integrated dual-band downtilt omni-directional antennas for 4x4 MIMO with maximum antenna gain of 3.1dBi in 2.4GHz and 5.0dBi in 5GHz. Built-in antennas are optimized for horizontal ceiling mounted orientation of the AP. The downtilt angle for maximum gain is roughly 30 degrees. **Other Interfaces** One 10/100/1000BASE-T Ethernet network interface (RJ-45) Auto-sensing link speed and MDI/MDX 802.3az Energy Efficient Ethernet (EEE) USB 2.0 host interface (Type A connector) Bluetooth Low Energy (BLE) radio Up to 4dBm transmit power (class 2) and -91dBm receive sensitivity Integrated antenna with roughly 30 degrees downtilt and peak gain of 3.4dBi (AP-314/IAP-314) or 1.5dBi (AP-315/IAP-315) Visual indicators (multi-color LEDs): for System and Radio status Reset button: factory reset (during device power up) Kensington security slot **Power Sources and Consumption** The AP supports direct DC power and Power over Ethernet (POE) When both power sources are available, DC power takes priority over POE Mounting The AP ships with two (white) mounting clips to attach to a 9/16-inch or 15/16-inch flat T-bar drop-tile ceiling. Mechanical Dimensions/weight (unit, excluding mount accessories): 182mm(W) x 180mm(D) x 48mm (H)650g/23oz			
	PoE Switch (8 ports) *End-user: MIS* Specifications: Small-form 10-port fully managed Gigabit Layer 2 PoE+ switch. This model has 8x 10/100/1000 PoE+ enabled ports and 2x combo dual personality ports operating either as 10/100/1000 or as Gigabit SFP ports. Supports IEEE 802.3at Power over Ethernet with a PoE+ power budget of 67 Watts.	2 units	2 units	**45 CD**
	Smart UPS *(End-user: MIS)* Specifications: Rack mount Output power capacity 600Watts / 1.0 kVA Max Configurable Power (Watts) 600Watts / 1.0 kVA Nominal Output Voltage 230V Output Voltage Distortion	1 unit	1 unit	**45 CD**

	Less than 5% at full load Output Frequency (sync to mains) 57 - 63 Hz for 60 Hz nominal Topology Line Interactive Waveform type Sine wave			
	Power supply 350 watts ATX *End-user: MIS*	5 units	5 units	**45 CD**
	Hard Drive *End-user: VPAF, VPAA*	2 units	2 units	**45 CD**
	External Drive 1TB *End-user: SHS*	2 units	2 units	**45 CD**
	Camera Tripod *End-user: RDP* Specifications: 1.5M Foldable Telescoping Tripod with Fluid Drag Head Padded Bag	1 unit	1 unit	**45 CD**
	CPU w/ keyboard & mouse *End-user: RDP* Specifications: Branded Intel Core i3-8400 Processor, 8GB DDR4 Memory, 1TB HDD, NVidia GTX 1050 2GB VRAM, 802.11AC WiFi+BT, Windows 10, Keyboard & Mouse	1 unit	1 unit	**45 CD**
	Wireless Mouse *End-user: RDP* Specifications: 33feet (10m) wireless range, Nano receiver, 2.4GHz connection, Plug and Play, ideal for left or right hand	4 units	4 units	**45 CD**
	Projector Stand *(End-user: GIS)* Specifications: 1.5m Foldable telescoping Tripod self-aligning metal quick-flip leg locks	1 unit	1 unit	**45 CD**
	Speaker's Stand *(End-user: GIS)* Specifications: Heavy Duty Stand; Compatible for Any Kind of Speaker's	2 units	2 units	**45 CD**
	Rack LCD Console *(End-user: GIS)* Specifications: Rack LCD Console with Integrated 8-port Analog KVM Switch	1 unit	1 unit	**45 CD**
	Server Hard Drive 12TB or Higher Digitally Signed Firmware *End-user: GIS*	1 unit	1 unit	**45 CD**
	Camera Mic *End-user: Extension*	1 unit	1 unit	**45 CD**
	USB 32GB *End-user: Extension*	4 units	4 units	**45 CD**