# "ANNEX A"

# TECHNICAL SPECIFICATIONS

| Stock/ Property No. | Quantity | Unit | Item Description |
|---|---|---|---|
| | | | **DESKTOP COMPUTER** |
| 1 | 8 | units | *End-user: CCSIT* |
| | | | **Specs:** <br> Desktop: 21.5 inch <br> 2.3 GHz Dual Core Intel Core i5 Processor Turbo Boost up to 3.6GHz <br> 8GB Memory <br> 1TB HD <br> Intel Iris Plus Graphics 640 <br> 1920 by 1080 sRGB display <br> Magic Keyboard <br> Magic Mouse 2 <br> Lightning to USB Cable |
| 2 | 2 | units | *End-user: Campus Headliner* |
| | | | **Specs:** <br> Memory&Storage: 32Gb Memory; 1TB SSD Storage and 1TB HDD <br> Processor Type: AMD Ryzen 9 Processor <br> Processor Speed: 4.7 GHz <br> Graphics card: NVIDIA GeForce GTX 1650 SUPER(4GB GDDR6 dedicated <br> Expansion Slots: 2 M.2 (1 for SSD,1 for WLAN); 1PCIe x 16;1PCLe x1 <br> Network Interface: Integrated 10/100/1000 Gbe LSN Wireless <br> Realtek: Wi-fi 5( 1x1) and Bluetooth 4.2 combo <br> Memory Card Device: HP 3 in 1 Media Card Reader <br> Monitor: OLED Mo nitor Display <br> Dimensions: 15.54 x 3.7 x 33.74 cm <br> Power supply: 400 W Platinum efficiency Power supply with Backlight <br> Keyboard: Wired Black Mouse <br> Input Devices-Mouse: Wired Black Mouse |
| 3 | 23 | units | *End-user: Electrical Engineering(6) and Computer Engineering(12), CHTM (5)* |
| | | | **Specs:** <br> Processor: Intel Core i5-10400 Processor 2.90 GHz 12M Cache, up to 4.30 GHz <br> RAM: 8 GB DDR4 2666 MHz UDIMM Up to 32 GB of Dual-channel DDR4 2666 MHz" <br> Storage: 128 GB M.2 SATA SSD+1 TB 3.5-inch 7200 RPM" <br> Graphics: Intel® UHD Graphics 630 <br> Integrated high-definition, 5.1-channel surround sound |

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| | | | |
|---|---|---|---|
| | | | WLAN: 802.11ac/a/b/g/n wireless LAN and Bluetooth® 4.2 LE |
| | | | LAN: Gigabit Ethernet" |
| | | | "Front/Side I/O connectors |
| | | | • Audio jack(s): 2 |
| | | | • USB 3.1 Gen 1 port(s): 1<br>• USB Type-CTM port(s): 1 |
| | | | Port 1 |
| | | | - USB 3.1 Gen 1 (up to 5 Gbps): 1 |
| | | | Rear I/O connectors |
| | | | • HDMI port(s): 2 (out) |
| | | | • LAN port(s): 1 |
| | | | • Audio jack(s): 3 |
| | | | • USB 2.0 port(s): 2 |
| | | | • USB 3.1 Gen 1 port(s): 4 " |
| | | | "• Number of PCIe x16 slot(s): 0 |
| | | | • Number of PCIe x1 slot(s): 1 |
| | | | • M.2 slot (for SSD): 0" |
| | | | 300W |
| | | | USB Wired Keyboard & Wired Mouse |
| | | | Size: 18.5"" |
| | | | Input: VGA + HDMI |
| | | | Max Res.: 1366 x 768 @ 60Hz |
| | | | With VGA & HDMI Cables" |
| | | | Win 10 Home SL 64 Bit with Office for Home & Student |
| 4 | 2 | units | *End-user: RI Office(1) and EOQA(1)* |
| | | | **Specs:** |
| | | | Processor : Intel Core i5-10400 Processor 2.90GHz  12M Cache, up to 4.30 GHz |
| | | | Memory : 8GB DDR4-2666 MHz |
| | | | Storage : 256GB M.2 2280 PCI-E SSD+ 1TB HDD |
| | | | Graphics:  2GB NVIDIA GeForceGT 1030 |
| | | | Bundle :USB Wired Keyboard & Wired Mouse, and Speakers |
| | | | Display       :23.6 inches |
| | | | OS             :Windows 10 Home SL 64 Bit |
| | | | Office         :MS Office |
| | | | **LAPTOP** |
| 5 | 2 | units | *End-users: (1) Board Secretary and (1)VPEOEA* |
| | | | **Specs:** |
| | | | Operating System : Windows 10 Home<br>Processor : Intel Core i5-1135G7 processor |
| | | | 2.40GHz quad-core with Turbo Boost (up to 4.20GHz) and 8MB cache |
| | | | Graphics : Intel Iris Xe Graphics |
| | | | Display : 13.3 Full HD (1920 x 1080), 16:9 aspect, anti-glare screen, 300nits brightness display |
| | | | Four-sided frameless NanoEdge design with 88% screen-to-body ratio |
| | | | 2.9mm-thin side bezel and 12.9mm bottom bezel1 IPS-level wide-view technology |
| | | | Memory : 8GB 4266MHz LPDDR4X |

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| | | | |
|---|---|---|---|
| | | | Storage : 512GB PCIe NVMe 3.0 x2 M.2 SSD |
| | | | Interfaces : 2 x Thunderbolt 4 USB-C (up to 40Gbps) |
| | | | 1 x USB 3.2 Gen 1 Type-A (up to 5Gbps) |
| | | | 1 x Standard HDMI |
| | | | 1 x MicroSD card reader |
| | | | Keyboard and TouchPad : Keyboard Edge-to-edge design, full-size backlit, with 1.4mm key travel |
| | | | Touchpad / NumberPad |
| | | | Glass-covered; intelligent palm-rejection |
| | | | Precision Touchpad (PTP) technology supports up to four-finger smart gestures |
| | | | Audio : *stereo audio system with surround-sound; smart amplifier for maximum audio performance* Array microphone with Cortana and Alexa voice-recognition support |
| | | | Certified by Harman Kardon |
| | | | Camera : 3D IR HD camera with Windows Hello support |
| | | | Wireless Connectivity : WiFi |
| | | | Intel WiFi 6 with Gig+ performance (802.11ax) |
| | | | Bluetooth: Bluetooth 5.0 |
| | | | Battery and Power : Up to 15 hours battery life4 (all other models) |
| | | | 67Wh 4-cell lithium-polymer battery |
| | | | 65W power adaptor |
| 6 | 5 | units | *End-user: CCJ* |
| | | | **Specs:** CPU:Corei5 |
| | | | Processor Model : Intel Core i5-8250U(1.6GHz up to 3.4 GHz, 6MB cache |
| | | | : Intel Core i5-8250U(1.6GHz up to 3.9 GHz, 6MB cache |
| | | | GPU Model:     NVIDIA GeForce MX 130 2gb GDDR5 |
| | | | RAM:          4GB,8GB |
| | | | Memory:      DDR4 SDRAM |
| | | | Memory Expandable:16GB Intel Optane Memory |
| | | | Memory Slots:   2 slots |
| | | | Storage Type: HDD+SSD/eMMC |
| | | | HDD: 1TB |
| | | | SSD/eMMC: 128GB |
| | | | Display Size: 15.6 inches |
| | | | Resolution: HD 1366 x 768 |
| | | | Panel Type: LED-backlit LCD, ComfyView |
| | | | Ethernet: RJ-45 Gigabit Ethernet |
| | | | WiFi: IEEE 802.11a/b/g/n/ac |
| | | | Connectivity: HDMI, USB2.0, USB3.0,Bluetooth,Card Reader,Speakers, Microphone 10 key, Trackpad, USB Type-C, USB3.1 |
| | | | OS: Windows 10 |
| | | | OS Ver: Windows 10 Home |
| | | | Battery: 4-cell Lithium Ion 3,320 mAh 65 W |
| | | | Weight: 1.9 kg. |
| 7 | 1 | unit | *End-user: Graduate School* |
| | | | **Specs:** Operating System:  Windows 10 Home |

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| | | | |
|---|---|---|---|
| | | | Processor: AMD 5 4600HS |
| | | | Graphics: NVIDIA GeForce GTX 1650 |
| | | | 4GB GDDR6 VRAM (Boost Clock: 1615MHz.50W |
| | | | Memory:  8GB DDR4 3200MHz SDRAM Up to 32GB |
| | | | Storage: 512GB M.2 NVMe PCIe 3.0 |
| | | | Display:14-inch Non-Glare Full HD (1920 x 1080) IPS-level panel, up to 120Hz, 100% sRGb,Pantone Validated, adaptive sync |
| | | | Keyboard: Backlit Chicklet keyboard, Hot keys: volume uo/volume down/microphone mute/ |
| | | | Audio: 2x2.5W Speakers with Smart AMP Technology |
| | | | 2x0.7 tweeter, Array Microphones |
| | | | With Dolby Atmos Technology |
| | | | I/O: Ports: 1x USB 3.2 Gen 2 Type-C with Display Port 1.4 nad Power Delivry, 1x USB 3.2 Gen 2 Type-C, 1x USB 3.2 Gen 1 Type-A, 1x HDMI 2.0b, 1x3.5mm headphone and microphone combo jack |
| | | | 1x Kensington lock |
| | | | Power: 150W power adopter |
| | | | Support type-C PD 3.0 up to 65W |
| 8 | 2 | units | *End-user: Library* |
| | | | **Specs:** |
| | | | CPU: Core i7 |
| | | | Processor Model: i7-7700HQ |
| | | | Processor Speed: 2.8 GHz |
| | | | Chipset: Intel HM 175 |
| | | | GPU Model: NVIDIA GeForce GTX 1050 Up to 2gb GDDR5 Dedicated graphics memory |
| | | | Ram: 8GB |
| | | | Memory type: DDR4 |
| | | | Storage Type: HDD,SSD |
| | | | HDD: 1TB |
| | | | SSD/eMMC: 128GB |
| | | | Display Size: 15.6 inches |
| | | | Resolution: Full HD 1920x 1080 |
| | | | Ethernet: RJ 45 Gigabit LAN |
| | | | Wifi: 802.11ac |
| | | | Connectivity: HDMI, USB2.0, USB3.0, Camera, Speakers, Microphone,10 key, USB Type-c, USB3.1 |
| | | | OS: Windows 10 |
| | | | OS Ver: Windows 10 Home |
| 9 | 1 | unit | *End-user: Student Welfare Services* |
| | | | **Specs:** |
| | | | Intel Core i3-1005G1 Processor 1.20 GHz 4M Cache, up to 3.40 GHz |
| | | | 14-inch ComfyView In-plane Switching (IPS) Technology |
| | | | 8GB DDR4 SDRAM |
| | | | 512GB Hybrid Storage SSD NVMe |
| | | | Intel UHD Graphics 620/ |
| | | | Windows 10 |
| | | | Microsoft Office 2019 Home and Student (Pre-Installed) |
| 10 | 1 | unit | *End-user: EOQA* |

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| | | | |
|---|---|---|---|
| | | | Processor : Intel Core i5-10210U Processor (6M Cache, up to 4.10 GHz) |
| | | | Operating System : Windows 10 Home |
| | | | Display : 13.3-in FHD (1920 x 1080), IPS, 72% color gamut, 300 nits |
| | | | Memory : 8GB LPDDR3 - 1866 |
| | | | Battery : 3Cell 45WH Battery |
| | | | Storage : 256GB SSD (M.2 2280 NVME) |
| | | | Graphics : 2GB NVIDIA GeForce MX250 GDDR5 |
| | | | Audio : 2 x 2W speakers with Dolby Audio |
| | | | 2 x front-facing microphones |
| | | | Dimensions : 306.6mm x 202.3mm x 19.9mm |
| | | | Weight : Starting at 2.8lbs / 1.29kg |
| | | | Connectivity : 802.11 AC 2 x 2 + Bluetooth 5 combo |
| | | | Ports : 2 x USB-A 3.1 (Gen 1) |
| | | | HDMI 1.4 |
| | | | Headphone/mic combo |
| | | | Keyboard : White backlit keyboard |
| 11 | 1 | unit | *End-user: COT* |
| | | | **Specs:** |
| | | | D14AMD |
| | | | Operating System: Windows 10 Home |
| | | | Dimensions and Weight: Width: 322.5 mm |
| | | | 15.9mm |
| | | | Height: 214.8mm |
| | | | Weight: Approx 1.38kg |
| | | | Color: Space Grey |
| | | | Screen Size: 14 inches |
| | | | Screen type: IPS |
| | | | Resolution:1920x 1080 |
| | | | Screen-to-body Ratio:84% |
| | | | Contrast Ratio:800.1 |
| | | | Brightness:250 nits |
| | | | View Angle:178 degrees |
| | | | Aspect Ratio: 16.9 |
| | | | Processor: AMD Ryzen 5 3500U, AMD Ryzen 7 3700U |
| | | | Graphics:Radeon Vega 8 Graphics,Radeon RX Vega 10 Graphics\ |
| | | | Memory: 8GB DDR4 |
| | | | Battery: 56 Wh(Rating Capacity) |
| | | | Wireless:Wifi: IEEE 802.11 a/b/g/n/ac, 2.4 GHz and 5 GHz, 2x2 MIMO Bluetooth 5.0, Compatible with Bluetooth 4.2, Bluetooth 2.1+EDR |
| | | | Camera: Recessed camera |
| | | | Camera Pixels:1mp (720p HD) |
| | | | Audio: Speaker Power:2 W each x 2 |
| | | | Number of Microphone:2 |
| | | | Sensor: hall Sensor, Fingerprint Sensor |
| | | | Featured Applications:, Monitor Manager( Eye comfort mode), Factory reset |

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| | | | |
|---|---|---|---|
| | | | Ports: USB-A 3.0 x 1 |
| | | | USB-A 2.0 x 1 |
| | | | USB-C x1 |
| | | | HDMI x1 |
| | | | 3.5 mm Headset and microphone 2-n-1 jack x1 |
| | | | Material:A/C/D  Alluminum alloy,B Mylar\ |
| | | | Storage: 512 GB PCIe SSD |
| | | | Keyboard and Touchpad: Chiclet Keyboard,Full-size keyboard, Support Touch pad |
| | | | Buttons: Two in One power button and touch fingerprint sensor |
| | | | In the box: PC x1 |
| | | | USB-C AC Adapter x1 |
| | | | Adapter Cable (USB-C) x 1 |
| | | | QSG x 1 |
| 12 | 1 | unit | **NETBOOK COMPUTER**<br>*End-user: RI-MIS/Journal*<br>**Specs:**<br>CPU: Intel Core i7-1065G7 Processor 1.30 GHz 8M cache, up to 3.90 GHz<br><br>OPERATING SYSTEM: Windows 10 Home<br><br>DISPLAY: 14 LED-Backlit Full HD(1920x1080)<br><br>GRAPHICS: 2GB  NVIDIA® GeForce MX350<br><br>Memory: 8GB 3200MHz DDR4<br><br>Storage: 1TB SSD<br><br>Keyboard: Full size with backlit and finger print sensor\<br><br>Wireless: Intel® WiFi 6 GIG+(802.11ax) Bluetooth 5.0<br><br>Camera: HD Camera<br><br>I/O: 1x USB 3.1 Gen1 Type A<br>: 1x USB 3.1 Gen1 Type C<br><br>: 1x USB 2.0 Gen1 Type A<br><br>: 1x HDMI<br><br>: 1x Audio Jack combo<br><br>: 1x SD card reader<br><br>3.5 mm headphone jack<br><br>Battery: s50 Wh 3 cell lithium –polymer battery |
| | | | **PRINTER** |
| 13 | 8 | units | *End-user: CCSIT (5), EOQA(2), Center of Foreign Language & Culture (1)* |
| | | | **Specs:**<br><br>Print Method: On-demand inkjet (Piezoelectric)<br><br>Minimum Ink Droplet Size: 3 pl, With Variable Sized Droplet Technology<br><br>Nozzle Configuration: 180 nozzles Black, 59 nozzles per color (Cyan, Magenta, Yellow)<br><br>Ink Technology Dye Ink<br><br>Printing Resolution: 5760 x 1440 dpi<br><br>Category. Home, Office Desktop<br><br>All-in-one Functions.Print,Scan,Copy |
| 14 | 4 | units | *End-user: Library(1), Student Development Services(1), CAO-PPDMO(1) & Scholarship-TES(1)* |

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| | | | |
|---|---|---|---|
| | | | **Specs:** |
| | | | 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: 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 |
| | | | 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 10.5 ipm / 5.0 ipm *1 |
| | | | ISO 24734, A4 Duplex (Black / Colour): Up to 6.0 ipm / 4.0 ipm *1 |
| | | | Copy quality: Draft/ Standard/Best Quality |
| | | | Maximum copies from standalone:99 copies |
| | | | Reduction/Enlargement:25-400%,auto fit function |
| | | | Maximum Copy Size: A4,letter |
| | | | ISO 29183,A4 Simplex Flatbed |
| | | | Scan Function:Scanner type: Flatbed colour image scanner |
| | | | Sensor type: CIS |
| | | | Optical Resolution: 1200 x 2400 dpi |
| | | | Maximum scan Area: 216x297mm(8.5x11.7) |
| | | | Scanner Bit Depth(colour):48 bit input,24 bit output |
| | | | Scanner bit Depth(Grayscale): 16-bit input,8 bit output |
| | | | Black&white: 16bit input,1 bit output |
| | | | Scan Speed:Flatbed (Black/colour): 200dpi:11sec/200 dpi:29sec |
| | | | Paper handling: number of paper trays:1 paper cassette |
| | | | Standard Paper input Capacity:100 sheets,A4 plain paper(80, 20vsheets,premium glossy photo paper Output capacity: 30 sheets,A4 plain paper 20vsheets,premium glossy photo paper |
| | | | Maximum Paper Size:legal, 8.5 x 13, letter, A4,195x270mm |
| | | | Card slot/USB Host Function: Type of direct printing |
| 15 | 1 | unit | *End-user: VPAF* |
| | | | **Specs:** |
| | | | Printing Technology: |
| | | | Printer Type: |
| | | | Print, Scan, Copy with ADF |
| | | | Print Method: |
| | | | PrecisonCoreTM Printhead |
| | | | Maximum Print Resolution: |
| | | | 4800 x 2400 dpi |
| | | | Minimum Ink Droplet Volume: |
| | | | 3.8 pl |
| | | | Printer Language: |

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| | | | | ESC/P-R, ESC/P Raster |
|---|---|---|---|---|
| | | | | Print Direction: |
| | | | | Bi-directional printing |
| | | | | Nozzle Configuration: |
| | | | | 800 x 1 nozzles (Black) |
| | | | | Automatic 2-sided Printing: |
| | | | | Yes (Up to A3) |
| | | | | Print Speed: |
| | | | | Draft Text - Memo, A4 (Black#1): |
| | | | | Up to 32.0 ppm |
| | | | | ISO 24734, A4 (Black): |
| | | | | Simplex: Up to 25.0 ipm \| Duplex: Up to 16.0 ipm |
| | | | | ISO 24734, A3 (Black): |
| | | | | Simplex: Up to 13.5 ipm \| Duplex: Up to 10.0 ipm |
| | | | | First Page Out Time (Black), A4: |
| | | | | Simplex: Up to 5.5 sec \| Duplex: Up to 11.0 sec |
| | | | | Copy Function: |
| | | | | Maximum Copies from Standalone: |
| | | | | 999 copies |
| | | | | Reduction / Enlargement: |
| | | | | 25 - 400% |
| | | | | Maximum Copy Resolution: |
| | | | | 600 x 600 dpi |
| | | | | Maximum Copy Size: |
| | | | | A3 / Ledger |
| | | | | Copy Speed: |
| | | | | ISO 29183, A4 (Black), Flatbed: |
| | | | | Simplex: Up to 23.0 ipm |
| | | | | ISO 24735, A4 (Black), ADF: |
| | | | | Simplex: Up to 22.5 ipm \| Duplex: Up to 15.5 ipm |
| | | | | Scan Function: |
| | | | | Scanner Type: |
| | | | | Flatbed colour image scanner |
| | | | | Sensor Type: |
| | | | | CIS |
| | | | | Optical Resolution: |
| | | | | 1200 x 2400 dpi |
| | | | | Maximum Scan Area: |
| | | | | 297 x 431.8 mm |
| | | | | 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: |

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| | | | Flatbed (200dpi): |
| --- | --- | --- | --- |
| **PB 2021 – G&S – 03** | | | Monochrome: 5 sec |
| | | | Colour: 10 sec |
| | | | ADF (200dpi): |
| | | | Monochrome (Simplex / Duplex): Up to 26.0 ipm / 11.5 ipm |
| | | | Colour (Simplex / Duplex): Up to 9.0 ipm / 6.0 ipm |
| | | | ADF Specifications: |
| | | | Support Paper Thickness: |
| | | | 64-95 g/m2 |
| | | | Paper Capacity: |
| | | | 50 sheets |
| | | | Paper Handling: |
| | | | Number of Paper Trays: |
| | | | 3 (Front 2, Rear 1) |
| | | | Paper Hold Capacity: |
| | | | Input: Cassette 1: 250 sheets (80 g/m2) |
| | | | Cassette 2: 250 sheets, (80 g/m2) |
| | | | Rear Slot: 50 sheets (80 g/m2) |
| | | | Output: 125 sheets (80 g/m2) |
| | | | Maximum Paper Size: |
| | | | 329 x 6000 mm |
| | | | Paper Sizes: |
| | | | A3, Super B (13 x 19"), Indian Legal, Letter, A4, 16K (195 x 270mm), 8K (270 x 390mm), Executive (7.25 x 10.5"), B4, B5, A5, B6, A6, 8.5 x 13", Legal (8.5 x 14"), 8 x 10", Envelopes: #10, DL, C6, C4 |
| | | | Paper Feed Method: |
| | | | Friction Feed |
| | | | Print Margin: |
| | | | 3mm top, left, right, bottom via custom settings in printer driver |
| | | | Mobile and Cloud Solutions: |
| | | | Epson Connect Features: |
| | | | Epson iPrint, Epson Email Print, Remote Print Driver, Scan to Cloud |
| | | | Other Mobile Solutions: |
| | | | Apple AirPrint, Mopria Print Service |
| | | | Supported OS and Applications: |
| | | | Supported OS: |
| | | | Windows XP / Vista / 7 / 8 / 8.1 / 10 |
| | | | Windows Server 2003 / 2008 / 2012 / 2016 / 2019 |
| | | | Mac OS X 10.6.8 or later |
| | | | Noise Level: |
| | | | PC Printing / Plain Paper Default*2: |
| | | | Sound Power 6.7 B(A), Sound Pressure 52 dB(A) |
| | | | Dimensions and Weight: |
| | | | Dimensions (W x D x H): |
| | | | 515 x 500 x 350 mm |
| | | | Weight: |
| | | | 20.2 kg |

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| | | | Consumables: |
|---|---|---|---|
| | | | Maintenance Box: |
| | | | C12C934591 |
| | | | Pigment Black Ink Bottle: |
| | | | 7.500 pages*3 - 008 (C13T06G100 / C13T06G199 (EIN)) |
| | | | Power: |
| | | | Rated Voltage: |
| | | | AC 220-240V |
| | | | Rated Frequency: |
| | | | 50-60 Hz |
| | | | Power Consumption: |
| | | | Operating: 19.0 W |
| 16 | 1 | unit | **SMART TV**<br>*End-user: Teacher Education*<br>**Specs:**<br>55" Crystal UHD TV<br>Real 4K Picture Quality<br>4K Upscaling<br>HDR (High Dynamic Range)<br>UHD Dimming<br>Mega Contrast<br>Adaptive Sound<br>20W Sound Output<br>2Ch<br>Smart TV<br>SmartThings App Support<br>Bluetooth Audio<br>Tap View<br>3 Side Bezel-Less<br>Clean Cable Solution<br>Motion Rate (120Hz)<br>Wireless LAN Built-In (WiFi)<br>HDMI (2 ports)<br>USB (1 port) |
| | | | **DSLR CAMERA** |
| 17 | 1 | unit | *End-user: CCJ* |
| | | | **Specs:**<br>20.9 Megapixels<br>Sensor Siz :23.5 mm x 15.6 mm<br>Image Sensor Format : DX<br>Storage Media : SD, SDHC<br>ISO Sensitivity : ISO 100-51,200<br>FingerPrint DSLR Camera 18-140mm f3.5-5.6G ED VR<br>Warranty Type:International Seller Warranty<br>Warranty Period: 1 year |

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| | | | |
|---|---|---|---|
| | | | 1x Charger 1x Battery 1x Cable 1x Strap 1x Body Cap |
| 18 | 1 | unit | *End-User: CCSIT* |
| | | | **Specs:**<br>DSLR CAMERA<br><br>18-55 mm f4-5.6 IS STM<br><br>24.2 Mega Pixles<br><br>45 Cross-type points<br><br>Dual Pixel CMOS AF<br><br>Wi-Fi, NFC and Bluetooth<br><br>Viewfinder<br>Full HD  video at 60p<br><br>Vari-angle touch screen<br><br>Digic 7 |
| 19 | 1 | unit | *End-User: Campus Headliner* |
| | | | **Specs:**<br>24.2MP APS-C CMOS Sensor<br><br>DIGIC 6 Images Processor<br><br>3.0" 1.04m- Dot Vari-angle Touchscreen<br><br>Full HD 1080p Video Recording at 60 fps<br><br>45-point all Cross Type AF System<br><br>Dual Pixel CMOS Af<br><br>Expanded ISO 25600, up to 7 fps Shooting<br><br>Built-in Wi-Fi with NFC RGB+ IR 7560- Pixel Metering Sensor<br><br>Lens: EF-S 18-55mm f/3.5-5.6 IS STM Lens<br><br>And Spare lens: EF 70-30mm f/4-5.6 IS USM |
| 20 | 1 | unit | **PHOTOCOPIER** *(VPAF)*<br>**Specs:**<br>**PRINT SPEED**<br><br>   Up to 65 ppm<br>PRINT RESOLUTION<br><br>   1,800 x 600 dpi<br>PRINT AREA<br><br>   307.1 x 437.1 mm (12.1 x 17.2 in.) Banner: 291 x 1,193 mm<br>PAPER WEIGHT<br><br>   Standard: 52 – 256 gsm<br><br>   Bypass: 52–309 gsm<br>PAPER SIZE<br><br>   Max. 320 x 450 mm ( 13 x 17.71 in.) Banner: 297 x 1,200 mm<br>COPY & SCAN RESOLUTION<br><br>   600 x 600 dpi<br>SCAN SPEED<br><br>   Up to 180 opm<br>STANDARD TRAY CAPACITY<br><br>   3500 sheets<br>FAX FUNCTION |

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| | | | Optional |
|---|---|---|---|
| | | | SUPPORTED OS |
| | | | Win/Mac OS 9.x/10.x/Linux |
| | | | INTERFACE TYPE |
| | | | Ethernet 10/100/1000 BaseT, USB 2.0, PCL 5c, PCL 6, PS 3, XPS, OOXML, Fiery IC-414: Adobe PS 3(optional) |
| 21 | 1 | unit | **DRONE** (AREC)<br><br>**Specs:**<br><br>Product Position<br><br>Entry-Level Professional Drone with Powerful Obstacle Avoidance<br><br>Weight (Battery & Propellers Included)<br><br>1388 g<br><br>Max Flight Time<br>Approx. 30 minutes<br><br>Vision System<br><br>Forward Vision System<br><br>Backward Vision System<br><br>Downward Vision System<br><br>Obstacle Sensing<br><br>Front & Rear Obstacle Avoidance Left & Right<br><br>Infrared Obstacle Avoidance<br><br>Camera Sensor<br><br>1" CMOS Effective pixels: 20 M<br><br>Max. Video Recording Resolution<br><br>4K 60P<br><br>Max Transmission Distance<br><br>FCC: 4.3 mi<br><br>Video Transmission System<br><br>Lightbridge<br><br>Operating Frequency<br><br>2.4 GHz/5.8 GHz<br><br>*5.8 GHz transmission is not available in some regions due to local regulations. |
| 22 | 1 | unit | **ROUTER**<br><br>*End-user: Library*<br><br>**Specs:**<br><br>Architecture Tile<br><br>CPU TLR4-00980<br><br>CPU CORE Count 9<br><br>CPU nominal Frequency 1 GHz<br><br>Dimensions 272 x 190 x 44mm<br><br>License level 6<br><br>Operating System Router OS<br><br>Size OF RAM 2GB<br><br>Storage size 128MB<br><br>Storage type NAND<br><br>Tested ambient temperature -20°c to 60°c<br><br>Powering Details |

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| | | | |
|---|---|---|---|
| | | | PoE in Passive |
| | | | PoE in input voltage 18-57 V |
| | | | Number Of DC Inputs 2(PoE-in,DC jack) |
| | | | DC jack input voltage 18-57v |
| | | | Max power consumption 38 W |
| | | | Max power consumption without attachment 33 W Ethernet |
| | | | 10/100/1000 ethernet ports 7 |
| | | | Ethernet combo ports 1 |
| | | | Fiber details |
| | | | SFP+ ports1 |
| | | | Peripherals details |
| | | | Number of SIM slots 1 Smart card(mini SIM) |
| | | | Memory card type microSD |
| | | | Memory cards 1 |
| | | | Serial portRS232 |
| | | | Number of USB ports 1<br>USB power reset yes |
| | | | USB slot type micro USB Type AB |
| | | | Max USB current(A) |
| | | | CPU Temperature monitor: yes |
| | | | PCB Ttemperature monitor:Yes |
| | | | Voltage monitor:yes |
| 23 | 2 | units | **GPS Navigator** *(AREC)*<br><br>**Specs:**<br><br>Display resolution: 160 x 240 pixels<br><br>Display type: Transflective, 65-K color TFT, transflective<br><br>Battery life: 16 hours<br><br>Built-in memory: 4GB<br><br>Waypoints/favorites/locations: 5000<br><br>Track log: 10,000 points, 200 saved tracks<br><br>High-sensitivity GPS and GLONASS receiver with quad helix antenna<br><br>**Features:**<br><br>2.6-inch sunlight-readable color screen and a high-sensitivity GPS and GLONASS receiver with a quad helix antenna for superior reception.<br><br>Includes a 3-axis electronic compass with barometric altimeter, wireless connectivity and a 1-year BirdsEye Satellite Imagery subscription.<br><br>Has a built-in 3-axis tilt-compensated electronic compass, which shows your heading even when you're standing still, without holding it level. Its barometric altimeter tracks changes in pressure to pinpoint your precise altitude, and you can even use it to plot barometric pressure over time, which can help you keep an eye on changing weather conditions |
| 24 | 1 | unit | **Solar Radiation Sensor** *(AREC)*<br><br>**Specs:**<br><br>ISO 9060:2018:<br><br>Class C (previously known as *second class*)<br><br>Sensitivity (variable from sensor to sensor, typical values listed):0.05 mV per W m$^{-2}$<br><br>Calibration Factor (reciprocal of sensitivity; variable from sensor to sensor, typical values listed):  20 W m$^{-2}$ per mV |

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|---|---|---|---|
| | | | Calibration Uncertainty: ± 5 % |
| | | | Output Range : 0 to 100 mV |
| | | | Measurement Range: 0 to 2000 W m$^{-2}$ (net shortwave irradiance) |
| | | | Measurement Repeatability: Less than 1 % |
| | | | Long-term Drift: Less than 2 % per year |
| | | | Non-linearity: Less than 1 % |
| | | | Detector Response Time: 0.5 s |
| | | | Field of View: 180° |
| | | | Spectral Range (50 % points): 385 to 2105 nm |
| | | | Directional (Cosine) Response: Less than 30 W m$^{-2}$ at 80° solar zenith |
| | | | Temperature Response: Less than 5 % from -15 to 45 C |
| | | | Zero Offset A: Less than 5 W m$^{-2}$; Less than 10 W m$^{-2}$ (heated) |
| | | | Zero Offset B: Less than 5 W m$^{-2}$ |
| 25 | | | **ACCESSORIES** |
| 25.1 | 1 | unit | **Full HD WEBCAM with built in mic** *(Accounting)* <br> **Specs:** <br> Resolution: FHD 1080P 1920*1080 <br> Frame Rate: 30fps <br> Built-in Mic: Single Mic <br> Lens Type: Full HD Glass lens <br> Focus type: Fixed Focus <br> Output Format MJPEG YUY2 <br> USB Transfer:USB 2.0 High Speed <br> Viewing Angle: 70 degrees <br> System Requirements: Windows 7/8/8 1/10 or above |
| 25.2 | 4 | units | **COMPUTER CAMERA** *(Scholarship)* <br> **Specs:** <br> HD Webcam <br><br> Max Resolution: 720p/30fps <br> Focus type: fixed focus <br> Lens technology: standard <br> Built-in mic: mon <br> FoV: 60 <br> Universal clip fits laptops, LCD or monitors <br> Cable length: 1.5 m |
| 25.3 | 2 | units | **Computer Speaker w/ Subwoofer** *(EOQA)* |
| 25.4 | 2 | units | **TRIPOD** *(Campus Headliner)* <br> **Specs:** <br> Maximum Load:3kg <br> Title Angle: 60-90 degrees <br> Expands from 21" to 56" in height <br> 3 way Pan Head |
| 25.5 | 1 | unit | **1.5TB SSD 2.5" SATA** *(Accounting)* |
| 25.6 | 1 | unit | **SSD 1TB** *(VPEOEA)* |
| 25.7 | 3 | units | **External SSD Portable Drive 512GB** *(Research)* |

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| | | | |
|---|---|---|---|
| 25.8 | 2 | units | **EXTERNAL DRIVE 1TB** (*Library*) |
| 25.9 | 6 | unit | **Hard Disk DRIVE** *(1) Student & Auxiliary Services, (2)BARGO & (3)EOQA*<br>**Specs:**<br><br>Storage Capacity: 2 TB<br>Connection Interface: 1 x USB 3.2 / USB 3.1 Gen 1 (USB Micro-B)<br>Internal Drive Type: Hard Disk Drive<br>Form Factor External Enclosure: 2.5"<br>Bus Power: USB<br>Dimensions (L x W x H):; 4.6 x 3.1 x 0.5" / 11.7 x 7.9 x 1.4 cm<br>Weight: 0.3 lb / 0.1 kg |
| 25.10 | 2 | units | **USB 32GB** (*VPAF*) |
| 25.11 | 1 | unit | **RAM 8GB DDR3-SODIMM** (*Accounting*) |
| 25.12 | 2 | units | **Internet Adapter USB** (*VPAF*)<br>**Specs:**<br><br>• **SPEED UP TO 5GBPS:** Full 10/100/1000Mbps gigabit Ethernet performance over USB 3.0's 5Gbps bus, faster and more reliable than most wireless connections. Link and Activity LEDs. USB powered, no external power required. Backward compatible with USB 2.0/1.1.<br><br>• **COMPATIBILITY:** This USB to Gigabit Ethernet adapter work with Windows 8.1/8/7/Vista/XP, Mac OSX 10.6/10.7/10.8/10.9/10.10/10.11/10.12, Linux kernel 3.x/2.6, and<br><br>Chrome OS. DO NOT SUPPORT Windows RT and Android. Compatible with IEEE 802.3, IEEE 802.3u and IEEE 802.3ab. Supports IEEE 802.3az (Energy Efficient Ethernet). |
| 25.13 | 4 | units | **Extension Wire** (*Computer Engineering*)<br>**Specs:**<br>Cord Length: 1.8 meters<br><br>Personal SurgeArrest 5 outlet surge 250V |
| 25.14 | 1 | box | **Outdoor UTP Cable Cat 6** (*MIS*) |
| 25.15 | 25 | pcs | **Outdoor RJ-45 Connector** (*MIS*) |

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