



Detail Specifications

A. All in one Computer

EXAMPLE	QUANTITY REQUIRED
	10x All in one Computers
All in one Computer Specifications	
Operating system	Windows 11
Processor family	13th Generation Intel® Core™ i5 processor
Processor	Intel® Core™ i5-1335U (up to 4.6 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads) integrated
Graphics	Intel® Iris® Xe Graphics (Intel® Iris® Xe Graphics capabilities require system to be configured with Intel® Core™ i5 or i7 processors and dual channel memory. Intel® Iris® Xe Graphics with Intel® Core™ i5 or i7 processors and single channel memory will only function as Intel® UHD Graphics.)
Memory	16 GB DDR4-3200 MHz RAM (2 x 8 GB) (Transfer rates up to 3200 MT/s.)
Memory Slots	2 SODIMM
Internal Storage	1 TB PCIe® NVMe™ M.2 SSD
Display	68.6 cm (27") diagonal, FHD (1920 x 1080), touch, IPS, three-sided micro-edge, anti-glare, 250 nits, 99% sRGB
Touchscreen	Yes
Screen-to-body ratio (without speakers)	98.16%
Color gamut	99% sRGB



Flicker-free	Yes
Minimum dimensions (W x D x H)	61.25 x 18.62 x 44.09 cm
Weight	6.42 kg
Wireless	Realtek RTL8852BE Wi-Fi 6 (2x2) and Bluetooth® 5.3 wireless card (supporting gigabit data rate)
Network interface	Integrated 10/100/1000 GbE LAN
Product color	Shell white
Form factor	All-in-One
Keyboard	710 White Wireless Keyboard and mouse combo
Camera	True Vision 1080p FHD IR tilt privacy camera with temporal noise reduction and integrated dual array digital microphones
Audio	Dual 2 W speakers
Expansion slots	2 M.2 (1 for SSD, 1 for WLAN)
Ports	Rear 1 USB Type-C® 5Gbps signaling rate; 2 USB Type-A 5Gbps signaling rate; 2 USB 2.0 Type-A; 1 headphone/microphone combo; 1 RJ-45
Power supply type	90 W Smart AC power adapter
Sustainable impact specifications	40% post-consumer recycled plastic; Ocean-bound plastic; 10% recycled metal
Ecolabels	EPEAT® registered
Manufacturer Warranty	1 year (1/1/0) limited warranty includes 1 year of parts and labor. No on-site repair. Terms and conditions vary by country. Certain restrictions and exclusions apply.



B. Desktops with 24" Monitors for Makerspace

EXAMPLE	QUANTITY REQUIRED
	8x Desktop with 24" Monitors

Desktops with 24" Monitors Specifications

Operating system	Windows 11
Processor	Intel 14th Generation Core i5-14600KF (3.5GHz, 44MB Cache, 14x Cores, Turbo 5.3Ghz) CPU Like "MSI PRO B760M-E DDR4 LGA 1700 USB3.2 Intel Motherboard"
Graphics	GeForce RTX 4060 8GB GDDR6 DX12 Graphics Card
Memory	16 GB DDR4-3200 MHz RAM (Transfer rates up to 3200 MT/s.)
Internal Storage	1 TB PCIe® NVMe™ M.2 SSD
Display	24" Monitor with stand and cables
Wireless	Wi-Fi 6 (2x2) and Bluetooth® 5.3 wireless card (supporting gigabit data rate)
Network interface	Integrated 10/100/1000 GbE LAN
Keyboard	Wireless Keyboard and mouse combo
Ports	Rear 1 USB Type-C® 5Gbps signaling rate; 2 USB Type-A 5Gbps signaling rate; 2 USB 2.0 Type-A; 1 headphone/microphone combo; 1 RJ-45
Power supply type	500W 80+ High Performance Power Supply
Manufacturer Warranty	Provide manufacturer warranty



C. Laptops for Makerspace

EXAMPLE	QUANTITY REQUIRED
	6x Laptops
Laptops Specifications	
Operating system	Windows 11
Processor	Intel® Core™ i7-13700H (up to 5.0 GHz with Intel® Turbo Boost Technology, 24 MB L3 cache, 14 cores, 20 threads)
Performance Technology	Intel® Evo™ laptop
Graphics	Discrete: Intel® Arc™ A370M Graphics (4 GB GDDR6 dedicated)
Display	16" diagonal, WQXGA (2560 x 1600), multitouch-enabled, 120 Hz, IPS, edge-to-edge glass, micro-edge, Low Blue Light, 400 nits, 100% sRGB
Display brightness	400 nits
Display color gamut	100% sRGB
Memory	16 GB DDR5-5200 MHz RAM (2 x 8 GB)
Storage	1 TB PCIe® Gen4 NVMe™ TLC M.2 SSD
Wireless technology	Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card (supporting gigabit data rate)
Power supply	150 W Smart AC power adapter
Battery	6-cell, 83 Wh Li-ion polymer
Battery life	Up to 10 hours and 15 minutes
Video Playback Battery Life	Up to 16 hours and 45 minutes
Battery Recharge Time	Supports battery fast charge: approximately 50% in 30 minutes
External I/O Ports	1 USB Type-A 10Gbps signaling rate; 1 USB Type-A 10Gbps signaling rate (HP Sleep and Charge); 2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4, HP Sleep and Charge); 1 HDMI 2.1; 1 AC smart pin; 1 headphone/microphone combo
Expansion slots	1 microSD media card reader
Energy efficiency	EPEAT® Gold registered
Webcam	HP True Vision 5MP IR camera with camera shutter, temporal noise reduction and integrated dual array digital microphones



Audio Features	Audio by Bang & Olufsen; Quad speakers; HP Audio Boost
Sensors	Accelerometer; Ambient light sensor; IR thermal sensor
Color	Natural silver aluminum
Pointing device	Imagepad
Keyboard	Full-size, backlit, natural silver keyboard
Dimensions (W X D X H)	14.07 x 9.94 x 0.78 in
Weight	Starting at 5.17 lb
Warranty	1-year limited hardware warranty.

D. Interactive TV with Rolling Stand

EXAMPLE	QUANTITY REQUIRED
	3x Interactive TV with Rolling Stand
Interactive TV with Rolling Stand Specifications	
Screen	
Size	65-inch
Screen Model	E-LED (65")
Resolution	4K
Precision	±1mm
Camera	
Resolution	4K30
Auto voice tracking	Yes
AutoFrame	Yes
Ultra-wide angle	80°
Anti-fog, dust-proof, and anti-flicker	Yes
Zoom	2x digital zoom
Speakers	
Frequency domain	40-20kHz



Quantity	6
Stereo audio	Yes
Microphone	
Sound pickup distance	8 m
Sound pickup angle	180° forward
Quantity	12
Frequency domain	20-20kHz
Enhanced functions	Echo cancellation, noise suppression, AGC, and external microphones

E. UV Printer

EXAMPLE	QUANTITY REQUIRED
	1x UV Printer
	Consumables
	20x UV Ink White 500ml
	20x UV Ink Black 500ml
	20x UV Ink Yellow 500ml
	20x UV Ink Cyan 500ml
	20x UV Ink Magenta 500ml
	20x UV Varnish 500ml
	20x Sheets Phenolic Laminate Sheet - 1220 x 1220 x 3mm
	20x Sheets Phenolic Laminate Sheet - 1220 x 1220 x 5mm

UV Printer Specifications

SPECIFICATIONS (print size:60*90cm, A1 size)

Power	Power consume	W	300
	Power supply	AC	220V, 50Hz
	Power Connector	Three-Socket	
Print head	Brand	Epson	
	Item No.	Tx800	
	Number	2 heads/3 heads	



	Print head		
	Nozzle	nozzle	6*180
	Printing Resolution	1440 dpi	
	Ink Type	UV ink	
Ink	Ink Color	2 TX800 Heads: 1 head for 6 colors UV ink, 1 head for white UV ink 3 TX800 Heads: 1 head for 6 colors UV ink, 1 head for white uv ink, 1 head for varnish	
	Ink Supply System	Negative Pressure Continuous Ink Supply System	
	Ink Capacity	1000ml of each bottle	
	Ink Consume	10ml/m2	
Print Speed	Standard	4 pass	3m2/h(2 TX800) 5m2/h(3 TX800)
	Quality	6 pass	1.5m2/h(2 TX800) 3m2/h(3 TX800)
	High resolution	8 pass	0.75m2/h(2 TX800) 1.5m2/h(3 TX800)
	Max medium width	1000mm	
Medium	Medium dispose	Standard automatic feeding system	
	Medium compatibility	General width inkjet medium	
	Medium Type	Glass/wooden board/metal board, ceramic, leather, pvc, acrylic etc	
Operation Environment	Temperature	°C	20-25
	Humidity	RH	40-70
	Max printing size	cm	60*90
Size	Max medium Height	cm	0-16
	Machine Dimension	cm	155*160*115
	Package Dimension	cm	175*169*132

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	NW/GW	KG	366/370
	Connector	Network/USB2.0	
	Language	English	
Connect Computer	Printing software	Photo print	
	Driven system	Windows 8/ windows 11	
Drying System	Two LED UV lamp		
Warranty	One year for body frame		

F. Plotter

EXAMPLE	QUANTITY REQUIRED
	2x Plotters
	Consumables
	Ink
	2x 300 ml – Cyan 2x 300 ml – Magenta 2x 300 ml – Yellow 2x 300 ml – Grey 2x 300 ml – Photo black 2x 300 ml – Matte black
	Paper
	2x Bright white inkjet paper, 914mm x 91.4m
	2x Everyday matte polypropylene, 914mm x 61m
Plotter Specifications	
Functions	Print
Print speed	180 A1/hr, 19.3 sec/A1
Ink drop	6 pl (C, M, Y, G, pK); 9 pl (mK)
Print cartridge volume delivered	300 ml (C, M, Y, G, pK, mK); 130 ml (C, M, Y, G, pK, mK)
Ink types	Dye-based (C, M, Y, pK, G); pigment-based (mK)
Number of print cartridges	6 (C, M, Y, G, pK, mK)
Print heads	1 universal printhead



Color(s) of printing supplies	cyan, magenta, yellow, photo black, matte black, gray
Print quality color (best)	Up to 2400 x 1200 optimized dpi
Finished output handling	Sheet feed, automatic front-loading roll feed, integrated output stacker, media bin, automatic horizontal cutter
Media sizes standard (metric rolls)	279 to 914 mm
Roll external diameter	140 mm
Roll maximum input	1
Roll maximum weight	11.9 kg
Recommended media	C6810A Bright White Inkjet Paper (FSC® certified) (recyclable) 914 mm x 91.4 m; C6980A Coated Paper (PEFC™ certified) (recyclable) 914 mm x 91.4 m; L5C80A Universal Heavyweight Coated Paper, 3-in Core (FSC® certified) (recyclable) 914 mm x 91.4 m; D9R28A Everyday Matte Polypropylene, 3-in Core 914 mm x 61 m
Media thickness	Up to 19.7 mil
Media thickness (metric)	Up to 0.5 mm
Media width, maximum	914 mm
Supported Primary Applications	Line drawings; Maps; Orthophotos; Presentations; Renderings
Non-printable area (cut-sheet)	3 x 22 x 3 x 3 mm
Non-printable area (roll media)	3 x 3 x 3 x 3 mm
Media sizes, custom	210 x 279 to 914 x 1219 mm
Media sizes supported	A4, A3, A2, A1, A0
Media types	Bond and coated paper (bond, coated, heavyweight coated, super heavyweight plus matte, colored), technical paper (natural tracing, translucent bond, vellum), film (clear, matte, polyester), photographic paper (satin, gloss, semi-gloss, matte, high-gloss), backlit, self-adhesive (two-view cling, indoor paper, polypropylene, vinyl)
Media weight, recommended	60 to 328 g/m ²
Model size	914 mm
Internal Storage	500 GB self-encrypting
Line accuracy	±0.1%
Printer drivers included	Raster, PostScript and PDF drivers for Windows
Print languages	Adobe PostScript 3, Adobe PDF 1.7, HP-GL/2, HP-RT, TIFF, JPEG, CALS G4



Print technology	Thermal Inkjet
Theoretical minimum line width	0.02 mm (PDF addressable @ 1200 dpi)
Printing path	Direct printing from USB flash drive, print from network shared folder, email printing, driver for Windows, Print Service for Android, Apple AirPrint driver for MacOS and for iOS, Print for Chrome OS, Click, Smart App for iOS and Android
Connectivity, standard	Gigabit Ethernet (1000Base-T), Wi-Fi (with optional Jetdirect accessory), supporting the following standards: TCP/IP, BootP/DHCP (IPv4 only), DHCPv6, TFTP (IPv4 only), SNMP (v1, v2c, v3), Apple Bonjour Compatible, WS Discovery, Embedded Web Server (HTTP, HTTPS), IPsec, SMTP (email), Raw IP printing (9100), LPD, IPP, WS print, NTLM v2, SMBv3, SSL/TLS, 802.1X authentication (LEAP, PEAP, EAP-TLS), DFS
Network ready	Standard
Security features	Secure Boot, Whitelisting, TPM, Role Based Access Control, LDAP and Kerberos authentication, SNMPv3, HTTPS, Secure-IPP, IPsec/Firewall, Certificates management, 802.1X, TLS 1.0/1.1/1.2, Web Jetadmin compatible, JetAdvantage Security Manager compatible, Secure Disk erase (DoD 5220.22-M), Secure File erase, self-encrypting HDD, encrypted PIN printing, Syslog security logging
Mobile printing capability	Direct print from mobile apps on iOS, Android, and Chrome OS; email printing with ePrint and Smart app for iOS and Android
Minimum dimensions (W x D x H)	1390 x 760 x 1080 mm
Package dimensions (W x D x H)	1477 x 767 x 800 mm
Weight	82 kg
Memory	128 GB (file processing)
Acoustic power emissions (active, printing)	≤5.9 B(A) (operating), 4.9 B(A) (idle), ≤3.5 B(A) (sleep)
Acoustic pressure emissions	2 dB(A) (operating), 32 dB(A) (idle), <17 dB(A) (sleep)
Operating temperature range	5 to 35°C
Power consumption	100 W (printing); <36 W (ready); <10 W (sleep); 0.3 W (off)
Power	Input voltage (auto ranging) 100-240 V (±10%), 50/60 Hz (±3 Hz), 2 A max



Software included	Click, mobile, ePrint and iOS/Android support plus the Smart app for mobile, Web Jetadmin, JetAdvantage Security Manager, SmartTracker
Manufacturer Warranty	Two-year limited hardware warranty. Warranty and support options vary by product, country and local legal requirements.

G. 48 port rack mounted switch

EXAMPLE	QUANTITY REQUIRED
	2x 48 port rack mounted switch
48 port rack mounted switch Specifications	

Product: 48-port Gigabit Managed Switch with 4x 1G SFP ports

MAX Power consumption: (w/o PoE): 45W, (w/ PoE): 480W

Input voltage: 100-127 VAC / 200-240 VAC

Ports: 48x ports 10/100/1000 BASE-T ports 4x 1G SFP ports

Switch type: Managed

Switch layer: L3

Latency: 1 Gbps: 1.9 μ Sec

Routing capabilities: Static

Switching capacity: 104 Gbps

Throughput: 77.3 Mpps

Memory and processor: Dual Core ARM Cortex A9 @ 1016 Mhz 8 GB DDR3
maximum, depending on model 16 GB eMMC

PoE capability: 370W Class 4 PoE/PoE+



H. Wi-Fi access point switch

EXAMPLE	QUANTITY REQUIRED
	1x Wi-Fi access point switch

Wi-Fi access point switch Specifications

Ethernet Ports: 8x 10/100/1000 (LAN) ; 1x 10/100/1000 (WAN)

Hardware Button: Reset

Max. Power Consumption: 33W

Mounting: Rack-Mount

Operating System: UniFi

Operating Temperature: -10°C to 40°C

PoE Input: None

PoE Output: None

Power Input: 1x IEC Power Cord (Included); 1x RPS DC Input

Processor: 1.7Ghz Arm Cortex-A57 Quad-Core

Serial Interface: None

SFP Ports: 2x 10Gbps (1xLAN 1xWAN)

Supported Voltage Range: 100V-240V

System Memory: 4 GB DDR4

USB Ports: None

Dimensions: 442.4 x 43.7 x 285.6mm

Weight: 3.90kg

H



I. Wi-Fi access point

EXAMPLE	QUANTITY REQUIRED
	3x Wi-Fi access point
Wi-Fi access point switch Specifications	

Antenna Gain: 2.4GHz: 4dBi; 5.8GHz: 6dBi
Beam-width: 360
Data Rate: 2.4GHz: 573Mbps; 5.8GHz: 4800Mbps
Ethernet Ports: 1x 10/100/1000
Hardware Button: Reset
Max. Power Consumption: 13W
Mounting: Ceiling or Wall Mount
Operating System: UniFi
Operating Temperature: -30°C to 60°C
PoE Input: 802.3at or Passive PoE
PoE Output: None
Power Input: 802.3at or Passive PoE (Not Included)
Serial Interface: None
SIM Slots: None
Supported Voltage Range: 44 to 57V
USB Ports: None
Dimensions: Ø197 x 35 mm
Weight: 600gSystem Memory: 4 GB DDR4
USB Ports: None
Dimensions: 442.4 x 43.7 x 285.6mm
Weight: 3.90kg





J. 40" FHD Smart TV for display of assembly information + sturdy trolley stand

EXAMPLE	QUANTITY REQUIRED
	1x 40" FHD Smart TV for display of assembly information + sturdy trolley stand
FHD Smart TV for display of assembly information + sturdy trolley stand Specifications	

40" Smart TV

Display diagonal: 101.6 cm (40"), Display resolution: 1920 x 1080 pixels, HD type: Full HD, Display technology: LED, Screen shape: Flat. Smart TV. Motion interpolation technology: Motion Rate 50. Wi-Fi, Ethernet LAN. Product colour: Black

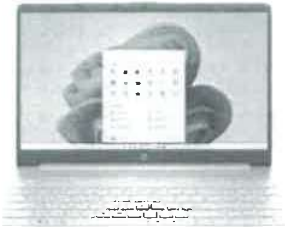
Sturdy Trolley

Toolless Tilt
Telescopic Column Design
Height Adjustable Equipment Shelf
Quick-Release Spring Lock
Heavy-Duty Casters with Locking Mechanism
Internal Cable Routing

HA



K. Laptops for Mechatronics

EXAMPLE	QUANTITY REQUIRED
	18x Laptops
Laptops for Mechatronics Specifications	

Product type: Notebook

Processor family: 13th Generation Intel Core i5

Processor frequency: 3.40 / 4.60 GHz (12 MB cache, 10 cores)

Display diagonal: 40.6 cm (16")

HD type: WUXGA

Display resolution: 1920 x 1200 pixels

Display: IPS, anti-glare, 250 nits

Internal memory: 16 GB 5200 MHz (1 x 16 GB)

Internal memory type: DDR5-SDRAM

Total storage capacity: 512 GB PCIe NVMe

On-board graphics card model: Intel UHD Graphics

Operating system installed: Windows 11

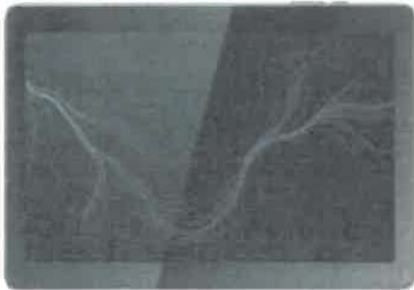
Ports

- 2x Thunderbolt 4 with USB Type-C 40Gbps signaling rate (USB Power Delivery, DisplayPort 1.4)
- 2x USB Type-A 5Gbps signaling rate (1x charging)
- 1x HDMI 2.1

At



L. Tablets for mechatronics

EXAMPLE	QUANTITY REQUIRED
	8x Tablets for mechatronics
Tablets for mechatronics Specifications	

- 10.1 inches, 295.8 cm² (~80.7% screen-to-body ratio)
- Octa-core (2x1.8 GHz Cortex-A73 & 6x1.6 GHz Cortex-A53)
- 1200 x 1920 pixels
- 16:10 ratio (~224 ppi density)
- 128GB 3GB RAM
- Wi-Fi 802.11 a/b/g/n/ac, dual-band
- Wi-Fi Direct, 5.0, A2DP, LE, USB Type-C 2.0
- Li-Po 6150 mAh, non-removable
- 8 MP, f/2.0, AF, 45.2 x 149.4 x 7.5 mm (9.65 x 5.88 x 0.30 in)

11



Annexure A: Mandatory Requirements

Description of Appendix	Requirement	Circle yes if submitted	
		Yes	No
RFQ Document	Submission of a detailed and signed quotation	Yes	No
Technical specifications and pricing	Pricing according to the technical specification	Yes	No
Proof of Bank Account	Signed letter from the Bank (not older than 3 Months)	Yes	No
Company registration documents	Supply Company registration documents	Yes	No
Tax PIN	PIN Status certificate	Yes	No
BBBEE certification	A valid BBBEE certificate / An original Sworn-In Affidavit	Yes	No
Declaration of Interest	SBD 4 SBD 6.1 SBD 6.2 SBD 8 SBD 9	Yes	No
CSD	Supply proof of registration with the National Treasury	Yes	No
ID Copy of Company's director(s)	Supply with certified copy of IDs	Yes	No
Complete and sign the official document	Request for proposal form to be completed, signed and email back	Yes	No
Eligible Companies	OEM's or authorised resellers. Must provide signed letter that you are an authorised reseller of the product in South Africa	Yes	No



Annexure B: Functional criteria

All in one Computer

Functional/Technical criteria		Weighting	0
Specifications		80%	Meeting none of the machine specifications
Operating system	Windows 11		
Processor family	13th Generation Intel® Core™ i5 processor		
Processor	Intel® Core™ i5-1335U (up to 4.6 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 10 cores, 12 threads) intergrated		
Graphics	Intel® Iris® X ^e Graphics(Intel® Iris® X ^e Graphics capabilities require system to be configured with Intel® Core™ i5 or i7 processors and dual channel memory. Intel® Iris® Xe Graphics with Intel® Core™ i5 or i7 processors and single channel memory will only function as Intel® UHD Graphics.)		
Memory	16 GB DDR4-3200 MHz RAM (2 x 8 GB) (Transfer rates up to 3200 MT/s.)		
Memory Slots	2 SODIMM		
Internal Storage	1 TB PCIe® NVMe™ M.2 SSD		
Display	68.6 cm (27") diagonal, FHD (1920 x 1080), touch, IPS, three-sided micro-edge, anti-glare, 250 nits, 99% sRGB		
Touchscreen	Yes		
Screen-to-body ratio (without speakers)	98.16%		
Color gamut	99% sRGB		
Flicker-free	Yes		
Minimum dimensions (W x D x H)	61.25 x 18.62 x 44.09 cm		
Weight	6.42 kg		
Wireless	Realtek RTL8852BE Wi-Fi 6 (2x2) and Bluetooth® 5.3 wireless card (supporting gigabit data rate)		
Network interface	Integrated 10/100/1000 GbE LAN		
Product color	Shell white		
Form factor	All-in-One		
Keyboard	710 White Wireless Keyboard and mouse combo		
Camera	True Vision 1080p FHD IR tilt privacy camera with temporal noise reduction and integrated dual array digital microphones		
Audio	Dual 2 W speakers		
Expansion slots	2 M.2 (1 for SSD, 1 for WLAN)		



higher education
& training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA



Eastcape
Midlands
TVET College

creating new futures

Ports	Rear 1 USB Type-C® 5Gbps signaling rate; 2 USB Type-A 5Gbps signaling rate; 2 USB 2.0 Type-A; 1 headphone/microphone combo; 1 RJ-45		
Power supply type	90 W Smart AC power adapter		
Sustainable impact specifications	40% post-consumer recycled plastic; Ocean-bound plastic; 10% recycled metal		
Ecolabels	EPEAT® registered		
Manufacturer Warranty	1 year (1/1/0) limited warranty includes 1 year of parts and labor. No on-site repair. Terms and conditions vary by country. Certain restrictions and exclusions apply.		
Local service and support capability		20%	Sales only

Desktops plus 24" Monitors for Makerspace

Functional/Technical criteria		Weighting	0
Specifications		80%	Meeting none of the machine specifications
Operating system	Windows 11		
Processor	Intel 14th Generation Core i5-14600KF (3.5GHz, 44MB Cache, 14x Cores, Turbo 5.3GHz) CPU		
	Like "MSI PRO B760M-E DDR4 LGA 1700 USB3.2 Intel Motherboard"		
Graphics	GeForce RTX 4060 8GB GDDR6 DX12 Graphics Card		
Memory	16 GB DDR4-3200 MHz RAM (Transfer rates up to 3200 MT/s.)		
Internal Storage	1 TB PCIe® NVMe™ M.2 SSD		
Display	24" Monitor with stand and cables		
Wireless	Wi-Fi 6 (2x2) and Bluetooth® 5.3 wireless card (supporting gigabit data rate)		
Network interface	Integrated 10/100/1000 GbE LAN		

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Interim Chairperson: Dr O van Heerden | Principal: CJ van Heerden



Keyboard	Wireless Keyboard and mouse combo		
Ports	Rear 1 USB Type-C® 5Gbps signaling rate; 2 USB Type-A 5Gbps signaling rate; 2 USB 2.0 Type-A; 1 headphone/microphone combo; 1 RJ-45		
Power supply type	500W 80+ High Performance Power Supply		
Manufacturer Warranty	Provide manufacturer warranty		
Local service and support capability		20%	Sales only

Laptops for Makerspace

Functional/Technical criteria		Weighting	0	5	10
Specifications		80%	Meeting none of the machine specifications	Meets only some of the main specifications	Meets all of the specifications
Operating system	Windows 11				
Processor	Intel® Core™ i7-13700H (up to 5.0 GHz with Intel® Turbo Boost Technology, 24 MB L3 cache, 14 cores, 20 threads)				
Performance Technology	Intel® Evo™ laptop				
Graphics	Discrete: Intel® Arc™ A370M Graphics (4 GB GDDR6 dedicated)				
Display	16" diagonal, WQXGA (2560 x 1600), multitouch-enabled, 120 Hz, IPS, edge-to-edge glass, micro-edge, Low Blue Light, 400 nits, 100% sRGB				
Display brightness	400 nits				
Display color gamut	100% sRGB				
Memory	16 GB DDR5-5200 MHz RAM (2 x 8 GB)				
Storage	1 TB PCIe® Gen4 NVMe™ TLC M.2 SSD				
Wireless technology	Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card (supporting gigabit data rate)				
Power supply	150 W Smart AC power adapter				
Battery	6-cell, 83 Wh Li-ion polymer				
Battery life	Up to 10 hours and 15 minutes				
Video Playback Battery Life	Up to 16 hours and 45 minutes				
Battery Recharge Time	Supports battery fast charge: approximately 50% in 30 minutes				



External I/O Ports	1 USB Type-A 10Gbps signaling rate; 1 USB Type-A 10Gbps signaling rate (HP Sleep and Charge); 2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4, HP Sleep and Charge); 1 HDMI 2.1; 1 AC smart pin; 1 headphone/microphone combo				
Expansion slots	1 microSD media card reader				
Energy efficiency	EPEAT® Gold registered				
Webcam	HP True Vision 5MP IR camera with camera shutter, temporal noise reduction and integrated dual array digital microphones				
Audio Features	Audio by Bang & Olufsen; Quad speakers; HP Audio Boost				
Sensors	Accelerometer; Ambient light sensor; IR thermal sensor				
Color	Natural silver aluminum				
Pointing device	Imagepad				
Keyboard	Full-size, backlit, natural silver keyboard				
Dimensions (W X D X H)	14.07 x 9.94 x 0.78 in				
Weight	Starting at 5.17 lb				
Warranty	1-year limited hardware warranty.				
Local service and support capability		20%	Sales only	Limited local technical support.	Full capable local team with a track record



Interactive TV with Rolling Stand

Functional/Technical criteria	Weighting	0	5	10	
Specifications	80%	Meeting none of the machine specifications	Meets only some of the main specifications	Meets all of the specifications	
Screen					
Size					65-inch
Screen Model					E-LED (65")
Resolution					4K
Precision					±1mm
Camera					
Resolution					4K30
Auto voice tracking					Yes
AutoFrame					Yes
Ultra-wide angle					80°
Anti-fog, dust-proof, and anti-flicker					Yes
Zoom					2x digital zoom
Speakers					
Frequency domain					40-20kHz
Quantity					6
Stereo audio					Yes
Microphone					
Sound pickup distance					8 m
Sound pickup angle					180° forward
Quantity	12				
Frequency domain	20-20kHz				
Enhanced functions	Echo cancellation, noise suppression, AGC, and external microphones				
Local service and support capability	20%	Sales only	Limited local technical support.	Full capable local team with a track record	

H



UV Printer

Functional/Technical criteria				Weighting	0	7	10
Specifications				80%	Meeting none of the machine specifications	Meets only some of the main specifications	Meets all of the specifications
SPECIFICATIONS (print size:60*90cm, A1 size)							
Power	Power consume	W	300				
	Power supply	AC	220V, 50Hz				
	Power Connector	Three-Socket					
Print head	Brand	Epson					
	Item No.	Tx800					
	Number	2 heads/3 heads					
	Print head Nozzle	nozzle	6*180				
Ink	Printing Resolution	1440 dpi					
	Ink Type	UV ink					
	Ink Color	2 TX800 Heads: 1 head for 6 colors UV ink, 1 head for white UV ink					
		3 TX800 Heads: 1 head for 6 colors UV ink, 1 head for white uv ink, 1 head for varnish					
	Ink Supply System	Negative Pressure Continuous Ink Supply System					
	Ink Capacity	1000ml of each bottle					
	Ink Consume	10ml/m2					
Print Speed	Standard	4 pas s	3m2/h(2 TX800)	5m2/h(3 TX800)			
	Quality	6 pas s	1.5m2/h(2 TX800)	3m2/h(3 TX800)			
	High resolution	8 pas s	0.75m2/h(2 TX800)	1.5m2/h(3 TX800)			
Medium	Max medium width	1000mm					



	Medium dispose	Standard automatic feeding system					
	Medium compatibility	General width inkjet medium					
	Medium Type	Glass/wooden board/metal board, ceramic, leather, pvc, acrylic etc					
Operation Environment	Temperature	°C	20-25				
	Humidity	RH	40-70				
	Max printing size	cm	60*90				
Size	Max medium Height	cm	0-16				
	Machine Dimension	cm	155*160*115				
	Package Dimension	cm	175*169*132				
	NW/GW	KG	366/370				
Connect Computer	Connector	Network/USB2.0					
	Language	English					
	Printing software	Photo print					
	Driven system	Windows 8/ windows 11					
Drying System	Two LED UV lamp						
Warranty	One year for body frame						
Local service and support capability				20%	Sales only	Limited local technical support.	Full capable local team with a track record

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Plotter

Functional/Technical criteria		Weighting	0	7	10
Specifications		80%	Meeting none of the machine specifications	Meets only some of the main specifications	Meets all of the specifications
Functions	Print				
Print speed	180 A1/hr, 19.3 sec/A1				
Ink drop	6 pl (C, M, Y, G, pK); 9 pl (mK)				
Print cartridge volume delivered	300 ml (C, M, Y, G, pK, mK); 130 ml (C, M, Y, G, pK, mK)				
Ink types	Dye-based (C, M, Y, pK, G); pigment-based (mK)				
Number of print cartridges	6 (C, M, Y, G, pK, mK)				
Print heads	1 universal printhead				
Color(s) of printing supplies	cyan, magenta, yellow, photo black, matte black, gray				
Print quality color (best)	Up to 2400 x 1200 optimized dpi				
Finished output handling	Sheet feed, automatic front-loading roll feed, integrated output stacker, media bin, automatic horizontal cutter				
Media sizes standard (metric rolls)	279 to 914 mm				
Roll external diameter	140 mm				
Roll maximum input	1				
Roll maximum weight	11.9 kg				
Recommended media	C6810A Bright White Inkjet Paper (FSC® certified) (recyclable) 914 mm x 91.4 m; C6980A Coated Paper (PEFC™ certified) (recyclable) 914 mm x 91.4 m; L5C80A Universal Heavyweight Coated Paper, 3-in Core (FSC® certified) (recyclable) 914 mm x 91.4 m; D9R28A Everyday Matte Polypropylene, 3-in Core 914 mm x 61 m				
Media thickness	Up to 19.7 mil				
Media thickness (metric)	Up to 0.5 mm				
Media width, maximum	914 mm				
Supported Primary Applications	Line drawings; Maps; Orthophotos; Presentations; Renderings				
Non-printable area (cut-sheet)	3 x 22 x 3 x 3 mm				



Non-printable area (roll media)	3 x 3 x 3 x 3 mm				
Media sizes, custom	210 x 279 to 914 x 1219 mm				
Media sizes supported	A4, A3, A2, A1, A0				
Media types	Bond and coated paper (bond, coated, heavyweight coated, super heavyweight plus matte, colored), technical paper (natural tracing, translucent bond, vellum), film (clear, matte, polyester), photographic paper (satin, gloss, semi-gloss, matte, high-gloss), backlit, self-adhesive (two-view cling, indoor paper, polypropylene, vinyl)				
Media weight, recommended	60 to 328 g/m ²				
Model size	914 mm				
Internal Storage	500 GB self-encrypting				
Line accuracy	±0.1%				
Printer drivers included	Raster, PostScript and PDF drivers for Windows				
Print languages	Adobe PostScript 3, Adobe PDF 1.7, HP-GL/2, HP-RTL, TIFF, JPEG, CALS G4				
Print technology	Thermal Inkjet				
Theoretical minimum line width	0.02 mm (PDF addressable @ 1200 dpi)				
Printing path	Direct printing from USB flash drive, print from network shared folder, email printing, driver for Windows, Print Service for Android, Apple AirPrint driver for MacOS and for iOS, Print for Chrome OS, Click, Smart App for iOS and Android				
Connectivity, standard	Gigabit Ethernet (1000Base-T), Wi-Fi (with optional Jetdirect accessory), supporting the following standards: TCP/IP, BootP/DHCP (IPv4 only), DHCPv6, TFTP (IPv4 only), SNMP (v1, v2c, v3), Apple Bonjour Compatible, WS Discovery, Embedded Web Server (HTTP, HTTPS), IPsec, SMTP (email), Raw IP printing (9100), LPD, IPP, WS print, NTLM v2, SMBv3, SSL/TLS, 802.1X authentication (LEAP, PEAP, EAP-TLS), DFS				
Network ready	Standard				
Security features	Secure Boot, Whitelisting, TPM, Role Based Access Control, LDAP and Kerberos authentication, SNMPv3, HTTPS, Secure-IPP, IPsec/Firewall, Certificates management, 802.1X, TLS 1.0/1.1/1.2, Web Jetadmin compatible, JetAdvantage Security Manager compatible, Secure Disk erase				



	(DoD 5220.22-M), Secure File erase, self-encrypting HDD, encrypted PIN printing, Syslog security logging				
Mobile printing capability	Direct print from mobile apps on iOS, Android, and Chrome OS; email printing with ePrint and Smart app for iOS and Android				
Minimum dimensions (W x D x H)	1390 x 760 x 1080 mm				
Package dimensions (W x D x H)	1477 x 767 x 800 mm				
Weight	82 kg				
Memory	128 GB (file processing)				
Acoustic power emissions (active, printing)	≤5.9 B(A) (operating), 4.9 B(A) (idle), ≤3.5 B(A) (sleep)				
Acoustic pressure emissions	2 dB(A) (operating), 32 dB(A) (idle), <17 dB(A) (sleep)				
Operating temperature range	5 to 35°C				
Power consumption	100 W (printing); <36 W (ready); <10 W (sleep); 0.3 W (off)				
Power	Input voltage (auto ranging) 100-240 V (±10%), 50/60 Hz (±3 Hz), 2 A max				
Software included	Click, mobile, ePrint and iOS/Android support plus the Smart app for mobile, Web Jetadmin, JetAdvantage Security Manager, SmartTracker				
Manufacturer Warranty	Two-year limited hardware warranty. Warranty and support options vary by product, country and local legal requirements.				
Local service and support capability		20%	Sales only	Limited local technical support.	Full capable local team with a track record

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48 port rack mounted switch

Functional/Technical criteria	Weighting	0	7	10
Specifications - Product: 48-port Gigabit Managed Switch with 4x 1G SFP ports - MAX Power consumption: (w/o PoE): 45W, (w/ PoE): 480W - Input voltage: 100-127 VAC / 200-240 VAC - Ports: 48x ports 10/100/1000 BASE-T ports 4x 1G SFP ports - Switch type: Managed - Switch layer: L3 - Latency: 1 Gbps: 1.9 μSec - Routing capabilities: Static - Switching capacity: 104 Gbps - Throughput: 77.3 Mpps - Memory and processor: Dual Core ARM Cortex A9 @ 1016 Mhz 8 GB DDR3, maximum, depending on model 16 GB eMMC - PoE capability: 370W Class 4 PoE/PoE+	80%	Meeting none of the machine specifications	Meets only some of the main specifications	Meets all of the specifications
Local service and support capability	20%	Sales only	Limited local technical support.	Full capable local team with a track record

WIFI Access point Switch

Functional/Technical criteria	Weighting	0	7	10
Specifications - Ethernet Ports: 8x 10/100/1000 (LAN) ; 1x 10/100/1000 (WAN) - Hardware Button: Reset - Max. Power Consumption: 33W - Mounting: Rack-Mount - Operating System: UniFi	80%	Meeting none of the machine specifications	Meets only some of the main specifications	Meets all of the specifications



- Operating Temperature: -10°C to 40°C - PoE Input: None - PoE Output: None - Power Input: 1x IEC Power Cord (Included); 1x RPS DC Input - Processor: 1.7Ghz Arm Cortex-A57 Quad-Core - Serial Interface: None - SFP Ports: 2x 10Gbps (1xLAN 1xWAN) - Supported Voltage Range: 100V-240V - System Memory: 4 GB DDR4 - USB Ports: None - Dimensions: 442.4 x 43.7 x 285.6mm - Weight: 3.90kg				
Local service and support capability	20%	Sales only	Limited local technical support.	Full capable local team with a track record

WIFI Access points

Functional/Technical criteria	Weighting	0	7	10
Specifications - Dual Band Antenna Gain: 2.4GHz: 4dBi; 5.8GHz: 6dBi - Beam-width: 360 - Data Rate: 2.4GHz: 573Mbps; 5.8GHz: 4800Mbps - Ethernet Ports: 1x 10/100/1000 - Hardware Button: Reset - Max. Power Consumption: 13W - Mounting: Ceiling or Wall Mount - Operating System: UniFi - Operating Temperature: -30°C to 60°C - PoE Input: 802.3at or Passive PoE - PoE Output: None - Power Input: 802.3at or Passive PoE (Not Included) - Serial Interface: None - SIM Slots: None - Supported Voltage Range: 44 to 57V - USB Ports: None - Dimensions: Ø197 x 35 mm - Weight: 600gSystem Memory: 4 GB DDR4 - USB Ports: None - Dimensions: 442.4 x 43.7 x 285.6mm - Weight: 3.90kg	80%	Meeting none of the machine specifications	Meets only some of the main specifications	Meets all of the specifications
Local service and support capability	20%	Sales only	Limited local technical support.	Full capable local team with a track record



40" FHD Smart TV for display of assembly information + sturdy trolley stand

Functional/Technical criteria	Weighting	0	7	10
Specifications 40" Smart TV Display diagonal: 101.6 cm (40"), Display resolution: 1920 x 1080 pixels, HD type: Full HD, Display technology: LED, Screen shape: Flat. Smart TV. Motion interpolation technology: Motion Rate 50. Wi-Fi, Ethernet LAN. Product colour: Black Sturdy Trolley Toolless Tilt Telescopic Column Design Height Adjustable Equipment Shelf Quick-Release Spring Lock Heavy-Duty Casters with Locking Mechanism Internal Cable Routing	80%	Meeting none of the machine specifications	Meets only some of the main specifications	Meets all of the specifications
Local service and support capability	20%	Sales only	Limited local technical support.	Full capable local team with a track record

Laptops for Mechatronics

Functional/Technical criteria	Weighting	0	7	10
Specifications - Product type: Notebook - Processor family: 13th Generation Intel Core i5 - Processor frequency: 3.40 / 4.60 GHz (12 MB cache, 10 cores) - Display diagonal: 40.6 cm (16") - HD type: WUXGA - Display resolution: 1920 x 1200 pixels - Display: IPS, anti-glare, 250 nits - Internal memory: 16 GB 5200 MHz (1 x 16 GB) - Internal memory type: DDR5-SDRAM - Total storage capacity: 512 GB PCIe NVMe	80%	Meeting none of the machine specifications	Meets only some of the main specifications	Meets all of the specifications



- On-board graphics card model: Intel UHD Graphics - Operating system installed: Windows 11 - Ports 2x Thunderbolt 4 with USB Type-C 40Gbps signaling rate (USB Power Delivery, DisplayPort 1.4) 2x USB Type-A 5Gbps signaling rate (1x charging) 1x HDMI 2.1				
Local service and support capability	20%	Sales only	Limited local technical support.	Full capable local team with a track record

Tablets for mechatronics

Functional/Technical criteria	Weighting	0	7	10
Specifications 10.1 inches, 295.8 cm² (~80.7% screen-to-body ratio) - Octa-core (2x1.8 GHz Cortex-A73 & 6x1.6 GHz Cortex-A53) 1200 x 1920 pixels 16:10 ratio (~224 ppi density) 128GB 3GB RAM - Wi-Fi 802.11 a/b/g/n/ac, dual-band - Wi-Fi Direct, 5.0, A2DP, LE, USB Type-C 2.0 - Li-Po 6150 mAh, non-removable 8 MP, f/2.0, AF, 45.2 x 149.4 x 7.5 mm (9.65 x 5.88 x 0.30 in)	80%	Meeting none of the machine specifications	Meets only some of the main specifications	Meets all of the specifications
Local service and support capability	20%	Sales only	Limited local technical support.	Full capable local team with a track record