3. Technical Specifications

IT Hardware and Equipment for Virtual Booths, Material Recording Booth, and Hybrid Training Room

LOT 1	**Supply of computer systems and Laptops**	
Item 1	**Required specifications for a high performance computer system**	5 Bundles
Brand:	**(Bidder MUST specify)** *All computer systems (system units, monitors, keyboards and mice) must be of the same brand.*	
Model:	**(Bidder MUST specify)**	
Form Factor:	Small or Tower (Note: Ultra Small size and All-in-One is not included)	
Processor:	lntel® Core i7 (13th Gen or later) or AMD Ryzen Equivalent or later	
Motherboard:	SATA lll Support lntegrated Sound Capabilities	
RAM:	16GB RAM, DDR4 or higher	
Hard Disk Drive	1TB M.2 NVMe SSD	
Optical Drive:	Internal DVD Writer/ Rewrite (Optional)	
Video:	Dedicated video card with at least 2GB VRAM, and at least 2x HDMI or 2x DisplayPort (D-Port) *Please specify the available port details in the quotation/ specification.*	
Dual Monitors:	**Monitor 1:** From and including 23" to below 25" Flat Screen with tilt and height adjustment features with at least 1 x HDMI and 1 x D-Port and, compatible cable **Monitor 2:** From and including 23" to below 25" Flat Screen with tilt and height adjustment features with at least 1 x HDMI and 1 x D-Port and, compatible cable ● *Bidder must specify on the quotation/ specification, the port(s) on the monitors. At least one port must be compatible with the provided port on the system unit and the video cable provided.*	

	● *Both monitors must be of the same brand, model, and screen size. Monitor interfaces/ports shall be compatible with the system unit to support dual-monitor operation.* ● *The cable supplied must match with the port in the system unit. Converters/Adapters will not be accepted.*	
Network:	1000Mbps (Integrated Gigabit Ethernet)	
Input/ Output Ports:	Minimum number of ports required; • 2 x USB Type-A ports (All ports must support USB 3.0 or later) • Audio combo jack (or separate speaker and mic jacks)	
Keyboard:	Wireless QWERTY Keyboard (EN-US) *(Keyboards with only English alphabetical characters and US English layout will be accepted)* ***(full size (non-compact) Keyboards will be accepted)***	
Mouse:	Wireless Optical Scroll Mouse with Mouse Pad	
Operating System:	Genuine Windows 11 Professional	
Warranty:	1 year parts	
	1 year service	
Item 2	**Required specification for a laptop**	30 Bundles
Brand:	**(Bidder Must specify)**	
Model:	**(Bidder Must specify)**	
Processor:	lntel® Core i5 (14th Gen or later) or AMD Ryzen Equivalent or later	
Motherboard:	RAM upgradeable to minimum 32GB Built-in Sound Capabilities	
RAM:	16GB RAM, DDR4 or higher	
Hard Disk Drive:	512GB SSD	
Video Interface:	Intel HD Graphics	
Network Interface:	Integrated Gigabit Ethernet network Integrated Wireless LAN: 802.11 b/g/n/ac or later Bluetooth v4.0 or higher	
Audio:	Integrated speakers	
Input/ Output ports:	Minimum number of ports required; ● 2 x USB Type-A ports (Must support USB 3.0) ● 1 x HDMI port	

	• 1 x Headphone & Microphone (or Combo port) • 1 x RJ45	
Keyboard:	QWERTY Keyboard (EN-US layout)	
Pointing Device:	Built-in pointing device	
Operating System:	Genuine Windows 11 Professional	
Webcam:	Built in webcam Integrated microphone	
Display:	14 inches screen LED Display with HD or better resolution	
Battery:	> 6 hours continuous use	
Weight:	< 2 Kg	
Power / Environmental:	AC Adapter / UK Plug	
Accessories:	• Carry case • Bluetooth wireless optical scroll mouse required	
Warranty:	1 Year parts	
	1 Year service	
Item 3	**Required specification for a computer system**	1 Bundle
Brand:	**(Bidder MUST specify)** *All computer systems (system units, monitors, keyboards and mice) must be of the same brand.*	
Model:	**(Bidder MUST specify)**	
Form Factor:	Small or Tower (Note: Ultra Small size and All-in-One is not included)	
Processor:	lntel® Core i7 (14th Gen or later) or AMD Ryzen Equivalent or later	
Motherboard:	SATA lll Support integrated Sound Capabilities	
RAM:	32GB RAM, DDR4 or higher	
Hard Disk Drive	2TB M.2 NVMe SSD	
Optical Drive:	Internal DVD Writer/ Rewrite (Optional)	
Video:	Dedicated video card with at least 8GB VRAM, and at least 2x HDMI or 1x DisplayPort (D-Port) and 1x HDMI *Please specify the available port details in the quotation/ specification*	
Dual Monitors:	**Monitor 1:**	

	From and including 23" to below 25" Flat Screen with tilt and height adjustment features with at least 1 x HDMI and 1 x D-Port and compatible cable **<u>Monitor 2:</u>** From and including 23" to below 25" Flat Screen with tilt and height adjustment features with at least 1 x HDMI and 1 x D-Port and compatible cable ● *Bidder must specify on the quotation/ specification, the port(s) on the monitors. At least one port must be compatible with the provided port on the system unit and the video cable provided.* ● *Both monitors must be of the same brand, model, and screen size. Monitor interfaces/ports shall be compatible with the system unit to support dual-monitor operation.* ● *The cable supplied must match with the port in the system unit. Converters/Adapters will not be accepted.*	
Network:	1000Mbps (Integrated Gigabit Ethernet)	
Input/ Output Ports:	<u>Minimum number of ports required;</u> • 2 x USB Type-A ports (All ports must support USB 3.0 or later) • Audio combo jack (or separate speaker and mic jacks)	
Keyboard:	Wireless QWERTY Keyboard (EN-US) *(Keyboards with only English alphabetical characters and US English layout will be accepted)* ***(full size (non-compact) Keyboards will be accepted)***	
Mouse:	Wireless Optical Scroll Mouse with Mouse Pad	
Operating System:	Genuine Windows 11 Professional	
Warranty:	1 year parts	
	1 year service	
Item 4	**Required specification for a laptop**	3 Bundle
Brand:	**(Bidder Must specify)**	
Model:	**(Bidder Must specify)**	
Processor:	lntel® Core i7 (13th Gen or later) or AMD Ryzen Equivalent or later	
Motherboard:	RAM upgradeable to minimum 32GB Built-in Sound Capabilities	
RAM:	32GB RAM, DDR4 or higher	

Hard Disk Drive:	1TB SSD M.2 NVMe SSD	
Video Interface:	Dedicated video card with at least 6GB VRAM, and at least 1x HDMI port	
Network Interface:	Integrated Gigabit Ethernet network Integrated Wireless LAN: 802.11 b/g/n/ac or later Bluetooth v4.0 or higher	
Audio:	Integrated speakers	
Input/ Output ports:	Minimum number of ports required; ● 2 x USB Type-A ports (Must support USB 3.0) ● 1 x HDMI port ● 1 x Headphone & Microphone (or Combo port) ● 1 x RJ45 or with USB network adapter	
Keyboard:	QWERTY Keyboard (EN-US layout)	
Pointing Device:	Built-in pointing device	
Operating System:	Genuine Windows 11 Professional	
Webcam:	Built in webcam Integrated microphone	
Display:	Between 14 inches and 15 inch screen LED Display with HD or better resolution	
Battery:	> 6 hours continuous use	
Weight:	< 2 Kg	
Power / Environmental:	AC Adapter / UK Plug	
Accessories:	● Carry case ● Bluetooth wireless optical scroll mouse required	
Warranty:	1 Year parts	
	1 Year service	
Item 5	**Required specification for a Windows based tablet device**	1 Bundle
Brand:	**(Vendor Must specify)**	
Model:	**(Vendor Must specify)**	
Processor:	Snapdragon® X2 Plus (10-core) or better	
RAM:	16 GB or higher	
Hard Disk Drive:	1 TB SSD	
Display:	OLED 2880 x 1920	
Screen Size:	13 inches	
Touch Enabled:	Yes	
Stylus Support:	Yes	

Network and Communication:	Integrated WiFi: 802.11 b/g/n/ac or later Bluetooth v4.0 or later	
Audio:	Integrated	
Input/Output Ports:	2 x USB Type-C	
Operating System:	Genuine Microsoft Windows 11 Professional	
Additional Software:	Genuine Microsoft Office 2021 Professional Plus	
Battery:	> 10 hours continuous use	
Webcam:	Built in Camera (Front and Back) Integrated microphone	
Power Supply:	Included	
Colour:	Graphite	
Weight:	Less than 1 kg	
Item 6	**Keyboard for the windows based tablet device**	1 Bundle
Keyboard:	QWERTY Keyboard (EN-US layout) - Should support the provided tablet *(Keyboards with only English alphabetical characters and US English layout will be accepted)*	
Built-in Touchpad:	Yes	
Weight:	281 g	
Pen storage:	Pen storage with charging	
Battery	built-in rechargeable lithium-ion battery	
Interface:	Magnetic	
Colour:	Graphite	
Item 7	**Pen for the windows based tablet device**	1 Bundle
Pen	Pen - for the provided tablet	
Buttons:	Side button, Top button with eraser functionality	
Tactile Signals:	Haptic feedback functionality	
Colour:	Matte black, plastic enclosure	
Pressure sensitivity:	4,096 pressure levels, Zero force inking	
Weight:	13 g	
Battery:	Rechargeable Lithium ion up to 15 hrs typical usage	
Warranty	1 Year	

LOT 2	**Mics, Headphones with Mic, Conference webcam, Network Attached Storage (NAS), cable management sleeve, Webcam, USB Noise cancelling microphone and UPSs.**	
Item 8	**Minimum specification for a headphone with mic**	5 Bundles
Brand:	**(Bidder MUST specify)**	
Model:	**(Bidder MUST specify)**	
Connectivity Mode/Port:	USB-A	
Ear Coupling:	Circumaural	
Features	Noise & Echo Cancellation Mic *Note: Headsets featuring RGB lighting are not acceptable; however, a microphone mute indicator light is allowed.*	
Supporting Operating System:	Windows and Mac	
Item 9	**Minimum specification for a conference webcam**	2 Bundles
Brand:	**(Bidder MUST specify)**	
Model:	**(Bidder MUST specify)**	
View Type:	360-Horizontal, Vertical coverage should be at least 60°	
Additional Features:	Pan, Tilt	
Port:	USB 3.0 Type-C (or Type-A)	
Quality:	4K, 3840 x 2160 pixels (Panoramic view)	
Voice Pickup Range:	At least 3 to 5 meters (10–16 feet) radius	
Color:	Black/White	
Supported Operating System:	Windows	
Accessories:	Tripod stand	
Item 10	**Minimum specification for a Network Attached Storage (NAS) device**	1 Bundle
Brand:	**(Bidder MUST specify)**	
Model:	**(Bidder MUST Specify)**	
Drive Bays:	4	
Drive Bays support:	3.5″ Support	
Hard Disk:	4 x 8TB SATA HDD	
RAID Option:	RAID 5 available	
Interface:	1x Gigabit Ethernet port	

Compatible Drive Type:	3.5" SATA HDD	
Configuration:	Configure the device for backup purposes.	
Supported network client OS:	Windows 10 and 11	
Warranty	1 year parts and service	
Item 11	**Minimum specification for a computer cable management sleeve Tube**	1 Bundle
Brand:	**(Bidder MUST specify)**	
Model:	**(Bidder MUST specify)**	
Type	Plastic	
Length	13 meters	
Color	black	
Item 12	**Minimum specification for a Webcam**	3 Bundles
Brand:	**(Bidder MUST specify)**	
Model:	**(Bidder MUST specify)**	
View Type:	78° field of view	
Port:	USB 3.0 Type-C (or Type-A)	
Quality:	4K, 3840 x 2160 pixels	
Voice Pickup Range:	At least 1 meters (3 feet) radius	
Color:	Black/White	
Supported Operating System:	Windows, macOS	
Accessories:	Universal Mounting Clip *Note: Bidder MUST specify this information in their quote*	
Item 13	**Minimum specification for a USB Noise cancelling microphone with arm stand**	3 Bundles
Brand:	**(Bidder MUST specify)**	
Model:	**(Bidder MUST specify)**	
Microphone Type:	USB Dynamic with noise-cancelling capability	
Connectivity:	USB	
Color:	Black	
Frequency response:	20Hz-20KHz	
S/N Ratio:	75-85dB	

Noise Reduction:	Built-in DSP or equivalent noise suppression technology	
Power supply:	USB power	
Accessories:	- Mic filter - Scissor arm stand - Tripod stand - USB cable (minimum 2m–3m length)	
Compatibility:	Windows and Mac	
Warranty:	1 year parts	
Item 14	**Required specification for a 650vA UPS**	1 Bundle
Brand:	**(Bidder MUST specify)**	
Model:	**(Bidder MUST specify)**	
Voltage:	230V	
Power Rating	650vA	
Type:	(Tower type)	
Features:	- Auto shutdown feature with software and cables - Power ports shall be IEC C13 - Suitable for Network Distribution Rack	
Warranty:	1 Year parts and service	
Item 15	**Required specification for a 1000vA UPS**	6 Bundles
Brand:	**(Bidder MUST specify)**	
Model:	**(Bidder MUST specify)**	
Voltage:	230V	
Power Rating	1000vA	
Type:	Tower	
Features:	Auto shutdown feature available with Software and cables - Power ports available shall be IEC C13 ports. - UPS shall be of tower type.	
Warranty:	1 Year parts and service	
Item 16	**Required specification for a 1000vA UPS**	1 Bundle
Brand:	**(Bidder MUST specify)**	
Model:	**(Bidder MUST specify)**	
Voltage:	230V	
Power rating:	1000vA	
Type:	Rack-mount	

Features:	Auto shutdown feature available with Software and cables - Power ports available shall be IEC C13 ports. - UPS shall be of tower type.	
Warranty:	1 Year parts and service	

LOT 3	**Antivirus Software**	5 Bundles
Item 17	**Minimum specification for Antivirus Software**	
Brand:	**(Vendor MUST specify)** *Product name, edition and version offered. All components must be from a single vendor/product suite.*	
Product Type	Genuine Standalone Antivirus Software for Workstations – 3-Year Subscription (5 Users)	