

Scope of Work

THE APPOINTMENT OF A SERVICE PROVIDER TO SUPPLY AND DELIVER LAPTOPS, DESKTOPS AND RELATED ACCESSORIES

The SANPC invites bids from suitable service providers to supply and deliver laptops, desktops and other related accessories which meet the minimum specifications as set out below.

NB: The service provider is requested to note that at the end of life of the current product used by SANPC, it is the awarded service provider's responsibility to provide SANPC with a product that as a minimum has the same functionality and capabilities in the same range.

PLEASE NOTE:

In response to this RFP, the Bidders must provide a complete Bill of Materials which includes, at a minimum, the specifications/ requirements outlined below.

1 Scope

End-user computing devices required:

- Laptops
- Desktops
- Monitors
- Docking stations and core peripherals
- Backpacks

2 Architectural Objectives

The End User Computing (EUC) device capability shall:

- Provide a secure, reliable, and manageable endpoint environment
- Support hybrid and office-based working models
- Enable consistent user experience and operational support
- Reduce risk and complexity through standardisation
- Support lifecycle management, compliance, and auditability

3 Functional Requirements

3.1 Core Computing Capability

All EUC solutions shall provide:

- Local compute suitable for the assigned user role
- Support for modern enterprise operating systems
- Integration with identity, collaboration, and endpoint management platforms

3.2 User Profiles

The EUC capability shall support, at minimum:

- Standard productivity users
- Advanced or privileged users
- Power users and specialist roles

4 Non-Functional Requirements

4.1 Security

All EUC devices shall:

- Support TPM 2.0 or later
- Enforce UEFI Secure Boot
- Support full disk encryption
- Integrate with enterprise identity and endpoint management platforms
- Support remote lock, wipe, and recovery operations

4.2 Manageability

All devices shall:

- Be fully manageable via enterprise endpoint management tooling
- Support automated provisioning and configuration
- Support firmware, BIOS, and driver lifecycle management
- Provide reliable asset identification and inventory data
- Be capable of Windows Autopilot deployment and Microsoft Intune management.
 - The supplier must perform the following prior to delivery:
 - Hardware Hash Collection

- The supplier must extract the Windows Autopilot hardware hash for each device using Microsoft-supported methods.
- Hardware Hash Submission
For each device, the supplier must:
 - Upload the hardware hash directly into the Customer's Microsoft Intune tenant or
 - Provide the hardware hash in CSV format, compliant with Microsoft Autopilot import requirements, for customer upload.
- Data Accuracy Requirements
 - Each hardware hash submission must include, at minimum:
 - Device serial number
 - Manufacturer and model
 - Windows Autopilot hardware hash
- Timing Requirement
Hardware hashes must be uploaded or delivered before physical delivery of the devices and no later than five business days from device build completion.

4.3 Reliability and Durability (Mandatory)

All end-user computing devices intended for user handling or mobility, including laptops and mobile workstations, shall:

- Be tested and passed to MIL-STD-810H
- Have testing performed by, or on behalf of, the original equipment manufacturer
- Apply to the specific device model, not a product family or series

NOTE: The following do not constitute compliance:

- "Military-grade" marketing claims
- "Designed to meet" statements
- Certifications from previous device generations
- Family-level or similar-model claims

Evidence of MIL-STD-810H compliance shall be:

- Manufacturer-issued
- Model-specific
- Verifiable on request

Devices that do not meet this requirement are architecturally non-compliant.

4.4 Performance

Devices shall:

- Deliver consistent performance for their assigned user profile
- Support modern multitasking workloads
- Avoid under-specification that leads to premature refresh cycles

5 Architectural Constraints

5.1 Operating System Constraint

- All end-user computing devices shall run a business-grade Windows operating system (Windows 11 and above)
- Consumer or home editions are not permitted
- SANPC will provide the Enterprise OS License

5.2 Supportability Constraint

- Devices shall be eligible for enterprise-grade OEM support
- Consumer-only support models are not acceptable

5.3 Durability Constraint

- MIL-STD-810H compliance is a mandatory architectural constraint
- Cost, availability, or lead time do not justify deviation
- Exceptions require explicit ARB approval

6 Device Specifications

6.1 Mandatory for All Computing Devices

6.1.1 Security & Management

- **Trusted Platform Module (TPM)**
 - **TPM 2.0 or later:** MANDATORY (discrete or firmware-based)
 - Used for: BitLocker encryption, secure boot, Windows 11 compliance
 - FIPS 140-2 certified
- **Secure Boot & Firmware**
 - **UEFI firmware:** Not legacy BIOS
 - **Secure Boot:** Enabled and configurable
 - **Firmware password protection:** Support for admin and user passwords
 - **Firmware updates:** Minimum 5 years security update commitment from purchase date
- **Enterprise Manageability**
 - **Intel vPro®**
 - Wake-on-LAN support
 - Network boot (PXE) capability
 - Remote BIOS/firmware configuration
- **Physical Security**
 - **Camera privacy shutter:** Physical, not software-only
 - **Security lock slot:** Kensington or Noble Wedge compatible
 - **IR camera for Windows Hello:** Required for Laptop and AiO Desktop
 - **Fingerprint scanner:** Required for Laptops

6.1.2 Support & Warranty (Minimum Requirements)

- Minimum warranty period: 36 months
- Onsite OEM service: Next Business Day response
- Hardware retention option: Hard Drive and data protection service included
- Support escalation process documented by supplier
- **Firmware security updates: Minimum 5 years from purchase date**

6.2 Desktop Minimum Technical Specifications

6.2.1 Form Factors

- All-in-One (AiO): Computer integrated into the monitor. Clean setup, limited upgrades

6.2.2 Security & Management

Please see section 6.1.1

6.2.3 Processor

- Minimum: Intel® Core™ i7/ Ultra 7 (14th Generation or newer) with vPro® technology
 - Minimum 20 cores, 20 threads
 - Minimum 33 MB cache
 - Minimum boost frequency: 5.3 GHz
 - Maximum TDP: 65W

6.2.4 Memory

- Minimum: 16 GB
- Type: DDR5 or later
- Minimum speed: 4800 MT/s
- Form factor: DIMM or equivalent, minimum 2 slots
- Expandable architecture required

6.2.5 System Display

- Minimum diagonal size: minimum 24"
- Minimum resolution: FHD (1920 x 1080)
- Minimum refresh rate: 60 Hz
- Panel technology: IPS or superior (OLED, Mini-LED)
- Anti-glare coating required
- Minimum brightness: 250 nits
- Touch capability: Optional

6.2.6 Graphics

- Minimum: CPU-Integrated UHD Graphics
- Must support minimum display resolution and refresh rate requirements
- Discrete graphics optional for enhanced performance

- Support for additional monitors

6.2.7 Storage

- Minimum capacity: 1TB
- Interface: PCIe Gen 4 NVMe or newer
- Form factor: M.2 SSD or better
- Performance class: Minimum Class 25 or equivalent
- Optional: Self-Encrypting Drive (SED) with TCG Opal 2.0 support, or BitLocker-compatible

6.2.8 Networking

- Wireless
 - Minimum: Wi-Fi 6 (IEEE 802.11ax) or newer standard
 - Minimum: Bluetooth® 5.4 or newer
- Wired
 - Minimum: 1 Gbps Ethernet (RJ45)
 - Optional: Support for 2.5 Gbps/10 Gbps future-ready

6.2.9 Camera & Microphone

- Minimum camera resolution: FHD (1920 x 1080) at 30 fps or higher
- Physical privacy shutter
- Windows Hello IR camera: Recommended
- Minimum: Dual-array microphones with noise cancellation

6.2.10 Audio & Speakers

- Minimum: Stereo speakers
- Minimum total output: 10W (2 x 5W configuration or equivalent)

6.2.11 Port Configuration (Minimum Requirements)

- USB Connectivity:
 - Minimum 1x USB Type-C® port supporting USB 3.2 Gen 2 (10 Gbps) or faster
 - Minimum 1x USB-A ports supporting USB 3.2 Gen 2 (10 Gbps) or faster
 - Minimum 1x USB-A ports supporting USB 3.2 Gen 1 (5 Gbps) or faster
 - Total: Minimum 3 USB ports (1x Type-C, 2x Type-A)
- Audio:

- Minimum 1x Universal audio port (combo) or separate headphone/microphone ports
- Minimum 1x Audio line-out port
- Video:
 - Minimum: 1x DisplayPort 1.4a (or newer) with HDCP 2.3+ support
 - Optional: 1x HDMI input port (version 1.4b or newer) with HDCP 1.4+ support
 - Minimum: 1x HDMI output port (version 2.1 or newer) with HDCP 2.3+ support
- Network:
 - Minimum: 1x RJ45 Ethernet port (1 Gbps capable minimum)

6.2.12 Accessories

- USB or wireless keyboard (required)
- USB or wireless mouse (required)
- Both must meet ergonomic and connectivity standards

6.2.13 Support & Warranty (Minimum Requirements)

See section 6.1.2

6.3 Laptop Minimum Technical Specifications

6.3.1 Laptop Categories

- Executive
- Engineering
- General

6.3.2 Security & Management

Please see section 6.1.1

- TPM 2.0 chip
- UEFI with Secure Boot
- Intel vPro® or AMD PRO equivalent
- Physical camera privacy shutter
- Security lock slot (Kensington or Noble Wedge)
- IR camera for Windows Hello (facial recognition)
- Firmware updates supported for minimum 5 years

6.3.3 Chassis

- Form factor:
 - Executive: 2-in-1 convertible (360° hinge)
 - Engineering: Clamshell
 - General: Clamshell
- Material: Aluminium or premium composite
- Weight: Maximum 1.5 kg (recommended for portability)
- Durability: MIL-STD-810H tested or equivalent

6.3.4 Processor

- Minimum: Intel® Core™ Ultra 7 (Series 1 or newer) with vPro® technology
 - Minimum 12 cores, 14 threads
 - Minimum 12 MB cache
 - Minimum boost frequency: 4.9 GHz
 - U-series (15W-28W TDP) for battery efficiency

6.3.5 Graphics

- Minimum: Integrated graphics (e.g. Intel® Graphics or Intel® Iris® Xe Graphics)
- Must support minimum FHD display resolution and external display requirements

- Discrete graphics optional for specialised workloads

6.3.6 Display

- Minimum diagonal size:
 - Executive: 14”
 - Engineering: 15”
 - General: 14”
- Minimum resolution: FHD+ (1920 x 1200) or higher aspect ratio
- Panel technology: IPS or superior (OLED)
- Touchscreen: Required for 2-in-1 form factor
- Surface treatment: Anti-glare recommended
- Minimum brightness: 400 nits (for outdoor/bright environment use)
- Colour accuracy: Minimum 100% sRGB coverage recommended

6.3.7 Memory

- Minimum:
- Executive: 16GB
- Engineering: 32GB
- General: 16GB
- Type: DDR5, LPDDR5x, or newer generation (DDR6/LPDDR6 when available), with preference for low-power variants (LPDDR5x/LPDDR6) for power efficiency
- Minimum speed: 6400 MT/s

6.3.8 Storage

- Minimum capacity:
- Executive: 512GB
- Engineering: 1TB
- General: 512GB
- Interface: PCIe Gen 4 NVMe or newer
- Form factor: M.2 SSD

6.3.9 Keyboard

- Layout: English US
- Backlight: Mini-LED or equivalent with ambient light sensor
- Battery-saving features required
- Special keys: AI/Copilot key or equivalent productivity key

- Key count: Minimum 79-key layout
- **Biometric security: Integrated fingerprint reader MANDATORY (power button or keyboard deck)**

6.3.10 Port Configuration (Minimum Requirements)

- **USB/Thunderbolt:**
 - Minimum 2x Thunderbolt™ 4 (or newer) ports with:
 - DisplayPort™ Alt Mode support
 - USB Type-C connector
 - USB4 protocol support
 - Power Delivery (minimum 65W input)
 - Minimum 2x USB-A ports supporting USB 3.2 Gen 1 (5 Gbps) or faster
- **Audio:**
 - Minimum 1x Universal audio port (3.5mm combo jack)
- **Video:**
 - Minimum 1x HDMI port (version 2.0 or newer) with HDCP 2.2+ support
- **Slots**
 - 1x Nano SIM slot (eSIM support is an acceptable alternative)
 - **1x Security lock slot MANDATORY (Kensington or Noble lock compatible)**
 - Optional: MicroSD card reader

6.3.11 Camera

- Minimum resolution: 1080p (FHD) at 30 fps or higher
- HDR support required
- **Physical privacy shutter: MANDATORY**
- **Windows Hello IR camera: MANDATORY for facial recognition**
- Microphone: Minimum dual-array with AI noise cancellation

6.3.12 Audio & Speakers

- Minimum: Stereo speakers (downward or upward-firing)
- Audio quality: Hi-Fi or premium audio certification (Dolby Atmos, Bang & Olufsen, etc.)
- Minimum total output: 4W (2 x 2W or equivalent)

6.3.13 Networking

- **Wireless:**

- Minimum: Wi-Fi 7 (IEEE 802.11be) or newer standard
- Minimum: Bluetooth® 5.4 or newer
- **Cellular: 4G or 5G modem MANDATORY**
 - eSIM capable
 - Global band support required
- **Wired:**
 - Gigabit Ethernet capability onboard or via USB-C/Thunderbolt adapter (adapter may be sold separately, but must be included)

6.3.14 Battery

- Minimum rated battery life: 16 hours (typical office productivity workload)
- Fast charging: Minimum 80% charge in 60 minutes
- Battery capacity: Minimum 65 Wh recommended
- ExpressCharge or equivalent technology required
- **Battery health reporting via BIOS and OS**

6.3.15 Power Adapter

- Minimum: 65W USB Type-C adapter
- EcoDesign compliant (Energy Star, EPEAT, or equivalent)
- Compact form factor required
- Cable length: Minimum 1.8m

6.3.16 Support & Warranty (Minimum Requirements)

See section 6.1.2

- **International warranty coverage: MANDATORY**

6.4 Docking Stations

6.4.1 Security & Management

- **Security lock slot: MANDATORY (Kensington or Noble lock compatible)**
- Firmware updateable via host connection
- Firmware security updates: Minimum 5 years from purchase date
- MAC address pass-through capability (for network policy enforcement)

6.4.2 Form Factor & Design

- Desktop or under-desk mounting capable
- Cable management features recommended
- Toolless connection (single cable to laptop preferred)
- LED status indicators required

6.4.3 Host Connection

- Minimum: Thunderbolt™ 4 or USB4 upstream connection
- Minimum power delivery: 95W (to support laptop charging under load)
- Cable included: Minimum 0.8m Thunderbolt 4/USB4 certified cable
- Backward compatibility: USB-C devices with reduced functionality acceptable

6.4.4 Display Support

- Minimum: Dual display support at FHD (1920 x 1080) resolution
- Recommended: Dual display support at QHD (2560 x 1440) or 4K (3840 x 2160)
- Single display: Minimum 4K (3840 x 2160) at 60 Hz
- Minimum video outputs: 2 ports total (any combination of HDMI and DisplayPort)

6.4.5 Video Port Configuration Options

- 2x HDMI (version 2.0 or newer)
- 2x DisplayPort (version 1.4 or newer)
- 1x HDMI + 1x DisplayPort (both meeting minimum versions)

6.4.6 USB Connectivity

- **Front/Top Panel (easily accessible):**
 - Minimum 2x USB-A ports supporting USB 3.2 Gen 1 (5 Gbps) or faster

- Minimum 1x USB-C port supporting USB 3.2 Gen 2 (10 Gbps) or faster with 15W charging
- At least one port should support fast charging (BC 1.2 or USB Power Delivery)
- **Rear Panel:**
 - Minimum 2x USB-A ports supporting USB 3.2 Gen 1 (5 Gbps) or faster
 - Minimum 1x USB-C port supporting USB 3.2 Gen 2 (10 Gbps) or faster
- **Total USB Ports: Minimum 6 ports** (4x USB-A, 2x USB-C)

6.4.7 Networking

- Minimum: Gigabit (1 Gbps) Ethernet port (RJ45)
- Recommended: 2.5 Gigabit Ethernet or 10 Gigabit Ethernet for future-readiness
- **Wake-on-LAN support: MANDATORY**
- PXE boot support recommended

6.4.8 Audio

- Minimum 1x Audio output (3.5mm jack, combo port or USB)
- Minimum 1x Microphone input (3.5mm jack, combo port or USB)
- Separate ports preferred over combo port for flexibility

6.4.9 Security

- **1x Security lock slot MANDATORY (Kensington or Noble lock compatible)**
- Firmware security updates supported
- MAC address pass-through recommended (for network policy management)

6.4.10 Power

- Input: 100-240V AC, 50/60 Hz (universal input)
- Output to dock: Minimum 180W
- Power delivery to laptop: Minimum 96W (under full dock load)
- Power supply: External brick or integrated (external preferred for servicing)
- Cable length: Minimum 1.8m AC power cord
- Energy efficiency: 80 PLUS certified or equivalent

6.4.11 Support & Warranty (Minimum Requirements)

- Minimum warranty period: 36 months
- Advance replacement service recommended



- Technical support: Phone and email during business hours minimum
- **Firmware security updates: Minimum 5 years from purchase date**

6.5 Monitor Minimum Technical Specifications

6.5.1 Display Panel

- Minimum Panel size: 24" diagonal (measured corner to corner)
- Aspect ratio: 16:9 (or 16:10 for increased vertical space)
- Native resolution: Minimum FHD (1920 x 1080)
- Recommended: FHD+ (1920 x 1200) or QHD (2560 x 1440)
- Panel technology: IPS or superior (VA, OLED acceptable if meeting other requirements)
- Minimum refresh rate: 60 Hz
- Surface treatment: Anti-glare (matte) or low-glare
- **Flicker-free backlight technology: MANDATORY**
- **Low blue light mode or certification: MANDATORY**

6.5.2 Display Quality

- Minimum brightness: 250 nits (typical)
- Contrast ratio: Minimum 1000:1 (static)
- Colour gamut: Minimum 99% sRGB coverage
- Viewing angles: Minimum 178°/178° (horizontal/vertical)

6.5.3 Ergonomics

- **Height adjustment: MANDATORY**
 - Minimum adjustment range: 100mm (approximately 4 inches)
- **Tilt adjustment: MANDATORY**
 - Minimum range: -5° to +20°
- Swivel adjustment: Recommended
 - Recommended range: ±45° (90° total)
- Pivot/Rotation: Optional (portrait mode capability)
- **Optional: VESA mount compatible: MANDATORY (100mm x 100mm or 75mm x 75mm)**

6.5.4 Connectivity (Video Inputs)

Required:

- **Minimum 1x HDMI port (version 2.0 or newer) MANDATORY**
 - Must support HDCP 2.2 or newer

Recommended (at least one additional input):

- 1x DisplayPort (version 1.2 or newer)
- 1x USB-C with DisplayPort Alt Mode and Power Delivery
 - If USB-C included: Minimum 65W power delivery to laptop

Legacy (Optional):

- VGA/D-Sub (legacy compatibility for older equipment)

6.5.5 Connectivity (USB & Other)

USB Hub (if integrated):

- Minimum: USB 3.2 Gen 1 (5 Gbps) or faster
- Minimum 2x USB-A downstream ports (side or bottom accessible)
- Upstream connection: USB-B or USB-C to host computer

6.5.6 Audio:

- Built-in speakers: Optional (2W minimum per speaker if included)
- 3.5mm audio output (headphone jack): Recommended

6.5.7 Power & Efficiency

- Input voltage: 100-240V AC, 50/60 Hz (universal input)
- Maximum power consumption: 30W typical operation
- Standby power: Maximum 0.5W
- Power supply: Internal preferred (no external brick)
- Auto power-off/sleep mode: Required (after period of no signal)
- **Energy certification: ENERGY STAR 8.0 or equivalent MANDATORY**
- **EPEAT registered: Silver minimum, Gold recommended**

6.5.8 On-Screen Display (OSD) & Controls

- OSD menu: Required for brightness, contrast, input selection
- Control method: Physical buttons or joystick (joystick preferred for ease of use)
- Preset modes: Minimum 2 (e.g., Standard, Eye Care/Low Blue Light)

6.5.9 Included Accessories

- **Required:**
 - **1x HDMI cable (minimum 1.8m length, HDMI 2.0 certified) MANDATORY**
 - Power cable appropriate for region
 - Quick setup guide and safety documentation
- **Recommended:**
 - DisplayPort cable (if DisplayPort input included)
 - USB upstream cable (if USB hub included)

6.5.10 Support & Warranty (Minimum Requirements)

- Minimum warranty period: 36 months
- Dead pixel policy: Clearly documented (ISO 13406-2 Class II or better)
- Advance replacement service: Recommended
- Technical support: Phone and email during business hours minimum

7 Required Quantities

Quantity	Product
2	24” General AiO Desktops
10	Laptop: Executive
2	Laptop: Engineering
28	Laptop: General
60	Docking Station
60	24-inch Monitor
60	Laptop Backpacks





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