

ANNEX 1 - Details of the Items - Revision 1

Category	#	Item	Quantity	Reference Brand or Equivalent	Specifications
1. Network	1.1	Wifi Access Points	17	Ubiquiti UniFi UAP-AC-Pro	Wi-Fi Standard: Wi-Fi 5 (802.11ac) Speed: Up to 1750 Mbps 2.4 GHz: 450 Mbps 5 GHz: 1300 Mbps Bands: Dual-band MIMO: 3x3 Ports: 2 x Gigabit LAN Power: PoE (802.3af/at) Coverage: Up to 140 m ² Users: 250+ clients Use: Indoor / sheltered outdoor Management: UniFi Controller Or Equivalent
	1.2	Wifi AP Controller (UBNT Dream Machine)	1	Dream Machine Pro	Type: All-in-one router / firewall / controller Ports: 8 x Gigabit LAN 1 x 1GbE RJ45 WAN 1 x 10G SFP+ WAN 1 x 10G SFP+ LAN IDS/IPS Throughput: Up to 3.5 Gbps CPU: Quad-core ARM Cortex-A57 1.7 GHz RAM: 4 GB Storage: 16 GB internal + 3.5" HDD bay for UniFi Protect Users: 1,000+ clients Managed Devices: 100+ UniFi devices Power: 33W max Form Factor: 1U Rackmount Display: 1.3" touchscreen Or Equivalent
	1.3	Firewall Router	1	Firewall Router	Firewall Throughput: 27 Gbps NGFW Throughput: 3.5 Gbps Threat Protection Throughput: 3 Gbps SSL Inspection Throughput: 4 Gbps Concurrent Sessions: 3 Million New Sessions/Second: 280,000 Interfaces: 16 x GE RJ45 ports 8 x GE SFP slots 4 x 10G SFP+ ports 1 x Management / HA port 1 x Console port 1 x USB port Form Factor: 1U Rack Mount Appliance Power: Dual hot-swappable PSU Management: FortiOS with centralized FortiManager support Or Equivalent
	1.4	Core Router	2	MikroTik CCR2004-16G-2S+	Type: Enterprise Router / Cloud Core Router CPU: 4-core ARM 64-bit AL32400 @ 1.7 GHz RAM: 4 GB Ports: 16 x Gigabit Ethernet 2 x 10G SFP+ Storage: 128 MB NAND OS: RouterOS Level 6 Power: Dual PSU support (model dependent) Cooling: Active cooling (fans) Rackmount: 1U Rackmount Use: ISP, Office Core Router, VLAN, VPN, Firewall, Load Balancing Or Equivalent
	1.5	Aggregation Fiber Switch (16 Port)	3	UniFi UB-US16-XG	Type: Managed 10G Aggregation Switch Ports: 12 x 1G/10G SFP+ 4 x 1G/10G RJ45 1 x RJ45 Console Port Switching Capacity: 320 Gbps Non-Blocking Throughput: 160 Gbps Forwarding Rate: 238.1 Mpps Management: UniFi Network Controller Rack Size: 1U Rackmount Power: Internal AC PSU + DC input option Use: Core switching, server uplinks, 10G backbone, aggregation layer Or Equivalent
	1.6	10G Single-Mode Optical Module (Duplex LC UPC)	46	10G Single-Mode Optical Module UACC-OM-SM-10G-D-2	Type: SFP+ fiber transceiver Speed: Up to 10 Gbps (also supports 1 Gbps) Fiber Type: Multi-Mode (MMF) Connector: Duplex LC UPC Wavelength: 850 nm (TX/RX) Max Distance: Up to 300 m (984 ft) Power Consumption: ~0.8 W Form Factor: SFP+ Operating Temp: 0 to 70°C Compatibility: SFP+ / SFP ports (Ubiquiti and compatible switches) Or Equivalent

1.7	Network Switch Poe+ (48 Port)	13	USW-Enterprise-48-poe, SKU: 01831	<p>Type: Layer 2/3 Managed Enterprise Switch</p> <p>Ports: 48 × 2.5 GbE RJ45 (PoE+) 4 × 10G SFP+ uplinks</p> <p>PoE Budget: 720W total (PoE+/802.3af)</p> <p>Switching Capacity: 320 Gbps</p> <p>Non-Blocking Throughput: 160 Gbps</p> <p>Forwarding Rate: 238 Mpps</p> <p>Max PoE per Port: up to 34W</p> <p>VLANs: 1,000 supported</p> <p>Form Factor: 1U rackmount</p> <p>Management: UniFi Network Controller</p> <p>Power: Internal AC (100–240V) + optional DC backup support</p> <p>Cooling: Active (fan cooled)</p> <p>Use Case: Enterprise access layer, WiFi 6/6E APs, IP cameras, VoIP, office networks</p> <p>Or Equivalent</p>
1.8	Storage Hard Disk Drives (NAS HDD)	15		<p>Type: NAS-grade Internal Hard Disk Drive (HDD)</p> <p>Capacity: 4TB</p> <p>Form Factor: 3.5-inch</p> <p>Interface: SATA III (6 Gb/s)</p> <p>Speed: 5400–7200 RPM (NAS optimized performance)</p> <p>Cache Memory: 64MB – 256MB (model dependent)</p> <p>Workload Rating: Designed for continuous 24/7 NAS operation</p> <p>Compatibility: Optimized for Synology NAS systems (DSM compatible)</p> <p>Reliability: RAID-optimized with error recovery control (TLER/ERC support)</p> <p>Vibration Protection: Built-in vibration and shock resistance for multi-bay NAS environments</p> <p>Data Integrity: CMR (Conventional Magnetic Recording) preferred for NAS reliability</p> <p>Operating Mode: Continuous operation (24/7 duty cycle)</p> <p>Temperature Range: 0°C – 65°C (operating)</p> <p>Warranty: Typically 3–5 years manufacturer warranty (model dependent)</p> <p>Or Equivalent</p>
2.1	Security Camera	47	Hikvision - DS-2CD1147G2H-LIU	<p>Type: 4MP ColorVu Dome IP Camera</p> <p>Resolution: 2688 × 1520 (4MP) @ up to 30 fps</p> <p>Sensor: 1/1.8" CMOS</p> <p>Lens Options: 2.8mm / 4mm fixed</p> <p>Night Vision: Full-color 24/7 (ColorVu + white light up to ~30m)</p> <p>Field of View: 2.8mm: ~112° 4mm: ~95°</p> <p>Audio: Built-in microphone (-LSU model)</p> <p>Compression: H.265+</p> <p>WDR: 130 dB (good for strong backlight)</p> <p>Storage: MicroSD support (up to 512GB)</p> <p>Protection: IP67 (weatherproof), IK10 (vandal resistant)</p> <p>Smart Features: Human/vehicle detection (Acusense AI)</p> <p>Power: PoE (802.3af) or 12V DC</p> <p>Or Equivalent</p>
2.2	NVR (128 Channel)	1	Hikvision - DS-96128NI-16	<p>Type: 128-channel IP Network Video Recorder (NVR)</p> <p>Max Cameras: Up to 128 IP cameras</p> <p>Incoming Bandwidth: 576 Mbps</p> <p>Outgoing Bandwidth: 512 Mbps</p> <p>Video Output: 2 × HDMI (independent, up to 4K) 1 × VGA</p> <p>Storage: Up to 16 HDD bays (up to 10TB per HDD) RAID 0/1/5/6/10 supported</p> <p>Decoding: Up to 32MP camera support</p> <p>Playback: Up to 16-channel simultaneous playback</p> <p>Network Ports: 4 × Gigabit RJ45</p> <p>Alarm I/O: 16 in / 8 out</p> <p>Form Factor: 3U rackmount</p> <p>Power: 100–240V AC, ~140W max</p> <p>Features: ANPR, people counting, fisheye support, hot-swap HDD, RAID protection</p> <p>Or Equivalent</p>
2.3	Access Controller (Door lock 8 door access)	14	UBNT Enterprise Access Hub	<p>Type: Enterprise IP-based door access controller (Hub)</p> <p>Doors Supported: Up to 8 doors</p> <p>Users (Cards / Credentials): Thousands (system-dependent)</p> <p>Event Log: Full event logging for all access transactions</p> <p>Readers Supported: Up to 8 per hub (UniFi Access readers, RFID or mobile credentials)</p> <p>Communication: TCP/IP, PoE (802.3af/at)</p> <p>Inputs: Door sensors, exit buttons (system configurable)</p> <p>Outputs: 8 relays for locks / AUX devices</p> <p>CPU / Memory: Embedded processor, system memory managed by UniFi Access software</p> <p>Power: PoE (802.3af/at) or 12V DC</p> <p>Operating Temp: 0°C – 40°C</p> <p>Functions: Access scheduling, user permissions, event logging, secure communication (AES 256-bit), expandable for multiple hubs</p> <p>Size: Wall or rack mountable (approx. 330 × 216 × 44 mm)</p> <p>Or Equivalent</p>

2. Security System

2.4	Electromagnetic Lock	2	Electromagnetic Lock - 600 lbs SOCA SL-200	<p>Type: Electric door locking system (fail-safe)</p> <p>Working Principle: Electromagnet holds metal armature plate when powered</p> <p>Holding Force: 600 lbs (standard) 1200 lbs (high security)</p> <p>Power Supply: 12V DC or 24V DC (dual voltage common)</p> <p>Current Draw: ~0.25A (24V) / ~0.5A (12V) typical</p> <p>Operation: Fail-safe (unlocks when power is off)</p> <p>Features (varies by model): LED status indicator Door position sensor Bond sensor (lock status output)</p> <p>Mounting: Surface mounted (door frame + armature plate on door)</p> <p>Use: Access control systems (offices, hotels, buildings)</p> <p>Door Types: Wood, metal, glass (with brackets)</p> <p>Or Equivalent</p>
2.5	Electromagnetic Lock (2-door)	2	Double Door leaf Electromagnetic Lock SOCA SL-200D	<p>Type: Dual-door electromagnetic lock (maglock)</p> <p>Function: Secures two doors simultaneously using magnetic force</p> <p>Holding Force: 600 lbs per door (light/standard security) 1200 lbs per door (high security)</p> <p>Input Voltage: 12V DC / 24V DC (selectable)</p> <p>Power Mode: Fail-safe (unlocks when power is off)</p> <p>Current Draw: ~0.5A (12V) / ~0.25A (24V per door)</p> <p>Mounting: Surface mounted (frame + armature plate on each door)</p> <p>Material: Aluminium housing + steel armature plates</p> <p>Features (varies by model): LED status indicator Door position / bond sensor Anti-tamper protection</p> <p>Use: Access control for double doors (offices, server rooms, emergency exits, hotels)</p> <p>Or Equivalent</p>
2.6	Dead Bolt Lock	45	Dead Bolt Lock SOCA SL-166A	<p>Type: Mechanical door security lock</p> <p>Function: Solid metal bolt extends into door frame (no spring action)</p> <p>Operation: Key or thumb turn (inside/outside depending on model)</p> <p>Material: Usually steel or brass bolt for high strength</p> <p>Bolt Throw: Typically 25–25.4 mm (1 inch) into frame</p> <p>Security Grade: Often ANSI Grade 1 / 2 / 3 (Grade 1 = highest)</p> <p>Door Thickness: Commonly fits 35–50 mm doors (1-3/8" to 2")</p> <p>Backset: Usually 60 mm or 70 mm (2-3/8" or 2-3/4")</p> <p>Types: Single cylinder (key outside, thumb turn inside) Double cylinder (key both sides)</p> <p>Use: Residential, commercial, and high-security doors</p> <p>Or Equivalent</p>
2.7	Card Reader (Access Card Reader)	69	UniFi Access G3	<p>Type: IP-based door access reader (UniFi Access G3)</p> <p>Access Methods: RFID cards (MIFARE Classic 13.56 MHz), mobile app credentials</p> <p>Users Supported: System-dependent (managed via UniFi Access Controller)</p> <p>Event Log: Logged by UniFi Access Controller software</p> <p>Communication: TCP/IP via UniFi Access Hub (PoE 802.3af/at)</p> <p>Inputs: N/A (powered and controlled via Access Hub)</p> <p>Outputs: N/A (controlled via Access Hub relays)</p> <p>Reader Format: Supports entry, exit, or both (configurable)</p> <p>LED / Feedback: Built-in RGB LED and audible buzzer for access status</p> <p>Mounting: Wall mount</p> <p>Power: PoE (802.3af/at)</p> <p>Operating Temperature: 0°C – 40°C</p> <p>Functions: RFID card reading, mobile app authentication, encrypted communication, real-time status reporting</p> <p>Size: Approx. 88 × 88 × 25 mm</p> <p>Or Equivalent</p>
2.8	Exit Button	9	Exit Push Button Switch 3"x3" OEM	<p>Type: Access control exit push button (momentary switch)</p> <p>Function: Releases door lock (maglock / electric strike) when pressed</p> <p>Operation: Normally Open (NO) momentary contact</p> <p>Material: Stainless steel / plastic (varies by model)</p> <p>Power: 12V DC (some models 12–24V DC)</p> <p>Output Contact: Dry contact (NO/COM/NC depending on model)</p> <p>Mounting: Surface mount or flush mount (wall / door frame)</p> <p>Indicator: Optional LED status (green/red)</p> <p>Response Time: Instant trigger (momentary press)</p> <p>Durability: High-cycle (typically 500,000+ presses)</p> <p>Use: Access control systems (maglock, strike locks, doors, gates)</p> <p>Common Types: Push button Touchless (IR sensor) Key reset / emergency exit</p> <p>Or Equivalent</p>
			11A860 Fingerprint T&A and Access	<p>Type: Biometric Time Attendance & Access Control Terminal</p> <p>Display: 2.8" color screen</p> <p>User Capacity: 3,000 users</p> <p>Fingerprint Capacity: 3,000 templates</p> <p>Card Support: 3,000 (ID card option)</p> <p>Log Capacity: 50,000 transactions</p> <p>Communication: TCP/IP, WiFi, USB host</p> <p>Authentication: Fingerprint + ID card (optional)</p>

	2.9	Biometric Attendance Device	8	ZK8001 Fingerprint & RFID ACCESS Control Terminal	<table border="1"> <tr> <td>Access Control: Supports electric lock + exit button</td> </tr> <tr> <td>Power Supply: 12V DC (approx. 1.5A)</td> </tr> <tr> <td>Operating Temp: 0°C to 45°C</td> </tr> <tr> <td>Functions: Time attendance, access control, SMS, auto status switching, T9 input</td> </tr> <tr> <td>Software: ZKBioTime / ZKTime.Net 3.0</td> </tr> <tr> <td>Size: ~185 × 137 × 38 mm</td> </tr> <tr> <td>Or Equivalent</td> </tr> </table>	Access Control: Supports electric lock + exit button	Power Supply: 12V DC (approx. 1.5A)	Operating Temp: 0°C to 45°C	Functions: Time attendance, access control, SMS, auto status switching, T9 input	Software: ZKBioTime / ZKTime.Net 3.0	Size: ~185 × 137 × 38 mm	Or Equivalent
Access Control: Supports electric lock + exit button												
Power Supply: 12V DC (approx. 1.5A)												
Operating Temp: 0°C to 45°C												
Functions: Time attendance, access control, SMS, auto status switching, T9 input												
Software: ZKBioTime / ZKTime.Net 3.0												
Size: ~185 × 137 × 38 mm												
Or Equivalent												

3. Server & Infrastructure	3.1	Network Rack 42U	2		<p>Type: Floor-standing server / network cabinet Size: 42U (standard 19-inch rack mount) Height: ~2000–2100 mm (2.0–2.1 m) Usable Space: 42U = 73.5 inches / 1867 mm internal height Width: Standard: 600 mm or 800 mm Depth: Common: 600 mm / 800 mm / 1000 mm / 1200 mm Load Capacity: ~800 kg – 1500 kg+ (model dependent) Material: Cold-rolled steel frame Doors: Front glass or perforated metal, rear metal door Cooling: Ventilated doors + optional fan tray Features: Adjustable mounting rails Lockable doors & side panels Cable management Castors + leveling feet Standard: EIA-310 19-inch rack compatible Use: Data centers, server rooms, CCTV/NVR, network equipment</p> <p>Or Equivalent</p>
	3.2	Network Rack 9U	11		<p>Type: Wall-mount Size: 9U (19-inch standard rack mount) Height: ~450–500 mm (45–50 cm) Width: 600 mm (standard) Depth: 400 mm / 450 mm / 600 mm (varies by model) Load Capacity: ~30–70 kg (model dependent) Material: Cold-rolled steel (SPCC) Doors: Tempered glass or metal front door Lockable Mounting Rails: Adjustable 19" rails Cooling: Ventilation slots / optional fan Protection: IP20 (dust protection for indoor use) Use: Small offices, CCTV DVR/NVR, patch panels, switches, ISP equipment</p> <p>Or Equivalent</p>
	3.3	UPS 10kVA	1	Huawei UPS2000-H	<p>Capacity: 10 kVA / 10 kW Type: Online Double Conversion UPS Input: 80–280V AC Output: 220/230/240V AC Efficiency: Up to 96% Battery: External only (no built-in battery) Battery System: 240V DC (ESS-240V12-7Ah / 9Ah packs) Form Factor: 2U Rack / Tower Display: LCD + LED indicators Monitoring: SNMP / network support Use: Servers, network racks, critical office equipment</p> <p>Or Equivalent</p>
	3.4	UPS 10kVA Battery Pack	4	ESS-240V12-9AhBPVBA04	<p>Type: External VRLA (Valve Regulated Lead Acid) battery pack Nominal Voltage: 240V DC system Configuration: 20 × 12V batteries in series Battery Capacity: 9Ah (Ampere-hour) per battery string Energy Storage: High-capacity UPS battery cabinet system Compatible UPS: Huawei UPS2000-H 6kVA / 10kVA series BOM Code: 02313SBA Weight: ~70.5 kg Dimensions: 130 mm × 430 mm × 685 mm (H × W × D)</p> <p>Or Equivalent</p>
	3.5	UPS 1kVA	14	Virtue Energy R1K-Li	<p>Type: Rack-mountable UPS (1 kVA) Capacity: 1 kVA / 700–800 W typical output Form Factor: 2U or 3U, suitable for 9U network rack installation Input Voltage: 220–240V AC, 50/60 Hz Output Voltage: 220–230V AC, 50/60 Hz Topology: Line-interactive or online double-conversion (depending on model) Waveform: Pure sine wave output Backup Time: ~5–15 minutes at full load (depends on connected devices) Battery Type: Internal sealed lead-acid (SLA) / maintenance-free Battery Recharge Time: 4–6 hours to 90% Protection Features: Overload protection Short-circuit protection Surge protection Automatic voltage regulation (AVR) Communication: USB / RS-232 / optional network card for monitoring Indicators: LCD display for load, battery status, alarms Noise Level: <45 dB typical Operating Temperature: 0°C – 40°C Humidity: 0–95% non-condensing Mounting: Rack-mountable, fits in 9U rack Functions: Battery backup during power outage, voltage stabilization, safe shutdown of connected devices</p> <p>Or Equivalent</p>
	4.1	Network Multifunction Laser Printer (Enterprise)	3	HP LaserJet Enterprise MFP M725F (CF667A)	<p>Type: Enterprise all-in-one laser printer (Print / Scan / Copy / Fax) Print Technology: Laser (Monochrome or Color models) Connectivity: Gigabit Ethernet (network), USB, optional Wi-Fi Print Speed: ~35–45 pages per minute (mono typical) Print Resolution: Up to 1200 × 1200 dpi Duplex Printing: Automatic (standard in enterprise models) Scanner: Flatbed + ADF (Automatic Document Feeder) Scan Speed: Up to ~30–50 ipm (duplex models faster) ADF Capacity: ~50–150 sheets (model dependent)</p>

				<p>Paper Handling: 250-550+ sheet input trays + multipurpose tray</p> <p>Monthly Duty Cycle: Up to 50,000 – 100,000 pages</p> <p>Memory/Storage: 1-2 GB RAM + internal storage (varies)</p> <p>Security: Secure print, user PIN, encryption, firmware protection</p> <p>Display: 4-5 inch touchscreen (enterprise UI)</p> <p>Duty Use: High-volume office / enterprise environments</p> <p>Or Equivalent</p>
--	--	--	--	---

4. Peripherals	4.2	Network Multifunction Laser Printer (SMB)	3	HP Color LaserJet Pro MFP M479fdw	<p>Type: Small/Medium Business (SMB) all-in-one printer Functions: Print / Scan / Copy / Fax (model dependent) Print Technology: Laser (color) Print Speed: ~25–40 ppm Resolution: Up to 1200 × 1200 dpi Connectivity: Gigabit Ethernet (network), USB, optional Wi-Fi Duplex: Automatic double-sided printing (common) ADF: ~50 sheets automatic document feeder Paper Tray: ~250–300 sheets input Duty Cycle: ~10,000 – 50,000 pages/month Scan: Scan to email / folder (SMB) / USB Use: Small offices, departments, workgroups</p> <p>Or Equivalent</p>
	4.3	Thermal Printers	1	ZKTeco ZKP8002 Thermal Receipt Printer	<p>Type: 80mm POS thermal receipt printer Printing Method: Direct thermal (no ink/ribbon) Print Speed: ~260–300 mm/sec Resolution: Standard receipt print quality Paper Width: 79.5 ± 0.5 mm (80mm roll) Print Width: ~72 mm Cutter: Auto cutter (full / partial cut) Interface: USB / LAN (some models support Serial, WiFi, Bluetooth) Commands: ESC/POS compatible Paper Type: Thermal receipt paper Power: 24V DC (~2.5A) Duty Life: ~100 km print head lifespan Use: POS systems, restaurants, retail billing, receipts</p> <p>Or Equivalent</p>
	4.4	Passport Scanner	3	Thales Gemalto MRZ and MSR Swipe Reader CR100M	<p>Type: USB document reader for passports, visas, and ID cards Function: Reads MRZ data (ICAO 9303 compliant documents) Technology: Optical MRZ capture (OCR); optional RFID ePassport chip reading (model dependent) Interface: USB 2.0 / USB powered (no external power required) Compatibility: Windows / Linux / macOS (SDK support available) Lighting: White light (standard), IR/UV support (advanced models) Performance: Fast automatic data extraction and processing Installation: Plug-and-play desktop device Application: Border control, hotels, banking, identity verification</p> <p>Or Equivalent</p>
	4.5	Barcode Reader	4	ZKTeco ZKB2035	<p>Type: Handheld barcode scanner (1D/2D depending on model) Technology: CMOS imaging sensor (area imager) Scan Capability: Reads printed and screen-displayed barcodes Supported Codes: 1D (EAN, UPC, Code 39, Code 128) and optional 2D (QR, Data Matrix) Connectivity: Dual mode – Wireless (2.4GHz RF or Bluetooth) and USB wired mode Interface: USB 2.0 (plug-and-play, HID keyboard emulation) Power Supply: Rechargeable battery with USB charging (5V DC) Operating Modes: Wireless scanning and direct USB mode when connected Range (Wireless): Typically up to 10–100 meters (environment dependent) Indicators: LED status indicator and audible beep for scan confirmation Compatibility: Windows / Linux / macOS (HID mode supported without drivers) Installation: Plug-and-play, no complex configuration required Durability: Suitable for retail, office, and warehouse use</p> <p>Or Equivalent</p>
	5.1	Laptops (Top Tier)	2	Macbook Pro Apple M5 Max chip	<p>Processor Apple M5 Pro chip (ARM-based SoC) 15-core CPU (5 performance + 10 efficiency cores) 16-core GPU Integrated Neural Engine Memory 36GB Unified Memory Storage 1TB SSD (Minimum) Display 14-inch or above Liquid Retina XDR (or equivalent) 3024 × 1964 resolution or higher Up to 120Hz adaptive refresh rate 1000 nits sustained / 1600 nits peak HDR Operating System Latest genuine macOS pre-installed Connectivity 3 × Thunderbolt / USB-C ports 1 × HDMI port 1 × SD card slot 1 × 3.5mm audio jack Wi-Fi 6E, Bluetooth 5.3 Camera & Audio 12MP HD camera with auto framing Spatial audio stereo speakers Keyboard & Security Backlit keyboard with Touch ID Battery Minimum 14 hours usage / 18 hours video playback Weight Not exceeding 2.20 kg Accessorie: Pro Hub Slim - HDMI (4K@60Hz), USB-A, USB-C data, SD/microSD slots, and up to 100W pass-through charging in a slim aluminum design</p>

				Warranty
				Minimum 1-year manufacturer warranty
				Or Equivalent

5.2	Mini Desktop Computer	1	Mac mini Apple M4 Pro chip	<p>Processor: Latest Generation Professional ARM-Based Desktop Processor Chip: Advanced Professional System-on-Chip (SoC) CPU: Minimum 12-core CPU or equivalent GPU: Minimum 16-core GPU or equivalent AI Engine: Integrated Neural Processing Engine Memory: Minimum 64GB Unified Memory Storage: Minimum 1TB SSD Form Factor: Compact Mini Desktop Ports: Minimum 4 x High-Speed USB-C / Thunderbolt Ports Minimum 2 x USB-A Ports HDMI Port RJ45 Gigabit Ethernet Port 3.5mm Audio Jack Wireless: Wi-Fi 6E or above, Bluetooth 5.3 or above Display Support: Support for Multiple External Displays Audio: Integrated High-Definition Audio Power Supply: Internal Power Supply Unit OS: Genuine Latest Operating System Pre-installed Accessories: Power Cable Included Warranty: Standard Manufacturer Warranty</p> <p>Or Equivalent</p>
5.3	Laptops (High End)	14	Apple M5 chip	<p>Processor: Apple Inc. M5 Chip CPU: 10-Core CPU GPU: Up to 10-Core GPU RAM: 16GB Unified Memory Storage: 512GB SSD Display: 13.6-inch Liquid Retina Display Resolution: 2560 x 1664 Brightness: 500 nits Camera: 12MP Center Stage Camera Audio: Spatial Audio, 4-speaker system Ports: MagSafe 3 charging 2 x Thunderbolt 4 / USB-C 3.5mm headphone jack Wireless: Wi-Fi 7, Bluetooth 6 Battery: Up to 18 hours Keyboard: Backlit Magic Keyboard with Touch ID Weight: 1.24 kg OS: macOS</p> <p>Or Equivalent</p>
5.4	Laptops Normal	50	HUAWEI MateBook X Pro	<p>Operating System: Windows 11 Pro Display: 14.2-inch OLED Touchscreen Resolution: 3120 x 2080, 264 PPI Refresh Rate: 120Hz Aspect Ratio: 3:2 Processor: Intel® Core™ Ultra 7 155H (Series 1) Graphics: Intel® Arc™ Graphics RAM: 16GB LPDDR5X Storage: 1TB NVMe PCIe SSD Brightness: Up to 1000 nits peak HDR Battery: 70Wh Ports: 2 x Thunderbolt 4 USB-C 1 x USB-C Wireless: Wi-Fi 6E, Bluetooth 5.3 Camera: 1080p HD camera Audio: 6 speakers, 4 microphones Fingerprint: Power button integrated Weight: Approx. 980g Dimensions: 310 x 222 x 13.5 mm</p> <p>Or Equivalent</p>
5.5	Desk phones (Network)	88	Grand Stream - GXP1625	<p>Type: 2-line Basic IP (VoIP) desk phone SIP Accounts: 2 SIP accounts Display: 132 x 48 pixel backlit LCD Audio: HD voice (handset + full-duplex speakerphone) Ports: 2 x 10/100 Mbps Ethernet (dual switched) PoE: Yes (802.3af supported) Lines/Keys: 2 line keys + 3 programmable soft keys Conferencing: 3-way audio conference Phonebook: Up to 1000 contacts Call History: Up to 200 records Headset: RJ9 + EHS support (Plantronics wireless) Security: TLS / SRTP encryption Provisioning: Auto provisioning (TR-069, XML, UCM zero-config) Use: Small office / basic business VoIP desk phone</p> <p>Or Equivalent</p>
5.6	USB wireless Mouse	37	Logitech	<p>Type: Wireless optical mouse Connectivity: 2.4 GHz USB nano receiver (plug-and-play) Range: Up to ~10–15 meters Sensor: Optical tracking DPI (Sensitivity): ~800 – 1600 DPI (varies by model) Buttons: 2–3 standard buttons + scroll wheel Power: 1 x AA or AAA battery / rechargeable (model dependent) Battery Life: ~3–12 months typical usage Compatibility: Windows, macOS, Linux Setup: No driver needed (plug USB receiver and use)</p> <p>Or Equivalent</p>

5. Consumer Electronics / IT Hardware

5.7	USB wireless Keyboards	18	Logitech	<p>Type: Wireless computer keyboard Connectivity: 2.4 GHz USB nano receiver (plug-and-play) Range: ~10–15 meters Layout: Full-size or compact (model dependent) Keys: 104 / 105 keys + function keys Switch Type: Membrane (most common) / mechanical (premium models) Power: 1–2 × AAA batteries or rechargeable battery Battery Life: ~3–12 months (usage dependent) DPI/Latency: Low latency via RF dongle (more stable than Bluetooth) Compatibility: Windows, macOS, Linux, Smart TVs Installation: Plug USB receiver → auto connect (no drivers needed)</p> <p>Or Equivalent</p>
5.8	4 Gang Power Extension board	46		<p>Type: Power extension strip (4 sockets) Sockets: 4 × AC outlets (UK / Type G or universal depending model) Voltage: 220–250V AC Current Rating: 10A – 13A max Max Load: ~2500W – 3250W Cable Length: 1.5m – 10m (varies) Cable Type: 3-core copper (0.75mm² – 1.5mm²) Switch: Individual or master ON/OFF switch (optional) Protection: Some models include overload protection / fuse Indicator: Power LED (on switched models) Material: Fire-retardant ABS plastic body Use: Computers, chargers, office equipment, home electronics</p> <p>Or Equivalent</p>
5.9	Computer Systems	17		<p>Type: Business Desktop PC (no monitor) Processor: Intel Core i7 (12th–14th Gen) Memory: 16GB RAM Storage: 1TB NVMe SSD Graphics: Integrated Intel Graphics Display Ports: 2 × HDMI , 1 × DP Network: RJ45 Gigabit LAN port Peripherals: Wired USB keyboard + wired USB mouse OS: Windows 11 Pro</p> <p>Or Equivalent</p>
5.10	Monitors (High End)	6		<p>Size: 27" Resolution: 4K UHD (3840×2160) Panel: IPS / QD-OLED (high color accuracy) Color: 99% sRGB / 95%+ DCI-P3 / AdobeRGB support Bit Depth: 10-bit Ports: 1 × HDMI 1 × DisplayPort USB hub (USB-A / USB-C) Refresh Rate: 60–120Hz Features: Factory calibration, HDR support, adjustable stand</p> <p>Or Equivalent</p>
5.11	Monitors	22		<p>Size: 24" (23.8" typical) Resolution: Full HD (1920 × 1080) Panel: IPS (wide viewing angles) Refresh Rate: 60–75Hz Ports: 1 × HDMI 1 × DisplayPort (DP) USB hub (USB-A ports, optional USB-C upstream) Brightness: ~250–300 nits Color: ~99% sRGB (office-grade accuracy) Adjustability: Tilt / height (model dependent) Use: Office work, admin, CCTV viewing, general business use</p> <p>Or Equivalent</p>
5.12	Smart TV 65"	4	LG 65 Inch Class UQ9000 PUD series LED 4K UHD Smart webOS 22 w/ ThinQ AI TV	<p>Type: 65-inch Smart LED/LCD TV Screen Size: 65 inches (diagonal) Resolution: 4K Ultra HD (3840 × 2160) Display Technology: LED / IPS panel (wide viewing angle) HDR Support: HDR10 / HLG (model dependent) Refresh Rate: 60Hz–120Hz (model dependent) Smart Features: Built-in apps (Netflix, YouTube, Amazon Prime, etc.), web browser, streaming services Operating System: Proprietary Smart OS (Tizen / WebOS / Android TV depending on brand) Connectivity: HDMI: 3–4 ports (HDMI 2.0/2.1) USB: 2–3 ports Ethernet: RJ45 LAN port Wireless: Wi-Fi 802.11ac or higher, Bluetooth (optional) Audio: Built-in stereo speakers (10–20W output typical), Dolby Audio / DTS support Remote Control: Standard IR remote, voice control (optional) Mounting: VESA compatible wall mount support Power Supply: AC 100–240V, 50/60Hz Additional Features: Screen mirroring, DLNA support, parental controls, energy-saving mode Warranty: Minimum 1-year manufacturer warranty</p> <p>Or Equivalent</p>

5.13	Smart TV 55"	1	LG 55 Inch Class UQ9000 PUD series LED 4K UHD Smart webOS 22 w/ ThinQ AI TV	<p>Type: 55-inch Smart LED/LCD TV Screen Size: 55 inches (diagonal) Resolution: 4K Ultra HD (3840 x 2160) Display Technology: LED / IPS panel (wide viewing angle) HDR Support: HDR10 / HLG (model dependent) Refresh Rate: 60Hz–120Hz (model dependent) Smart Features: Built-in apps (Netflix, YouTube, Amazon Prime, etc.), web browser, streaming services Operating System: Proprietary Smart OS (Tizen / WebOS / Android TV depending on brand) Connectivity: HDMI: 3–4 ports (HDMI 2.0/2.1) USB: 2–3 ports Ethernet: RJ45 LAN port Wireless: Wi-Fi 802.11ac or higher, Bluetooth (optional) Audio: Built-in stereo speakers (10–20W output typical), Dolby Audio / DTS support Remote Control: Standard IR remote, voice control (optional) Mounting: VESA compatible wall mount support Power Supply: AC 100–240V, 50/60Hz Additional Features: Screen mirroring, DLNA support, parental controls, energy-saving mode Warranty: Minimum 1-year manufacturer warranty</p> <p>Or Equivalent</p>
5.14	Smart TV 75"	1	LG 75 Inch Class UQ9000 PUD series LED 4K UHD Smart webOS 22 w/ ThinQ AI TV	<p>Type: 75-inch Smart LED/LCD TV Screen Size: 75 inches (diagonal) Resolution: 4K Ultra HD (3840 x 2160) Display Technology: LED / IPS panel (wide viewing angle) HDR Support: HDR10 / HLG (model dependent) Refresh Rate: 60Hz–120Hz (model dependent) Smart Features: Built-in apps (Netflix, YouTube, Amazon Prime, etc.), web browser, streaming services Operating System: Proprietary Smart OS (Tizen / WebOS / Android TV depending on brand) Connectivity: HDMI: 3–4 ports (HDMI 2.0/2.1) USB: 2–3 ports Ethernet: RJ45 LAN port Wireless: Wi-Fi 802.11ac or higher, Bluetooth (optional) Audio: Built-in stereo speakers (10–20W output typical), Dolby Audio / DTS support Remote Control: Standard IR remote, voice control (optional) Mounting: VESA compatible wall mount support Power Supply: AC 100–240V, 50/60Hz Additional Features: Screen mirroring, DLNA support, parental controls, energy-saving mode Warranty: Minimum 1-year manufacturer warranty</p> <p>Or Equivalent</p>
5.15	Smartboard 55"	4	LG CreateBoard Standard 55TR3DQ	<p>Type: 55-inch Interactive Smart Board with Mobile Stand Display Size: 55 inches (diagonal) Resolution: 4K UHD (3840 x 2160) Touch Technology: Multi-touch (10–20 points), pen and finger input Operating System: Compatible with Windows 10 / 11 (via built-in PC or connected Windows PC) Connectivity: HDMI / DisplayPort input USB for touch interface and peripheral connection Wireless casting (optional) LAN / Ethernet (optional) Software: Includes interactive whiteboard software compatible with Windows (e.g., SMART Notebook, Promethean ActivInspire) Audio: Built-in stereo speakers (10–20W output) Mobile Stand: Height-adjustable, lockable wheels for easy mobility VESA compatible mount Peripherals: Touch pens included, optional external Windows PC mount Additional Features: Annotation, screen sharing, and collaboration tools Energy-saving mode Protective anti-glare tempered glass Power Supply: AC 100–240V, 50/60Hz Warranty: Minimum 1-year manufacturer warranty</p> <p>Or Equivalent</p>

5.16	Smartboard 65"	3	LG CreateBoard Standard 65TR3DQ	<p>Type: 65-inch Interactive Smart Board with Mobile Stand</p> <p>Display Size: 65 inches (diagonal)</p> <p>Resolution: 4K UHD (3840 × 2160)</p> <p>Touch Technology: Multi-touch (10–20 points), supports finger and stylus input</p> <p>Operating System: Compatible with Windows 10 / 11 (via built-in PC or connected Windows PC)</p> <p>Connectivity: HDMI / DisplayPort input USB for touch interface and peripherals Optional wireless casting LAN / Ethernet (optional)</p> <p>Software: Includes interactive whiteboard software compatible with Windows (e.g., SMART Notebook, Promethean ActivInspire)</p> <p>Audio: Built-in stereo speakers (10–20W output)</p> <p>Mobile Stand: Height-adjustable, lockable caster wheels for mobility VESA compatible mount</p> <p>Peripherals: Touch pens included, optional external Windows PC mount</p> <p>Additional Features: Annotation, screen sharing, and collaboration tools Protective anti-glare tempered glass Energy-saving mode</p> <p>Power Supply: AC 100–240V, 50/60Hz</p> <p>Warranty: Minimum 1-year manufacturer warranty</p>
5.17	Conference Camera & Intercom System	4	Meeting Owl 5 Pro	<p>Or Equivalent</p> <p>Type: 360° Smart Conference Camera & Intercom System</p> <p>Video: 360° panoramic HD video, auto-framing of participants</p> <p>Audio: 360° microphone array with full-duplex audio Noise cancellation and echo suppression Built-in speaker for clear voice playback</p> <p>Connectivity: USB 3.0 / USB-C to PC or laptop Wi-Fi optional for networked management</p> <p>Compatibility: Works with Windows OS / macOS / Zoom / Teams / WebEx / Google Meet</p> <p>Field of View: 360° horizontal coverage, automatic speaker focus</p> <p>Control: Automatic or software-based participant tracking</p> <p>Installation: Tabletop or stand mount (compact form factor)</p> <p>Power Supply: USB powered (5V/2A) or AC adapter (model dependent)</p> <p>Additional Features: Plug-and-play setup LED indicators for mute / active speaker Integrated software for multi-participant video layout</p> <p>Warranty: Minimum 1-year manufacturer warranty</p> <p>Or Equivalent</p>