

Laamu Atoll Education Center Digitalization Project Technical Specification

Item	Qty	Specification	Vendor must Specify
SMART Television	46	65 inch LED Panel 4K UHD (3840 x 2160) Surround Sound, 2 x 10W Speakers	
Computer System Units	46	Micro Form Factor / Mini PC Intel Core i5 (12th Generation or later) 16 GB RAM 512GB NVMe storage 1 x HDMI Port 4K Supported onboard Display 1 x Gigabit Ethernet Port WiFi and Bluetooth availability 2 x USB Type A ports Genuine Microsoft Windows 11 Professional 1 year Parts + Service Warranty USB Wireless US English layout Keyboard (with English alphabetical characters only) with Optical Scroll Mouse, Combo pack, connection supported by a single USB Dongle	
Smartboard	4	75 inch Interactive Flat Panel Smartboard Infrared Technology 4K (3840 x 2160) LED Panel Finger or any opaque touch support Approximately 10 to 32 Touch Points Accuracy < 2mm 5ms Response Time Aluminum Alloy Frame Built-in Camera and Microphone Wall Mountable with Mounting Bracket Windows Operating System	
Sound System: Amplifier	1	6 zones speaker output, each zone with individual volume control 2 Mic inputs, Mic1 with priority and muting function 3 AUX line inputs and 1 AUX line output for power extension Each AUX and Mic input with individual volume control Bass and treble tone control for speaker output Built-in chime for speech/paging notification 100V and 4-16 ohm optional speaker output for different uses	
Sound System: Speakers	46	6 inch 2-Way Surface Mount Loudspeakers 70V 6.5 inch woofer 1 inch balanced-dome tweeter	
Video Conferencing: System	1	4K 3X optical zoom lens with 15X zoom 4K True WDR sensor: ultra-crystal-clear image in any lighting Frame rate: (16:9) 4K 30fps Frame rate: 1920 x 1080, 1600 x 900, 1280 x 720, 960 x 540 at 60, 30, 15fps Frame rate: (4:3) 1280 x 960, 800 x 600, 640 x 480, 480 x 360 at 60, 30, 15fps Adjustable audio fence: Block outside noise True WDR up to 120db SmartFrame & SmartSpeaker: automatic tracking and field of view adjustment to fit all participants, focus on the speaker Presentation tracking: Tracking speaker Gesture control for intuitive camera control Mirror, Flip, AE, white balance: Auto, manual override via PTZApp 2 Minimum focus distance: 80 cm Pan: total horizontal viewing area 170° Tilt: total vertical viewing area 100° Video formats: YUV, YUY2, M-JPEG, H.264, H.265 USB 3.1 Gen 1, backward compatible with USB 2.0 UVC 1.1 (USB Video); UAC 1.0 (USB Audio); UVC 1.5 IR remote control WebUI: IP access via Chrome browser (Chrome 76.x or later) VISCA/pelco P/pelco D via RS-232; Visca over IP UVC/UVA Plug and Play PTZApp Windows 10 and 11 Support Beamforming microphone array 7 meters pickup range Stereo speaker with output power 12W (6W x 2 pcs) Echo cancellation Noise suppression USB Display Adapter: built-in USB 3.1 (Gen 1) to HDMI adapter Power adaptor Mini DIN 6 for RS-232 connection USB 3.1 Type-C port, backward compatible with USB 2.0 HDMI out connection (USB Display Adapter) Two RJ45 ports (one for Ethernet, one for audio expansion speakerphone/ microphone) 2 x USB 2.0 Type-A Wall mount bracket Google Meet compatibility	
Video Conferencing: TV	1	75 inch LED Panel 4K UHD (3840 x 2160) Surround Sound, 2 x 10W Speakers	
Video Conferencing: Computer System	1	Tower Type Chassis Intel Core i5 (12th Generation or later) 16 GB RAM 512GB NVMe storage 1 x HDMI Port	

Audio Video Recording System	1	<p>4K Supported onboard Display 1 x Gigabit Ethernet Port 2 x USB Type A ports 1 x USB Type C port Genuine Microsoft Windows 11 Professional 1 year Parts + Service Warranty USB Wireless US English layout Keyboard (with English alphabetical characters only) with Optical Scroll Mouse, Combo pack, connection supported by a single USB Dongle</p> <p>Tower Type Chassis</p> <p>Intel Core i7 (12th Generation or later) 32 GB RAM 1TB NVMe storage 4GB Graphics Card with Dual Monitor Support with HDMI Ports 1 x Gigabit Ethernet Port 2 x USB Type A ports 1 x USB Type C port Genuine Microsoft Windows 11 Professional 1 year Parts + Service Warranty USB Wireless US English layout Keyboard (with English alphabetical characters only) with Optical Scroll Mouse, Combo pack, connection supported by a single USB Dongle 2 x 24" LCD Monitor with HDMI Ports and HDMI Cables for connection</p>
UPS	4	<p>600W / 1000vA Transfer time: 6ms Topology: Line Interactive Input frequency: 50/60 Hz +/- 5 Hz Auto-sensing Input voltage range for main operations: 170 - 280V Number of Power Cords: 1 Battery type: Lead-acid Nominal Battery Voltage: 12 V Battery replaceable: Yes Automatic Voltage Regulation (AVR): Yes Surge Protection: Yes (156 Joules) Audible noise at 1 meter from surface of unit: 40 dBA</p>
Speaker Cable	7	<p>JSC Wire Wire Gauge: 14 500 feet 2 Conductors</p>
CAT6 Ethernet Cable	5	<p>CAT6 UTP Cable Roll Superslim 4 pair 305m Category 6A Supported 10Gbits transmission supported</p>
HDMI Cable	46	<p>HDMI Cable 8m High Speed Supports 4K at 30Hz Anti-interference</p>
Drone	1	<p>OcuSync HD video transmission technology Max. Transmission Distance: 15km (FCC) and 8km (CE/SRRC/MIC) Operating Frequency: 2.400-2.4835 GHz; 5.725-5.850 GHz Antennas: 2, Wi-Fi Protocol: 802.11 a/b/g/n Wi-Fi Operating Frequency: 2.400-2.4835 GHz / 5.150-5.250 GHz / 5.725-5.850 GHz Bluetooth Protocol: Bluetooth 4.2 Bluetooth Operating Frequency: 2.400-2.4835 GHz Transmitter Power (EIRP): < 10 dBm Screen Resolution: 1920x1080 Screen Size: 5.5 inches Screen Frame Rate: 60fps Screen Brightness: 700 nits Screen Touch Control: 10-point multi-touch Battery: Li-ion (5,200 mAh @ 3.6 V) Rated Power: 4.5 W Storage Capacity: Expandable with microSD card Charging Time: 1.5 hours Operating Time: 4 hours</p>
Countdown board: TV	2	<p>65 inch LED Panel 4K UHD (3840 x 2160) Surround Sound, 2 x 10W Speakers</p>
Countdown board: System Units	2	<p>Micro Form Factor / Mini PC</p> <p>Intel Core i5 (12th Generation or later) 16 GB RAM 512GB NVMe storage 1 x HDMI Port 4K Supported onboard Display 1 x Gigabit Ethernet Port WiFi and Bluetooth availability 2 x USB Type A ports Genuine Microsoft Windows 11 Professional 1 year Parts + Service Warranty USB Wireless US English layout Keyboard (with English alphabetical characters only) with Optical Scroll Mouse, Combo pack, connection supported by a single USB Dongle</p>
Studio Monitor	1	<p>Inverted dome tweeter: very low directionality, excellent linearity and dynamics Optimised baffle tweeter: excellent dispersion control Composite sandwich 'W'-cone: sound neutrality, no distortion Focus mode: two monitors in one; 2-way monitor and 1-way full-range monitor (woofer alone) Large laminar port: no port noises or distortion</p>

		<p>Inserts for wall fastening Automatic disengageable stand-by mode Settings: activatable/deactivatable, LF shelving, HF shelving, LMF @ 160Hz Frequency response (@ -3dB): 40Hz - 40kHz Focus mode: 110Hz - 10kHz Maximum SPL (Average CEA2034 50-10kHz free field @ 1m): 110dB Focus mode (Average CEA2034 100-10kHz free field @ 1m): 109.5dB Input: Balanced XLR 10 k ohms Bass amplifier stage: 80W RMS Treble amplifier stage: 50W RMS Nominal power supply: -100-120 VAC/220-240 VAC 50/60Hz Bass: 6.5" (16.5cm) "W" cone Treble" 1.5" (38mm) Beryllium Shielding: No</p>
Analogue Mixer	1	<p>High-Performance 12-input small format analogue mixer with onboard effects and multi-track USB recording and playback 14-in/12-out ultra-low latency USB playback and recording interface Iconic Soundcraft Ghost mic preamps with ultra-low noise performance Renowned Soundcraft Sapphire British EQ with sweepable mid-bands per channel Lexicon Effects Engine featuring award-winning Reverbs, Delays, Choruses and Modulations dbx Limiters (High-ratio Compressors) on input channels Switchable Hi-Z inputs for guitars, basses and other instruments Hi-Pass Filters (low-cut) and 48V Phantom Power on all mic channels Comprehensive Soundcraft GB series audio routing with Auxes (flexible pre/post switching) and subgroups with switching and dedicated outputs Smooth premium-quality faders Robust metal construction for tour-grade build quality and reliability Internal universal power supply USB Interface Compatibility: Windows 10</p>
Professional Microphone Stand with Boom	1	<p>Tripod Stand</p> <p>Boom with 360 degree free movement Durable steel alloy construction Height and T-bar adjustment points</p>
Recording Audio Device	1	<p>Combo XLR/TRS: Two</p> <p>Additional Line Inputs (Volt 4 and 476 only): Two Line Outputs (Volt 4, 476 and 476P only): Four Monitor Outputs: Two (one stereo pair) Headphone Outputs: One stereo (two stereo on Volt 476P) USB: One USB 2.0 port (USB Type-C connector) MIDI: In, Out (two 5-pin DIN connectors)</p> <p>A/D - D/A Conversion: Supported Sample Rates (kHz): 44.1, 48, 88.2, 96, 176.4, 192 Bit Depth Per Sample: 24</p> <p>Mic, Line, Instrument Input(s): 76 Compressor presets: Selectable VOC, GTR, FAST, OFF 76 Compressor preset times: Attack / Release times (approximate) VOC: Attack 2 ms / Release 300 ms GTR: Attack 1.5 ms / Release 700 ms FAST: Attack 30 μs / Release 35 ms Compression Ratio: 6:1</p> <p>Mic, Line, Instrument Input(s): Frequency Response: 20 Hz to 20 kHz, ±0.1 dB Dynamic Range (A-weighted): 112 dB Total Harmonic Distortion + Noise (1 kHz @ -1 dBFS): -103 dB (0.0007 %) Equivalent Input Noise (150 Ohms, A-weighted): -127 dBu Maximum Input Level: 9 dBu Input Impedance: 3 Kilohms Available Gain: 55 dB Phantom Power: +48V (switchable) Connector Type: XLR Female, pin 2 positive</p> <p>Line Input(s): Frequency Response: 20 Hz to 20 kHz, ±0.05 dB Dynamic Range (A-weighted): 111 dB Total Harmonic Distortion + Noise (1 kHz @ -1 dBFS): -102 dB (0.0008 %) Maximum Input Level: 22 dBu Input Impedance: 15 Kilohms Gain Range: 55 dB</p> <p>Stereo Headphone Outputs: Frequency Response: 20 Hz to 20 kHz, ±0.1 dB Dynamic Range (100K load, A-weighted): 110 dB Total Harmonic Distortion + Noise (1 kHz @ -1 dBFS, 300 Ohms): -100 dB (0.001%) Maximum Output Power into 32 Ohms: 84 mW per channel Maximum Output Power into 300 Ohms: 22 mW per channel Maximum Output Power into 600 Ohms: 12 mW per channel Connector Type: 1/4" 1/8" TRS Stereo</p> <p>Electrical: External DC Power Input: Barrel, female, 5.5mm OD, 2.1mm ID, IEC 60130-10 Type A Power Supply, Electrical Requirements: +5VDC, Center Positive (+) Power Consumption: 5W maximum, 3.5W typical</p>
High Performance Microphone	2	<p>Transducer Type: Condenser</p> <p>Acoustic Operating Principle: Pressure Gradient Frequency Response: 20Hz - 20kHz (+/-3dB) Equivalent Noise Level: 14dB A-Weighted Sensitivity at 1kHz into 1kohm: 23.7mV/Pa Maximum SPL for THD 0.5%: 138dB Signal-to-Noise Ratio (rel. 94dB SPL): 80dB A-Weighted Polar pattern: Omni/Cardioid/Figure-of-Eight</p>

Lavelier Microphone	1	<p>Pad Switches: -20dB/-10dB/0dB Low-Cut Filter: 80Hz Product length: 175 mm / 6.89 in Product width: 54 mm / 2.13 in Product weight: 625 g / 1.38 lb</p> <p>1 x Mic Receiver 2 x Mic Transmitter 1 x Mic Charging Case 1 x Mic Camera Audio Cable (3.5mm TRS) 1 x Mic Mobile Phone Adapter (Type-C) 1 x Mic Mobile Phone Adapter (Lightning) 2 x Mic Windscreen 2 x Mic Clip Magnet 1 x Mic Carrying Pouch 1 x Mic Hot Shoe Adapter 1 x Charging Cable Range: 250m Battery life: 15 hours Noise cancellation Support for Windows PC, Android, iPhone</p>
Dual Handheld Digital Microphones	1	<p>General:</p> <p>Wireless Technology: Digital UHF Included Transmitters: 2 x Handheld Diversity: True Digital Diversity Max Operating Range: 100 m Receiver Type: Rackmount Microphone Type: Handheld Capsule Polar Pattern: Cardioid</p> <p>System:</p> <p>Wireless Technology: Digital UHF Number of RF Channel Frequencies: 1760 Included Transmitters: 2 x Handheld Diversity: True Digital Diversity RF Frequency Band: H55: 514 to 558 MHz RF Bandwidth: 44 MHz Frequency Step Size: 25 kHz RF Channel Scanning: Auto-Scan Max Operating Range: 100 m Max Transmitters per Band: 32 Sample Rate/Resolution: 24-Bit Latency: 3.2 ms Dynamic Range: 120 dBA (Typical) Encryption: No</p> <p>Receiver:</p> <p>Receiver Type: Rackmount 1 RU (Full Rack) Antenna: 2 x 1/4 Wave External, BNC (Rear-Mount) Number of Audio Channels: 2 Audio I/O: 2 x XLR 3-Pin Male Balanced Mic/Line Output Audio I/O: 2 x 1/4" TRS Female Balanced Output (Locking) Gain Range: 0 to +21 dB (3 dB Steps) Pad: 30 dB Audio Output Level: -18 to +42 dB (Balanced, Unbalanced) Phantom Power Protection: On 1/4", XLR Outputs Frequency Response: 20 Hz to 20 kHz +/-2 dB (Dependent on Mic) Network I/O: 1 x RJ45 (10/100 Mb/s) Network Protocols: DHCP, Manual IP Impedance: 1/4" Output: 1.3 Kiloohms (Balanced) / 670 Ohms (Unbalanced) Impedance: XLR Output: 400 Ohms (Balanced) / 150 Ohms (Balanced) Adjacent Channel Isolation: >70 dB Spurious: Rejection: >75 dB Power Requirements: AC/DC Power Adapter AC/DC Power Adapter: 15 VDC at 600 mA, Center-Positive (Included) AC Input Power: 100 to 240 VAC, 50 / 60 Hz Display & Indicators: LCD (AF Level, Channel, Group, RF Level, Transmitter Battery Status) Housing: Steel</p> <p>Transmitter:</p> <p>Transmitter Type: Handheld RF Output Power: 1 / 10 mW Audio I/O: No Pad: No Muting: No Audio Input Level: 8.2 dBV Auto-Level Control: No Gain Range: 0 +21 dB Signal Processing: No Frequency Response: 20 Hz to 20 kHz (Dependent on Mic) Sync Method: IR Antenna: Internal Single-Band Helical Power Requirements: Battery Battery Type: 2 x AA (Included) / 1 x Shure SB 903 (Not Included) Battery Charging Time: 1.25 to 5.5 Hours Approx. Battery Life: 8 Hours USB/Lightning Connectivity: No Display & Indicators: LCD (Battery Status, Channel, Group, Power) Housing: Aluminum</p> <p>Microphone:</p> <p>Type: Handheld Capsule Sound Field: Mono Capsule: Dynamic Polar Pattern: Cardioid Frequency Range: 50 Hz to 15 kHz Sensitivity: -54.5 dBV/Pa CMRR: No Diameter: 1.97" / 50 mm</p>

Lighting Kit (2 piece)	1	<p>Item Type: 1 x LED Monolight Included Light Modifier: 1 x Reflector Photometrics: 2982 fc / 32,100 Lux at 3.3' / 1 m (with Reflector) Color Temperature: 2800 to 6500K Color Accuracy Standard: CRI 96 / TLCI 97 Dimming: Built-In Dimmer, 0 to 100% Beam Angle: 120° Front Accessory Mount: Bowens S Wireless Remote Control Type: Bluetooth Power Source: AC Power (Cable Included) AC Input Power: 100 to 240 VAC, 50 / 60 Hz Power Consumption: 100 W Fixture Mounting: 1 x 5/8" Receiver</p> <p>Light Fixture: Item Type: 1 x LED Monolight Included Light Modifier: 1 x Reflector Photometrics: 2982 fc / 32,100 Lux at 3.3' / 1 m (with Reflector) Color Temperature: 2800 to 6500K Color Accuracy Standard: CRI 96 / TLCI 97 Dimming: Built-In Dimmer, 0 to 100% Beam Angle: 120° Umbrella Mount: Yes Front Accessory Mount: Bowens S</p> <p>Connectivity: Wireless Remote Control Type: Bluetooth Wireless Channels: 32 Wireless Groups: 16 Wireless Range: 98.4' / 30 m (Bluetooth)</p> <p>Power and Input/Output: Power Source: AC Power (Cable Included) Inputs/Outputs: 1 x IEC Power Input AC Input Power: 100 to 240 VAC, 50 / 60 Hz Included Adapter / Cable: 1 x Edison Plug to IEC Cable Inline Switch: No Power Pass-Thru: No Power Consumption: 100 W</p> <p>Bowens Speed Ring: Item Type: 23.6 x 35.4" Softbox (Rectangular Shape) Interior Color: Silver Light Compatibility: Includes Speed Ring with Bowens S Mount Accepts Grids: Yes (Not Included) Interior Color: Silver Light Compatibility: Includes Speed Ring with Bowens S Mount Quick Open Type: No Accepts Grids: Yes (Not Included) Removable Front Face: Yes Interior Baffle: Yes, Removable Materials: Aluminum, Fabric Dimensions: 35.4 x 23.6" / 90 x 60 cm</p> <p>Hard Carrying Case With Wheels: Color: Black Carry/Transport Options: Handle, 2 x Wheels (Recessed) Type of Closure: Zipper</p>
Projector	1	<p>Display System: 3-Chip RGB Liquid Crystal Shutter Projection System LCD Native Chip Resolution: 1920 x 1080 (Full HD) Maximum Brightness: White: 5000 Lumens (ISO) / Color: 5000 Lumens Throw Ratio: 0.16 to 0.22:1 Projection Size: 80 to 160" / 2.0 to 4.1 m Supported HDR Input Formats: Yes Inputs/Output: 2 x HDMI Audio, Video Input Inputs/Output: 1 x RJ45 (HDBaseT) Audio, Control, Data, LAN, Remote, Video Input Inputs/Output: 1 x HDMI Audio, Video Output Inputs/Output: 1 x DE-9/DB-9 (RS-232) Control Input/Output Inputs/Output: 1 x USB-A Data Input Inputs/Output: 1 x USB-A Power Output Inputs/Output: 1 x USB-B Data Input Light Source: Laser Phosphor Display System: 3-Chip RGB Liquid Crystal Shutter Projection System LCD Native Chip Resolution: 1920 x 1080 (Full HD) On-Screen Resolution: Up to 4K UHD (3840 x 2160) via Pixel-Shift Technology Offset: 100% Aspect Ratio: Native: 16:9 Dynamic Contrast Ratio: 2,500,000:1 Color Depth: 10-Bit (1.07 Billion Colors) Includes Lens: Yes Focus: Manual Aperture: f/1.8 Focal Length: 2.3mm Throw Distance: 10.9 - 22.7" / 0.3 - 0.6 m Throw Ratio: 0.16 to 0.22:1 Projection Size: 80 to 160" / 2.0 to 4.1 m Keystone Correction: Manual to Vertical: ± 3.6° / Manual to Horizontal: ± .9° Supported HDR Input Formats: Yes Digital Zoom: 1.35x Multi-Input Support (PIP/PBP): Not Specified by Manufacturer Ceiling Mountable: Yes Built-In Speaker: Yes (Stereo) Projection Tilt Option: Yes</p>
Protatable Vocal Booth with Floor and Desk Stand	1	<p>High end recording tool with superior acoustic foam</p> <p>Heavy duty stand included, three times more stable than the average microphone stand Desk Stand Mounts included</p>

HDMI Video Capture Card	1	<p>Barn Door bracket head design Adjustable height Adjustable microphone positioning pole</p> <p>Zero-Lag Pass-Through Video</p> <p>Interface: USB 2.0 Plug & Play Input: HDMI 2.0 Output Interface: HDMI 2.0 H.264 Hardware Encoder Max Pass-Through Resolutions: 1080p60 Max Record Resolution: 1080p60 Streaming Platform: Twitch, YT, FB Live, Mixer Operating System: Windows 10 64bit / Windows 11 64bit</p>
Camcorder	1	<p>Sensor Resolution: Effective: 21 Megapixel Image Sensor: 1/2.3"-Type CMOS Image Stabilization: Optical in Integrated Lens, Digital Recording Modes: H.264/MP4/XF-AVC 4:2:2 8/10-Bit Recording Modes: 3840 x 2160 at 23.98/24.00/29.97 fps [150 Mb/s] Recording Modes: 1920 x 1080p at 23.98/24.00/29.97/59.94 fps [17 to 35 Mb/s] Recording Modes: 1280 x 720 at 59.94 fps [8 Mb/s] Media/Memory Card Slot: Dual Slot: SD/SDHC/SDXC (UHS-I) Video I/O: 1 x Mini-HDMI 2.0 Output Video I/O: 1 x BNC (3G-SDI) Output Sensor Resolution: Effective: 21 Megapixel Image Sensor: 1/2.3"-Type CMOS Built-In ND Filter: Mechanical Filter Wheel with 1-Stop (1/2), 2-Stop (1/4), 3-Stop (1/8) ND Filters Capture Type: Video Only Shutter Type: Electronic Global Shutter Shutter Type: Electronic Global Shutter Shutter Speed: 1/2000 to 1 Second Gain: 0 to 24 dB (Native) Signal-to-Noise Ratio: 3 dB Minimum Illumination: 5 Lux at 1/30 Shutter Speed, 0.3 Lux at 1/2 Shutter Speed White Balance: 2,000 to 15,000K Focal Length: 3.6 to 73.4mm (35mm Equivalent: 29.3 to 627mm) Optical Zoom Ratio: 20x Maximum Aperture: f/1.8 to 2.8 Optical Design: 12 Elements in 10 Groups Minimum Focus Distance: Wide: 0.4" / 1.0 cm, Entire Zoom Range: 23.6" / 60.0 cm Filter Size: 58 mm Control Rings: Focus, Zoom Focus Control: Auto Focus, Manual Focus Fast-/Slow-Motion Support: Yes Broadcast Output: NTSC Built-In Microphone Type: Stereo Audio Recording: MP4: 2-Channel 16-Bit AAC Audio, MP4: 4-Channel 16-Bit LPCM Audio IP Streaming: No Media/Memory Card Slot: Dual Slot: SD/SDHC/SDXC (UHS-I) Video I/O: 1 x Mini-HDMI 2.0 Output, 1 x BNC (3G-SDI) Output Audio I/O: 2 x XLR 3-Pin Mic/Line (+48 V Phantom Power) Input Audio I/O: 1 x 1/8" / 3.5 mm TRS Stereo Headphone Input Audio I/O: 1 x 1/8" / 3.5 mm TRS Stereo Microphone Input Power I/O: 1 x USB-C Input Other I/O: 1 x USB-C Wireless: No Display Type: Articulating Touchscreen LCD Display Size: 3.5" Monitor Resolution: 2,760,000 Dot Viewfinder Type: Built-In Electronic (LCD) Viewfinder Size: 0.36" Viewfinder Resolution: 1,770,000 Dot Power Consumption: <4.8 W Shoe Mount: 1 x Cold Shoe on Included Handle Tripod Mounting Thread: 1/4"-20 Female Accessory Mounting Thread: No</p>