

Item No.	Description	Qty.	Unit	Unit Price	Total Price
	Lot 2 - Network Equipment				
16.	<p>Gigabit Switch, 24 Port, Unmanaged, Rack Mount</p> <p>Number of Ports: 24 – 10/100/1000 Gigabit ports</p> <p>Standards: IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, ANSI/IEEE 802.3 NWay auto-negotiation, IEEE 802.3x Flow Control</p> <p>Data Transfer Rates:</p> <p>Ethernet: 10 Mbps (half duplex), 20 Mbps (full duplex)</p> <p>Fast Ethernet: 100 Mbps (half duplex), 200 Mbps (full duplex)</p> <p>Gigabit Ethernet: 2000 Mbps (full duplex)</p> <p>Features: IEEE 802.3az Energy Efficient Ethernet (EEE), Link status detection power saving, RoHS Compliance</p> <p>Media Interface Exchange: Auto MDI/MDIX</p> <p>Transmission Method: Store-and-Forward switching method</p> <p>MAC Address Table: 8K MAC addresses</p> <p>RAM Buffer: 512 KB RAM for data buffering</p> <p>Switching Capacity: 48 Gbps</p> <p>LEDs: Power LED, 24 Link/Activity/Speed LEDs (one per port)</p> <p>Dimensions (approximate): 11.02 x 7.09 x 1.73" (280 x 180 x 44 mm)</p>	5	pc		
17.	<p>Gigabit Switch, 16 Port, Unmanaged, Rack Mount</p> <p>Number of Ports: 16 – 10/100/1000 Gigabit ports</p> <p>Standards: IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, ANSI/IEEE 802.3 NWay auto-negotiation, IEEE 802.3x Flow Control</p> <p>Data Transfer Rates:</p> <p>Ethernet: 10 Mbps (half duplex), 20 Mbps (full duplex)</p> <p>Fast Ethernet: 100 Mbps (half duplex), 200 Mbps (full duplex)</p> <p>Gigabit Ethernet: 2000 Mbps (full duplex)</p> <p>Features: IEEE 802.3az Energy Efficient Ethernet (EEE), Link status detection power saving, RoHS Compliance</p> <p>Media Interface Exchange: Auto MDI/MDIX</p> <p>Transmission Method: Store-and-Forward switching method</p> <p>MAC Address Table: 8K MAC addresses</p> <p>RAM Buffer: 512 KB RAM for data buffering</p> <p>Switching Capacity: 32 Gbps</p> <p>LEDs: Power LED, 16 Link/Activity/Speed LEDs (one per port)</p> <p>Dimensions (approximate): 11.02 x 4.92 x 1.73" (280 x 125 x 44 mm)</p>	5	pc		
18.	<p>Gigabit, 8 Port, Unmanaged, Rack Mount</p> <p>Number of Ports: 8 – 10/100/1000 Mbps ports (ports 1-4 are PoE enabled)</p> <p>Standards: IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, ANSI/IEEE 802.3 NWay Auto-negotiation, IEEE 802.3x Flow Control, IEEE 802.1p QoS, IEEE 802.3az EEE"</p> <p>Data Transfer Rates:</p> <p>Ethernet: 10 Mbps (half duplex), 20 Mbps (full duplex)</p> <p>Fast Ethernet: 100 Mbps (half duplex), 200 Mbps (full duplex)</p> <p>Gigabit Ethernet: 2000 Mbps (full duplex)</p> <p>Media Interface Exchange: Auto MDI/MDIX adjustment for all ports</p> <p>Transmission Method: Store and forward</p> <p>MAC Address Table: 4K MAC Entries</p> <p>RAM Buffer: 512 KB</p> <p>Switching Capacity: 16 Gbps</p> <p>LEDs:</p> <p>Per unit: Power/PoE Max</p> <p>Per port: Activity/Link and Speed</p> <p>Per PoE port: Power/Status</p> <p>Dimensions (approximate): 7.5 x 4.7 x 1.5" (190 x 120 x 38 mm)</p> <p>Warranty: at least 1 year</p>	5	pc		

19.	<p>Layer 3 Access Switch, 24 Port, with SFP+ Ports, Supplied with Two (2) Pieces of MFF Transceiver Modules</p> <p>JL255A Aruba 2930F 24G PoE+ 4SFP+ Switch (To be compatible with the existing network devices)</p> <p>I/O ports and slots: 24 RJ-45 autosensing 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3at PoE+); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 SFP+ 1/10GbE ports; PHY-less</p> <p>Additional ports and slots: 1 dual-personality (RJ-45 or USB micro-B) serial console port</p> <p>Memory and processor: Dual Core ARM Cortex A9 @ 1016 MHz, 1 GB DDR3 SDRAM; Packet buffer size: 12.38 MB 4.5MB Ingress/7.785 Egress, 4 GB eMMC</p> <p>IPv6 Ready Certified</p> <p>Switching capacity: 128 Gbps</p> <p>Routing table size: 2,000 IPv4, 1,000 IPv6 in hardware, 200 OSPF, 256 Static, 10,000 RIP</p> <p>MAC address table size: 32,768 entries</p> <p>Must be supplied with 2 pieces of MFF Transceiver Modules</p> <p><u>Warranty: at least 2-year hardware replacement warranty</u></p>	1	set		
20.	<p>10G 16 Port Managed POE+ Gigabit Switch with SFP+ Ports Supplied with Two (2) Pieces MFF Modules</p> <p>Enclosure Characteristics: SGCC Steel</p> <p>Total Non-Blocking Throughput: 160 Gbps</p> <p>Switching Capacity: 320 Gbps</p> <p>Forwarding Rate: 238.10 Mpps</p> <p>Max. DC Power Consumption: 36W (Excludes SFP/SFP+ Modules)</p> <p>Power Method: AC: 100-240VAC/50-60 Hz, Universal Input; DC: 56 W, 25 to 16V, with 2.5 mm DC Power Inline Connector</p> <p>Supported Voltage Range: 100 100 to 240 VAC, 25 to 16 VDC</p> <p>Power Supply: AC/DC, Internal, 56 W DC</p> <p>LEDs Per Data Port SSpeed/Link/Activity</p> <p>Networking Interfaces (12) 1/10 Gbps SFP+ Ethernet Ports (4) 1/10 Gbps RJ45 Ethernet Ports</p> <p>Management Interface (1) RJ45 Serial Port, Ethernet In/Out Band</p> <p>Rack Mounted, 1U High</p> <p>ESD/EMP Protection: Air: ± 24 kV, Contact: ± 24 kV</p> <p>Shock and Vibration: ETSI300-019-1.4 Standard</p> <p>Operating Temperature: -5 to 40° C (23 to 104° F)</p> <p>Operating Humidity: 5 to 95% Noncondensing</p> <p>Certifications: CE, FCC, IC</p> <p>Core Switching Features</p> <p>ANSI/TIA-1057: LLDP-Media Endpoint Discovery (MED)</p> <ul style="list-style-type: none"> • IEEE 802.1AB: Link Layer Discovery Protocol (LLDP) • IEEE 802.1D: Spanning Tree Compatibility • IEEE 802.1S: Multiple Spanning Tree Compatibility • IEEE 802.1W: Rapid Spanning Tree Compatibility • IEEE 802.1Q: Virtual LANs with Port-Based VLANs • IEEE 802.1p: Ethernet Priority with User Provisioning and Mapping 	4	set		
21.	<p>Network Crimping Tool</p> <p>Ratchet Controlled, With Flat Cable Cutter and Striper, For use on Western Electric (WE)/Stewart Stamping (SS)-type, 6-and 8-position modular telephone plugs, rj45, cat5 cables, and coaxial cable</p>	10	pc		

22.	<p>Network Tone Tracer and Probe</p> <p>Vibration: Random, 2 g, 5 Hz-500 Hz</p> <p>Safety: EN 61010-1, Category: None</p> <p>Battery: 9 V alkaline</p> <p>Application: Copper cabling media including 75- or 50-Ohm Coaxial cable; Two Conductor control, security, generic cabling. 10 Base-T or 10/100 Base-T datacom networks. UTP cable. Shielded Twisted Pair supported in Cable map function</p> <p>Toner Specifications</p> <p>Display: LED</p> <p>Control: Thumbwheel switch</p> <p>Toner interface: Main Mod8 port for tone generation on all 4 pairs of UTP / STP cabling. F Connector for coaxial cabling Banana Jack Plugs (2) - two conductor wiring</p> <p>Toner frequency: signal: encoded digital signal Analog signal: 500 - 1200Hz, 4 songs</p> <p>Output power: 5 V p-p</p> <p>Probe Specs</p> <p>Display: (8) LED indicators, Sync LED indicator</p> <p>Control: Thumbwheel switch, volume control wheel</p> <p>Tone detection: Detects digital signal for Locate, Isolate, and Cable Map Detects analog signal (500-1200Hz) and other analog toners.</p> <p>Toner interface: Main Mod8 port for cable map on all 4 pairs of UTP / STP cabling.</p>	2	pc		
23.	<p>IP PHONE</p> <p>MITEL IP420 (compatible to existing system)</p> <p>130x28 pixels, backlit display</p> <p>Half-duplex speakerphone</p> <p>Audio Controls</p> <p>LED Indicator</p> <p>SIP protocol</p> <p>VLAN, DiffServ/ToS</p> <p>G.711 uLaw/aLaw, G.722, G.723, G.726, G.729a, iLBC, Linear 16bit</p> <p>Built-in 10/100 Ethernet switch</p> <p>802.3af PoE Class 1 (2.4W idle / 3.2W active / 3.9W max)</p> <p>DHCP, Static IP Addressing</p> <p>Local PoE Adapter</p> <p>w/ License Bundle, Essential On-site</p> <p>Warranty : at least 1-year warranty</p>	5	pc		