



Republic of the Philippines
Department of Education
REGION X – NORTHERN MINDANAO
SCHOOLS DIVISION OF EL SALVADOR CITY

ANNEX C: SPECIFICATION

	Item	TECHNICAL SPECIFICATION	QTY
PASSIVE EQUIPMENT	1	CAT 6 pair U/UTP Installation Cable (305 m Box, Unshielded, PVC, Grey) Shall comply to the following standards: ANSI/TIA-568.2-D:2018, ISO/IEC 11801-1:2017, CENELEC EN 50173-1, CENELEC EN 50288-6-1, Flame retardancy is verified according to IEC 60332-1-2, 3P certified, ETL certified, RoHS compliant. Bending Radius: $\geq 6D$, without load, $\geq 8D$, with load. Operation Temperature: $-20\text{ }^{\circ}\text{C}$ $\sim +60\text{ }^{\circ}\text{C}$. Must be Bare Copper/23 AWG.	7
	2	CAT6 U/UTP Retail Patch Cord (PVC, 2m, Blue) Shall comply to the following standards: ANSI/TIA-568-C.2, ISO/IEC 11801 2nd Edition. CENELEC EN 50173-1, CENELEC EN 50288 100% factory tested to component level performance as per TIA/EIA-568-c.2 specifications. Flame retardance according to IEC 60332-1-2. RJ45 contacts 50 μ inch gold plated. Molded snag proof boot. RoHS compliant. Must be Bare Copper/24 AWG. Diameter 6.4 ± 0.02 mm	60
	3	CAT U/UTP, Slimline Patch Cord, 30 AWG, LSOH, 1m, Blue Compliant with Cat.6 standards as: ANSI/TIA 568-2.D:2018 ISO/IEC 11801-1 Class E:2017 CENELEC EN 50173-1:2018 CENELEC EN 50288-10-2:2015 IEC 61935-2:2010 (Edition 3.0) IEC 61156-6:2012 RJ45 contacts 50 μ inch gold plated Molded snag proof boot. Diameter 3.1 ± 0.2 mm. Must be Bare Copper/24 AWG.	60
	4	Category 6 180° 1U 24-Port Unshielded Patch Panel, Dual Type IDC, Black Category 6 Unshielded Patch Panel comply with ANSI/TIA-568.2-D, ISO/IEC 11801-1 and EN 50173-1 Class E specifications. The complete module complies with EU ROHS directive.The construction is in standard 1U 19" size, suits for all 19" rack installation. The main metal frame is made of SECC material, with the thickness over 1.0mm. Dual type IDC accepts 22-26 AWG solid cable, easy for termination with 110 or Krone tools.	4





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	Phosphor bronze, 50μ inch gold plating over nickel in contact area. 100μ inch nickel plated over phosphor bronze. Dielectric Strength 1000V RMS for 1min. Contact Resistance 2mΩ per contact. Temperature Range -10°C to 60°C. Humidity 10%~90%; non condensing.	
5	<p>Cable Management Bar, Click On Type for 1U Unshielded Patch Panel, Black</p> <p>Cable Management Bar, Screw Type is standard EIA 19" rack and cabinet mountable. It can effectively prevent cable tangle and protects the cable in acceptable bending radius. The removable rings design is easy for cable management and maintenance.</p>	4
6	<p>Faceplate, Bevel, 45° Entry, 86*86, Snap-In, w/-Shutter, 1-Port, White</p> <p>Secures to any surface, drywall, baseboard, and even modular furniture. 100% compatible with standard wall (face) plates. Keystone jacks can be snapped in and out easily. Comes in models to accommodate 1/2/3/4 inserts and shuttered dust cover. Comes with hidden mounting screws and clear outlet ID labels.</p>	60
7	<p>1 port Back Box (86x86x42 mm)</p> <p>Features: Easy installation and high durability Material: ABS Color: white Dimension (mm) 86*86*42mm</p>	60
8	<p>Category 6 180° Unshielded Keystone Jack, Dual Type IDC, White</p> <p>The dual type IDC accepts 22-26 AWG solid cables, easy terminated with 110 or Krone tools, supports T568 A&B wiring. Body Material Housing: PC, UL94 V-0. Jack Contact phosphor bronze, 50μ inch gold plated over nickel. IDC Contacts 100μ inch nickel plated over phosphor bronze. Dielectric Strength 1000V RMS for 1min. Current Rating 1.5Amp Max. Insulation Resistance 10MΩ Min. Contact Resistance 2mΩ per contact. Temperature Range -10°C to 60°C. Humidity 10%~90%; non condensing</p>	60
9	Wall Cabinet, Tempered Glass Door, 540x450x460 mm	1





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	<p>Cabinet Structure: Assembled frame structure. Front Door: Tempered glass door. Side Panel: Powder coated, side panel removable. Maximum Static Load Capacity: 30 kgs. Standard Compliance: ANSI/EIA RS-310-D, IEC60297-2, DIN41494 PART1, DIN41494 PART7.</p> <p>It can at least support 3 switches and 1 router</p>	
10	Vertical, 220 V 15 A, 10-way NEMA 5-15R Socket with Ammeter and overload protection, NEMA 5-15P 15A plug input	1
11	<p>1U 19" power distribution unit, with aluminum body, US (NEMA 5-15P) Plug, 6 universal outlets, w/ LED master switch</p> <p>IEC60906 two-pole socket-outlets with grounding contact Maximum 10A 110V AC current capacity, 2.5 kW Lighted master switch Standard 1U 8 output and 1.5U 7 output with surge protect 2 m power cord, other length upon request Color: aluminum or plastic frame in black RoHS compliant</p>	1
12	19" 1U, Cable Management Duct Type, Black	4
13	<p>Fiber Optic Outdoor access building cable, uni-tube, w/ glass yarn strength member, MM OM3, 4C, PE (Note: 500 meters 1 roll)</p> <p>The optic fibers are positioned in a loose tube made of high modulus plastics. The tube is filled with filling compound to give the fibers excellent waterproof performance. The glass yarn between the jacket and loose tube is a strength member and provides rodent resistance. Cable is completed with a polyethylene (PE) jacket. Compliant Standard: ITU-T G651 / ITU-T G652 D, ANSI/TIA B.3, IEC-794. Filling Compound Material Thixotropic Jelly</p>	1
14	LC/UPC-LC/UPC Duplex Multimode OM3 Patch Cord 2 M, 2.00 mm, LSOH	8
15	<p>19" Rack Mounted ODF, 24 cores, with Splice Trays w/o Adapter</p> <p>ODF suits for standard 19" server cabinet installation. The front door is removable during installation and easily seal with two plastic lockers.</p>	4
16	LC/PC Duplex MM Adapter w/zirconia Sleeve	8





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		All adapters produce with a zirconia sleeve for universal applications (MM/SM). All SC, LC and MT-RJ adapters are provided with retaining clips for easy, snap-in mounting. And performance meets with TIA/EIA 568-B.3 standard.	
	17	Fiber Optic 12 pack pigtail LC-UPC, MM OM3, 0.9 mm, PVC, 1m 2 pack pigtail integrated design with good performance. Use additional outer jacket wrapping protect the pigtails also ease to manage.	1
	18	Grounding Protection of the equipment Ensure that all equipment are grounded and protected.	1
ACTIVE EQUIPMENT	1	28-Port Manageable Gigabit Smart Switch with 24-Port PoE+ Interface: • 24× 10/100/1000 Mbps RJ45 Ports (Auto Negotiation/Auto MDI/MDIX) 4× Gigabit SFP Slots Network Media: • 10BASE-T: UTP category 3, 4, 5 cable (maximum 100m) • 100BASE-TX/1000Base-T: UTP category 5, 5e or above cable (maximum 100m) • 1000BASE-X: MMF, SMF PoE+ Ports(RJ45): Standard: 802.3at/af compliant PoE+ Ports: 24 Ports Power Supply: 250 W Max Power Consumption: 32.1 W (110 V/ 60 Hz with no PD connected) 308.6 W (110 V/ 60 Hz with 250 W PD connected) Bandwidth/Backplane: 56 Gbps	3





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	<p>Packet Forwarding Rate: 41.7 Mpps</p> <p>MAC Address Table: 8K</p> <p>Packet Buffer Memory: 4.1 Mbit</p> <p>QoS: • Support 802.1p CoS/DSCP priority • Support 8 priority queues • Queue scheduling: SP, WRR, SP+WRR • Port/Flow- based Rate Limiting • IPv6 QoS • Voice VLAN</p> <p>VLAN: • Supports up to 4K VLANs simultaneously (out of 4K VLAN IDs) • MAC/Protocol-based VLAN</p> <p>Security: AAA Port Security DHCP Snooping IP-MAC-Port Binding IPv6-MAC-Port Binding ARP Inspection 802.1x and Radius Authentication SSH v1/v2 SSL v3/TLSv1.2 Broadcast/Multicast/Unknown-unicast Storm Control Dos Defend</p> <p>Environment: • Operating Temperature: 0–50 °C (32–122 °F); Storage Temperature: -40–70 °C (-40–158 °F) Operating Humidity: 10–90% RH non-condensing Storage Humidity: 5–90% RH non-condensing</p>	
2	<p>Powerful 1U rackmount router with 13x Gigabit Ethernet ports, 60 GB M.2 Drive for Dude Database</p> <p>Architecture: ARM 32bit</p> <p>CPU: AL21400</p> <p>CPU Core Count: 4</p> <p>CPU nominal frequency: 1.4 GHz</p> <p>Dimensions: 443 x 148 x 44 mm</p> <p>License Level: 6</p> <p>Size of RAM: 1 GB</p>	1





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	<p>Storage Size: 128 MB Storage Type: NAND MTBF: Approximately 200'000 hours at 25C Tested Ambient Temperature: -40°C to 70°C IPsec hardware acceleration: YES Number of AC inputs: 2 Number of DC inputs: 2 (2-pin terminal, PoE-IN) 2-pin terminal input Voltage: -48, 20-57 V Max Power Consumption: 33W Max Power Consumption without attachments: 25 W FAN Count: Passive PoE in: 802.3af/at PoE in input Voltage: 20-57 V 10/100/1000 Ethernet ports: 13 Extended storage: 60GB M.2 SSD included M.2 slots: 2 Memory card type: microSD Memory Cards: 1 SATA ports: 2x SATA3 Serial console Port: RS232</p>	
3	<p>AC1350 Wireless MU-MIMO Gigabit Ceiling Mount PoE Wireless Access Point</p> <p>Interface: Gigabit Ethernet (RJ-45) Port×1 (Support IEEE802.3af PoE and Passive PoE) Physical Security Lock: Yes Power Supply: 802.3af/A PoE 24V Passive PoE (+4,5pins; -7,8pins. PoE Adapter Included) Dimensions (W x D x H): 8.1 × 7.1 × 1.5 in (205.5 × 181.5 × 37.1 mm) Antenna Type: 3 Internal Omni 2.4GHz: 4dBi 5GHz: 5dBi</p>	7





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	<p>Wireless Standards: IEEE 802.11ac/n/g/b/a Frequency: 2.4GHz and 5GHz Signal Rate: 5GHz: Up to 867Mbps 2.4GHz: Up to 450Mbps Wireless Functions: Multiple SSIDs (Up to 16 SSIDs, 8 for each band) Enable/Disable Wireless Radio Automatic Channel Assignment Transmit Power Control (Adjust Transmit Power on dBm) QoS(WMM) Seamless Roaming Band Steering Load Balance MU-MIMO Airtime Fairness Beamforming Rate Limit Reboot Schedule Wireless Schedule Wireless Statistics based on SSID/AP/Client</p> <p>Wireless Security: Captive Portal Authentication Access Control Wireless Mac Address Filtering Wireless Isolation Between Clients SSID to VLAN Mapping Rogue AP Detection 802.1X Support</p>	
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	Centralized: Yes	
	Environment: Operating Temperature: 0°C~60°C (32°F~144°F) Storage Temperature: -40°C~70°C (-40°F~158°F) Operating Humidity: 10%~90% non-condensing Storage Humidity: 5%~90% non-condensing	
4	Multi-Mode Fiber LC-LC that works with the Manageable Switch	4
5	2.5 HP Wall Mounted Inverter Type 230V, 60Hz, Single Phase Aircon, Complete Accessories and installation	3

