



**PAMBANSANG PUNONGHIMPILAN TANOD BAYBAYIN NG PILIPINAS**  
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09 June 2025

**SUPPLEMENTAL/BID BULLETIN NO. 05-2025**

This Supplemental/Bid Bulletin No. 05-2025 is issued to include the following clarification/changes raised by the prospective bidders as an integral part of the Bidding Documents for the project **REHABILITATION AND ENHANCEMENT OF THE EXISTING PRIVATE BRANCH EXCHANGE (PBX) SYSTEM AND REWIRING OF THE ICT INFRASTRUCTURE AT NHQ-PCG**, detailed as follows:

**Section VII. Technical Specifications**

Section VII. Technical Specifications is hereby amended to read as and additional item/s must be included as required:

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	ITEM DESCRIPTION	UNIT	QTY	Please indicate either: "Comply" or "Not Comply"
<b>1. Subscription</b>				
1.1	<b>One (1) Year Subscription of High-Speed Broadband Satellite Internet Service (HSBSIS) for Fix Location with LAN Ethernet Adapter for NHQ-PCG</b>  Speed: Download: at least 220 Mbps Upload: at least 25 Mbps  Bandwidth: 50 Gigabytes Mobile Priority Data per Month per HSBSIS Unit	lot	3	<i>Statement of Compliance:</i> <hr/> <i>Brand Offered:</i> <hr/>
1.2	<b>One (1) Year Subscription of Applied Threat Intelligence System with Bundle License Unified Threat Protection (UTP)</b>			



	<p>IPS, Advanced Malware Protection, Application Control, URL, DNS &amp; Video Filtering, Antispam Service, and comprehensive support and maintenance service</p> <p>Minimum Features: Capable of detecting and mitigating threats as follows:</p> <ul style="list-style-type: none"> <li>• Webshells/Corporate Espionage</li> <li>• Shadowpad APT Ips</li> <li>• Remcos RAT Traffic</li> <li>• HotRAT Download Site</li> <li>• QuasarRAT</li> <li>• Other Misc RATs and Trojans</li> <li>• Zegost Malware</li> <li>• Proxy Abuse</li> <li>• ApatWeb PUP and Scareware Campaign</li> <li>• Suspicious Domains</li> </ul>	set	1	
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## 2. **Hardware Components**

2.1	<p><b>High Speed Broadband Satellite Internet Service for Fix Location with LAN Ethernet Adapter</b></p> <p>Package Weight: 12.2 kg (27 lbs) Package Dimensions: 478.1 x 685.9 x 160.1 mm (18.8 x 27 x 6.3 in) Antenna: Electronic Phased Array Field of View: 110° Orientation: Software Assisted Manual Orienting Environmental Rating: IP67 Type 4 Operating Temperature: -30°C to 50°C (-22°F to 122°F) Wind Speed: Operational: 96 kph+ (60 mph+) Snow Melt Capability: Up to 40 mm / hour (1.5 in / hour) Power Consumption: Average: 75 - 100 W Power Supply Environmental Rating: IP66 Power Supply Operating Temperature: -30°C to 50°C (-22 to 122°F) Power Supply Grounding: Dedicated Earth Terminal Power Specifications: 100-240V - 6.3A 50 - 60 Hz Mounting: Included Mount</p>	units	3	
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## 2.2 IP Network System

2.2.1	<b>Network Security Firewall</b> 16x Hardware Accelerated GE RJ45 ports (including 2 x MGMT port) 8 x GE SFP Slots, 4 x 10GE SFP+ Slots, SPU NP7 and CP9 hardware  1. System Performance — Enterprise Traffic Mix <ul style="list-style-type: none"> <li>• IPS Throughput - 12 Gbps</li> <li>• NGFW Throughput - 10 Gbps</li> <li>• Threat Protection Throughput - 9 Gbps</li> </ul> 2. System Performance and Capacity <ul style="list-style-type: none"> <li>• IPv4 Firewall Throughput (1518 / 512 / 64 byte, UDP) - 79.5 / 78.5 / 70 Gbps</li> <li>• IPv6 Firewall Throughput (1518 / 512 / 64 byte, UDP) - 79.5 / 78.5 / 70 Gbps</li> <li>• Firewall Latency (64 byte, UDP) - 4.19 <math>\mu</math>s / 2.5 <math>\mu</math>s*</li> <li>• Firewall Throughput (Packet per Second) - 105 Mpps</li> <li>• Concurrent Sessions (TCP) - 7.8 Million</li> <li>• With 1000 estimated users</li> <li>• IPS/IDS</li> </ul>	pc	1	
2.2.2	<b>Load Balancer</b> <ul style="list-style-type: none"> <li>• Gigabit Ethernet ports (1-LAN, 4-WAN, 1-MGMT, 1- Heartbeat Interface)</li> <li>• Supported Bandwidth: 1.5 Gbps</li> <li>- At least 2 ISPs with minimum of 1Gbps</li> <li>• Interconnection with copper connection At least 1GE each</li> <li>• IAG At least 1000 users</li> </ul>	pc	1	
2.2.3	<b>Layer 3 24Port Switch with 8 x SFP + Slots Module</b>  Minimum Features: <ul style="list-style-type: none"> <li>• Total 10/100/1000 or Multigigabit copper ports: 24 POE+</li> <li>• Default AC power supply: 715W AC Available</li> <li>• PoE power: 445W</li> <li>• StackWise-480: Yes</li> <li>• Stack Power: Yes</li> </ul>	pc	1	



	<ul style="list-style-type: none"> <li>• Default power supply: PWR-C1-715WAC-P/2</li> <li>• Switching capacity: 208 Gbps on 24-port Gigabit Ethernet model</li> <li>• Stacking bandwidth: 480 Gbps</li> <li>• Total number of MAC addresses: 32,000</li> <li>• Jumbo frames: 9198 bytes</li> <li>• Total routed ports per 9300 Series stack: 208</li> <li>• Wireless bandwidth per switch: Up to 48 Gbps on 24- port Gigabit Ethernet model</li> <li>• Forwarding rate: 154.76 Mpps</li> <li>• Dimensions (H x W x D): 1.73 x 17.5 x 17.5 Inches</li> <li>• Weight: 16.33 Pounds</li> <li>• Mean time between failures (hours): 299,000 • Safety certifications: UL 60950-1, CAN/CSA-C222.2 No. 60950-1, EN 60950-1, IEC 60950-1, IEC 60950-1, IEEE 802.3</li> </ul>			
2.2.4	<p><b>Layer 2 Switch PoE 48P with 2 SFP + Slots Module</b></p> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>• Total 10/100/1000 or Multigigabit copper ports: 24 POE+</li> <li>• Default AC power supply: 715W AC Available</li> <li>• PoE power: 445W</li> <li>• StackWise-480: Yes</li> <li>• Stack Power: Yes</li> <li>• Default power supply: PWR-C1-715WAC-P/2</li> <li>• Switching capacity: 208 Gbps on 48-port Gigabit Ethernet model</li> <li>• Stacking bandwidth: 480 Gbps</li> <li>• Total number of MAC addresses: 32,000</li> <li>• Jumbo frames: 9198 bytes</li> <li>• Total routed ports per 9300 Series stack: 208</li> <li>• Wireless bandwidth per switch: Up to 48 Gbps on 48- port Gigabit Ethernet model</li> <li>• Forwarding rate: 154.76 Mpps</li> <li>• Dimensions (H x W x D): 1.73 x 17.5 x 17.5 Inches</li> <li>• Weight: 16.33 Pounds</li> </ul>	pcs	3	



	<ul style="list-style-type: none"> <li>Mean time between failures (hours): 299,000</li> <li>Safety certifications: UL 60950-1, CAN/CSA-C222.2 No. 60950-1, EN 60950-1, IEC 60950-1, IEC 60950-1, IEEE 802.3</li> </ul>			
2.2.5	<b>24-port POE switch</b>  Minimum Features: <ul style="list-style-type: none"> <li>Designed to provide power and data connectivity to devices such as IP cameras, VoIP phones, and wireless access points over a single Ethernet cable.</li> <li>PoE+ support, gigabit Ethernet ports, power budget allocation per port, and smart management capabilities for monitoring and control.</li> </ul>	pcs	5	
2.2.6	<b>L3 to L2 Uplink SFP-10G-LRM</b>  Minimum Features: <ul style="list-style-type: none"> <li>Multi-mode transceiver module designed for both 10GBASE-LRM and 1000BASE-LX/LH data links over multi-mode fiber.</li> <li>Transceiver module operates at a wavelength of 1310 nm and supports link lengths of up to 220m on standard multi-mode fiber.</li> <li>Compatible with various switches and routers that have SFP+ slots.</li> <li>Data transfer rates of up to 10 Gbps, LC duplex connector type, and support for both 10 Gigabit Ethernet and 1 Gigabit Ethernet.</li> </ul>	pcs	6	
<b>2.3 VOIP System</b>				
	<b>Enterprise Grade IP PBX with 1-Port Quad Primary Rate Interface (PRI) Module and built-in redundancy</b> <ul style="list-style-type: none"> <li>At least 1350 channels for SIP only; 750 channels for analog.</li> </ul> Minimum Hardware: <ul style="list-style-type: none"> <li>Processor: at least 12MB Cache (3.40 GHz)</li> <li>RAM: at least 8GB</li> </ul>	pc	1	



	<ul style="list-style-type: none"> <li>• Storage 2x hot-swappable: at least 500GB SSD</li> <li>• RAID1: at least Dual hard drive for increased system reliability</li> <li>• Fan: at least 3 redundant fans</li> <li>• Echo Cancellation Module: at least Voice enhancement &amp; echo cancellation (optional)</li> <li>• USB: at least 4 external, USB 2.0</li> <li>• Self-provisioning Proprietary Softphone for Mac, Windows, Android and iOS using a non-email-address format Username and Password</li> </ul> <p>Minimum Software:</p> <ul style="list-style-type: none"> <li>• Management Interface: at least Complete PBX 5 (64-bit)</li> <li>• Linux version: at least CentOS 7</li> <li>• Framework: at least Asterisk 18</li> <li>• Asterisk 18: at least Intrusion protection software, firewall protection</li> <li>• High availability: at least supported</li> </ul> <p>Telephony:</p> <ul style="list-style-type: none"> <li>• Maximum number of concurrent calls: at least 880 (SIP only); 750 (PRI + FXS)</li> <li>• Maximum number of built in analog ports: at least 32 (additional ports with external Atribank units)</li> <li>• Number of E1 / T1 ports: at least 4 (up to 120 concurrent PRI/R2/CAS calls)</li> <li>• Max. telephony modules supported internally: at least 4 (additional ports are supported by adding Atribanks)</li> <li>• Maximum number of telephony ports supported internally: at least 144 (4xE1 PRI/R2/CAS + 24 analog ports)</li> <li>• Supported telephony modules: at least 8 ports FXS, 8 ports FXO, Up to 4 ports PRI/R2/CAS, Up to 8 ports BRI ISDN</li> <li>• Dimensions: at least 44 x 44 x 9 cm (17.3 x 17.3 x 3.5")</li> </ul> <p>Power:</p> <ul style="list-style-type: none"> <li>• Power supply: Two internal, redundant, hot-swappable units</li> <li>• Voltage: Switching, auto adjust 100/240 Volts, 50/60 Hz</li> </ul>			
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	<ul style="list-style-type: none"> <li>Power consumption: 230 Watts (maximum)</li> <li>Built in grounding connection: supported</li> </ul>			
	<p>Network:</p> <ul style="list-style-type: none"> <li>Ethernet port – standard: 10/100/1000 Mb/s (x2)</li> </ul> <p>Minimum Capacities:</p> <ul style="list-style-type: none"> <li>Max. Signaling: 250</li> <li>Max. Registered Users: 1,500</li> <li>Max. RTP/SRTP Sessions: 200</li> </ul> <p>Minimum Telephony Interfaces:</p> <ul style="list-style-type: none"> <li>Digital: Single E1/T1 interface</li> <li>Digital PSTN Protocols: Various ISDN PRI protocols such as EuroISDN, North American NI-2, LucentTM 4/5ESS, NortelTM DMS- 100 and others. Different CAS protocols, including MFC R2, E&amp;M immediate start, E&amp;M delay dial/start and others.</li> </ul> <p>Minimum Network Interfaces:</p> <ul style="list-style-type: none"> <li>Ethernet: 4 GE interfaces configured in 1+1 redundancy or as individual ports</li> </ul> <p>Minimum Security:</p> <ul style="list-style-type: none"> <li>Access Control: DoS/DdoS line rate protection, bandwidth throttling, dynamic blacklisting (Intrusion Detection System)</li> <li>VoIP Firewall: RTP pinhole management, rogue RTP detection and prevention, SIP message policy, advanced RTP latching</li> <li>Encryption/Authentication: TLS, SRTP, HTTPS, SSH, client/server SIP Digest authentication, RADIUS Digest</li> <li>Privacy: Automatic topology hiding, user privacy</li> <li>Traffic Separation: VLAN/physical interface separation for multiple media, control and OAMP interfaces</li> </ul> <p>Minimum Interoperability:</p> <ul style="list-style-type: none"> <li>SIP B2BUA: Full SIP transparency, mature and broadly deployed SIP stack, stateful proxy mode</li> </ul>			



	<ul style="list-style-type: none"> <li>• SIP Interworking: 3xx redirect, REFER, PRACK, session timer, early media, call hold, delayed offer</li> <li>• Registration and Authentication SBC users: User registration restriction control, registration and authentication on behalf of users, SIP authentication server for</li> <li>• Transport Mediation: Mediation between SIP over UDP/TCP/TLS, Ipv4/Ipv6, RTP/SRTP (SDES)</li> <li>• Header Manipulation: Add/modify/delete SIP headers and message body using simple WireShark-like language with powerful capabilities such as variables and utility functions</li> <li>• Number Manipulations: Ingress and egress digit manipulation</li> <li>• SIP Interworking: 3xx redirect, REFER, PRACK, session timer, early media, call hold, delayed offer</li> <li>• Signal Conversion: DTMF/RFC 2833/SIP, T.38 fax, T.38 V3, V.34, packet-time conversion</li> <li>• NAT: Local and far-end NAT traversal for support of remote workers</li> </ul> <p>Minimum Voice Quality and SLA:</p> <ul style="list-style-type: none"> <li>• Call Admission Control: Limit number and rate of concurrent sessions and registers per peer for inbound and outbound directions</li> <li>• Packet Marking: 802.1p/Q VLAN tagging, DiffServ, TOS</li> <li>• Standalone Survivability: Maintains local calls in the event of WAN failure. Outbound calls can use PSTN fallback (including E911).</li> <li>• Voice Monitoring and Enhancement: Trans rating, RTCPXR, acoustic echo cancellation, replacing voice profile due to impairment detection, fixed and dynamic voice gain control, packet loss concealment, dynamic programmable jitter buffer, silence suppression/comfort noise generation, RTP redundancy, broken connection detection</li> </ul>			
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	<ul style="list-style-type: none"> <li>• Direct Media: Hair-pinning (no media anchoring) of local calls to avoid unnecessary media delays and bandwidth consumption</li> <li>• High Availability: SBC high availability with two-box redundancy, active calls preserved</li> <li>• Test Agent: Ability to remotely verify connectivity, voice quality and SIP message flow between SIP Uas</li> </ul> <p>Minimum SIP Call Handling:</p> <ul style="list-style-type: none"> <li>• Criteria: Incoming SIP trunk, DID ranges, host names, any SIP headers, codecs, QoE, bandwidth</li> <li>• Querying External Databases: Destinations based on customized queries of ENUM, LDAP, HTTP server (REST API)</li> <li>• Available Destinations: Configured SIP peers, registered users, IP address, request URI</li> <li>• Advanced Features: Alternative destinations, load balancing, LCR, call forking, E911 emergency call detection and prioritization</li> <li>• SBC Media Types: Audio\Video\Fax\Text\Message Session Relay Protocol (MSRP)\Binary Floor Control Protocol (BFCP)</li> <li>• SIPREC: IETF standard SIP recording interface, supporting both audio and video SBC sessions</li> </ul> <p>Management:</p> <ul style="list-style-type: none"> <li>• OAM&amp;P: Browser-based GUI, CLI, SNMP, INI Configuration file, REST API, One Voice Operations Center (OVOC)</li> </ul> <p>Minimum Physical/Environmental:</p> <ul style="list-style-type: none"> <li>• Dimensions: 43.7 (1U) x 310 x 210 mm (HxWxD) • Weight: 4.4 lb (2.0kg)</li> <li>• Mounting: Desktop or 19" rack mount</li> <li>• Power: 100-240V, 50-60 Hz, 0.8A</li> <li>• Environmental: Operational: 0 to 40°C (41 to 104°F); Storage: -25 to 70°C (-13 to 185°F)</li> </ul>			
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2.3.1.1	FXO Gateway Module (2 X 8 ports)	pc	1	
2.3.1.2	Additional 1GB Ethernet Port	pc	1	
2.3.1.3	1TB Upgrade	pc	1	
2.3.1.4	Rapid Recovery USB	pc	1	
2.3.2	<b>Session Border Controller</b>  Minimum Features: <ul style="list-style-type: none"> <li>Controls the signaling and media streams involved in setting up, conducting, and tearing down communication sessions.</li> <li>Security Features: encryption, access control, and protection against denial-of-service attacks to secure communication sessions.</li> <li>Interoperability: facilitate communication between different networks, protocols, and devices, ensuring seamless interoperability.</li> <li>Quality of Service (QoS): prioritize and manage network traffic to ensure the quality of communication sessions, particularly in VoIP and video conferencing applications.</li> <li>Media Handling: handle media transcoding, packet inspection, and manipulation to ensure compatibility between different endpoints.</li> <li>Session Management: manage session initiation, termination, and routing, ensuring smooth communication flow.</li> <li>Scalability: scalable to accommodate varying levels of traffic and communication sessions.</li> <li>Redundancy and Failover: support redundancy and failover mechanisms to ensure high availability and reliability.</li> <li>Monitoring and Reporting: provide tools for monitoring network performance, analyzing traffic patterns, and generating reports for troubleshooting and optimization.</li> </ul> Hardware Components: On-premises (as determined by the Supplier)	pc	1	



2.3.3	<p><b>WiFi/PoE phone with PSU</b></p> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>• 2.4-inch 320x240 pixel color screen</li> <li>• Support audio codec G.722 and Opus, HD audio on speakerphone and handset</li> <li>• Support 6-way audio conference</li> <li>• Support EHS wireless headset</li> <li>• Built-in 2.4GHz&amp; 5GHz Wi-Fi, realizing more flexible connectivity</li> <li>• Two installation methods of desktop stand and wall mountable</li> </ul> <p>Minimum Functions:</p> <ul style="list-style-type: none"> <li>• Local Phonebook (1000 entries)</li> <li>• Remote Phonebook (XML/LDAP, 1000 entries)</li> <li>• Call logs (In/Out/Missed, 600 entries)</li> <li>• Blocked List/Allowed List</li> <li>• Screen saver</li> <li>• Voice Message Waiting Indication (VMWI)</li> <li>• Programmable DSS/Soft keys</li> <li>• Network Time Synchronization</li> <li>• Support Poly wireless headset (Through Poly APD-80 EHS Cable)</li> <li>• Support Jabra wireless headset (Through EHS20 EHS Cable)</li> <li>• Support Recording (Through Server)</li> <li>• Action URL / Active URI</li> <li>• uaCSTA</li> <li>• Wideband ADC/DAC 16KHz Sampling</li> <li>• Narrowband Codec: G.711a/u, G.723.1, G.726, G.729A/B, iLBC</li> <li>• Wideband Codec: G.722, Opus</li> <li>• Full-duplex Acoustic Echo Canceller (AEC)</li> <li>• Voice Activity Detection (VAD) / Comfort Noise Generation (CNG) / Background Noise Estimation (BNE) / Noise Reduction (NR) / Automatic Gain Control (AGC)</li> <li>• Packet Loss Concealment (PLC)</li> <li>• Dynamic Adaptive Jitter Buffer</li> <li>• DTMF: In-band, Out-of-Band (RFC2833/ SIP INFO)</li> </ul>	pcs	90	
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<ul style="list-style-type: none"> <li>• VQM voice quality monitoring</li> </ul> <p>Minimum Physical Specifications:</p> <ul style="list-style-type: none"> <li>• LCD: 2.4-inch (320x240) Color Screen</li> <li>• Keypad: 36 keys, including</li> <li>• 4 Soft keys</li> <li>• 9 Function keys (Hold/Transfer/Voice/message/Conference/Phonebook/MWI/Headset/Redial/Hands-free)</li> <li>• 3 Line keys (With LED Indicator Light)</li> <li>• 4 Navigation keys</li> <li>• 1 OK key</li> <li>• 12 Standard Phone Digits keys</li> <li>• 3 Volume Control keys (Up/Down/Mute (Microphone))</li> <li>• Handset (RJ9) x1</li> <li>• Standard RJ9 Handset Wire x1</li> <li>• 1.5M CAT.5E Ethernet Cable x1</li> <li>• Desktop stand</li> <li>• Status Indicator Light x1 (Red)</li> <li>• RJ9 Port x2: Handset x1, Headset x1</li> <li>• RJ45 Port x2: Network x1, PC x1 (Bridged to Network)</li> <li>• Security Slot x1</li> <li>• DC Power Input: DC5V / 1A</li> <li>• Power Consumption (Adapter): 1.218~2.39W Power Consumption (PoE): 2.12~3.49W</li> <li>• Working Temperature: 0~45°C</li> <li>• Working Humidity: 10~95%</li> <li>• Installation: Desktop Stand, Wall mountable (optional)</li> <li>• Color: Black</li> <li>• N.W/CTN: 8.98kg</li> <li>• G.W/CTN: 9.69kg</li> <li>• Device Dimensions: Desktop Stand (45°): 169x201.1x177.4 mm, Desktop Stand (50°): 169x191.9x185.8 mm, Wall mountable: 169x120.1x213.7 mm</li> <li>• Gift Box Dimensions: 250x220x55mm</li> <li>• Outer CTN Dimensions: 460x300x270mm (10 PCS)</li> <li>• HD Voice</li> <li>• PoE Enabled</li> <li>• 2.4-inch color screen</li> <li>• Handset / Hands-free / Headset mode</li> </ul>			
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2.3.4	<p><b>IP Phone with Video</b> (for CPCG, DCO, DCA, CS, MDAC, Conference Room, Function Hall)</p> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>• 20 SIP lines, hotspot</li> <li>• Support an external USB camera (optional).</li> <li>• 112 one-touch DSS keys on 7" capacity color touch screen</li> <li>• HD audio with Harman speaker</li> <li>• Built-in Bluetooth 4.2 and 2.4G/5G Wi-Fi</li> <li>• Support video codec H.264</li> <li>• Dual Gigabit ports, integrated PoE</li> <li>• Stand with 2 adjustable angles of 40 and 50 degrees</li> </ul> <p>Minimum Phone Functions:</p> <ul style="list-style-type: none"> <li>• Local Phonebook (2000 entries)</li> <li>• Remote Phonebook (XML/LDAP, 2000 entries)</li> <li>• Intelligent Search for Contacts and Call Log</li> <li>• Call logs (In/out/missed, 1000 entries)</li> <li>• Blocked list/Allowed list</li> <li>• Screen saver</li> <li>• Voice Message Waiting Indication (VMWI)</li> <li>• Programmable DSS/Soft keys</li> <li>• Network Time Synchronization</li> <li>• Built-in Bluetooth 4.2: Support Bluetooth headset/ Bluetooth of Mobile Device</li> <li>• Built-in Wi-Fi</li> <li>• 2.4GHz, 802.11 b/g/n</li> <li>• 2.4GHz, 802.11 b/g/n</li> <li>• Miracast</li> <li>• Support Recording</li> <li>• Action URL / Active URI</li> <li>• UaCSTA</li> <li>• Audio/Video Recording</li> <li>• SIP Hotspot</li> <li>• Group Broadcasting</li> <li>• Action Plan</li> <li>• Group listening</li> <li>• Support Poly wireless headset (Through Plantronics APD-80 EHS Cable)</li> <li>• Support Jabra wireless headset (Through EHS20 EHS Cable)</li> <li>• Call out / Answer / Reject</li> </ul>	pcs	7	



	<ul style="list-style-type: none"> <li>• Mute / Unmute (Microphone)</li> <li>• Call Hold / Resume</li> <li>• Call Waiting</li> <li>• Intercom</li> <li>• Caller ID Display</li> <li>• Speed Dial</li> <li>• Anonymous Call (Hide Caller ID)</li> <li>• Call Forwarding (Always/Busy/No Answer)</li> <li>• Call Transfer (Attended/Unattended)</li> <li>• Call Parking/Pick-up (Depending on server)</li> <li>• Redial</li> <li>• Do-Not-Disturb</li> <li>• Auto-Answering</li> <li>• Voice Message (On server)</li> <li>• Hot Line</li> <li>• Hotdesking</li> <li>• BLF</li> <li>• 3-way video conference, 10-way voice conference</li> <li>• Video decoding: H.264</li> <li>• Video call resolution: QVGA/CIF/VGA/4CIF/720P/1080P</li> <li>• Image format: JPEG/PNG/BMP</li> <li>• Video format: MP4</li> <li>• Bandwidth selection: 64kbps~4Mbps</li> <li>• Frame rate selection: 5~30fps</li> <li>• Video from remote site can be displayed in full screen</li> <li>• Optional CM60 USB Camera</li> <li>• 2 Mega Pixel</li> <li>• Plug and Play</li> <li>• Flexible Placement and Angle Adjustment</li> <li>• Video Preview</li> </ul> <p>Minimum Physical Specifications:</p> <ul style="list-style-type: none"> <li>• Color: Black</li> <li>• LCD x1:7-inch (1024x600) color touch screen</li> <li>• Keypad: 26 keys, including</li> <li>• 5 Function keys (Hold, MWI, Mute, Headset, Redial)</li> <li>• 4 Navigation keys</li> <li>• 1 OK key</li> <li>• 1 Return key</li> </ul>			
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	<ul style="list-style-type: none"> <li>• 12 Standard Phone Digits keys</li> <li>• 2 Volume Control keys, Up/Down</li> <li>• 1 Hands-free key</li> <li>• HD Handset (RJ9) x1</li> <li>• Standard RJ9 Handset Wire x1</li> <li>• 1.5M CAT5 Ethernet Cable x1</li> <li>• Back Rack x1</li> <li>• RJ9 Port x2: Handset x1, Headset x1</li> <li>• RJ45 Port x2: Network x1, PC x1 (Bridged to Network)</li> <li>• USB2.0 Port x1: Standard A, Connect with Flash Driver</li> <li>• Safety keyhole x1</li> <li>• Power: 5V/2A or PoE</li> <li>• Power Consumption (PoE): 1.596~11.86W</li> <li>• Power Consumption (Adapter): 0.907~9.38W Working Temperature: 0~45°C</li> <li>• Working Humidity: 10~95%</li> <li>• Qty/CTN: 10pcs</li> <li>• N.W/CTN: 21.1kg</li> <li>• G.W/CTN: 22.22kg</li> <li>• Device Dimensions: Desktop Stand (Angles 1): 268x185x189mm, Desktop Stand (Angles 2): 268x201x168mm</li> </ul>			
2.3.5	<p><b>IP Console – Operator</b></p> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>• 20 SIP lines, 3-way conference, hotspot</li> <li>• HD audio on speakerphone and handset</li> <li>• Movable type Directional External Gooseneck Microphone</li> <li>• 4.3" main color display, 2x3.5" side color displays for DSS keys • Built-in Bluetooth</li> <li>• Wi-Fi connectivity (Via Wi-Fi dongle)</li> <li>• Up to 106 DSS keys (42 tri-colored physical keys)</li> <li>• Video Codec H.264 support for receiving video calls</li> <li>• Dual Gigabit ports, integrated PoE</li> <li>• Stand with 2 adjustable angles of 40 and 50 degrees</li> <li>• Video call resolution: QCIF / QVGA / CIF / VGA / 4CIF / 720P / 1080P</li> </ul>	pcs	2	



	<p>Minimum Physical Specifications:</p> <ul style="list-style-type: none"> <li>• Main LCD x1: 4.3 inch (480x272) color-screen LCD</li> <li>• DSS Key-mapping LCD x2: 3.5-inch (320x480) color screen LCD</li> </ul> <p>Minimum Keypad: 77 keys, including:</p> <ul style="list-style-type: none"> <li>• 4 Soft-keys</li> <li>• 6 Function keys (Hold, Call forward, Phonebook, MWI, Headset, Redial)</li> <li>• 4 Navigation keys</li> <li>• 1 OK key</li> <li>• 1 Return key</li> <li>• 12 Standard Phone Digits keys</li> <li>• 3 Volume Control keys, Up/Down/Mute(Microphone)</li> <li>• 1 Hands-free key</li> <li>• 42 DSS Keys with tri-color LED</li> <li>• 3 Page-Switch (PS) key</li> <li>• HD Handset (RJ9) x1</li> <li>• Standard RJ9 Handset Wire x1</li> <li>• 1.5M CAT5 Ethernet Cable x1</li> <li>• Gooseneck Microphone x1</li> <li>• Directional microphone</li> <li>• Frequency response: 20Hz~20KHz</li> <li>• SNR: ≥60 dB.1kHz at 1 Pa</li> <li>• Back Rack x1</li> <li>• Gooseneck MIC Port x1: Gooseneck Microphone x1</li> <li>• RJ9 Port x2: Handset x1, Headset x1</li> <li>• RJ45 Port x2: Network x1, PC x1 (Bridged to Network)</li> <li>• USB2.0 Port x1: Standard A, Connect with Wi-Fi USB dongle or Flash Driver</li> <li>• DC Power Input: 5V/2A</li> <li>• Power Consumption (PoE): 2.9~7.9W</li> <li>• Power Consumption (Adapter): 2.54~6.4W</li> <li>• Working Temperature: 0~45°C</li> <li>• Working Humidity: 10~95%</li> <li>• installation: Desktop Stand</li> <li>• Color: Dark gray</li> <li>• Qty/CTN: 10 PCS</li> <li>• N.W/CTN: 18.77kg</li> <li>• G.W/CTN: 19.9kg</li> </ul> <p>Minimum Device Dimensions:</p>			
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<ul style="list-style-type: none"> <li>• Desktop Stand (Angles 1): 309 x 214 x 187mm</li> <li>• Desktop Stand (Angles 2): 309 x 226 x 167mm</li> <li>• Gift Box Dimensions: 323 x 301 x 71mm</li> <li>• Outer CTN Dimensions: 624 x 383 x 348mm</li> </ul> <p>Minimum Phone Functions:</p> <ul style="list-style-type: none"> <li>• Local Phonebook (2000 entries)</li> <li>• Remote Phonebook (XML/LDAP, 2000 entries)</li> <li>• Call logs (In/out/missed, 1000 entries)</li> <li>• Blocked /Allowed List</li> <li>• Screen saver</li> <li>• Voice Message Waiting Indication (VMWI)</li> <li>• Programmable DSS/Soft keys</li> <li>• Network Time Synchronization</li> <li>• Built-in Bluetooth 2.1: Support Bluetooth headset</li> <li>• Support Wi-Fi Dongle</li> <li>• Support Poly wireless headset</li> <li>• Support Jabra wireless headset (Through EHS20 EHS Cable)</li> <li>• Support Recording (Through Flash Drive or Server Recording)</li> <li>• Action URL / Active URI</li> <li>• uaCSTA</li> <li>• Call out / Answer / Reject</li> <li>• Mute / Unmute (Microphone)</li> <li>• Call Hold / Resume</li> <li>• Call Waiting</li> <li>• Intercom</li> <li>• Caller ID Display</li> <li>• Speed Dial</li> <li>• Anonymous Call (Hide Caller ID)</li> <li>• Call Forwarding (Always/Busy/No Answer)</li> <li>• Call Transfer (Attended/Unattended)</li> <li>• Call Parking/Pick-up (Depending on server)</li> <li>• Redial</li> <li>• Do-Not-Disturb</li> <li>• Auto-Answering</li> <li>• Voice Message (On server)</li> <li>• 3-way Audio Conference</li> </ul>			
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	<ul style="list-style-type: none"> <li>• Hot Line</li> <li>• Hot desking</li> </ul>			
2.3.6	<p><b>Conference Phone with PSU</b></p> <p>Minimum Phone features and Functions:</p> <ul style="list-style-type: none"> <li>• 1 SIP account</li> <li>• Call hold, mute, DND, call recording, hotline</li> <li>• 10-way conference call</li> <li>• Analog PSTN calls via CPN10</li> <li>• Redial, call waiting, emergency call</li> <li>• Call forward, call transfer, call return, dial plan Ring tone selection/import/delete</li> <li>• Set date time manually or automatically</li> <li>• Volume adjustment</li> <li>• Pairing via Bluetooth</li> <li>• Create meeting directly</li> <li>• Join meeting seamlessly</li> <li>• Active Speaker</li> <li>• Optimal HD audio</li> <li>• Noise Proof Technology</li> <li>• Smart Noise Filtering</li> <li>• 13ft (4m) high-quality voice pickup range</li> <li>• Maximum 20ft (6m) voice pickup range</li> <li>• Apply to medium to large conference room</li> <li>• Built-in 12-microphone array, 360-degree voice pick up</li> <li>• Built-in 1-microphone array, decrease noise</li> <li>• Loudspeaker</li> <li>• Frequency: 100-20,000 Hz</li> <li>• Volume: 94 dB at 0.5-m peak volume</li> <li>• 56mm diameter and 5w speaker</li> <li>• Full-duplex speakerphone with AEC</li> <li>• Echo cancellation tail length is up to 320ms</li> <li>• Background noise suppression</li> <li>• Codecs: G722, G722.1C, G726, G.729, G.729A, • G723, iLBC, PCMU (G.711A), PCMA (G.711μ)</li> <li>• DTMF: In-band, Out-of-band (RFC 2833) and SIP INFO</li> <li>• VAD, CNG, PLC, AJB, AGC</li> <li>• Busy Lamp Field (BLF)</li> <li>• Multicast paging</li> </ul>	pcs	2	



	<ul style="list-style-type: none"> <li>• Intercom</li> <li>• Anonymous call</li> <li>• Anonymous call rejection</li> <li>• Voice mail</li> <li>• Distinctive ringtone</li> <li>• Call pickup</li> </ul> <p>Minimum Network and Security:</p> <ul style="list-style-type: none"> <li>• SIP v1 (RFC2543), v2 (RFC3261)</li> <li>• SIP server redundancy supported</li> <li>• Ipv4/Ipv6</li> <li>• NAT traversal: STUN mode</li> <li>• Proxy mode and peer-to-peer SIP link mode • IP assignment: static/DHCP</li> <li>• HTTP/HTTPS web server</li> <li>• Time and date synchronization using SNTP</li> <li>• UDP/TCP/DNS-SRV (RFC 3263)</li> <li>• QoS: 802.1p/Q tagging (VLAN), Layer 3 ToS, DSCP</li> <li>• SRTP for voice encryption</li> <li>• Transport Layer Security (TLS1.3)</li> <li>• HTTPS certificate manager</li> <li>• AES encryption for configuration file (AES256)</li> </ul> <p>Minimum Display:</p> <ul style="list-style-type: none"> <li>• 5" 720x1280 capacitive touch screen</li> <li>• Volume key</li> <li>• Home button</li> </ul> <p>Minimum Interface:</p> <ul style="list-style-type: none"> <li>• 1 x RJ45 10/100M Ethernet port</li> <li>• Built-in Wi-Fi (2.4GHz/5GHz, 802.11a/b/g/n) • Built-in Bluetooth 4.2</li> <li>• Power over Ethernet (IEEE 802.3at), class 4 • 1 x USB 2.0 Type-A device port</li> <li>• "Serving our Nation by Ensuring a Safe, Clean, and Secure Maritime Environment."</li> <li>• 1 x USB 2.0 Type-C device port</li> <li>• 1 x Security slot</li> </ul> <p>Minimum Directory:</p> <ul style="list-style-type: none"> <li>• Local phonebook up to 1000 entries</li> <li>• XML/LDAP remote phonebook</li> <li>• Intelligent search method</li> </ul>			
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	<ul style="list-style-type: none"> <li>• Phonebook search/import/export</li> <li>• Call history: dialed/received/missed/forwarded</li> <li>• Block list</li> </ul> <p>Management:</p> <ul style="list-style-type: none"> <li>• Configuration: browser/phone/auto-provision/Yea- link</li> <li>• Device Management Platform</li> <li>• Auto provision via FTP/TFTP/HTTP/HTTPS for mass deploy</li> <li>• Auto-provision with PnP</li> <li>• Zero-sp-touch, TR-069</li> <li>• Reset to factory, reboot</li> <li>• Package tracing export, system log</li> </ul> <p>Minimum Physical features:</p> <ul style="list-style-type: none"> <li>• Color: Black</li> <li>• External PoE adapter (Optional)</li> <li>• Power consumption (PoE): 7.3W-20W</li> <li>• Dimension (W*D*H): 328mm*322mm*62mm</li> <li>• Operating humidity: 10~90%</li> <li>• Operating temperature: -10 to +45°C (+14 to 113°F)</li> <li>• Storage temperature: -30 to +70°C (-22 to +158°F)</li> </ul>			
2.3.7	<p><b>LTE Gateway 8 Ports</b></p> <p>Minimum Interface:</p> <ul style="list-style-type: none"> <li>• 8 GSM or 3G or 4G Channels</li> <li>• 1 10/100 Mbps Ethernet Interface</li> <li>• 2 10/100 Mbps Ethernet Interfaces</li> </ul> <p>Minimum Mobile Features:</p> <ul style="list-style-type: none"> <li>• GSM Frequency: 850/900/1800/1900MHz</li> <li>• WCDMA Frequency: 850/1900MHz, 850/2100MHz, 900/2100MHz</li> <li>• 4G LTE Band: depends on the module type</li> <li>• VoLTE if the Carrier Supports</li> <li>• SMS Sending and Receiving</li> <li>• Send Bulk SMS</li> </ul>	pc	1	



<ul style="list-style-type: none"> <li>• SMS Center</li> <li>• Gain Adjustment</li> <li>• USSD</li> <li>• PIN Modify</li> <li>• Carrier Selection: Auto/Manual</li> <li>• Talk Time Alarm</li> <li>• Caller ID/CLIR</li> <li>• Open API for SMS and USSD</li> </ul> <p>Minimum Network &amp; Management:</p> <ul style="list-style-type: none"> <li>• Network Protocol: FTP, TFTP, HTTP, SSH</li> <li>• NAT Traversal: Static NAT, STUN</li> <li>• Static Route</li> <li>• OpenVPN</li> <li>• Firewall</li> <li>• VLAN</li> <li>• QoS/ToS</li> <li>• DDNS</li> <li>• Configure Backup/Restore</li> <li>• Firmware Upgrade by HTTP/TFTP</li> <li>• Web based Configuration</li> </ul> <p>Minimum System Features:</p> <ul style="list-style-type: none"> <li>• Mobile Ports Groups</li> <li>• VoIP Trunk Group</li> <li>• Incoming /Outgoing Routing rules</li> <li>• Call Blocklist</li> <li>• Hotline</li> <li>• Auto CLIP</li> <li>• Call Duration Limitation</li> <li>• Call Transfer</li> <li>• Call Back</li> <li>• Call Detail Record (CDR)</li> <li>• Call Status Display</li> <li>• NTP</li> <li>• IP Blocklist</li> <li>• Network Attack Alert</li> <li>• Packet Capture</li> <li>• System Logs</li> </ul> <p>Minimum Voice Processing:</p> <ul style="list-style-type: none"> <li>• Protocol: SIP, IAX2</li> <li>• Transport: UDP, TCP, TLS, SRTP</li> <li>• Voice Codec: G.711 (alaw/ulaw), G.722, G.726, G.729A, GSM, ADPCM, Speex</li> </ul>			
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	<ul style="list-style-type: none"> <li>Echo Cancellation: ITU-T G.168 LEC</li> <li>DTMF Mode: RFC2833, SIP INFO, In-band</li> <li>SIP Server for IP Phones Included</li> <li>SIP Response Code Switch</li> <li>Call Progress Tone Generation</li> <li>1 Stage/2 Stage Dial</li> </ul>			
<b>3. Wireless Link System</b>				
3.1	<b>P2MP Wireless Access Point Backhaul Radio</b>  Minimum Features: <ul style="list-style-type: none"> <li>Used to establish wireless connections between a central wireless access point and multiple remote access points or clients.</li> <li>Frequency Bands: operate in various frequency bands such as 2.4 GHz, and 5 GHz for backhaul communication.</li> <li>Throughput: ranging from tens to hundreds of Mbps or Gbps.</li> <li>Antenna Configuration: support integrated or external antennas for directional or omnidirectional coverage.</li> <li>Security Features: incorporate encryption, authentication, and other security mechanisms to ensure data privacy and integrity.</li> <li>Scalability: able to scale the network by adding more remote access points while maintaining performance is an important aspect of these radios.</li> <li>Management and Monitoring: centralized management and monitoring capabilities allow for easy configuration,</li> </ul>	pc	1	
3.2	<b>P2MP Wireless Subscriber Radio</b>  Minimum Features: <ul style="list-style-type: none"> <li>Used to establish wireless connections from P2MP Wireless Access Point Backhaul Radio to P2MP Wireless Subscriber Radio or clients.</li> </ul>	pcs	5	
3.3	<b>WIFI 6 POE Indoor Access point</b> <ul style="list-style-type: none"> <li>At least 75 concurrent clients</li> <li>Up to 2.7Gbps throughput</li> </ul>	pcs	64	



	<p>Minimum Features:</p> <ul style="list-style-type: none"> <li>• Supports the latest Wi-Fi 6 (802.11ax) standard</li> <li>• Can be powered through PoE, allowing for both data connectivity and power supply over a single Ethernet cable.</li> <li>• Utilizes MIMO technology to improve wireless performance by transmitting multiple data streams simultaneously.</li> <li>• Supports beamforming technology to focus Wi-Fi signals towards connected devices, enhancing signal strength and coverage.</li> <li>• Operates on both 2.4 GHz and 5 GHz bands for increased flexibility and reduced interference</li> <li>• Offers high data transfer speeds suitable for bandwidth intensive applications, with speeds potentially reaching multiple Gbps.</li> <li>• Allows for the creation of multiple Service Set Identifiers (SSIDs) to segregate wireless networks for different purposes or user groups.</li> <li>• Includes encryption, authentication, and other security protocols to protect the wireless network from unauthorized access and cyber threats.</li> </ul>			
3.4	<p><b>WIFI 6 POE Outdoor Access point</b></p> <ul style="list-style-type: none"> <li>• At least 75 concurrent clients</li> <li>• Up to 2.7Gbps throughput</li> </ul> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>• Built to withstand outdoor conditions, these access points are typically weatherproof and designed to operate in various climates.</li> <li>• Supports the latest Wi-Fi 6 (802.11ax) standard, offering improved speed, capacity, and performance for outdoor wireless networks.</li> <li>• Can be powered through PoE, enabling easy installation and flexibility in power source placement.</li> <li>• Operates on both 2.4 GHz and 5 GHz bands, providing flexibility and reduced</li> </ul>	pcs	10	



	<p>interference in outdoor Wi-Fi deployments.</p> <ul style="list-style-type: none"> <li>Utilizes beamforming technology to focus wireless signals towards connected devices, enhancing signal strength and coverage.</li> <li>Support mesh networking capabilities, allowing for easy deployment and extension of the wireless network.</li> <li>Capable of robust security protocols, encryption, and authentication mechanisms to secure the outdoor wireless network from unauthorized access and cyber threats.</li> </ul>			
<b>4. Auxiliary Equipment</b>				
4.1	<p><b>Data Cabinet (42U) w/ 2 PDU and patch panels (Data Center)</b></p> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>The data cabinet is 42U in height, providing ample space for mounting servers, switches, and other network devices.</li> <li>Two (2) PDUs are included for power distribution to the equipment mounted in the cabinet, ensuring reliable power supply.</li> <li>At least eight (8) IEC 60320 C13 outlets</li> <li>Adequate ventilation and cooling mechanisms are essential to maintain optimal operating temperatures for the equipment housed within the cabinet.</li> <li>The cabinet is designed to support the weight of network equipment and accessories mounted inside, with a specified weight capacity.</li> <li>The cabinet design allows for easy access to the equipment for maintenance, troubleshooting, and upgrades.</li> </ul>	pc	1	
4.2	<p><b>Data Cabinet (24U) w/ PDU and patch panels (outdoor cabinet)</b></p> <p>Minimum Features:</p>	pc	1	





	<ul style="list-style-type: none"> <li>• The data cabinet is 24U in height, offering a compact yet spacious solution for mounting servers, switches, and other networking devices.</li> <li>• A PDU is included for efficient power distribution to the equipment within the cabinet, ensuring reliable power supply and management.</li> <li>• At least six (6) IEC 60320 C13 outlets</li> <li>• Adequate ventilation and cooling mechanisms are essential to maintain optimal operating temperatures for the equipment housed within the cabinet.</li> <li>• The cabinet is incorporate with locking doors and side panels to enhance security and prevent unauthorized access to the network equipment.</li> <li>• The cabinet is designed to support the weight of networking equipment and accessories installed inside, with a specified weight capacity for safe usage.</li> <li>• The cabinet design allows for easy access to the equipment for maintenance, upgrades, and troubleshooting purposes, ensuring convenient management.</li> </ul>			
4.3	<p><b>Data Cabinet (12U) w/ PDU and patch panels (outdoor cabinet)</b></p> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>• The data cabinet is 12U in height, offering a compact yet spacious solution for mounting servers, switches, and other networking devices.</li> <li>• A PDU is included for efficient power distribution to the equipment within the cabinet, ensuring reliable power supply and management.</li> <li>• At least four (4) IEC 60320 C13 outlets</li> <li>• Adequate ventilation and cooling mechanisms are essential to maintain optimal operating temperatures for the equipment housed within the cabinet.</li> <li>• The cabinet is incorporate with locking doors and side panels to enhance</li> </ul>	pc	1	



	<p>security and prevent unauthorized access to the network equipment.</p> <ul style="list-style-type: none"> <li>• The cabinet is designed to support the weight of networking equipment and accessories installed inside, with a specified weight capacity for safe usage.</li> <li>• The cabinet design allows for easy access to the equipment for maintenance, upgrades, and troubleshooting purposes, ensuring convenient management.</li> </ul>			
4.4	<p><b>5kVA Uninterruptible Power Supply (Data Center)</b></p> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>• Has a capacity of 5,000 volt-amperes, providing power backup to connected devices during outages or fluctuations.</li> <li>• Supports a wide input voltage range to handle fluctuations and provide consistent power output within specified limits.</li> <li>• Delivers a regulated output voltage to protect connected equipment from power spikes, sags, and other electrical disturbances.</li> <li>• Includes internal batteries to provide backup power during outages, allowing for a seamless transition to battery power without interruption.</li> <li>• Offers high efficiency to minimize energy wastage and reduce operating costs over time.</li> <li>• Provides monitoring capabilities for battery status, load levels, and system alerts, along with management options for remote monitoring and control.</li> <li>• Support scalability options such as additional battery packs or parallel configurations for increased backup time or redundancy.</li> </ul>	pc	1	
4.5	<p><b>3kVA Uninterruptible Power Supply (outdoor cabinet)</b></p> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>• Has a capacity of 3,000 volt-amperes, offering backup power to connected</li> </ul>	pcs	2	



	<p>devices when the main power source fails.</p> <ul style="list-style-type: none"> <li>• Supports a wide input voltage range to handle fluctuations and provide consistent power output within specified limits.</li> <li>• Delivers a regulated output voltage to protect connected equipment from power spikes, sags, and other electrical disturbances.</li> <li>• Includes internal batteries to provide backup power during outages, allowing for a seamless transition to battery power without interruption.</li> <li>• Offers high efficiency to minimize energy wastage and reduce operating costs over time.</li> <li>• Provides monitoring capabilities for battery status, load levels, and system alerts, along with management options for remote monitoring and control.</li> <li>• Support scalability options such as additional battery packs or parallel configurations for increased backup time or redundancy.</li> </ul>			
4.6	<p><b>IP-based Biometric-Magnetic for Glass Door Access</b></p> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>• Utilizes biometric technology for fingerprint recognition for secure and accurate user identification.</li> <li>• Employs magnetic door locks for physical access control, ensuring reliable locking mechanisms for enhanced security.</li> <li>• For exit, push button</li> <li>• Connects to the network via an IP interface, allowing for remote access control, monitoring, and management of the door access system.</li> </ul>	set	1	
4.7	<p><b>Fiber Optic Cable Armored Multi-Mode</b></p> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>• Multi-mode fiber suitable for short to medium-distance transmission.</li> <li>• Core sizes of 50/125µm or 62.5/125µm to support different network requirements.</li> </ul>	set	1	



	<ul style="list-style-type: none"> <li>Fiber Optic: at least 6 cores, Fiber Patch Panel: at least 4, SFP: at least 6, Conduit: at least 200</li> <li>The armored cables must have a protective layer typically made of steel, aluminum or Kevlar to shield the fibers from physical damage. The outer jacket is usually made of PVC, LSZH (Low Smoke Zero Halogen), or other materials for durability and safety.</li> <li>Compatible with common connector types like LC, SC, ST, or MTP for easy connectivity.</li> <li>Supports high bandwidth transmission for data-intensive applications.</li> <li>Armored cables provide enhanced resistance to environmental factors like moisture, rodents, and mechanical stress.</li> <li>Suitable for indoor or outdoor installations, industrial environments, and areas prone to physical damage or interference.</li> </ul>			
4.8	<p><b>Cat6 LAN Cable Enclosed in Electrical PVC Conduit Pipe</b></p> <p>Minimum Features:</p> <ul style="list-style-type: none"> <li>The Cat6 Ethernet cable, designed for high-speed data transmission within a local area network (LAN).</li> <li>Enclosed with Electrical-grade PVC (Polyvinyl Chloride) conduit pipe, providing insulation and protection for the LAN cable.</li> <li>The conduit size is suitable based on the number of cables and installation requirements to accommodate the Cat6 cable.</li> <li>The LAN cable jacket is made of PVC for flexibility and protection against environmental factors.</li> <li>The Cat6 cables support Gigabit Ethernet speeds and provide improved performance and reliability compared to lower categories.</li> <li>Has a Copper conductor within the Cat6 cable for efficient data transmission.</li> </ul>	set	1	



	<ul style="list-style-type: none"> <li>The cable has feature twisted pairs with additional shielding to minimize electromagnetic interference and crosstalk.</li> <li>The Cat6 LAN cable is enclosed within the PVC conduit pipe for added physical protection and easy installation in various environments.</li> </ul>			
4.8.1	<b>Cabling:</b> <ul style="list-style-type: none"> <li>Priority 1 – PVC Pipe</li> <li>Priority 2 – Plastic Molding</li> </ul>	set	1	

Other Terms and Conditions:	Please indicate either: “Comply” or “Not Comply”
All items shall have a warranty of at least eighteen (18) months upon acceptance	Statement of Compliance: _____
The period for correction of defects is within thirty (30) Days from receipt of the notice to rectify if there were any latent or patent defects identified on the delivered items.	Statement of Compliance: _____
All necessary system, administrative, and service-related accounts along with their corresponding credentials and access rights shall be fully transferable to the Philippine Coast Guard (PCG) upon the expiration of the warranty period. This is to ensure full operational continuity, independent system administration, and the proper turnover of control and responsibility to PCG personnel.	Statement of Compliance: _____
<b>Requirement/if awarded the contract:</b>  Delivery Period: Within One Hundred Eighty (180) Calendar Days from receipt of the Notice to Proceed.	Statement of Compliance: _____
Delivery Place: National Headquarters Philippine Coast Guard, 139 25th Street, Port Area 1018 Manila	Statement of Compliance: _____
Site Delivery Inspection: National Headquarters Philippine Coast Guard, 139 25th Street, Port Area 1018 Manila	Statement of Compliance: _____
Pre-Delivery Inspection – To be checked by at least Two (2) TIAC Members and One (1) SAO Farola Representative	Statement of Compliance: _____
Period for Correction of Defects:	Statement of Compliance: _____



<p>a. Minor Defects: Small issues that does not affect basic functions of the ICT appliances and shall be rectified within Thirty (30) Days from the receipt of notice coming from the end-user; Or</p> <p>b. Major Defects: Serious problems that stops the ICT appliances from working and shall be rectified within Sixty (60) days from receipt of notice coming from the end-user.</p>	
The Service Provider shall not be a Blacklisted Entity at the time of the conduct of the performance evaluation of the TWG-CEIS and Representatives of CG Procurement Service of the PCG until the issuance of the Notice of Award.	Statement of Compliance: _____
The Service Provider warrants the security of all the processed data and information on the system and shall be held liable in case of breach thereof.	Statement of Compliance: _____
<p>The Service Provider shall provide 24/7 technical support service for the entire warranty period at no additional cost:</p> <ul style="list-style-type: none"> <li>❖ Technical personnel: at least two (2) dedicated technical personnel with complete contact details</li> <li>❖ Phone Support: Provide a toll-free number for customers to call anytime.</li> <li>❖ Live Chat: Integrate live chat support on your website and mobile app.</li> <li>❖ Email Support: Offer email support for non-urgent issues, ensuring a quick response time.</li> <li>❖ Social Media: Monitor and respond to customer queries on social media platforms.</li> <li>❖ Self-Service Portal: Develop a robust self-service portal with FAQs, troubleshooting guides, and video tutorials.</li> </ul>	Statement of Compliance: _____
The Service Provider must assign one (1) Project Manager and at least two (2) technical systems analysts to be in contact with the PCG from the time of the installation until acceptance of the Technical team of the PCG of the project, to assist in the support, integration, set-up, and maintenance of the platform.	Statement of Compliance: _____
The Service Provider must dedicate on-call technical personnel to provide support for any issues encountered within the system from the entire duration of the warranty.	Statement of Compliance: _____
Acceptance Parameters – Only items that conform with the technical specifications shall be accepted.	Statement of Compliance: _____
<p>Permits and licenses</p> <p>The supplier shall cover the expenses and carry out the application of permits for the end-user necessary for the installation of the equipment to include but not limited to:</p>	Statement of Compliance: _____



<p>NTC permit (for radio equipment)</p> <ol style="list-style-type: none"> <li>type approval</li> <li>Permit to purchase</li> <li>Permit to possess</li> </ol>	
<p><b>Bidder's Qualification</b></p> <ul style="list-style-type: none"> <li>The bidder must be supported by the certifications provided by locally/internationally recognized organizations such as, but not limited to: <ol style="list-style-type: none"> <li>ISO 9001:2015 – Quality Management System</li> <li><u>Valid and current NTC</u> VoIP <u>VAS</u> Certificate/ VAS Cert</li> </ol> </li> </ul>	<p>Statement of Compliance:</p> <hr/>
<p>The bidder must have a portfolio of not less than two (2) previously developed VoIP and Structured Cabling Systems.</p>	<p>Statement of Compliance:</p> <hr/>
<p><b>Timeline</b></p> <p>Upon issuance of Notice to Proceed (NTP)</p> <ul style="list-style-type: none"> <li>❖ Within three (3) Working days conduct of kick-off meeting after the Notice to Proceed (NTP)</li> </ul> <p>Within ten (10) Working days after NTP</p> <ul style="list-style-type: none"> <li>❖ Presentation of Working Design of the System</li> <li>❖ Reconciliation of Technical Concerns and Issues</li> </ul> <p>Within forty-five (45) Calendar days after the conduct of the Presentation of the working design or earlier as the case may be.</p> <ul style="list-style-type: none"> <li>❖ Conducted comprehensive training and familiarization with the components of the system. (as specified in item 14)</li> </ul> <p>Within one hundred fifty (150) Calendar days after NTP</p> <ul style="list-style-type: none"> <li>❖ The TWG, TIAC, and End-User may conduct a joint inspection as to the quantity, quality, functionality, and readiness of the equipment if the said matters are in compliance with the submitted technical data sheet of the winning bidder/supplier.</li> </ul>	<p>Statement of Compliance:</p> <hr/>
<p>As part of the pre-acceptance activity, the Service Provider will host a meeting to present a progress report before the TWG, TIAC, and end-user for proper evaluation regarding the status and potential date of completion of the said project, if the Service Provider complies with the checklist provided by the TWG, such as but not limited to, working system, functionality, and performance of the project.</p>	<p>Statement of Compliance:</p> <hr/>





After the pre-acceptance activity, the TWG, TIAC, and end-user will declare whether the service provider complies with the said checklist.	Statement of Compliance: _____
<b>Security Support</b>  The Supplier warrants to provide comprehensive cybersecurity measures and controls and ensure the Confidentiality, Integrity, and Availability of the cloud infrastructure, the software (system), and the data and shall render monthly reports of the security log that happens during the system's operation.	Statement of Compliance: _____
The Supplier shall present the system's source code and shall subject the same to a thorough review by representatives of CGWCEISC prior to the system's deployment.	Statement of Compliance: _____
<b>Other requirements to be submitted by the Bidder during the Bid Opening</b>	
All ICT equipment for the project must come from a reputable and established brand existing in the Market for at least (20) years and are widely used in enterprise or consumer environments.	Statement of Compliance: _____
The proponent of the rehabilitation of ICT equipment and systems of the PCG must be authorized to sell the products in the Philippine Market. As evidence, the bidder shall submit an authorized distributorship, dealership or resellership of all of the products required for the rehabilitation of ICT equipment and systems.	Statement of Compliance: _____
Bidders shall submit a proposal on all items and evaluation that the contract will be awarded as one contract. The Bidder shall submit a Price Schedule, wherein each of all the equipment/components under the Technical Specifications shall have a bid price/offer. Failure to do so shall cause the bidder as INELIGIBLE or DISQUALIFIED.	Statement of Compliance: _____
The bidder is to submit a time-bound/schedule of the project.	Statement of Compliance: _____
Origin: The provider for the rehabilitation of ICT equipment and systems of the PCG must be at least a member of G7 or NATO countries.	Statement of Compliance: _____
<b>Scope of Work</b>  The supplier shall rehabilitate all hardware equipment (radio communication equipment and radio-determination equipment, computer, installation materials, VoIP system, electronic equipment), shall be commercial-of-the-shelf (cots) and be readily available to the Philippine market for the sustainability of spares.	Statement of Compliance: _____





The cost of delivery of equipment and materials to its final destination (incoterms 2020 delivered duty paid) shall be borne by the supplier.	Statement of Compliance: _____
The PCG shall have the right to reject and return the unit and cancel the corresponding Contract if the unit delivered is defective, incomplete, or non-compliant with the specification herein specified, or for any other reason advantageous to the Republic of the Philippines.	Statement of Compliance: _____
To be connected to existing trunk lines and analog SIP phones.	Statement of Compliance: _____
To be capable of accommodating LTE calls	Statement of Compliance: _____
The VoIP system must be compatible to initiate and receive calls via IP phone with video and WiFi/PoE phone among NHQ-PCG and its remote offices.	Statement of Compliance: _____
The VoIP system must be equipped with a rapid recovery tool.	Statement of Compliance: _____
The VoIP system shall have no downtime in wireless link connections among NHQ-PCG and its remote offices.	Statement of Compliance: _____
One (1) Year Subscription of High-Speed Broadband Satellite Internet Service should be handled by the winning bidder after the acceptance of the system.	Statement of Compliance: _____
<b>Manpower Requirements</b>  The team shall have at least one (1) project manager.  The project manager should be a graduate of finance or business management-related field and should have a background in the implementation of the IPBX system for at least five (5) years.  The bidder must submit a certificate of at least one (1) Certified Product Engineers for the Applied Threat Intelligence Solution  The team will have at least three (3) Certified Network Engineers and at least one (1) Certified Product Engineers for the Applied Threat Intelligence Solution who must have a bachelor's degree in information technology, computer science, or similar courses and	Statement of Compliance: _____



<p>experience in rehabilitation or implementation or equivalent in IPBX systems and rewiring of ICT equipment.</p> <p>The project manager shall be responsible of providing project management which will include determining the project scope and timeline, and monitoring progress to ensure an accurate outcome while ensuring the deadlines are met.</p>	
<p>Technical Team Members. Technical members will be responsible for managing, maintaining the system, and resolving issues with the software. The team will have at least one (1) Technical Specialist. Technical members must have a bachelor's degree in information technology, computer science, or similar courses and experience in rehabilitation or implementation or equivalent in IPBX systems and rewiring of ICT equipment.</p> <p>❖ The contractor shall submit the respective Curriculum Vitae of the required members of the project team who shall be deployed during the implementation of the contract as part of the First (1st) Bid Envelope (Eligibility Documents and Technical Component) using the attached Curriculum Vitae Template as "Annex B."</p> <p>❖ These documents encompass various aspects, including but not confined to the following:</p> <p>a. For those who have developed their own in-house ERP systems, proof of ownership of a system that has been in existence in the market, and an active user base of at least one year.</p> <p>❖ The contractor's manpower/project team members should be full-time employees at the time of the bidding and not project-based. No sub-contracting of the manpower requirements is allowed.</p> <p>❖ If any or all original team members deployed during the implementation of the project is or are unable to participate in the ERP implementation, and/or perform their respective duties and obligations, the contractor shall provide a replacement who possesses similar knowledge, capabilities, and qualifications. Replacement should be based on justifiable reasons subject to the approval of PCG per the recommendation of the end-user and Implementation Team.</p>	<p>Statement of Compliance:</p> <hr/>
<p><b>Requirements to be Submitted during the Bid Opening:</b></p> <ul style="list-style-type: none"> <li>• Certificate of Exclusive/authorized Distributor/Reseller of Applied Threat Intelligence System.</li> <li>• Certificate of Exclusive/authorized Distributor/Reseller of Broadband Satellite Internet Service.</li> </ul>	<p>Statement of Compliance:</p> <hr/>



<ul style="list-style-type: none"> <li>• Certificate of Exclusive/authorized Distributor/Reseller of Network Security Firewall.</li> <li>• Technical data sheet of their proposed product that complies with the required technical specifications.</li> <li>• ISO 9001:2015 - Quality Management System Certificate</li> <li>• NTC Value-Added Services (VAS) Certificate</li> <li>• Certificate of at least one (1) Certified Product Engineers for the Applied Threat Intelligence Solution.</li> <li>• Proof of track record of installing and managing VoIP service for at least 5 continuous years</li> </ul>															
<p><b>Training</b></p> <p>Service Provider, at their expense, shall provide training and seminar packages in the handling, safety, and other related training to the system's operation to the PCG. This shall include incidental activities in the pursuance of the training/seminar which shall be conducted face-to-face or online platform</p>	<p>Statement of Compliance:</p> <p>_____</p>														
<table border="1"> <thead> <tr> <th>Activities</th><th>Timeline</th></tr> </thead> <tbody> <tr> <td>High-speed Satellite Internet Service/ISP Training</td><td>1 day</td></tr> <tr> <td>Applied Threat Intelligence System and Unified Threat Protection Training</td><td>5 days</td></tr> <tr> <td>IP Network System Training (Network Security Firewall, Load Balancing, Session Boarder Controller)</td><td>3 days</td></tr> <tr> <td>VoIP System Training (IPPBX, FXO Gateway Module, IP Phones, LTE Gateway)</td><td>2 days</td></tr> <tr> <td>Wireless Link System (Wireless Access Point Backhaul Radio, Wireless Subscriber Radio, WiFi 6 POE Indoor Access Point, WiFi 6 POE Outdoor Access Point)</td><td>1 day</td></tr> <tr> <td>Auxiliary Equipment Training</td><td>1 day</td></tr> </tbody> </table>	Activities	Timeline	High-speed Satellite Internet Service/ISP Training	1 day	Applied Threat Intelligence System and Unified Threat Protection Training	5 days	IP Network System Training (Network Security Firewall, Load Balancing, Session Boarder Controller)	3 days	VoIP System Training (IPPBX, FXO Gateway Module, IP Phones, LTE Gateway)	2 days	Wireless Link System (Wireless Access Point Backhaul Radio, Wireless Subscriber Radio, WiFi 6 POE Indoor Access Point, WiFi 6 POE Outdoor Access Point)	1 day	Auxiliary Equipment Training	1 day	<p>Statement of Compliance:</p> <p>_____</p>
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<p>The training shall be conducted within forty-five (45) days from the receipt of the Notice to Proceed (NTP).</p>	<p>Statement of Compliance:</p> <p>_____</p>														
<p>The training must be detailed enough for the technical participants to be able to completely operate and maintain the platform. The training must also include troubleshooting, preventive maintenance and business continuity planning/testing.</p>	<p>Statement of Compliance:</p> <p>_____</p>														



Appropriate training manuals must be provided for each participant. The training manuals must be easy to understand and comprehensive. The training manuals shall be available in both soft and hard copy formats.	Statement of Compliance: _____
The PCG shall have ownership of the data inputted, submitted, generated, or otherwise formed during the contract period.	Statement of Compliance: _____
<b>Non-Disclosure</b>  The Supplier warrants the security and ensures the Confidentiality, Integrity, and Availability of the system, its source code and all the processed data on the system and shall be held liable in case of breach thereof.	Statement of Compliance: _____
<b>Quality and Warranty</b>  The provider for the rehabilitation of the IPBX shall maintain the Warranty Agreement for at least eighteen (18) months starting from the date of contract completion.	Statement of Compliance: _____
Warranty Security shall be covered by either a Retention Money or a special bank guarantee amounting to at least one percent (1%) of the total contract price will be withheld and/or remain valid for a period of eighteen (18) months. However, said amounts can only be released provided that the supplies delivered are free from patent and latent defects and all the conditions imposed under this Contract have been fully met.	Statement of Compliance: _____
The Supplier's liability shall be as provided by the laws of the Republic of the Philippines.	Statement of Compliance: _____
<b>Service Level Agreement</b>  The system must have a guaranteed 99.5% uptime service commitment.	Statement of Compliance: _____
In the event that the Service Provider is not able to deliver within the allowable and acceptable period set in the SLA, the PCG shall recoup in the form of service credits of one (1) day for every day of delay or when the system is down. The SLA shall be based on a response time matrix, to be determined by the Service Provider and the PCG, and agreed upon through a written sign-off.	Statement of Compliance: _____
<b>Documentation</b>	Statement of Compliance: _____



The Service Provider shall provide complete documentation for every deliverable and at every end of each development stage and milestone which will be submitted to the PCG for approval.	
As part of the post-qualification evaluation, the Service Provider will be asked on a predetermined date to present a working solution/system, with the necessary documentation such as systems design specifications and technical architecture design, to the Technical Working Group (TWG) and CGWEIS for proper evaluation.	
<b>Other requirement to be submitted by the Bidder during Post-Qualification</b> TWG to conduct site inspection to ascertain the authenticity of the store and supporting documents	Statement of Compliance: _____
<b>Contact Person</b>  The following shall be the authorized and direct contact person of the SUPPLIER:  <b>LTJG MITCH RICHMOND V PERIO PCG</b> Project Management Officer for the Rehabilitation and Enhancement of the Existing Private Branch Exchange (PBX) and Rewiring of the ICT Infrastructure at NHQ-PCG	Statement of Compliance: _____

This is to certify that we commit to comply with the above-mentioned delivery requirements.

\_\_\_\_\_  
*[Signature of the Authorized Rep.]*

\_\_\_\_\_  
*[in the capacity of] (Please indicate position of Authorized Rep.)*

Duly authorized to sign Bid for and on behalf of \_\_\_\_\_  
*(Please indicate name of company)*

For guidance and information of all concerned.



**RADM HOSTILLO ARTURO E CORNELIO PCG**  
Chairperson, NHQ-PCG Bids and Awards Committee



Received by the bidders:

Name: \_\_\_\_\_

Date: \_\_\_\_\_

