TECHNICAL SPECIFICATION COMPLIANCE FORM

Lot B: Supply and Installation of ICT Equipment

Item/ Units	SPECIFICATIONS	Compliance	
		Compliant	Non-compliant
1.	**Rack Servers and Storage**		
2 units	Servers: Processor: • Two (2) Gen 10 Intel Xeon 4110 (2.1GHz/8-core/85W) FIO Processor Kit Memory: • 64 GB (4x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Storage: • Two (2) 1TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Warranty Digitally Signed Firmware HDD Network: • Ethernet 10GB 2-port 562SFP+ Adapter Controller • Gen 10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller Power Supply: • Two (2) 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit Operating System: • Three (3) Microsoft Windows Server 2016 (16-core) Standard Additional License Warranty: • 3 Year Warranty, Proactive Care 24x7 Other Accessories: • 9.5 mm SATA DVD-ROM Gen9 Optical Drive Power-up, Installation, Configuration, Implementation, Knowledge Transfer, Project Turn-over		
1 unit	SAN Storage Host Interface: • 10GBe iSCSI with 4-ports per array system, SFF Form Factor: • 2U rack height SFF HDDs 15K: • 900 GB (2.5in) x 5 with 3yr warranty SAS Host connectivity: • 12 Gb LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable x4 SAN Backup Support • Yes Compatible Operating Systems • Microsoft Windows Server 2016 • Microsoft Windows Server 2012		

1 unit	Warranty: • 3 Year Proactive Care, 24x7 Service Network Access Storage • 4 x 2TB 6G SATA 7.2K Rpm MDL LFF HDDs pre-installed (8TB Raw) • Data Transfer Speeds up to 1Gbps • Form factor 1U • Pre-installed Windows Storage Server 2012 Standard or higher • With Non-intrusive Data De-duplication • Built-in encryption and on-line snapshots • Warranty: 3 years Power-up, Installation, Configuration, Implementation, Knowledge Transfer, Project Turn-over for all units.		
2.	**Endpoint and Datacenter Security**		
50 licenses	Endpoint Security Endpoint Protection • With a high-fidelity machine learning (pre-execution and runtime) technology. Behavioural analysis protection against scripts, injection, ransomware, memory and browser attacks. File reputation, Web reputation, Exploit preventions, command and control monitoring, integrated Data loss prevention, a configurable Device Control. Vulnerability Protection • Protection from vulnerability exploits, denial of service attacks, illegitimate network traffic, and web threats. Provides patches for end-of support operating systems, hosted intrusion prevention, protection against known and unknown vulnerability exploits, control filters to alert/block specific traffic. Prevents network backdoors from penetrating the network. Endpoint Application Control • Prevents unwanted or unknown applications from executing at endpoints. Provides support for application name, path, or certificate for basic application white and black listing. Control Manager (Dashboard/Management Tool) • Web-based management system for administrators providing a dashboard to display multiple information. Displays alerts on the main menu to view administrator notifications concerning system or security events Email Protection • Provides anti-virus, anti-spam, and anti-relay protection, quarantine emails upon virus detection. Has heuristic anti-spam protection. Able to protect against phishing websites. Have advanced detection and alert capabilities for early mitigation of emerging threats and targeted attacks. Detects unknown URLs embedded in email messages. Protects sensitive email content by encrypting		

	inbound and outbound email messages according to specific policies. Has anti-spoofing features and mail auditing and tracking features. Gateway Protection • Protects HTTP, FTP, SMTP, Pop3 protocols. Has URL databases with multiple categories. Blocks forbidden internet applications through a web browser, blocks malicious sites and restricted areas. Scan HTTP and HTTPs traffics for spyware and other web threats. Blocks outbound data to known spyware and phishing-related web sites. Deploys policy base on Users and/or groups defined in the active directory. Support • Reseller should provide support with onsite assistance from a local source • Vendor should provide 24/7 support via email/call. • Vendor should provide direct support for installation and upgrade. • Security Assessment and recommendations should be provided every 6 months.		
12 licenses	**Datacenter Security** *Security Features* • Provides layered defense against advanced attacks and shields against known and unknown vulnerabilities in web and enterprise applications and operating systems • Web reputation prevents access to malicious web sites • Monitors inter-VM traffic • Protects a wide range of platforms: Windows, Linux, Solaris, HP-UX, AIX, VMware, Citrix, Hyper-V, Amazon, and Azure • The proposed solution is Virtual-aware, where it automatically avoids AV storms and is integrated with a lightweight cloud-client based architecture for security pattern-files (footprint) updates. • Proposed solution must be able to support IPv6 • The proposed solution supports automatic isolate of VM when there is a violation of policy *Firewall Function* • Must include an enterprise-grade, bidirectional stateful firewall providing centralized management of firewall policy, including predefined templates • Virtual machine isolation • Fine-grained filtering (IP and MAC addresses, ports) • Coverage of all IP-based protocols (TCP, UDP, ICMP, GGP, IGMP, etc.) and all frame types (IP, ARP, etc.) • Prevention of denial of service (DoS) attack • Design policies per network interfaces • Detection of reconnaissance scans *Intrusion Prevention* • Must be able to provide HIPS/HIDS feature, agent & agentless • Must feature a high-performance deep packet inspection engine that examines all incoming and outgoing traffic for protocol deviations, content that signals an attack, or policy violations • Must be able to operate in detection or prevention mode to protect operating systems and enterprise application vulnerabilities • Must provide detailed events with valuable information, including		

identity of the attackers, when they attacked, and what they attempted to exploit; administrators should be notified automatically via alerts when an incident has occurred
- Must be able to provide protection against known and zero-day attacks
- Protection can be pushed out to thousands of virtual desktops in minutes without a system reboot
- Includes out-of-the-box vulnerability protection for over 100 applications, including database, Web, email, and FTP services
- Must include smart rules to provide zero-day protection from unknown exploits that attack an unknown vulnerability, by detecting unusual protocol data containing malicious code
- Must include exploit rules to stop known attacks and malware and are similar to traditional antivirus signatures in that they use signatures to identify and block individual, known exploits
- Must assist compliance (PCI DSS 6.6) to protect web applications and the data they process
- Must automatically shield newly discovered vulnerabilities within hours, pushing protection to large number of servers in minutes without a system reboot
- Must be able to provide Application Control on network layer

Anti-malware
- Must be able to avoid resource contention such as antivirus Strom in the virtualized VDI environment
- Must be able to provide Web Reputation filtering to protect against malicious web sites for virtual desktops

Log Inspection
- Must be able to provide the capability to inspect logs and events generated by operating systems and applications
- Must be able to automatically recommend and assign relevant log inspection rules to the server based on the operating system and applications installed
- Must be able to automatically recommend and unassigned log inspection rules that are not required
- Proposed solution comes with predefined template for operating system and enterprise application to avoid manual creation of the rules
- Must be able to create customized rule to support custom application

Integrity Monitoring
- Must be able to monitor critical operating system and application files, such as directories, registry keys, and values, to detect and report malicious and unexpected changes in real-time

Virtual Patching
- Provide virtual patching which shields vulnerable systems that are awaiting a security patch. Automatically shields vulnerable systems within hours and pushes out protection to thousands of VMs within minutes
- Must have vulnerability rules to shield known vulnerabilities from an unlimited number of exploits; automatically shields newly discovered vulnerable within hours
- Must have the intelligence to provide recommended virtual patching rules to protect OS & Applications
- Must be able to create Scheduled Tasks to run recommendation scan to discover new rules to apply
- Must be able to automatically assign new Virtual Patching rules

through scheduled task
- Must be able to automatically unassigned Virtual Patching rules after physical patch has been installed

Event Tagging
- The proposed solution must support event tagging so that Administrator can add "tag" to events generated by the solution
- The Tag must be fully customizable; Administrator can add, edit and delete their own Tag with own name
- The proposed solution must be able to search for events based on the "Tag"
- The proposed solution must allow administrator to specify a specific event that is to be automatically tagged by the system

Management Console
- Proposed solution must have a dashboard to display multiple-information
- The dashboard must be configurable by administrator to display the required information only
- Proposed solution must have a web-based management system for administrators to access using web browsers
- Providing "Alerts" on the main menu to view administrator notifications concerning system or security events
- Providing Firewall Events to view activities on computers with the firewall enabled (typically includes dropped or logged packets).
- Providing access to Deep Packet Inspection (DPI) events to view security-related DPI activities; The section should display exploits detected, either resulting in dropped traffic (Prevent Mode) or logging of events (Detect Mode)
- Providing System Events to view a summary of security-related events, primarily for the Management server and also including Agents' system events; all administrative actions should be audited within the System Events

Compliance and Certifications
Must provide support for:
- NIST
- HIPAA
- SOX
- Basel 2
- ISO 2700x
- SAS70
- DPA
- Must be certified to Common Criteria EAL 4+
- Must be certified by VCE vBlock
- Must be certified by EMC VSPEX
- Must be validated for Cisco UCS
- Must be validated for NetApp FlexPod

Support
- Reseller should provide support with onsite assistance from a local source
- Vendor should provide 24/7 support via email/call.
- Vendor should provide direct support for installation and upgrade.
- Security Assessment and recommendations should be provided every 6 months.

	Other Requirements: • The solution must be integrate-able to an SIEM system • Directory integration for enterprise directories including Microsoft Active Directory • Support selective module on agent installation. • Knowledge Transfer		
3.	**Routers and POE Switches**		
1 unit	<u>MDF Core Switch</u> Minimum Specification: • 24 fixed 10/100/1000 Gig-T ports • 4 SFP+ 10gbe Ports • 1 dual-personality (RJ-45 or USB micro-B serial console port • Dual Power Supply (Redundancy must include) • Full Layer 2 and Layer 3 Switch Memory and Processor:1 • 2 GB SDRAM; Packet buffer size: 4 MB Internal, 512 MB Flash Performance: • Throughput: up to 214 million pps • Switching fabric speed: 288 Gbps • MAC address table size 32000 entries Management: • Command-line interface (CLI) • Web Graphical user interface (GUI) • SNMPv1/v2c/v3 Security: • Access control list (ACL), RADIUS/TACACS+, IEEE802.1X, MAC address lockout, Port Security Layer 2 Switching: • VLANs: support and tagging support the IEEE 802.1Q Standard and 4,096 vlan Layer 3 Routing: • Static IP routing both IPV4/IPV6, OSPFv3, Policy based Routing, BGP and RIPv2 Other Features: • Must have sFlow support • Must be Scalable with 10 Gigabit uplinks and nine-chassis stackable with up to 160 Gbps stacking bandwidth • Support RSTP, MSTP, LACP • Green Award Certification • Must have free software update downloaded via internet Minimum Requirements: • Comply Redundant Power Supply • Comply with 2 10Gbe SFP+ to SFP+ 5 Meters DAC cable • Comply Lifetime Warranty for the switch Brand and Manufacturing: • Globally known brand distributed in the Philippines via a locally		

	declared company with global standard certifications like ISO, ITIL and D&B and Engineers Certified of the said product.		
4 units	**IDF Access Switch** Minimum Specification: • 1U height switch • 48 fixed 10/100/1000 POE+ Gig-T ports • 4 SFP+ fixed 10Gbe ports • 1 dual-personality (RJ45 or USB micro-B) serial console port • Full layer 2 with Lite L3 Switch Memory and Processor: • 2Gb SDRAM; Packet buffer size: 4 MB, 512 MB flash Performance: • Throughput: up to 190 million pps • Switching capacity: 216 Gbps • MAC address table size 32000 entries Management: • Command-line interface (CLI) • Web Graphical user interface (GUI) • SNMPv1/v2c/v3 Security: • Access control list (ACL), RADIUS/TACACS+, IEEE802.1X, MAC address lockout, Port Security Layer 2 Switching: • VLANs: provides support VLANs and 4,094 vlan IDs Jumbo packet support: 9k bytes Layer 3 Routing: • Static IP routing, Routing Information Protocol (RIP), Policy Based Routing Other Features: • Must have sFlow support • Must be Scalable with 10 Gigabit uplinks and nine-chassis stackable with up to 80 Gbps stacking bandwidth • Support RSTP, MSTP, LACP • Green Award Certification • Must have free software update downloaded via internet Minimum Requirements: • Comply Lifetime Warranty for the Switch • Comply with 1 Unit spare for the Switch • Comply with 1 Meters SFP+ to SFP+ DAC cable per Switch Brand and Manufacturing: • Globally known brand distributed in the Philippines via a locally		

	declared company with global standard certifications like ISO, ITIL and D&B and Engineers Certified of the said product.		
1 unit	**IP Camera Switch** Minimum Specification: • 24 fixed 10/100/1000 740W POE+ Gig-T ports • 4 SFP+ Fix 1Gig Ports • 1 dual-personality (RJ-45 or USB micro-B) serial console port • Full Layer 2 with Lite Layer 3 Switch Memory and Processor: • 2 GB SDRAM; Packet buffer size: 4 MB Internal, 512 MB Flash Performance: • Throughput: up to 154 million pps • Switching fabric speed: 168 Gbps • MAC address table size 32000 entries Management: • Command-line interface (CLI) • Web Graphical user interface (GUI) • SNMPv1/v2c/v3 Security: • Access control list (ACL), RADIUS/TACACS+, IEEE802.1X, MAC address lockout, Port Security Layer 2 Switching: • VLANs: support VLANs Simultaneously and 4,094 vlan IDs Jumbo packet support: 9k Bytes Layer 3 Routing: • Static IP routing Routing Information Protocol (RIP), Policy based Routing Other Features: • Must have sFlow support • Must be Scalable with 10 Gigabit uplinks and nine-chassis stackable with up to 80 Gbps stacking bandwidth • Support RSTP, MSTP, LACP • Green Award Certification • Must have free software update downloaded via internet Minimum Requirements: • Comply Lifetime Warranty for the Switch Brand and Manufacturing: • Globally known brand distributed in the Philippines via a locally declared company with global standard certifications like ISO, ITIL and D&B and Engineers Certified of the said product.		

1 unit	Network Router		
	 - 1U height Switch - 2 WAN Routed Ports Gigabit with 1 Dual SFP Ports - 3 Expansion Module Slot - 1 Console RJ45 Management Port Performance: - Throughput: up to 2.6 million pps - Switching fabric speed: 288 Gbps - Routing table 200k entries Management: - Command-line interface (CLI) - SNMPv1/v2c/v3 Security: - IPS Built-in Intrusion Prevention System (IPS) detects and protects - Zoned Base Firewall - Enhance stateful firewall – Application layer protocol inspection (Support more L4 and L7 protocols like TCP, UDP, UDP-Lite, ICMPv4/ICMPv6, SCTP, DCCP, RAWIP, HTTP, FTP, SMTP, DNS, SIP, H.323, SCCP - IPSec VPN - Access Control List (ACL) Layer 2 Switching: - Spanning Tree Protocol (STP), RSTP and MSTP - Internet Group Management Protocol (IGMP) - VLANs – Supports up to 4,094 VLANs or IEEE 802.1Q-based VLANs - SFLOW Layer 3 Routing: - Support L3 Protocol like Static IP routing both IPv4/IPv6, IS-IS, MPLS, OSPFv3, Policy based Routing, BGP-4 and RIPv2 Layer 3 Servicing: - NAT-PT – Network Address Translation—Protocol Translation (NAT-PT) - Must Support L3 Services like WAN Optimization, ARP, DHCP and User Datagram Protocol (UDP) helper Other Features: - Must have Weighted Random Early Detection (WRED) or Random Early Detection (RED) - Must have Hierarchical quality of service (HQoS) or Nested QoS - Must have Zero-touched deployment - Green Award Certification - Must have free software update downloaded via internet Minimum Requirements: - 1 Year Warranty with additional 3 years warranty extension both hardware and support Brand and Manufacturing: - Globally known brand distributed in the Philippines via a locally declared company with global standard certifications like ISO, ITIL and D&B and Engineers Certified of the said product.		

Installation and Configuration

Training Requirements:
Prior to Final Acceptance, the supplier shall provide operational workshop onsite on using the configuration management.

4.	**NextGen Firewall**		
1 Unit	Minimum Specifications: • 1U height Firewall • 8 100/1000 RJ45 ports • Dual USB ports • 1 Expansion Module Slot • 1 Console RJ45 Management port Performance: • Firewall Throughput: up to 1.9 Gbps • Full DPI Throughput: 300 mbps • IPS Throughput: 700 mbps • VPN Throughput: 1.1 Gbps • Maximum Connection: 15,000/sec • Site to Site Tunnels: 250 Other Features: • Must have On-box and Cloud-based threat prevention • Must have Multi-Core hardware architecture • Must have TLS/SSL decryption and inspection • Must have Patented reassembly-free deep packet inspection technology • Must have Stateful packet inspection and DDoS/DoS attack protection • Must have ISP Load Balancing • Must have Gateway anti-malware and CloudAV malware protection • Must have inside/outside content filtering and Web caching Minimum Requirements: • 1 Year Warranty with additional 3 years warranty extension both hardware and support Brand and Manufacturing: • Globally known brand distributed in the Philippines via a locally declared company with global standard certifications like ISO, ITIL and D&B and Engineers Certified of the said product. Installation and Configuration with Knowledge Transfer		
5.	**Wireless Access Point & Controller**		
11 units	<u>Access Points</u> Minimum Specification for Access Point: • Must be 802.11ac Multi-User MIMO (MU-MIMO) • Must have 80 MHz channelization; 256-QAM modulation support; 1733 Mbps PHY rates at 5 GHz • Must have 256-QAM support on 2.4GHz • BeamFlex+ (PD-MRC) improves signal reception of mobile devices • Must have USB port for hosting Internet-of-Things (IoT) devices such as Bluetooth Low Energy (BLE) smart beacons		

1 unit	• Must be Controller Based Access Point • Must be Compatible to the POE+ Switch with IEEE 802.3at compliance Antennas: • Physical antenna gain: 3dBi (2.4 and 5GHz) • Radio Chains: 4x4 (SU-MIMO up to 4 streams and MU-MIMO up to 3 Streams • Integrated smart antenna with many unique patterns for ultra-reliability Power: • Maximum power consumption: 13 watts (PoE) or 11 watts • Power over Ethernet (PoE): 802.3af/3at-compliant source Controller Minimum Specification for Controller: • Ports: 2 Ports of Gig – T Ethernets, Auto MDX, Auto Sensing 10/100/1000 Mbps • 1 Console Port RJ45 Performance and Capacity • Must have Smart Mesh Networking control and monitoring • Must be support up to 150 AP's License maximum • Must have 256 WLANS BSSID's • Must have 4k concurrent stations Minimum requirements for **AP and Controller:** • Comply AP License based on the AP quantity • Comply with 1 unit of spare for Access Point • Comply mounting/ceiling bracket for AP • Comply Limited Lifetime Warranty for the AP with 3 Years support • Comply Lifetime warranty coverage for the Controller with 3 Years Support Brand and Manufacturing: • Globally known brand distributed in the Philippines via a locally declared company with global standard certifications like ISO, ITIL and D&B and Engineers Certified of the said product for ensured technical support. Installation and Configuration		
	Training Requirements: Prior to Final Acceptance, the supplier shall provide operational workshop onsite on using the basic configuration management.		
6.	**IP Camera System (CCTV)**		
11 units	IP Camera Minimum Specification: • Must be Indoor IP dome camera with varifocal lens with 2 Mega Pixel lens • Must have 720p resolution for sharp images • Must have IR version with 15 m (50 ft.) viewing distance		

	• Must have maximum of 30fps Bitrate • Must have Night vision (IR version only) up to 15m • Must have Memory card slot up to 32 Gb micro SD card • Must be Complies with the SMPTE 296M-2001 Standard with IEC 62471 (IR version) • Must be Operating temperature of 20 °C to +50 °C (-4 °F to +122 °F) • Must have Video compression: H.264 M-Jpeg • Must have Overall IP Delay with Min. 120 ms, Max. 340 ms • Must have Encoding interval of 1 to 25 [30] ips • Must have sensor type of 1/2.7-inch CMOS • Must have Total Sensor Pixel of 1952 x 1092 (2MP) • Must Have ONVIF compliance (EN 50132-5-2; IEC 62676-2-3) • Must Have Product Certification standard (CE, FCC, UL, cUL, C-tick, CB, VCCI) • 3 Years Warranty		
1 unit	**Network Video Recorder (NVR)** Minimum Specification: • Must be All-in-one, fully featured video management solution for up to 32 channels • Must be Out-of-the-box IP video recording solution with up to 8 TB (4 x 2 TB) storage capacity pre-installed • Must be Robust, secure operation — instant real-time access to video • Must have Pre-Workstation License up to 5 • Must Have VGA/2CIF 25 fps balanced up to 25 for current live views and 7 for playback views • Must Have at least Intel i3-2120 processor and Chipset Intel Core logic chipset PCH Cougar Point C206 • Must have at least DDR3 1066/1333 MHz UDIMM Memory Type • Must have at least 4 GB, DDR3-1333 SO-DIMM (2 x 2 GB) Memory installed • Must have at least 4 trays: 3.5-inch SATA storage type • Must have at least 4 x HDD (2 TB 5400RPM GP) max Hard drive installed • Must have at least 1 x USB DVI port, onboard graphics VGA port and 1 x 1 GbE RJ45 port. • Must Provide 1 unit at least 40 Inch LED SMART TV with Mounting bracket for IP Camera		

1 unit	**Workstation**
	
	Minimum Specification:
	• Workstation: Intel Core i5, Windows 10 X64 professional, 8 GB RAM at least, 1TB Hard disk space (Server)
	• 1Gig- Ethernet Network Card (PCI)
	• Graphical adapter with 1024x768 resolution and 32k colors
	• Resolution support:
	   − 1024 by 768
	   − 1920 by 1080
	• 21" Monitor
	• Mouse and Keyboard		

	Installation and Configuration Training Requirements Prior to Final Acceptance, the supplier shall provide operational workshop onsite on using the basic configuration management.		
7.	**Door Access Control**		

5 Units	Minimum Specification:
	
	Access Reader
	
	Five (5) Biometrics reader for the Main doors (back to back) and Server entrance door:
	
	    • RISC 32bit CPU
	    • TCIP/IP, Wiegand In/Out, RS2485, RS232, WiFi (optional) Communication
	    • 4MB Flash + 8MB SDRAM
	    • 15,000 Max Users
	    • 17,000 Log Capacity
	    • KC,CE,FCC, RoHS Certification
	    • 125 KHz EM / 13.56MHz Mifare / Desfire / HID Prox (optional)		

8 Units	Eight (8) Biometric reader for the Exit doors:
	    • RISC 266 MHz, 32BIT CPU
	    • TCIP/IP, Wiegand In/Out, RS2485, RS232 Communication
	    • 4MB Flash + 8MB SDRAM
	    • 100/1,500 Max Users
	    • 5,000 Log Capacity
	    • CE,FCC, RoHS Certification
	    • 125 KHz EM / 13.56MHz Mifare / Desfire / HID Prox (optional)
	
	Other Features:
	    • With Live and Fake finger detection (Optical sensor and algorithm)
	    • Dust and Water Resistance
	    • With USB Memory slot for quick upload and download
	    • With Door Phone Interface
	
	Inclusions:
	    • One (1) Exit Switch for Server room Exit
	    • One (1) Push button for Reception
	    • With at least 300 proximity cards
	    • Magnetic Lock with Brackets
	    • Emergency Key Switch
	    • Emergency Break Glass
	    • Door controller with Back-up battery for each Reader
	
	Workstation:
	Minimum Specification:
	    • Workstation: Intel Core i5, Windows 10 X64 professional, 8 GB RAM at least, 1TB Hard disk space (Server)
	    • 1Gig- Ethernet Network Card (PCI)
	    • Graphical adapter with 1024x768 resolution and 32k colors
	    • Resolution support:
	       – 1024 by 768		

	– 1920 by 1080 • 21" Monitor • Mouse and keyboard Warranty • Standard One (1) year <u>Includes:</u> Installation and Configuration, Knowledge Transfer, Training.		
8.	**PC Desktops AIO**		
15 units	<u>Minimum Specifications:</u> Form Factor: • All-in-One Processor: • Intel Core i5 7400T 7Gen 3.0Ghz CPU Memory: • 8GB DDR4 2400 SODIMM Memory Operating System: • Windows 10 Professional 64-Bit Software Included: • Microsoft Office Standard 2016 Storage: • 1TB 7200RPM 2.5in Graphics: • Intel® HD Graphics Network: • Intel 3168 ac 1x1 +Bluetooth 4.0 WW • WLAN 802.11ac + BT4.0 Expansion Features: • 1 headphone/microphone combo USB 3.0 RJ-45 Display Port Card reader With Keyboard and Optical mouse of the same brand (Wireless) Warranty: • 3yrs Parts and Labor Onsite With 650 VA UPS • Warranty for the unit: 2 years; battery: 1 year		
9.	**LCD Console with Integrated KVM Switch**		
1 unit	<u>Minimum Specifications:</u> • 17" Display • 8 port Analog KVM Switch • 1U rack space • Full size keyboard with integrated number pad • Multi-platform support • Integrated touchpad pointing device • Includes: Power cables, USB KVM cables • 2 years warranty		

10.	Uninterruptible Power Supply		

1 unit	Minimum Specifications:
	
	Output:
	
	Output power capacity:
	  • 4.0 KWatts / 5.0 kVA
	Nominal Output Voltage
	  • 230V
	Efficiency at Full Load
	  • 96.0 %
	Output Voltage Distortion
	  • Less than 5% at full load
	Output Frequency (sync to mains)
	  • 47 - 53 Hz for 50 Hz nominal
	Topology
	  • Line Interactive
	Waveform type
	  • Sine wave
	Output Connections
	(4) IEC Jumpers (Battery Backup)
	(2) IEC 320 C19 (Battery Backup)
	(8) IEC 320 C13 (Battery Backup)
	
	Input:
	
	Nominal Input Voltage
	  • 230V
	Input frequency
	  • 50/60 Hz +/- 3 Hz (auto sensing)
	Input Connections
	  • Hard Wire 3-wire
	Input voltage range for main operations
	  • 160 - 286V
	Input voltage adjustable range for mains operation
	  • 151 - 302V
	Efficiency at Full Load
	  • 96.0 %
	
	Batteries:
	
	Battery type
	  • VRLA
	Typical recharge time
	  • 3hour(s)
	Expected Battery Life (years)
	  • 3 – 5
	RBC Quantity
	  • 2
	
	Communications and Management:
	
	Interface Port(s)
	  • DB-9 RS-232
	Control panel
	  • LED status display with On Line : On Battery : Replace Battery and Overload indicators		

	Audible Alarm		
	• Audible and visible alarms : configurable delays		

Sustainable Offer Status:

RoHS
    • Compliant
REACH
    • REACH: Contains No SVHCs
Battery Directive
    • Compliant

Standard warranty
    • 2 year Warranty

Includes: CD with software , Documentation CD , Installation Guide , Rack mounting hardware , Rack Mounting support rails , Smart UPS signalling RS-232 cable , User Manual , Web/SNMP Management Card, Power cables

Installation and Configuration with Knowledge Transfer.

11.	**Printer**		

2 units	<u>Minimum Specifications:</u>
	
	Functions:
	    • Print, Copy, Scan, Fax
	Print Quality Black and Color:
	    • Up to 600 x 600 dpi
	Automatic Duplex Printing:
	    • Yes, up to A3 size
	Control Panel:
	    • 4.3" TFT Colour LCD
	Print Speed:
	    • Black (ISO, A4): Up to16 ppm
	    • Color (ISO, A4): Up to16 ppm
	Duty Cycle (monthly, A4):
	    • Up to 30,000 pages
	Processor speed:
	    • 800MHz
	Recommended monthly page volume:
	    • 150 to1500
	Wireless capability:
	    • Built-in 802.11b/g/n; authentication via WEP,WPA/WPA2,or 802.11x; encryption via AES or TKIP; WPS; Wi-Fi Direct
	Media types:
	    • Paper (bond, brochure, colored, glossy, heavy, letterhead, light photo, plain, pre-printed, pre-punched, recycled, rough)
	    • Transparencies, labels, envelopes, cardstock
	
	Scanner type:
	    • Flatbed, ADF
	Scan file format:
	    • JPG, RAW(BMP), PNG,TIFF, PDF
	Scan resolution, optical:
	    • Up to 300 dpi (color and mono, ADF); Upto1200 dpi (color and mono, flatbed)
	Scan size, maximum:
	    • 215.9 x 297mm		

| | Scan size (ADF), maximum
   • 215.9 to 355.6mm
Copy speed (black, normal quality, A4)
   • Upto16 ppm
Copy speed (color, normal quality, A4)
   • Up to16 ppm
Copy resolution (black text)
   • Up to 600 x 600 dpi
Copy resolution (black graphics)
   • Up to 600 x 600 dpi
Copy resolution (color text and graphics)
   • 600 x 600 dpi

Warranty
   • 1 Year Warranty | | |

Note:

1.   All specifications are at minimum requirement. Proponents may propose equivalent or higher specifications.

2.   Full replacement of defective unit should be 15 working days from the receipt of notice. If full replacement is not yet possible, a service unit shall be provided by the supplier within 48 hours from the receipt of defective unit/s.

3.   Propose Globally-known brands.

Bidder's Authorize

Signature over Printed Name

Principal Bidder / Supplier