

Terms of Reference for Procurement of ICT Equipment FY 2022

| Item | Specification | Statement of Compliance |
|------|---------------|---|
| | | <p>Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of the manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data, etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder’s statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification, or the execution of the contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB Clause 3.1(a)(ii) and/or GCC Clause 2.1(a)(ii).</p> |

| 1. General Requirement for all ICT Equipment and WLAN Upgrade | Statement of Compliance |
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| <ul style="list-style-type: none"> The Bidder must be an authorized reseller/ dealer of the brand being offered. A current Authorization or reseller certificate from the Manufacturer or Vendor is required as part of the technical component of the bid proposal. | |
| <ul style="list-style-type: none"> The Bidder must not exceed the ninety days (90) days delivery lead-time upon receipt of the Notice to Proceed. | |
| <ul style="list-style-type: none"> Must attach a brochure of the brand being offered. | |
| 2. Specific Requirements for Corporate Notebook PC and Desktop | |
| <ul style="list-style-type: none"> The Bidder must be an Authorized Service Partner (ASP) of the brand being offered. A current valid manufacturer certificate is required as part of the technical component of the bid proposal. | |
| <ul style="list-style-type: none"> The Bidder must have at least one (1) manufacturer-certified engineer for the brand of laptop. A current valid manufacturer certificate is required as part of the technical component of the bid proposal. | |
| <ul style="list-style-type: none"> The brand offered by the bidder must be included in the latest Top 4 of IDC's Worldwide Personal Computing Device Tracker. Certification for inclusion in the Top 4 is required from the brand's manufacturer. | |
| <ul style="list-style-type: none"> The winning Bidder shall replace a factory defective unit with a new unit within 30 days upon delivery of the item. | |
| <ul style="list-style-type: none"> In case of outside repair within the 3-year warranty period, the winning Bidder shall provide a service unit to the OSG. | |
| <ul style="list-style-type: none"> For the two immediately preceding items, the Bidder must submit Proof of Warranty as part of the technical component. | |

| ICT EQUIPMENT | | | |
|---|-------|--------------------|------------------------|
| ITEM | QTY | UNIT COST | TOTAL |
| LOT 1: Workstations | | | |
| Corporate Notebook PC | 136 | 60,000.00 | 8,160,000.00 |
| Desktop Workstation | 10 | 70,000.00 | 700,000.00 |
| Notebook PC for Technical Use | 20 | 80,000.00 | 1,600,000.00 |
| | | TOTAL | 10,460,000.00 |
| LOT 2: ICT Equipment | | | |
| Hi-Resolution Document Scanner | 3 | 360,000.00 | 1,080,000.00 |
| | | TOTAL | 1,080,000.00 |
| LOT 3: ICT Equipment | | | |
| Biometric Premium Outdoor Fingerprint recognition Terminal | 3 | 55,000 | 165,000.00 |
| | | TOTAL | 165,000.00 |
| LOT 4 - WLAN Upgrade | | | |
| Supply, Delivery, and Implementation of Wireless LAN (Wi-Fi 6) | 1 lot | 3,145,000.00 | 3,145,000.00 |
| | | TOTAL | 3,145,000.00 |
| | | GRAND TOTAL | ₱ 14,850,000.00 |

| ICT EQUIPMENT - LOT 1: WORKSTATIONS | | |
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| Item | Specifications | Statement of Compliance |
| CORPORATE NOTEBOOK PC (136 Units) | | |
| Classification | True Branded Notebook PC | |
| Certification | Must belong in the latest Top 4 of IDC's Worldwide Personal Computing Device Tracker. Certification for inclusion in the Top 4 is required from the brand's manufacturer. | |
| | MIL-STD-810H military certified | |
| | Must be Green Certified <ul style="list-style-type: none"> • EPEAT™ Gold • Energy Star 8.0 • ErP Lot 3 • TCO Certified 9.0 • RoHS Compliant | |
| Processor | At least 12th Generation Intel® Core™ i5-1235U Processor (E-cores up to 3.30 GHz P-cores up to 4.40 GHz) or better | |

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| Cache Memory | At least 12 MB Cache or better | |
| Chipset | Intel SoC (System on Chip) platform | |
| Minimum Memory | At least 16 GB DDR4-3200MHz | |
| Max Memory | 40GB DDR4-3200 | |
| Graphics | Integrated Graphics | |
| Monitor Support | up to 3 independent displays via native display and 2 external monitors; supports external monitors via HDMI® (up to 4096x2160@30Hz) or Thunderbolt™ (up to 5120x3200@60Hz) | |
| Storage Type | SSD M.2 2242 PCIe TLC | |
| Storage Size | At least 512 GB or higher | |
| Storage Support | Up to two drives, 2x M.2 SSD | |
| | • M.2 2242 SSD up to 1TB | |
| Display | 14.0" FHD (1920x1080) IPS AntiGlare 300nits non-Touch, 720p HD camera with privacy shutter, Dual Mic, AL. Black | |
| Base Cover Material | PC/ABS | |
| Camera | 720P HD with Array Microphone | |
| Ethernet | Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN or compatible | |
| Wireless LAN | Intel® Wi-Fi 6 AX201 2x2 AX & Bluetooth® 5.0 or above | |
| Fingerprint Reader | Fingerprint Reader | |
| Ports | Shall consist of the following: 1 x USB 2.0 1 x USB 3.2 Gen 1 (Always On) 1 x Thunderbolt 4 / USB 4 40Gbps (Support data Transfer, Power Delivery 3.0, and Display Port 1.4) 1 x HDMI up to 4k/60hz 1 x Headphone / microphone combo jack (3.5mm) | |
| Audio Support | High Definition (HD) Audio, Realtek® ALC3287 codec | |
| | Stereo speakers, 2W x2, Dolby® Audio™, Harman Speakers | |
| | Dual array microphone | |

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| Keyboard | 6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, Backlit | |
| Touchpad | TrackPoint pointing device and Mylar surface multi-touch touchpad | |
| Security | Supervisor password, Power-on password, NVME password, Self-healing BIOS | |
| Security Chip Setting | Discrete TPM 2.0, TCG certified | |
| Operating System | Windows 10 Pro 64 preinstalled through downgrade rights in Windows 11 Pro 64 (Must provide a certificate from the manufacturer that the OS installed is Genuine OS) | |
| Battery | Integrated 3-cell Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) | |
| AC Adapter | 65W AC Adapter PCC (3pin)-US (USB Type C) | |
| Carrying Case | Standard Carrying Case | |
| Maximum Weight | 3.62 lb. / 1.64 kg | |
| Warranty | With at least 3 years of support 3/3/3 | |
| Warranty Support | <p>The warranty must include the following scope of services. (A valid certificate issued by the manufacturer must be submitted)</p> <ul style="list-style-type: none"> • Advanced level phone support designed to expedite problem resolution (Premier Support call center available 24x7 for phone support, M-F 8:30 am to 5:30 pm excluding holidays for email support). • Single point of contact for simplified end-to-end case management • Next Business Day on-site labor and parts prioritization • Dedicated phone number with comprehensive software and hardware support • Designated Technical Account Managers for proactive relationship and escalation management | |
| Environment Certification | EPEAT Gold; ENERGY STAR® 8.0; RoHS-compliant | |
| | The bidder must be an authorized reseller/service provider of the brand being offered (must provide a Manufacturer Certificate). | |

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| Support Service Requirement | The bidder must provide the following: | |
| | * Unlimited corrective maintenance/ repair services within the warranty period | |
| | * Eight (8) hours by five (5) days (Monday to Friday, 8:00 AM -5:00 PM) technical support and must meet the following response and resolution time: | |
| | > Within one (1) hour for phone or email support | |
| | > Within two (2) hours of response time for on-site support | |
| | > Root cause analysis for all support cases filed. | |
| | The bidder must provide full documentation for the Activity Plan on the installation of patches and upgrades and Root Cause Analysis of incidents encountered | |
| | The bidder must provide onsite support for the installation and deployment of software patches and version upgrades. | |
| | The bidder must provide a procedure for support and problem escalation. | |
| | * Submission of Activity/Service Report within 5 calendar days | |
| Other Warranty and After-Sales Requirements | * Immediate replacement of the equipment and/or its parts. | |
| | * The winning Bidder shall replace a factory defective unit with a new unit within 30 days upon delivery of the item. | |
| | The bidder must provide a certificate for the above services as part of the technical requirements. | |
| DESKTOP WORKSTATION (10 Units) | | |
| Classification | True Branded Desktop PC | |
| Certification | Must belong in the Top 4 of IDC's Worldwide Personal Computing Device Tracker. Certification in the inclusion in the Top 4 is required from the brand's manufacturer. | |
| | Must be Green Certified <ul style="list-style-type: none"> • EPEAT™ Silver • ErP Lot 3 • TCO Certified 9.0 • RoHS Compliant | |

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| Processor | At least 12th Generation Intel® Core™ i7-12700 Processor (E-cores 1.6GHz/P-cores 2.1GHz) | |
| Cache Memory | At least 25 MB Cache | |
| Chipset | Intel B660 chipset | |
| Memory | 8GB DDR4-3200MHz or better with Two DDR4 UDIMM slots, dual-channel capable, with a maximum memory of up to 64GB | |
| Graphics | Intel UHD graphics 770 | |
| Monitor Support | Supports up to 3 independent displays via (HDMI, DP and VGA) | |
| Storage | At least 512GB SSD M.2 2280 PCIe 3.0x4 NVMe Opal 2.0 | |
| Storage Support | Up to two drives, 1x 2.5"/3.5" HDD + 1x M.2 SSD <ul style="list-style-type: none"> • 2.5" HDD up to 1TB • 3.5" HDD up to 2TB • M.2 SSD up to 1TB | |
| Display | At least 21.5" IPS, 1920x1080, 102 dpi, 16.7 Million Color Support, 60Hz, 250 nits, 1x HDMI 1.4, 1x DP 1.2, 1x VGA, with built-in 2 x 1.5W speakers, with Tilt, Swivel, Pivot, Height Adjust Stand Features * Must be Energy Star Certified, TCO 8.0, TCO Edge 2.0, EPEAT Silver, RoHS Certified | |
| Card Reader | 7-in-1 card reader (SD, SDHC, SDXC, MMC, MS, MS-Pro, XD) | |
| Audio | High Definition (HD) Audio, Realtek® ALC623-CG codec | |
| Ethernet | Integrated 100/1000M | |
| I/O Ports | Shall consist of the following: <ul style="list-style-type: none"> • 2x USB 3.2 Gen 1 • 1x USB-C 3.2 Gen 1 (support data transfer and 5V@3A charging) • 1x headphone / microphone combo jack (3.5mm) • 1x microphone (3.5mm) • 2x USB 2.0 • 2x USB 3.2 Gen 1 (one supports Smart Power On) • 1x VGA • 1x HDMI 2.1 TMDS • 1x DisplayPort 1.4 | |

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| | <ul style="list-style-type: none"> • 1x Ethernet (RJ-45) • 1x line-out (3.5mm) | |
| Keyboard | USB Calliope Keyboard, Black, English | |
| Mouse | USB Calliope Mouse, Black | |
| Form Factor | SFF (7.4L) | |
| Case | Black | |
| Maximum Weight | 4.5 kg (9.9 lbs.) | |
| Security Chip Setting | Discrete TPM 2.0, TCG certified | |
| Operating System | Windows 11 Pro 64 preinstalled (Must provide a certificate from the manufacturer that the OS installed is Genuine OS) | |
| Warranty | With at least 3 years of support 3/3/3 | |
| Warranty Support | <p>The warranty must include the following scope of services. (A valid certificate issued by the manufacturer must be submitted)</p> <ul style="list-style-type: none"> • Advanced level phone support designed to expedite problem resolution (Premier Support call center available 24x7 for phone support, M-F 8:30 am to 5:30 pm excluding holidays for email support). • Single point of contact for simplified end-to-end case management • Next Business Day on-site labor and parts prioritization • Dedicated phone number with comprehensive software and hardware support • Designated Technical Account Managers for proactive relationship and escalation management | |
| Certification | The bidder must be an authorized reseller/service provider of the brand being offered (must provide Manufacturer Certificate). | |
| Support Service Requirement | The bidder must provide the following: | |
| | * Unlimited corrective maintenance/ repair services within the warranty period | |
| | * Eight (8) hours by five (5) days (Monday to Friday, 8:00 AM - 5:00 PM) technical support and must meet the following response and resolution time: | |

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| | > Within one (1) hour for phone or email support | |
| | > Within two (2) hours response time for on-site support | |
| | > Root cause analysis for all support cases filed. | |
| | The bidder must provide full documentation for the Activity Plan on the installation of patches and upgrades and Root Cause Analysis of incidents encountered. | |
| | The bidder must provide onsite support for the installation and deployment of software patches and version upgrades. | |
| | The bidder must provide a procedure for support and problem escalation. | |
| | * Submission of Activity/Service Report within 5 calendar days | |
| Other Warranty and After-Sales Requirements | * Immediate replacement of the equipment and/or its parts. | |
| | * The winning Bidder shall replace a factory defective unit with a new unit within 30 days upon delivery of the item. | |
| | The bidder must provide a certificate for the above services as part of the technical requirements. | |
| NOTEBOOK PC FOR TECHNICAL USE (20 Units) | | |
| Classification | True Branded Notebook PC | |
| Certification | Must belong in the Top 4 of IDC's Worldwide Personal Computing Device Tracker. Certification in the inclusion in the Top 4 is required from the brand's manufacturer. | |
| | MIL-STD-810H military certified | |
| | Must be Green Certified <ul style="list-style-type: none"> • EPEAT™ Gold • Energy Star 8.0 • ErP Lot 3 • TCO Certified 9.0 • RoHS Compliant | |
| Processor | At least 12th Generation Intel® Core™ i7-1255U Processor (E-cores up to 3.50 GHz P-cores up to 4.70 GHz) | |
| Cache Memory | At least 12 MB Cache or better | |
| Chipset | Intel SoC (System on Chip) platform | |

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| Minimum Memory | At least 16 GB DDR4-3200MHz | |
| Max Memory | 40 GB DDR4-3200MHz | |
| Graphics | NVIDIA® GeForce® MX550 2GB GDDR6 | |
| Monitor Support | up to 3 independent displays via native display and 2 external monitors; supports external monitors via HDMI® (up to 4096x2160@30Hz) or Thunderbolt™ (up to 5120x3200@60Hz) | |
| Storage | At least 1 TB SSD M.2 2242 PCIe Gen4 TLC Opal | |
| Storage Support | Up to two drives, 2x M.2 SSD | |
| | • M.2 2242 SSD up to 1TB | |
| Display | 14.0" FHD (1920x1080) IPS AntiGlare 300nits non-Touch, 720p HD camera with privacy shutter, Dual Mic, AL. Black | |
| Base Cover Material | PC/ABS | |
| Camera | 720P HD with Array Microphone | |
| Ethernet | Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN or compatible | |
| Wireless LAN | Intel® Wi-Fi 6 AX201 2x2 AX & Bluetooth® 5.0 or above | |
| Fingerprint Reader | Fingerprint Reader | |
| Ports | Shall consist of the following 1 x USB 2.0 1 x USB 3.2 Gen 1 (Always On) 1 x Thunderbolt 4 / USB 4 40Gbps (Support data Transfer, Power Delivery 3.0, and Display Port 1.4) 1 x HDMI up to 4k/60hz 1 x Headphone / microphone combo jack (3.5mm) | |
| Audio Support | High Definition (HD) Audio, Realtek® ALC3287 codec Stereo speakers, 2W x2, Dolby® Audio™, Harman Speakers Dual array microphone | |
| Keyboard | 6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, Backlit | |
| Touchpad | TrackPoint pointing device and Mylar surface multi-touch touchpad | |

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| Security | Supervisor password, Power-on password, NVME password, Self-healing BIOS | |
| Security Chip Setting | Discrete TPM 2.0, TCG certified | |
| Operating System | Windows 10 Pro 64 preinstalled through downgrade rights in Windows 11 Pro 64 (Must provide a certificate from the manufacturer that the OS installed is Genuine OS) | |
| Battery | Integrated 3 cell Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) | |
| AC Adapter | 65W AC Adapter PCC (3pin)-US (USB Type C) | |
| Carrying Case | Standard Carrying Case | |
| Maximum Weight | At least 3.62 lb. / 1.64 kg or less | |
| Warranty | With at least 3 years support 3/3/3 | |
| Warranty Support | <p>The warranty must include the following scope of services. (A valid certificate issued by the manufacturer must be submitted)</p> <ul style="list-style-type: none"> • Advanced level phone support designed to expedite problem resolution (Premier Support call center available 24x7 for phone support, M-F 8:30 am to 5:30 pm excluding holidays for email support). • Single point of contact for simplified end-to-end case management • Next Business Day on-site labor and parts prioritization • Dedicated phone number with comprehensive software and hardware support • Designated Technical Account Managers for proactive relationship and escalation management | |
| Environment Certification | EPEAT Gold; ENERGY STAR® 8.0; RoHS-compliant | |
| Support Service Requirement | <p>The bidder must provide the following:</p> <ul style="list-style-type: none"> * Unlimited corrective maintenance/ repair services within the warranty period | |

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| | * Eight (8) hours by five (5) days (Monday to Friday, 8:00 AM - 5:00 PM) technical support and must meet the following response and resolution time: | |
| | > Within one (1) hour for phone or email support | |
| | > Within two (2) hours of response time for on-site support | |
| | > Root cause analysis for all support cases filed. | |
| | The bidder must provide full documentation for the Activity Plan on the installation of patches and upgrades and the Root Cause Analysis of incidents encountered. | |
| | The bidder must provide onsite support for the installation and deployment of software patches and version upgrades. | |
| | The bidder must provide a procedure for support and problem escalation. | |
| | * Submission of Activity/Service Report within 5 calendar days | |
| Other Warranty and After-Sales Requirements | * Immediate replacement of the equipment and/or its parts. | |
| | * The winning Bidder shall replace a factory defective unit with a new unit within 30 days upon delivery of the item. | |
| | The bidder must provide a certificate for the above services as part of the technical requirements. | |
| ICT EQUIPMENT - LOT 2: SCANNER | | |
| Item | Specifications | Statement of Compliance |
| HI-RESOLUTION DOCUMENT SCANNER-110PPM (3 Units) | | |
| Type | Must be Production Document Scanner | |
| Document Feeding | Must be Automatic and/or Manual sheet feeding | |
| Document size | | |
| Width | Must be 2" - 12" | |
| Length | Must be 2.8" - 17" | |
| Long Document Mode: | Must be Up to 220.1" | |

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| Document weight | | |
| Automatic Feeding: | Must be 14 - 56 lb. Bond | |
| Manual Feeding: | Must be 14 - 56 lb. Bond | |
| Feeder Capacity: | Must be Up to 500 Sheets | |
| Grayscale: | Must be 8-bit | |
| Color: | Must be 24-bit | |
| Scanning Element: | At least Three-Line Contact Image Sensor (CIS) | |
| Light Source: | Must be RGB LED | |
| Scanning Modes: | Must be Color, Grayscale, Black and White | |
| Color Dropout: | Must be RGB and Custom | |
| Optical Resolution: | Must be Up to 600 dpi | |
| Output Resolution: | 150/200/240/300/400/600 dpi | |
| Max. Scanning Speeds | | |
| | Simplex | |
| BW/Grayscale | Must be Up to 110 ppm | |
| Color: | Must be Up to 110 ppm | |
| | Duplex | |
| BW/Grayscale | Must be Up to 220 ipm | |
| Color: | Must be Up to 220 ipm | |
| Interface: | Must be Hi-Speed USB 3.1, 10Base-T/ 100Base-TX/1000Base-T Ethernet | |
| Dimensions (H x W x D): | At least 18.9" x 22.4" x 12.4" (with trays closed) | |
| Weight: | Maximum of 55.1 lb. or less | |
| Power Consumption: | 66.5 W or less (Energy Saving Mode: 3.5 W) | |
| Supported OS: | Windows® 7/8/8.1/10 (32-bit/64-bit) or later, Windows® Server 2008 R2/ 2012 R2/2016 | |
| Scanner Drivers: | ISIS/TWAIN | |
| Suggested Daily Volume: | At least 50,000 ▲ | |

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| Bundled Software: | Must be compatible with existing OSG Information System/s | |
| Other Features: | Auto Color Detection, Auto Page Size Detection, Active Thresholding, Batch Separation, Character Emphasis, Count Only Mode, Custom Color Dropout/Enhance Color, Deskew, Double-Feed Detection, Edge Emphasis, Folio Scan, Image Rotation, Moiré Reduction, MultiStream, Paper Feed Tray (Adjustable), Pre-Scan, Prevent BleedThrough/Remove Background, Punch Hole Removal, Rapid Recovery System, Skip Blank Page, Staple Detection, Text Enhancement, Text Orientation Recognition, Three-Dimensional Color Correction, User Preferences, Verify Sc | |
| Warranty | At least one year on parts and labor. | |
| Support Service Requirement | The bidder must provide the following: | |
| | * Unlimited corrective maintenance/ repair services within the warranty period | |
| | * Eight (8) hours by five (5) days (Monday to Friday, 8:00 AM - 5:00 PM) technical support and must meet the following response and resolution time: | |
| | > Within one (1) hour for phone or email support | |
| | > Next business day on-site support | |
| | > For onsite support, the winning bidder must attend to and repair the defective unit within two (2) business days | |
| | > In case of outside repair within the 1-year warranty period, the winning bidder shall provide a service unit to the OSG within three (3) days upon pull out of the unit. The repaired hardware or replacement for the pulled-out hardware/unit must be delivered within fifteen (15) calendar days from the issuance of the service unit. | |
| | The bidder must provide full documentation for the Activity Plan on the installation of patches and upgrades and Root Cause Analysis of incidents encountered. | |

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| | The bidder must provide onsite support for the installation and deployment of software patches and version upgrades. | |
| | The bidder must provide a procedure for support and problem escalation. | |
| | * Submission of Activity/Service Report within 5 calendar days after rendering service | |
| | The bidder must conduct system health checks every quarter with the following scope: <ul style="list-style-type: none"> • System/ Application patches, fixes, security patches, and alerts • System/ Application profile • Resource utilization • Log analysis • Formal reports on the output of conducted health checks within 5 days | |
| Other Warranty and After Sales Requirements | * Immediate replacement of the equipment and/or its parts. | |
| | * The winning Bidder shall replace a factory defective unit with a new unit within 30 days upon delivery of the item. | |
| | The bidder must provide a certificate for the above services as part of the technical requirements. | |
| Certification | The bidder must be an authorized reseller of the brand being offered. Must provide Authorization certificate from the Manufacturer or Vendor. | |
| ICT EQUIPMENT - LOT 3: ICT EQUIPMENT | | |
| Item | Specifications | Statement of Compliance |
| BIOMETRIC PREMIUM OUTDOOR FINGERPRINT RECOGNITION TERMINAL (3 Units) | | |
| Type | Fingerprint scanner with LCD and Touch Keypad | |
| CPU | RISC 400 MHz, 32 Bit CPU | |
| LCD | 2.8" color TFT LCD | |
| Minimum User Capacity | 20,000 User Capacity | |
| Minimum Log Capacity | 61,000 Log Capacity | |

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| Power | POE 13W Support | |
| Interface | TCP/IP, Wiegand In/Out, RS485, RS232 | |
| IP Rating | IP65 Dust / Water-Resistant | |
| Memory | At least 32MB RAM + 32MB SD Memory | |
| Fingerprint Detection | Live & Fake Finger Detection | |
| Compatibility | Must support UNIS integrated Security Management Software | |
| Software | UNIS integrated Security Management Software | |
| Warranty | At least 1 year on parts and labor. | |
| Certification | The bidder must be an authorized reseller of the brand being offered (must provide a Manufacturer or Reseller Certificate). | |
| Support Service Requirement | The bidder must provide the following: | |
| | * Unlimited corrective maintenance/ repair services within the warranty period | |
| | * Eight (8) hours by five (5) days (Monday to Friday, 8:00 AM - 5:00 PM) technical support and must meet the following response and resolution time: | |
| | > Within one (1) hour for phone or email support | |
| | > Within two (2) hours response time for on-site support | |
| | > Root cause analysis for all support cases filed. | |
| | The bidder must provide full documentation for the Activity Plan on the installation of patches and upgrades and Root Cause Analysis of incidents encountered. | |
| | The bidder must provide onsite support for the installation and deployment of software patches and version upgrades. | |
| | The bidder must provide a procedure for support and problem escalation. | |
| | * Submission of Activity/Service Report within 5 calendar days | |
| Other Warranty and After-Sales Requirements | * Immediate replacement of the equipment and/or its parts. | |
| | * The winning Bidder shall replace a factory defective unit with a new unit within 30 days upon delivery of the item. | |

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| | The bidder must provide a certificate for the above services as part of the technical requirements. | |
| TERMS OF PAYMENT | | |
| | Supplier agrees to be paid based on a progressive billing scheme as follows: | |
| | <ul style="list-style-type: none"> • Within thirty (30) days from completion of the delivery and issuance of the Inspection and Acceptance Report by the OSG, and submission of all other required documents - 95% of the contract price. • One (1) year from the issuance of the Inspection and Acceptance Report by the OSG - 5% of the contract price. | |
| DELIVERY | | |
| | Ninety (90) days upon receipt of NTP | |
| ICT EQUIPMENT - LOT 4: WLAN UPGRADE | | |
| Supply, Delivery, and Implementation of Wireless LAN (Wi-Fi 6) | | |
| 40 Units Access Point | | |
| Features | <ul style="list-style-type: none"> • Must belong to the latest Top 4 of the Leaders Group of Gartner's Magic Quadrant for Enterprise Wired and WLAN Infrastructure Report for 2021 (must provide certificate) | |
| | <ul style="list-style-type: none"> • Must be compatible with existing OSG WLAN Infrastructure. | |
| | <ul style="list-style-type: none"> • Must be 1.49 Gbps maximum real-world speed (HE80/HE20) | |
| | <ul style="list-style-type: none"> • Must be WPA3 and Enhanced Open security | |
| | <ul style="list-style-type: none"> • Must have built-in technology that resolves sticky client issues for Wi-Fi 6 and Wi-Fi 5 devices | |
| | <ul style="list-style-type: none"> • Must have OFDMA for enhanced multi-user efficiency | |
| | <ul style="list-style-type: none"> • Must be IoT-ready Bluetooth 5 and Zigbee support | |
| | <ul style="list-style-type: none"> • Must be designed to optimize user experience by maximizing Wi-Fi efficiency and dramatically reducing airtime contention between clients. | |
| | <ul style="list-style-type: none"> • Must support Orthogonal frequency-division multiple access (OFDMA) | |

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| | <ul style="list-style-type: none"> • Must support cellular optimization | |
| | <ul style="list-style-type: none"> • Must support up to 2 spatial streams (2SS) and 80MHz channel bandwidth (HE80) | |
| | <ul style="list-style-type: none"> • Must support handling multiple Wi-Fi 6 capable clients on each channel simultaneously, regardless of device or traffic type. | |
| | <ul style="list-style-type: none"> • Must support Channel utilization optimization by handling each transaction via smaller sub-carriers or resource units (RUs) | |
| | <ul style="list-style-type: none"> • Must support controller-less mode and can provide SLA-grade performance by allocating radio resources, such as time, frequency, and spatial streams, to specific traffic types | |
| | <ul style="list-style-type: none"> • Must support Layer 7 deep packet inspection (DPI) to identify user roles and applications, the APs will dynamically allocate the bandwidth needed | |
| | <ul style="list-style-type: none"> • Must support the elimination of sticky client issues by placing Wi-Fi 6 capable devices on the best available AP | |
| | <ul style="list-style-type: none"> • Must support Wi-Fi 6 aware client optimization by steering mobile devices to the best AP based on available bandwidth, types of applications being used, and traffic type –even as users roam. | |
| | <ul style="list-style-type: none"> • Must support Advanced Cellular Coexistence (ACC) uses built-in filtering to automatically minimize the impact of interference from cellular networks, distributed antenna systems (DAS), and commercial small cell or femtocell equipment. | |
| | <ul style="list-style-type: none"> • Must support continuous monitoring and reporting hardware energy consumption. can also be configured to enable or disable capabilities based on available PoE power | |
| | <ul style="list-style-type: none"> • Must support integrated Bluetooth 5 and 802.15.4 radio (for Zigbee support) to simplify deploying and managing IoT-based location services | |

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| | <ul style="list-style-type: none"> • Must support Target Wake Time (TWT) by establishing a schedule for when clients need to communicate with an AP | |
| | <ul style="list-style-type: none"> • Must support for stronger encryption and authentication is provided via the latest version of WPA for enterprise-protected networks. | |
| | <ul style="list-style-type: none"> • Must support WPA2-MPSK MPSK enables simpler passkey management for WPA2 devices | |
| | <ul style="list-style-type: none"> • Must support VPN Tunnels can be used to establish a secure SSL/IPsec VPN tunnel to a VPN concentrator | |
| | <ul style="list-style-type: none"> • Must support Trusted Platform Module (TPM) for secure storage of credentials and keys, and boot code | |
| | <ul style="list-style-type: none"> • Must support flexible management platform either standalone, controller-less, controller-based, cloud-based, and on-premises NMS using unified OS | |
| | <ul style="list-style-type: none"> • Must support zero-touch provisioning | |
| | <ul style="list-style-type: none"> • Must support Transmit beamforming (TxBF) Increased signal reliability and range | |
| | <ul style="list-style-type: none"> • Must support Passpoint Wi-Fi (Release 2) (Hotspot 2.0) | |
| | <ul style="list-style-type: none"> • Must support Seamless cellular-to-Wi-Fi carryover for guests | |
| | <ul style="list-style-type: none"> • Must support Dynamic Frequency Selection (DFS) Optimized use of available RF spectrum | |
| | <ul style="list-style-type: none"> • Must support Maximum Ratio Combining (MRC) Improved receiver performance | |
| | <ul style="list-style-type: none"> • Must support Cyclic Delay/Shift Diversity (CDD/CSD) Greater downlink RF performance | |
| | <ul style="list-style-type: none"> • Must support Space-Time Block Coding Increased range and improved reception | |
| Technical Specifications | <ul style="list-style-type: none"> • Must be Indoor, dual radio, 5GHz, and 2.4GHz 802.11ax 2x2 MIMO | |
| | <ul style="list-style-type: none"> • Must have Two spatial stream Single User (SU) MIMO for up to 1.2Gbps wireless data rate with 2SS HE80 802.11ax client devices | |
| | <ul style="list-style-type: none"> • Must be Up to 256 associated client devices per radio | |

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| | <ul style="list-style-type: none"> • Must be 16 BSSIDs per radio | |
| | <ul style="list-style-type: none"> • Must support the following frequency bands: (Country-specific restrictions apply) | |
| | 2.400 to 2.4835GHz / 5.150 to 5.250GHz / 5.250 to 5.350GHz / 5.470 to 5.725GHz / 5.725 to 5.850GHz | |
| | <ul style="list-style-type: none"> • Available channels | |
| | Dependent on the configured regulatory domain | |
| | <ul style="list-style-type: none"> • Must Support the following radio technologies | |
| | 802.11b: Direct-sequence spread-spectrum (DSSS) | |
| | 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM) | |
| | 802.11ax: Orthogonal frequency-division multiple access (OFDMA) with up to 8 resource units | |
| | <ul style="list-style-type: none"> • Must support the following modulation types: | |
| | 802.11b: BPSK, QPSK, CCK | |
| | 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM (proprietary extension) | |
| | 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM (proprietary extension) | |
| | 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM | |
| | <ul style="list-style-type: none"> • Must be 802.11n high throughput (HT) | |
| | support: HT20/40 | |
| | <ul style="list-style-type: none"> • Must be 802.11ac very high throughput (VHT) support: VHT20/40/80 | |
| | <ul style="list-style-type: none"> • Must be 802.11ax high efficiency (HE) | |
| | supports: HE20/40/80 | |
| | <ul style="list-style-type: none"> • Must support the following data rates (Mbps): | |
| | 802.11b: 1, 2, 5.5, 11 | |
| | 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 | |
| | 802.11n: 6.5 to 300 (MCS0 to MCS15, HT20 to HT40), 400 with 256-QAM | |
| | 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2, VHT20 to VHT80), 1,083 with 1024-QAM | |
| | 802.11ax (2.4GHz): 3.6 to 574 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40) | |

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| | 802.11ax (5GHz): 3.6 to 1,201 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE80) | |
| | <ul style="list-style-type: none"> • Must be 802.11n/ac/ax packet aggregation: A-MPDU, A-MSDU | |
| | <ul style="list-style-type: none"> • Transmit power: Must be Configurable in increments of 0.5 dBm | |
| | <ul style="list-style-type: none"> • Maximum (aggregate, conducted total) transmit power (limited by local regulatory requirements): | |
| | 2.4 GHz band: +21 dBm (18dBm per chain) | |
| | 5 GHz band: +21 dBm (18 dBm per chain) | |
| | Note: conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain. | |
| | <ul style="list-style-type: none"> • Must include AP-POE-ATSR 1P SR 802.3at 30W Midspan | |
| Accessories | <ul style="list-style-type: none"> • Must include mount bracket (same brand) and power cord | |
| Warranty | <ul style="list-style-type: none"> • With at least a Lifetime warranty on parts and include one (1) Year next business day support | |
| WLAN Controller with High Availability | | |
| Features | Must support new Wi-Fi 6 (802.11ax), WPA3, and Enhanced Open - and existing standards | |
| | Must have Dynamic Segmentation that enforces wired and wireless access policies to simplify and secure the network | |
| | Must have Application awareness for 3,000+ applications without additional hardware | |
| | Must have Built-in AI-powered wireless/RF optimization | |
| | Must have Unifies policy enforcement for WLAN, LAN, and WAN traffic | |
| Quality of Service (QoS) | Must have Application visibility with Deep Packet Inspection (DPI) technology which evaluates and optimizes performance and Quality of Service policies for over 3,000 applications - even for encrypted or hidden traffic. | |

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| | Must classify websites by content category and rate them by reputation. It can also block, apply QoS, bandwidth limit, mirror, and log web content. | |
| | Must have visualized and troubleshoot networks based on call quality metrics such as MOS, latency, jitter, and packet loss. Supported applications include Teams, Skype for Business, Wi-Fi Calling, Facetime, SIP, Jabber, Spark, and more. | |
| | Must have Resiliency and High Availability | |
| Resiliency and High Availability | Can be clustered together in a network managed by a centralized controller | |
| | Must support redundant power supplies | |
| Performance | Maximum campus or remote AP licenses: 256 | |
| | Maximum concurrent users/devices: 8192 | |
| | Maximum VLANs: 2048 | |
| | Active firewall sessions: 1M | |
| | Concurrent GRE tunnels: 8192 | |
| | Concurrent IPsec sessions: 4096 | |
| | Concurrent SSL sessions: 4096 | |
| | Firewall throughput (Gbps): 12 | |
| | Wired Bridged Throughput (Gbps): 12 | |
| | Encrypted throughput 3DES (Gbps): 5 | |
| | Encrypted throughput AES-CBC-256 (Gbps): 5 | |
| | Encrypted throughput AES-CCM (Gbps): 5 | |
| | Encrypted throughput AES-GCM-256 (Gbps): 5 | |
| Connectivity | Form factor/ footprint: 1xRU | |
| | 10/100/1000BASE-T: 4xCombo | |
| | 1000BASE-X: 4xCombo | |
| | 10G Ports (10G or 1G supported): 2xSFP+ USB 2.0: 2 | |
| | Management/status LEDs: Yes | |
| | LINK/ACT and status LEDs: Yes | |
| | LCD panel and navigation buttons: Yes | |
| | Console port: Mini USB, RJ-45 | |
| Security | Enhanced wireless security Support for WPA3 brings stronger encryption and authentication methods, while Enhanced Open brings | |

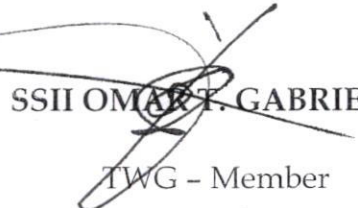
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| | automatic security to open networks. New WPA2-MPSK feature enables simpler passkey management for WPA2 devices - should the Wi-Fi password on one device need to be changed, no additional key changes are needed for other devices on the network. | |
| | Dynamic Segmentation to simplify and better secure wired and wireless network access can enforce per-user and device roles across wired and wireless networks by integrating with a Policy Manager. This ensures consistent policy regardless of user role and device type and eliminates the need to configure unnecessary SSIDs, ACLs, VLANs, and subnets at every node in the network | |
| | Wired and wireless user and application traffic can be tunneled to a stateful firewall through GRE tunnels for inspection. | |
| | For advanced malware or antivirus protection, the device must be able to assume the role of an on-premises agent of centrally hosted firewalls such as those provided by Palo Alto Networks and Check Point Software | |
| Others | <ul style="list-style-type: none"> • Must include Power cords | |
| | <ul style="list-style-type: none"> • Must include 10G SFP+ LC SR 300m MMF XCVR per controller | |
| | <ul style="list-style-type: none"> • Must include uplink to existing core switch to support wireless traffic | |
| | <ul style="list-style-type: none"> • 1-year renewal Hardware Replacement and Software support of the existing OSG APs | |
| | <ul style="list-style-type: none"> • 1-year renewal Software support of the existing Network policy manager | |
| Warranty | <ul style="list-style-type: none"> • With at least 1 year on parts and includes 1 Year next business day exchange for Controller | |
| | <ul style="list-style-type: none"> • At least 3 years on parts for Transceivers | |
| Licenses | <ul style="list-style-type: none"> • Must include Controller Per Ap Capacity Licenses and must include 1Y Foundation Care | |
| | <ul style="list-style-type: none"> • Must include Controller Per AP Policy Enforcement Firewall and must include 1Y Foundation Care Next Business Day Exchange | |

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| Installation | Installation and Mounting of Access Points within 60 days from the initial inspection of delivered wireless equipment. | |
| Implementation | Configuration and Deployment within 60 days from the initial inspection of delivered wireless equipment. | |
| | Includes: | |
| | <ul style="list-style-type: none"> • Project Kickoff, Requirements Gathering and Analysis, Planning and Design, Deployment, Testing, Documentation, and Knowledge Transfer | |
| Certification | The bidder must be an authorized reseller of the brand being offered (must provide a Manufacturer or Reseller Certificate). | |
| Support Service Requirement | The bidder must provide the following: | |
| | * Unlimited corrective maintenance/ repair services within the warranty period | |
| | * Eight (8) hours by five (5) days (Monday to Friday, 8:00 AM - 5:00 PM) technical support and must meet the following response and resolution time: | |
| | > Within one (1) hour for phone or email support | |
| | > Within two (2) hours of response time for onsite support | |
| | > Root cause analysis for all support cases filed. | |
| | * Submission of Service Report within 5 calendar days after rendering service | |
| | The bidder must provide full documentation for Activity Plan on the installation of patches and upgrades and Root Cause Analysis for incidents encountered. | |
| | The bidder must provide onsite support for the installation and deployment of software patches and version upgrades. | |
| | The bidder must provide access to the Vendor portal for download of the latest product contents, patches, updates/upgrades including extensive online self-help resources and | |

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| | knowledge base. Advisory to patches and fixes shall also be provided | |
| | The bidder must provide a procedure for support and problem escalation. | |
| | The bidder must conduct system health checks every quarter with the following scope: <ul style="list-style-type: none"> • System/ Application patches, fixes, security patches, and alerts • System/ Application profile • Resource utilization • Log analysis • Formal reports on the output of conducted health checks within 5 days | |
| Other Warranty and After-Sales Requirements | * Immediate replacement of the equipment and/or its parts. | |
| | * The winning Bidder shall replace a factory defective unit with a new unit within 30 days upon delivery of the item. | |
| | The bidder must provide a certificate for the above services as part of the technical requirements. | |
| TERMS OF PAYMENT | | |
| | Supplier agrees to be paid based on a progressive billing scheme as follows: | |
| | <ul style="list-style-type: none"> • Within thirty (30) days from completion of the delivery and issuance of the Inspection and Acceptance Report by the OSG, and submission of all other required documents - 95% of the contract price. • One (1) year from the issuance of the Inspection and Acceptance Report by the OSG - 5% of the contract price. | |
| DELIVERY | | |
| | Ninety (90) days upon receipt of NTP | |

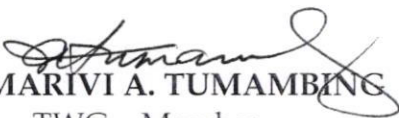
TECHNICAL WORKING GROUP:



SSS MARICAR G. TOLENTINO-
MENDOZA
TWG - Member


SSII OMAR T. GABRIELES
TWG - Member

On leave
SSII JOSEPH RYAN C. ABALOS
TWG - Member

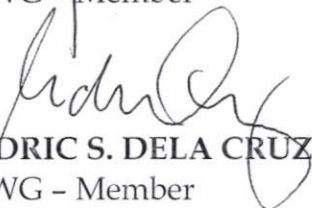

SSII PANTAS M. DE LEON
TWG - Member



ASII MARIVI A. TUMAMBING
TWG - Member


CAO JESSICA L. CASTRO
TWG - Member


SAO JOY Y. CHUA
TWG - Member


ITO III JAYVIE NEIL MALICK S.
MALICDEM
TWG - Member


ITO II CEDRIC S. DELA CRUZ
TWG - Member


COMPRO III AUGUSTUS MARK B.
DICHOSO
TWG - Member


DIR IV EDUARDO ALEJANDRO O. SANTOS
TWG - Chairperson