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## **INVITATION TO BID**

The Western Mindanao State University, through its Bids and Awards Committee (BAC), is inviting PhilGEPS registered suppliers to apply for eligibility and to submit bids for the item mentioned hereunder:

1.) Forty (40) unit of PROGRAMMABLE DRONE KIT

Specifications:

- . DIY Quadcopter Drone for STEM education
- . Includes 2x microbits
- . Includes WIFI camera
- . Build, code, and fly features.

2.) Two (2) unit of EDUCATIONAL ROBOT CAR WITH VISION ROBOTIC ARM

Specifications:

1. Nano (Technology) Control System

- . With ROS controller
- . Able to run mainstream deep learning framework such as TensorFlow, PyTorch, Caffe, Keras, MXNet intelligent analysis
- . Can implement image recognition, object detection and positioning, post estimation, semantics segmentation,

2. Smart Vision Robotic Arm

- . FPV robotic arm for picking, sorting, and transporting
- . With 5 Degree of Freedom vision robotic arm
- . Multi-point navigation transport
- . Gesture Recognition
- . Color Recognition, Tracking, and Sorting
- . Waste Sorting
- . Voice Control
- . Follow line to clear obstacles
- . Grab weight (straight arm): up to 200 g
- . Grab weight during transporting: up to 500 g
- . Arm span: at least 410mm
- . Robotic arm material: aluminum alloy

3. Depth camera recognition and tracking

- . RTAB-VSLAM 3D Mapping and Navigation
- . ORBSLAM2 + ORBSLAM3 Mapping
- . RGB data and point cloud visualization
- . Media pipe development
- . Human Body Recognition
- . Fingertip detection
- . Face detection
- . 3D detection
- . AI Deep Learning Networking Framework
- . KFC object Mapping
- . Color/Tag Recognition and Tracking
- . Body Motion Control
- . ROS Robot APP mapping

#### 4. 2D LiDAR for mapping and navigation

- . Supports mapping with Gmapping, Hector, Karto, and Cartographer algorithms
- . Single-point and Multi-point Navigation
- . LiDAR tracking - capable of target tracking
- . LiDAR Guarding - alarms when detecting intruder
- . RRT exploration mapping
- . TEB Path Planning and obstacle avoidance

#### 5. at least 6 microphone array for voice interaction

- . Pick-up distance: up to 3.5m
- . Far-field sound pick-up, noise reduction recognition
- . Voice control navigation
- . Voice control on color recognition and tracking, multi-point navigation
- . Sound source localization

#### 6. Interconnected Motorcade

- . Multi-vehicle Navigation
- . Intelligent Formation
- . Group control features

#### 7. With LCD touchscreen

- . Screen Size: at least 7 inches
- . Port: USB/HDMI
- . Resolution: 1020 x 600 (HD)

#### 8. Includes accessories

- . Expansion board
- . Encoder motor driver
- . Hall Encoder Geared Motor
- . At least 6000mAh Lipo Battery
- . Speaker (installed)
- . 2A charger
- . Card reader
- . PS2 wireless handle
- . 1 appropriate tool set
- . 1 screw bag

### 3.) Three (3) unit of CODEBOT 4WD

#### Specifications:

- . with ROS Controller , LiDAR and Depth Camera.
- . With Remote control joystick
- . With Wireless keyboard
- . Touch screen
- . Voice recognition controller
- . Flight case
- . Onboard Software:
  - Onboard Ubuntu, ROS1 and STM32 driver.
  - User can install ROS2 on a new Micro SD card or replace the original ROS1 on the bundled Micro SD card.
- . Drivers and ROS Packages:
  - iOS and Android remote control apps.
  - Drivers and Software Installers
  - ROS Packages and Source Codes
  - STM32 Chassis Source Codes

### 4.) Sixty (60) unit of ARDUINO MICRO-CONTROLLER TRAINING KIT

The kit Includes the following:

## A. Micro-controller Board

### Specifications:

- . Memory: at least 2kB SRAM, 32kB flash, and 1kB EEPROM
- . Processor: at least 16MHz
- . Digital I/O: at least 14 pins
- . Analog I/O: at least 6 pins
- . PWM pins: at least 6
- . Built-in LED Pin: at least 13
- . Communication: UART, IC2, and SPI
- . USB Connector: USB-B
- . Replacable chip
- . I/O Voltage: 5V

## B. Includes one (1) set of 37 sensors (with case)

- . 1 x 2 axis Analog Joystick
- . 1 x Relay
- . 1 x Big sound, big microphone for audio detection
- . 1 x Small sound, small microphone for audio detection
- . 1 x Tracking, small IR sensor
- . 1 x Avoidance, IR sensor
- . 1 x Flame
- . 1 x Linear hall, hall effect sensor to detect magnetic
- . 1 x Touch sensor
- . 1 x Digital temperature, thermistor
- . 1 x Active buzzer, audio output
- . 1 x Passive buzzer, Piezo buzzer
- . 1 x RGB LED, Through-hole LED
- . 1 x SMD RGB, SMD LED
- . 1 x Two-color, through LED
- . 1 x Mini two-color

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- . 1 x SMD RGB, SMD LED
- . 1 x Two-color, through LED

- . 1 x Mini two-color
- . 1 x Reed switch
- . 1 x Mini reed switch
- . 1 x Heartbeat
- . 1 x 7 color flash, auto flash LED
- . 1 x Laser emitter
- . 1 x Button, push button
- . 1 x Shock
- . 1 x Rotary encoders
- . 2 x Light cup
- . 1 x Ball switch
- . 1 x Tilt-switch, mercury
- . 1 x Photo-resistor, LDR
- . 1 x Temp and humidity
- . 1 x Analog hall
- . 1 x Hall magnetic
- . 1 x 18B20 temp
- . 1 x Analog temp, thermistor
- . 1 x IR emission
- . 1 x IR receiver
- . 1 x Tap module
- . 1 x Light blocking

C. Includes one (1) compatible turtle robot

#### 5.) Sixty (60) unit of RASPBERRY-PI SINGLE-BOARD COMPUTER TRAINING KIT

The Kit Includes the following:

##### A. Raspberry-Pi Single-Board Computer

Specifications:

- . Memory: at least 8GB
- . Processor: 1.5GHz (64-bit)
- . 2.4 GHz and 5.0 GHz IEEE 802.11ac wireless, Bluetooth 5.0, BLE Gigabit Ethernet
- . 2 x USB 3.0; 2 x USB 2.0
- . 2 x micro HDMI
- . 2-lane MIPO DSI display port
- . 2-lane MIPI CSI camera port
- . 4-pole stereo audio and composite video port
- . OpenGL ES 3.0 graphics
- . Micro-SD card slot for loading operating system and data storage
- . 5V DC via USB-C connector (minimum 3A)
- . 5V DC via GPIO header (minimum 3A)

B. Power over Ethernet (PoE) enabled (requires separate PoE HAT)

C. Compatible Power Supply

D. Micro HDMI to Standard HDMI cable (1 m)

E. Kit Case

F. Fan

G. At least 32GB microSD Card

H. One (1) set of Heatsink

#### 6.) Ten (10) unit of 8086 MICROPROCESSOR TRAINING KIT

Specifications:

- . Processor: operates at 2.5/5MHz
- . ROM: at least 16KB (expandable to 64KB)
- . RAM: at least 16KB (expandable to 64KB) of battery backup
- . 20 x 2 Alphanumeric LCD Display
- . 101 ASCII compatible Keyboard
- . 72 I/O Lines

- . 3 channel 16 bit Timer/Counter
- . PC serial interface using USART
- . Interrupt control
- . Built-in Power supply (+5V/1.5A, ±12V/250mA)

#### 7.) Thirty (30) unit of DIGITAL OSCILLOSCOPE

##### Specifications:

- . Bandwidth Model: 70 MHz (or higher)
- . Real-Time Sampling Rate: up to 1 GSa/s
- . Equivalent Time Sampling Rate: up to 50 GSa/s
- . Memory Depth: up to 2 Mpts
- . Trigger types: Edge, Pulse, Video, Slope, Alternate
- . Waveform math functions: +, -, \*, /, FFT
- . Display: at least 7 inches TFT (800 \* 480 resolution)
- . Channels: at least 2
- . 6 digital frequency counter
- . Screensaver from 1 minute to 5 hours
- . Digital filter and waveform recorder function
- . Shortcut storage function key
- . Interface: USB Host, USB Device (USBTMC), LAN (VXI11), Pass/Fail
- . Language: English and supports Multi-language display and embedded online help
- . Includes carrying bag
- . Includes User Manual
- . With Certificate of Calibration

#### 8.) Two Hundred Seventy (270) license of VIRTUAL LABORATORY INTERACTIVE SIMULATION SOFTWARE FOR PHYSICS (at least 270 licenses)

##### Specifications:

- . Simulator for tertiary level
- . Laboratory Simulation Courses
- . Multimedia content for simulations
- . Laboratory manuals included
- . Laboratory exercises
- . Laboratory contents meet international standards
- . Libraries of images and videos
- . Learning activities are designed to promote problem-solving and critical thinking
- . Activities are based on current methodologies, exercises, and techniques
- . Guides for teachers and students
- . Training (on-site) for all users (5-15 days)
- . at least 6 months technical support
- . Does not require Internet (offline installation and usage)
- . Should be installed in the computer laboratory

##### Note:

Subjects include Fundamentals of Physics, Optics and Thermodynamics, Electricity and Magnetism, Modern Physics, Biophysics, and other related Physics subjects.

#### 9.) Two Hundred Seventy (270) license of VIRTUAL LABORATORY INTERACTIVE SIMULATION SOFTWARE FOR CHEMISTRY (at least 270 licenses)

##### Specifications:

- . Simulator for tertiary level
- . Laboratory Simulation Courses

- . Multimedia content for simulations
- . Laboratory manuals included
- . Laboratory exercises
- . Laboratory contents meet international standards
- . Libraries of images and videos
- . Learning activities are designed to promote problem-solving and critical thinking
- . Activities are based on current methodologies, exercises, and techniques
- . Guides for teachers and students
- . Training (on-site) for all users (5-15 days)
- . at least 6 months technical support
- . Does not require Internet (offline installation and usage)
- . Should be installed in the computer laboratory

Note:

Subjects include General Chemistry, Biochemistry, Analytical Chemistry, Physical Chemistry, Instrumental Chemistry, and other related Chemistry subjects.

10.) Two Hundred Seventy (270) license of VIRTUAL LABORATORY INTERACTIVE SIMULATION SOFTWARE FOR MATHEMATICS  
(at least 270 licenses)

Specifications:

- . Simulator for tertiary level
- . Laboratory Simulation Courses
- . Multimedia content for simulations
- . Laboratory manuals included
- . Laboratory exercises
- . Laboratory contents meet international standards
- . Libraries of images and videos
- . Learning activities are designed to promote problem-solving and critical thinking
- . Activities are based on current methodologies, exercises, and techniques
- . Guides for teachers and students
- . Training (on-site) for all users (5-15 days)
- . at least 6 months technical support
- . Does not require Internet (offline installation and usage)
- . Should be installed in the computer laboratory

Note:

Subjects include Trigonometry, Differential Calculus, Integral Calculus, Differential Equations, College Algebra, Advance Math, and other related Mathematics subjects.

11.) One (1) lot of SUPPLY AND DELIVERY OF VOICE OVER IP TELEPHONY SYSTEM (Digital Phone)

The VOIP System includes the following devices:

A. One (1) Unit Main Unit/Expansion Chassis with Main Processor, Main Software and Power Supply

Specifications:

- . 1 Main Unit/Expansion Chassis, Main Processor Board with
  - Power Supply
  - Main Software
  - Operating System: at least NEC SV9000
  - Processor: at least 1.86 GHz
  - Memory: at least 2GB DDR3
  - Storage: at least 500GB SATA HDD
  - VoIP Channels: at least 8-VoIP channels built-in (expandable)
  - InMail Voice Mail: at least 4-Channel, 2-Hour InMail Voice Mail Built-In (expandable)
  - Mobile Extension Licenses: at least 4 Mobile Extension Licenses

- Connectors: Connector for optional VoIP Expansion Daughter Board, EXIF Expansion Board, and InMail SD Expansion cards

- . 1 VOIP Gateway Daughter Board with
- 3 Analog Trunks
- 8 Hybrid Extensions Board
- 128 maximum channels

B. Ten (10) Units IP Trunk Licenses

C. One (1) Unit Hybrid Phone

Specifications:

- . 12 keys Hybrid (4W) Multi-Line Terminal
- . Black Color

D. Two (2) Units Router Gateway 1U

Specifications

- . CPU: at least Quad-core 1.7GHz
- . RAM: at least 1GB
- . Flash: at least 16 MB
- . Ethernet ports: 5 x Gigabit RJ45
- . SFP port: 1 x SFP
- . Routing: Up to 1.3 million packets per second
- . Line rate: 5 Gbps
- . VPN: OpenVPN, L2TP, PPTP
- . Firewall: Stateful firewall, NAT, DoS protection
- . Traffic shaping and QoS: Queues, policies, classes
- . Management: Web interface, CLI, API

E. Ten (10) Units Patch Panel

Specifications:

- . Ports: 24
- . Connector: RJ45
- . Category: 6
- . Backplane: Dual IDC, Type 110
- . Management: Integrated Cable Management
- . Mounting: 1U rack mountable
- . LOADED with:
  - o Patch cords that are 2 meters (7 feet) long and are made of blue Cat6 RJ45 UTP cable. The modular plugs on the ends of the patch cords are also made of Cat6 RJ45.
  - o Modular Plugs
  - o with set of accessories to connect all devices
  - o Mouldings
  - o UTP Cables

F. Forty-eight (48) Units IP Extension License for Std-SIP Terminal

- license that allows you to use 48 IP extensions on a standard SIP terminal. A SIP terminal is a device that can make and receive SIP calls. SIP is a standard protocol for making and receiving voice calls over IP networks.

12.) One (1) unit of RIBBON SPLICING MACHINE Q102 MASS FUSION SPLICER KIT WITH FC-6RM-C MASS FIBER CLEAVER

Specifications:

- . Compact Mass Fusion Splicer with dual built-in Heat Shrink Ovens

- . Mass Fiber Cleaver
- . Heated Fiber Stripper
- . Splice Protection Sleeves
- . 12 Cores Fiber Cable Management Tray
- . Pair of 250um single fiber holders
- . AC Interface/Battery Charger with Power Cord
- . Battery Unit
- . Cleaning Kit
- . High Resolution Touch Screen Display

13.) One (1) unit of FIBER OPTIC TESTER 1310/1550nm 1625 LIVE WITH INTELLIGENT OPTICAL LINK MAPPER OPTICAL TIME DOMAIN REFLECTOMETER (iOLM OTDR)

Specifications:

- . wavelengths of light that the tester can use to test the cable: 1310/1550nm 1625
- . The term "live" suggests that the tester can perform tests on a cable while it is still in use, without disrupting the signal flow.
- . 7-inch outdoor-enhanced touchscreen, 800 x 480 TFT
- . Two USB 2.0 ports
- . RJ45 LAN 10/100 Mbit/s
- . 2 GB internal memory (20 000 OTDR traces, typical)
- . Rechargeable lithium-polymer battery
- . Power supply AC/DC adapter, input 100-240 VAC, 50-60 Hz, 9-16V
- . DCIN 15 Watts minimum
- . -  $1310 \pm 30/1550 \pm 30/1625 \pm 10$
- . -  $\pm(0.75 + 0.0025 \% \times \text{distance} + \text{sampling resolution})$
- . Distance 0.1 to 160 KM
- . Pulse width 5 to 20000
- . Loss threshold (dB) 0.01
- . Loss resolution (dB) 0.001"

14.) One (1) lot of SUPPLY, DELIVERY, INSTALLATION OF GATE KEEPER SYSTEM with SMS TEXT BULK MESSENGER

A. Five (5) units Fully Automatic Flap Turnstile (Dual Core)

Specifications:

- . Passing Speed: at least 35-45 people/minute
- . Adjustable Lane width
- . Working Environment: Indoor and Outdoor
- . MCBF(Mean Cycles Between Failure): up to 5 million times
- . With anti-tail gate function
- . Double protections of Mechanical and infrared anti-pinch function providing more reliable and safer passing.
- . Multi alarm modes for illegal intrusion, anti-intrusion, anti-follow, overtime alarm,
- . Anti-rush function, Anti-Reverse, Anti-intrusion, Anti-follow.
- . With LED indicator light: green and red indicate the passing information.
- . External button for normal open and normal close (for group pass)
- . With Auto detect and reset function.
- . Gate auto open when power is off to meet the fire protection requirements.
- . Can be integrated with all kinds of access control systems with RFID Reader, upon receiving the relay switch signal.
- . Flap turnstile can be uni-directional or bi-directional control.

B. Twenty (20) Units RFID SCANNERS UHF

Specifications

- . NFC Contactless Smart Card Reader
  - . with complete SDK kit
- includes:



- . collection of sample codes for device and contactless programming
- . demo programs
- . smart card drivers
- . supports the following latest programming languages - Java, MS Visual Basic.NET 2008, MS Visual C#.NET 2008, MS Visual C++ 6.0, and MS Visual C++.NET 2008.
- . Include at least 5 test cards for each RFID scanner
- . Supports the existing Operating System

#### C. One (1) Unit RFID CARD PRINTER

##### Specifications:

- . UHD Dual Sided Retransfer card printer
- . Capacity: up to 200 cards input Hopper
- . Resolution: 300dpi
- . IPSEC Network Security
- . Electronic Security Lock
- . Can be connected up to 7 retransfer card printers

#### D. Five (5) Units Computer Desktop (Branded)

##### Specifications:

- . Processor: 18M Cache, up to 4.40 GHz (or higher)
- . Motherboard: Truly rated compatible motherboard
- . Memory: 16GB (2x8GB) DDR4 or higher
- . Storage: 2TB HDD + 512GB SSD
- . Power supply: 700Watts Power
- . Graphics: 4GB DDR5 or higher
- . Display: at least 23-inch LED Monitor (includes bracket)
- . Optical Drive: DVD-RW
- . Connectivity: LAN and Wi-Fi 802.11 b/g/n
- . I/O Ports: at least 4 USB ports (2 front, 2 rear), Audio Jacks, HDMI and VGA
- . Accessories: Combo USB keyboard and mouse with pad, speaker , UPS with built-in AVR 720 VA or higher
- . With latest licensed OS (64 bit)

#### E. Five (5) units Monitor

##### Specifications

- . Display Type: LED-backlit
- . Size: at least 24 inches
- . Panel Type: In-Plane Switching (IPS)
- . Native Resolution: Full HD 1920x1080 Resolution
- . Refresh Rate: 75Hz
- . Aspect Ratio: 16:9
- . Connectivity Interfaces: VGA, HDMI
- . includes bracket

#### F. Two (2) Units Outdoor Professional Standalone Access Control Terminal

##### Specifications

- . Log Capacity: at least 50, 000 records
- . Fingerprint Capacity: at least 3,000
- . Card Capacity: at least 3,000
- . Interface: PoE-TCP/IP,RS485, Relay Output (COM, NO, NC ), Wiegand Out&In,Door Sensor, Exit Button
- . Activation Mode: Fingerprint Touch activation
- . Identification Mode: FP, Card, ID+FP, ID+PW, PW+Card
- . LCD: 128 x 64 OLED

#### G. Ten (10) Units U 4500 Fingerprint Reader

#### Specifications

- . Scan capture area: at least 14.6 mm (nom. width at center) 18.1 mm (nom. length)
- . Pixel resolution: 512 dpi (average x, y over the scan area)
- . 8-bit grayscale (256 levels of gray)
- . Reader size (approximate): 65 mm x 36 mm x 15.56 mm
- . Compatible with USB 1.0, 1.1 and 2.0

#### H. Two (2) Units Double Electromagnetic Lock

##### Specifications

- . Holding Force: (600Lbs / 280 Kgs x 2)
- . Relock Delay Timer, Buzzer
- . Dimension: 180L x 32W x 11H(mm)
- . Surface Finish: Zinc plated

#### I. SMS TEXT BULK MESSENGER (E-enrollment System)

- with Built-in API for system Development PHP,JQUERY integration

#### 15.) One (1) unit of SUPPLY, DELIVERY, INSTALLATION OF INDOOR P3 LED WALL WITH METAL FRAME

##### Specifications:

- . Size: at least 9ft x 12 ft
- . No. of Panels: at least 40 pcs
- . 1 unit - Video Processor
- . 1 set - Cables and Connectors for the whole package
- . 1 set - Link Cables for AC and Signal including 4 Main AC Cables
- . Pixel Pitch: 3mm or lower (distance between the center of one pixel to the center of the adjacent pixel)
- . Mounting: Surface-Mount Device (SMD)
- . Display Configuration: 3 in 1 (red, green, and blue - RGB)
- . Panel Dimensions: at least (W x H x D) 500mm x 500mm x 65mm
- . Panel Physical Resolution: at least (W x H) 128 x 128 pixels
- . Lifetime (half brightness): at least 100,000 Hrs (Specifies the estimated lifespan in hours. In this case, the LED wall is expected to operate at a satisfactory brightness level for approximately 100,000 hours before reaching half of its original brightness.)
- . Refresh Rate: at least 600-2,000 Hz
- . Power Supply that supports the whole LED wall Unit
- . Training for MISTO staff in the operation of the Unit
- . Warranty: at Least 1 Year

Note: Materials and accessories for the installation are included.

#### 16.) One (1) lot of SUPPLY, DELIVERY, INSTALLATION OF CCTV SET WITH MONITORING SYSTEM

##### A. One (1) Unit NVR (Network Video Recorder) 64 CH HD 1080

##### Specifications:

- . Supports up to 12 megapixels 64 IP cameras with high-definition (HD) 1080p resolution
- . hot-swappable hard drives (HDD) with support for RAID0, RAID1, RAID5, RAID6 and RAID10 configurations
- . supports POS (Point of Sale) triggered recording, which means that when a transaction or event occurs at a point of sale location (such as a cash register), the system can automatically start recording video footage.
- . supports alarm triggers, which means that when specific events or alarms are activated (such as motion detection or sensor triggers), the system can respond accordingly, such as initiating recording or sending notifications.
- . NVR provides both network and Ethernet access, enabling you to connect and manage the

system through a network infrastructure.

- . Each hard drive (HDD) in the system has a capacity of up to 10 terabytes (10TB)

#### B. Three (3) Units 2MP 6-inch 23x IP Network PTZ Camera with Joystick

##### Specifications

- . Pan-Tilt-Zoom (PTZ) cameras with a 2-megapixel (2MP) resolution.
- . At least 6-inch size and can be controlled remotely to pan, tilt, and zoom.
- . At least 23x optical zoom capability for capturing distant objects.
- . Powered through Hi-PoE (High Power over Ethernet) or a 24VAC power supply.
- . Joystick is included for controlling the camera movements.

#### C. Forty-eight (48) Units MP IP Bullet Network Camera (4 mm): 2MP IP Bullet Camera

##### Specifications

- . bullet-style IP cameras with a 4-megapixel (4MP) resolution.
- . high-quality video at a resolution of 1920 × 1080 pixels and a frame rate of 30fps.
- . fixed 4mm lens and support advanced video compression formats (H.265+ and H.264+).
- . 24/7 full-time color recording and include features such as behavior analysis and face detection.
- . Power-over-Ethernet (PoE) support

#### D. Seven (7) Units HDD

##### Specifications

- . Capacity: at least 6TB
- . RPM: 5400 RPM
- . Cache: 64MB

#### E. Forty-eight (48) Units 30W PoE Injector

##### Specifications

- . Provide power over Ethernet (PoE) to the cameras.
- . Input voltage: 90Vac~264Vac
- . Output 12volts

#### F. Four (4) Units 55 inch 1080 Full HD TV

##### Specifications

- . Screen Size: at least 55 inches and a Full HD resolution of 1080p.
- . 4k UHD
- . with brackets for wall mounting.
- . smart TV functionality, Bluetooth connectivity, voice control, and wireless connectivity.
- . Accessories like an HDMI cord, and remote control are included.

#### G. Twenty (20) Boxes Cat 6 UTP Cable, Blue (305m/box)

### 17.) One (1) lot of SUPPLY, DELIVERY, INSTALLATION OF VEHICLE GATE BARRIER

#### A. Three (3) Units 3M Straight Vehicle Gate Barrier

##### Specifications

- . Boom type: Straight
- . Running time: 1 second
- . Max Boom length: 3 meters with rubber
- . 220V 50Hz
- . Left installed
- . Remote control included
- . With the following features:
  - . Manual release
  - . Machine core with compression spring to avoid accidents caused by spring breaking.
  - . die-casting aluminum alloy motor, precision and good at thermal radiating

- . Motor cooling fan
- . Double safety limit switches (photoelectricity limit switch/motor memory sensor)
- . Reversing on an obstacle
- . Auto-closing
- . Traffic light interface
- . Wire control (switch signal) Remote control (418M)
- . Double loop detector
- . Optional Features:
- . Support the INFRARED PHOTOCELL for an anti-bumping function
- . RS485 Communication module
- . Includes installation and civil works

#### B. Ten (10) Units Vehicle Loop Detector

##### Specifications:

- . Power Voltage: 220VAC
- . Power: 4.5W
- . Output relays:240V/5A
- . Operating temperature:-20~65°C
- . Storage temperature:-40~85°C
- . Frequency range:20 kHz to 170 kHz
- . Temperature compensation:50°C/ h
- . Reaction time: 10ms
- . Signal holding time:Unlimited/limited
- . SensitivityHigher:0.02%, high:0.05%, low:0.1%, lower:0.5%
- . Loop inductance:Total loop plus connection wiring:50?H to 1000?H. Ideal is 100?H to 300?H
- . Loop connection wiring: 200 meters long. The total resistance is less than 80hm, twisted at least 20 times per meter

#### 18.) Five (5) unit of LAPTOP

##### Specifications:

- . Processor: 8M Cache, 2.4GHz up to 4.5GHz (or higher)
- . Memory: at least 8GB DDR4 2666MHz (Upgradable)
- . Storage: at least 512GB SSD NVMe M.2 (Upgradable)
- . Display: at least 13" FHD
- . Graphics: at least 2GB GDDR5 Dedicate Graphics
- . Camera: Built-in 720p HD Webcam
- . Audio: Two built-in stereo speakers
- . Network Interface: Wireless LAN Dual Band, Bluetooth 5.1, Ethernet, Wake-on-LAN ready
- . Ports: 2 USB 3.0 or 3.1, 1 USB 2.0, HDMI, audio jacks
- . Touchpad: Multi-gesture secure touchpad, supporting two-finger scroll.
- . Operating System: Latest licensed OS (64 bit)
- . With latest Office application installed
- . With laptop bag

#### 19.) Two (2) unit of LAPTOP M2

##### Specifications:

- . Processor: 10-core CPU; 16-core GPU
- . Memory: at least 16GB DDR5 (or higher)
- . Storage: at least 512GB SSD
- . Display: at least 14" LED-backlit display with IPS technology
- . Camera: Built-in 1080p HD Webcam
- . Network Interface: Wi-fi, Bluetooth
- . Adapter/Ports: HDMI, SDXC card slot, 3.5 headphone jack, MagSafe 3, Three Thunderbolt
- . Operating System: Latest licensed MacOS
- . With a laptop bag

#### 20.) Ten (10) unit of DOT MATRIX PRINTER

##### Specifications:

- . Number of Pins: 24 pins
- . Print Direction: Bi-direction
- . Print Speed: 10/12 cpi
- . Paper Size: 100-257 mm

21.) Two (2) unit of MULTI-MEDIA TABLE TOUCH SCREEN E-PODIUM LED SMART DIGITAL PODIUM

Specifications:

- . Display:
  - o Screen Size: At least 21"
  - o Resolution: 1920 x 1080
- . Touch:
  - o Touch Technology: Capacitive multi-touch screen
  - o Touch Points: at least 10 points
- . Computer:
  - o CPU: 9MB Cache, up to 4.1GHz (or higher)
  - o Motherboard: Highly Rated Compatible Motherboard
  - o Memory: at least 8GB DDR3
  - o Storage: at least 128GB SSD
  - o Graphics: at least 2GB DDR
  - o Network: Wi-Fi
  - o Operating System: Licensed Windows OS
- . Interfaces: USB, HDMI-compatible Mic, RS232, VGA
- . With built-in Speakers
- . With at least one Gooseneck Microphone
- . Drivers Included
- . Includes Writing pen (stylus)
- . Adjustable Height
- . With castor wheels

22.) One (1) unit of 4K/UHD PROFESSIONAL VIDEO CAMERA CAMCORDER

Specifications:

- . UHD 4K up to 60p
- . FHD up to 120p
- . Effective Sensor Resolution: 4096 x 2160
- . Optical zoom: up to 20x
- . Digital zoom: up to 10x
- . Focal length: 8mm - 180 mm
- . Maximum Aperture: f/2.8 to 4.5
- . Shutter Speed: 1/60 to 1/8000 sec
- . Focus Adjustment: Auto / Manual
- . Control Rings: Focus, Zoom, Iris
- . With Optical Image Stabilizer (OIS)
- . Built-in Microphone Type: Stereo
- . Audio Recording
- . Display Type: LCD
- . Display Screen Size: approx. 3.5"
- . Interfaces: HDMI, USB Type-A, USB Micro-B, BNC, 3.5mm Stereo Mic/Line, 3.5mm Stereo Headphone, 2.5 Camera Interface
- . Media/Memory Card Slot: Dual Slot: SD/SDHC/SDXC UHS
- . Includes Accessories: Battery, AC Adapter, Power Cord, Microphone Holder Kit, Eye Cup, Lens Hood, SD card
- . With Carrying Bag

23.) Two (2) unit of 512GB CLASS 3 MICRO SD

Specifications:

- . Transfer Speed: up to 170MB/s
- . Write Speed: up to 90MB/s
- . Compatibility: SDXC and SDXC UHS-I enabled devices

. For capturing 4K UHD video

24.) Two (2) unit of 5600K DAYLIGHT LED VIDEO LIGHT

Specifications:

- . With eight (8) built-in special effects mode
- . With wireless control (Bluetooth, Proprietary Wireless)
- . Bluetooth Wireless Range: up to 30 meters
- . Wireless Channels/Groups: at least 32 channels and 16 groups
- . Lens Reflector Mount: Bowens S-Type
- . High CRI/TLCI Rating: 96/97
- . Beam Angle: up to 120°
- . Dimming: 0 to 100%
- . Accessories: Protection Cover, Power Cord

25.) One (1) unit of CINEMA 3D PROJECTOR FULL HD 1080p THEATER

Specifications:

- . Projection Technology: RGB LCD Shutter Projection System
- . Native resolution: 1080p
- . Lumens: at least 2,400
- . 4K PRO-UHD Resolution
- . 3D Display Mode: Full HD 3D
- . 2D to 3D Conversion
- . Focal Length: 22 mm - 46 mm
- . Interface: USB Type A, USB Type B, 3.5 mm jack, Wireless

26.) One (1) unit of ELECTRIC HIDDEN CEILING SCREEN

Specifications:

- . Type: Ceiling Mount Electric/Motorized Projection Screens
- . Screen Size: at least 120"
- . Viewing Angle: 180 degrees
- . With Control System
- . Compatible to all types of Projectors

27.) Seven (7) unit of DOCUMENT CAMERA

Specifications:

- . Effective Pixels: at least 2MP (1920 x 1080 pixels) or higher
- . Frame Rate: up to 30fps
- . Camera Sensor: 1 /2.7 inches CMOS Sensor
- . Native Resolution: up to Full HD (1080p)
- . Lens Type: Optical Zoom / Focus
- . Zoom: up to 10x Digital Zoom, 12x Optical Zoom
- . Focus: Automatic (with Focus button)
- . Focus adjust Time: less than 2 sec
- . Interfaces: VGA, HDMI, USB, Memory SD card, Internal Microphone
- . With remote control
- . Accessories: USB charger
- . Includes the following functions:
  - o Freeze
  - o Select Output Source
  - o Image Brightness Adjustment
  - o Light Brightness Control
  - o Auto Detect Aspect Ratio
  - o Still Image and Video Capture
  - o Digital Scroll, Pan, and Tilt
  - o Image File Play or Slideshow (with SD card)
  - o Split Screen

28.) Sixteen (16) unit of CEILING SPEAKERS (COMPLETE SET)

Specifications:

- . Set of Two (2) speakers
- . 8-inch, Full-range, In-Ceiling Loudspeaker
- . 6W Transformer for use of 70V / 100V Distributed Lines
- . Dog-ears for mounting

29.) One (1) unit of POWER AMPLIFIER

Specifications:

- . Output Power:
  - . 4 x 140W at 8 Ohm /4 Ohm
  - . 2 x 280W at Double Power Mode (8 Ohm /4 Ohm)
- . High Impedance: 4 x 125W at 100V/70V lines
- . Digital Input / Output: RJ45 x 2 (YDIF IN / OUT)
- . Speaker Output: Barrier strip x 4 pairs
- . Network: RJ45 x 1
- . Control Ports: Remote, Fault Output: Euroblock (3P) x 1

30.) One (1) unit of PORTABLE WIRELESS PA SYSTEM

Specifications:

- . Power Output: 190-325 Watts
- . Audio Player: Bluetooth, USB player/recorder
- . With built-in Class D amplifiers, woofer, and tweeter
- . With retractable Handle and rugged wheels
- . Can be powered by AC power, Battery or direct DC
- . With 4-level Battery Indicator
- . Standby Time: up to 7 hours
- . Include Wireless Hand held Mic

31.) Eleven (11) unit of HDMI WIRELESS TRANSMITTER TRANSCEIVER EXTENDER

Specifications:

- . Includes one (1) Transmitter and one (1) Receiver
- . The Transmitter can be switched as a Receiver
- . 1 Transmitter can be connected up to four (4) Receivers
- . Supports video resolution up to 1080p Full HD @ 60Hz
- . With 2 external gain antenna
- . Transmission Distance: up to 200 meters
- . Accessories: HDMI Cable, User Manual (written in English Language), Power Adapter

32.) Fifty (50) unit of HIGH GAIN WIRELESS DUAL BAND WI-FI USB ADAPTER RECEIVER DONGLE

Specifications:

- . Interface: USB 3.0
- . Frequency: 2.4 GHz, 5.0 GHz
- . Wireless Speed: up to 867Mbps at 5GHz; 400Mbps at 2.4GHz
- . With antenna

33.) Twenty-Five (25) unit of HIGH-SPEED HDMI TO HDMI CABLE

Specifications:

- . Cable Length: 20 meters
- . Video Quality: up to 4K

34.) Two (2) unit of VIEWBOARD INTERACTIVE FLAT PANEL

Specifications:

- . Display: 98"
- . Resolution: Gen 2 4K UHD (3840 x 2160)

- . Touchscreen Technology: Infrared
- . Multi-Touch Points: up to 10
- . With built-in speakers
- . Anti-Glare feature
- . Smartport USB
- . Dedicated camera port
- . HDMI output, multiple HDMI inputs, and multiple USB ports
- . With digital whiteboarding/annotation software
- . OS Support: Android, Mac OS, Windows

35.) Seventeen (17) unit of ACCESS POINT

Specifications:

- . 2.4GHz Speed: 450 Mbps
- . 5GHz Speed: 1300 Mbps
- . PoE Mode: 802.3af PoE/802.3at PoE+
- . Ports: (2) 10/100/1000 Ethernet
- . WiFi Users: at least 200 Users

36.) Thirty-Five (35) unit of TABLET 8

Specifications

- . Processor: 8 Core (2C up to 2.0GHz + 6C up to 1.8 GHz)
- . Internal Memory: at least 32GB expandable up to microSD Card 2TB)
- . Display: at least 9" HD (1340x800) IPS
- . Camera: at least 8MP
- . with Anti-fingerprint
- . with speakers
- . Connectivity: Wifi, Bluetooth, USB
- . Operating System: Latest Operating System
- . Battery: at least 5000mAh

37.) One (1) unit of PROFESSIONAL CAMERA TRIPOD KIT

Specifications:

- . Material: Aluminum Alloy
- . With Smooth Ball Head
- . At least 75mm Leveling Ball
- . With six-step counterbalance system
- . Supports up to 8 pounds
- . Four-Step Pan and Tilt Drag
- . Two-Stage, Three-Section Tripod Legs
- . With Rubber Feet for Dual Spikes
- . With Carrying Case and Shoulder Strap

The criteria to be used for the eligibility check of the prospective bidders, examination and evaluation of bids, post-qualification and all matters relevant to this procurement shall be in accordance with Republic Act. No. 9184 (The Government Procurement Reform Act) and its Implementing Rules and Regulations.

Interested bidders may obtain further information from WMSU BAC Secretariat regarding the checklist of eligibility and technical requirements.

**IMPORTANT NOTICE FOR BIDDERS:**

1. Bidding papers may be acquired starting September 21 until October 17, 2023 from the BAC Office or download from website ([www.wmsu.edu.ph](http://www.wmsu.edu.ph)). The WESTERN MINDANAO STATE UNIVERSITY shall allow the bidder to present its proof of payment for the Bidding Documents fees before the submission of their bids, pursuant to the latest Guidelines issued by the GPPB, in the amount of Twenty-Five Thousand Pesos (Php.25,000.00). (Please attached the machine copy of the Official Receipt)



2. All bidders are required to post a Bid Security, at least Two (2%) Percent of the ABC in the form of Cash, Cashier's Check or Manager's Check or may submit Bid Securing Declaration. Bids without Bid Security will not be considered.
3. The Bidder shall prepare an original of the Eligibility Documents & Technical Components and original of Financial Proposal and clearly mark each "ORIGINAL – ELIGIBILITY DOCUMENTS and TECHNICAL COMPONENTS", and "ORIGINAL – FINANCIAL PROPOSAL", respectively. Bidders shall submit one (1) set of the first and second components of its bid. State the unit price of each item and the total bid price and also state the shortest time of delivery and submit your quotation duly signed by your representative in a sealed envelope.
4. Pre-Bid Conference will be on October 3, 2023, 9:30 AM at BAC Office for Goods, WMSU, 2nd Floor Administration Building, Zamboanga City and/or through video conferencing or webcasting via Zoom, which shall be open to prospective bidders.
5. Bid Submission will be on or before October 17, 2023 at 9:30 A.M. through Manual Submission.
6. Bid opening shall be on October 17, 2023 at 9:30 A.M. at BAC Office, 2nd Floor Administration Building, WMSU, Zamboanga City, Philippines, 7000. Bids will be opened in the presence of the Bidders representatives who choose to attend at the address above. Late bids shall not be accepted.
7. Price validity shall be for a period of 120 calendar days.
8. Bidders shall submit original brochures showing certifications of the product being offered.
9. Warranty shall be for a period of Six (6) months for supplies and materials. One (1) year for equipment, from date of acceptance by WESTERN MINDANAO STATE UNIVERSITY.
10. Bids received in excess of the ABC shall be automatically rejected at Bid Opening.

The WESTERN MINDANAO STATE UNIVERSITY reserves the right to reject any or all Bids and to accept the bid most advantageous to the government, and to award the contract by lot, if warranted.