



Republic of the Philippines
EASTERN VISAYAS STATE UNIVERSITY
Tacloban City

BID SUPPLEMENT

Date: August 23, 2023

Title: IB-2023-08-08 SUPPLY, DELIVERY & INSTALLATION FOR SMART CLASSROOM & AUDIO-VISUAL ROOM EQUIPMENT (ICT)

Reference No.: 10011501

SUPPLEMENTAL/BID BULLETIN No. 4

Please be advised of the following Clarifications/Amendments to the Bidding Schedules/Activities. This shall form an integral part of the Bid Documents.

TERMS OF REFERENCE

INFRASTRUCTURE AND SMART CAMPUS DEVELOPMENT, OPERATIONALIZATION OF FACE-TO-FACE CLASSES AND UPGRADING/PROCUREMENT OF EQUIPMENT

1. Technical Specifications

1.1. Smart Classrooms

1.1.1. General Requirement

1.1.1.1. The setup will be designed to capture the teacher's gestures and audio clearly and the student interactions both in-classroom and online participants.

1.1.1.2. Each classroom has its own independent setup of an all-in-one conferencing board and audio setup. These three (3) classrooms can be merged to form a single big conference room with a mirrored display and unified audio system.

1.1.2. All-in-One Collaboration Board

The All-in-one terminal should include:

1.1.2.1. Interactive Panel;

1.1.2.2. Video conference codec;

1.1.2.3. Built-in Speaker;

1.1.2.4. Built-in microphone;

1.1.2.5. Built-in camera.

1.1.2.6. OPS module

System configuration:

1.1.2.7. 8-core CPU, 8 GB RAM, 64 GB Flash

1.1.2.8. With an OPS module/computer with: i7-10700, DDR4 16 GB, 512 GB SSD, Windows10 IOT Enterprise SAC

Features

1.1.2.9. Supports anti-glare

1.1.2.10. Automatically adjusts screen brightness based on light sensing.

1.1.2.11. Optical anti-blue light: protects eyes and doesn't change color.

1.1.2.12. Screen response time: 8ms

1.1.2.13. Touch accuracy: ± 1 mm

- 1.1.2.14. Supports 20 touchpoints
- 1.1.2.15. 4K built-in camera
- 1.1.2.16. A built-in privacy cover to physically close the camera
- 1.1.2.17. Auto-framing: automatically adjusts the camera based on the location of the participants. The camera displays all participants in a panoramic view and ensures that the participants are displayed in the center.
- 1.1.2.18. Speaker tracking, automatically switch to the close-up picture of speaker without manual intervention
- 1.1.2.19. At least 6 built-in microphone arrays
- 1.1.2.20. The microphone sound pickup radius at least 12 meters, and the sound pickup angle: 180°.
- 1.1.2.21. Acoustic echo cancellation (AEC), automatic gain control (AGC), automatic noise reduction (ANR)
- 1.1.2.22. Can add external microphone
- 1.1.2.23. Two built-in speakers, frequency response range:100Hz-20KHz, total power not less than 40 W
- 1.1.2.24. Video In: 1 x HDMI 2.0 (4K60)
- 1.1.2.25. Video Out: 1 x HDMI 2.0 (4K60)
- 1.1.2.26. Audio In: 1 x 3.5mm
- 1.1.2.27. Audio Out: 1 x 3.5mm
- 1.1.2.28. 1 x Omni-directional microphone port, support the cascading of two microphones.
- 1.1.2.29. 3 x USB Type-A 3.0, support USB flash drive, mouse, keyboard, microphone, speaker, remote control and wireless dongle for projection.
- 1.1.2.30. 1 x USB Type-C, support USB flash device, wireless dongle for projection.
- 1.1.2.31. 1 x 10/100/1000M RJ45 port
- 1.1.2.32. Wi-Fi 5 and Wi-Fi 6, IEEE802.11a/b/g/n/ac/ax network protocol
- 1.1.2.33. Remote control that controls the volume, speaker on/off, microphone mute/unmute, camera open/close, previous/next page
- 1.1.2.34. Writing latency of no more than 16ms
- 1.1.2.35. The built-in whiteboard supports handwriting, drawing, erasing, marking, saving, zooming, and locking the whiteboard. The background color can be changed.
- 1.1.2.36. The whiteboard supports page turning. A maximum of 100 pages are supported
- 1.1.2.37. Selectable pen type: pencil, pen, and highlighter. Pen color: color palette.
- 1.1.2.38. Full-screen annotation: You can take a screenshot of any screen to enter the whiteboard annotation
- 1.1.2.39. The contents of the whiteboard can be saved locally and edited when you open it for the second time, saved in an external USB flash memory, sent to an email.
- 1.1.2.40. When writing on the electronic whiteboard, the hand-drawn graphics can be recognized as standard geometric figures, and the hand-written text can be recognized as standard printed text.
- 1.1.2.41. Wired projection through HDMI cable. Projection resolution support up to 1080p60fps and 4K30fps.
- 1.1.2.42. Wired projection through USB Type-C cable. Projection resolution support up to 1080p60fps and 4K30fps. When PC is projected to the device, the device can control the PC reversely without extra cables.

- 1.1.2.43. Wireless projection by entering the projection code on the mobile phone and PC. Projection resolution support up to 1080p60fps and 4K15fps. When PC is projected to the device, the device can control the PC reversely.
- 1.1.2.44. Wi-Fi Direct projection. Users do not need to configure a Wi-Fi router or change the network of their mobile phones or PCs during screen projection. Projection resolution: up to 1080P60fps and 4K15fps. When PC is projected to the device, the device can control the PC reversely.
- 1.1.2.45. DLNA projection, during projection, user can use mobile phone to perform other tasks.
- 1.1.2.46. Allows users to use the same projection APP to project screens to OPS Windows.
- 1.1.2.47. Supports third-party video conference APP
- 1.1.2.48. The camera, microphone and speaker can be used for third-party video conference APP.
- 1.1.2.49. The camera auto-framing and voice tracking features can be used for third-party video conference APP
- 1.1.2.50. Android apps can be installed.
- 1.1.2.51. Support APP store dedicated to large screens device.
- 1.1.2.52. Supports APIs, third-party applications can perform registration, conference call, conference control, configuration query, and address book query based on the APIs.
- 1.1.2.53. Multi-window: The desktop can be divided into two windows that display two applications. User can change the size of the two windows by dragging the windows.
- 1.1.2.54. Supports BYOM, device hardware capabilities such as microphones, cameras, speakers, and touchscreens can be easily used as peripherals for 3rd party conferences on PC, by using Type-C cables, projection app, or wireless dongle
- 1.1.2.55. Welcome page without OPS module, the welcome page should contain text and pictures. The font of the text can be edited and the pictures can be customized.
- 1.1.2.56. Users can quickly customize applications on the home page. Common applications can be placed on the home page for quick search. At least six applications can be configured on the home page.
- 1.1.2.57. Supports dynamic wallpapers and static wallpapers. Wallpapers can be changed and imported.
- 1.1.2.58. Clone screen content to another screen via HDMI cable
- 1.1.2.59. Supports the OTA(over the air) technology.
- 1.1.2.60. Supports password complexity settings
- 1.1.3. Tracking Cameras
 - 1.1.3.1. Ultra 4K camera
 - 1.1.3.2. 1/2.5", CMOS, Effective Pixel: 8.51M
 - 1.1.3.3. 8x digital zoom
 - 1.1.3.4. H.265 compression
 - 1.1.3.5. Built-in advanced image recognition and tracking algorithm; can easily realize fluent and continuous tracking.
 - 1.1.3.6. Autofocus non-distortion lens, view angle 46° / 84° / 120° for options (120° don't support AF), a small lens with big view, supporting electronic PTZ
 - 1.1.3.7. Ultra-high noise ratio of the new CMOS image sensor can effectively reduce the low noise in the case of image noise, while the application of 2D and 3D noise reduction algorithm, significantly reducing the image noise, even

under low light conditions, still keep the picture clean and clear, the image signal to noise ratio up to 55dB or more

- 1.1.3.8. Supports PoE
- 1.1.3.9. Interleaving mode: achieve single camera and single SDI interface to simultaneously output panoramic and close-up signals.
- 1.1.3.10. Wall mount bracket of box camera
- 1.1.4. Digital Board
 - 1.1.4.1. Integrated to the all-in-one conferencing board; installed on both sides
 - 1.1.4.2. Green color
 - 1.1.4.3. With an integrated document capture camera
- 1.1.5. Audio System
 - 1.1.5.1. 3 x condenser hanging microphones per classroom installed on the ceiling
 - 1.1.5.1.1. Cardioid pattern
 - 1.1.5.1.2. 70 dB SNR
 - 1.1.5.2. Central mixing console at the center classroom and a power amplifier
 - 1.1.5.2.1. Mixing console: 16-channel mixing console, 16-line inputs, 1-knob compressor, rack-mountable
 - 1.1.5.2.2. Power amplifier: 60 watts rated power, 2U rack mount, 4-16 ohms speaker output
 - 1.1.5.3. Small mixer for the side classrooms: integrated USB, reverb, echo and delay function, 4 mic inputs
 - 1.1.5.4. 2 x 35 watts wall speakers per classroom
 - 1.1.5.5. Supply and termination of audio cables
 - 1.1.5.6. With HDMI splitter and cabling
- 1.1.6. Compact Switch
 - 1.1.6.1. Enterprise compact network switch, 8 ports GE copper, 2 x GE copper and 2 x 10GE SFP uplink ports
 - 1.1.6.2. PoE+, 240 watts power budget
 - 1.1.6.3. Fanless
 - 1.1.6.4. Up to 32,000 MAC address table
 - 1.1.6.5. With rack-mount kit
- 1.1.7. Access Point
 - 1.1.7.1. Enterprise access point compatible with existing WLAN controller
 - 1.1.7.2. 802.11ax AP; dual band
 - 1.1.7.3. MU-MIMO
 - 1.1.7.4. OFDMA
 - 1.1.7.5. BSS coloring
- 1.1.8. LAN Cabling
 - 1.1.8.1. 4 x Cat 6 copper cabling node per classroom
 - 1.1.8.2. With 3 feet closed-type cabinet per classroom
 - 1.1.8.3. To include cabinet electrical power tapping
 - 1.1.8.4. Proper installation method with patch panel and labeling
- 1.1.9. Rack-mount UPS
 - 1.1.9.1. 1000VA UPS line interactive
 - 1.1.9.2. Rack-mountable

1.2. SLS AVR

- 1.2.1. General Requirement
 - 1.2.1.1. Shall use LED wall for the big display
 - 1.2.1.2. LED wall shall be integrated to the all-in-one conferencing board

- 1.2.2. Tracking Cameras
 - 1.2.2.1. Ultra 4K camera
 - 1.2.2.2. 1/2.5", CMOS, Effective Pixel: 8.51M
 - 1.2.2.3. 8x digital zoom
 - 1.2.2.4. H.265 compression
 - 1.2.2.5. Built-in advanced image recognition and tracking algorithm; can easily realize fluent and continuous tracking.
 - 1.2.2.6. Autofocus non-distortion lens, view angle 46° / 84° / 120° for options (120° don't support AF), a small lens with big view, supporting electronic PTZ
 - 1.2.2.7. Ultra-high noise ratio of the new CMOS image sensor can effectively reduce the low noise in the case of image noise, while the application of 2D and 3D noise reduction algorithm, significantly reducing the image noise, even under low light conditions, still keep the picture clean and clear, the image signal to noise ratio up to 55dB or more
 - 1.2.2.8. Supports PoE
 - 1.2.2.9. Interleaving mode: achieve single camera and single SDI interface to simultaneously output panoramic and close-up signals.
 - 1.2.2.10. Wall mount bracket of box camera
- 1.2.3. LED Wall
 - 1.2.3.1. Indoor fixed LED video wall
 - 1.2.3.2. P3.91 pitch
 - 1.2.3.3. 4 x 2.5 meter size
 - 1.2.3.4. Shall include video controller, signal cables
 - 1.2.3.5. Shall include installation and commissioning.
 - 1.2.3.6. Shall include power supply provision
- 1.2.4. Audio System
 - 1.2.4.1. 7 x condenser hanging microphones installed on the ceiling
 - 1.2.4.1.1. Cardioid pattern
 - 1.2.4.1.2. 70 dB SNR
 - 1.2.4.2. Central mixing console at the center classroom and a power amplifier
 - 1.2.4.2.1. Mixing console: 16-channel mixing console, 16-line inputs, 1-knob compressor, rack-mountable
 - 1.2.4.2.2. Power amplifier: 120 watts rated power, 2U rack mount, 4-16 ohms speaker output
 - 1.2.4.3. 4 x 35 watts wall speakers
 - 1.2.4.4. Supply and termination of audio cables
- 1.2.5. Compact Switch
 - 1.2.5.1. Enterprise compact network switch, 8 ports GE copper, 2 x GE copper and 2 x 10GE SFP uplink ports
 - 1.2.5.2. PoE+, 240 watts power budget
 - 1.2.5.3. Fanless
 - 1.2.5.4. Up to 32,000 MAC address table
 - 1.2.5.5. With rack-mount kit
- 1.2.6. Access Point
 - 1.2.6.1. Enterprise access point compatible with existing WLAN controller
 - 1.2.6.2. 802.11ax AP; dual band
 - 1.2.6.3. MU-MIMO
 - 1.2.6.4. OFDMA
 - 1.2.6.5. BSS coloring
- 1.2.7. LAN Cabling
 - 1.2.7.1. 5 x Cat 6 copper cabling node

- 1.2.7.2. With 4 feet closed-type cabinet
- 1.2.7.3. To include cabinet electrical power tapping
- 1.2.7.4. Proper installation method with patch panel and labeling
- 1.2.8. Rack-mount UPS
 - 1.2.8.1. 1000VA UPS line interactive
 - 1.2.8.2. Rack-mountable

1.3. OLD LIBRARY AVR

- 1.3.1. General Requirement
 - 1.3.1.1. Shall use LED wall for the big display
 - 1.3.1.2. LED wall shall be integrated to the all-in-one conferencing board
- 1.3.2. Tracking Cameras
 - 1.3.2.1. Ultra 4K camera
 - 1.3.2.2. 1/2.5", CMOS, Effective Pixel: 8.51M
 - 1.3.2.3. 8x digital zoom
 - 1.3.2.4. H.265 compression
 - 1.3.2.5. Built-in advanced image recognition and tracking algorithm; can easily realize fluent and continuous tracking.
 - 1.3.2.6. Autofocus non-distortion lens, view angle 46° / 84° / 120° for options (120° don't support AF), a small lens with big view, supporting electronic PTZ
 - 1.3.2.7. Ultra-high noise ratio of the new CMOS image sensor can effectively reduce the low noise in the case of image noise, while the application of 2D and 3D noise reduction algorithm, significantly reducing the image noise, even under low light conditions, still keep the picture clean and clear, the image signal to noise ratio up to 55dB or more
 - 1.3.2.8. Supports PoE
 - 1.3.2.9. Interleaving mode: achieve single camera and single SDI interface to simultaneously output panoramic and close-up signals.
 - 1.3.2.10. Wall mount bracket of box camera
- 1.3.3. LED Wall
 - 1.3.3.1. Indoor fixed LED video wall
 - 1.3.3.2. P3.91 pitch
 - 1.3.3.3. 4 x 2.5 meter size
 - 1.3.3.4. Shall include video controller, signal cables
 - 1.3.3.5. Shall include installation and commissioning.
 - 1.3.3.6. Shall include power supply provision
- 1.3.4. Audio System
 - 1.3.4.1. 8 x condenser hanging microphones installed on the ceiling
 - 1.3.4.1.1. Cardioid pattern
 - 1.3.4.1.2. 70 dB SNR
 - 1.3.4.2. Central mixing console at the center classroom and a power amplifier
 - 1.3.4.2.1. Mixing console: 16-channel mixing console, 16-line inputs, 1-knob compressor, rack-mountable
 - 1.3.4.2.2. Power amplifier: 120 watts rated power, 2U rack mount, 4-16 ohms speaker output
 - 1.3.4.3. 4 x 35 watts wall speakers
 - 1.3.4.4. Supply and termination of audio cables
- 1.3.5. Compact Switch
 - 1.3.5.1. Enterprise compact network switch, 8 ports GE copper, 2 x GE copper and 2 x 10GE SFP uplink ports
 - 1.3.5.2. PoE+, 240 watts power budget

- 1.3.5.3. Fanless
- 1.3.5.4. Up to 32,000 MAC address table
- 1.3.5.5. With rack-mount kit
- 1.3.6. Access Point
 - 1.3.6.1. Enterprise access point compatible with existing WLAN controller
 - 1.3.6.2. 802.11ax AP; dual band
 - 1.3.6.3. MU-MIMO
 - 1.3.6.4. OFDMA
 - 1.3.6.5. BSS coloring
- 1.3.7. LAN Cabling
 - 1.3.7.1. 5 x Cat 6 copper cabling node
 - 1.3.7.2. With 4 feet closed-type cabinet
 - 1.3.7.3. To include cabinet electrical power tapping
 - 1.3.7.4. Proper installation method with patch panel and labeling
- 1.3.8. Rack-mount UPS
 - 1.3.8.1. 1000VA UPS line interactive
 - 1.3.8.2. Rack-mountable

1.4. Warranty and Support

- 1.4.1. Hardware warranty shall be 1 year from the date of delivery except:
 - 1.4.1.1. All-in-one conferencing device base unit with 3 years
- 1.4.2. Support coverage shall be 1 year after the date of acceptance

2. Bidder Qualifications

The bidder should have the following competencies:

- 2.1. Operating for 10 years or more offering ICT solutions
- 2.2. With PCAB license for communications facilities issued by DTI
- 2.3. Employ at least 1 (one) network engineer associate (CCNA or equivalent)
- 2.4. Employ at least 1 (one) collaboration engineer associate
- 2.5. Employ at least 1 (one) registered electronics engineer
- 2.6. Has a project management office with PMP-certified staff. The project management office shall oversee the project implementation.
- 2.7. Has 24 x 7 helpdesk facility available to receive support requests. This facility should be reachable thru multiple channels: SMS, e-mail, landline, and mobile. The helpdesk should respond not longer than 1 hour after the support request has been sent.

For guidance and information of all concerned.

For further information, please refer to:

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Noted:

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