INVITATION FOR BIDS (IFB) NO. 22-4026

FURNISH AND DELIVER MULTIMEDIA EQUIPMENT

UNIVERSITY OF HAWAII MAUI COLLEGE

KAHULUI, HAWAII

NOVEMBER, 2021

BOARD OF REGENTS

UNIVERSITY OF HAWAII

HONOLULU, HAWAII

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IFB No. 22-4026 to Furnish and Deliver Multimedia Equipment, University of Hawaii Maui College, Kahului, Hawaii

IT IS THE RESPONSIBILITY OF ALL BIDDERS TO CHECK THE TABLE OF CONTENTS TO CONFIRM THAT ALL PAGES LISTED THEREIN ARE REVIEWED AND THAT THE MANDATORY BID FORM IS SUBMITTED AS PART OF THEIR BID PACKAGE.

NOTICE TO BIDDERS

University of Hawaii IFB No. 22-4026, Furnish and Deliver Multimedia Equipment, University of Hawaii Maui College, will be issued via the Hawaii Electronic Procurement System (HIePRO). **Bids must be submitted via HIePRO no later than 2:30 p.m. HST, <u>December 17, 2021</u>. Bids received after the bid due date and time or not submitted via HIePRO will not be considered.**

Bidders are advised to allow ample time for submitting their bid to ensure the submission process is completed and timely. **Bidders are solely responsible for ensuring their bid submission is completed prior to the bid due date and time.** The University shall not be responsible for any delay or failure of Bidders in submitting a complete bid.

<u>ELECTRONIC PROCUREMENT</u>

Bidders interested in responding to this solicitation must be registered on HIePRO. To register, visit the URL: <u>https://hiepro.ehawaii.gov/videos/video/vendor_registration.html</u>. Reference the Vendor Quick Reference Guide for additional information at <u>https://hiepro.ehawaii.gov/static-resources/VendorQuickReferenceGuide.pdf</u>.

HIePRO is the system of record for issuing IFB No. 22-4026 and related amendments (including changes to the bid due date and time). In addition, HIePRO is the sole vehicle for Questions, Requests for Clarification, Bid Submittals (i.e., MANDATORY BID FORM and related attachments) and Notification of Award. Bidders shall review all special instructions in HIePRO related to this IFB which are made a part of this IFB through reference.

<u>QUESTIONS AND REQUESTS FOR CLARIFICATION</u>

Questions and Requests for Clarification regarding the Technical Specifications or any other aspect of the IFB must be submitted via HIePRO by **2:00 p.m. HST, <u>December 9, 2021</u>**. Responses are scheduled to be posted on **<u>December 13, 2021</u>**.

The University shall not be required to answer Questions or Requests for Clarification not submitted via HIePRO or received after the Questions and Requests for Clarification deadline.

David Lassner
President, University of Hawaii

Posting Date: December 6, 2021

Vendors are responsible for notifying the Procurement Specialist Michele Elmore (e-mail: <u>mselmore@hawaii.edu</u>) for accessibility concerns related to this IFB.

BID REQUIREMENTS

FURNISH AND DELIVERY MULTIMEDIA EQUIPMENT

Submission of the **MANDATORY BID FORM** via HIePRO confirms a bidder has carefully examined the INVITATION FOR BIDS (IFB) NO. 22-4026, FURNISH AND DELIVER MULTIMEDIA EQUIPMENT, UNIVERSITY OF HAWAII MAUI COLLEGE, KAHULUI, HAWAII, and offers to furnish and deliver multimedia equipment to the locations listed in the SPECIAL PROVISIONS, in strict accordance with the true intent and meaning of the Invitation for Bids (IFB) and shall complete delivery within **FORTY FIVE (45) CONSECUTIVE CALENDAR DAYS** from the date designated in the Notice to Proceed, as follows:

TAX LIABILITY

Both out-of-state and Hawaii bidders are advised that the amount bid on this solicitation is subject to the general excise tax imposed by Chapter 237, Hawaii Revised Statutes (HRS) and, if tangible property is being imported into the State of Hawaii for resale, the use tax (currently 1/2%) imposed by Chapter 238, HRS. (Refer to Taxes in the General Provisions.) Bidders are therefore cautioned to consider such taxes in formulating their bids since no adjustments to the prices bid shall be allowed.

BASIS FOR AWARD

The award of contract, if awarded, shall be made to the lowest responsive and responsible bidder on the **TOTAL AMOUNT FOR EACH ITEM**.

The University, at its sole discretion, may order additional quantities of items at the unit prices offered at the time of award, if additional funds are available. The University also reserves the right to cancel the IFB or not make award of individual items due to funding limitations.

NOTE TO BIDDERS

An acceptable bid must conform in all material respects to this Invitation for Bids. Any of the following may be grounds for disqualification:

1.   Taking exception to any of the specifications, terms or conditions contained in the IFB.
2.   Placing conditions on the furnishing of solicited goods or services.
3.   Inclusion of a quotation or order form containing additional specifications, terms or conditions.
4.   Referencing external documents containing additional specifications, terms or conditions.

Bidders are advised that bids are evaluated as submitted and requests by bidders to delete conditions contained in their bids after bid opening cannot be considered.

SUBSTITUTIONS TO BE APPROVED IN ADVANCE

The manufacturer and model numbers of items identified in the TECHNICAL SPECIFICATIONS are used as a measure of quality, style, size, appearance, and performance. All equipment must be new and unused. Used or refurbished equipment will not be considered.

Any brand or manufacture of equal or better quality and performance than that specified will be considered for acceptance by the University upon submission of a Request for Substitution (**BID REQUIREMENTS**, Page 5). The Request for Substitution must include a statement of variances which lists all features of the proposed substitution differing from the specifications and/or product specified and must further certify that the substitute has no other variant features. In addition, the Request for Substitution must include manufacturer's literature or brochures containing technical data and illustrations providing sufficient evidence to enable the University to evaluate each feature listed as a variance. The University may, at its discretion, reject or deny any submittal containing insufficient information or any substitution that it deems unequal, and the findings in these regards shall be accepted by the bidder as final and binding.

All requests for substitution of items shall be emailed to the Technical Representative, Mike Slattery, at slattery@hawaii.edu, no later than **4:00 p.m. HST, December 2, 2021.** The University shall not be required to consider any Request for Substitution received after this deadline.

The University may at its discretion reject or deny any substitution that it deems unequal, and the findings in this regard shall be accepted by the bidders as final and binding. Notification of approval or rejection/denial of substitution requests shall be included in the University's posting of its response to **QUESTIONS AND REQUESTS FOR CLARIFICATION** (see Notice to Bidders).

A bid which includes a substitution shall be considered only if the substitution has been approved by the University via the QUESTIONS AND REQUESTS FOR CLARIFICATION.

<u>SAMPLE FORMAT FOR REQUEST FOR SUBSTITUTION</u>

Date:_____

Mike Slattery
University of Hawaii Maui College
Media Center
Email: slattery@hawaii.edu

To Whom It May Concern:

      Subject: **REQUEST FOR SUBSTITUTION**

      Project Title: **IFB No. 22-4026 Furnish and Deliver Multimedia Equipment**
                            University of Hawaii Maui College

      In accordance with the "SUBSTITIONS TO BE APPROVED IN ADVANCE" section of the BID REQUIREMENTS, I hereby submit for substitution the attached technical brochure(s) and statement of variances for your review and approval for the item(s) shown below:

ITEM	SPECIFIED BRAND	SUBSTITUTE OR ALTERNATE BRAND	MODEL NUMBER	VARIANT FEATURES

      I further certify that my request for substitution of the above items(s) has no other variant features.

_____
Signature

_____
Title

NOTES:	**PLEASE USE YOUR COMPANY'S LETTERHEAD**
	IF NO VARIANT FEATURE, INDICATE "NONE"

TECHNICAL SPECIFICATIONS

This section indicates the Technical Specifications required for the multimedia equipment. The Technical Specifications listed herein are the minimum requirements and are **mandatory** for an accepted bid.

ITEM 1   TRACKING USB PTZ CAMERA / WALL MOUNT

AVer PTZ310 Professional PTZ Camera w/ Wall Mount (COMSVCMNT), or approved substitution

Quantity: THIRTY THREE (33)

1/2.8" CMOS Sensor, 1080p Resolution, 12X Optical Zoom, Pan/Tilt/Zoom Features
3G-SDI, HDMI, IP, USB Output, NDI, NDI|HX IP Streaming Support, 3.5mm Analog Audio Input, PoE+ Support, RS-232/IR Remote Control
Image Sensor: 1-Chip 1/2.8" CMOS Sensor
Horizontal Resolution (TV Lines): 800 TV Lines
Sensor Resolution Effective: 2.07 Megapixel
Signal-to-Noise Ratio: 50 dB
Minimum Illumination: 0.4 Lux
Camera Shutter Speed: 1/1 to 1/32,000 sec
Max Digital Zoom: 12x
Flip / Mirror Support: Image Flip, Mirror (Vertical) Lens
Optical Zoom Ratio: 12x
Focal Length: 3.9 to 46.8mm
Field of View: Horizontal: 72.5 to 6.6°
Maximum Aperture: f/1.6 to 2.8
  Wide: 11.8" / 0.3 m; Telephoto: 59.1" / 1.5 m
Video Output
Output Formats: Minimum Focusing Distance
   SDI, HDMI, USB: 1920 x 1080p at 25, 29.97, 30, 50, 59.94, 60 fps 1920 x 1080i at 50, 59.94, 60 fps, 1280 x 720p at 50, 59.94, 60 fps
   IP Streaming: H.264, MJPEG, RTMP, RTP, RTSP, TCP, UDP: 1080p, 720p, 480p at 30p, 60p (32.00 Mb/s)
Move Speed - Pan: 0.1 to 100°/sec, Tilt: 0.1 to 100°/sec
Movement Range
   Pan: 170°, Tilt: 120° (-30 to 90°)
Supported Control Protocols: IP - RS-232, RS-422, VISCA
Interfaces
   Video Output Connectors: 1 x BNC (3G-SDI) Female, 1 x HDMI Type A Female, 1 x RJ45 (HX / NDI) Female, 1 x USB 2.0 Type-B (USB Video) Female
Audio I/O: 1 x 1/8" / 3.5 mm Stereo Mic/Line Level Input
Control Interface: 1 x RJ45 (RS-422), 1 x 9-Pin D-Sub (RS-232)
Other I/O: 1 x RJ45 (LAN) Input/Output
Power
   PoE Support: PoE+ 802.3at
   Power Connectors: 1 x Barrel / Coaxial (12 VDC at 5 A)

ITEM 2   **CAMERA WALL MOUNT**

Aver PTZ310 Pro AV Camera Wall Mount (COMSVCMNT), or approved substitution

Quantity: FOURTEEN (14)

Wall Mount Accessory for ITEM #1

ITEM 3   **VIDEO CONFERENCE MIC/SPEAKER/CAMERA BAR**

PolyStudio Bar, or approved substitution

Quantity: SEVEN (7)

Windows 7, 8.1, 10 / MacOS 10.12, 10.13, 10.14
Support for standard audio and video device drivers
UAC 1.0 Audio / UVC 1.1/1.5 Video / HID 1.11

CAMERA - 120-degree FOV, UHD 2160p (4K) capture resolution, Automatic people framing & speaker tracking, 5x zoom / EPTZ, 2 camera presets

AUDIO- Full-duplex conversations, acoustic echo cancellation and background noise suppression, Mute/unmute controls, Stereo microphones: 6-element beamforming microphone array, 12 ft pickup range, 120 Hz–16 kHz frequency response
Stereo speakers: 100 Hz–20 KHz frequency response, Output = 90 dB @ 0.5m

INTERFACES - 1x USB 3.0 Type-C port (with 2.0 compatibility), Power connector, Optional external microphone, 3.5 mm stereo Audio In, 802.11ac Wi-Fi wireless networking for manageability; IEEE 802.11a/b/g/n compatible
Bluetooth 4.2

APPLICATION COMPATIBILITY - Compatible with any application supporting standard USB audio and video drivers, including but not limited to:
Microsoft Teams, Skype for Business, Zoom Certified, LogMeIn GoToMeeting, BlueJeans Network, Google Hangouts, Amazon Chime, Cisco Webex, VidyoDesktop, Polycom RealPresence Desktop

SECURITY -802.1x support, Certification management
MANAGEABILITY (VIA WI-FI), Polycom Companion App (running on
Win/Mac PC connected to device, Polycom RealPresence Resource Manager, Polycom Device Management Service

ITEM 4   **85" INTERACTIVE LED DISPLAY**

Sharp PN-L851H Interactive Aquos Board LED display, or approved substitution

Quantity: SEVENTEEN (17)

85" Diagonal Class (84.6" viewable), LED display interactive touchscreen (multi touch), 4K UHD (2160p) 3840 x 2160, direct-lit LED
Type: LED-backlit LCD flat panel display with Touchscreen (multi touch)
Video Interface: HDMI
HDMI Ports Qty: 2

TECHNICAL SPECIFICATIONS

PC Interface: VGA (HD-15)
DisplayPort
   Diagonal Class: 85 inch
Resolution: 3840 x 2160
Display Format: 4K UHD (2160p)
Response Time: 9.5 millisecond
Image Aspect Ratio: 16:9
Image Contrast Ratio: 5000:1
Viewing Angle: 178°
Brightness: 350 candela per square metre
Modes: Landscape mode, Portrait mode
Touchpoints Qty: 20
Additional Features: InGlass Table, Hex-Core processing, Quad Screen
Features: Embedded Android SoC
Output Power / Total: 20 watt
Speaker System: 2 speakers
USB Ports Qty: 7
PC Configuration: ARM A72+A53 / 4 GB RAM
Processor: ARM Cortex-A73 Dual-Core + ARM Cortex-A53 Dual-Core
RAM: 4GB
Connectivity: LAN, Wi-Fi
   LAN Protocol: Gigabit Ethernet
   Wi-Fi Protocol: 802.11n, 802.11ac, 802.11g, 802.11a, 802.11b
Speakers: 2 x speaker - built-in - 10 Watt, 2 x speaker - 10 Watt
Connector Type: DisplayPort input - side, 2 x HDMI input - side, 3 x USB - side, VGA input - side, RS-232C input - bottom, USB 2.0 - bottom, Audio line-out - bottom, Network - side, USB 2.0 - side, 2 x speakers output - side, Audio line-in - bottom, 2 x USB - bottom, DisplayPort output - bottom
Cables Included: USB cable

ITEM 5   **85" 4K LCD TV**

Samsung Q70T (QN85Q70TAFXZA), or approved substitution

Quantity: SEVEN (7)

84.5" Diagonal
Resolution: 4K UHD (3,840 x 2,160)
Wide Viewing Angle, Dolby, 20W, 2CH
Wireless Connectivity: Wi-Fi 802.11ac, Wi-Fi Direct, Bluetooth (ver.4.2)
Smart Hub, Quantum Processor 4K
4K AI Upscaling
USB HID Support, TV to Mobile - Mirroring
Inputs & Outputs
   HDMI Connections (4), USB (2), Ethernet (LAN), Terrestrial / RF input
Digital Audio Out (Optical) (1), RS232C (1)
DTV Tuner - ATSC/ClearQAM, Digital Broadcasting, ATSC/ClearQAM
Analog Tuner, 4K UHD Resolution, HDR

ITEM 6 **90" LCD TV**

Sharp PN-LE901, or approved substitution

Quantity: FOUR (4)

90 1/64" diagonal commercial LCD TV
Full HD (1920 x 1080) Native Resolution
5000:1 Contrast Ratio
Built-In Ethernet Connectivity
Built-In Analog and Digital Tuners
VGA, Component Video, USB & 3 x HDMI-In
Dual Built-In 10-Watt Speakers
Resolution 1920 x 1080
Bit Depth / Color Support: 8-Bit+FRC (1.07 Billion Colors)
Brightness 350 cd/m²
Viewing Angle (H x V): 176 x 176°
Screen Area 78.47 x 44.14" / 199.31 x 112.12 cm
Contrast Ratio 5000:1
Dynamic Contrast Ratio 4,000,000:1
Response Time   4 ms
Dot Pitch   1.038 x 1.038 mm
Backlighting Technology LED
Input Ports: 3 x HDMI Audio, Video, 1 x 15-Pin VGA Video, 1 x RCA Component Video, 2
      x RCA Composite Video, 2 x RCA Stereo (L/R) Audio, 1 x 1/8" / 3.5 mm Audio, 1 x RF
      Antenna Audio, Video
Output Ports: 1 x RCA Stereo (L/R) – Audio, 1 x TOSLINK Optical – Audio
USB Ports: 1 x USB (Version Unspecified)
Ethernet Ports: 1
Other I/O: 1 x RS-232C Control Input
TV Tuner: ATSC

ITEM 7 **MOBILE FLAT/CURVED PANEL FLOOR STAND**

**Tripp Lite MOBILE TV LCD FLOOR STAND CART STNDHEIG (DMCS60100XX),
or approved substitution**

Quantity: THIRTY (30)

Recommended Use: LCD / plasma panel / interactive whiteboard
VESA Mounting Interface: 400 x 200 mm, 400 x 400 mm, 800 x 400 mm, 600 x 400 mm,
200 x 100 mm, 800 x 600 mm, 300 x 300 mm, 1000 x 600 mm
Shelf Qty: 2
Recommended Display Size: 60"-100"
Tilt: -10° to 5°
Lift: 47.01 in - 65 in
Adjustments: Tilt, lift
Max Load Weight: 110.2 lbs
Wheels Qty: 4
Aluminum frame and supports up to 220 lb.

TECHNICAL SPECIFICATIONS

ITEM 8   **90" DISPLAY WALL MOUNT**

Peerless-AV STX660P SmartMount Universal Tilt Wall Mount for 39-90 inches, or approved substitution

Quantity: TWO (2)

Low profile design holds display 1.69" (43mm) from the wall
Universal tilt adaptor brackets easily hook onto wall plate for fast installation
Up to 1" of vertical adjustment on each universal display adaptor bracket for post installation leveling and height adjustment fine-tuning
Up to 23" of horizontal adjustment for centering display on wall
5º of back tilt offers 3" of space for hands-free, behind the display access
Mounting Type: Tilt
Blade Movement: Tilt
TV Size: 90 Inches
Tilting included

ITEM 9   **PROJECTOR MOUNT**

Chief RPAUW Universal Projector Mount, or approved substitution

Quantity: NINE (9)

Ceiling mounting methods: 1.5" NPT Threaded Extension Column.
Max Equipment Size: 50 lbs (22.7kg)
Roll Adjustment: +/- 4° adjustment up or down
Pitch Adjustment: +/- 25° adjustment on each side of the mount.
Yaw Adjustment: 360°
Construction: Steel
Dimensions: 6.25 x 1.75 x 5.5" (159 x 44 x 140mm)
Weight Capacity: 50 lbs (22.7kg)

ITEM 10   **CEILING DROP-IN SPEAKERS (PAIR)**

Extron FF 220T 42-141-03, or approved substitution

Quantity: TWENTY-SEVEN (27)

Low Profile Enclosure and 70/100 V Transformer
2' x 2', 7.8 lb (3.5 kg) drop-in ceiling tile speaker
UL 2043 plenum rated enclosure
3" (76 mm) horn-loaded, full-range driver
Audio / Acoustic and Electrical
   Speaker type   1-way, full-range, in-ceiling speaker
   Frequency range   68 Hz to 18 kHz, -10 dB, half space
   Power capacity   16 W (rms) continuous pink noise (per IEC 60268-5)
    32 W (rms) continuous program
   Nominal sensitivity 86 dB SPL, 1 watt, 1 m, half space
   Nominal impedance   8 ohms per speaker
   Driver   (1) 3" (76.2 mm) paper cone
   Input connector   (1) 10 mm Euro-style captive screw terminal block, 7 pole

Tap settings
   70 V input   16 W, 8 W, 4 W, 2 W, 1 W, null (bypass 8 ohm direct connection)
   100 V input   Null, 16 W, 8 W, 4 W, 2 W, 1 W (bypass 8 ohm direct
connection)

ITEM 11   **70V MONO AMP – 60 WATTS AMP**

Extron MPA 601-70V 70 V 60-1449-01, or approved substitution

Quantity: SEVENTEEN (17)

Inputs: Balanced or unbalanced stereo or mono on a captive screw connector; unbalanced stereo or mono on RCA connectors; 3.5 mm stereo mini jack
Speaker Outputs: 5 mm screw-lock captive screw connector
60 watts rms output power: MPA 601-70V - 1 x 60 watts @ 70 volts
Signal-to-noise of >90 dB and <0.1% THD+N
ENERGY STAR® qualified amplifier
Bass, treble, and input level controls
Balanced and unbalanced buffered audio inputs
Auto power-down with fast power-up
Automatic clip limiter
5mm screw-lock captive screw speaker connector
Rack-mountable 1U, quarter rack width metal enclosure

ITEM 12   **SPEAKER CABLES**

Monoprice Nimbus Series 14AWG 2-Conductor CMP-Rated Speaker Wire 100ft, or approved substitution

Quantity: FIVE (5)

14AWG, 2 Color-Coded Conductors, Oxygen-Free Copper Conductors, 100% Pure Bare Copper

ITEM 13a   **WALL MOUNT SPEAKERPHONE**
ITEM 13b   **NETWORK HUB**

Stem Audio Ecosystem Hub 1 / Wall 1, or approved substitution

Quantity: Wall Mount 1 - TWENTY SIX (26); Network Hub 1 - ELEVEN (11)

WALL AMOUNT SPEAKERPHONE
Mounts On Wall/Credenza
15 Beamforming Microphones and Speakers, Use Networked/Standalone with Computer, Power over Ethernet (PoE+)
Volume and Mute Controls, Automatic Voice-Level Adjustment
Noise Cancellation, Echo Canceling
Compatible Operating Systems: Windows 98 and Up, Linux, Mac OS/macOS
Network Port: 1 x RJ45, Full Duplex
Power Over Ethernet: PoE+ 802.3 Type 2
PC Connectors: 1 x USB Type-B
Microphones: 15 x Wide, Medium, Narrow Array

Speakers
  Speakers: 2 x 4 W
  Subwoofers: 2 x 10 W
Echo Cancellation: > 40 dB, Conversion Speed 40 dB/Second
Noise Cancellation: > 15 dB
Frequency Response: 50 Hz to 16 kHz
Broadcast Level: 90 dB SPL at 1 kHz from 3.3' / 1 m, 5 W RMS

NETWORK HUB
Connects up to 12 Stem Audio Components, For Stem Table, Wall, Ceiling & Control
Dante-Enabled, VoIP Support, USB, Power over Ethernet (PoE+), Wall-Mountable Design
Compatible Operating Systems: Windows 98 and Up, Linux, Mac OS/macOS
Network Port: 1 x RJ45, Full-Duplex Ethernet with PoE, 1 x RJ45, Dante
Power Over Ethernet: PoE+ 802.3 Type 2
Audio Ports: 1 x Terminal Block
Frequency Response: 50 Hz to 16 KHz
Broadcast Level: 90 dB SPL at 1 kHz from 1 m, 5 W RMS
Noise Cancellation: >15 dB
PC Connectors: 1 x USB Type-B

ITEM 14   WALL MOUNTSPEAKER

JBL Control 1 Pro with Wall Mount, or approved substitution

Quantity: TEN (10)

150W Power Handling,
Impedance: 4 Ohms,
Frequency Range: 80 Hz to 20 kHz -10 dB
Frequency Response: 100 Hz to 18 kHz ±3 dB
Maximum SPL: 108 dB (Continuous), 114 dB (Peak)
Sensitivity: 87 dB SPL
Crossover: 4.2 kHz
Protections: Overvoltage
Includes ball-and-socket mounting bracket for easy installation and positioning flexibility.

ITEM 15   ACTIVE OPTICAL CABLE, 75 FT

C2G 75ft HDMI Active Optical Cable (41454), or approved substitution

Quantity: EIGHTEEN (18)

75ft High Speed HDMI Active Optical Cable (AOC) 4K 60Hz 18Gbps Plenum
Max Output Resolution: 3840 x 2160 at 60Hz
Support HDMI 2.0 and resolutions up to 4K (4096 x 2160 at 60hz, 4:4:4), bandwidths up to 18Gbps, HDR for higher contrast ratios and vivid colors, plus 32 uncompressed digital audio channels, 12-bit Deep Color, HDCP compliant

ITEM 16   ACTIVE USB 2.0 EXTENSION CABLE

MutecPower 32 Feet Active USB Extension Cable 2.0 Male to Female with 2 Extension chipsets Signal Booster - Active Extension/Repeater Cord 10 Meters / 32 Feet, or approved substitution

Quantity: FORTY TWO (42)

USB 2.0 Active extension cable, 32ft length, bus powered with an integrated amplification chipset.
Compatible Devices   Tablet , Printer , PC
Connector Gender   Female-to-Male
Connector Type   3.5 Mm, USB, USB 2.0
Data Transfer Rate   480 Megabits per second

ITEM 17   USB EXTENDER

Icron USB 2.0 Ranger® 2301single Port cat5e/6/7 100m extender, or approved substitution

Quantity: SEVENTEEN (17)

1-port USB 2.0 extender supporting all USB 2.0/1.1 devices up to 480 Mbps
Supplies up to 1 Amp to USB port
Metal enclosures with FCC/CE Class B certification
SPEEDS - USB 2.0: up to 480 Mbps, USB 1.1: up to 12 Mbps
LEX (Local Extender)
    USB Connector: 1 x USB Type B Receptacle, Link Connector: 1 x RJ45
REX (Remote Extender)
    USB Connector: 1 x USB Type A Receptacle
    Link Connector: 1 x RJ45
    Power Supply: 100-240V AC Input, 5V 3A DC Output
COMPLIANCE
    EMC: FCC (Class B), CE (Class B)
    Environmental: RoHS2, REACH, Conflict Minerals

ITEM 18   HDMI CABLE, M-M, 35FT

Select High Speed HDMI Cable with Ethernet, or approved substitution

Quantity: TWENTY-SEVEN (27)

Length: 35.00 Foot
Warranty: Lifetime
HDMI Specification: 1.4
Signal bandwidth: 10.2Gbps, Nominal impedance - 100Ω, Nominal capacitance - 95.2pF/m Insulation resistance - 10MΩ
Nominal attenuation: 300KHz-825MHz 8dB, 825MHz-2.475GHz 21dB, 2.475GHz-4.125GHz 30dB
Cable bend radius: 100mm
 Braided Shield: 24/6/0.12, CCAM
Jacket: PVC, Black, O.D. - 10.0 ± 0.2mm
Connectors (2): HDMI - Type A

ITEM 19   DOCUMENT CAMERA

AVer M17-13M 13MP 35.2x Digital Zoom 1080p Document Camera, or approved substitution

Quantity: FIFTY-FIVE (55)

Resolution: 13MP, 1080p at 60fps, 35.2x Digital Zoom, HDMI,VGA,USB Connectivity
Flash Memory Installed Size: 128 megabyte, 128 megabyte
Supported Memory Cards: SDHC Memory Card, SD Memory Card
Video Input
   Color or B&W: Color
   Digital Zoom: 35.2
   Audio Support: Yes
   Audio Support Features: Built-in microphone
   Max Digital Video Resolution: 1920 x 1080
   Frame Rate (max): 60 frames per second
   Video Modes: 1080p
   Still Image Capture Resolution: 1920 x 1080
   Connectivity Technology: Wired
   Supported Video Signals: HDMI, Composite video, VGA
   Computer Interface: USB 2.0
   Lens System - Focus Adjustment: Automatic
   Optical Sensor - Optical Sensor Type: CMOS
   Sensor Size: 1/3.06"
   Sensor Pixels Effective (H) : 4096, Sensor Pixels Effective (V) :3048
   Total Pixels: 13,000,000 pixels
   Ports
      HDMI Input: VGA input - HD15, Audio line out - 3.5 mm jack, VGA output - HD15
      HDMI Output: USB 2.0 - 4 pin USB Type A, USB 2.0 - Mini-USB Type B
Cables Included: 1 x mini-USB to USB cable - external - 6 ft, Power adapter, External
Nominal Voltage: AC 120/230 V, 50/60 hertz
System Requirements
OS Required: Apple MacOS X 10.10 or later, Microsoft Windows 7 / 8 / 10 (32/64 bits), Google Chrome OS 29 or later
Included Accessories: Remote control

ITEM 20   WIRELESS PRESENTATION SYSTEM

Aver AW200 Wireless Presentations System receiver with (2) AP200 transmitters, or approved substitution

Quantity: FIVE (5)

System shall share presentations securely via Wi-Fi or Ethernet. Capable as standalone or network wireless presentation system. No app required. Supports Split-Screen display up to four sources.

Rx Output

HDMI Out x 1 (up to 4096 x 2160p 24Hz, 3840 x 2160p 30Hz, 1920x1080p 60Hz)

Tx Interface   HDMI in, Mini DP in, Gigabit Ethernet, USB for Mobile devices (iOS)

Rx Interface   HDMI / USB / Gigabit Ethernet

Power Supply AR200 Receiver: DC Power Input or PoE (IEEE 802.3AT)

AP200 Transmitter Pods: USB 2.0 bus power or PoE (IEEE 802.3AT)

Wi-Fi   IEEE 802.11ac 5GHz, WPA2-PSK, 50 ft. (Max) recommended, IEEE 802.11ac 5GHz, WPA2-PSK, 50 ft. (Max) recommended

Native Protocol Supported:

Apple Airplay & Google Cast, Supports iOS USB wired mirror

Mirror max Resolution   Tx: 4K in , Rx: 4K out

Power Requirement   AR200 Receiver: 5V / 2A   AP200 Transmitter Pods: 5V / 1A

ITEM 21   USB CAMERA SWITCHER

Inogeni Cam 300 4x1, or approved substitution

Quantity: EIGHT (8)

2 HDMI / 2 USB Inputs, HDMI and USB 3.0 Outputs, Input up to 1080p30 Video over HDMI, MJPEG and H.264 Video over USB, HDMI/USB Output up to 1080p60

Front Panel Switch Controls, Ethernet and RS-232 Device Control

Inputs: 2 x USB 2.0 Type-A, 2 x HDMI type A

Outputs: 1 x HDMI type A, 1 x USB 3.0 Type-B

Other I/O: 1 x Ethernet, 1 x 4-pin Phoenix, RS-232, 2 x USB 3.0 Type-A, host

Video Input Format   USB:, MJPEG, H.264   HDMI: 1080p 30, 720p 60, 480p 60

Audio Input Format   USB: USB camera audio

HDMI - Embedded PCM

    Video Output Format   Up to 1080p 60

    Audio Output Format   Embedded PCM (audio output follows selected video input)

    2 x USB 3.0 Host Ports

ITEM 22   WIRED HEADSET

Focal Listen Professional Headphones, or approved substitution

Quantity: TEN (1O)

Circumaural Closed-Back Design, 22mm Thick Memory Foam Ear Cushions

Low Impedance, High Sensitivity, 16' Coiled Cable with 3.5mm Jack, 4.5' Cable with In-Line Remote and Mic,

Drivers: 1.6" / 40 mm Mylar/titanium-cone drivers

Frequency Range: 5 Hz to 22 kHz

Impedance: 32 Ohms

Sensitivity: 122 dB SPL at 1 kHz / 1 Vrms

THD: 0.3% at 1 kHz / 100 dB SPL

Connectors: Headphones: 1/8" / 3.5 mm jack socket with locking mechanism

Cables: 1/8" / 3.5 mm TRRS

Construction Material Silicone headband padding

ITEM 23   **AUDIO MULTI-ZONE AMPLIFIER**

OSD Audio Multi-Zone Amplifier – 80W 12 Channel 6-Stereo Zone System (MX1280), or approved substitution

Quantity: TWO (2)

Independent 6-zone control, Class D, Multi-Channel Amp 6-Zone, 12-Channel, 2U Rack-mountable.
Amplifier Class: Digital Class D
Number of Channels: 12
Power Handling per Channel @ 8 Ohms: 50W(RMS)/ 100W(MAX)
Power Handling per Channel @ 4 Ohms: 80W(RMS)/ 160W(MAX)
Frequency Response: 20Hz to 20KHz + 1.7/-1dB
Impedance: 8 Ohm and 4 Ohm Stable

ITEM 24   **WIRELESS HEADSET**

Sennheiser HSP Essential Omni with EW Wireless Connector (HSPEssOBK), or approved substitution

Quantity: FIVE (5)

Ergonomic stainless-steel headset, Omnidirectional mic capsule, foam windscreen and carry pouch, 3.5mm plug — fits XS Wireless and evolution wireless bodypacks
Microphone Type: Condenser
Compatibility: Sennheiser EW
Connector: Sennheiser 1/8"
Polar Pattern: Omnidirectional
Frequency Response: 20Hz-20kHz
Max SPL: 148dB
Self Noise: 30dB (A weighted)
Output Impedance: 1000 ohms
Cable Length: 4.7 ft.
Weight: .88 oz.

ITEM 25   **HANDHELD WIRELESS MICROPHONE TRANSMITTER WITH MIC CAPSULE**

Sennheiser SKM 100 G4-S Handheld Wireless Microphone Transmitter and Sennheiser MMD 845 Supercardioid Dynamic Capsule, or approved substitution

Quantity: FIVE (5)

Interchangeable Mic Capsule System, 1680 Auto-Scan Frequencies, Adjustable Gain Control, 8-Hr AA Batteries, compatible with Sennheiser EM 100 G4 Wireless Receiver.
Wireless Transmission: Analog UHF
RF Frequency Band A:, 516 to 558 MHz,
RF Bandwidth: 42 MHz

TECHNICAL SPECIFICATIONS

Frequency Step Size: 25 kHz
Max Operating Range: 330' / 100.6 m
Encryption: Yes
Modulation: Wideband FM
Transmitter: Handheld, RF Output Power 30 mW
Muting: Mute Switch
Audio Input Level: 3 V RMS
Gain Range: 48 dB (6 dB Steps)
Frequency Respons: 80 Hz to 18 kHz
Antenna: 1 x Internal, Fixed (Handheld)
Display & Indicators: 1 x Backlit LCD (Audio Level, Battery Status, Channel, Group, Mute, Signal Strength)
Housing: Metal
Form Factor: Handheld Capsule
CapsuleDynamic, Polar Pattern: Supercardioid
Maximum SPL 154 dB SPL, Sensitivity 1.6 mV/Pa
Compatible Transmitters: Sennheiser: SKM 100 G3, SKM 100 G4, SKM 2000, SKM 300 G3, SKM 300 G4, SKM 500 G3, SKM 500 G4, SKM 5000, SKM 5200, SKM 6000, SKM 9000, SKM D1/AVX, SL Handheld DW

ITEM 26   **SDI SWITCHER**

Blackmagic Design ATEM Television Studio Pro 4K Live Production Switcher (SWATEMTVSTU/PRO4K), or approved substitution

Quantity: ONE (1)

8-Channel 12G-SDI Switcher, HD and UHD Signal-Compatible,Re-Sync on All Inputs, UHD 4K Multiview Output, CCU Control
Inputs- 12G/HD/SD-SDI: 8 x BNC, Audio: 2 x 3-Pin XLR, Reference: 1 x BNC
Outputs - 12G/HD/SD-SDI: 8 x BNC, Auxiliary: 1 x BNC, Program: 1 x BNC, Multiview: 1 x BNC, Multiview: 1 x HDMI, Headphone: 1
Other - 1 x RS-422, 1 x Ethernet, 1 x USB 2.0
Format Support: UHD Video:,2160p: 59.94/50/29.97/25/24/23.98
HD Video: 1080p: 59.94/50/29.97/25/24/23.98, 1080i: 59.94/50, 720p: 59.94/50
Input Resolutions for Computers, 2160p: 59.94/50/30/29.97/25/24/23.98, 1080p: 59.94/50/30/29.97/25/24/23.98, 1080i: 60/59.94/50, 720p: 59.94/50
SDI Compliance: 292M, 424M, 2081, 2082
Video Sampling: 4:2:2, 10-Bit
Color Precision: 4:2:2, 10-Bit
Color Space: 4:2:2 YUV
Processing Delay: 6 Lines
Audio Mixer: 12-Input x 2-Channel Mixer
Keyers Upstream: 1 with Chroma/Linear/Luma Key, Downstream: 2
Chroma: 1, Linear/Luma: 3
Transition (Stinger/DVE): 1
Layers Up to 5

Generators: Pattern: 2, Color: 2
DVE: Border and Drop Shadow: 1
Number of Windows: Multiview: 1 x 10, Routable: 8, Fixed, Program, and Preview: 2
Media Players: 2 (Non-Volatile Flash Memory)
Media Pool Still Image Capacity: 20 (with Fill and Key)
Media Pool Still Image Format: PNG, TGA, BMP, GIF, JPEG, TIFF
Channels: Fill and Key for Each Media Player
Media Pool Clip Capacity: 2 (with Fill and Key / Shared Pool)
Media Pool Clip File Format: TGA Sequence
Media Player Clip Length:
UHD 4K: 90 Frames
1080 HD: 360 Frames
720 HD: 1440 Frames
Media Pool Audio File Format: WAV, MPE, AIFF
Operating System Support: MacOS 10.12 Sierra, MacOS High Sierra 10.13 or Higher
Windows 8.1 or 10

ITEM 27   <u>**SDI/HDMI CONVERTER WITH POWER SUPPLY**</u>

Blackmagic Design Micro Converter BiDirectional SDI/HDMI with Power Supply (CONVBDC/SDIHDWPSU), or approved substitution

Quantity: FOUR (4)

Connections - SDI Video Inputs, 1 x SD, HD or 3G-SDI.
SDI Video Outputs, 1 x SDI loop out.
HDMI Outputs, HDMI Type A out.
Multi Rate Support, Auto detection of SD or HD.
SDI Video Standards - 525i59.94 NTSC, 625i50 PAL
HD Video Standards
720p50, 720p59.94, 720p60 , 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p47.95, 1080p48, 1080p50, 1080p59.94, 1080p60, 1080PsF25, 1080PsF29.97, 1080PsF30, 1080i50, 1080i59.94, 1080i60
2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2Kp29.97 DCI, 2Kp30 DCI, 2Kp47.95 DCI, 2Kp48 DCI, 2Kp50 DCI, 2Kp59.94 DCI, 2Kp60 DCI
2KPsF25 DCI, 2KPsF29.97 DCI, 2KPsF30 DCI
SDI Compliance - SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 424M, SMPTE 425M
SDI Video Rates - SDI video connections are switchable between standard definition, 720p 1080i, 1080p and DCI high definition.
SDI Color Precision - 4:2:2
SDI Color Space - YUV
SDI Auto Switching - Automatically detects SD, HD and level A or B for 3G-SDI.
HDMI Video Standards
525i29.97 NTSC, 625i25 PAL - 720p50, 720p59.94, 720p60 - 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p47.95, 1080p48, 1080p50, 1080p59.94, 1080p60 1080i50, 1080i59.94, 1080i60

ITEM 28   USB WIRELESS MIC

Samson XPD2 Lavalier USB Digital Wireless System, or approved substitution

Quantity: THREE (3)

2.4 GHz, portable wireless bodypack transmitter, lavalier microphone, USB stick receiver
100' line of sight range, Working Frequency 2.404~2.476 GHz, Audio Frequency
Response 20 Hz to 17 kHz (-1 dB), Signal to Noise >85 dB,Transmiter - Input Connector
Mini-XLR (P3), 2 x AA (LR6) alkaline batteries, Battery Life 20 hours
Receiver - Max Audio Output Level Analog 9 dBu, Headphone Output 22 mW into 16 or
32 Ohms, Operating Voltage 5 VDC.

ITEM 29   XLR M TO XLR F MICROPHONE CABLE

XLR M to XLR F Microphone Cable - 6' (1.8 m), Kopul Studio Elite 4000 Series, or approved substitution

Quantity: THREE (3)

98% braided shield, 24 AWG oxygen-free stranded copper inner core, Cast zinc shell and
chuck style strain relief. Twin-conductive PVC inner shielding
Connector 1: 3-Pin XLR Male, Connector 2: 3-Pin XLR Female, Cable Length 6' / 1.8 m.

ITEM 30   18X8 USB AUDIO/MIDI INTERFACE

Focusrite Scarlett 18i8 18x8 USB Audio/MIDI Interface (3rd Generation), or approved substitution

Quantity: THREE (3)

Form Factor - Tabletop,
Channels of I/O Analog: 8 Input / 6 Output at 192 kHz. Digital: 10 Input / 2 Output, Max
Sample Rate/Resolution 192 kHz / 24-Bit, 4 Mic Preamps, Input Level Adjustment - 4 x
Knob, Mic/Line/Hi-Z: Switchable per Channel, Phantom Power +48 V - Selectable On/Off
on 4 Channels
Analog Audio I/O
2 x Combo XLR-1/4" TRS Balanced/Unbalanced Mic/Line/Hi-Z Input (Front Panel),
2 x Combo XLR-1/4" TRS Balanced Mic/Line Input (Front Panel)
4 x 1/4" TRS Balanced Line Input,
4 x 1/4" TRS Balanced Line Output,
2 x 1/4" TRS Unbalanced Headphone Output (Front Panel)
Host Connection / USB 1 x USB Type-C (USB 2.0)
24-Bit (AD/DA Conversion)

ITEM 31   SHOTGUN MICROPHONE KIT / SHOCKMOUNT / XLR CABLE

Rode NTG2 Shotgun Microphone Kit with Auray DUSM-1 Shockmount and XLR Cable, or approved substitution

Quantity: THREE (3)

Battery or phantom-powered shotgun microphone, hot shoe/pole shockmount, and a short XLR cable with one right-angled and one straight connector. Form Factor Stand/Boom Mount, Sound Field - Mono, Capsule - Condenser, Diaphragm 0.5" / 12.70 mm, Polar Pattern - Supercardioid Orientation, High-Pass Filter 80 Hz, 12 dB/Octave, Windscreen Foam

All questions pertaining to the Technical Specifications must be submitted per the instructions in the QUESTIONS AND REQUESTS FOR CLARIFICATION section of the NOTICE TO BIDDERS. The submittal of a bid shall be considered as acceptance of the specifications as published.

Any manufacturer providing equal or better quality to the Technical Specifications will be considered for acceptance by the University upon submission of a written request for approval with manufacturer's literature or brochures containing technical data on the proposed items. The University may, at its discretion reject or deny any product offer that it deems to not be equivalent, and the findings in this regard shall be final and binding.

SPECIAL PROVISIONS

1. SCOPE
    The Furnishing and Delivery of Multimedia Equipment for University of Hawaii Maui College shall be in accordance with the terms and conditions of IFB No. 22-4026 and the General Provisions dated September 2013, included by reference. Copies of the General Provisions are available at the Office of Procurement Management, 1400 Lower Campus Road, Room 15, Honolulu, Hawaii 96822 or the General Provisions may be viewed at: https://www.hawaii.edu/procurement/vendor-info/terms-and-conditions/general-provisions-for-goods-and-services/

2. AUTHORITY
    IFB No. 22-4026 is issued under the provisions of the Hawaii Revised Statutes, Chapters 103 and 103D. All prospective Bidders are charged with presumptive knowledge of all requirements of the cited legal authorities. Submission of a valid executed bid by any prospective Bidder shall constitute an affirmation of such knowledge on the part of such prospective Bidder.

3. TECHNICAL REPRESENTATIVE OF THE PROCUREMENT OFFICER (TRPO)
    The Technical Representative of the Procurement Officer is Mike Slattery, Media Center Research Support, telephone (808) 984-3217, email: slattery@hawaii.edu

4. AVAILABILITY OF FUNDS
    Offerors are advised that the award of this contract is contingent upon availability of funds. If funds are not available, the University reserves the right to cancel the IFB or not award individual items due to funding limitations.

5. DISCONTINUED MODELS
    If the model specified is discontinued prior to delivery, Contractor shall provide to the University a letter from the manufacturer, on company letterhead, stating the model number being discontinued, the replacement manufacturer and model number, and verifying statement that the replacement meets or exceeds the minimum Technical Specifications. Contractor shall furnish, deliver and install the replacement model at the original bid price.

6. MANUALS AND INSTRUCTIONS
    Contractor shall provide the University with operating and maintenance manuals of the equipment furnished under this contract.

7.   <u>DELIVERY</u>

The physical sites at which the goods shall be delivered are as follows:

- University of Hawaii Maui College
  310 W. Kaahumanu Avenue
  Kahului, HI 96732-1617

- University of Hawaii Maui College
  Molokai Education Center
  375 Kamehameha V Highway
  Kaunakakai, HI 96748

- University of Hawaii Maui College
  Lanai Education Center
  329 7th Street
  Lanai City, HI 96763

Refer to **EXHIBIT – SHIPPING INFORMATION** for specific details.

Contractor shall contact the Technical Representative to coordinate deliveries.

8.   <u>DAMAGED/DEFECTIVE GOODS</u>

The University reserves the right to reject damaged or defective goods, which shall be promptly and satisfactorily replaced by the Contractor at no additional cost of the University.

9.   <u>WARRANTY</u>

Goods furnished shall be new in accordance with the Technical Specifications. Used or refurbished goods will not be accepted. Contractor shall warrant that all goods furnished under this contract shall be guaranteed for the Manufacturer's Standard Warranty from date of acceptance. Contractor shall replace and/or repair any defective goods at no cost to the University during the warranty period, provided such defects are not due to abuse or negligence on the part of the University.

10.   <u>PAYMENT</u>

Contractor shall be remunerated upon final acceptance and submission of a properly executed original invoice and ONE (1) copy, indicating the contract number, to University of Hawaii Maui College, Business Office, 310 W. Kaahumanu Avenue, Kahului, Hawaii 96732.

EXHIBIT A

SHIPPING INFORMATION

LOCATION #1

University of Hawaii Maui College
310 W. Kaahumanu Avenue
Kahului, HI 96732-1617

Item #	Description	Qty
1	Tracking USB PTZ Camera / Wall Mount	27
2	Camera Wall Mounts	14
3	Video Conference Mic/Speaker/Camera Bar	3
4	85" Interactive LED Display	15
5	85" 4K LCD TV	6
6	90" LCD TV	4
7	Mobile Flat/Curved Panel Floor Stand	27
8	90" Display Wall Mount	2
9	Projector Mount	9
10	Ceiling Drop-in Speakers (Pair)	22
11	70V Mono Amp – 60 Watts Amp	14
12	Speaker Cables	5
13a	Wall Mount Speakerphone	21
13b	Network Hub	8
14	Wall Mount Speaker	10
15	Active Optical Cable, 75 ft	14
16	Active USB 2.0 Extension Cable	36
17	USB Extender	12
18	HDMI Cable, M-M, 35ft	23
19	Document Camera	48
20	Wireless Presentation System	5
21	USB Camera Switcher	6
22	Wired Headset	10
23	Audio Multi-Zone Amplifier	2
24	Wireless Headset	5
25	Handheld Wireless Microphone Transmitter with MIC Capsule	5
26	SDI Switcher	1
27	SDI/HDMI Converter with Power Supply	4
28	USB Wireless Mic	3
29	XLR M to XLR F Microphone Cable	3
30	18x8 USB Audio/MIDI Interface	3
31	Shotgun Microphone Kit / Shockmount / XLR Cable	3

LOCATION #2

University of Hawaii Maui College
Molokai Education Center
375 Kamehameha V Highway
Kaunakakai, HI 96748

Item #	Description	Qty
1	Tracking USB PTZ Camera / Wall Mount	4
3	Video Conference Mic/Speaker/Camera Bar	3
4	85" Interactive LED Display	2
7	Mobile Flat/Curved Panel Floor Stand	2
10	Ceiling Drop-in Speakers (Pair)	5
11	70V Mono Amp – 60 Watts Amp	3
13a	Wall Mount Speakerphone	4
13b	Network Hub	2
15	Active Optical Cable, 75 ft	2
16	Active USB 2.0 Extension Cable	4
17	USB Extender	3
18	HMDI Cable, M-M, 35ft	2
19	Document Camera	5
21	USB Camera Switcher	2

LOCATION #3

University of Hawaii Maui College
Lanai Education Center
329 7th Street
Lanai City, HI 96763

Item #	Description	Qty
1	Tracking USB PTZ Camera / Wall Mount	2
3	Video Conference Mic/Speaker/Camera Bar	1
5	85" 4K LCD TV	1
7	Mobile Flat/Curved Panel Floor Stand	1
13a	Wall Mount Speakerphone	1
13b	Network Hub	1
15	Active Optical Cable, 75 ft	2
16	Active USB 2.0 Extension Cable	2
17	USB Extender	2
18	HMDI Cable, M-M, 35ft	2
19	Document Camera	2
21	USB Camera Switcher	2

EXHIBIT A