

Audio Presenter Hub Advanced 4K Audio & Video Presentation and Annotation System

- A. Furnish and install a 4K audio/video presentation and annotation system. The system shall be capable of displaying high-resolution 4K sources on a presentation display or TV that are shared from video and computer sources, as well as mobile devices such as smartphones or tablets. The system shall be capable of providing annotation overlays that can be controlled wired and wirelessly by various devices to make live annotations on the presentation content. The system shall provide audio conferencing functionality that allows to make calls with a computer, laptop or mobile devices via Bluetooth®. The system shall be capable of connecting to external microphones, amplifiers and speakers.

A1. Base Unit

The base unit shall employ a graphics processing unit (GPU) that provides high-resolution video and annotation overlay through one HDMI output port to be connected to a 4K presentation display or projector. The unit shall provide one HDMI and five USB 3.0 inputs that allow to connect audio, video and presentation devices via HDMI or USB 3.0 connection such as video players, computers, laptops, USB cameras, microphones and speakers. The HDMI and USB 3.0 inputs shall be capable of connecting video sources with a resolution up to 3840 x 2160 @ 24/25/30 fps. The unit shall provide wired and wireless connectivity via a 10/100 Base-T Ethernet port and a WiDi antenna for sharing content from computers and mobile devices via Apple AirPlay®, Miracast™ or Google Chromecast. The 10/100 BaseT Ethernet port shall also provide streaming of the presentation into the Ethernet network using the H.264 or H.265 video codec. The HDMI output shall deliver video with a resolution up to 3840 x 2160 @ 60 fps to a presentation display or projector. The unit shall be able to stream content from connected HDMI, USB or network sources into software applications such as Zoom®, GoToMeeting™ or Skype™ soft-codec video conferencing. The base unit shall be capable of managing calls made with a computer, laptop or mobile device such as smartphones or tablets via a wireless Bluetooth® connection through a connected Bluetooth® wireless access point. The unit's Bluetooth® connectivity shall provide control of volume and mute through the wirelessly connected computer, laptop or mobile device. The unit shall employ an audio mixer with DSP functions, including acoustic echo cancellation. The mixer shall include two microphone inputs that accept balanced or unbalanced analog signals at a six pole Phoenix style connector and provide a +48VDC phantom power. The mixer shall include two line audio inputs that accept balanced or unbalanced analog signals at a six pole Phoenix style connector. The mixer shall provide two line audio outputs that is a balanced or unbalanced analog signal at a six pole Phoenix style connector. The unit shall employ a class D stereo amplifier delivering 25 watts power output per channel at 4 or 8 ohms (selectable) at two pole Phoenix style connectors. The unit's USB 3.0 ports shall allow for connecting USB microphones and speakers. The unit shall support connection of wireless Bluetooth® and WiFi speakers. The unit shall have an RJ-45 port that allows for connection to the included Bluetooth® wireless access point. The unit shall have the capability of recording videos and presentations and saving annotated images to a USB storage device such as a flash drive as well as printing annotated images to a printer and sharing annotated images over a TCP/IP network via Microsoft Windows file sharing. The unit shall allow for web browser configuration and printing or sharing annotated images over a TCP/IP network. The Ethernet port shall allow for control of the unit through third-party control systems. The unit shall be powered by an external 19VDC, 6.7A power supply. The unit shall include a two pole Phoenix style connector for remote power. The unit shall be housed in a 19" /1 RU rack-mountable enclosure.

A2. Bluetooth® Wireless Access Point / Transceiver

The transceiver unit shall employ a 4.2 aptX HD long-range transceiver that supports 24-bit, high-resolution Bluetooth® audio. The unit shall provide bidirectional Bluetooth® connectivity to connect a computer, laptop or mobile device wirelessly to the base unit. The unit shall provide up to 100-foot/30-meter sphere of Bluetooth® broadcast coverage and shall eliminate signal interference between the

conference area and the base unit. The unit shall automatically disconnect the computer, laptop or mobile device once the call has ended to prevent unwanted and unexpected audio broadcasts from private phone calls. The unit shall have an RJ-45 port that allows for connection to the base unit. The unit shall be powered by the base unit over a CAT6 cable and shall allow for being mounted on a ceiling or wall.

A3. Control Devices

The base unit shall provide wired and wireless connectivity to various third-party controllers to change settings, switch video sources, and to make live annotations on the video or presentation content. The unit shall provide a wireless Bluetooth® connection to allow for video source switching, annotation and control of presentation slides (forward and return) by mobile devices such as smartphones or tablets using the Presenter Control iOS/Android app. Two DB-9 RS-232 ports shall allow to annotate with third-party controllers such as touch screens. Five USB 3.0 ports shall allow to connect USB devices to make annotations such as HID compliant touch screens, electronic whiteboards, drawing tablets, keyboards or mouse devices using the USB 3.0 inputs. The unit shall provide a multi-functional menu on the connected display that can be controlled by any control devices that are connected locally via HDMI, USB or locally as well as remotely via web browser using an Ethernet network connection. Users who connect to the unit via web browser shall be able to see the unit's video stream. The unit shall have the capability to enable a 6-digit security number (PIN) to prevent users without the PIN from viewing the video stream in their browser or app. The menu shall provide options for marking, annotating, highlighting, erasing, defining drawing colors, selecting video sources, recording videos and saving or printing images. The menu shall also allow to configure network connection and video output aspect ratio and resolution.

Williams AV, LLC products are specified.

B. Furnish and install the following:

1. Williams AV Audio Presenter Hub VP S2 with power supply and one (1) B-WAP Bluetooth® transceiver (qty: 1ea.)
2. Williams AV Audio Presenter Hub Bundle VP SY2 with one (1) B-WAP Bluetooth® transceiver, two (2) 6.5" two-way in-ceiling speakers, two (2) low profile, unidirectional boundary microphones (Qty: 1 ea.)

Contact Williams AV for a quote:

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A&E Specs are available in Microsoft Word format. Call Williams AV.