Executive Meeting Room Audio Visual requirements

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Summary

To provide an executive meeting room with video calling capabilities, resident PC as well as wired and wireless laptop connectivity.

Display

Single 65"/ 75" Display screen, 4K resolution. The screen must be supplied with a suitable wall mounted security bracket.

PC

Lancaster University will provide a 3U PC to be installed in the AV rack. This PC will be used to provide video calling capability for the meeting room. A wireless keyboard and mouse will be provided as well as a desktop monitor which will be located on top of the AV rack location.

Wired laptop inputs

One HDMI wired laptop input is required to be presented onto the meeting table.

Ability for a laptop to access camera feed and microphone audio feed via single USB connection presented on the meeting table for use with video calling solutions.

Wireless BYOD connectivity

A wireless connection device should be provided to allow mobile devices to be connected to the display. The device should connect to the LU network and must not rely on using an internal wireless router for connections to devices. The device must be supplied with an Educational Perpetual License

Video switching

A suitable HDCP compliant video switcher must be provided to allow all sources to be switched to the main display screen. One spare input must be available for future expansion. The video switcher must be 4K compatible.

Control

A 7" touch panel based control system will be provided to control all of the audio visual equipment in the room. The touch panel must be a wired table top version. Touch panel design must adhere to the Lancaster style of touch panels.

The control system should connect to a controller of appropriate capability for the features of the room. The control system should provide a means of controlling all inputs and outputs of the system as well as interfacing to elements of the room such as lighting.

It must be possible to connect a second touch panel device to the system without the need for Lancaster University to make alterations to the control code.

RMS monitoring of the room equipment and source usage is also required.

Audio

One or multiple Ceiling Mounted Beam Forming Microphones sufficient to cover the whole room are required for video calling so must provide a single mixed output to the resident PC in the AV rack as well as provide a USB connection for laptops. The ceiling microphones should also provide a voice signal to the hearing loop system. Sufficient microphones to cover the table area must be supplied and connected to a suitable mixer to provide the necessary outputs.

A Microsoft Teams Certified DSP must be specified. The USB feed must switch between either the PC or a laptop with users able to select which device receives the active USB connection. All microphones must be fully EQ'd for the room with appropriate gain structures applied to eliminate feedback.

No additional room voice reinforcement is necessary.

Wall speakers or ceiling speakers should be of good quality and be supplied with a full back-box and all necessary baffling. Gain structure, appropriate EQ and delays should be used dependent on the space, to ensure a consistent audio experience.

Camera

A minimum of 2 x PTZ USB cameras for video calling must be specified. The cameras must be wall or ceiling mountable. The cameras will be connected to the resident PC in the AV rack as well as provide a USB output for laptops. PTZ controls must be present on the touch panel. The camera must also have inbuilt auto tracking feature that can be turned on/ off from touch panel.

Microsoft Teams room solution option

A Cost option of a Microsoft Team certified room solution should also be provided. The room solution must provide camera, microphones suited to the size and layout of the room, speakers and control panel. The solution is to be used with the specified 65"/ 75" Display screen and must allow a laptop to be connected.

If selected this cost option should replace the need for the following equipment – Lancaster University PC, wired inputs, Wireless BYOD, Video Switching, Remote Monitoring & Control, Audio and Camera.

Assistive hearing system

An inductive loop is required in the room, this should provide a voice signal as captured by the ceiling microphones and a mix of the program sound. The finished and tested hearing loop system shall comply with all current legislation.

Programming

The source code must be handed to ISS upon completion for the purposes of backup and restoration when required.

Automatic shutdown of the system should be included if the system has not been used for 3 hours, not used means no buttons pressed on the control system, no motion detected by the panel motion sensor (if fitted) and no active video source.

If equipment varies Lancaster University will confirm full functionality of the control system. Before sign off can be agreed the system will undergo full user testing as shown in appendix C.

All firmware must be the latest approved versions as indicated by Lancaster University at the time of install.

All code is subject to agreed change control procedures and must not be modified without the express agreement and scheduling by Lancaster University.

Remote monitoring and control

The control system must interface with the universities room management system (RMS) and must provide a minimum of:

- Display screen power status
- Source input usage
- The status of all connected devices
- Remote control of the touch panel if present
- Power usage
- Error statuses of all connected devices
- Current volume level

The contractor must liaise with ISS to determine the exact requirements of the integration required.

Installation requirements

All AV switching and control equipment will be located in a suitable AV rack. A suitable rack mount enclosure must be supplied to fit within the space provided.

All cabling should run in suitable containment above the suspended ceiling, in wall voids or under the floor. Permitted containment options include copex, cable baskets or concealed trunking. **Surface Mounted trunking and visible cable snakes will not be permitted.**

All cables must be labelled at both ends with the following information: Signal type, Source, Destination, e.g. Sig - HDMI, Src – PC, Dest – Switch Input 1

In all cases the floor box should be able to be fully closed; this may necessitate right angle connectors for shallow floor boxes.

Final Build schematics showing all devices and connectivity must be provided for video signals, audio signals, control signals as well as the rack build layout.

Manufacturer, model, serial numbers and MAC Addresses of all equipment should be provided to Lancaster University as part of the handover process.

A 5 year warranty is required on all new equipment.

Physical space

The room should contain one analogue clock without second hand affixed to the wall opposite the main display. The clock must be PoE powered and take a time signal using an NTP Server.