



Trinity University's new state-of-the-art CSI building has advanced multimedia classrooms designed to encourage student participation. One of the premier classrooms is called the Innovation Center and consists of 3 areas: Teaching, Design Studio, and Lounge. These three areas are controlled individually or combined together under one system. Trinity not only engaged TEKVOX to provide control software and audio programming, but also installed the unique TEKVOX products to provide easy installation and maintenance.

Included in this system is a CobraNet audio system which allows audio to be inserted or extracted anywhere in the rooms. Users only need to connect an audio expansion box into a floor box network connection and select its routing on the main touchscreen.

All displays are controlled and monitored by TEKVOX TEK 2s using the TekEzLink™ protocol. TekEzLink provides for easy control of the displays and the ability to change out displays in the future without having to modify any control software. The TEK 2s also provide security monitoring, remote monitoring, and management of the displays. Another feature of the TEK 2 allows for a control portal into the room using TekManager™ and TekEnterprise™. With TekEnterprise, a user can request control of a room by a schedule. This in turn, allows a user to log in using a web browser and take control from any device, such as a smartphone. Once the users' time expires, they no longer have control of the room.

The main component of the system is designed around a 32x32 HDMI 1080P matrix switcher largely using HDBaseT inputs and outputs. Most displays can only support 1080P and only the Teaching Area supports 4K resolutions. Any input can be routed to any display. This left a dilemma of how to route 4K sources from the Teaching Area through the system. To solve this issue, TEKVOX supplied 4K HDBaseT transmitter and receiver pairs along with the new TEK 4KDS-1 1080P scaler. This unique device provides for two outputs; one that mirrors the input and a second output that up-scales or down-scales to 1080P/60. Unlike other down-scalers that only convert horizontal resolution, the TEK 4KDS-1 provide for full scaling of any source to 1080P/60. These low cost horizontal scalers do not work on most displays.

The Teaching Area allows an instructor to display any source on two 4K ultra high definition displays. These displays not only allow 4K content to be displayed, but also improves the image quality of their 1080P sources. Operation of the system is provided by an easy-to-operate iPad GUI and can be scheduled using TekEnterprise. A 4x4 4K HDMI Matrix is used to display local content from the podium. The content is then routed to a TEK 4KDS-1 where the mirror out is sent to the 4K display on HDMI input 1. This input is then selected by the TEK 2. If the instructor sends the content to the Design Studio, the scaled output of the TEK 4KDS-1 is routed by the 32x32 Matrix to all Design Stations and all displays are powered on by their TEK 2.

An instructor can view any Design Station on the podium confidence monitor by just selecting a Design Station at any time. Once selected, a Design Station can be sent to the Teaching Area displays, the Lounge, or all Design Stations.

Design Stations are autonomous; the system does not need to be turned on to power them. If the system is not on, a user only needs to connect to the HDMI input and the display is automatically powered on. Once the HDMI connection is disconnected, the TEK 2 starts its system-off timer and as soon as it expires, the display powers off.

The Lounge has its own iPad to operate the room. Users can select from the two floor boxes or rack sources such as Apple TV or Blu-ray. When the system is combined from the Teaching Area, the iPad is locked out.

Innovation Design Studio

