# Extron

## **EDUCATION**



## Extron 4K Scaling & Switching Presentation Systems Empower Mt. San Antonio College BCT Active Learning

"Extron products are the time-tested standard for Mt. San Antonio College, and they have everything we need to build, manage, and control our AV systems."

Chris Rodriguez Manager, Technical Services Engineering Mt. San Antonio College

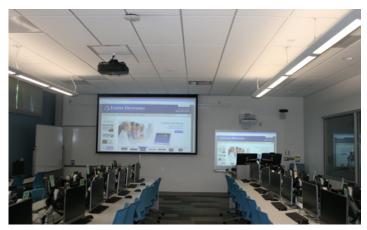
### Challenges

Mt. San Antonio College – Mt. SAC in Walnut, California, decided to design all aspects of their new Business and Computer Technology Complex – BCT in house. The flagship complex consists of three, multi-story buildings that provide a combined 87,000 square feet of learning space. The state-ofthe-art complex includes interactive classrooms, labs with demonstration workstations, a large lecture hall, conference and meeting rooms, and huddle spaces. Mt. SAC brought in Centerpoint Communications to provide integration and commissioning services.

Each room required a high-performance AV system to support a variety of video formats. System components had to fit within a custom ADA-compliant teaching station, and any visible AV equipment had to have minimal aesthetic impact. System control was to be intuitive and allow remote management.

### Solution

Depending on room size and purpose, the system has between one and seven display devices and a variety of sources, including a resident computer, a document camera, and AV connectivity for portable devices. The custom teaching station provides dual monitors, a touch display, and AV connectivity. In labs, each student workstation includes a display and



A press on the TouchLink Pro touchpanel's capacitive touchscreen lowers a projection screen in front of or to the side of the whiteboard, depending on room layout.



AV system components had to fit within the ADA-compliant teaching station that Marshall Furniture custom designed for Mt. San Antonio College.



An Extron DTP CrossPoint 4K matrix switcher installed in the lectern provides AV switching, signal extension, audio amplification, and system control processing.

AV connectivity. Specific rooms also offer lecture capture, videoconferencing, and/or annotation capabilities. For system control, a touchpanel is installed at the teaching station or on the wall and the support team can monitor, control, and provide assistance from a remote location.

The AV signal switching and distribution system is centered on an Extron presentation switcher. The design provides an Extron 10x8 or 8x4 DTP CrossPoint 4K Series presentation matrix switcher with 4K scaling capabilities or an IN1608 Series eight-input presentation switcher with DTP<sup>®</sup> twisted pair extension. Model choice depended on room size and resources.

Several rooms are equipped with the Extron Annotator 300. The instructor can make notations on a document or slide image to clarify lesson points and stimulate conversation. Simultaneous video outputs on the Annotator 300 enable the same annotated image to be sent to the switcher for presentation on any combination of room displays. A selection of Extron DTP receivers in wallplate and low-profile form factors support the displays.

To share content from devices connected at the teaching or a student workstation, the design incorporates Extron DTP transmitters. Models include the DTP T HD2 4K 330 HDMI model with input loop-through and the DTP T DSW 4K 333 three-input multi-format switcher with a built-in DTP transmitter. They provide signal extension up to 330 feet (100 meters). An Extron ShareLink 200 N collaboration gateway connected to one of the switcher's HDMI ports enables communication over the wireless network.

For sound reinforcement, the audio amplifier built into the presentation switcher feeds the distributed sound system that includes one or more Extron FF 220T Flat Field<sup>®</sup> ceiling tile speakers. The plenum-rated speaker provides consistent, listening area sound levels and wide coverage, requiring fewer units to support the room.

The rack-mounted IPCP Pro 350 IP Link® control processor and an Extron TouchLink® Pro touchpanel provide in-room system control. For remote system monitoring and operation, the support team uses Extron GlobalViewer Enterprise® – GVE and the iGVE app on their Apple® devices.

#### Results

Centerpoint Communications had all systems up and running in time for the start of the spring semester. Mt. SAC succeeded in designing the BCT complex with easy-to-use Extron AV switching systems that enables instructors to focus on teaching rather than technology.

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