



Overview

The classroom will be used in a higher education environment with the need to display multiple types of electronic media to the students, while maintaining a cost-effective solution. Several different instructors will be using the classroom. Therefore, the system needs to be intuitive and simple to operate. Also, since the system will be used extensively on a day-to-day basis, reliability will be essential.

Room Needs Assessment

Staffing	Various professors and instructors, plus classroom seating for students.
Viewing Distance Range	From 8 feet (2.4 meters) to 45 feet (14 meters).
Display Requirements	Projector with front surface screen located on front wall, to enable viewing of PC and video sources.
Computer Sources and Connectivity	One PC in the lectern with 15-pin HD output at 1280x1024 resolution, plus 15-pin HD and HDMI connectivity for two laptops. HDMI and 15-pin HD connectivity is also provided on the rear wall for two additional laptops. The laptops will be at various resolutions.
Other Sources	One Blu-ray Disc player in lectern, plus one AV input for an iPod® for playing podcasts.
Audio Requirements	Program audio playback of PC content and video sources.
Control Interface	A simple-to-use control interface at the lectern to power the projector on and off, switch inputs into the projector, lower or raise the screen, select input sources into the system switcher, and control the audio output level and Blu-ray Disc player.

System Design Solution

Display System

One ceiling-mounted projector with 3,500 ANSI lumens brightness and RGBHV, composite video, and HDMI inputs. The projector has a native resolution of 1366x1024, and will be projected onto a 120 inch (3 meter) diagonal, 16x9 aspect ratio electric screen. The screen is to be ceiling-mounted and located on the front wall, centered with the seating area.

A PC monitor will be located on top of the lectern. The monitor will be 19 inches (48 cm) diagonal and have a native resolution of 1280x1024.

Sources and Connectivity

The following sources and connections will be provided in the lectern: One PC workstation, one Blu-ray Disc player, one AV input for an iPod, and analog 15-pin HD and HDMI inputs for laptops. In addition, on the rear wall there will be 15-pin HD and HDMI laptop inputs.

Control Interface

The **Extron TLP 700TV TouchLink™ Touchpanel** in conjunction with an **Extron IPL 250 Control Processor** will provide user control of the system, including source selection, source device control, display system control, and audio output level adjustment. The TLP 700MV touch-sensitive control panel will be configured with a simple-to-use and intuitive graphical user interface.

Switching System

An **Extron MLS 608 D SA** system switcher will be the base of the system. The MLS 608 D SA will be rack-mounted inside the lectern. The lectern PC, analog laptop input, HDMI laptop input, and iPod AV inputs will be connected directly to the respective inputs of the MLS 608 D SA. In addition, the Blu-ray Disc player will also be located in the lectern, with its HDMI output connected directly to the MLS 608 D SA. The MLS 608 D SA will enable switching for all sources to the projection display system and speakers. The TouchLink touchpanel will interface with the MLS 608 D SA and IPL 250 to complete the system.

Signal Distribution

An **Extron HDMI 201 A D Twisted Pair Transmitter** and an **Extron HDMI 201 Twisted Pair Receiver** will be used to extend the wall-mounted laptop input to the HDMI input of the MLS 608 D SA. The **Extron MTP 15HD A D Twisted Pair Transmitter** will be used to extend the wall-mounted analog laptop input to the MTP Twisted Pair input of the MLS 608 D SA. The HDMI twisted pair and MTP outputs of the switcher will be used to extend the video signals to the **Extron MTP/HDMI U R Twisted Pair Receiver**, located at the projector.

Audio System

The integrated amplifier of the MLS 608 D SA will provide power for the audio system. **Extron SI 26 Surface Mount Speakers** will be located on each side of the screen for stereo program audio playback.

