



## Overview

This room will be used to train corporate employees. It will also be used to provide demonstrations to clients and business partners. The system needs to be capable of displaying both analog and digital media as an integral part of high quality, professional presentations. Consideration for future additional sources of various types will need to be incorporated into the design. Additionally, the system needs to be highly reliable and simple to operate.

## Room Needs Assessment

<b>Staffing</b>	Various presenters and instructors, with classroom seating for audience attendees.
<b>Viewing Distance Range</b>	From 8 feet (2.4 meters) to 65 feet (20 meters).
<b>Display Requirements</b>	Projector with front surface screen located on front wall, to enable viewing of PC and video sources.
<b>Computer Sources and Connectivity</b>	One PC workstation at the lectern with HDMI output at 1280x1024 resolution, 15-pin HD inputs for laptops at the lectern and on the rear wall, DVI /HDMI inputs for laptops at the lectern and on the rear wall. The laptops will be at various resolutions.
<b>Other Sources and Connectivity</b>	One Blu-ray Disc player in the lectern, plus HDMI and auxiliary AV inputs.
<b>Audio Requirements</b>	The system needs to provide program audio playback of PC content and video sources. Additional needs include sound reinforcement for a lectern microphone, a wireless lavalier microphone, and a handheld wireless microphone.
<b>Control Interface</b>	A simple-to-use control interface is needed at the lectern to power the display on and off, control source switching, lower or raise the screen, and control audio output levels and the Blu-ray Disc player.

## System Design Solution

### Display System

One ceiling-mounted projector with 5,000 ANSI lumens brightness and an HDMI input. The projector has a native resolution of 1366x1024, and will be projected onto a 133 inch (338 cm) diagonal, 16x9 aspect ratio electric screen. The screen will 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, an auxiliary AV input, analog 15-pin HD and DVI inputs for laptops, and an HDMI input. In addition, on the rear wall there will be 15-pin HD and HDMI inputs for laptops.

### Control Interface

An **Extron TLP 350CV TouchLink™ Touchpanel** will provide user control of the system, including source selection, source device control, display system control, and audio output level adjustments. The **TLP 350CV** touch-sensitive control panel will be configured with a simple-to-use and intuitive graphical user interface. The **Extron IPL 250** Ethernet Control Processor will integrate the TouchLink panel with non IP Link-equipped devices.

### Switching System

The **Extron SMX 200** Modular Multi-Plane Matrix Switcher, loaded with an **SMX 84 HDMI** board and an **SMX 84 A** audio board will facilitate switching and routing of the various sources to the displays and audio system. The lectern sources shall be pre-switched and scaled at the lectern using an **Extron DVS 605 A** HDCP-compliant scaler.

### Signal Distribution

**Extron DTP HDMI 230**, **MTP T 15HD A**, and **HDMI 201 A D Tx** Twisted Pair Transmitters and Receivers will be used to extend the video signals from the lectern and wallplates to the rack equipment, and from the rack equipment to the displays.

### Audio System

The **SMX 84 A** audio I/O board will enable distribution of the source audio signals to the program audio system. This system will use an **Extron XPA 1002** Stereo Power Amplifier and two **Extron SI 28** Surface Mount Speakers located on each side of the screen. Speech reinforcement will be accomplished by inserting the lectern, wireless lavalier mic, and wireless handheld microphones into an **Extron DMP 64 ProDSP™** Digital Matrix Processor. The DMP 64 will then feed an **Extron XPA 2001** Mono Power Amplifier and six **Extron SI 26CT** Ceiling Speakers.

