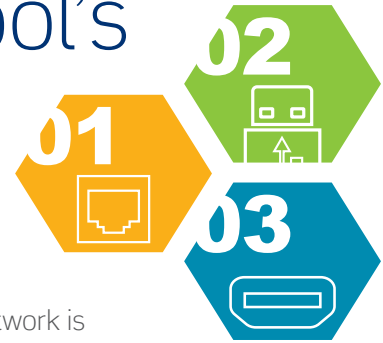


# 3 Methods for Extending the Life of a School's IT/AV Network



An up-to-date audiovisual network is a crucial component for any classroom. Sound and video help capture the attention of students so they learn and retain more information. To better engage students, teachers need to have access to enhanced audiovisual solutions, and be able to easily extend HDMI®, VGA, and USB signals from their desks to the latest devices anywhere in the room. But it's also important to consider the financial burdens typically associated with network upgrades and expansions. Schools need to reduce expenses by maximizing the life of their AV network.

With IT/AV signal extension, schools can extend the life cycle of their audiovisual network while supporting large-format displays throughout lecture halls, libraries, classrooms, labs, and other learning environments. HDBaseT™ 5Play™ technology allows schools to use a category-rated cable infrastructure to carry the high-bandwidth signals required for high-resolution displays across distances up to 100 meters (328 feet), greatly exceeding the capability of passive HDMI cables at 35 feet or less. And since an HDBaseT system is built on a category-rated permanent link, simple device swaps allow schools to perform easy, cost-effective upgrades without replacing their entire AV network infrastructure, saving time and money.

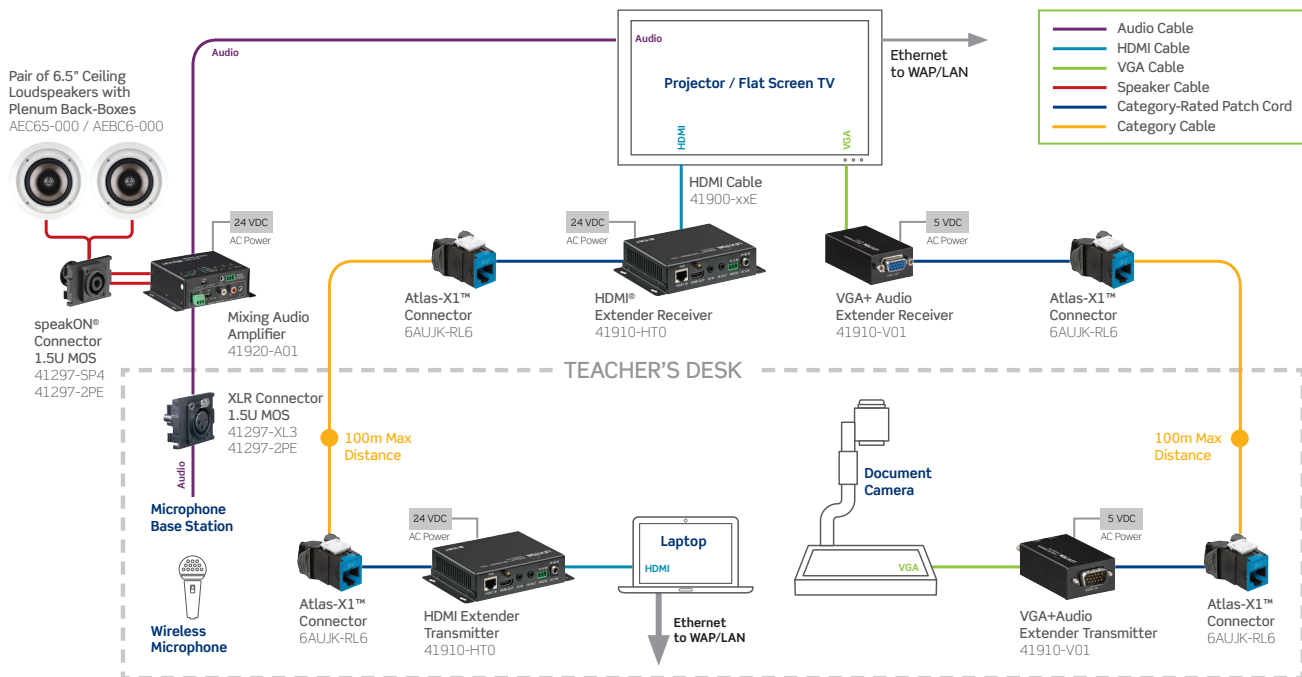
There are a number of ways in which IT/AV technologies can be deployed in real-world classroom applications. The following scenarios use IT/AV systems to simplify audiovisual controls, reduce equipment expenditures, and extend the life of an AV network to support future technologies.



## Multiple Sources

By running an IT/AV signal over category-rated cable, schools benefit from the reliability and performance associated with a tested, standards-based permanent link. Classrooms can use multiple sources, such as document cameras and laptops, connecting directly to projectors or large-format displays. These displays are already capable of managing video signals from multiple sources, eliminating the need for a dedicated switch and allowing schools to save additional resources by investing in less equipment.

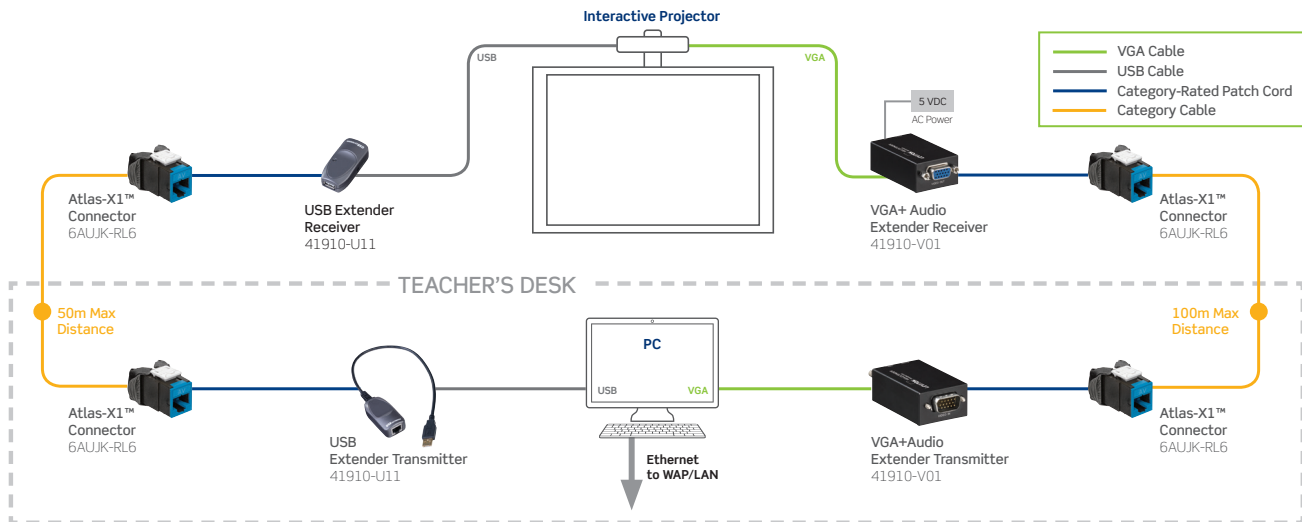
In some cases, audio output is taken from the source. This can limit sound quality and distance. In the diagram below, an audio amplifier connected to the display allows better synchronization of audio and video. Teachers will be able to use the remote control supplied with the display to adjust audio and video outputs, simplifying operation.





## PC to Interactive Projector via USB & VGA Connections

In this scenario, a PC is connected to an interactive projector with a USB connection for control and a VGA connection for audiovisual output. To allow an extended distance (up to 100 meters for VGA and up to 50 meters for USB) between the source computer and the projector, while protecting against signal degradation, a category-rated permanent link is necessary. In addition to signal extension capability, using a permanent link and category cabling prepares the system for easy upgrades to newer technologies, as shown in scenario three.

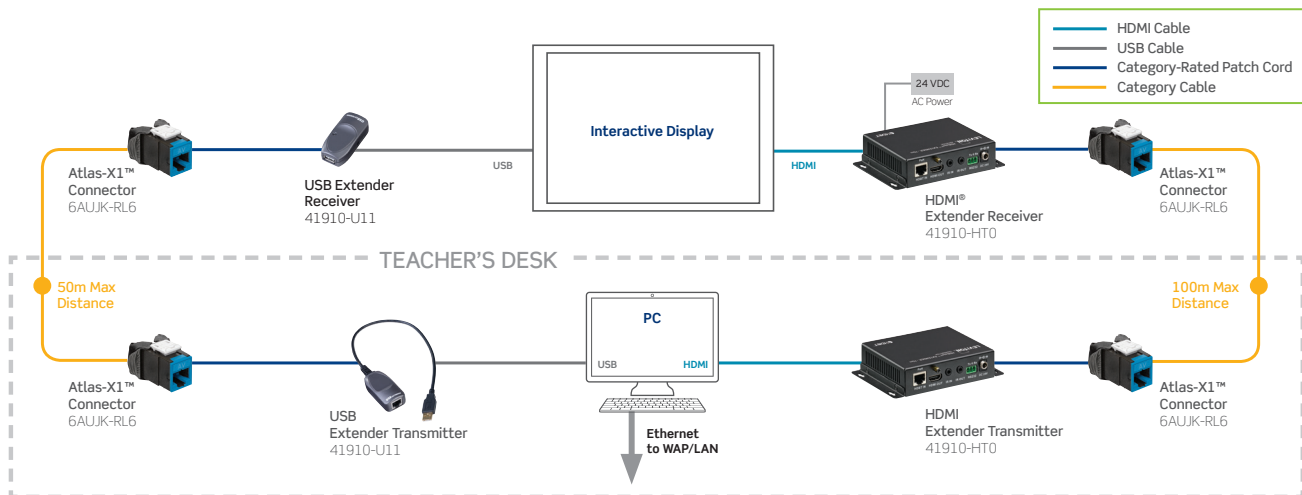




## Upgrading to an Interactive Projector with an HDMI<sup>®</sup> Connection

In this scenario, the VGA connection from scenario two can be upgraded to HDMI to handle greater bandwidth for supporting higher resolution displays and greater interactivity.

IT/AV technology upgrades are simple and easy, because replacing the existing IT/AV infrastructure is not required. The same reliable, standards-based permanent link is used; just swap out the VGA extenders for HDMI extenders. The USB connection remains unchanged. The link now provides a significant boost in audiovisual quality and increased interactivity with no change to the cabling infrastructure.



An up-to-date audiovisual network built on standards-based category-rated cable allows schools to minimize the high costs associated with complete network upgrades. Plus, since these plug-and-play solutions do not require programming, and often can be added to an existing certified permanent link, a datacom expert can quickly perform the installation, allowing a single contractor to facilitate all datacom and audiovisual networking needs.

For more information on how HDBaseT solutions can enhance the student learning experience, check out our webinar, HDBaseT 101: IT/AV Designs for Schools, at [Leviton.com/ns/webinars](http://Leviton.com/ns/webinars).