

Using HDMI Splitters by Scott Cimarusti

HDMI (High Definition Multimedia Interface) cables transmit high definition video and audio through a single cable. More a/v hardware components--including desktop and laptop computers--are making use of this technology. Of course, as HDMI-compatible devices continue to become more common, creative users are devising new and novel ways of configuring their audio/video systems. Whether it's routing high-definition video and audio in a classroom or conference room--or the family room, HDMI technology is expanding to accommodate users' varying needs. This article will explore some uses of one particularly useful component: an HDMI splitter.

Splitters vs. Switchers

HDMI splitters and switchers accomplish two different tasks. A *splitter* takes a single HDMI output signal and sends it to multiple different sources. An HDMI *switcher* is the inverse of that process, as it funnels multiple sources (a Blu-Ray player and a video game console, for example) into one destination (like a plasma display). One use for a switcher is when there are more input devices than there are HDMI ports on a display.

Active vs. Passive

Splitters can be described as either active or passive. Put simply, a passive splitter allows for a single HDMI signal to be distributed to multiple displays--except usually only one of those displays can be in use at a time. An active splitter--which often costs more--allows for a single HDMI signal to be displayed on multiple sources simultaneously. Active splitters are also better at minimizing signal degradation over longer cable distances.

Example Applications and Uses

One practical application for an HDMI splitter in a professional setting would be in a conference room, where the speaker plugs his or her laptop's HDMI output into an interface that sends the signal simultaneously to a desktop-mounted preview monitor and the room's ceiling-mounted projector. In this particular case, the HDMI output of the single source (the laptop computer) would be routed to an active HDMI splitter and then on to two different desired destinations simultaneously (a preview monitor and projector).

HDMI splitters have applications in home theater systems, as well--particularly with the trend of centralization that seems to be gaining popularity with home systems. HDMI splitters are especially useful in a configuration with a single media server housed in one central location, where video and/or audio can be routed to different rooms without having to clutter up those rooms with extraneous expensive hardware and cabling. HDMI cables and splitters have made this configuration more practical because of fewer cables to install.

Getting Started

The most effective tool when designing and configuring an audio/video system is preparation. With a budget in mind, consider how the proposed a/v system will be configured and used--with an eye on future modification as technology advances. A color-coded diagram of cabling and other hardware is a good place to start--followed by a parts list. This will help determine if HDMI splitters will be needed, how many, and which kind (active or passive).