



ATLONA.
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WHITE PAPER

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The Modern Conference Room: Design and Support Tomorrow's Technology with Today's Designs!

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Think about the last meeting you attended and ask yourself a few questions.

- What presentation sources were installed in the room?
- What types of personal devices did other attendees bring with them?
- Was everyone able to present with their personal device for the meeting?
- What presentation sources were actually used?

Often times today we find that many of the installed AV sources are not utilized as much as they were just a few years ago.

Trends we see today suggest that conference room technology and presentation requirements have changed from relying solely upon furnished presentation sources to the need to support BYOT, bring your own technology, and all the types of personal technology that may entail. When designing AV systems for conference room applications, it is essential to know which types of AV sources and presentation equipment your clients may want to use now and in the future. When you ask your client what type of sources may be used for a meeting, you might get the answer “I am not sure but everything needs to work.” Today’s challenge in AV systems design is to provide support for legacy and current sources as well tomorrow’s technology while utilizing today’s equipment in a cost effective way.



In a functional conference room, presentation sources and equipment may be located in an equipment rack as well as at the conference room table. Presentation devices mounted in the rack are easy to integrate with the A/V system. Meeting participants at the table will also need connectivity to the AV system. This presents a design challenge due to the need to support a large variety of sources and BYOT. The AV System Designer will need to provide an infrastructure that will allow the meeting participants to seamlessly connect to A/V equipment housed in the rack.

In both cases the range of sources will most likely require support for legacy and current video technologies alike. By providing VGA and HDMI inputs, the vast majority of the devices used in a meeting will have the ability to be displayed on the AV presentation system. Sources that are installed in the rack can vary and may require a support for a wide range of video signals. In some systems the need for support of composite or S-video may also be a requirement. Reliably managing and distributing all video signals that need to be shown on the display is a key design element that will need to be carefully planned.



With traditional cabling systems, analog and digital signals utilize separate infrastructures. VGA signals are run over bulky coax cables while long haul HDMI cables are thick and inflexible. As the number of presentation device inputs at the conference table increases, the required conduit size to house the cabling quickly becomes a concern. In new construction, large conduit and cable requirements drive up

project costs while in retrofitting a room it could be the limiting factor in the systems design. With this in mind, the designer has to find ways to control costs and ensure the room will meet the client’s expectations.

Another key factor in the design is the control of the AV presentation system. A properly designed AV system is intuitive and easy to use and allows the participants to effortlessly communicate and share information. For this to happen the control system must have a way to access all of the AV equipment in the presentation system. Control system flexibility and limitations of control signals and cabling all have to be considered and will have an effect on the type of AV equipment that is specified.

In recent years, new technologies have been introduced that provide AV System Designers with tools to overcome these challenges. Even though the variety of presentation devices that may be used in modern AV systems has changed, newer displays continue to have limited connectivity. The importance of ensuring the display is compatible with any source that needs to be presented has made the use of scalars an essential tool. Modern video scalars have the unique ability to work with a wide range of current and legacy video signals to ensure they are compatible with the presentation system. As 4k becomes more prevalent, video scalars will be a key component in providing readiness to meet the needs of the new display technology

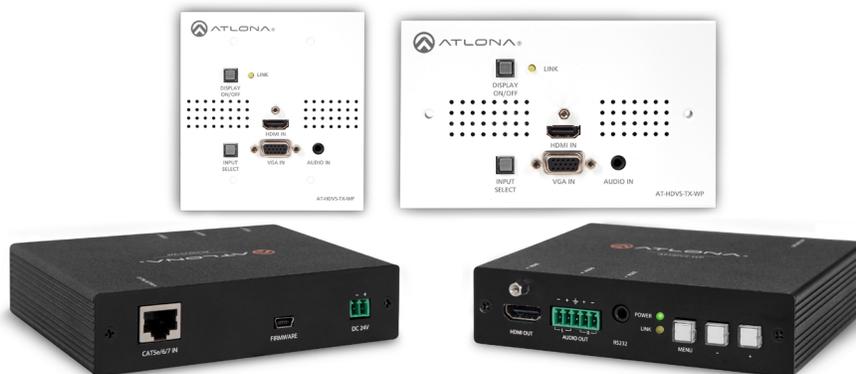


HDBaseT is another technology that solves many challenges in professional AV system designs. By providing a reliable way to deliver audio, video, control and even power over a CATxx infrastructure, an AV system can be more robust and easier to install. This will in turn provide more cost effective solutions for conference room applications. When an AV presentation system switcher/scaler includes HDBaseT, it becomes the Swiss army knife solution that a designer needs for today's conference room AV presentation systems.

The Atлона AT-UHD-CLSO-612 multi-format switcher and 4K scaler has been engineered to have all the connectivity needed to support communication in modern conference room applications. With several carefully designed inputs - two HDMI, two HDBaseT, and two multi-format analog inputs- virtually any source can be connected into the AV presentation system. The HDBaseT inputs support HDBaseT specifications for signal distribution up to 230 feet (70 meters), and allow the designer to remotely mount the presentation switcher/scaler out of sight in the equipment rack. The AT-UHD-CLSO-612 comes equipped with two mirrored outputs, which can upscale the video and output at UHD and 4k resolutions to provide maximum image quality and ensure the signal is compatible with the display.

To ensure the message is heard, the AT-UHD-CLSO-612 also includes an advanced set of audio features that are ideal for conference room AV systems. Utilizing balance audio inputs and outputs it provides professional quality audio that is essential to every meeting. Any type of microphone can be connected to the system and utilize advanced features such as the audio ducking capabilities. This will enable any presenter to automatically be heard over program audio material with ease. Along with the ability to control the AV system volume, the AT-UHD-CLSO-612 can save money by replacing the need for additional audio processing.

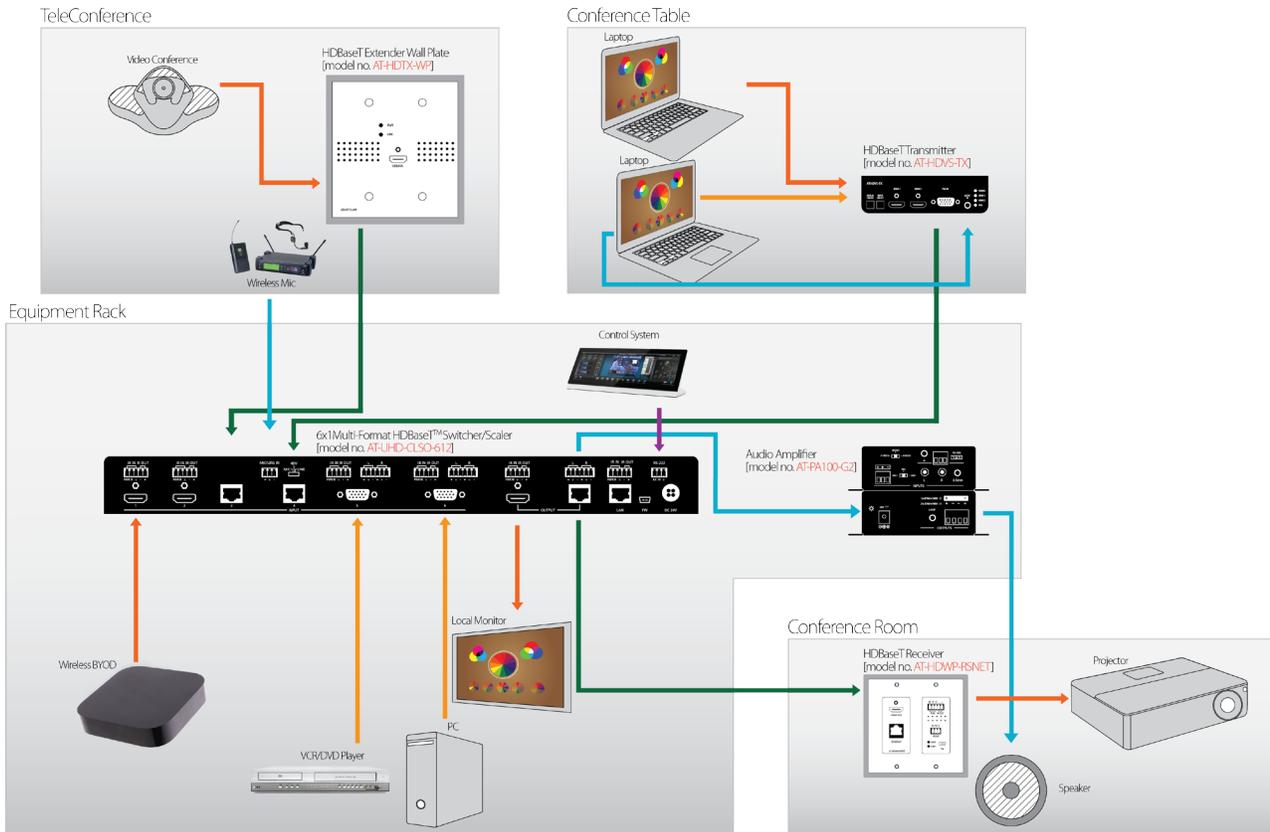
The AT-UHD-CLSO-612 combines multiple functions in a single box, while allowing you to choose the control and audio systems that match the needs of the AV system. Atlona offers drivers compatible with most control systems and the AT-UHD-CLSO-612 works with any amplifier allowing for simple integration into an AV presentation system. To meet the needs of the modern conference room system, the AT-UHD-CLSO-612 offers features to delight the AV System Designer, empower the presenter, and excite the audience, all at a price that will thrill the CFO. Packed with features such as switching, scaling, HDBaseT extension for inputs and outputs, audio de-embedding, you can be certain the AT-UHD-CLSO-612 will function effectively as part of any conference room AV presentation system.



AV systems designed around HDVS transmitters and receivers are perfect for classrooms and small conference rooms. Using HDBaseT technology they allow video signals to run longer distances and provide video scaling and de-embedded audio. As part of larger and more complex applications these components provide additional HDMI and VGA connections via the HDBaseT inputs on larger switchers such as the AT-UHD-CLSO-612. The AT-HDVS-RX is an HDBaseT receiver with a built in video scaler and can be used with any Atlona HDBaseT transmitter. When scaling is required on a specific display, the AT-HDVS-RX can also be used along with the HDCAT series of distribution amplifiers and the PRO2HD and PRO3HD matrix switchers.

Application Diagram & Specifications

- VGA
- HDMI, Video, VGA
- Audio, S/PDIF, 2CH, L/R
- HDBaseT, CAT, CAT5/6/7
- Control, RS232, IR, TCP/IP



Model	Description	Inputs	Outputs	Benefits
AT-UHD-CLSO-612	Multi-format Switcher	2 - HDMI 2 - HDBaseT 2 - Analog audio/video 1 - Microphone (ducking)	1 - HDBaseT	Simplifies design, installation and operation of a basic AV systems with inputs from up to 230 feet from the switcher, analog (RGBHV, YPBPR, S-, Comp) sources as well as HDMI. Analog audio outputs with control simplify system integration. RS-232, IR, and TCP/IP control.
AT-HDVS-TX	Module	2 - HDMI 1 - VGA/3.5 mm audio	1 - HDBaseT	Input from PCs with VGA or HDMI output. Powered from CLSO-612 at distances up to 230 feet (70 m). Switch between inputs with control via RS-232 or auto-switch.
AT-PA100-G2	Audio Amplifier	1 - RCA L/R 1 - 3.5mm L/R 1 - Microphone	1 - Stereo Speaker 1 - 3.5mm loop	Drive speaker with 40 watts (stereo or mono) of power for better sound in the classroom. Control via RS-232.
AT-HDWP-RSNET	Receiver Wall Plate	1 - HDBaseT	1 - HDMI 1 - RS-232 1 - IR	Convert HDBaseT to HDMI and control for display. Powered from CLSO-612 at distances up to 230 feet (70m).
AT-HDTX-WP	Wall Plate	1- HDMI 1 - RS-232 1 - IR	1 - HDBaseT	Input from PCs or other sources with HDMI output. Powered from CLSO-612 at distances up to 230 feet (70m). Transmit control signals via RS-232 or IR.

The Modern Conference Room

About Atlona®

Atlona® is a leading provider of innovative, AV distribution solutions. Since 2003, the company has been designing and engineering award-winning products for a diverse range of residential and commercial AV and IT markets, including education, business, government, entertainment, and healthcare.

Atlona's products and services enable system designers, integrators, consultants, and installers to simplify installation, minimize maintenance, and maximize the versatility of premier automated control solutions. Atlona's vision is simple: deliver customer-driven products designed and developed with the features, performance, and reliability that industry leaders demand; and deliver the best value in the industry.

More information about Atlona is available at www.atlona.com.



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