



ATLONA.

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WHITE PAPER

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Media Space Applications

Blending Technology with Your Favorite Room

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Media Space Audio and Video solutions, otherwise known as the Media Room, Family Room, Home Theater or Man Cave have taken on many forms as A/V technology has evolved over the past several years. Whatever you call the room one thing is clear; it has to sound awesome, display amazing video, be easy to operate and have some kickin' wow factor!

A well conceived design

Why does everyone love the media space so much? Because it's fun. What makes it fun? The experience. What creates the experience? A well-designed and easy to use electronics system that is matched well with the owners desires. How can you create this experience for yourself and or your clients? The answer is simple, Atlona offers these solutions in many configurations to meet you and your clients' needs. Let's examine several examples.

To begin lets define the most basic system, which can be used stand-alone or be integrated into larger systems. The most basic system needs to be affordable, easy to install, easy to operate and make use of the latest technology that the future of A/V will be built on. This system can be defined as a set of extenders, that's a transmitter and a receiver, which have the ability to deliver your multi-media content, control, power and Ethernet over a single category cable.



This type of solution would commonly be used in a family room where the home owner desires to have their multi-media source equipment located out of sight in an equipment rack, cabinet or closet and have the audio and video discretely distributed to the flat panel display located aesthetically on the wall. To create this system, use a pair of Atlona extenders such as the AT-HDTX-RSNET transmitter and the AT-HDRX-RSNET receiver. The transmitter can be located in the equipment closet with the source equipment while the receiver can be discretely located behind the display on the wall. Because this system operates using the HDBaseT communication standard, audio/video and bi-directional control signals can be conveniently passed between the equipment and the display over a single category cable. Additionally HDBaseT will allow the transmitter to send power over the category cable to power the receiver at the other end. Finally with HDBaseT you will also have the ability to deliver an Ethernet signal to your display or Smart TV allowing the use of streaming services at the display.

To add a little extra wow factor two displays are often included in some media spaces. Sometimes these display are located side-by-side, on different walls or even mixed by using a flat panel display and a projector in the same space. The extra display allows for greater viewing capacity and sometimes even allows you to change the use of the media space.

A true multi-purpose family room

Let's consider a room with a flat panel display located over a beautiful fireplace set in the family great room. During the day this display will be used when the lights are on and ambient light is streaming

in through the picture windows from across the lake in back of the property. Magically with the touch of a button this room transforms into a theater in the evening when the lights go down. In this scenario the flat panel display turns off, the projector tucked into the cove at the back of the room turns on and the motorized screen rolls down a stunning large display screen from the ceiling in front of the flat panel display. The room is a transformer! This room boasts a modern flat panel display by day and a jaw-dropping theater by night.



How do you create such a room? Design the room to be built around the Atlona AT-HD4-V42 HDMI switcher. This switcher offers four HDMI inputs and two mirrored HDMI outputs. Depending on the size of the room you may need to add a pair of HDBaseT transmitter/receiver extenders to the design. This will enable the video signal to travel up to 230 feet (70 meters) over category cable to the projector located near the ceiling in the back of the room. In this application Atlona recommends the AT-HDTX-IR and AT-HDRX-IR extender pair to allow IR control commands to be sent to the projector in addition to the video signal.

The other output from the HD4-V42 will feed the display located over the fireplace. If the distance to the display is too long for a conventional HDMI cable, then a pair of HDBaseT extenders may feed that display as well. For the flat panel display it is best to use the AT-HDTX-RSNET and AT-HDRX-RSNET extenders to allow for Ethernet at the display in addition to the audio/video and controls signals.

Multiple display video wall

Now let's turn the wow factor up to 10 and create a video wall out of multiple displays in the media space. Media walls can use any number of displays and also be a combination of flat panel displays and video projectors. A video wall requires that the systems be able to deliver any source in the system to any display on the wall. To accomplish this you will need to use a matrix switcher from Atlona. Atlona makes matrix switchers in many input/output configurations including 4x4, 6x6, 8x8 and 16x16.

A typical media space video wall will include five displays on the wall and a sixth display feed ran to a separate display above a bar or game table at the back of the room. To create this type of A/V system you will need to build the design around the Atlona AT-PRO3HD66M matrix switcher. This matrix switch will accommodate up to six sources via HDMI inputs. It will also allow for up to six outputs via HDBaseT over category cable to displays located up to 230 feet (70 meters) away. Additionally ports 5 and 6 offer mirrored outputs via HDMI for local feeds such as an in rack monitor or in rack AVR



for Dolby/DTS audio decoding.

A popular configuration is to have a larger projected image in the center of the wall to serve as a main display and have two flat panel displays located on both sides of the projected display. This configuration will allow the viewer to focus on and enjoy the primary content on the larger center display while still being able to keep tabs on four other displays of content. Since the signal is being sent using HDBaseT over category cable you will need to integrate HDBaseT receivers behind each flat panel display to receive and send the AV signal.

Often in multi-source systems such as a video wall you will need to display content that may not match the native resolution or aspect ratio of your display. For this reason the projector should be paired with an HDBaseT receiver with a built-in scaler such as the AT-HDVS-RX. This receiver will take the input signal and scale it to match the native resolution and aspect ratio of the main projected image in the video wall ensuring that the content displayed for the primary image will always fill the video screen.

The media space can take on many forms and these are just a few designs using some key Atlona solutions. To more learn more about Atlona solutions for the media space please visit Atlona online at Atlona.com.

Atlona solution components

Model	Description	Inputs	Outputs	Benefits
AT-HDTX-IR	Transmitter extender with IR	1 - HDMI 1 - IR	1 - HDbaseT	Extend any HDMI source up to 230 feet (70 m) on a single category cable with IR
AT-HDRX-IR	Receiver extender with IR	1 - HDbaseT	1 - HDMI 1 - IR	Receiver extender with IR
AT-HDTX-RSNET	Transmitter extender with ethernet, RS-232, IR	1 - HDMI 1 - IR 1 - RS-232 1 - Ethernet	1 - HDbaseT	Extend any HDMI source up to 328 feet (100 m) on a single category cable with IR, RS-232 and ethernet
AT-HDRX-RSNET	Receiver extender with ethernet, RS-232, IR	1 - HDbaseT	1 - HDMI 1 - IR 1 - RS-232 1 - Ethernet	Receiver extender with IR, RS-232 and ethernet
AT-HD4-V42	HDMI 4 x 2 switch	4 - HDMI 1 - RS-232	2 - HDMI 2 - Ethernet 2 - SPDIF	Switch any 4 HDMI inputs using the auto-switch feature
AT-PRO3HD66M	6 HDMI in 6 HBaseT out matrix switch	6 - HDMI 1 - LAN 7 - IR 1 - RS-232	6 - HDbaseT 2 - HDMI 4 - SPDIF 7 - IR	Switch any 6 HDMI sources to any 6 HDbaseT ports with audio de-embedding and local HDMI out

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.

