

# AV OVER IP TAKES THE STAGE AT JAVITS CENTER



Atlona's OmniStream AV over IP platform is installed in one of the world's best known and largest convention centers.





**“AFTER REVIEWING THEIR REQUIREMENTS AND ALIGNING THEM WITH SOLUTIONS AVAILABLE ON THE MARKET, ALL SIGNS POINTED US TO ATLONA’S OMNISTREAM AV OVER IP PLATFORM”**

– Brian Hayes, Sr. Sales Engineer

In one of the more unassuming sections of Manhattan lies the Jacob K. Javits Convention Center, the busiest facility of its kind in the United States. With its sprawling 760,000 square feet of flexible exhibition space complemented by 102 meeting rooms across four levels, it’s easy to understand why the Javits Center is a premier global destination for tradeshows and conferences.

The Javits Center, which opened in 1986, has one under extensive renovations over the last five years. These renovations include upgrades replacement of the glass and the River Pavilion, and upgrades to the IT infrastructure. The latter has played a role in the ease the transition of key AV operations to the IP network. (Upon completion in 2021, renovations will also include new meeting, event and outdoor spaces.)

To simplify the AV over IP transition, the Javits Center added approximately six bases, spaced fifteen

feet apart, along each wall of the event space. These bases include jacks that provide direct hooks to the central IP network. For commercial AV applications – a significant need at every trade show – the presence of these hooks, along with a robust network infrastructure, provided a foundation for a transition at the Javits Center from heavily wired legacy systems to a leaner AV over IP architecture.

“The Javits Center offers this network infrastructure as a part of its services for businesses that rent space for meetings and events,” said Brian Hayes, senior sales engineer, IVCi, which supplied the AV systems to support the transition. “AV is a substantial need for these businesses, so there was a desire to acquire technology that could operate over this network to support presentations, lectures and other corporate AV needs.”

The Javits Center’s requirements specified an AV over IP solution. Low-latency content delivery topped the list from a technical perspective, while quick setup and deployment was an operational priority. From a roadmap point of view, Hayes sought a 4K-capable system that would support higher video resolutions as these needs came to fruition.

**“FROM A LABOR PERSPECTIVE, IT’S A HUGE COST-SAVINGS FOR THE JAVITS CENTER. THERE ARE NO LONG CABLE RUNS TO MANAGE ACROSS ROOMS AND THROUGH DOORWAYS. THE WORKLOAD IS ELIMINATED.”**

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While video was the highest priority, Hayes also wanted a switching and distribution

system that could co-exist with their current Dante Audio over IP network, thus unifying all audio and video transport needs over a common infrastructure.

“After reviewing their requirements and aligning them with solutions available on the market, all signs pointed IVCi to select Atlona’s OmniStream AV over IP platform,” said Hayes.

## Bringing it all Back Home

As Hayes explains, the OmniStream platform alleviates any concerns about quick setup and deployment. An added, less anticipated bonus related to cost savings magnified the value of the team’s decision.

“It’s as simple as walking up to any jack, plugging in an OmniStream encoder, and connecting a source to that encoder,” said Hayes. “The OmniStream decoder is plugged into the jack closest to the receive point. From there, it’s simply connecting the display to the decoder to support the image. From a labor perspective, it’s a huge cost-savings. There are no long cable runs to manage across rooms and through doorways. The workload is eliminated.”

The very low (below eight milliseconds) latency of OmniStream has delivered tremendous value for users for distribution of high-bandwidth AV content. Video and audio synchronization is perhaps the biggest benefit, ensuring that all content arrives at the same place at the same time no matter how distant the destination.

“Think of a keynote in a large ballroom or auditorium space where you are watching a presentation, and the IMAG (image magnification) video lags behind the audio track,” said Hayes. “OmniStream removes that issue because of its imperceptible latency, ensuring audiences don’t have to see out-of-sync video. This has been used across different delay screens and overflow screens. All content arrives at the same time. The user experience remains clean regardless of location.”

From a reliability standpoint, OmniStream instills extra confidence through its built-in system redundancy and stream failover. The systems are



AT-OMNI-112 and AT-OMNI-122

configured to route primary and backup streams. In the event of a dropped stream, OmniStream decoders immediately switch over to redundant paths to ensure uninterrupted delivery.





While most video content distributed over OmniStream at the convention center today is 1080p, the design spec called for a solution capable of 4K UHD content distribution, with support for higher resolutions. Across all formats, OmniStream compensates for network errors with integrated forward error correction to ensure artifact-free, real-time video. This ensures pristine quality and uninterrupted video regardless of bandwidth usage.

sound overall operation,” he concluded. “With OmniStream at the core of our AV infrastructure, we’re achieving the robust, reliable and low-latency operation we aimed for upon making the to IP.”

## “STANDARDS-BASED AES128 ENCRYPTION TECHNOLOGY REALLY BRINGS EVERYTHING TOGETHER INTO A SOUND OVERALL OPERATION”

—Hayes

Since OmniStream operates in a multicast configuration and supports Dante audio, video and audio can be managed over the same network. This includes supporting signal flows to Dante-enabled mixers and consoles on the production side, all manageable through Atлона’s AMS software platform.

“The fact that everything lives and operates within the same ecosystem amplifies the overall value, which includes having an OmniStream/Dante interface to support audio,” said Hayes. “And, in addition to removing legacy wires and connectors, the OmniStream AV over IP architecture provides the flexibility to roll out AV services in many ways. Many encoders and decoders can be cross-utilized to support different spaces, sources and content without being tethered to a single piece of hardware or chassis. There is a lot of freedom using this platform.”






## Conclusion

Hayes adds that with everything living on that heavily trafficked Javits Center network, OmniStream’s inherent security features provide the peace-of-mind needed for protection of sensitive data.

“Standards-based AES128 encryption technology really brings everything together into a



## PRODUCTS FEATURED

Model	Description	More Information
<a href="#">AT-OMNI-111</a>	Networked AV encoder for one HDMI source up to 4K/UHD, plus embedded audio and RS-232 control	 <a href="https://atlona.com/product/at-omni-111/">https://atlona.com/product/at-omni-111/</a>
<a href="#">AT-OMNI-112</a>	Networked AV encoder with two independent channels of encoding for two HDMI sources up to 4K/UHD, plus embedded audio and RS-232 control	 <a href="https://atlona.com/product/at-omni-112/">https://atlona.com/product/at-omni-112/</a>
<a href="#">AT-OMNI-121</a>	Networked AV decoder for an OmniStream-encoded video stream up to 4K/UHD, as well as embedded audio and RS-232 control	 <a href="http://atlona.com/product/at-omni-121/">http://atlona.com/product/at-omni-121/</a>
<a href="#">AT-OMNI-122</a>	Networked AV decoder with two independent channels of decoding for two OmniStream-encoded video streams up to 4K/UHD	 <a href="http://atlona.com/product/at-omni-122/">http://atlona.com/product/at-omni-122/</a>
<a href="#">AT-OMNI-232</a>	Dante networked audio interface that transmits and receives two channels of audio over a network	 <a href="http://atlona.com/product/at-omni-232/">http://atlona.com/product/at-omni-232/</a>

For more solutions, see <http://atlona.com/solutions-tour/>

For more applications, see <http://atlona.com/case-studies/>



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