

Professional-Grade A/V in Luxury Cottage Country



A/V over IP infrastructure delivers high-end viewing and listening experiences across sprawling luxury property

Approximately two hours north of Toronto, Ontario, the District Municipality of Muskoka—with its three major lakes—is home to 60,000 permanent residents, as well as an additional 100,000 property owners who spend time in the area on a seasonal basis. Affectionately known as “cottage country,” this



upscale destination is dotted with luxurious estates, with Hollywood A-listers such as Stephen Spielberg, Cindy Crawford, and Tom Hanks among the owners. King’s Electric Ltd., an electrical contractor and audiovisual system design and integration firm based in Toronto, was hired to integrate a complex audiovisual system at a newly constructed residence. The system would cover a main cottage, several outbuildings and exterior amenities including a gym, pool, and boathouse. King’s Electric turned to Atlona’s OmniStream R-Type AV over IP distribution platform to seamlessly deliver video and audio to all locations.

“We’ve been using Atlona as one of our video distribution options for the last two or three years,” said Francisco Aquino, senior audio-visual project manager at King’s

Electric. “The OmniStream R-Type solution specifically was brought in for this project to tackle a problem that we couldn’t find a solution for in other manufacturer’s products.”

Video Everywhere

King’s Electric created a Cisco switch network via a 10-gigabit back haul, with six OmniStream 512 (AT-OMNI-512) dual-channel encoders and 12 OmniStream 521 (AT-OMNI-521) single-channel decoders at the core of the AV over IP video switching.

“The dual-channel encoders were particularly useful from an integration perspective, as the architecture allowed us to get multiple video inputs with fewer devices,” said Aquino. “Rack space is always at a premium, especially in residential areas where server rooms don’t really exist. So, we were able to



accommodate all our video over IP switching needs with a compact rack system in a standard mechanical room, without shortchanging the signal count.”

Network switches were deployed to each individual building, enabling OmniStream to take a source from the main cottage—whether a 4K Apple TV or a cable box—and stream it on any of

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—Francisco Aquino, Senior Audio-Visual Project Manager, King's Electric



the TVs in that location, simultaneously or in succession. "This configuration allows the residents to begin watching a program in the main cottage, and continue viewing that same content when they move to the gym," said Aquino. "There would have been limitations to this using a circuit-based video matrix, the first being the length at which you can run an HD-based video signal."

"When video-switched in the gym, the system needed to respond as quick as it did in the main cottage, as well as down at the boat house. OmniStream expertly handles moving between 4K sources and non-4K sources, as well as the required synchronization on that level, all with ultra-low-latency." Aquino adds that all of that decoding is done internally within the OmniStream encoders and decoders, and controlled by the client with ease.

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– Aquino

Audio for Everyone

The project also required improved audio distribution throughout the property. The two surround sound zones in the main cottage are handled by Integra 7.2 and 9.2 Surround Sound Receivers. The 20 remaining two-channel zones are powered by Triad multi-zone eight-channel amplifiers running to Triad's designer series In-Ceiling Full Range Loudspeaker.

One challenge that Aquino and his team encountered was the property's combination of 4K video sources—such as Apple TV, as well as Samsung and Bang & Olufsen 4K televisions—and HD sources together on the same video architecture. This raised latency and synchronization concerns, along with general video switching questions. "We needed to provide for the client a system that provided a quick response along with a consistent experience throughout the entire property," said Aquino.

All outdoor common areas, including the pool and lakeside fire pit, were designed with the guidance of the team at Staub Electronics. Crown amplifiers power the 16 Episode speakers, with four subwoofers positioned throughout the property. Aquino explains that the ability to distribute audio seamlessly throughout the entire property was made possible via Dante audio networking. Audio streaming capabilities were provided by the



Control4 automation system that serves as the user interface – with Atlona’s OmniStream OMNI-232 Dante audio interface playing the critical role that allowed the two systems to integrate.

“OmniStream was the solution that tied these two pieces together,” he said. “The Dante interface offered me the ability to spread audio across the network, as well as take audio inputs that were coming from different areas of the property. As an example, I would flip open my iPhone and stream a song down at the boat house, and somebody would see it on the Control4 system and say, ‘hey, I want to listen to the same thing up here at the gym.’ With a simple press of a button, that audio just got networked if a kilometer up the property.”

"IN ALL THE PROJECTS WE TAKE ON AS A COMPANY, OUR NUMBER ONE GOAL IS TO DEPLOY A SOLUTION THAT IS GOING TO BE ROCK-SOLID, RELIABLE, AND SERVICEABLE. OMNISTREAM WAS BY FAR THE MOST EFFECTIVE AV OVER IP SOLUTION TO ENSURE WE FULFILLED THAT GOAL."

-Aquino

Confidence All Around

While King’s AV doesn’t shy away from projects with a considerable degree of complexity, Aquino underlines that the goal is always to create user-friendly systems that can be trusted.

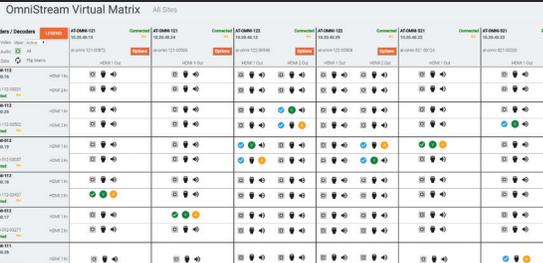
“In the end, our goal was to create a simple and user-friendly system. Given the complex requirements for the project, finding the right solution that utilized the strength of the network we created was crucial,” Aquino said. “In all



the projects we take on as a company, our number one goal is to deploy a solution that is going to be rock-solid, reliable, and serviceable. OmniStream was by far the most effective AV over IP solution to ensure we fulfilled that goal.”

Aquino also notes that from an integrator’s perspective, Atlona provided the support required whenever he or other members of his team required guidance. “Atlona and its representatives have the technical knowledge, and they were able to assist us with the pieces of the puzzle that we weren’t knowledgeable about,” he said. “It was important to align ourselves with a company that we thought was not only pushing the envelope, but that was really well-versed in the cutting edge technology they provide.”

SELECT FEATURED PRODUCTS

MODEL	DESCRIPTION	
AT-OMNI-512	<p>The Atlona OmniStream™ 512 (AT-OMNI-512) is a networked AV encoder with two independent channels of encoding for two HDMI 2.0 sources up to 4K @ 60 Hz and HDR (High Dynamic Range), plus embedded audio and RS-232 or IR control pass-through.</p>	
AT-OMNI-521	<p>The Atlona OmniStream™ 521 (AT-OMNI-521) is a single-channel networked AV decoder for HDMI 2.0 / HDCP 2.2 output supporting resolutions up to 4K @ 60 Hz and HDR (High Dynamic Range), and RS-232 or IR pass-through.</p>	
ATLONA MANAGEMENT SYSTEM (AMS)	<p>The Atlona Management System (AMS) is a powerful system integration resource for configuring and managing Atlona devices over a network. With AMS, simplify and streamline AV installation from a single user portal that lets you discover, set up, and commission multiple Atlona IP-controllable products at once.</p>	
AT-OMNI-232	<p>The Atlona OmniStream™ 232 (AT-OMNI-232) is a Dante networked audio interface that transmits and receives two channels of audio over a network. Part of the OmniStream Audio Series, OmniStream 232 devices are ideal for integrating microphones and other audio sources with a Dante-equipped DSP and OmniStream AV decoders.</p>	

