



“It’s cost-effective 10G heaven: if you compare the price tag of similar switches to the NETGEAR one, jaws drop”

Stew Ives, Senior Director of Systems at SNA Displays

Company name:
SNA Displays

Industry:
LED Display
Manufacturing

Company website:
www.snadisplays.com

Geographic region:
Times Square, NYC, USA

American Dream – visitor AV that delivers a real wow factor

INTRODUCTION

New Jersey’s American Dream takes entertainment, dining and retail to a whole new level, underpinned by interactive and immersive AV. Set to become one of the leading and biggest visitor experiences in North America, American Dream is a feast for the senses, with its impressive LED walls and hundreds of digital signage kiosks.

Integral to delivering a large-scale, high-quality AV experience throughout the vast site is a powerful and flexible Ethernet network, using NETGEAR switches designed for AV. These form part of an integrated and sophisticated solution that also uses advanced AV over IP technology from Aurora Multimedia.

The primary digital signage supplier for American Dream is SNA Displays, a New York-based LED display manufacturer, which is providing more than 40,000 square feet of digital display technology to the development.

BACKGROUND

Occupying a multi-million-square foot site at Meadowlands in East Rutherford, American Dream is 70 percent entertainment, featuring water parks, indoor gardens, a ski slope, an ice rink, roller coasters, golf and more. When it is time for some retail therapy or refreshment, familiar names in the mall include H&M, Primark, Zara, Taco Bell and Five Guys. In addition to multiple LED video displays, over 200 digital signage kiosks throughout the location support a fantastic visitor experience, delivering information, wayfinding and interactive entertainment.

Sansi Development Group (SDG) operates and manages the interior and exterior digital signage network. It brought in expertise from SNA Displays to provide a complete turn-key content management and display network to support American Dream’s AV needs, as well as to manage on-going network operations. SNA Displays is a global provider of high-end digital displays and has designed and built some of the largest and most well-known digital spectacles worldwide.





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THE CHALLENGE

Delivering AV on this scale would have been impossible using traditional AV, so networked AV-over-IP was the only way to go. That means a heavy-duty backbone of switches that can efficiently communicate with each other, while having enough bandwidth to support a huge matrix of 360 sources and 300 destinations. The existing switches on site were not seen as viable long-term to support this size of an installation and any expansion in the future.

Stew Ives, Senior Director of Systems at SNA Displays, was the project lead and explains what he was looking for: "The AV network is critical in the mall, so downtime or latency is not acceptable. We also wanted a "plug and play" SDVoE-compliant switching solution that didn't require outsourcing of the configuration or maintenance to a third-party. We were also looking for a manufacturer we could work with directly during set-up and afterwards."

Aurora Multimedia was already playing a critical role in the project, including provision of its ground-breaking IPX-TC3 IP/AV streaming, the industry's first 4K2K transceiver and receiver with zero compression and latency, which synergizes various IP/AV standards to work together as one and is based on Aurora's IPBaseT® technology. Well-versed in AV-over-IP, Aurora understood SNA Displays' switching requirements and recommended Stew took a look at what NETGEAR had to offer. Says Aurora CEO Paul Harris: "As a NETGEAR Platinum Partner, we were already aware of the company's wide range of AV-over-IP switches and knew these were the right fit for American Dream."

THE SOLUTION

Following a consultation period, Aurora's recommendation led to the NETGEAR M4500 Series of switches being chosen. The NETGEAR M4500 series ticked several important boxes, including SDVoE compliance for easy integration with compatible equipment. The simple and fast configuration of the switches themselves was another big factor, thanks to NETGEAR IGMP Plus™. This makes it straightforward for the M4500s to connect and communicate with each other, eliminating the complexity that traditional Layer 3 switching would require.

Adds Ives "The network must flex with building changes. The M4500 provides a full, non-blocking design, so together with the IPX-TC3-Pro from Aurora, this means that any device can be plugged into any port on any switch, and it will be available everywhere."

There is full 4K/60 4:4:4 10Gb data to every kiosk and LED video wall, delivering consistent, latency-free image quality, with IPBaseT Manager software from Aurora controlling and routing all signaling. This adds up to a powerful and very flexible AV network that can keep pace with any changes across the entire site.

A further benefit is return-on-investment, with the M4500 series costing a fraction of comparable switches. "It's cost-effective 10G heaven: if you compare the price tag of similar switches to the NETGEAR one, jaws drop," says Ives.



"Whatever the scale, I'll deploy a network with NETGEAR going forward, for several reasons."

Stew Ives, Senior Director of Systems at SNA Displays

INSTALLATION

The original plan was to move from the legacy switches to the new ones overnight to minimize visitor disruption. However, Covid-19 meant that American Dream had to temporarily close its doors, and installation had to be carried out without on-site support from NETGEAR. Stew Ives: "Fortunately, the out-of-the-box set-up and remote NETGEAR network management meant we could do all the work ourselves. We anticipated 12 hours downtime to complete the change-over, but it only took four hours, and most of that was physical labor."

Ives continues, "When we needed them, the NETGEAR Pro AV Engineering Services team was very helpful. I have a shared Slack channel between our team and theirs, and that's critical to keeping up with what's going on during a demanding project like this. There are always going to be unforeseen hiccups, but as long as someone responds straight away, that's all we ask."

RESULTS

The finished installation includes 16 M4500-48XF8C edge switches, and four M4500-32C core switches carrying AV traffic. As of Fall 2020, the total number of kiosks stood at 220, with approximately 140 other outputs going to LED screens and video walls managed by Analog Way processors.

SNA Displays also replaced the existing data network with a M4300-96X core switch, supported by multiple smaller NETGEAR S3300 switches. Says Ives, "While the M4300 is purpose-built for AV, it is excellent for carrying other network traffic."

Concludes Ives, "Whatever the scale, I'll deploy a network with NETGEAR going forward, for several reasons: you are dealing directly with the experts, the switches meet our customers' requirements, and no time is wasted. In the meantime, with the American Dream project, we have contributed towards the groundwork of what is a phenomenal place."

For more information on NETGEAR's Pro AV switches and services:
www.netgear.com/proav

For more information on SNA Displays:
www.snadisplays.com

For more information on Aurora Multimedia:
www.auroramultimedia.com
