

Newegg's Premier
Gaming Arena
Runs Flawlessly on
NETGEAR Networking
Technology



Newegg's Gamer Zone is a 2,300-square-foot gaming arena featuring dozens of high-performance gaming stations, streaming equipment, and broadcast capabilities. At its core are NETGEAR's robust networking solutions, handling intensive video and audio streaming demands while enabling professional-grade live production workflows.



Background

Newegg Commerce, founded in 2001 and headquartered in Diamond Bar, California, has established itself as a leading global e-commerce platform for computer and technology products. With strong ties to the DIY and gaming communities, Newegg recognized the need to expand its digital presence into the physical world, creating a space that unites its online Gamer Community with real-life experiences.

The Newegg Gamer Zone represents a new standard in gaming experiences, serving as both a technology showcase and community hub that brings together gamers, streamers, creators, and innovators. Featuring over \$200,000 in cutting-edge hardware, including VR systems, racing simulators, immersive gaming pods, and professional streaming equipment, the venue required a networking infrastructure capable of handling multiple simultaneous 10Gb Ethernet streams, NDI video feeds, and broadcast-quality content production.



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Radium Fu, Director of Global IT at Newegg

Challenge

Creating a professional-grade gaming and streaming facility that could handle the demanding requirements of modern content creation presented several technical challenges. The project required supporting dozens of gaming stations simultaneously while maintaining low-latency performance critical for competitive gaming. The facility needed to accommodate professional streaming and broadcast capabilities, including multiple 4K cameras, live production workflows, and NDI technology for real-time video distribution.

Managing multiple 10GbE streams across the facility while ensuring consistent performance for both gaming and content creation workflows demanded a robust networking infrastructure. The system needed to support various video formats and resolutions, from 4K streaming content to high-refresh gaming displays, all while maintaining broadcast-quality standards for live productions.

Additionally, the networking solution had to provide scalability for future expansion as Newegg plans to host larger events and potentially expand the facility's capabilities. The infrastructure had to integrate seamlessly with existing broadcast equipment while remaining flexible enough to adapt to evolving streaming technologies and gaming requirements.

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Director of Global IT at Newegg. “NETGEAR delivered a turnkey solution for our streaming, media, and production needs that stood apart from other products. With the right mix of ports, PoE, and both CLI and GUI management, it gave us the versatility and confidence to meet the demands of our users and use cases.”

Selection Criteria

When evaluating networking solutions for the Gamer Zone, Newegg's technical team assessed vendors against specific requirements. The facility demanded a solution that could handle simultaneous 10GbE streams, provide sufficient PoE++ power for professional cameras and equipment, and offer both advanced CLI management for complex configurations and intuitive GUI controls for daily operations.

NETGEAR emerged as the clear choice due to its M4350 series being purpose-built as an AV switch, specifically designed for audio/video applications and professional media environments. This AV-focused design provided the port configuration needed while the integrated PoE++ capabilities eliminated infrastructure complexity. NETGEAR's pre-configured profiles and proven track record in broadcast and professional AV environments provided confidence for mission-critical streaming applications.

The M4350's AV switch architecture was particularly well-suited for the facility's NDI-enabled environment and professional streaming workflows, ensuring broadcast-quality performance that traditional enterprise switches might not deliver.



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Solution

The Newegg Gamer Zone’s networking infrastructure centers on the NETGEAR Fully Managed Switch, featuring 44 × 2.5G ports, 4 × 10G/Multi-gig PoE++ ports, and 4 × SFP28 25G ports. This powerful switch configuration supports the facility’s diverse technology ecosystem, including BirdDog 4K cameras for professional content creation, Cooler Master MasterHUB systems, Elgato Stream Deck XL controllers, and professional-grade audio equipment from RØDE and DJI. The PoE++ capabilities eliminate the need for separate power supplies for many devices, streamlining installation and reducing cable management complexity.

NETGEAR SFP+ optical transceiver modules provide high-speed fiber connectivity for critical backbone connections, enabling multiple 10GbE streams throughout the facility while ensuring consistent performance for both competitive gaming and professional streaming applications. The infrastructure seamlessly integrates with the venue’s NDI-enabled environment, allowing for real-time video production and distribution capabilities that meet broadcast industry standards.

Wireless connectivity throughout the facility is provided by NETGEAR’s Tri-Band WiFi 7 Access Points, delivering high-performance wireless access for mobile devices, tablets, and wireless gaming peripherals. The WiFi 7 technology ensures low-latency wireless connectivity that complements the wired infrastructure for a comprehensive networking solution.

The NETGEAR Insight cloud management platform provides centralized visibility and control over the facility’s wireless infrastructure, enabling remote monitoring and configuration of all access points from a single dashboard. This cloud-based approach simplifies network management for Newegg’s IT team, allowing them to quickly identify and resolve connectivity issues, optimize wireless performance across the gaming floor, and deploy configuration changes to multiple access points simultaneously. The Insight platform’s real-time analytics and automated alerts ensure that wireless performance remains consistent during high-traffic gaming events, while its intuitive interface reduces the complexity of managing a sophisticated wireless network spanning the entire 2,300-square-foot facility.





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Cindy Lam, Marketing Program Manager at Newegg

The system is supported by power supply units providing 600W modular power delivery, ensuring reliable power distribution for the network infrastructure. This robust power architecture supports the high-performance switches and access points while providing redundancy for critical network operations.

The Command Center, which is serving as the facility's nerve center for live production and event management, coordinates multiple video feeds, audio streams, and control systems through the M4350 switch's advanced management capabilities. This centralized approach enables efficient management of complex live events while maintaining the reliability necessary for professional productions.

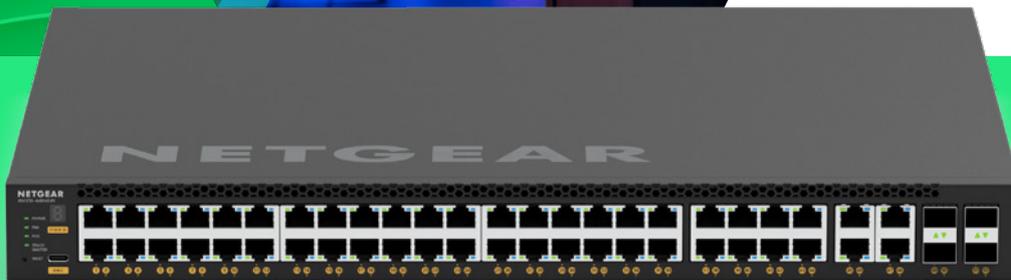
Gaming stations throughout the facility benefit from the M4350's 2.5G ports and multi-gig capabilities, ensuring optimal performance for competitive gaming while simultaneously supporting streaming activities. The switch's 10G and 25G uplinks handle the aggregate bandwidth requirements, while individual gaming stations receive dedicated high-speed connections. The infrastructure accommodates various gaming platforms, from high-end PC gaming rigs to console stations and VR systems, all operating concurrently without network performance degradation.

Results

The Newegg Gamer Zone has successfully established itself as a premier destination for gaming innovation in Southern California. The facility is hosting successful events, including the Intel Gamer Days celebration, bringing together partners, creators, influencers, and community members.

The NETGEAR-powered networking infrastructure delivers flawless performance, enabling seamless operation of the complex gaming and streaming ecosystem. The facility successfully supports simultaneous gaming sessions across multiple platforms while maintaining broadcast-quality streaming capabilities for content creators and live events.

Content creators and streamers have praised the facility's professional-grade capabilities, with the networking infrastructure enabling high-quality productions that rival traditional broadcast facilities. The low-latency gaming performance has attracted competitive gamers and esports enthusiasts, while the streaming capabilities have empowered local content creators with access to professional equipment previously available only in dedicated studios.



“NETGEAR has been a perfect fit for this project,” notes Cindy Lam. “The switch delivers rock-solid performance for our demanding setup, powering BirdDog devices, whether routing multiple 10GbE streams, or supporting live production workflows. NETGEAR made it possible for the Command Center to run smoothly and gave us the scalability to grow as we host larger events.”

The facility now serves as a model for technology integration in gaming spaces, demonstrating how robust networking infrastructure can enable innovative experiences that bridge the gap between gaming, content creation, and professional broadcasting. The success of the Gamer Zone has positioned Newegg as a leader in creating physical spaces that complement its digital ecosystem.

The venue continues to expand its programming, hosting community events, workshops, and tournaments while supporting the growing Newegg Gamer Community. The scalable NETGEAR infrastructure ensures that the facility can adapt to evolving requirements and support increasingly sophisticated events and productions.

NETGEAR products used:

- M4350-44M4X4V Fully Managed Switch (MSM4352)
- NETGEAR AXM761 Compatible 10GBASE-SR SFP+ optical transceiver modules
- NETGEAR's Tri-Band PoE 2.5G Insight Manageable WiFi 7 Access Points
- APS600W Power Supply Units

Why NETGEAR was chosen:

- Tailored for AV Applications
- Integrated PoE++ capabilities
- Optimized for NDI-enabled environment and streaming workflows
- Pre-configured profiles and a strong track record in broadcast and professional AV settings

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