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Tony Wehner, managing director of Bartons Sound Systems

Company name:
Eden Park

Industry:
Sports and Recreation

Company website:
edenpark.co.nz

Geographic region:
Auckland, New Zealand

Unmatched audio for world-famous stadium Eden Park

SUMMARY

Like any form of entertainment, sporting events depend on great audio. That is what has been created at Eden Park, New Zealand's historic sports stadium and legendary 'fortress' to the country's national cricket and rugby teams. Thanks to Bartons Sound Systems, the venue now has a networked digital signal processing and distribution system with 80 output channels (or zones), providing superior audio quality just about everywhere in the stadium. State-of-the-art IP-based technology includes NETGEAR AV Line switches supplied by local audio specialists and NETGEAR partner JPRO.

BACKGROUND

Eden Park has been home to the country's national rugby and cricket events for the past hundred years, hosting some magnificent moments in sporting history. Located in central Auckland, the country's largest city, it has a capacity of just under 50,000 seats and is also used for conferences, live events, and other functions.

In 1992, Auckland-based Bartons Sound Systems installed Eden Park's first site-wide PA system to coincide with the inaugural Cricket World Cup and continues to service the venue's audio needs with various upgrades over the years. Bartons has experience designing, supplying, installing, and supporting audio for over fifty years, with an impressive array of completed projects and clients.

THE NEED

In 2021, it became clear that Eden Park's existing sound system was reaching the end of its useful life. Says Tony Wehner, managing director of Bartons Sound Systems, "This presented an ideal opportunity for us to help our customer improve the sound quality and system resilience. Having everything network-based – which is the way of the future – enables us to get the channel count up really high. With so many extra sound channels to work with, we could offer some innovations, such as immersive multichannel surround-sound, to provide superior quality audio almost anywhere in the stadium."

There were a few additional factors to address. For instance, Eden Park is subject to a strict noise level requirement of 60dB LA10 (10 minutes) at the nearest residential boundary. So sound volume had to be managed, but without impacting on quality. Second, 'bring your own device' needed to be provided, enabling anyone hiring the venue to connect to the PA system easily. Finally, replacing the old sound system with the new one had to take place without impacting the stadium's availability.





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THE ANSWER

Bartons recommended and designed an 80-channel sound system based on hardware using the QSYS ecosystem, with components including: redundant QSYS Core for control and audio processing, Junger AES67 Limiter with web-based monitoring for mobile devices, and Touch OSC for 2D sound panning from mobile devices. The new hardware improves the signal-to-noise ratio and fidelity by providing a digital audio path all the way from the sound source to the amplifiers.

Critical to efficient audio distribution was finding the right network switches. Says Tony Wehner, "We carried out some research, and the word was spreading about the NETGEAR switches designed for AV, so we decided to find out more. We like that there is a wide choice of models in the range, from small to huge high-density switches, and professional build quality supported by a lifetime guarantee. It's also important to use a reputable brand, and NETGEAR seems to be more agile in this marketplace than other players. We value that they have put some effort into creating network switches specifically for AV."

Tony continues, "It is so easy to set up multiple VLANs with the NETGEAR switches. We have one for the primary event audio, another for control, and the third for external third parties, who can walk up to any AV switch and patch in their equipment."



www.netgear.com

INSTALLATION AND RESULTS

The selected switches are NETGEAR GSM4212PXs, designed for 1Gb AV-over-IP applications and preconfigured out of the box with a variety of settings and compatibility with leading audio and visual products. The switches were sourced and delivered fast and efficiently by local NETGEAR distributor JPRO, one of the country's leading professional audio and AVC distribution companies, with a track record spanning more than 30 years.

Due to the need to minimize any downtime, the speed of installation was of the essence. Fortunately, as Tony explains, "We were able to get the NETGEAR switches up and running fast because everything was preconfigured. Instead of our engineers having to do all that work, they just used the easy-to-use graphic user interface, and NETGEAR presets, meaning they could spend more time on other tasks."

Installation occurred in early January 2022, with Bartons providing on-site support through on-site staff and a remote management solution. As a result, the stadium now enjoys high-quality audio throughout the entire space, across gameday commentary, background music, public announcements, and hirers' own third-party systems. Plus, sound operators can monitor audio levels and limits throughout the venue, whether from a PC or smartphone. Consequently, if there are any issues, muting or gaining control of individual zones is possible from anywhere in the stadium.

Concludes Tony, "There have been full-capacity sold-out events, and the network has been rock solid. In addition, Eden Park now has a future-facing audio system throughout the site, delivering flexible and high-quality audio." So, Eden Park can be safe in the knowledge that the sound system is working hard and reliably in the background, enhancing the experience for sports fans and other visitors to this world-renowned venue.

edenpark.co.nz