

## PRESS RELEASE



# OPTOCORE

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For Immediate Release

### OPTOCORE NETWORKS BOOST RIO CEREMONIES FOR NORWEST

Just as they had at *London 2012* — and many other spectacular Games ceremonies before — Norwest Productions took their extensive Optocore fiber network system to Rio for this year's Summer Olympics.

The Australian-based large event specialists were contracted to Cerimônias Cariocas 2016 (CC2016) to design and supply the audio system, and provide the necessary technical staff to deliver a complete turnkey audio solution for both the Olympic and Paralympic Opening and Closing Ceremonies at the 79,000-capacity Maracanã Stadium. The company had already taken the decision almost a year earlier to partner with Campinas-based Loudness Sonorização, prior to tender.

Noted Norwest project coordinator and designer Andy Marsh, “As system designer we tried to keep the design as straightforward as possible, however the venue posed a few challenges, in particular the unfriendly cable paths.”

For the main audio transport Norwest provided an Optocore redundant ring network of decentralized devices in the form of a 24-node, 2Gb system, with the audio LAN using the second fiber pair in a 24-node 1Gb system. “We used all 24 nodes possible, and also handled delivery of feeds to the broadcaster.”

The Optocore set-up was designed in such a way that six nodes were stationed on the field of play, two of which handled the I/O from the different stages; the signals were converted to AES digital at every individual node, with Dolby Lake processors feeding the amplifiers.

Many of the signal runs approached distances of 350 metres — the maximum for a 2Gb network using multimode fiber. And this is where Optocore's new R-series interfaces came into their own.

Norwest maintains a substantial investment in Optocore equipment and upgraded to the new super-efficient R series devices, with 2Gb capability, as soon as they became available. R series devices offer increased features and energy efficiency, reduced carbon footprint and a substantial decrease in cost and power consumption — as well as 100%

more bandwidth over their predecessors. The devices provide for 1024 input channels per ring plus unlimited number of output channels — necessary for events on this scale.

“Norwest already owned enough R-series devices to run the entire network — with ample spares,” confirmed Andy Marsh. “We even did another couple of point to point networks using spare devices we had there!”

In total they supplied 54 interfaces, including DD4MR-FX, DD32R-FX, X6R-FX-8AE/8MI, X6R-TP-8AE/8MI, X6P-16IN for the main PA system and further DD4MR-FX and DD2FR-FX for broadcast splits.

As for the main Opening Ceremony itself, despite having a significantly lower budget than those of other recent Olympics, the event was praised by the international media for its vivid, diverse performances, emphasis on multiculturalism and its appeal to the issue of climate change.

Directed by Fernando Meirelles, Daniela Thomas and Andrucha Waddington, the ceremony included presentations of Brazil’s history and culture in a carnival like atmosphere, including its landscape and forests, the history of the Portuguese people, music and samba — and the favelas, among other aspects.

To ensure rock solid delivery of the event, Norwest’s fully redundant system contained secondary consoles connected to an analogue backup system with Dolby Lake processors switching the system outputs. Signals were transmitted to up to 380 various L-Acoustics FOH loudspeakers for the main Opening Ceremony, powered by up to 164 amplifiers, for the FOH system alone.

Andy Marsh knows that Optocore is unique in being able to deliver an event of this nature, and it continues to be their go-to solution. “We absolutely love it,” he said. “It offers reliability, redundancy and extremely high quality signal transportation.”

Norwest’s 13-strong site team included Ian Shapcott (FOH engineer) and Ian Cooper (senior systems engineer) — who both co-designed the systems with Andy Marsh — Chad Lynch (project manager) and John Watterson (monitor engineer), while Andre De Paula was crew chief for Loudness.

For further information about Optocore visit [www.optocore.com](http://www.optocore.com).

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***Rio Olympic Ceremonies pics attached. Please credit: ©Ryan Penny (CC2016) where indicated***

#### **About Optocore**

Based in Munich, Germany, OPTOCORE is the world market leading provider of high bandwidth, low latency, resilient, scalable and flexible fibre optic based networks for the transmission of audio, video

and data. For 20 years, Optocore has been continuously innovating and setting new standards with regards to digital network technology. OPTOCORE builds and develops synchronous optical fibre and CAT5 based network solutions for broadcast professionals — for fixed installations and live event applications. Utilising leading-edge technology and high-quality components Optocore guarantees durability and therefore long-term market and customer satisfaction. Due to the open system architecture, Optocore's platform offers other manufacturers the option to transfer conventional standard audio, video and data formats used in the pro audio industry, via an Optocore network. Technical expertise, QoS and an extensive support structure are guaranteed to all customers, together with the highest level of quality.

#### About BroaMan

BroaMan (Broadcast Manufactur GmbH's) high quality products are aimed at the broadcast and installation markets as well as production companies, sport facilities, professional AV integrators and many more applications. The company offers customised solutions for every application that requires video, audio and data transport or routing – whether a big and complex system for broadcast studio or OB Van, or a simple point to point for a small church, conference hall, etc. With DiViNe (Digital Video Network) all open standards can be integrated — digital video, audio, Ethernet and intercom — on the same fibre infrastructure.