

CommScope supports Orange Cameroon to deliver a seamless experience to its subscribers for AFCON 2022

The Africa Cup of Nations (AFCON) is the most prominent international football tournament on the African continent. The tournament is a celebrated event that attracts over 65 million viewers from all over the world. Olembe Stadium in Yaoundé, built in 2018, with a capacity of 60,000, served as the main venue for the opening ceremony as well as the final matches of the tournament.



Customer

Orange Cameroon

Country

Cameroon, West Africa

Challenges

African nations are becoming increasingly social media savvy and rely more on it to capture and share experiences. This calls for increased coverage and bandwidth throughout for every subscriber. Mobile operators face a further challenge: the inability of traditional macro systems to provide adequate mobile coverage and connectivity in large public venues such as stadiums due to poor signal penetration, as well as the concentration of thousands of mobile subscribers.

“Being the title sponsor of AFCON 2022, Orange wanted everyone to have the best possible experience at AFCON designated main Stadiums by giving them near-perfect coverage to share event experiences

in real time on social networks,” said Abdallah Nassar, chief engineering and network officer at Orange Cameroon. The experience would not be limited to Orange subscribers, but would also include spectators subscribed to other service providers, the media, and a multitude of organizers involved in the event. To achieve this, Orange would need to provide the best coverage and bandwidth speeds on par with global standards.

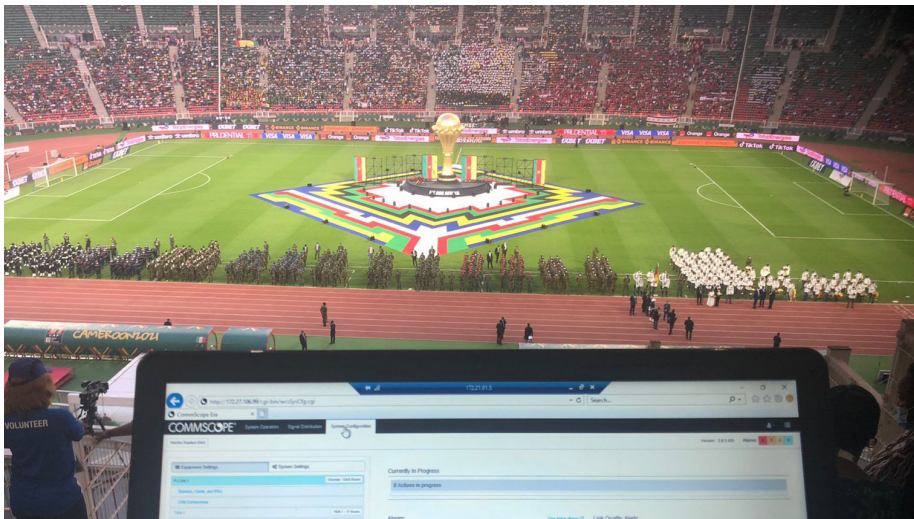
Orange Cameroon needed to collaborate with industry leaders and providers in mobile and large venue coverage space, and, with the short timeframe available, picking the right partner was critical to the success of this project. “The vision and ambition were clear. We searched for

an innovative, reputable and sustainable solution,” added Nassar.

CommScope was able to provide Orange Cameroon with various iterations of the ERA® DAS solution, specific to Olembe Stadium’s capacity, architecture and technology needs. This enabled Orange to select the optimal solution within project guidelines and budget.

The CommScope solution

CommScope’s solution had to provide subscribers with an improved user experience without disruptions during the event. CommScope’s reputation as a global leader in the in-building/large public venues space—as well as their experience in providing similar infrastructure projects



to stadiums in South Africa and France—resulted in the business being awarded to them.

The CommScope solution deployed at the Olembe stadium was its all-digital ERA distributed antenna system (DAS), designed to deliver high-performance in-building connectivity with multi-operator and multi-technology functionality. The DAS solution also included all the required passive antennas as well as fiber and coaxial cabling. The ERA system, being modular and scalable, was designed to support cellular coverage and capacity demands as well as the scale to deliver 5G.

The solution supports 5G in existing frequency bands, with no changes required to existing connections. ERA offers a mid-band feeder module and access points for higher mid-band frequencies such as C-band. The result is a system that supports 2G through 5G over a standard set of nodes and cabling.

CommScope's AIMOS was also implemented in the stadium. The Advanced Integrated Management and Operating System (AIMOS) is CommScope's comprehensive monitoring platform for distributed antenna systems and repeater solutions. AIMOS

is a Windows-based application that supervises and monitors the operation of all active elements within CommScope's repeater and fiber DAS systems. The AIMOS network management platform ties everything together by providing real-time automated support with robust configuration, fault finding and inventory management capabilities.

The implementation of the fully digital DAS solution is a first of its kind in Cameroon.

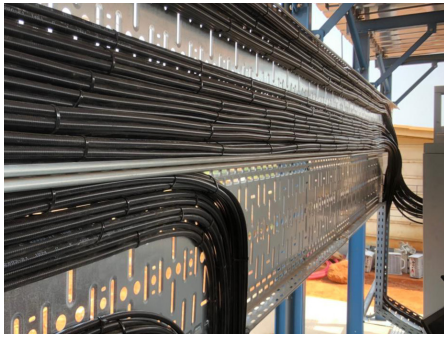
"CommScope DAS solution has already been tested and deployed with Orange Group in some European stadiums. The DAS solution isn't just for us, but the cross-platform capabilities allow other operators to benefit from the deployment as well," added Nassar.

Regional challenges during deployment

CommScope products were shipped from China, Germany, and the Netherlands with third-party electrical and fiber-optic products sourced from South Africa. CommScope worked with two partners—namely Clean IT Services and IMAX Wireless—to ensure the successful implementation of the solution.

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Orange had one particular ambition: to provide a cross-functional platform that gave all other operators the opportunity to take advantage of its scalability and independent configurations. Despite the challenging nature of this feat, CommScope and its partner were able to align with the other sharing operators and obtained their design approvals and final network configurations—resulting in a true multi-operator, multi-technology solution.

The pandemic gave a unique flair to the deployment, as the planning, pre-engineering work, and communication with Orange occurred remotely for the very first time. With French being Cameroon’s primary language, communication proved

challenging at times; however, the team managed to overcome these hurdles and seamlessly engaged with the operators involved.

Match day challenge

Orange implemented bandwidth changes and frequency reframing to support the growing LTE market and bandwidth needs of its data users during match events. With CommScope’s ERA solution, these pre-game changes were considered plug-and-play based and non-service affecting. This demonstrated another benefit of the solution to all the operators and cemented their trust in CommScope and the ERA system.

The future

CommScope’s successful implementation led to smooth and stable network coverage throughout the tournament. While these specific solutions were deployed for AFCON 2022, Orange will reap the benefits at future events at Olembe Stadium as spectators continue to experience the robust performance and reliability of their network.

“Stadiums coverage is just the beginning. We will continue implementing the DAS solution to cover airports in Cameroon and other strategic buildings for the public and private sectors,” concluded Nassar.

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