

Ivory Coast Stadiums

CommScope and Leadcom/STA help Orange Ivory Coast deliver a superior fan experience at AFCON 2024

One of the most celebrated events in football, the African Cup of Nations (AFCON) attracts fans, players, and officials from across the continent. Expectations are high at this world-class event, and attendees demand a rich digital experience enabled by seamless communication and internet access. To keep fans connected and engaged, telecoms leader Orange Ivory Coast partnered with CommScope and system integrator Leadcom/STA to deploy the ERA® digital DAS (distributed antenna system) at three key stadiums. This advanced solution dramatically enhanced connectivity during AFCON, providing attendees with an unparalleled digital experience.



Customer

Orange Ivory Coast

Location

Africa

Requirements

- Deliver excellent wireless performance and availability during high-density use
- Deliver fast, reliable internet access at events amid surging data demand
- Overcome coverage limitations in challenging stadium environments

Solution

- ERA® digital distributed antenna system

Benefits

- Delivered consistently high data rates even at full stadium capacity
- AIMOS monitoring before and during each match enhanced visibility
- Customer experience manager reported positive feedback

Meeting changing fan expectations at a major sporting event

Orange Ivory Coast, a leading telecommunications provider in West Africa, has partnered with several football stadiums hosting AFCON games in multiple cities. The provider understood the need to deliver robust connectivity to meet the growing demands of large-scale events. As smartphones and data-intensive applications

proliferate, it is becoming more challenging for conventional mobile networks to deliver consistent coverage and capacity. The challenges are especially demanding in densely populated environments like packed sports stadiums.

Challenge

Orange Ivory Coast was seeking technology partners that could meet stringent requirements, to ensure spectators would enjoy a full range of digital amenities and services at a high-profile event. AFCON 2024 posed several distinct technical challenges. Hosting between 40,000 and 60,000 spectators, AFCON venues are extremely high-density environments. When capacity soars for major events, network congestion and signal degradation issues escalate as well.

Even as population density surges, attendees still expect fast, reliable internet access for live streaming, social media sharing, and real-time updates.

The layouts of the stadium environments themselves also created specific challenges. Conventional mobile networks struggle to provide adequate coverage within stadium confines, particularly in hard-to-reach areas with architectural complexities and obstructed signals.

Solution

To address these challenges, CommScope partnered with Leadcom/STA, an international leader in the provision, management, and implementation of telecommunications solutions. Designed to deliver flexible, high-performance connectivity, CommScope's all-digital ERA distributed antenna system offers Ivory Coast Stadiums a simple yet economical solution. Operating on standard IT infrastructure—Category 6A and fiber—



these solutions allow the organization to provide high capacity with “five bars” of coverage throughout large sports venues.

At the heart of the solution is digital distributed antenna system (DAS) technology. CommScope® ERA digital DAS leverages digital signal processing to enhance coverage and capacity at each event, mitigating interference and improving signal quality. Designed with scalability in mind, the modular form factor of ERA digital DAS allows for seamless expansion to accommodate evolving connectivity demands during

AFCON. A dedicated team of engineers from Leadcom/STA installed and integrated ERA digital DAS equipment across AFCON venues, ensuring seamless interoperability with existing network infrastructure.

ERA's centralized management platform enables venues and their service providers to monitor network performance in real time, identify potential issues, and optimize system configurations remotely.

Together, CommScope and Leadcom/STA collaborated closely with Orange

Ivory Coast to tailor the deployment of ERA digital DAS to specific venue requirements, ensuring comprehensive coverage and optimal performance. For example, the Stade Olympique d'Ebimpé is a multi-purpose stadium that can host football, rugby and athletics. This massive site required coverage for up to 60,000 attendees, as well as 5G coverage in VIP indoor areas. At a final match, additional tickets were sold, yet the solution was still successful at delivering excellent performance. A VIP speed test during the match in crowded areas demonstrated download speeds of an impressive 141 Mbps.

CommScope, Leadcom/STA, and Orange Ivory Coast also deployed the solution at the multi-purpose StadeFélix-Houphouët-Boigny, as well as the Stade Bouakéis, with capacities of 45,000 and 40,000, respectively. These sites also delivered remarkable results, even with cell sites at 100% capacity.

The successful deployment of CommScope ERA digital DAS at AFCON demonstrated Orange Ivory Coast's commitment to delivering best-in-class connectivity solutions for large-scale events. Utilizing CommScope solutions and their advanced digital DAS technology, Orange Ivory Coast not only addressed the connectivity challenges inherent in high-density environments, but also provided attendees with an unmatched digital experience. At each deployment, successful data rates were consistently achieved, even when stadiums had reached full capacity.

The solution's Advanced Integrated Monitoring and Operating System (AIMOS) also played a critical role.

This comprehensive monitoring platform for DAS and repeaters provides automated support with robust fault, configuration and inventory management capabilities—minimizing time and labor associated with manual network management tasks. Successful AIMOS monitoring reports were sent every 30 minutes before and during each match.

To further enhance the solution, CommScope worked closely with Orange Ivory Coast to optimize their outdoor macro sites to improve performance.

The deployment has forged a lasting relationship for innovation as well as a repeatable template for success. Moving forward, Orange Ivory Coast, CommScope, and Leadcom/STA will continue to build on their proven cutting-edge connectivity infrastructure, deploying their solutions at similar events and venues across the region.

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