

5G stadium base station antennas Capacity challenges have met their match



As millions of sports and entertainment fans return to large stadiums and arenas all over the world, each of them wants to stay in contact with friends and family who couldn't be there themselves. That means terabytes of data—calls, texts, photos and video—entering and leaving the stadium over the course of an event.

This capacity challenge would be significant anywhere, but stadiums are particularly difficult places to handle this kind of high-density traffic—and, in a world where 5G connectivity is the default expectation, mobile network operators and neutral hosts face a steep challenge to keep tens of thousands of fans reliably connected.

CommScope takes the field with a 5G-ready solution that dramatically boosts capacity

Stadium-sized challenges call for CommScope-grade solutions. Our new 5G stadium base station antenna (BSA) solutions are purpose-built to meet the unique challenges of the largest stadiums, whether the attendance is 1,000 or 100,000 connected fans, and we did it by squaring the circle—literally.

Supporting both 4G and 5G networks, including the 3.5 GHz and 700 MHz bands, the 5G stadium BSA solution employs precise pattern to deliver a rectangular radiation pattern envelope (RPE)

instead of the conventional round RPE. For a wireless network built to support a grid of seating sections, this is the ideal way to cover every seat with minimal overlap and cross-sector interference. This not only improves QoS, but also greatly improves spectrum reuse to optimize capacity—potentially even unlocking the bandwidth to drive the most cutting-edge virtual reality (VR) and augmented reality (AR) live experiences that fans crave.



Benefits

- Sharply rectangular RPEs cover seating sections with minimal sector overlap
- Precise pattern increases frequency reuse, greatly expanding capacity
- Ultra-wide bandwidth antennas can support multiple frequencies
- Support for 5G bands and all legacy bands
- Expanded capacity can unlock VR and AR capabilities
- No larger than existing 4G-only stadium antennas
- Compact, 4.3-10 connectors reduce PIM and improve performance

Specifications

Low band support	700, 800, 900 MHz
High band support	1.8, 2.1, 2.6, 3.5 GHz
Antenna ports	10 (2 low band, 4 mid band, 4 high band)
MIMO	2xMIMO for low bands 4xMIMO for mid band 4xMIMO for high bands
Dimensions	853x1354x210 mm
Horizontal HP beamwidth (nominal)	50°
Vertical HP beamwidth (nominal)	50°

About CommScope

CommScope's reputation as a trusted expert is built on over four decades of RF innovations, considerable investment in research and development, and more than 15,000 patents. We take a system-level approach, with a proven process based on:

- Innovative design
- The constant search for optimized performance
- Reliable delivery

Our solutions are designed to meet RF challenges found in virtually any wireless network deployment, whether a macro network deployment, small cell, in-building or other unique environment—such as open-air stadiums packed with tens of thousands of simultaneously-connected fans.

We're focused on delivering the technologies that help mobile operators and neutral hosts fulfill their missions to keep customers connected and smiling.

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com

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