

Black Box Implemented a High-Capacity DAS Framework for a Healthcare Leader, Supporting Clinical Voice and Data Transmission

Overview

For more than 20 years, a leading healthcare institution has trusted Black Box® to drive its wireless innovation and connectivity. As the digital demands of modern healthcare continued to grow, from real-time clinical communications to enhanced guest access, the organization sought a scalable and future-proof solution. Black Box responded with a powerful combination of engineered Wi-Fi and a high-performance Distributed Antenna System (DAS), transforming the facility's wireless infrastructure and enabling secure, uninterrupted mobility for staff, patients, and visitors alike.

Challenges

Maintaining seamless wireless coverage in a large healthcare environment presented several critical challenges that directly impacted clinical workflows and the patient experience. The existing systems were marred by coverage gaps, leading to unreliable mobile connectivity and frustration among staff and patients alike. As a healthcare provider deeply reliant on mobile voice and data applications, the institution required dependable roaming and network capacity to support real-time clinical communication. Being one of the early adopters of DAS technology, they had

AT A GLANCE

CHALLENGES

- Coverage gaps hindering clinical communication
- Unreliable network impacting staff and patient care
- Demand for scalable, future-ready DAS and Wi-Fi

SOLUTIONS

- Tailored DAS ensuring seamless cellular, radio & paging
- High-speed Wi-Fi optimized for clinical workflows & roaming
- Unified wireless architecture and secure guest access to elevate the patient and visitor experience

RESULTS

- Reliable connectivity for clinicians and staff
- Improved patient experience with secure guest Wi-Fi
- Seamless communication across the facility

BENEFITS

- Future-proof wireless infrastructure
- Optimized network performance
- Cost-effective connectivity solutions

Challenges (continued)

a vision of a scalable, future-proof mobile infrastructure but lacked the right implementation to bring it to life. Connectivity inconsistencies and performance shortfalls hindered both operations and satisfaction, necessitating a comprehensive and modern solution to meet growing demands.



Solutions

Black Box responded with a custom-engineered wireless solution that directly addressed the institution's complex needs. A robust DAS architecture was designed to support commercial cellular services, two-way radio, and paging systems, ensuring blanket coverage throughout the facility. Complementing this, Black Box deployed a high-performance Wi-Fi network, purpose-built to sustain clinical applications and uninterrupted roaming. By integrating multiple wireless technologies into a unified DAS framework, deployment costs were streamlined while enhancing operational efficiency. Additionally, a secure and reliable guest Wi-Fi network was introduced, offering patients and visitors a significantly improved digital experience during their stay.

Results

The impact of the wireless overhaul was immediate and transformative. Clinicians experienced seamless mobility throughout the facility, gaining uninterrupted access to critical applications and patient data, essential for responsive and effective care delivery. Patients and their families benefited from reliable guest connectivity, enhancing comfort and engagement during visits. The healthcare institution witnessed a marked improvement in operational efficiency and user satisfaction, laying the foundation for a digitally connected, mobile-first environment. This transformation has not only resolved previous challenges but also set a new standard for wireless performance within the institution.

Why Black Box?

Black Box's long-standing relationship with the healthcare provider, built on over two decades of trust and proven results, made them the ideal partner for this ambitious wireless transformation. Their deep expertise in healthcare environments, combined with tailored engineering and forward-thinking deployment strategies, positioned them as a reliable ally in future-proofing the institution's mobile infrastructure. From supporting new construction projects to modernizing legacy systems, Black Box continues to deliver unmatched wireless solutions that evolve with the institution's needs, ensuring both continuity and innovation in healthcare connectivity.

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