

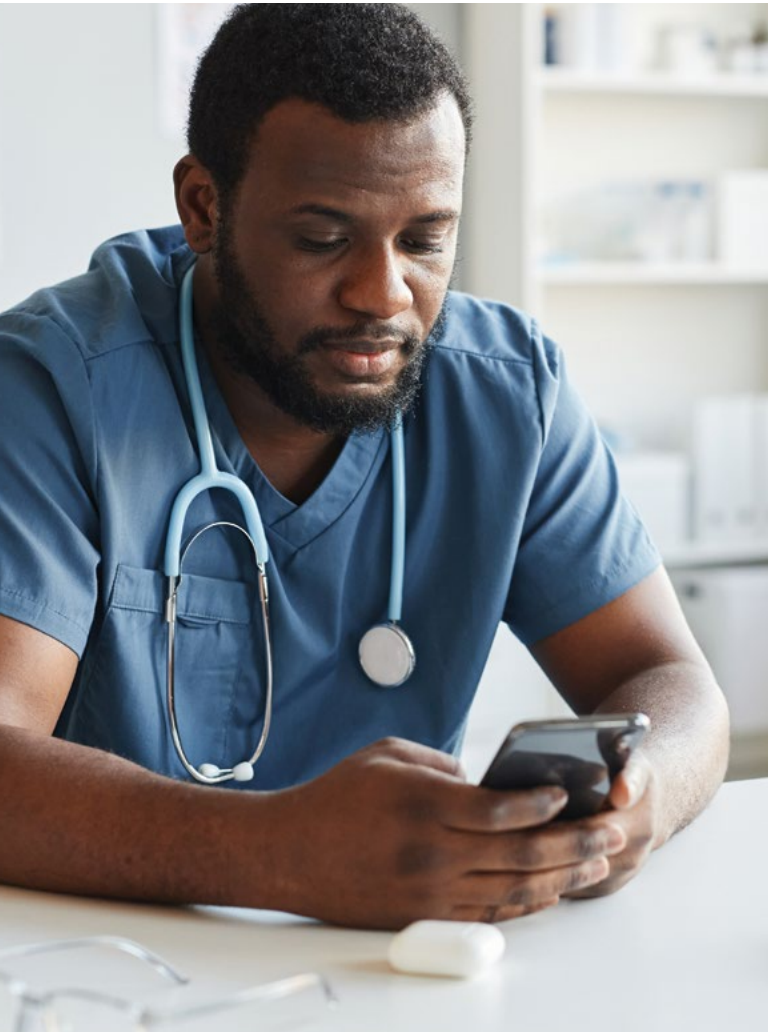


# The Essential DAS Guide for Healthcare

Achieve reliable cellular coverage in hospitals with distributed antenna systems.

A female doctor with blonde hair, wearing a white lab coat over a grey and white striped shirt, is looking down at a black tablet computer. She has a stethoscope around her neck. In the background, two other doctors in white lab coats are walking in a brightly lit hospital hallway with large windows.

eBook



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# When cellular service fails, hospitals are at risk

## CELLULAR NETWORKS AT HOSPITALS ARE FALLING SHORT. SOLVE DROPPED CALLS, DEAD ZONES AND POOR CELLULAR COVERAGE WITH DAS.

Patients, staff and medical equipment—everything in a hospital is now connected. Yet, many healthcare facilities face connectivity challenges: slow data speeds and coverage gaps that disrupt workflows and delay care, create frustration and compromise safety in an already demanding environment.

The root of the problem? Most hospital wireless networks weren't built for the demands of modern healthcare.

With **distributed antenna systems (DAS)** healthcare can solve poor network coverage—and unlock the full potential of connected care.

In this eBook, healthcare professionals will learn everything to know about DAS.

- ✓ What DAS is and how it works
- ✓ Who benefits from DAS
- ✓ Why DAS matters for every healthcare system
- ✓ How cost-effective DAS models support hospitals of all sizes



# What is a DAS?

## A DISTRIBUTED ANTENNA SYSTEM (DAS) BRINGS CELLULAR SERVICE INSIDE BUILDINGS, WHERE YOU NEED IT.

Most hospitals rely on outdoor cell towers to stay connected with 5G or LTE—but those signals often cannot penetrate inside buildings. Materials like concrete, metal and medical equipment block wireless signals from reaching inside, leaving critical gaps in coverage. A DAS solves this by extending cellular service throughout the building, ensuring reliable connectivity where it's needed most.



### WHY COVERAGE FAILS INDOORS

# 80%

of mobile calls and data sessions happen inside buildings. Building materials such as steel, concrete and energy-efficient glass interfere with signals and disrupt wireless service.<sup>1</sup>



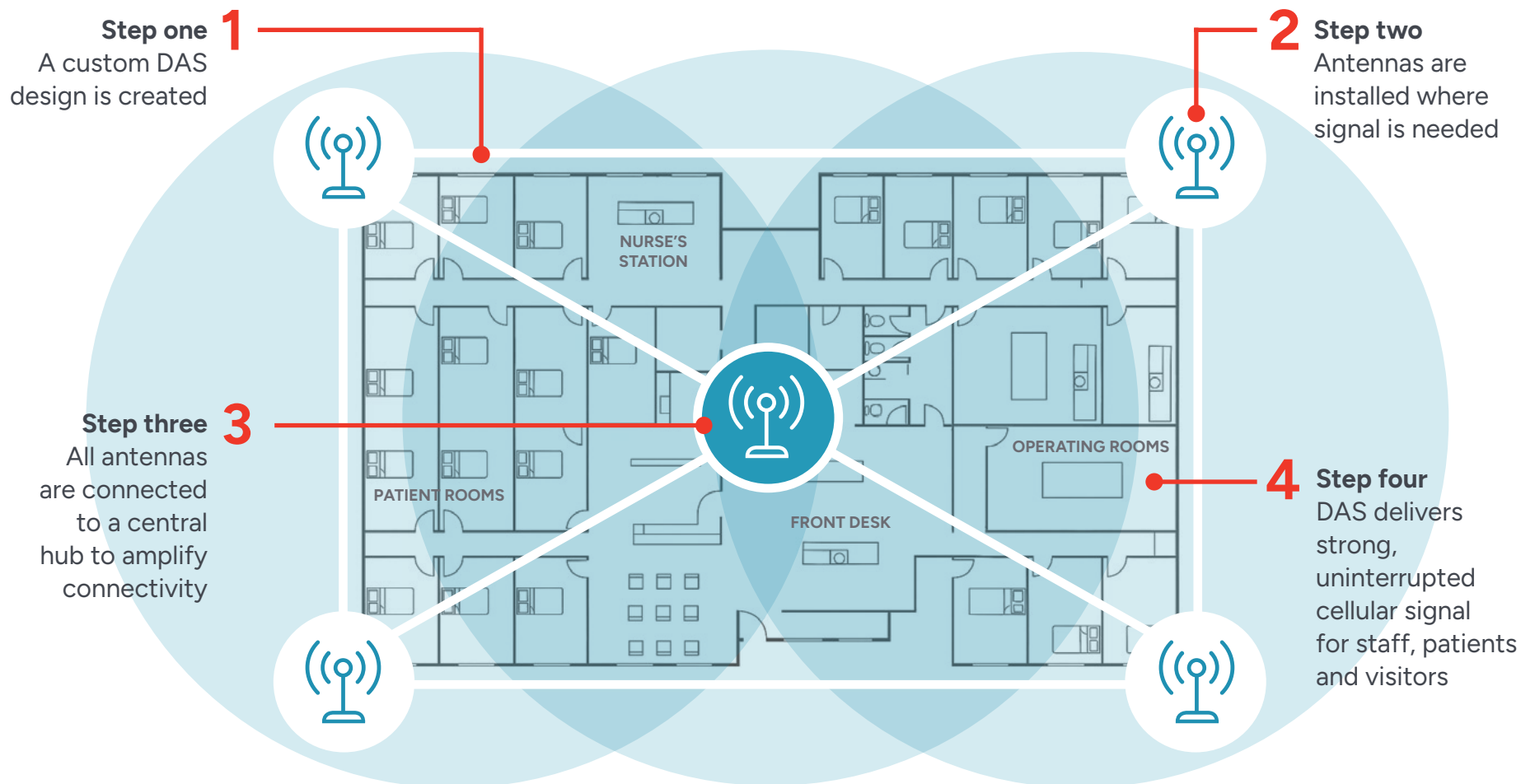
### HOW DAS DELIVERS RELIABLE CONNECTIVITY



Small and stealth cellular antennas are deployed throughout hospitals and healthcare facilities to improve service, eliminate dead zones and boost signal strength for AT&T, T-Mobile, Verizon and other service providers.

# How DAS works

**IN-BUILDING ANTENNAS BRING RELIABLE CELLULAR SIGNAL TO EVERY CORNER OF YOUR FACILITY.**





# DAS results

**WITH STRONG INDOOR CELL SERVICE, EVERYONE STAYS CONNECTED, FROM STAFF TO PATIENTS—EVEN EQUIPMENT.**

From faster data speeds to dramatic reductions in dropped calls, DAS transforms indoor cellular performance with measurable results across speed, reliability and user experience.

Boingo's DAS is a neutral host solution, delivering connectivity from all major wireless carriers—AT&T, T-Mobile and Verizon—on one shared network.



## SPEED & PERFORMANCE

# 20x

faster data speeds<sup>2</sup>

# 75%

reduction in wireless lag,  
helping eliminate user delays<sup>2</sup>

## RELIABILITY

# 95-98%

cellular coverage, up from  
40-60% coverage in many  
hospitals without DAS<sup>2</sup>

# 80-90%

reduction in dropped calls<sup>2</sup>

# How hospitals use DAS

## CELLULAR CONNECTIVITY IMPACTS ALL CORNERS OF CARE.

### Patient Experience

- ✓ Provides reliable cellular service for patients and visitors
- ✓ Supports patient entertainment systems
- ✓ Frees up Wi-Fi capacity, as cellular coverage helps reduce Wi-Fi network congestion

### Emergency Response

- ✓ Emergency Responder Radio Communication Systems (ERRCS) provide reliable radio communications for first responders
- ✓ Emergency paging systems

### Care Quality

- ✓ Electronic Health Records
- ✓ Patient monitoring systems
- ✓ Telehealth appointments

### Staff Efficiency

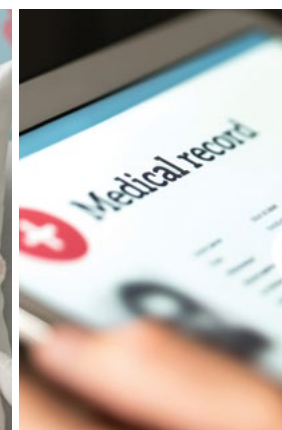
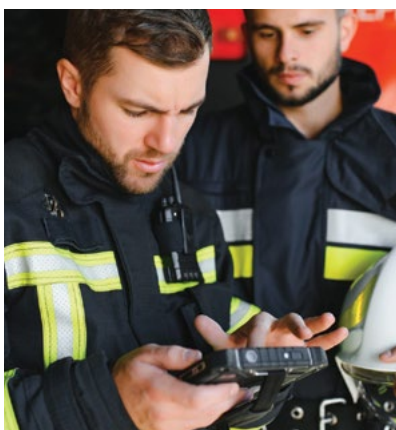
- ✓ Allows staff to communicate instantly
- ✓ Enables efficient staff call systems

### Recruiting & Retention

- ✓ Increases productivity and reduces stress
- ✓ Creates a safer work environment
- ✓ Helps attract top talent

### Bottom Line

- ✓ Decreases maintenance costs compared to multiple separate communication systems
- ✓ Lowers the risk of communication-related medical errors



# Who benefits from DAS?

## ADVANCEMENTS IN WIRELESS TECHNOLOGY MAKE DAS ACCESSIBLE FOR ALL HEALTHCARE ENVIRONMENTS AND BUDGETS.

There's now a DAS solution for any size healthcare facility—whether you're running a major hospital network or a small outpatient clinic. From basic cellular coverage for voice calls and text messaging to advanced systems supporting high-bandwidth, data-intensive medical applications, today's DAS networks can be tailored to your environment and budget.

**"No two healthcare systems are alike, which is why Boingo offers flexible, tailored DAS solutions—from high-capacity systems for hospitals with high bed counts to cost-effective coverage options that deliver strong cellular performance without stretching your budget."**

Boingo Wireless CEO Mike Finley



### DAS FOR CELLULAR COVERAGE

#### Reliable, cost-effective connectivity for essential communication

- ✓ Voice calls
- ✓ Text messaging
- ✓ Email and browsing
- ✓ Emergency/public safety communication (ERRCS)

### DAS FOR CELLULAR COVERAGE + CAPACITY

#### Robust network optimized for seamless coverage and data-intensive applications

- ✓ Voice calls
- ✓ Text messaging
- ✓ Email and browsing
- ✓ Emergency/public safety communication (ERRCS)
- ✓ Point-of-care (POC) systems
- ✓ Real-time image and data transfer
- ✓ Telehealth platforms
- ✓ Medical and IoT devices
- ✓ Video streaming



# Network as a Service (NaaS)

## A COST-EFFECTIVE WIRELESS MODEL DESIGNED FOR HOSPITALS OF ALL SIZES.

To simplify network complexities, Boingo designs, installs, manages and maintains network operations with a NaaS model. Boingo's team of experts fully manage the DAS network and eliminate high upfront costs with a predictable monthly payment structure.

**No upfront capital  
investment required**

**Guaranteed performance &  
ongoing maintenance**

**Scalable, future-proofed  
infrastructure**

### Discover the benefits of NaaS



#### Infrastructure

- DAS equipment
- Fiber optic cabling
- Remote monitoring systems
- Support infrastructure



#### Financial

- Reduced upfront costs
- Predictable monthly expenses
- Scalable investment model
- Technology refreshes



#### Services

- Carrier coordination and guaranteed cellular service for AT&T, T-Mobile, Verizon and other wireless carriers
- System design and engineering
- Installation and commissioning
- 24/7 monitoring and maintenance



#### Operational

- Guaranteed performance levels
- Future-proof technology
- Flexible capacity scaling
- Performance optimization

#### GPO Partner

Boingo is a contracted supplier with national GPOs, which offer potential savings for your hospitals and healthcare facilities. Contact Boingo at [sales@boingo.com](mailto:sales@boingo.com) for more information.



# Cybersecurity and data compliance



## PROTECTING PATIENT DATA REQUIRES A PROACTIVE NETWORK STRATEGY.

Hospitals manage vast amounts of sensitive patient data and must adhere to strict security and privacy regulations, like HIPAA. As AI and digital innovation transform healthcare, a strong data security strategy is essential. It starts with wireless infrastructure designed to protect patient information, mitigate cyber threats and ensure compliance.

### Boingo DAS networks feature built-in security



Zero trust network architecture



Dedicated Network Operations Center that provides 24x7x365 threat monitoring



End-to-end encryption for data traffic



Seamless integration with existing IT infrastructure and security protocols



**"At Boingo, we provide 24/7 protection for hospital networks. A secure wireless network cannot be an afterthought. Trusted by the Department of Defense on more than 100 U.S. military bases, our in-house security team mitigates the risk of costly and devastating security breaches."**

**Boingo Wireless CTO Dr. Derek Peterson**

# Connecting AI with DAS



## THERE IS NO AI WITHOUT NETWORK INFRASTRUCTURE.

AI is changing healthcare. But as hospitals race to adopt AI-powered tools, many are hitting the same roadblock: their networks aren't ready. DAS helps connect your AI future.

Here's why DAS is essential to AI:

### **Powers real-time data.**

Whether it's an algorithm flagging a change in vitals or a predictive tool managing patient flow, split-second access to data matters. DAS ensures that mobile networks can handle the speed and volume AI requires.

### **Eases pressure on Wi-Fi.**

AI applications are bandwidth-intensive. Combine that with EHR systems, imaging tools, IoT devices and staff mobile use—and Wi-Fi alone can get bogged down. DAS offloads traffic, keeping both systems running smoothly.

### **Enables device density at scale.**

As more AI-enabled tools come online DAS helps ensure your network can handle the growing load without compromising performance.

### **Future-proofs the facility.**

DAS scales with evolving technologies and works alongside other wireless networks and solutions, including private 5G and edge computing.

As hospitals chart their path forward with AI, reliable and secure connectivity is what turns AI from a buzzword into real-world impact.

## CASE STUDIES

# Proven DAS performance at leading healthcare facilities

**SEE HOW HOSPITALS ARE SOLVING COMPLEX CONNECTIVITY CHALLENGES—AND TRANSFORMING THE CARE EXPERIENCE—WITH BOINGO.**



## Ben Taub Hospital

A high-volume teaching hospital staffed by Baylor College of Medicine faculty and residents, Ben Taub relies on Boingo's cellular DAS to support fast-paced, next-generation care delivery across its large urban campus.



## Hurley Medical Center

As a 443-bed public teaching hospital and Level 1 trauma center, Hurley provides dependable mobile connectivity for clinicians, patients and visitors—ensuring seamless communication at every level of care.



## Arnot Ogden Medical Center

This acute care facility prioritizes the patient experience by partnering with Boingo to eliminate dropped calls, improve coverage and enable stronger connectivity with a cost effective solution.

**With 20+ years of experience, Boingo is the largest indoor DAS provider in the U.S.**

# Before & after: the impact of DAS

For hospital IT and procurement teams responsible for evaluating infrastructure upgrades, results matters. Boingo's real-world DAS deployments deliver measurable outcomes. Improved signal strength across AT&T, T-Mobile and Verizon networks demonstrate how dramatically a well-designed system can transform connectivity.

## CHALLENGE

Poor cellular coverage for mobile and IoT devices disrupted operations and user experience.

## SOLUTION

Boingo designed, built and manages a DAS network with all three Tier One carriers, delivering significant coverage improvements for operational devices and thousands of people.

## RESULTS

### Carrier 1

Before 0 Mbps avg download speed  
After 136.6 Mbps avg download speed



### Carrier 2

Before 1.8 Mbps avg download speed  
After 35.9 Mbps avg download speed



### Carrier 3

Before 3.5 Mbps avg download speed  
After 49.5 Mbps avg download speed





# World-class organizations connect with Boingo

Boingo delivers mission-critical connectivity where it matters most—from busy airports and packed stadiums to elite military bases and leading hospitals. With decades of experience and a reputation for innovation, Boingo is the trusted partner for secure, high-performance wireless networks.



O'Hare International Airport



World Trade Center Oculus



Salesforce Transit Center



JFK International Airport



Camp Pendleton



Aloft Hotel



Garnet Health Medical Center



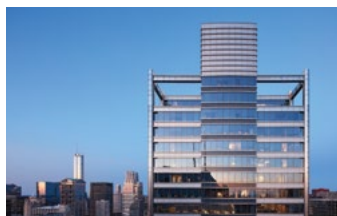
State Farm Arena



Hollywood Bowl



Soldier Field



One North Wacker



State Farm Corporate HQ



Hillsdale Hospital



Grand Central Madison



Rockefeller Center



# Why Boingo?

Not all wireless is created equal. Top healthcare systems rely on Boingo for robust connectivity that improves patient care and operational efficiencies.

## The Boingo difference

- ✓ Delivers cellular coverage for AT&T, T-Mobile and Verizon
- ✓ Manages system design, installation and ongoing operations
- ✓ Assumes financial responsibility for the network infrastructure
- ✓ Handles regulatory compliance and technical updates
- ✓ Provides 24/7 monitoring and maintenance
- ✓ Ensures secure networks that meet strict regulatory requirements

## The hospital benefit

- ✓ Reliable and secure connectivity for staff, patients and medical equipment
- ✓ Reduced capital expenditure
- ✓ An expert partner to manage complex network infrastructure
- ✓ Fast deployment and carrier onboarding
- ✓ Ongoing system optimization and upgrades

## Network Convergence

In addition to DAS networks, Boingo is a neutral host network leader deploying state-of-the-art Wi-Fi and private networks for cohesive wireless coverage managed through one centralized platform.



# Let's get started

Boingo is ready to design, deploy, and manage a secure, high-performance DAS network tailored to your hospital's unique needs.



Contact Boingo today: [sales@boingo.com](mailto:sales@boingo.com)  
Learn more at: [boingo.com/healthcare](https://boingo.com/healthcare)

Scan to learn more

**Boingo Wireless, Inc.** simplifies complex wireless challenges to connect people, operations and things. We design, build and manage converged, neutral host public and private networks at major venues around the world. Boingo's vast footprint of distributed antenna systems (DAS), Wi-Fi, small cells and macro towers securely powers innovation and connectivity in airports, transit stations, stadiums, military bases, hospitals, commercial properties and enterprises worldwide. Learn more at [boingo.com](https://boingo.com).



<sup>1</sup>Inside Towers <https://insidetowers.com/growing-demand-for-in-building-wireless>; <sup>2</sup>Boingo Internal Data The images on the cover, page 3, page 6, child with video game on page 7, and page 15 are AI generated. © 2025 Boingo Wireless