

Fast mobile connectivity, everywhere it's needed

A distributed antenna system (DAS) can bring full mobile coverage and higher capacity to any building.

In building coverage needs are changing...

The use of technology is changing:

High speed data and large ubiquitous coverage and capacity are expected, and 5G technology and devices are on the rise.

Tenant connectivity needs are changing:

Property owners are expected to provide connectivity for staff and contractors for all three mobile network operators (MNOs). Offices need to be flexible enough to account for ad hoc reconfigurations and changing work environments.

User and enterprise technology are changing:

Increased use of portable devices like laptops, remote network setups and the introduction of Internet of Things (IoT) use cases call for updated infrastructure.

The DAS technology is changing:

New active technology solutions greatly improve network observability and enables DAS networks to be offered as a managed service. Use of fibre-based connections makes deployments more flexible than ever before and easily adapt to changing building layouts. Highly reliable DAS networks underpinned by SLAs can now finally support smart buildings applications.

Time to rethink your DAS.

Connect every user and application, everywhere, with dedicated indoor mobile connectivity.

Offer patrons, tenants and fans fast, reliable 4G LTE/5G connectivity everywhere they go with the broad coverage and high capacity of a DAS.

BAI's DAS solution can meet the need for dedicated indoor mobile connectivity, even in the most user-dense locations: from high-rise office buildings and stadiums to shopping centres and transport hubs.

We start by assessing your property so we can design and deliver a custom in-building coverage (IBC) solution that will extend mobile coverage and capacity throughout your entire space. Our end-to-end process also includes post-deployment management and 24/7 monitoring for greater service assurance.

Where is a DAS needed?

Any building or campus with poor indoor mobile signal coverage and performance can benefit from a DAS solution. This includes:



Hospitals and other healthcare facilities



Stadiums and convention centres



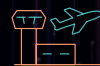
Hotels and residential apartment buildings



Shopping centres



Large office buildings



Railway stations, airports and other transport hubs



bai communications

DAS delivers dedicated indoor mobile coverage

Achieving full in-building connectivity.

BAI's DAS solution

Outdoor macro base stations often can't provide sufficient signal strength throughout buildings or in underground areas such as transit tunnels. This is mostly due to interior obstacles or construction materials that make it hard for signals to penetrate. Even if a signal is available, the network can quickly reach capacity when too many users try to connect at the same time, such as during a big event at a stadium, or use it for bandwidth-heavy tasks like video streaming.

How DAS solves the indoor connectivity challenge

A DAS provides dedicated indoor mobile coverage through a mix of passive and active network elements installed throughout a building.

These include combiners, cables and splitters that transport signals from in-building mobile base stations to antennas placed in carefully considered positions (and typically attached to the ceiling for discreet installations). The result is consistently high-quality mobile connectivity wherever users are – and the capacity to connect everyone during peak usage times.

Shared infrastructure allows multiple mobile network operators (MNO's) to join a DAS network to deliver a better indoor mobile connectivity experience for customers. However, this requires an infrastructure provider with the experience, capacity and resources to deploy, operate and maintain the network.

With this innovative shared model, building owners benefit from 24/7 operations and maintenance support for the DAS network. The right partner can also deliver other networks a building might need, such as public Wi-Fi for guests or private 5G for Internet of Things (IoT) applications, and ensure a harmonious connectivity experience.

Features	Benefits
 Dedicated indoor mobile coverage	Better coverage and capacity everywhere in a building
 Shared infrastructure	Less capital spent upfront for deployment and lower individual risk through sharing
 Flexible funding models	Resources are freed up to be invested elsewhere
 Discreet installations	In-building equipment guests, fans and tenants won't notice
 Best-practice operations and maintenance	Backed by service-level agreements that ensure high availability for users
 Single point of contact	Less complexity and faster delivery timelines
 Expert delivery	Quality assured with our extensive DAS design and delivery experience in Australia and globally
 Strong relationships	Reduced barriers by working closely with key stakeholders (e.g. MNO's, technology partners) Resources are freed up to be invested elsewhere

End-to-end DAS solution delivery

Consult and design

We work with you to design the ideal DAS for your space, whether it's a retrofit or for a new build. Our process starts with coverage assessments to evaluate existing and/or required mobile connectivity, or close review of your floorplans and connectivity requirements if it's a new development. Then we design a DAS solution to deliver best-in-class wireless connectivity to every target coverage area. We can also develop in-building coverage specifications and manage the tender process, then help validate the bids you receive.

Install

Our team installs all the combiners, cables, splitters, antennas and other elements according to the DAS network design. Expert project managers coordinate and oversee every step, keeping the deployment on track and ensuring a high-quality result. To minimise disruption to a building's activities and occupants, we can work during off-hours or take a staged approach to accommodate events.

Operate and maintain

As your in-building connectivity partner and owner of the on-site DAS network elements (excluding the MNO base station equipment), we engage with and onboard MNOs joining the DAS network. Staffed by highly trained and qualified personnel, our network operations centre provides 24/7 real-time monitoring and support that includes issue tracking and incident management. Regular reporting of key network performance indicators keeps you informed about DAS performance against our service-level agreements. Our highly skilled technical support and field services teams perform on-site inspections and needed repairs to keep the DAS network running smoothly.

We support three main DAS architecture variants to cover a broad range of in-building mobile connectivity needs.

- Passive DAS: Only passive components and coaxial cabling for signal transport and distribution. For small to mid-sized buildings.
- Active DAS: An active fibre backbone for signal transport and active antennas for greater service assurance. For medium to large-sized buildings.
- Hybrid DAS: A combination of active and passive.



DAS design and installation guided by experience

Knowing what technology to apply to a space is critical to getting optimal results from a DAS. BAI's deep insight and broad experience help us make the right call for every building.

DAS architecture for every space

No matter how expansive your building is, we can design a DAS that will bring dedicated mobile connectivity to your target coverage areas.

Small to mid-size properties can be served with passive cables and antennas, with a central power supply needed only for the mobile base station. However, buildings with many floors, such as high-rise office towers, require longer cable runs and powered (active) network elements to transport signals across all target coverage areas. An advantage of active elements is that they can be remotely monitored, allowing for proactive maintenance with less downtime and a more consistent user experience.

Designs that meet demand

Whatever network capacity your space needs, our DAS designs can deliver.

From stadiums that host tens of thousands of visitors, to office buildings where network use fluctuates throughout the day, to car parks with minimal bandwidth requirements, we can design a system that supports the needed capacity for every target coverage area.

Optimal antenna placements

We account for every factor when planning the most effective, unobtrusive antenna placements, including how a building was constructed and what's inside each room.

Sites with fewer obstructions, such as modern offices with open floor plans, can get great connectivity with fewer antennas. More complex are buildings with many walls, metal objects and electronic equipment such as hospitals, or high ceilings like in a stadium or convention centre. These require denser and well-planned deployments to optimise coverage.

Built with best practices for best results

Our DAS designs comply with Mobile Carriers Forum (MCF) standards.

Following these standards helps make sure your DAS network will provide sufficient coverage and capacity, won't interfere with nearby networks and will be accepted by mobile carriers. MCF standards also facilitate shared use by multiple mobile carriers, meaning less space and equipment are required for multi-carrier coverage.

Contact us

Find out how BAI's DAS solution can connect everything and anyone in your world:

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