

Carrier-Grade DAS Solutions



Improving In-Building and Outdoor Cellular and Wi-Fi Coverage

What are Industrial and Carrier-Grade Distributed Antenna Systems?

When properly engineered and expertly installed, Distributed Antenna Systems (DAS) ensure excellent cellular coverage and data capacity for smart phones and IoT devices. DAS solutions deliver a dedicated network of antennas that amplify cellular and Wi-Fi signals throughout a facility. Distributed Antenna Systems are highly scalable and can be designed to function in any indoor (iDAS) or outdoor (oDAS) space. When the labels of Industrial-Grade or Carrier-Grade are applied to the term DAS it means that these systems are extremely advanced — capable of supporting levels of coverage and capacity that surpass basic or lower end DAS systems. Part of what makes a DAS system carrier-grade is the extensive on-site surveying and testing done before installation — ensuring that the system is engineered to operate at maximum effectiveness. The rest of what creates a carrier-grade DAS solution deals with the high-end and expertly installed equipment utilized in the system.

When should I consider iDAS solutions for my buildings and facilities?

If your organization owns existing facilities, are expanding those facilities, or are constructing new facilities, and those facilities are meant to house hundreds of vendors and service thousands of customers, then a DAS solution may be something your organization needs.

Large structures made of steel, concrete, and Low-E glass tend to impede external cellular signals from propagating indoors — reducing the signal strength, coverage, and capacity levels of the cellular networks your stores, kiosks, and restaurants use to connect their wireless equipment (*i.e. POS systems for customer transactions*). Additionally, when thousands of customers are calling, texting, and live streaming about their experiences at your venue, they consume bandwidth — slowing internet speeds, impacting revenue generating activities, and reducing customer satisfaction.

A site survey is required to evaluate the state of your current in-building wireless coverage and capacity levels. After one is performed, expert technicians, like those employed by MCA, can advise as to the type of system your facility requires to achieve optimal coverage levels throughout your facilities.

What if my facilities are outdoors, when would I consider an oDAS Solution?

Cellular signals can be impeded by neighboring structures as well as your own structure. If line of sight to cellular towers is obstructed by facilities around your outdoor space, or if your outdoor spaces have weak signals due to their proximity to the nearest cellular towers (*far away*), you can boost the strength of cellular signals with oDAS solutions designed specifically for harsh outdoor environments in need of signal enhancement. These systems are especially useful for distributing Wi-Fi signals for private and public use across areas like parks, state fairgrounds, and other wide open spaces.

What types of DAS systems are there?

There are four types of DAS systems; Passive, Active, Hybrid, and Digital (all for outdoor and indoor use). They have different pros and cons, price points, and installation requirements. Each system utilizes various components to achieve the desired level of signal enhancement your facilities require including Donor (*External*) and Ceiling (*Internal*) Antennas, Bi-Directional Amplifiers (BDA), Small Cells, Base Transceiver Stations (BTS), Head End Units (HEU), Remote Radio Units (RRU), and more. Some companies market and sell BDA's as a standalone solution, but generally, we do not.

Will a stand-alone BDA work?

BDA's help pull in and enhance the strength of signals from outdoor to indoor environments and vice versa, but typically are much less effective when utilized individually with a single donor antenna. Many companies use the terms BDA and DAS as if they were interchangeable, but generally BDA's are components within a larger DAS solution.

How can MCA help us with our cellular coverage enhancement needs?

Mobile Communications America is a Tier 1 National Integrator of Carrier-Grade DAS Solutions. We provide services every step of the way — including consultation, site surveys, iBwave design, solution engineering, system testing, and on-site installation. And with our equipment service agreements you can hire us to perform ongoing system monitoring and maintenance to ensure your signal levels stay consistent and strong.

OUR SIX-STEP PROCESS | MCA is With You Every Step of the Way



Discovery

MCA consultants work with organizations, both big and small, to fully assess, determine scope, and gather the necessary requirements to provide a complete solution to fit their specific budget.



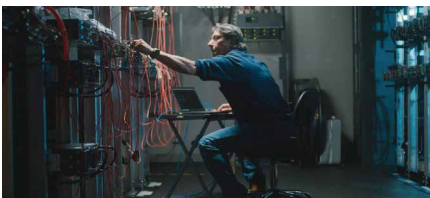
Site Survey + Design

RF Coverage is then tested, and if determined that a solution is required, MCA will formulate a plan and an iBwave design. Our design engineers are iBwave-certified and have years of inbuilding design experience.



System Installation

With 20 years as a tier 1 DAS Integrator, MCA's project managers and technicians have a vast amount of expertise in installing any system, from one for a small office to a large campus-wide DAS fiber solution.



System Commissioning

MCA's engineering group will optimize each component of the system to ensure peak performance using advanced RF test tools and bring the system fully on air. MCA installers are certified in all DAS OEMs.



Inspection + Approval

Once the system is on-air and tested, the system is ready for AHJ inspection and final signoff. MCA project managers will handle all upfront permitting and back-end approvals required to assure NFPA and IFC compliance.



Ongoing Support

Our equipment service agreements (ESA) include ongoing system support and annual site visits, and our in-house Network Monitoring System (NOC) notifies MCA of any issues for quick maintenance response.

CONTACT US TO BOOST YOUR IN-BUILDING WIRELESS COVERAGE TODAY



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