



**PUBLIC SAFETY DAS**

A public safety DAS solution provides radio coverage for first responders in key areas within a building, including stairwells and basements. Local regulations may require a public safety DAS for a certificate of occupancy, subject to the approval of the authority having jurisdiction (AHJ).

**COMPONENTS OF YOUR COMPLETE PUBLIC SAFETY DISTRIBUTED ANTENNA SYSTEM**

RF Source	Typically a repeater or radio base station that provides capacity to drive throughout the coverage area.
Headend Equipment	Active equipment that allows the public safety frequencies to be transmitted to the remotes. Public safety DAS equipment must be painted red and must meet NEMA ratings.
Remotes	Takes the signal from the headend, turns it into RF and sends it to an antenna (integrated or external). Remotes must also be painted red for visibility and meet NEMA ratings.
RF Conditioning	Enables signals to be combined or split as the system requires, allowing for a more efficient system.
Antennas	Radiating devices that propagate RF signals to first responders' mobile equipment and typically support multiple frequencies.
Battery Back-Up	Maintains system operation for 2 to 24 hours, depending on code requirements.

<b>WE ADD VALUE BY ENABLING:</b>		
Technology Selection	Systems Interoperability	Project Deployment

“If you look at many after-action reports for incidents, communication is mentioned in every one of them, so it’s a priority item for all public-safety responders to enhance their communications capabilities everywhere.”

Source: Perdue in IWCE, Urgent Communications, Safer Buildings Coalition names Alan Perdue as Executive Director.

**COMMON CHALLENGES**



Providing consistent **COVERAGE**



Understanding **REGULATORY** requirements



Monitoring system and battery **BACK-UP**



Educating **STAKEHOLDERS**



Coordinating with **INTEGRATORS** and the **AHJ**

## TECHNOLOGY SOLUTIONS



### Coverage

During an emergency event, the crucial areas to provide public safety communication include areas of refuge and evacuation, and typically include the stairwells and basement. A properly designed public safety DAS with appropriate battery back-up will provide sufficient coverage when and where first responders need it.



### Regulatory requirements

While enforcement varies by jurisdiction, it is important to review NFPA 72 and the equivalent IFC requirements to ensure your facility meets the most recognized standards for public safety DAS. Here is an example from New York City: “An approved two-way, fire department communication system designed and installed in accordance with NFPA 72 shall be provided for Fire Department use. It shall operate between a fire command center complying with Section 911 and elevators, elevator lobbies, emergency power rooms, fire pump rooms, areas of refuge and inside enclosed stairways.”



### System monitoring and battery back-up

Annual maintenance and testing is required to ensure that the public safety DAS remains operational. Additionally, it is important to confirm that the battery plant is large enough to meet system needs. Our recommendation is to exceed the minimum requirements for battery back-up time enforced locally, which ranges from 2 to 24 hours.



### Stakeholders

Building owners and commercial tenants must be informed of the potential consequences of not installing a public safety DAS during new construction and refurbishment. These consequences include being denied occupancy until the system is properly installed.



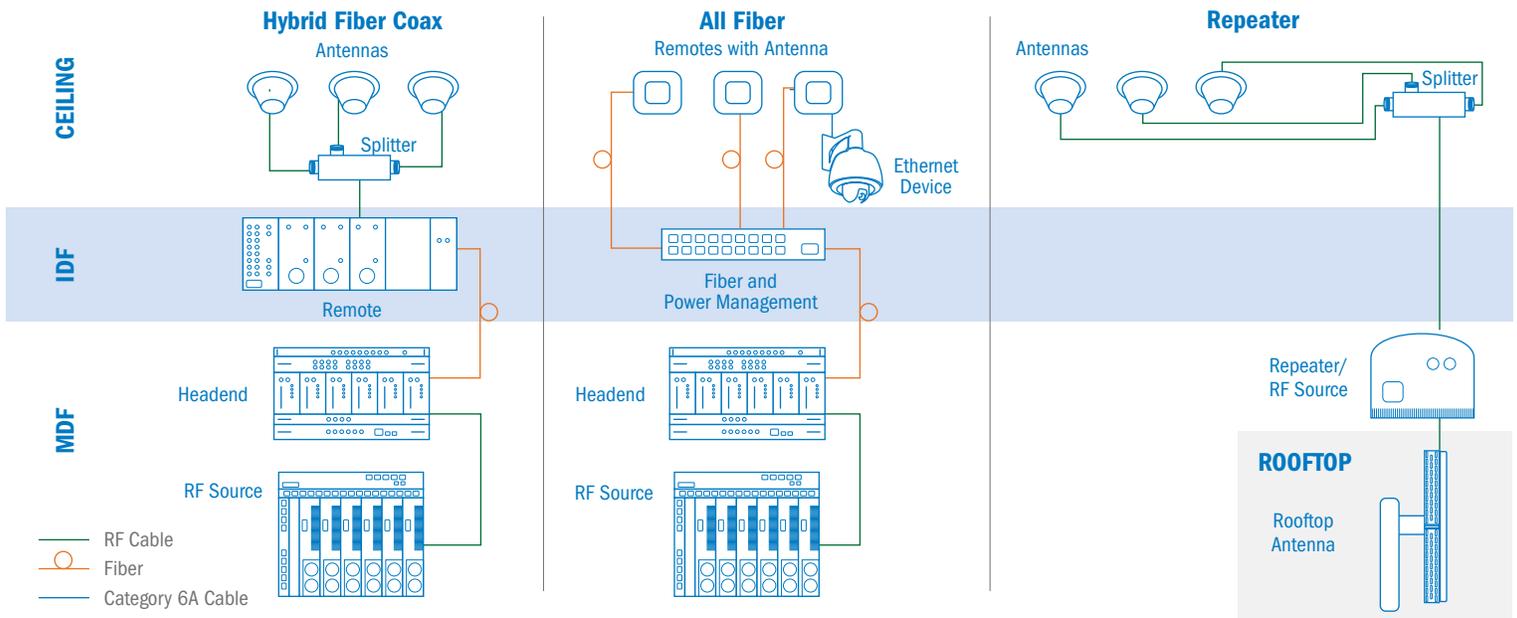
### System integrators and the AHJ

To deploy a properly designed system that will be approved by the authority having jurisdiction (AHJ), it is important to partner with a qualified system integrator who knows the local regulations and will include the AHJ from the beginning of the planning process.

## CONCEPTUAL SYSTEM LAYOUT

### Public safety DAS solutions supplied by Anixter

For system integration and installation, we recommend working with a certified wireless integrator or contractor.



Note: Layouts do not show necessary power systems.

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