

ENHANCED RADIO COVERAGE IN CRITICAL AREAS

Bi-Directional Amplifiers
from Gamewell-FCI

Case Study

10400

Honeywell



OVERVIEW

When Elegance Perfumes Inc. built its mixed-use office and warehouse facility in Sunrise, FL, they turned to Gamewell-FCI for a combined fire and life safety system that would fit the unique structure needs.

The 45,000 sq ft building included multiple tenant spaces, including shipping bays, second floor offices, and ample warehouse racking systems. The building was built entirely out of concrete to safeguard against hurricanes and thunderstorms and eco-glass was installed throughout the office areas.

Fire Controls Inc., a Gamewell-FCI Engineered Systems Distributor (ESD), was brought on board to design and install an integrated fire and life safety system that would include Bi-Directional Amplifiers (BDA) to ensure first responder radio coverage. This would be the first Gamewell-FCI BDA installation in Broward County.

THE CHALLENGE

The structure needed a comprehensive fire and life safety system that would comply with Broward County's recently amended building and fire safety codes. The County stipulates that two-way radio communication enhancement public safety signal booster systems must be installed to achieve 99% floor public safety radio coverage in critical areas. Reliable two-way radio coverage is vital for first responders to help protect lives and property.

Achieving the approved radio coverage was a challenge due to the fact that the building itself consisted solely of concrete and eco-glass. The warehouse also featured a large, 30 ft. racking system that housed thousands of glass perfume bottles, causing significant radio signal dead spots for first responder radios.

THE SOLUTION

Fire Controls Inc. and the project's design team opted for the Honeywell Gamewell-FCI S3 Series® fire alarm and life safety system coupled with 700/800MHz dual band addressable Bi-Directional Amplifier (BDA) technology.

The S3 Series is an easy-to-use, intelligent fire alarm solution designed for small to mid-size buildings. Its FACP features an intuitive color touch-screen menu with concise system operations, making it easy to navigate during a fire emergency. Using true Boolean logic, unique to Gamewell-FCI, the S3 system can be customized to suit any project's needs. It is easy to use, simple to install and budget friendly.

To ensure reliable radio coverage throughout the building, Fire Controls Inc. and the design team installed a Bi-Directional Amplifier system. Gamewell-FCI BDAs are high gain, high power band-selective signal boosters that can be customized to meet all public safety frequency band ranges.

To determine locations of potential radio signal failure, Honeywell's design experts mapped the building into 20x20ft grid sections, then overlaid an IBWave heat map. Any areas testing at negative 95dB loss were deemed as signature failure points. Referencing the heat map, Fire Controls Inc. installed 18 Distributed Antenna System (DAS) antennae throughout the dead spot zones. The main BDA module was installed next to the S3 FACP, while the donor antenna was placed across the property, closest to the city radio tower.

"Having FCC licensed staff is a major benefit to BDA installations. It is life safety equipment for first responders. BDA systems need to be installed and maintained by experts. Emergency Radio Communication Enhancement Systems (ERCES) are a vital component to protecting our First Responders," states Brian Feero, President of Fire Controls Inc.

By designing and expertly installing a comprehensive Gamewell-FCI S3 fire safety system coupled with BDA signal boosters, Fire Controls Inc. established 99% radio coverage for Elegance Perfumes. The success of this installation cemented Gamewell-FCI BDA as the best-in-class signal enhancement solution for Broward County.

"Once the fire department approved the permits, the installation went very smooth. Gamewell-FCI BDA is well designed for easy installation, and its short lead time was excellent, which really helped expedite the project," concludes Brian.

QUICK FACTS

Needs

- Combined fire and life safety system to fit the unique structure needs
- Seamless integration between BDA and life safety system for code-compliance supervision
- 99% radio wave coverage in a radio hostile environment
- Fast and efficient installation to meet tight deadlines

Benefits

- Life-saving, reliable two-way radio coverage for first responders and public safety
- Expertly placed signal boosters to achieve the strict 99% coverage
- Easy to use and overall low cost of ownership
- Expert installation and maintenance by local Gamewell-FCI authorized factory distributor

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