

## CUSTOMER STORY

# How FLL Modernized its Public Address System with Algo IP Endpoints

### INDUSTRY

Transportation

### LOCATION

Florida, USA

Opened in 1929, **Fort Lauderdale-Hollywood International Airport (FLL)** located in Broward County is one of the USAs largest hubs serving over 35 million passengers annually. With a large, sophisticated environment, a reliable public address system is essential to provide staff and passengers with a high amount of situational awareness.

As it stood, the existing paging system could not integrate with other communication technology, had inconsistent coverage, and was difficult and costly to manage and maintain. With major renovations scheduled to expand the airport, it was critical that a new, highly-effective paging system was deployed as a part of the building upgrades.

## Addressing Growing Pains

FLL faced various challenges in their daily operations and responsiveness to emergency situations due to growing pains such as:

- 1 INTEGRATION WITH CISCO CALLMANAGER**  
Cisco Unified Communications Manager (CUCM or CallManager) is used throughout FLL. It was essential that their paging system could integrate with CallManager to ensure reliable and effective communications within the airport.
- 2 MANAGEMENT & MAINTENANCE**  
With over 150 70-volt amplifiers servicing over 3,000 analog speakers, managing and maintaining devices manually was difficult. This meant if one speaker failed, all analog devices in the connected series would be affected as well.
- 3 SCALING UP FOR GROWTH**  
The airport required additional gates and terminals to accommodate the growing number of passengers. This expansion necessitated integrating new devices into the existing paging system seamlessly. The challenge was to ensure that the new and old components worked together without issues.

## Algo Helped FLL Scale, Integrate, and Optimize with Partners

The FLL IT team consulted with three key partners to understand what features would be needed in a new paging system. This included:

### PRESIDIO®

Presidio Technology Partners, FLL's longtime technology integration partner



Singlewire Software, FLL's mass notifications software provider



Cisco Systems, FLL and Broward County's unified communications and collaboration system provider

FLL and their technology partners sought a solution that would allow the airport to do a phased migration from legacy systems to a fully monitored IP-based solution over time. An IP paging system would help FLL easily scale a growing system, integrate with their technology partners for further control, and optimize their standards and procedures to provide high-quality audio throughout the entire airport grounds.

FLL's list of desired features of a new IP-based paging solution included:

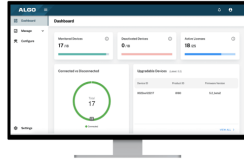
Feature	Problems Solved
Seamless Integration with Cisco CallManager (CUCM)	Elevate communications with FLL's pre-existing unified communications and collaboration system.
Compatibility with Singlewire InformaCast	Elevate communications with FLL's pre-existing mass notification system
Support for hybrid paging environment	Allow phased migration, from legacy systems to a full IP environment.
Effectiveness in loud and difficult environments	Ensure effective and equally effective communication in areas like the airport tarmac, baggage claims, and parking lots as other areas of the airport despite their loud conditions.
Real-time device monitoring	Equip the IT team with ways to quickly identify and address issues with paging devices to ensure continuous operation
Scalability	Future-proof the paging system by enabling the easy addition of new devices as the airport continues to grow

## FLL Relies on a Combination of Algo Devices

After their consultations with other experts and research, FLL opted to use multiple Algo IP endpoints to meet their needs.

### Manage and Monitor

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#### LEFT TO RIGHT

- 8301 IP Paging Adapter & Scheduler
- ADMP (Algo Device Management Platform)

### Indoor and Outdoor Audio

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#### LEFT TO RIGHT

- 8198 IP PoE+ Ceiling Speaker and 1198 Satellite Ceiling Speaker (featuring identical design)
- 8516 IP Line Array Speaker
- 8420 IP Dual-Sided Display Speaker
- 8186 IP Horn Speaker (outdoor)

### Emergency Stations

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#### LEFT TO RIGHT

- 8036 IP Multimedia Intercom
- 8138 IP Color Visual Alerter

Algo has been one of the most responsive partners that we've ever had. Our concerns and ideas have been taken very seriously. We are very happy with the timeliness of their responses and the constant contact we have had with all levels and departments within the Algo organization.

#### DANIEL TSAO

NETWORK SUPERVISOR AT  
FORT LAUDERDALE AIRPORT

## Deploying Algo Products

Presidio Technology Partners played an integral role in deploying Algo devices at FLL, ensuring that all necessary materials were delivered and installed correctly. Leveraging their deep knowledge and expertise of Algo devices, Cisco Unified Communications Manager, and Singlewire InformaCast, Presidio was a major contributor to the success of this project.

One of the biggest benefits of the deployment strategy that Algo offered was the lack of head-end. No amplifiers, servers, or software are required as all features and functionality are embedded directly within Algo IP endpoints. Each device is also SIP-compliant and is multicast capable, making it easy to integrate with the Cisco and Singlewire platforms and other deployed endpoints.



### 8301 IP PAGING ADAPTER & SCHEDULER

The foundational Algo IP endpoint that makes FLL's new system possible is the Algo 8301 IP Paging Adapter & Scheduler. Over 150 paging adapters were deployed and interfaced to existing paging infrastructure, enabling a hybrid model that uses both IP and analog speakers to deliver successful IP communication throughout the airport.

An additional benefit of the 8301 is the scheduling functionality. This allows FLL to pre-record and schedule announcements and alerts such as welcome messages from city officials or safety reminders from TSA.



**8198 IP POE+ CEILING SPEAKER AND 1198 SATELLITE CEILING SPEAKER**  
The team also deployed new IP speakers and retired older analog speakers while maintaining zoning integrity between the old and new Algo solution.

For low ceilings, the Algo 8198 IP PoE+ Ceiling Speaker and Algo 1198 Satellite Ceiling Speaker were deployed, typically running in a 2-to-1 ratio where an IP PoE+ speaker powers and supervises the connected satellite speakers. The satellite speaker technology helped reduce the overall project cost for FLL, limiting the number of network drops, licenses, and switch ports needed.



### 8516 IP LINE ARRAY SPEAKER

In large, open areas with reflective surfaces the Algo 8516 IP Line Array Speaker was used. These speakers are designed to propagate sound cylindrically, allowing you to target areas more accurately without audio overlap and interference.

### 8420 IP DUAL-SIDED DISPLAY SPEAKER

The team has also begun using Algo 8420 IP Dual-Sided Display Speakers in areas for digital signage along with paging alerts.





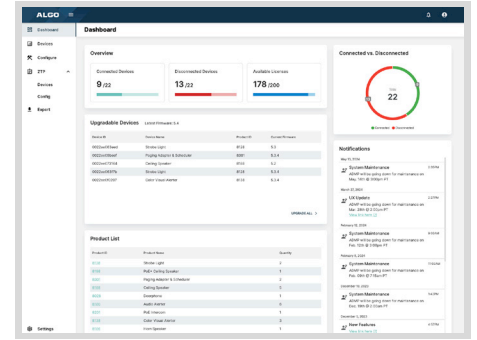
## 8186 IP HORN SPEAKER

Outdoors in open spaces made of predominantly concrete structures, the weather-resistant Algo 8186 IP Horn Speaker were deployed to deliver highly intelligible, loud audio.



## 8036 IP MULTIMEDIA INTERCOM AND 8138 IP COLOR VISUAL ALERTER

Emergency stations were also set up throughout the airport using the Algo 8036 IP Multimedia Intercom paired with an Algo 8138 IP Color Visual Alerter. These stations are highly visible and easy to use for immediate connection with an operations control center agent.



## ALGO DEVICE MANAGEMENT PLATFORM (ADMP)

To easily manage and monitor Algo devices throughout the airport, the Algo Device Management Platform (ADMP) was used. ADMP makes it simple to manage firmware updates and configuration changes, simplifying maintenance and monitoring of the system. If a device goes out of service for any reason, ADMP will immediately notify IT staff so they can take action.

The biggest, unexpected benefit of our use of Algo products was the unified user interface. This is the cleanest and most intuitive interface of any unified communication system that we've ever used. We can confidently say that we can train any experienced collaboration IT personnel to use and manage an Algo product in half a day.

## ANGELA SCOTT

ENTERPRISE DIRECTOR OF INFORMATION TECHNOLOGY AT FORT LAUDERDALE AIRPORT

## Algo IP Endpoints: The Ideal Fit

- ✓ Integration with CUCM and InformaCast platforms
- ✓ Effectiveness in challenging acoustic environments
- ✓ Ability to phase migration from legacy to IP

This initial deployment consisted of over 1000 Algo IP endpoints, introducing new applications throughout the airport. FLL, Presidio, and Algo are continuing to make plans to continue using Algo devices in other parts of the airport.

## Contact Algo to learn more.