



Chania Airport (CHQ), Greece – critical communication in an expanding terminal

Chania International Airport (CHQ) underwent a major terminal modernization and expansion.

INTRODUCTION

A key part of the project was the implementation of a Voice Alarm system compliant with EN54, designed to meet both safety requirements and the operational demands of a growing airport infrastructure.

PROJECT OBJECTIVES

The goal was to create a solution that enhances safety while improving day-to-day operational communication. The system had to comply with EN54 standards, operate within a distributed TCP/IP architecture, and

Delivered equipment

- » 12 SMART-CU11 controllers
- » midiVES IP amplifiers
- » infrastructure covering **thousands of loudspeaker points**

ensure high speech intelligibility through advanced DSP processing. Scalability was equally important, enabling seamless expansion alongside future infrastructure development.

PROJECT SCOPE

The project involved the deployment of a complete smartVES PAVA system, including central control units, IP amplifiers, and an extensive loudspeaker network covering the entire terminal. The distributed architecture ensures high availability and flexibility, while integration with building safety systems enables effective communication in both operational and emergency scenarios.

KEY SYSTEM FEATURES

- » Distributed TCP/IP architecture – high availability and easy expansion
- » Over 100 centrally managed paging zones
- » Key feature: Adaptive Filtration KIT – automatic optimisation of speech frequency response based on real acoustic conditions
- » Continuous noise monitoring (SMART-ANSM-01) with DSP-based signal correction (SMART-DU1604)
- » Automated zone calibration – reduced commissioning time
- » High speech intelligibility (STI) without excessive SPL increase
- » Real-time adaptation to changing environmental conditions
- » EN54 compliance

DELIVERED SOLUTION

The system was designed for operation in a demanding and acoustically dynamic transport environment. The combination of distributed IP architecture, advanced DSP processing, and Adaptive Filtration technology ensures consistent message clarity regardless of background noise conditions. The solution delivers high reliability, meets

strict EN54 requirements, and allows future system expansion without changing the core architecture.

PRACTICAL APPLICATION

The system supports all key operational areas of the terminal, providing informational and operational announcements, as well as automated alarm and evacuation messages. Acoustic optimisation ensures clear speech intelligibility even in high-noise zones typical for airport environments.

SYSTEM OPERATION

All Ambient System EN54-certified PAVA systems operate on a unified software platform. This ensures full compatibility across components and enables straightforward expansion of the smartVES system using

midiVES and miniVES IP amplifiers.

SUMMARY

- » EN54-compliant Voice Alarm system,
- » Over 100 zones within a single platform,
- » Distributed IP architecture for improved reliability,
- » Consistently high speech intelligibility,
- » Automatic adaptation to acoustic conditions,
- » Future-proof and scalable system design,
- » Optimised for demanding operational environments.

