



“Collaboration, commitment, and excellence were the cornerstones of our success in delivering a prestigious airport project.”

Market Segment:
Airports

Country of installation:
Sweden

Year of Installation:
2020

End customer:
Swedavia Airports

Solutions:
Public Address and Voice Alarm (PAVA)

Key Products:
V2000, VIPA-WS

Key Technology:
VIPEDIA, INTEGRA

System Integrator:
Bravida and SAC Nordic of Sweden

Göteborg Airport improves passenger experience with Zenitel

A Public Address and Voice Alarm (PAVA) solution delivers high-quality audio to Sweden’s second largest airport.

The Customer/End User

Göteborg Landvetter Airport serves as a critical transportation hub, connecting Gothenburg and the broader western region of Sweden to domestic and international destinations reliably. Its status as the country’s second-largest airport underscores its importance, accommodating millions of passengers annually. With a continuous rise in passenger numbers over time, the airport’s emergency communication systems have become increasingly vital for ensuring smooth and safe operations.

The Requirement

In response to this growth, Göteborg Landvetter Airport has initiated several expansion and development projects. These endeavours aim to improve terminal facilities, parking infrastructure, and other essential services, ultimately enhancing the overall passenger experience. Key to this is a state-of-the-art PAVA System.

Partnering with Bravida and SAC Nordic, leading providers of technical solutions in Sweden, the airport sought a robust PAVA solution from a trusted manufacturer to replace its ageing 137-zone system, which had reached the end of its service life. The new EN 54 certified PAVA system needed to support a variety of functionalities, including emergency broadcasts, pre-recorded messages, background music, and live paging broadcasts from gates and information desks.

It was crucial that the system seamlessly integrate with existing infrastructure and elevated Speech Transmission Index (STI) standards, despite utilising the current loudspeakers.

To minimise disruption and installation costs, IP connectivity was to be utilised, eliminating the need for extensive new cabling. Additionally, the new PAVA system was required to have a minimum operational lifespan of 10-15 years and flexible to accommodate the airport's ambitious growth trajectory.

The Solution

Zenitel's VIPEDIA-based PAVA technology was the chosen solution to meet the demanding requirements of the project. The built and tested system comprised 12 nodes, 16 cabinets, and 5 wall-mounted INTEGRA enclosures, all interconnected via a robust Secure Loop IP network. Within the cabinets, 16 VIPEDIA-12-NET audio routers and 23 V2000 amplifier mainframes were deployed, serving various functions including housing, control, surveillance, and amplification.

Addressing space limitations posed a significant challenge, and the V2000 and INTEGRA systems emerged as the optimal solution. The V2000, compact yet powerful, supported up to 2000W and 10 amplifiers within a single 2U 19" chassis, effectively minimising the system's overall footprint. Integration of the EN 54-4 battery charger into the V2000 further optimised cabinet space utilisation. Additionally, in equipment rooms where additional cabinets were not feasible, the compact INTEGRA wall mount amplifier controller was deployed, offering wall-mounting capabilities for up to 2000W and 10 amplifiers.

To minimise the need for new cabling, IP-enabled MPS were deployed across the 18 gates, accompanied by centralised control and monitoring over IP provided by the VIPA-WS microphones, ensuring comprehensive system visibility in terms of operation and broadcasts. Leveraging existing IP infrastructure simplified deployment and accelerated the process.

Despite constraints imposed by existing speaker allocation,

improvements in Speech Transmission Index (STI) were achieved through the deployment of Dynamic Ambient Noise Sensors (DANS). These sensors dynamically analysed ambient noise and continuously adjusted audio output during broadcasts, facilitating precise control and optimization of sound levels. This dynamic adjustment capability enabled enhanced communication effectiveness in various environmental conditions, distinguishing between ambient noise within the zone and broadcast levels in both the associated zone and any adjacent zones. The combination of DANS, lower total harmonic distortion and fine parametric EQ control provided by the VIPEDIA contributed to an improvement in STI, setting a new benchmark for performance.

The Result

Bravida Sweden and SAC Nordic successfully handed over a cutting-edge Zenitel PAVA system to Göteborg Landvetter Airport. This VIPEDIA-based solution from Zenitel not only met all specified requirements but also provided Swedavia with a dependable hardware platform capable of seamless expansion to accommodate the airport's future plans. This adaptability was evidenced by the expansion initiative undertaken by SAC for the new South Terminal in 2021.

Furthermore, despite constraints posed by the existing speaker circuit, the system delivered enhanced Speech Transmission Index (STI), resulting in exceptional sound quality. The Zenitel PAVA is poised to serve Göteborg Landvetter Airport's evolving needs for years to come, ensuring a safe and enhanced travel experience.



Why Zenitel?

Zenitel is well positioned to drive the future of intelligent critical-communication solutions. Through our portfolio of IP products & solutions, with built-in intelligence and a focus on cybersecurity, we provide organizations with superior, scalable security and flexibility. Zenitel is the proven, preferred choice for environments requiring crystal-clear audio to ensure the protection of human life, property, assets and the management of critical activities. With interoperability at all levels, we seamlessly integrate with access control, video management and security platforms.