

Lotte World Mall: PA Renovation Project

Mixed-use Buildings

Date of Project Completion: November 2024

Integration Partner: TricomTech

tricomtech
(주)트리콤테크



Opened in October 2014, Lotte World Mall is one of South Korea's largest mixed-use shopping and entertainment destinations, which is located in the Jamsil district of Seoul. It forms part of the 555-meters tall Lotte World Tower complex, which includes retail, dining, entertainment, offices, a luxury hotel, and an observation deck.

The Lotte World Mall itself contains hundreds of stores and extensive entertainment facilities, making it one of Seoul's premier retail high-density mixed-use environment. It accommodates vast numbers of visitors daily and a critical requirement of such establishments includes a Public Address & Voice Alarm (PAVA) system that can guide the occupants safely in emergencies through such a large and complex structure.

Bosch PRAESENSA, the fully-featured IP-based PAVA system, replaced their previously installed PAVA system because of some inconsistencies with it. PRAESENSA exactly addressed the customer's pain points by improving operational efficiency and overall user experience towards the complex requirements of such an establishment by offering the following benefits:

- Fully IP-networked architecture leveraging OMNEO (Dante + OCA) technology for high quality audio transmission
- Listening to sound output from amplifier on PC
- Real-time monitoring of broadcasting from control room through integration with third-party DSP equipment
- High system availability through built-in redundancy
- Centralized management of announcements and emergency messages
- Flexible zoning for targeted communication
- Excellent speech intelligibility across diverse environments
- Seamless integration with the building's existing ecosystem
- Future-ready scalability for evolving operational needs

PRAESENSA Powers Lotte World Mall



When Lotte World Mall was originally commissioned in 2014, three leading Public Address solution providers including Bosch were evaluated for the project. While Bosch demonstrated strong technical capabilities and superior functionality, the project was ultimately awarded to a competitor brand based on pricing considerations.

Despite not securing the initial deployment, Bosch and its partner maintained a close nexus with the facility's supervisors and operational teams. This continued engagement enabled a deep understanding of the customer's evolving requirements. A key requirement, which the existing PA system was not able to provide, was the ability to monitor amplifier audio output directly through a PC interface while also providing visual monitoring capabilities. In addition, the central control room required real-time monitoring of broadcasts across eight separate locations, including duty-free shops, department stores, and theater facilities. That system also presented ongoing maintenance difficulties. Frequent changes in equipment dealership support resulted in inconsistent after-sales service, limited technical assistance, and inadequate product training for operators. These issues negatively impacted day-to-day operations and increased the complexity of system management.

Hence, when the customer sought a reliable, future-ready solution backed by a globally recognized technology leader capable of providing long-term support and operational confidence, those requirements ultimately positioned Bosch favorably for their future modernization initiatives.

Challenges with previous PAVA system:

- Operational inconvenience and complex system management
- Limited-service support and inconsistent maintenance
- Insufficient availability of user training thereby adversely impacting operator confidence
- Customized monitoring capabilities tailored to the facility's unique operational requirements
- Increasing demand for better sound quality and system reliability

Solution We Provided:

We deployed PRAESENSA, our advanced IP-based Public Address and Voice Alarm platform built on OMNEO (Dante + OCA) networking technology. To meet the customer's specific monitoring requirements, we integrated third-party visual monitoring equipment and developed a customized monitoring solution utilizing DSP technology. This enabled centralized real-time supervision of multiple broadcast zones while providing operators with enhanced visibility and control over system performance.

The fully IP-based architecture delivered exceptional audio quality, advanced functionality, and a scalable platform capable of supporting the facility's current and future communication requirements.

Realized Benefits after implementation of Bosch PRAESENSA:

- Enhanced operational efficiency and improved user experience
- Improved audio quality and system performance through a fully-IP based architecture
- Reliability and user confidence achieved through proper user training and after sales service from a globally trusted technology provider
- Seamless real-time monitoring across multiple locations

The customer expressed high satisfaction with the solution, as it fully addressed previous operational challenges. future communication requirements.