Extensive public address and voice evacuation solution installed in record time

Customized safety solution at the Shenzhen World Exhibition & Convention Center

With an exhibition space of over 500,000 square meters – the equivalent of roughly 50 football fields – Shenzhen World Exhibition & Convention Center is the largest trade fair and congress center in the world. Bosch developed a customized security and communications solution for this huge venue and its 19 exhibition halls. Its massive size presented extraordinary challenges: The loudspeakers across the over 20,000 square meter space with ceilings up to 16 meters in height need to be powerful enough for instructions to be heard clearly and precisely by every visitor in the event of an evacuation. Not only that, but during normal operation the sound system has to provide high-quality and reliable speech reproduction and music playback.

Sending out a clear message throughout the exhibition halls

Bosch has found the ideal solution in its Hemi-directional Ceiling Loudspeaker, which is able to fill at least 700 square meter rooms with sound due to its coverage angle and high sound pressure level. “We managed to reduce the number of loudspeakers needed by using our Hemi-directional Loudspeaker. Energy and operational costs for the operator dropped as a result,” says Kevin XU, Product Marketing Manager at Bosch Building Technologies, China. 425 units in total were installed in the exhibition halls.

Extreme flexibility

The loudspeakers form part of the networked public address and voice evacuation system PAVIRO. Thanks to its flexible system architecture and use of IP technology, the system is perfect for selective music and audio playback in different exhibition hall areas. “The system has to facilitate both building-specific audio signals and system-wide announcements so that visitors feel safe and comfortable in the huge building. For example, an announcement in hall 1 shouldn’t interfere with the music in hall 2 – except in the case of an emergency,” explains Kevin XU. An integrated hard- and software with intelligent energy management reduces energy consumption and the building’s CO₂ footprint.

So much to do, so little time

The complete security and communications solution consists of 27 PAVIRO systems, 425 Hemi-directional Loudspeakers, and over 9,000 other
loudspeaker types, such as ceiling-mounted and column loudspeakers. In addition, Bosch also equipped the facility with an intrusion detection system and 1,000 detectors as protection against potential intruders.

But it was not just the complexity of the Shenzhen World Exhibition & Convention Center that made the project so challenging: The experts from Bosch had to implement this all-encompassing solution within just two months. “Supplying this huge volume of products within such a short timeframe was a major challenge,” says Kevin XU. “But despite the tight schedule, the Bosch team came together, from global supply chain to production and other sales regions, as a whole to shorten the original eight-month delivery period to two months.” The result: A comprehensive public address and evacuation solution that guarantees incredible sound in 19 exhibition halls and ensures that thousands of visitors are kept safe.

Contact:
Bosch Building Technologies
Erika Görge
Phone: +49-89 6290-1647
E-mail: erika.goerge@de.bosch.com
www.boschbuildingtechnologies.com