



Case Study

Global display manufacturer boosts productivity and safety with WAVE PTX™ solution

Motorola Solutions' broadband Push-To-Talk communication subscription service, WAVE PTX™ and its TLK 100 two-way radios delivers seamless workplace communications for the world's largest display manufacturer

Global manufacturing production sites operate 24/7. Teams working around the clock are responsible for countless automated systems assembling top-quality products. However, the smallest of errors in a single process, or by an individual worker, can have a serious impact on production, making operational management, communications, and security all vital to success. This company, one of the world's largest display manufacturers, realised that high-performance, instant communications were essential to the smooth operation of its plant; consequently, it selected a Motorola Solutions' WAVE PTX LTE radio communications system for reliable, clear communications across its extensive production facility.



MOTOROLA SOLUTIONS



Client

Global leading display manufacturer

Partner

Signal I&C Co., Ltd.

Industry

Manufacturing

Solutions

- WAVE PTX™ Service
- WAVE PTX TLK 100 two-way radios
- DMR- MOTOTRBO™ XIR E8600i series digital radios

Global display manufacturer

As one of the world's leading display manufacturers, this company produces OLED and LCD panels for TVs, monitors, smartphones, and vehicle and aircraft displays. It is the recognized global leader in OLED display technology.

This leading display manufacturer operates large-scale production facilities in Gyeonggi and Gyeongbuk provinces in South Korea. The company was one of the first customers to test and adopt the Motorola Solutions' WAVE PTX radio communication service as soon as it was released onto the South Korean market. The company currently uses 700 units of TLK 100 radios, with more devices being added on a regular basis.

Communication black spots in large-scale manufacturing sites

The display manufacturer selected Motorola Solutions' WAVE PTX service and radios to resolve the communication challenges typical of large-scale production sites. The vast size of the facility, combined with the complex layout of pipelines, production equipment, and shielding structures, previously resulted in numerous communication dead zones, which posed a significant challenge. Seamless communication between production lines and support teams was essential, making these black spots a critical issue. To address this, the company opted to replace its digital radios with WAVE PTX radios, leveraging the extensive LTE network already in place across the factory. Despite the financial commitment investing in a new communication system, eliminating these dead zones was necessary to ensure operational efficiency. Indeed, initially, the company considered LTE radios from

a competitor, a partner of the telecom provider that had built the internal network. However, following tests, these radios could not deliver reliable communications.

In the meantime, Motorola Solutions had just launched its broadband radio communication service, WAVE PTX, in South Korea; and as soon as the manufacturer heard about the launch, it actively requested to trial the solution, to see if it could meet its requirements. Indeed, the company had already been successfully using Motorola Solutions' MOTOTRBO digital radios and was very satisfied with the communication quality, stability, and durability of the devices (which are now used for backup communications). It began testing Motorola Solutions' TLK 100 radios and, within a week, the company decided to deploy the WAVE PTX TLK 100 radios.

Selecting Motorola Solutions' WAVE PTX and TLK 100 radios

The company rigorously tested the TLK 100s, focussing particularly on voice quality, as workers need to hear and be heard when receiving job instructions or transmitting emergency communications. Compared to other LTE radios, the TLK 100 was found to deliver exceptionally loud and clear audio across the whole site, enabling precise communications, even in large, noisy environments.

“ Company rigorously tested TLK 100 radios, focussing particularly on voice quality, as workers need to hear and be heard when receiving job instructions or transmitting emergency communications. The radios received top marks for what they delivered in terms of call quality, instant connectivity, reliability, ease of use, durability, and security.



The safety management department, which led the device testing, placed a strong emphasis on the immediacy of communications in case of safety incidents, as even a delay of two to three seconds can be critical in emergencies. An LTE device, the TLK 100 offers PTT communications that are as instantaneous as traditional radios, enabling real-time communications. Another key factor in selection was the radio's durability. The TLK 100 features a rugged, robust design to withstand harsh working environments with minimal risk of malfunction. In addition, the fact the radio does not have a display reduces the risk of breakage, or accidental operation.

Crystal-clear audio, highly reliable system

The company currently uses more than 700 units of WAVE PTX TLK 100 radios at its domestic sites. Since the initial installation of 200 devices, it has continued to expand their use, with further deployments planned. More than 20 departments are now using the radios, and other teams are eagerly adopting them based on positive feedback from current users, who have found that the radios greatly assist in their operations. Users have also praised the exceptionally clear and crisp audio quality, thanks to the latest codec technology that improves both volume and sound quality. Moreover, since deployment, the company has experienced zero failures; the odd exception being from accidental damage, for example if the device has been dropped from a significant height or submerged in water. Finally, users appreciate the TLK 100's functionality, particularly the ease of individual communications, the speed and security of emergency communications, and the variety of integrated features essential for group calls.

Best value, made simple

This display manufacturer is the largest customer of Motorola Solutions' WAVE PTX radios in the Korean manufacturing sector. It rigorously tested the TLK 100 radios to ensure that they would meet the demands of operational management and safety control on site. The radios performed exceptionally in all areas, including call quality, immediacy and reliability of communications, ease of use, durability, and security. Seeing the success of this expanding deployment, a construction supplier, who is responsible for building and maintaining the company's manufacturing facilities, also adopted WAVE PTX and TLK 100 radios for use at its construction sites across the country.

The company was able to achieve significant value through the WAVE PTX service and TLK 100 radios, even by focusing on the fundamental aspects of call quality and instant communication without delay.



Why the display giant chose Motorola Solutions' WAVE PTX service and TLK 100 radios

- **Reliable and clear call quality**
Exceptional audio quality and adjustable, loud volume for clear communications in noisy environments and previous signal black spots
- **Easy to use and manage**
Convenient, one-handed operation for group and individual calls with a single push-to-talk (PTT) button; and easy maintenance and updates via an administrator portal and over-the-air programming (OTAP).
- **Simple and robust radio design**
 - Simple design without display
 - Rugged, resistant to rain, dust, and occasional drops (IP54 rating)
 - Reliable performance, even in very tough environments



For more information about Motorola Solutions' WAVE PTX solution and radios, please visit: www.motorolasolutions.com/waveptx

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