



MOTOTRBO™ IP SITE CONNECT DRIVES EFFICIENCY AND SAFETY AT PRINGLES PRODUCTION FACILITY

WITH RELIABLE, SECURE AND SCALABLE COMMUNICATIONS



PRINGLES

Pringles are produced by Kellanova, formerly Kellogg's. Kellanova is the world's largest producer of breakfast cereals and the second-largest producer of savoury snacks. As part of its Better Days™ Promise, it supports equal access to food and addresses issues related to hunger, sustainability, wellbeing, equity and inclusion.

Kellanova started producing Pringles at its factory in Kutno, in the Lodz Special Economic Zone (SEZ) in central Poland, in 2014. The facility is Kellanova's second-largest plant in Europe and operates 24/7. The factory is divided into three sectors, namely the production zone, the warehouse section and the office and staff utility areas. The facility has recently been expanded to include a fourth and fifth production line housed in a new 21,000 m² building. This is one of the company's largest capital investments worldwide. The two new high-speed production lines, integrating all the latest technologies, will increase the factory's capacity by 66 per cent to produce around 108,000 tonnes, equivalent to 540 million tubes of Pringles every year.

CHALLENGE

Kellanova was using low power device 433 MHz (LPD433) transceiver radios in the plant, with 3M PELTOR LiteCom Plus LPD hearing protectors with in-built radio, for short range, licence-free analogue group communications. These supplied adequate communications when just one production line was in operation. However, as production increased to three production lines in an area of nearly 15,000 m² the system started to struggle; and when the plant was expanded to incorporate the ultra-modern, high-capacity fourth production line, and communications were needed over an area

of 36,000 m², this LPD system could no longer provide the range needed. Kellanova looked at increasing the power of the LPD radios from 10 mW to their maximum of 200 mW; however, this did not help and, having run a series of interference and attenuation tests between the different halls using a spectrum analyser, it became clear that the partition walls between the separate production halls also significantly affected the quality of communication. Moreover, the number of radio users has increased from 300 to 600.

CUSTOMER PROFILE

Organisation:
Kellanova (Pringles)

Partner:
Elnex

Location:
Poland

Industry:
Manufacturing

Motorola Solutions Products:
MOTOTRBO IP Site Connect UHF system comprising:

- SLR 5500 repeaters
- DP4801e and DP1400 portable two-way radios
- 3M™ PELTOR™ WS™ LiteCom Pro III headsets (hearing protectors with built-in DMR radio)
- DM1400, DM1600 and DM4601e mobile two-way radios
- Accessories including belt clips, IMPRES™ batteries and single-unit chargers

“As our business grew, our previous communications system could no longer provide reliable coverage in all areas of the plant. Instant communications are essential to keep the plant operating efficiently, so we decided to deploy a MOTOTRBO IP Site Connect system with the help of our long-term partner Elnex. This new system is extremely reliable, easy to use and easy to manage; it provides all the scalability, security and functionality we will need moving forward.”

Justyna Stangreciak, Head of Communications, Relations and Leadership Development,
Kellanova (Pringles)



Kellanova contacted Elnex, as its local partner of Motorola Solutions and 3M PELTOR. Together, they started to look at new solutions that could deliver reliable, clear communications for the larger workforce across the expanded facility and production lines, including in the new building. With its 30 years of experience in the industry – as a company that provides individual, high-tech solutions and comprehensive and professional customer support – Elnex recommended the implementation of a MOTOTRBO IP Site Connect system. As Krzysztof Sambor, Business Development Manager at Elnex, explains: “MOTOTRBO IP Site Connect enabled us to build a wide-area RF network across the site. With the 3M PELTOR equipment transmitting in low power, the IP Site Connect network enabled us to create a common channel for these devices, improving voice communication throughout the plant.”

SOLUTION

Following a series of successful site tests, including checking the range of the new 3M PELTOR WS LiteCom Pro III headsets, Elnex deployed the MOTOTRBO IP Site Connect system, including eight SLR 5500 repeaters with four converters (rack mounted on the roof) across two locations connected by a fibre optic link. Production line workers were each equipped with an individually assigned 3M PELTOR WS LiteCom Pro III headset with inbuilt radio, as they need hearing protectors in the high-noise zones and when moving around the site. Using these headsets, they can connect with their team leaders and managers, who, along with the general office site staff, use the DP4801e and DP1400 portable two-way radios with belt clips. The DM1400, DM1600 and DM4601e mobile radios, meanwhile, were installed in forklift trucks for these drivers to be able to communicate with their relevant teams. Elnex has configured 20 channels on the radios to Kellanova’s requirements: some are used for direct simplex communications; some are used with the converters.

Each production line has its own individual channel for communication, as do the logistics and maintenance departments, and there is an emergency channel for plant-wide communications, in case of an incident. There are currently 600 users set up across the two shifts.

As the system is mission-critical for the safe and efficient operation of the plant, it has been configured with a certain level of redundancy, including an emergency power supply, and Elnex has installed a control panel it has designed, for round-the-clock system monitoring. The control panel also monitors the 230V AC main power supply, the status of the buffer power supplies and the status of the converters; and, in the case of any power or equipment failures, automated SMS notifications are sent to the relevant shift manager and to Elnex’s service and maintenance team, who are responsible for the ongoing regular management and maintenance of the whole system, including the radios and hearing protectors.

BENEFIT

Justyna Stangreciak summarises: “MOTOTRBO IP Site Connect delivers the reliable, secure communications we need in all areas of the plant, now we have extended our operations and doubled our number of users. Keeping our teams connected is not only boosting our productivity, uptime and security but it’s also improving worker engagement and safety; and, ultimately, all this contributes to our throughput, so this is a very worthwhile investment. Moreover, we know we can easily expand and develop the system, as and when we need and should we ever extend the facility further. This is a long-term, flexible, future-proof solution for us.”

Benefits:

- High system availability and reliable coverage across the whole facility
- Clear audio, even in the noisiest areas
- Fully scalable, future-proof system
- Advanced calling features, such as 1-to-1, talk groups and emergency communications
- Increased worker safety
- Secure communications
- Enhanced productivity and efficiency leading to greater factory throughput

