

Manufacturer Doubles Size of Facility, Deploys MOTOTRBO™ Radios for Increased Coverage, Capacity and Safety



When a large international manufacturer doubled the size of its plant, the existing two-way analog radio system could not go the distance. Unreliable communications can compromise plant efficiency, creating negative impact on team collaboration, employee productivity and even plant safety. The company deployed a MOTOTRBO digital radio system that provides crisp, clear audio throughout the coverage area, greater call capacity and multiple talk groups to reduce interference. Today, plant efficiency and safety is on track, allowing the company to continue its quest to provide green energy at an affordable price.

Situation: Manufacturer doubles the size of existing factory in the Midwest

From raw material sourcing through end-of-life collection and recycling, a large international manufacturer creates cost-effective, renewable energy solutions that protect and enhance the environment. The company manufactures solar modules with advanced semiconductor technology that delivers economically viable alternatives to fossil-fuel generation.

With much less impact on the environment, renewable energy is most favorable when the cost is on par with grid-based (oil, coal or natural gas) energy. While proprietary technology gives the manufacturer's modules an edge in the race toward grid-parity, the company also strives to keep productivity and efficiency high and costs low throughout the design and manufacturing process.

In 2008, the manufacturer began expansion of its U.S.-based manufacturing facility, which ultimately added two new buildings for an additional 500,000 square feet, a fourth production line and an R&D center. The expansion doubled the size of the existing factory, increased the plant's workforce and significantly boosted annual production of solar panels.

The new plant consists of three separate buildings and a coverage area that had grown beyond the capability of the company's two-way analog, single channel repeater radio system.

"Two-way radios are critical to maintaining efficiency and productivity," says the local Motorola channel partner called in to consult with the manufacturer. "They help employees collaborate, keep work processes moving smoothly and ensure that the company's Emergency Response Team has the tools needed to maintain safety and rapid response."

"The MOTOTRBO radios have been a great value to this customer. Not only are they designed to withstand the physical environment of a busy, noisy plant, but the digital features also help this customer's safety and security team to coordinate emergency response quickly, safely and more effectively."

- Motorola channel partner

Products

- MOTOTRBO XPR™ 4350 Portables
- MOTOTRBO XPR™ 6350 mini-base Mobile Stations
- MOTOTRBP XPR™ 8300 Repeaters
- Capacity Plus

Benefits

- Seamless coverage throughout expanded 3-building plant
- Greater efficiency between multiple, dispersed response teams
- Enhanced employee safety and security
- Meets FCC mandate for narrowbanding



Accessories tailored to your needs

From IMPRES™ Smart Energy System batteries and chargers to Motorola Original® mobile and portable speaker microphones and carry accessories, Motorola offers the whole package that lets you take full advantage of your MOTOTRBO communications solution.

Solution: MOTOTRBO digital radios with Capacity Plus

The manufacturer met with the channel partner to discuss options and learn about the latest RF technology. After learning of the manufacturer's challenges, the partner recommended migrating the existing analog system to a digital radio system.

"The goal was to deploy facility-wide coverage for seamless communications throughout the campus," says the channel partner. "Since they needed to upgrade anyway, we wanted to find a scalable, future-ready solution for them that would allow all of their departments to share a common radio system. And MOTOTRBO would also let them comply with the FCC narrowbanding mandate coming up in 2013."

Integrated voice and data capability

The channel partner recommended a MOTOTRBO digital radio system. Not only would MOTOTRBO provide the required coverage and rugged radios built to withstand a factory environment, the radios leverage TDMA digital technology, which doubles the number of users per channel for twice the calling capacity, without an additional license or second repeater. Other digital features include integrated voice and data in one device, access to applications such as work order tickets, dispatch, telemetry and location tracking and longer battery life.

In addition, multiple talk groups would allow the various functional teams throughout the plant to easily collaborate, communicate without interfering with other groups, and thereby improve productivity.

Emergency features

Safety was also a critical concern to the manufacturer. MOTOTRBO's emergency features, such as All Call, Transmit Interrupt and call group features would enable the company's Emergency Response Team – comprised of representatives from each functional area of the plant – to quickly pull together, collaborate and provide rapid response in the event of an emergency.

The manufacturer deployed a MOTOTRBO four-repeater, eight-channel system with 150+ portables and mini-base mobile stations located throughout the manufacturing area. Motorola's scalable Capacity Plus Single-Site Trunking solution was also deployed to expand the capacity of the MOTOTRBO communication system even further, enabling all of the company's users to quickly and efficiently share business-critical voice and data communication on the same system.

“They could have upgraded their existing analog radios to meet the narrowbanding mandate but it wouldn’t have addressed the coverage issue. MOTOTRBO digital radios gave them the coverage, multi call flexibility and capacity they were looking for, with the added benefit of making them compliant to narrowbanding right away.”

– *Motorola Channel Partner*

Results:

Meeting their goal to deliver sustainable energy with minimal impact to the environment at grid-parity requires the manufacturer to put the right work processes in place that allow employees to do their jobs quickly and efficiently. Maintaining those processes requires that employees have instant communications regardless of where they are within the plant. MOTOTRBO radios provide that capability by enabling increased efficiency, greater productivity and enhanced safety.

Increased efficiency and productivity

Direct communication from field sales staff or customers to production teams can mean faster response times and better customer service. With the MOTOTRBO radios in place, the manufacturer has access to:

- **Expanded coverage:** Digital technology overcomes many of the coverage issues commonly experienced with two-way analog radios, providing the manufacturer’s radio users with access to crisp, clear communications throughout the entire expanded coverage area.
- **Increased capacity:** Digital TDMA technology enables twice the number of users (over analog technology) for the price of one frequency license. Capacity Plus extends the capacity of the MOTOTRBO digital repeaters even further, allowing up to 16 users at the manufacturing plant to communicate at the same time without interfering with each other. The manufacturer’s employees can operate as a unified work team, ensuring increased productivity, efficiency and work safety.

- **Multiple talk groups:** With 14 different talk groups, employees no longer have to wait for an open channel or risk being interrupted by radio traffic that doesn’t pertain to them. For example, Production can call for material to be moved or request specific chemicals to be delivered to an exact location. Maintenance can be dispatched quickly in the event of a machine down condition.
- **Radios that last through extended shifts:** Extended battery life allows the MOTOTRBO portable radios to operate up to 40 percent longer between recharges, compared to analog radios – vital for long work shifts or where productivity-enhancing data applications place an increased power demand on the radio.

Increased safety and security:

The security team can preempt potential hazards with one-to-one or one-to-many calling. Motorola radios also include emergency call features to alert a safety or security team, in addition to other safety benefits, including:

- **Rapid Response:** The MOTOTRBO’s transmit interrupt feature allows the security team to override the entire system in the event of an emergency and broadcast to all hands simultaneously, improving safety and increasing speed of response.
- **Rugged and safe for higher-risk locations:** In the rugged environment of a busy manufacturing facility, durability is everything. MOTOTRBO radios meet U.S. Military specifications for vibration, shock due to dropping, temperature extremes, rain and dust and IP57 specifications for submersibility in water for up to 30 minutes. MOTOTRBO radios also feature intrinsically safe options for use in locations where flammable gas, vapors or combustible dust may be present.



Motorola MOTOTRBO XPR Digital Radios



Motorola IMPRES chargers



Meeting the FCC mandate for narrowbanding

MOTOTRBO radios also help the manufacturer prepare for and meet the FCC mandate for narrowbanding, which goes into effect in January 2013. "They could have upgraded their existing analog radios to meet the narrowbanding mandate but it wouldn't have addressed the coverage issue," says the channel partner. "The MOTOTRBO digital radios gave them the coverage, multi call flexibility and capacity they were looking for, with the added benefit of making them compliant to narrowbanding right away."

To learn how MOTOTRBO can help your business

www.motorola.com/mototrbo

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