



LOGAN
ALUMINUM

DRIVING THE FUTURE OF PLANT SAFETY AND EFFICIENCY

Unified Technologies for Safe Manufacturing





FORGING A MODERN APPROACH TO SAFETY, SECURITY, AND EFFICIENCY WITH AN INTEGRATED TECHNOLOGY ECOSYSTEM

Located in southwestern Kentucky, Logan Aluminum is an industrial manufacturer and technology innovation leader that produces nearly half of the aluminum sheet products made in the United States today. The company is the largest employer in Logan County, employing nearly 1,500 people across seven operating units, all housed on a massive 1,110-acre campus.

With such a large operation, on any given day the plant's security team regularly contends with potentially dangerous machinery and chemicals, while accounting for numerous contractors, employees, and deliveries. Given the nature of the work done at the plant, safety and security, along with maintaining the systems that support them, are top priorities.

CUSTOMER PROFILE

Logan Aluminum

INDUSTRY

Manufacturing

SOLUTIONS

- MOTOTRBO™ Capacity Max Land Mobile Radio System
- Motorola Solutions Nitro™ Private Broadband
- Avigilon Cameras, Analytics, and License Plate Recognition Systems
- XPR 7550E, XPR 5550E, and MOTOTRBO™ Ion Radios
- Orchestrate Workflow Automation
- WAVE PTX

BENEFITS

- A Unified Technology Ecosystem that's Greater Than the Sum of Its Parts
- Complete Radio Coverage with Next Generation Voice and Data Capabilities
- Broadband Data Coverage in Remote Locations Without the Need for Trenching
- AI-Powered Video Security Cameras That Offer Superior Video Analytics Capabilities
- Automated and Custom Workflows to Provide Immediate Situational Awareness to Appropriate Individuals



CHALLENGES

INSUFFICIENT RADIO COVERAGE ACROSS THE PLANT MADE COMMUNICATION UNRELIABLE

Logan Aluminum had an existing radio system to connect employees throughout its expansive plant, yet with the main building spanning 30 acres under a metal roof housing noisy equipment, multiple concrete tunnels, and pits throughout the facilities, the legacy system did not offer the level of reliability and coverage necessary for the safest operations possible. To compensate, the company placed multiple radio signal repeaters throughout the plant, yet issues persisted and with equipment scattered around the campus, the system was difficult to maintain. Without reliable coverage, it was difficult to communicate in far reaches of the campus, in dead zones underground, or around signal blocking equipment and supplies. In a manufacturing operation as large as Logan Aluminum, any communications challenges could directly impact safety, security and productivity.

"There were always issues in terms of network coverage, so we had to install additional repeaters to fill the gaps," said Shane Miller, the system administrator for plant communications. "Even with those extra repeaters, we were never able to fully cover everything. There was someone in my office at least once a week complaining about the radios."

OUTDATED VIDEO SYSTEMS HAD BLINDSPOTS AND REQUIRED TEDIOUS, MANUAL WORK TO MONITOR, REVIEW, AND ANALYZE FOOTAGE

With such a large campus, Logan Aluminum is focused on closely monitoring deliveries, visitors, contractors, and employees across the entire operation, relying on an extensive network of video cameras to support campus security.

"My team is in the business of managing who comes in and out of the plant each day," said Joe Jenkins, head of loss prevention at Logan Aluminum. "For example, my team and I need to keep track of things like which trucks check in and out and what time of day those activities happen."

These responsibilities made a reliable, easy-to-use video camera system an essential starting point to support the company's security efforts. Yet, the company's camera system required hardwiring, so Logan Aluminum couldn't always place cameras in locations where it would be difficult to run cables. This resulted in blind spots, often where cameras were needed most. This meant security teams had to manually patrol specific areas, a time consuming, inefficient use of staff resources. Image quality was also lacking and when investigating an incident, the technology required Joe or a team member to go through a tedious, manual process in order to review and analyze any footage. These lengthy reviews were time consuming for the security team, bogging them down with administrative work, making it difficult or impossible to proactively monitor for issues.

"If someone asked me to review video footage to look for a specific event between the hours of 7 a.m. and 3 p.m., for example, I'd essentially have to pop a bag of popcorn and watch a full eight hours' worth of footage at two or five times the speed to look for that event,"

— Joseph Jenkins,
Loss Prevention Leader

DISPARATE TECHNOLOGY LIMITED SYSTEM EFFECTIVENESS AND MADE FUTURE UPGRADES DIFFICULT

With so many technologies associated with plant security, from radios, to security cameras, to access control systems and sensors, Logan Aluminum sought a total solution that could integrate them all, so their security and communication system would be greater than the sum of its individual parts.

"By marrying some of these systems together we can get entirely new functionality," said Joe. "For example, we wanted to be able to mark a zone and have the system automatically send an alert to a radio to notify security if someone enters that zone. That keeps someone from having to watch cameras all the time, the camera does it on its own."

In addition, the company knew its security needs would continue to evolve over time and sought an ecosystem that made it easy to integrate additional components and solutions at their own pace.

"We needed something that would last and that we could grow with," explained Joe. "You have to build the foundation right, so we decided from the start an integrated system is the path we were going to go on."





A SEAMLESS SOLUTION

With Shane, Joe, and their teams in agreement regarding the need for a more modern and comprehensive technology ecosystem to support plant safety, security and efficiency, they sought to evaluate solutions and decide which would best serve Logan Aluminum's needs today while evolving with the business as it needs change.

Whatever solution they selected had to address the company's key challenges: they needed full and reliable radio coverage across the campus, updated video technology that offered greater efficiencies and visibility for users, and the ability to connect those tools in order to efficiently solve more complex security and safety challenges.

Logan Aluminum ultimately selected an integrated technology ecosystem from Motorola Solutions, which included Motorola Solutions Nitro™ Private Broadband, for high-speed, wireless broadband access around campus and in hard to reach areas of the plant; Avigilon cameras with next generation analytics; License Plate Recognition systems that can automatically scan and alert security to specific vehicles; XPR 7550E, and MOTOTRBO™ Ion Radios; MOTOTRBO™ Capacity Max land mobile radio; Orchestrate workflow automation software, and WAVE PTX software to seamlessly connect PTT radios with smartphones, tablets, and computers.

"Motorola Solutions knows their stuff and they have a phenomenal product," said Shane. "That's really what it came down to for us."

"When we had questions about the solutions, their team had answers. They offered us specifics and they helped us understand how the products would function specifically in our environment. That gave us a great deal of confidence in Motorola Solutions. They've been a true partner to us."

— Joseph Jenkins,
Loss Prevention Leader

MOTOTRBO Ion Smart Radio

Your business runs on voice and data. But if your devices can only access one, you're not running at your best. The rugged MOTOTRBO™ Ion smart radio is the first business-ready communication device with all-on voice and broadband data capabilities. [Learn more](#) about MOTOTRBO Ion.



BENEFITS

CLEAR, RELIABLE RADIO COVERAGE ACROSS THE ENTIRE CAMPUS AND BEYOND

Today, using the Motorola Solutions technology ecosystem, Logan Aluminum has a radio system that reliably reaches all employees across its vast campus and beyond, even underground and in pockets where the previous system had dead zones. All without the repeaters that complicated operations. After deploying the new system, Logan Aluminum employees immediately noticed that clarity and coverage were no longer an issue.

Today, instead of having repeaters across campus and in buildings, the company was able to condense everything together in one administration building. Now, if there's an issue with the system, there's one place to go to troubleshoot instead of having to travel across the campus to identify and fix the problem, saving valuable time to focus on more productive efforts.

Plus, using WAVE PTX, radio users on campus can extend PTT functionality further to instantly connect with those using smartphones, tablets, and computers anywhere across the country. Ultimately, the reliable immediacy of Logan Aluminum's new communication system has won over the team.

"Availability is critical, especially these days," said Shane. "2020 turned everything upside down and with supply chain disruptions, things are even more chaotic. Now, when I reach out to someone about an issue, concern, or just a quick question, they speak to me right away."

FULLY INTEGRATED VIDEO ANALYTICS OFFER SUPERIOR SITUATIONAL AWARENESS EVERYWHERE IT IS NEEDED

Logan Aluminum's integrated technology ecosystem relies on Avigilon Cameras to provide the extraordinary level of image detail the company requires to monitor its 1,100-acre campus, as well as advanced video analytics to automatically sense unusual activity and alert security personnel. Plus, with the company's new Nitro™ Private Broadband solution, cameras can be placed almost anywhere without having to worry about hardwiring and trenching limitations.

From offering 360-degree views of its plant floors to capturing license plate numbers at a range of distances and speeds in the plant's parking lots, Logan Aluminum's new cameras offer the company superior situational awareness and added efficiencies.

"One of the most common problems we experience at the plant are contractors and truckers speeding on our access roads, which is dangerous because of the materials they're handling," said Joe. "We put cameras [on roads] where we couldn't before thanks to our Avigilon Cameras and Motorola Solutions Nitro Broadband."

With the cameras in place and integrated with Orchestrate, security teams now can receive an automatic alert when the system detects speeding, a hot-listed license plate, or other specified activity. That intelligence also extends to investigations, with security teams able to query using easy search parameters including specific times, location, and even visual cues, such as "a person wearing a red sweater." "With our Avigilon Cameras, we can teach them our routines – we can tell them what to look for and the system applies that intelligence to future searches," said Joe. "Searching through footage to find an event used to take eight hours. Now I can find what I need in just 10 minutes."

By integrating advanced analytics with the company's radio and other systems, Logan Aluminum's security team can be much more proactive and strategic with their time. "We're required by the government to monitor certain areas of our building 24/7 and thanks to the reliability of the ecosystem, the technology can do some of the work for us which frees up the security team to survey the plant on foot and look for disturbances or safety concerns. This is a much better use of their time than sitting in one place and manning the system."

"The clarity and coverage area is unreal," said Miller. "People used to come in every week to my office with problems, then we rolled this out and now there will be silence for weeks at a time. That means that there's not many issues anywhere."





A UNIFIED, CONNECTED TECHNOLOGY ECOSYSTEM THAT HELPS REIMAGINE PLANT SECURITY AND SAFETY

With one seamlessly integrated technology ecosystem, Logan Aluminum has completely reimagined its campus security and productivity efforts. The company's Nitro Private Broadband network and MOTOTRBO™ Capacity Max LMR system provides a foundation of connectivity while the Orchestrate platform allows them to apply automatic workflows across the ecosystem, connecting its video cameras, radio systems, and other technologies to support comprehensive plant communications and monitoring solutions. In addition to video analytic alerting, the ecosystem has allowed Logan Aluminum to improve operations through the use of data, especially regarding how it allocates security resources throughout the day.

"Before, we had signs that flashed when a vehicle's speed limit was over 30 MPH," said Shane. "But there were so many limitations to what we could do beyond that. Now, we're able to obtain traffic counts and better understand when our heaviest traffic times occur so that we can send our security team to do their rounds on the roads and in the lots during those times to watch for speeding. We're able to plan our operations better thanks to that data," said Shane.

Shane views the connected ecosystem as one that will grow with the company in the years ahead. "We're just scratching the surface with this," he said. "The connectivity between our radios and cameras and other equipment is huge for us."

"Having NITRO and the Avigilon cameras tied to our radios is a big thing. For instance, now our camera system provides automatic notifications on our radios when anyone comes to the admin building."

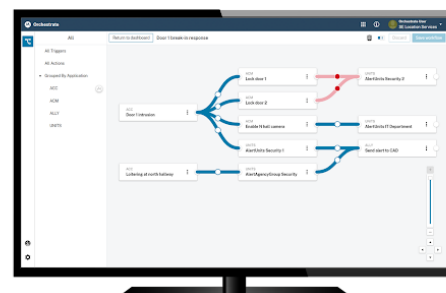
— Joseph Jenkins,
Loss Prevention Leader

SAFETY REIMAGINED WITH ORCHESTRATE

COMPLEX WORKFLOWS, SIMPLIFIED.

Our business workflow automation solution, Orchestrate, is designed for your unique ecosystem. It allows you to integrate individual processes, fully manage and optimize workflows, and deliver a consistent response every time. Scale the number and complexity of workflows to meet the needs of your operations. Because Orchestrate is a secure, cloud-based, cross technology platform, users can access and build customized solutions from anywhere, at any time. That's what we call, Safety Reimagined.

For more information on Orchestrate and Safety Reimagined visit us at www.motorolasolutions.com/orchestrate.





SAFE MANUFACTURING

MUCH MORE THAN A RADIO SYSTEM: THE POWER OF AN INTEGRATED TECHNOLOGY ECOSYSTEM

By investing in a unified ecosystem, Logan Aluminum sees more value from each piece of its technology and is further establishing themselves as a leader in safety and technology innovation. Today, they can leverage multiple platforms using video data analytics to increase productivity and create solutions to their most pressing safety and efficiency challenges.

From reliable radio connectivity anywhere on campus, to private broadband that can power a universe of devices, to new video analytics capabilities and new insights derived from data, Logan Aluminum now has the foundation for modern communications, security and productivity. One that is providing immediate benefits today, while able to easily scale and mature as technology and the company's needs evolve.

“As long as this transformative technology is there, we’re going to use it. Our old system was nothing but a radio system. This is so much more.” said Joe.

Motorola Solutions ecosystem of solutions can help keep your manufacturing plants safer, more secure, and more efficient. To learn more visit: www.motorolasolutions.com/en_us/solutions/manufacturing.html



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