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## Case Study

**KELTRON**

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## Active Network Radio System Military Deployment



When military units deploy overseas, their weapons, ammunition, equipment, and supplies must be moved by sea or air to their theater of operations. Coastal terminals provide a launching point for the efficient flow of mission-critical materiel.

This military facility consists of dozens of buildings. To protect the facilities and the lives of its personnel, the facility deploys an on-site central monitoring station to monitor the signals from fire alarm control panels (FACPs) that are connected to the smoke detectors and fire alarm boxes throughout each building.

### The challenge

The facility used early radio frequency (RF) technology to receive signals from the buildings' FACPs and transmit them to a central receiver. Over a period of years, the facility's monitoring system became obsolete; newer technologies made replacement parts and the expertise to install them increasingly difficult to obtain. With many buildings reporting continuous trouble signals, the facility's team of fire protection experts and technicians began the process of upgrading the facility's fire and life safety monitoring system.

*The system needed to interface with several brands of FACPs and needed to use wireless signaling technology to avoid the high cost of installing and maintaining wire or fiber throughout the base.*

The first steps were to contact the original distributor and integrator and obtain proposals that ranged from minor upgrades to full scale system replacement. Full system replacement exceeded the budget and an upgrade required bringing the existing system up to code. To help navigate the complexities of the code, the facility manager hired a team of NICET 4-rated experts headed by Joel King, of ADT's Federal Systems Division, to survey the facility and develop a specification that best served the requirements of this military facility. The results of the code survey included a review of the original system specification documents.

### The requirements

It was determined that the ideal fire protection system for this military facility would provide a far higher degree of accuracy, reliability and flexibility than was provided by the existing system. To meet budget requirements, the system needed to interface with several brands of FACPs and needed to use wireless signaling technology to avoid the high cost of installing and maintaining wire or fiber throughout the base. Other requirements included:

- **Pinpoint accuracy** - original specifications called for only alarm/trouble/ supervisory signals but the facility's safety team required that the system provide the exact locations and natures of the devices to enable the dispatcher to quickly and effectively respond to events.
- **System redundancy** - dual head ends to ensure that a catastrophic event could not render the entire system inoperable; radios function as both transmitters and repeaters.
- **Surge suppression** - to counteract the high occurrences of lightning strikes in region
- **UL-listing** - specifically Fire UL864 for proprietary applications

- **NEMA 4X enclosures** - to protect the radios from weather and corrosion
- **Network planning** - to ensure appropriate distance of radio transceiver antennas from the facility's stores of ammunition and ordnance.

After months of research and systems comparisons, the facility's safety team chose the Keltron Active Network Radio system because it met the required specifications and cost effectively interfaced with the system's existing component devices and panels.

### The advantages

Keltron has the expertise and experience to ensure that our systems are engineered, installed, and maintained properly and in accordance with strict specifications. As the supplier of entire systems, Keltron provides the added component of system integrity that ensures the success of our solutions. Benefits to this military facility include:

- **Reduced costs** - wireless technology enables the facility to monitor fire alarms without establishing a wire or fiber optic infrastructure, requiring an expensive installation and ongoing maintenance costs with a limited expected life span.
- **Speed and accuracy** - active network radio provides instantaneous alarm annunciation and highly accurate location information from mission-critical alarms that are located near ordnance and hazardous material sites.
- **Universal compatibility** - Keltron's systems interface with the widest variety of FACP's available in the industry.
- **Reliability** - rigorous testing and comprehensive training ensure successful implementation and maintenance. Keltron provides radio installation site certification and facilities technician training programs.

Keltron develops and manufactures universally-compatible, UL listed life safety event management systems for the municipal and proprietary markets. Solutions include Ethernet signaling systems, active network radio systems, distributed multiplex systems, digital communicator/receiver systems, and direct wire systems. This document is not intended for installation or maintenance purposes. All specifications are subject to changes without notice. For more information visit [www.keltroncorp.com](http://www.keltroncorp.com) or contact us at 781-894-8710.



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