
Danish National Police

European Police Organization Consolidates Emergency Communications System on TETRA Network - A Sierra Wireless® Mobile Workforce Solution



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CUSTOMER CRITICAL CHALLENGE

- New communications system required unifying disparate analog radio systems
- Required persistent in-vehicle connectivity for use in rugged applications

SOLUTION

- AirLink® gateways provided extensive accessory support to extend solution functionality and reliable connectivity to complete measurement activity and transition to new systems

BENEFITS

- Built to rugged specifications for the harshest environmental conditions
- Secure, reliable connectivity
- Supports numerous accessories to extend functionality
- Quick solution integration and minimal power consumption

Business Challenge

For the Danish National Police, moving to the TETRA standard for its unified Private Mobile Radio (PMR) communications system meant unifying more than a hundred disparate analog radio systems. To ensure the success of its rollout and eliminate any potential frustration for the system's law enforcement users, the National Police's SINE Agency determined the need to measure the performance and coverage of the TETRA network in every corner of Denmark. To accurately measure the pioneering PMR standard, the agency needed an equally advanced method to acquire and assess signal availability.

The SINE Agency started by mounting PEGASUS TETRA Probes in state vehicles in order to monitor service coverage and stream live measurements back to the SINE Agency headquarters as the vehicles travelled through Denmark. In the process of completing their measurement exercise, the SINE Agency discovered that the USB modems used to provide connectivity to the in-vehicle probes were failing. The USB modems were not adaptable for use in rugged applications; they dislodged when driving through rough terrain, could not provide a strong wireless connection and were a drain on CPU power.

Sierra Wireless AirLink® Solution

The National Police were referred to Daimler Mobile Partner by Scandinavian IT reseller giant ATEA in order to provide an alternative connectivity solution with lower CPU requirements, better shock absorption and better reliability. Daimler Mobile Partner, a Sierra Wireless systems integration partner, worked with the SINE Agency to test different USB modems and "plastic" routers before selecting the unmatched reliability provided by the Sierra Wireless AirLink Gateway.

The gateway is built on a powerful platform and processing environment that provides remote monitoring and two-way communication required for commercial mobile or portable network connectivity applications. "The AirLink gateway did indeed solve our CPU issues, and - combined with a roof-mounted antenna - it is capable of providing service in greater areas," said Nikolaj Marquart, member of the Danish National Police's SINE Agency.

The AirLink gateway enables critical remote data collection, and its compact form factor enables integration in close quarters, like those found in the trunk of a police vehicle. The rugged design, as well as the wide temperature ranges in which it can operate, ensures the gateway can perform in the harsh field environments where law enforcement vehicles regularly operate. In addition, the ability to run a high gain roof-mounted antenna from the gateway ensures sufficient coverage even in remote locations.

According to Torben Deleuran of Daimler Mobile Partner, the SINE Agency was "very fond of seeing that they could have all kinds of accessories," such as wall mount brackets and antennas, to increase the flexibility of their solution. The agency is also experimenting with the advanced I/O capabilities to gather additional equipment data and establish connections to external antenna.

“The AirLink gateways have given us options of remotely rebooting the PEGASUS TETRA Probes and radio equipment,” explained Marquart. “This enables us to let non-technicians do the drive tests and to lay the probes dormant in different vehicles, only to be awakened when needed.”

Results

One of the first tests of the unified communications capabilities provided by Denmark’s advanced TETRA network was for the COP15 United Nations Climate Conference in Copenhagen, which required coordinated security provided by all of Denmark’s emergency organizations. Because of the SINE Agency’s TETRA signal measurement project, which depended on the persistent connectivity capabilities of the AirLink gateway, the National Police were ready to carry out the emergency communications demands of the large scale event.

The National Police have already begun to realize the vast potential in leveraging the AirLink gateways for other law enforcement applications. The gateway’s rugged design and remote management capabilities make it the perfect in-vehicle connectivity device for mobile data transmission. With a common need across Europe to support data-intensive public safety applications, such as video upload for covert surveillance, the AirLink gateway in combination with advanced cellular networks provides a complementary data solution to the highly available TETRA radio system used for critical voice communications.