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 PrivateMobile Radio (PMR) communications system meant unifying more than a hundreddisparate analog radio systems. To ensure the success of its rollout and eliminate anypotential frustration for the system’s law enforcement users, the National Police’sSINE Agency determined the need to measure the performance and coverage of theTETRA network in every corner of Denmark. To accurately measure the pioneeringPMR standard, the agency needed an equally advanced method to acquire and assesssignal availability.

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

Sierra Wireless AirLink® Solution

The National Police were referred to Daimler Mobile Partner by Scandinavian IT resellergiant ATEA in order to provide an alternative connectivity solution with lower CPUrequirements, better shock absorption and better reliability. Daimler Mobile Partner,a Sierra Wireless systems integration partner, worked with the SINE Agency to testdifferent USB modems and “plastic” routers before selecting the unmatched reliabilityprovided by the Sierra Wireless AirLink Gateway.

The gateway is built on a powerful platform and processing environment that providesremote monitoring and two-way communication required for commercial mobile orportable network connectivity applications. “The AirLink gateway did indeed solve ourCPU issues, and - combined with a roof-mounted antenna - it is capable of providingservice in greater areas,” said Nikolaj Marquart, member of the Danish National Police’sSINE Agency.

The AirLink gateway enables critical remote data collection, and its compact formfactor enables integration in close quarters, like those found in the trunk of a policevehicle. The rugged design, as well as the wide temperature ranges in which it

canoperate, ensures the gateway can perform in the harsh field environments wherelaw enforcement vehicles regularly operate. In addition, the ability to run a high gainroof-mounted antenna from the gateway ensures sufficient coverage even in remotelocations.

According to Torben Deleuran of Daimler Mobile Partner, the SINE Agency was “veryfond of seeing that they could have all kinds of accessories,” such as wall mountbrackets and antennas, to increase the flexibility of their solution. The agency is alsoexperimenting with the advanced I/O capabilities to gather additional equipment dataand establish connections to external antenna.

“The AirLink gateways have given us options of remotely rebooting the PEGASUSTETRA Probes and radio equipment,” explained Marquart. “This enables us to let nontechniciansdo the drive tests and to lay the probes dormant in different vehicles, onlyto be awakened when needed.”

Results

One of the first tests of the unified communications capabilities provided by Denmark’sadvanced TETRA network was for the COP15 United Nations Climate Conferencein Copenhagen, which required coordinated security provided by all of Denmark’semergency organizations. Because of the SINE Agency’s TETRA signal measurementproject, which depended on the persistent connectivity capabilities of the AirLinkgateway, the National Police were ready to carry out the emergency communicationsdemands of the large scale event.

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