

LAW and ORDER

Vehicle Ruggedized Versus Fully Ruggedized Notebooks

Written by Tim Hill

In Queen Anne's County, Maryland, personnel in the Office of the Sheriff provide police services to nearly 50,000 residents, tourists and commuters in an area stretching 372 square miles from the Chesapeake Bay Bridge to the Delaware state line. Recognizing the need to provide law enforcement officials and first responders with the tools, knowledge and skills to effectively perform their duties in the most efficient, productive and safe manner, the Queen Anne's County Sheriff's Office is committed to providing its personnel with the most appropriate technology and training for their jobs.

The Problem

Manually writing tickets and generating reports was time consuming, and the existing computers weren't designed for law enforcement operations. First, they decided to deploy mobile computers. The Sheriff's Office wanted a system that would enable officers to spend less time at headquarters writing reports and more time in their cars on patrol. In addition, they were looking to set up a mobile computing system that would reduce the communications resources used for dispatch; that would be extremely reliable; and that would provide real-time access to information patrol officers needed, such as license, registration and VINs. They also wanted a system that would enable officers to issue tickets more efficiently.

The Sheriff's Office initially selected fully rugged notebooks that could easily withstand the rigors of travel in a patrol car and that could be used in a range of outdoor environments. While these notebooks could withstand a great deal of harsh handling under any circumstances, the Sheriff's Office found that over time this level of ruggedness was more than they needed.

"We were looking for notebooks that supported our officers' needs for issuing tickets, doing background checks, writing and filing reports and more—most of which can be done from their vehicles," said Corporal Sean Hampton of the Queen Anne's County Sheriff's Office. "While we needed notebooks that were durable, we needed them to survive a few raindrops, not a torrential storm. The notebooks we had offered extra-rugged features we just didn't need."

The Solution

The answer was vehicle-rugged notebook computers with thermal printers that sped ticketing time and shaved costs. The Sheriff's Office replaced the majority of its original rugged notebooks with lighter, "vehicle-rugged" notebooks from General Dynamics Itronix—the GoBook VR-2 and its successor, the GD6000.

The only notebooks optimized for vehicle deployments, the GoBook VR-2 and the GD6000, meet the fully rugged standards for extreme temperature, vibration, dust and humidity—conditions most often associated with a vehicle environment—and they can survive 30-inch drops. In addition, they come with a spill-resistant keyboard, dual task lights and the industry's best 13.3-inch outdoor viewable touchscreen display, featuring patent-pending DynaVue® technology.

"We're convinced that the vehicle-rugged notebooks from General Dynamics Itronix will withstand the hazards of life in a patrol car, including really hot or cold temperatures, and a lot of bumps and vibration," Hampton added. "We didn't need notebooks that were going to be left out in a storm, or carried around and dropped on a frequent basis. By replacing our original notebook systems, we were able to reduce our costs by not paying for the extra ruggedness."

The vehicle-rugged notebooks have options for integrated GPS, WWAN and WLAN, for always-on connectivity. These powerful wireless capabilities let officers create and send reports from their vehicles electronically. It also allowed officers to gather invaluable information through the Capital Wireless Information Net (CapWIN), such as background checks, license plate numbers and VINs. Officers can access information from crime databases regarding prior arrests, mug shots and protective orders in real time, which makes them better prepared when approaching a potential crime scene.

With an Electronic Traffic Information Exchange (E-Tix) e-citation system and Pentax Pocket Jet 3 thermal printers, which print out traffic tickets from the notebooks using Bluetooth, officers can generate tickets far more quickly and efficiently.

In Motion Technology's onBoard Mobile Gateway delivers high-performance, high-security, wireless broadband networking for mobile applications by turning vehicles into communications hotspots. The gateway enables connectivity between air cards and WiFi, and provides GPS locations of officers' vehicles through the county's automatic vehicle locator (AVL) program.

A computer-aided system enables officers to be dispatched to a scene more efficiently while reducing the communications traffic previously conducted over the radio. When a 9-1-1 call is received, routing information can be sent to police vehicles instantaneously, and the Mobile Area Routing & Vehicle Location Information System (MARVLIS) software with GPS determines the best route for an ambulance to pursue in emergency cases.

The Results

Vehicle-rugged notebooks did improve efficiency and safety for law enforcement. By deploying vehicle-rugged notebooks and the associated systems, the Queen Anne's County Sheriff's Office has turned its vehicle fleet into mobile offices. Officers can now perform administrative tasks electronically instead of making multiple trips to the central office. Manually written reports and citations are a thing of the past.

With the E-Tix citation system, officers can write multiple tickets in a 3- to 5-minute period, as compared to taking 15 minutes to write just one ticket. In addition, because electronic tickets are easier to read than handwritten ones, fewer drivers are disputing their citations, which means officers spend less time in court.

Even more importantly, wireless capabilities provide critical, real-time access to information that can improve both officer and public safety. The MARVLIS system helps public safety workers get to emergency situations more quickly. Also, the expanding use of in-car video and neighborhood surveillance cameras lets officers stay on top of multiple high-risk areas simultaneously and allows them to react to criminal action more quickly than they could before.

At the center of the Queen Anne's County Sheriff's Office mobile computing system is the General Dynamics Itronix vehicle-rugged notebook, which is tough enough for vehicle use but more cost-effective than its fully rugged counterpart. "The General Dynamics Itronix vehicle-rugged notebooks, in combination with all the components in our mobile computing system, give our law enforcement officers and first responders capabilities they didn't have before," said Brad Smith, a data manager at the Queen Anne's County Department of Emergency Services.

"Each notebook brings a wealth of time-saving and life-saving information and tools to the field and gives officers and first responders rapid access to the county's infrastructure and resources. The mobile computing system is truly an integral component of our service to the community."

Tim Hill, product marketing manager for General Dynamics Itronix, has more than 20 years of product marketing and management experience in both the telecommunications and rugged notebook computer markets. He holds three U.S. patents and is responsible for all aspects of the mobile computing product and peripheral range.

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