

WHITE PAPER

A photograph showing several firefighters in full protective gear, including helmets and jackets. One firefighter in the foreground is holding a ruggedized tablet device, likely a Panasonic Toughbook, and looking at the screen. The background is slightly blurred, showing other firefighters and what appears to be an emergency scene at night or in low light.

MOBILE TECHNOLOGY: ENHANCING FIREFIGHTERS' CAPABILITIES

FIREFIGHTERS HAVE ALWAYS RELIED ON THEIR TRAINING, EXPERIENCE AND SENSES TO KEEP THEM SAFE AND EFFICIENT IN A JOB THAT PUTS THEIR LIFE ON THE LINE.

Today, mobile technology exponentially enhances firefighters' abilities to stay alert, aware and effective. Drones give firefighters eyes in the sky. Digital building schematics, floor plans, hydrant locations, incident histories and more all help incident commanders prepare for and assess the situation, and then direct a response plan.

Maps, weather, fire behavior, thermal images, videos and more can be digitized and accessed via mobile computing devices, placing critical, decision-making photos and videos or real-time imagery at incident commanders' fingertips and greatly improving on-scene communications.

Augmenting situational awareness

"Our first responders are more reliant on mobile technologies than ever to increase their operational efficiency and situational awareness," said Alex Nollmann, Director of Sales, Panasonic Connect. "Having situational awareness is key to the way they perform their jobs."

Panasonic has been providing TOUGHBOOK® rugged mobile computing devices to public safety professionals for more than 25 years and has developed these robust products for responders by actively listening to their requirements.

Nollmann said first responders operate in very dynamic environments and real-time information is important to keep them situationally aware of everything that's happening around them. Having critical information such as surveillance

videos, computer-aided dispatch (CAD) information, automatic vehicle locations and geographic information system (GIS) data provides critical information about what's happening at the event and its surroundings.

Building next-generation mobile solutions

Panasonic Connect has a diverse portfolio of products, including laptops and tablets, each designed to help first responders do their jobs more efficiently and effectively.

"Years ago, we talked about specific hardware and the functionality of the devices," Nollmann said. "Now, there are customized tools and programs, accessories, unmanned aerial vehicles (UAVs) and connectivity options all designed for fire and rescue to enable a more effective response."

He explained that so much more than hardware goes into providing solutions for first responders. Panasonic Connect, along with its partners are providing hardware, solutions, services and support.

Nollmann said most medium to large fire departments have rugged mobile computing devices in their vehicles and apparatus. Fire departments are also adding other technology that can transmit valuable data. For example, drones are fast gaining popularity with first responders. They can help with rapid scene assessment by providing real-time photos or video streams. Information and images gleaned from drones can also be used to identify hazmat incidents and in search-and-rescue operations or other situations where direct first-responder access is limited. The information transmitted to a mobile device can aid in better resource allocation and a more efficient response overall.



"Drones provide a view of the situation well in advance of anyone getting there and better than any other type of technology to date," Nollmann said. "We're hearing a lot of positives about drones in the fire service."

"Thermal imaging cameras (TICs) are another area where technology is advancing," Nollman said, adding that Panasonic offers TICs built into TOUGHBOOK mobile devices as an optional configuration.

Investing in mobile technology

When departments consider the investment into mobile computers, Nollmann says responders need to assess the overall project, the end goal and the final product.

"They need to consider connectivity, both in the vehicle and in house," he said. "They need to consider the different vehicles that will be needing connected mobile equipment."

The buying committee will need to think about budgets, network security requirements and the type of devices the agency needs. Laptops and tablets each have their places and benefits.

"Usually, the larger-screen laptops sit up front for CAD dispatching and they typically stay docked in the apparatus," Nollman said.

"Tablets are portable, enabling users to take their devices out of the apparatus and closer to the incident to take photos or track firefighter biometrics," he said.

"Picking the right device is really critical to the success of any deployment," Nollmann said. "Any agency, at any given time, might have several different devices, depending on the end user."

Working with a trusted advisor

Nollmann said Panasonic Connect is uniquely qualified to help agencies make the right selections.

"Let us be your trusted advisor through the whole process," he said. "We've got the tools, the resources and years of working with first responders to help customers make really good decisions."

Panasonic Connect has ProServices, a team of "very experienced solution integrators and system architects who are readily available to help responders integrate technology into their operations."

"They evaluate your situation and your goals. From there, they help design a very cost-effective, cohesive technology solution and help you deploy, manage and maintain, if needed. They can also recommend accessories like shoulder straps or work with you on vehicle installations like computer docks and antennas."

Nollmann said Panasonic Connect has "hundreds and hundreds" of fire departments that are current customers and no two deployments are the same.

"We can help solve connectivity or interoperability issues," Nollmann said. "We can help with device management and simple tasks like asset tagging, tracking where the devices are located, service rates and even ongoing battery health."

Mobile computing for smaller and rural agencies

Mobile computing technology is not just for large or medium-size cities any more.

Nollmann said, "Whether you're a small agency or a rural agency, a volunteer group, or a big city, everyone has reporting, education and training duties where mobile computing can be a benefit."

He said small departments in rural agencies might not have CAD providers or a lot of interoperability with other systems, but they have unique connectivity needs and they're still doing reporting, training and asset management.

"Funding and budget constraints may be a bigger barrier for some small rural agencies. Buying consortiums are available to help those agencies that are cash strapped with the installation of new technologies," Nollmann said. "And it's not uncommon for some agencies to share in technology with neighboring agencies, making purchasing a little easier."



Connectivity for first responders

All first-responder agencies across the U.S. can take advantage of connectivity developed specifically to enable better on-scene interoperability for public safety workers.

Citing information from the Association of Public-Safety Communications Officials (APCO), Nollmann defined interoperability as the ability to share information in real time between multiple and separate entities and agencies.

Nollmann said, "TOUGHBOOK devices are certified with major carriers and are ready to activate and rapidly connect first responders to critical information they need during an incident. Our TOUGHBOOK computers have embedded wireless antennas with optimized placement providing superior connectivity over rugged competitors."

"Our broadband wireless offerings include 4G LTE and 5G for exceptional speed, coverage and security. For example, the TOUGHBOOK 40 provides the fastest cellular in the industry with a 5G modem that supports of Sub-6, C-band and mmWave with speeds up to 5.5Gbps and the ability to connect to the best available network without any disruption or loss of connectivity. A 4G LTE option is also available."

Panasonic Connect provides wireless solutions for AT&T FirstNet® and Verizon Frontline.

FirstNet, built with AT&T, is a nationwide dedicated wireless network for public safety professionals. It provides first responders access to priority and preemption services over a dedicated network core, with coverage that reaches more than 99% of Americans.

With greater network capacity for sending and receiving voice, data, video, images and text messages, emergency responders can use their mobile devices to access the near real-time data and the applications they need to improve situational awareness on the front lines, coordinate better with each other and work more efficiently and effectively.

"As a FirstNet Dealer, Panasonic is proud to support first responders with TOUGHBOOK FirstNet Ready™ solutions," said Nollmann.

Verizon offers Verizon Frontline, which segregates public safety data traffic from the commercial and consumer network to provide priority connectivity. Verizon Frontline is built on the

Verizon 5G network, ranked first by RootMetrics as the most reliable network in their 2022 5G data reliability assessments of 125 metropolitan markets.

Through Verizon, responders get the benefit of Long Term Evolution (LTE) radio access network (RAN) capabilities, plus options for quality-of-service, priority access and preemption services. The services are available at no additional cost to qualified public safety customers helping responders with their emergency communication needs.

Choosing the best connectivity solution

Nollmann said responders who are interested in learning more about TOUGHBOOK product features and connectivity are encouraged to contact their local Panasonic Connect area managers.

"They will bring in all the necessary resources and the consulting team to determine the best solutions for your agencies going forward," he said.

Once the solutions have been determined, Panasonic Connect will then provide information about its partner reseller network for product acquisition.

"When you partner with Panasonic, you pretty much get a team that can take care of all your mobile computing needs."

—Alex Nollmann, Director of Sales



FOR MORE INFORMATION ON HOW PANASONIC CONNECT CAN HELP FIRE DEPARTMENTS, VISIT THE TOUGHBOOK SOLUTIONS FOR FIREFIGHTERS PAGE ►

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