



## CASE STUDY

# Cheshire Police deploy Panasonic Toughpad FZ-M1

**Cheshire Police deploy Panasonic Toughpad FZ-M1 tablets in patrol cars for ANPR, speed enforcement and video recording**



When Cheshire Police wanted to upgrade the technology for its Automatic Number Plate Recognition systems (ANPR) and implement Petards Provida 4000 speed enforcement and video recording systems in its advanced patrol cars it chose Panasonic Toughpad tablets.

Cheshire Police's objective was to change the concept of the in-car technology required to run state-of-the-art ANPR, speed detection and video recording systems in its advanced patrol cars. Until this point, vehicles using these systems typically had a mobile data terminal or computer fitted into the boot with a screen mounted onto the dashboard.

"We wanted a solution using an off-the-shelf tablet that would complement the interior of the vehicle without significantly altering the ergonomics of the dashboard but also have the processing power to take all the information feeds to meet the requirements of our complex in-vehicle systems both now and in the future," explained Trevor Longshaw, ANPR Development and Services Lead for Cheshire Police. "This would make the system easier to use and support and in the long term save money."

Working with the vehicle system supplier and recognised ANPR specialist, QRO Solutions, Cheshire Police chose the rugged Panasonic Toughpad FZ-M1 i5 tablet because of its convenient size, processing power and existing crash-tested and safety approved vehicle docking unit, which would allow the device to be neatly mounted into the dashboard of its advanced patrol vehicles.

## Simple USB connectivity

QRO Solutions designed an interface box to collate all the video and data information streams from the systems and feed them via simple USB connections to the Panasonic Toughpad tablet running a Windows 8.1 operating system. The Panasonic device then processes the information and communicates in real-time to both the officers in the vehicle and with the police force's back office systems and databases via its 3G and 4G connections using the pass through antenna from the vehicle docking mount. With this system in place, the mobile ANPR solution is more than capable of handling in excess of 15,000-20,000 number plate checks per day if required.

QRO Solutions has been specialising in providing ANPR technology to police forces for more than 15 years. The Cheshire vehicles use a rear MAV Rapier 30 Dual IR/Colour Camera and front facing MAV Sabre camera for number plate recognition alongside QRO's Check-IT ANPR software application. The vehicles are also fitted with a mini front facing camera for video recording. In vehicles fitted with speed enforcement a Petards Kestrel front facing camera is used for ANPR, video recording and speed detection. The recording application, also provided by QRO, is installed on the Toughpad and utilises the processing power in order to software encode the video into H.264 video standard along with audio.

The solution is being deployed in 53 BMW X5, 5 series and 3 series advanced patrol cars for Cheshire Police and the Firearms Alliance – a collaboration between North Wales and Cheshire police forces. The vehicle solution is being fitted by specialists Jack Hodson Ltd in Liverpool and Coleman Milne in Bolton.

Commenting on the solution, Trevor said: “There was some pain in developing this first of its kind solution. For example, when we started the build we discovered that the tablet was quickly overheating and we had to overcome this with a modification to the mount for faster cooling and heat dissipation. However, we now have a straightforward solution that is easier to use, easier to maintain and versatile, with the processing power to cope with any future requirements we may have.”

“Bringing to fruition a brand new technology solution is always a challenge and this prestigious project showcased the resources and skills of the Panasonic Global Docking Solutions team, Cheshire Police and QRO Solutions,” added Will Holmes, Emergency Services Business Manager for Panasonic Toughbook. “We all worked closely, alongside our colleagues in Japan, to design, prototype, test and then mass produce the docking station modification. The result is a solution that could now be deployed quickly and efficiently to police forces around the country.”

## **The Toughpad FZ-M1 tablet**

The fully rugged Toughpad FZ-M1 tablet sets the new benchmark for outdoor tablets making it ideal for field workforces in challenging environments. With its capacitive 10-finger multi-touch outdoor display and flexible configurations (integrated business expansion module), this Windows tablet has been designed to optimise the efficiency of mobile workers. It benefits from various connectivity options to ensure data is always available when needed and gives business users the legacy options they require in a compact, fully rugged and lightweight form factor. Never before has so much flexibility and performance been packed into such a compact, durable tablet with such great outdoor viewing capability.

