



Keeping the Public Safe is All of Our Duty

How Zebra's next-generation 5G devices will help
the UK's emergency services to save lives



Introduction

Knowledge is power and having the most up-to-date information in the field is critical for those working at the sharp-end of public safety to deal with emergencies and save lives.

Understanding the exact scale of what they're up against will often prove the difference between success and disaster, whether they are crewing an ambulance rushing to a person in medical distress, responding to a crime in progress in a police vehicle, or readying themselves in a fire appliance that's racing to put out the flames.

Today's technology-first landscape dictates that those working within the UK's emergency services must have confidence in the mobile devices they carry with them each day.

They need certainty that these devices will connect to the mobile network to deliver the most accurate data in real time. That is why the rollout of 5G across the UK is seen as so important to their lifesaving and life protecting roles.

Since 5G was launched in 2019, it has become available in around 120 UK towns and cities. The rollout will eventually bring connectivity to more rural locations, offering greater levels of stable and trusted communication for the country's police, ambulance, and fire services.

5G is the new cornerstone of public safety

However, if 5G mobility solutions are to become a vital tool for those working for our emergency services, they will need to have the best device by their side. Many smartphones, tablets, and other rugged devices are already available to connect to and communicate via 5G.

The technology offers a whole series of improvements for mobile device operation. Not only does it deliver download speeds that can be up to 100 times faster than 4G, but it also offers far more capacity to boost the efficiencies of networks.

The low latency of 5G also means information can be sent and received with shorter delays, speeding up the time it takes to move between masts and sensors. New and improved applications can also be developed and installed on devices to tackle specific tasks or issues.

For public safety, this brings a number of critical benefits:

- Police officers can complete reports far more quickly and efficiently
- Paramedics can provide patients with tailored care out in the field
- Fire officers can coordinate with each other securely during disasters
- Real-time data can be delivered on ambulance stock or equipment levels
- Sensors in ambulances can closely monitor the temperature of drugs/blood
- Live video feeds can be streamed from incidents to receive specialist advice

However, with budgets increasingly tight within the public safety sector, many of those with the responsibility for purchasing new mobility devices might understandably baulk at the idea of replacing their entire and existing 4G mobile device suite.

Thanks to Zebra's backwards compatibility though, when the time comes for the replacement of a 4G piece of kit, procurement leaders can be certain their new 5G-enabled Zebra kit will still work on 4G while also offering the advantages of 5G when and where these networks are available.



Protecting people and emergency personnel with LifeGuard

Across all of Zebra devices available to the UK's emergency services, security is paramount. It is vital that personal data is kept safe and this is rightly a high priority for any decision maker looking to rollout new 5G kit within their public safety organisation.

Zebra's LifeGuard can be found on all of our rugged Android mobile devices and it ensures these products are kept up-to-date with the latest operating system updates to keep them as secure as possible. In a world of fast-growing, and often daily, security threats, having the newest version of the Android OS can make the difference when protecting data from being lost or stolen.

LifeGuard automatically updates over the air, or IT teams can manage the release of the updates manually, choosing – for example – to only install these when the devices are cradled. One full year of LifeGuard support is included with any Zebra OneCare contract so the system runs smoothly without disruptions or downtime that could cost lives.



Saving Money in the Long-term

Procurement departments have tough choices to make. Replacing lost or broken devices – or entire suites of older tablets – with new 4G versions might be cheaper on the bottom line in the very short-term, but ultimately this will prove more costly. Eventually, even if still in a working condition, all mobile devices used across public safety and within the emergency services will have to be replaced by those that are 5G-compatible.

So, the question leaders must ask themselves at this moment is 'why not upgrade to it now, given these devices also support 4G?' Doing so delivers far more return on investment over the entire lifecycle and where 5G is available, its benefits can be harnessed immediately.

Key Zebra devices that support both 5G and 4G include:



TC58

A thin, rugged smartphone with a 6in screen and ultra-high resolution camera



ET 65

A versatile and rugged Android tablet built for unpredictable environments



UK TC 27

A compact and powerful 6in screen mobile computer that fits in a pocket



DE ET 85

A 2in1 laptop replacement; a tablet with a detachable rugged keyboard

5G is the Only Response for Fast Response

For first responders, the ultimate aim is to protect and serve their communities. The next generation of 5G cellular networks enhance and strengthen this goal. But to fully capture the opportunity, procurement leaders must answer the following five questions:

1. When should we start discussions about our next set of mobility devices?
2. What is our overall mobility strategy and how will 5G improve it?
3. Do I start replacing our infrastructure, phones, and tablets now?
4. How difficult will it be to manage the migration of new 5G devices?
5. Who could be our best trusted partner to work with on the rollout?

Zebra's strength in the deployment of mobility devices is clear with our years of experience working with emergency services across the globe. Our kit is out in the field right now in the hands of paramedics, police officers, and fire crews.

Many of these are 5G-ready and as network providers continue to switch on their 5G services globally, they represent a more mature enterprise solution.

When 5G is in the headlines, there is always talk of increased download and upload speed improvements. But really it is the low latency that brings enormous benefits to emergency services. In the future, this will power smart and autonomous emergency response vehicles by shortening the period for real-time information to move between devices and sensors.

5G offers Actionable Intelligence quickly and easily to mobile devices. This could include live facial recognition to the scanning and identification of hazardous materials to knowing the location of broken smoke alarms or the best water pressures.

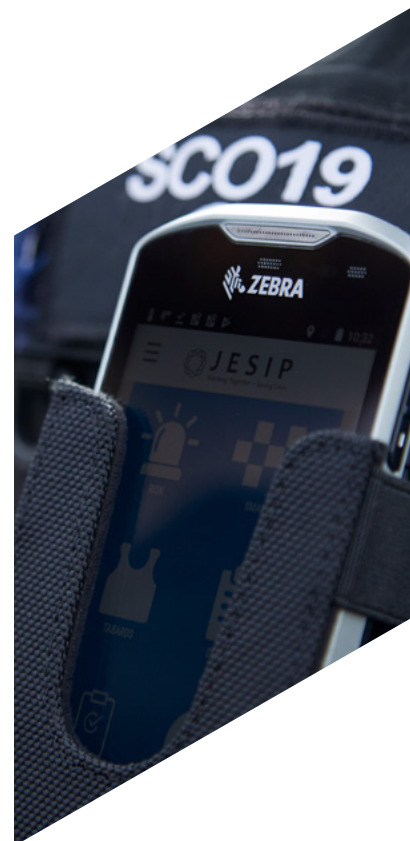
Increases in network capacity from 5G also means first responders won't face calls or signals dropping out in densely populated areas. They can remain connected to hospitals, police stations, and fire stations and receive instructions and data direct to their rugged devices – even when having to travel out of cities and into the countryside.

Additionally, there are potential cost savings with 5G able to track RFID tags placed on equipment, drugs, or consumables. If anything is stolen or lost or accidentally left behind at a scene, it can be found fast rather than having to be expensively replaced.

When a patient, perpetrator, or victim finally arrives at a hospital or a police station, 5G can also be harnessed to stream all of the important live crime data or diagnostic information directly to their internal IT systems.

Looking ahead, 5G will also power new technologies such as augmented and virtual reality, whether to be used for training purposes or for remote support that can be accessed from the locations of emergencies.

It is environmentally friendly too as a technology with a 90% reduction in total energy requirements for 5G according to Nokia in 2020.



The Time for 5G is Now

For those working within public and emergency safety, it is not a case of IF they need to purchase 5G-compatible mobility devices but WHEN is the best time to make the jump and upgrade as soon as possible.

Zebra can assist in every step of the migration. There is, of course, no risk of carriers abandoning 4G networks anytime soon, and as 5G becomes available more widely, there will be no impact or degradation to 4G voice or data communications.

This means backwards compatible 5G devices, that also work on 4G, are the best choice.

If you are reading this as a procurement manager or decision-making leader, then why not consider the following advice as your next steps:

1. Examine your existing application roadmap to understand how the inclusion of 5G-enabled devices could benefit your operational development
2. Recognise there is no one-size-fits-all approach and that your timeline for 5G migration might not be the same as your competitors or peers
3. Ask for help from a trusted provider such as Zebra to analyse the current state of each mobile device you have in use or in storage

As of January 2023, there were 229 commercial 5G networks globally while new figures from GSMA Intelligence show 5G connections are expected to double over the next two years. There will be new 5G network deployments in more than 30 countries in 2023 alone, many within developing regions.

When it comes to dealing with an emergency, you will always find us by your side.



If you would like to find out more about how Zebra could support your 5G device deployment, visit:

<https://www.zebra.com/us/en/solutions/industry/government/public-safety.html>



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