


# Lancashire Ambulance Service



Lancashire Ambulance Service   
NHS Trust



**Product:** Itronix fex21

**Application:** Ambulance & Rapid-Response Service

**Solution:** Itronix and ntl Equipping its 46 ambulances, 10 rapid response vehicles and a helicopter with a rugged handheld PC means that Lancashire Ambulance Service can save time, improve patient care and speed up reporting.

For more information contact:

**Itronix Ltd**  
+44 (0)2476 671516  
marketing@itronix.co.uk  
www.itronix.co.uk

## **SITUATION: Lancashire Ambulance Service NHS Trust - frontline mobile solution**

Lancashire Ambulance Service NHS Trust serves the whole of the county including the towns of Blackpool, Preston, Blackburn, Burnley, and Lancaster. Covering a population of 1.4 million, the service responds to 140,000 emergency calls annually. There are 46 ambulances, 10 rapid response vehicles, and a helicopter.

## **PROBLEM: To replace paper forms with a rugged mobile solution**

Lancashire Ambulance Service has over 400 highly trained paramedics and technicians. When responding to emergency calls, the crews completed an A3 paper record form with the location and patient details. Initial job information was copied from a mobile data system, ntl mobilise, fitted to each vehicle. The form was then annotated with observations taken and emergency treatments given. It was cumbersome and easily damaged.

After a verbal handover for medical staff in accident and emergency departments, the completed form was filed by the hospital and retained on the patient's case notes. The Lancashire Ambulance Service also kept a copy of the form, but after being filed, follow-ups or data analysis proved time consuming.

Lancashire Ambulance Service wanted to eliminate paperwork by using a rugged handheld mobile computer. It also wished to provide on-the-job support with information on procedures including drug use. Data would also have to be transferred automatically while long-term storage costs were to be cut and clinical analysis made easier.

"A new system had to be user-friendly and acceptable to the crews. We also wished to give them information to assist with clinical decision making at the scene," said Paul Bastow, Clinical Effectiveness Manager, Lancashire Ambulance Service.

## **AN ITRONIX SOLUTION:**

Helped by ntl, Lancashire Ambulance Service reviewed the market for handheld devices that met specific requirements for electronic form filling in demanding environments. This included instant switch-on, all-weather ruggedness as well as a good-sized colour touch-screen and extended battery life. A QWERTY keyboard was also considered useful, as was an integrated card reader.

The Itronix fex21 handheld PC proved ideal for the purpose. Lancashire Ambulance Service specified the application while ntl wrote the necessary software in line with clinical advisory body standards. This included pre-populating several data fields from the ntl mobilise system. A unique smart card solution with encrypted data was developed to protect patient confidentiality and ensure easy transfer to hospital databases.

First used in a yearlong trial in Blackpool, the new patient record form software is now known as 'ntl formalise'. Thanks to its similarity with paper forms, minimal training was required. The trial also resulted in a series of minor hardware modifications provided by Itronix such as new metal fittings,

membrane keyboards and anti-static filters. The fex21 handheld PC now performs reliably in the most difficult and hazardous circumstances.

All emergency vehicles receive calls through the ntl mobilise system which automatically transfers data to the docked fex21. Upon arrival, this simple yet innovative electronic reporting tool is used to complete forms using drop-down tick menus. The patient's condition and treatment are swiftly recorded while not missing any mandatory fields.

The fex21 also includes an electronic clinical handbook to assist with drug use and treatment protocols. Once at the hospital, the smart card is taken into accident and emergency departments where the information is automatically uploaded from a reader into hospital records. Details are also transmitted across **NHSnet** to Lancashire Ambulance Service HQ.

"ntl formalise won't allow crews to finish the job until they have filled in all the information. I can now guarantee that the patient record forms are 100 percent complete."

As everything is sent back to a database - **ntl synchronise** - at the Lancashire Ambulance Service, information is readily available for analysis. The Clinical Effectiveness Manager can now monitor patient care and check compliance with care pathways. The new system allows the analysis of drug use and consumables spending while complaints procedure handling and crew performance monitoring are also undertaken.

Thanks to its intuitive on-screen display and rapid data input, the Itronix fex21 handheld PC has been fully accepted as routine equipment. Providing superb efficiency and ease of use, it's a professional-looking alternative to tedious form filling. And by including advice, it supports better clinical decision-making and speeds up patient care while monitoring the treatment provided.

Lancashire Ambulance Service now plans to include extra information on the handheld PC to assist emergency crews. ntl formalise is being actively developed for new features and integration with different health record systems. For example, a question and answer routine is being deployed to assist with the administration of life saving heart drugs. What's more, the mobile solution is now being trialed by other ambulance services too.

"The Itronix fex21 handheld PC is the hub of the whole system and we're very happy with the way that it's performed. Itronix has been prepared to work with us by changing the design to meet Lancashire Ambulance Service specifications," said Bastow.