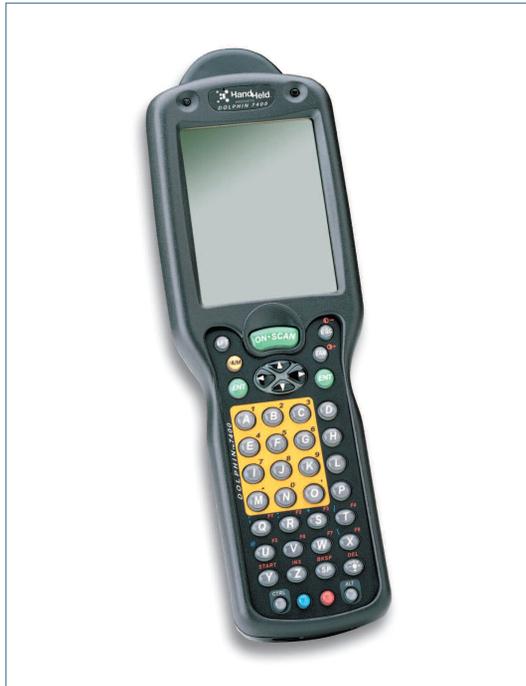


Spirit upgrade to logistics operation

Automatic data capture technology has an important role to play across a range of applications within the manufacturing sector. One example is the use of mobile computers by BMW's engine plant at Hams Hall in North Warwickshire. For the past four years or more, these have been used as part of a real-time material call system. The plant has recently upgraded to new Dolphin 7900 mobile computers, supplied by Spirit Data Capture Limited.



The BMW engine plant at Hams Hall opened in January 2001. This £400 million production facility is the first BMW engine plant to be built outside Germany and Austria. It plays a crucial role in BMW Group's international production network as its 'centre of competence' for production of all four-cylinder petrol engines between 1.6 and 2.0 litres capacity, and employs revolutionary VALVETRONIC technology. ▶

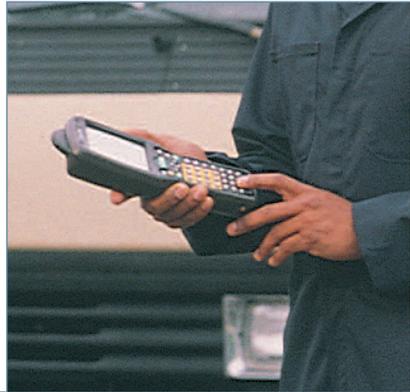
Case Study

Over four years ago, the plant purchased some Dolphin® 7400 RF hand held computers manufactured by Hand Held Products. These were chosen as part of a drive to automate the facility's logistics operations, especially those involving material calls (in which components are requested from the warehouse for the production line).

The engine plant recently decided to upgrade the Dolphin® 7400s. BMW decided to stay with the Dolphin range and asked Spirit Data Capture to source the replacement units. Spirit is an independent consultancy based in Preston Brook, Cheshire, and specialises in automated data collection solutions.

One of the key criteria that BMW was looking for was reliability. After putting a number of devices through trials, it opted for the Dolphin® 7900. This sophisticated mobile computer is powered by Hand Held Products' Adaptus® Imaging Technology. It can read a wide range of bar codes, provides Optical Character Recognition (OCR), and captures digital images and signatures. It is compact, ergonomic and rugged, and very easy to use, and has triple radios to provide seamless real-time data and voice communications.

Spirit supplied the Dolphins and is also responsible for maintaining them. They are being used to support a number of processes within the logistics operation at Hams Hall. For example, a logistics operative will deliver components to various fit-points (production stations) in the assembly operation. At the fit-point, the operative will scan the component and the rack to which they are delivered. They will then carry out a 'snap-check' to confirm that the right component is being delivered to the right location.



The operative will also order additional components if the stock is below a certain threshold. This request is generated on the Dolphin and sent via radio frequency (RF) to the Warehouse Control System and picked by the auto store. By the time the logistics operative has completed their delivery schedule, their new assignment will be ready.

The Dolphins have successfully enhanced the efficiency of the logistics operation at Hams Hall. The plant has a low volume of components at the assembly production line, and relies on 'just in time' delivery. By interfacing with its Warehouse Control System, the Dolphins facilitate very short delivery cycles.