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## **The keyboard is here to stay**

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From handheld units used to check stock in a warehouse to highly intuitive retail point of sale systems, fast and accurate data capture and entry is vital for many industries. And despite the arrival of innovative voice activated and touchscreen technology there appears to be no substitute for the old fashioned QWERTY keyboard for quick and positive information recording.

Indeed, touchscreens, whilst offering quantifiable benefits in reduced training time and ease of use, are simply not suitable for all applications, especially within harsh manufacturing environments. And while touchscreens offer retailers the chance to display a wide range of pictures of goods, such systems are also far from ideal for repetitive tasks where pushing a solid screen - rather than a moveable key - could easily lead to repetitive strain injuries.

However, there is also a growing awareness across industry - most specifically within the retail market - that the creation of highly tailored devices that combine the ease of data capture by keystrokes for repetitive, quick actions with the flexibility of touchscreens can actually transform employee productivity. Such user programmable devices can increase speed, improve ease of use and deliver technology that responds to the users' needs.

This is no either/or situation - with the right approach, resellers now have the chance to achieve very real differentiation through the use of customised user input devices that combine the very latest in key, touchscreen and, where applicable, ruggedised technologies. Yet the channel's traditional focus on software led differentiation has resulted in far too many organisations fundamentally failing to explore and understand the new hardware technologies that are now available.

Simply relying on the old stalwarts of mouse and keyboard in specifying a new system is to miss out on very real new business opportunities. Indeed, the right, customised hardware solution can enable resellers to differentiate software offerings and enable better use of the software's unique features. Specialist data input tools such as small keypads, programmable keyboards, 'jog shuttles' and joysticks can be customised for particular applications.

In fact the opportunities now presented by peripheral hardware technologies are extensive - and perhaps it is prospective customers who are waking up to the potential earlier than the channel. For example, there is a growing interest in combining innovations in keys and displays, such as the provision of a four or five line display to turn the keyboard into a self-contained SMS messaging device.

As some industries, such as live to air broadcast move away from bespoke hardware to PC based technology solutions, there is an increase need for customisable input devices. For example a standard QWERTY keyboard with low-light keys user displays and in excess of 100 user programmable keys are needed to meet the specific demands of these specialist sectors. From the simple addition of a single, pre-programmed button to the use of spill resistant material or highly ruggedised systems that can survive tough environments, input devices can be tailored to meet user needs and to enable resellers to leverage key features

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within the software solution set – gaining much needed differentiation and competitive advantage. Without doubt it is the retail sector – specifically the supermarkets – that have spent time assessing the potential of new peripheral technologies at the point of sale (POS).

These organisations recognise the need for moving keys to support the basic, repeated operations conducted during virtually every transaction, often using a numeric pad. However, they are also keen to leverage touchscreen technology for rapid product display, recognition and processing. But other industries are also catching on fast – such as the organisation that has implemented an innovative heavy vehicle tracking system that uses a peripheral device plugged into the vehicle computer system to interrogate vehicle operation and performance. Each driver logs on via the keypad plugged into the box, which is also a GPRS device, to provide operators with information on driver and load location. Management also use the keypad to attain real-time information on both driver and load – a key benefit in industries where each load has a significant value.

Another quite specific example is in an auction environment, where customers need to bid on different lots displayed. Using new software, customers are able to bid using a simple keypad with its own IP connection. The display provides information on the bidding price and the customer continues to raise the bid using the device to make the desired purchase. A simple enough opportunity but made more complicated by installing a thin client in turn removing the need for an expensive and over complex PC solution at the point of bidding.

In the majority of these environments the peripheral combines both touchscreen and/or displays and function keys but in very different permutations to reflect the environment and user needs. New technologies such as the use of large buttons that contain an LCD display also provide resellers and their customers with opportunities for greater innovation and flexibility.

Each button is the size of four regular keys and the, albeit limited, graphical display enables each button to indicate a mode or availability. Using these buttons in tandem with conventional keys provides infinite display possibilities and, critically, eases the integration process. Furthermore, new peripheral devices can be both intelligent and dumb to reflect the needs of the software system. Adding intelligence to the device can reduce the overhead on the host, support additional security, such as the use of PINs, or enable the device to recall a schedule of tasks in its memory.

Device intelligence is already being used to deliver cash-less transactions in schools and to validate who the pupil is by barcode, and/or pin and/or finger-print recognition. Also enabling parents to track what their children are eating at the canteen. Despite the extraordinary innovations in voice technology and touchscreen, there is a general acceptance that keyboards have a very important and continued role to play in the majority of applications.

Indeed, even new mobile devices increasingly include keyboards to provide users with that familiar level of control, even if they are now miniaturised down to the size of a phone. The keyboard is here to stay. The challenge for resellers looking to achieve differentiation is to understand the very different and highly specialised hardware solutions available today and assess how best these can be



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tailored to meet customer demands. It is those organisations that can deliver the quirky yet functional to transform productivity and ease of use that will win additional business and maintain margins. Keep them out of the museums, they have some mileage to go yet.

*Opinion piece submitted by Stuart Thorn, chief executive of Electrone Europe*