

Motion Computing ***(Case Study)***

Company Description

Motion Computing®, headquartered in Austin, Texas, produces slate tablet PCs for mobile professionals in industries including healthcare, government, and field force automation. Motion™ is a mobile computing and wireless communications leader, combining world-class innovation and industry experience so individuals can use computing technology in new ways and places. The company's enhanced line of tablet PCs and accessories are designed to increase productivity for on-the-go users while providing computing security, power and versatility.

Operations Data

- Established in 2001, Motion is a company driven to innovate and applies that culture to the markets it serves which include: Healthcare, Enterprise Mobility (includes Field Sales & Service, Retail, and Hospitality), Education, Manufacturing, and Government.
- Motion has three award-winning tablet PC form factors and offers related peripherals, software, and other services to provide complete, wireless computing solutions for mobile professionals.
- Motion was the first tablet PC developer to incorporate an integrated RFID reader.
- Motion's tablet PCs are recognized as tools that are designed for the way people work and are focused on integrating world-class technology that is application and mobility driven. Motion's customers experience tangible, measurable advances in productivity, without compromising their work styles to accommodate a machine.
- With more than 1400 resellers in 24 countries, Motion has built a collaborative ecosystem of strong reseller partners and industry-leading software and hardware vendors to help its customers find the right combination of products and services to support specific mobile computing needs. Its distributor and value-added reseller partners include Seneca Data, TechData., Synntex., CDW, McKesson and Cerner Corporation.
- Motion is the only company that focuses 100% on slate PCs, and continues to be the world leader in the category as reported by IDC in their 2007-2011 Tablet Forecast.

The Problem



When Motion Computing set out to design its Motion C5, a mobile clinical assistant (MCA) for the healthcare industry, they did so by going to the source. They conducted a great deal of field research with doctors and nurses who would be the primary users of the C5. Motion is a company that is intentional about everything – from the simplest product design aesthetics down to the obvious technology must haves.

So when the Motion C5 was introduced, it was therefore, the industry's first tablet PC of its kind because it was an authentic reflection of the development process. The C5 came together in a collaborative, informative effort between the healthcare professional, technologists, and Motion's innovative team. In fact, in a series of clinician usability studies doctors and nurses were asked about their preferences for a tablet PC – both for practical usability and professional functionality – they

pointed to increased security and integrated RFID in their list of primary user criteria. It comes as no surprise that security needed to be top notch to protect sensitive patient information. They also needed a way to authenticate the user and verify identification in a way that enhanced the experience versus creating a barrier that might hinder use. Speed and convenience for accessibility was at stake. Naturally, there were other key requirements, not the least of which were preferences like easy to disinfect casing and an ergonomic-friendly design, but security and authentication for access were crucial to success. With research in hand and its commitment to understand and answer the customer's unique need for mobility, Motion Computing began to search for technology and development partners to meet its security and authentication requirements.



The Solution

Since the company's inception in 2001, Motion understood the opportunity in the healthcare industry. They understood the clinicians' workflow and the need for increased productivity and its patient care demands. There were many devices before the Motion C5 which tried to accomplish this, but many fell short and helped in only minor ways, primarily because the devices were designed before asking clinicians what they needed most in a mobile clinical assistant (MCA). Since security and having an integrated RFID reader were paramount design metrics, Motion approached Texas Instruments. They were seeking a co-developer and technology partner and found that relationship with TI's RFID group. Motion also wanted the experience, quality and design support that TI could bring to their design. They also understood that TI is aligned with the pursuit of innovation and has a history of championing companies like Motion. Motion and TI were a fit both in technology and in the general spirit of what technologists strive to do - develop products that change how technology is used and implement it into new environments and use habitats.

TI provided its multi-protocol reader IC ([product: TRF7960; or visit http://www.ti.com/rfid/shtml/trf796x.shtml](http://www.ti.com/rfid/shtml/trf796x.shtml)) which is recognized for being easy to design-in and facilitates faster product development. Specifically TI's reader IC offers a high level of integration, performance, low power, small size, configurability and flexibility. These features not only help simplify the hardware design – an advantage TI has over conventional systems -- but the small size is particularly key because it shrinks the printed circuit board area required for the RFID portion of the system. To put it in perspective, size for the whole system is compared to the size of a quarter. This equates to cost savings in printed circuit material and enables even smaller form factor systems in next generation product designs. Additional cost reductions are realized in the bill of materials such as low drop out regulators, passive components, manufacturing and reduction of possible defects. With TI's reader IC delivering low power consumption, the power saved allows for extended usage in between charges, which makes the user experience better. In fact, one TI customer saw an increase battery life from one year to almost two years, proving IC design and selection translate through to end-user experiences.

In conclusion, clinicians can now document clinical activity, administer medication, and take pictures using a single device. Doctors are able to eliminate double documentation decreasing the potential for transcription errors. As a development partner, TI's reader IC has played a pivotal role enabling Motion Computing to transform patient care and bring physicians the ability to manage the "five rights" of medication administration: right drug, right patient, right dosage, right route, and right time.

About Motion Computing

Motion Computing is a mobile computing and wireless communications leader, combining world-class innovation and industry experience so professionals in vertical industries such as healthcare, field sales and service and government can use computing technology in new ways and places. The company's enhanced line of tablet PCs, mobile clinical assistants and accessories are designed to increase productivity for on-the-go users while providing portability, security, power and versatility. Motion combines those products with services and unique vertical market knowledge to deliver complete solutions – platforms, peripherals, services and wireless – customized for the needs of a particular industry. For more information, visit www.motioncomputing.com

About Texas Instruments RFID Systems

Texas Instruments is the world's largest integrated manufacturer of radio frequency identification (RFID) transponders and reader systems. Capitalizing on its competencies in high-volume semiconductor manufacturing and microelectronics packaging, TI is a visionary leader and at the forefront of establishing new markets and international standards for RFID applications. For more information, contact RFID Systems at 1-800-962-7343 (North America) or +1 214-567-7343 (International), or visit the Web site at www.ti-rfid.com.



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