White Paper

The Benefits of Standardizing on Rugged Tablet PCs in Manufacturing

The Tablet PC and Enterprise Mobility

The Benefits of Standardizing on Rugged Tablet PCs in Manufacturing

Introduction

The following white paper is intended to outline the many benefits of standardizing on mobile computing technologies for the manufacturing workforce. Rugged tablet PCs are a lightweight, durable alternative to traditional handheld computers. They also offer a full touch screen and some offer a full Windows 7 operating system so you can run the complete version of your application, not a scaled down one. By providing all of the functionalities of a PC, and access to robust software applications, rugged tablets are the ultimate mobile computing solution for the manufacturing environment.

Mobile computing devices arm your workforce with real-time access to the technology and information they need to work smarter and faster. Standardize on rugged tablet PCs for your manufacturing applications to improve worker productivity and save on system development, deployment and maintenance.

Mobile Computing in Manufacturing

Manufacturing is undeniably a demanding environment. The success of any manufacturer is dependent on the efficiency of a multifaceted workforce; workflows must be monitored closely to ensure the entire operation is performing at an optimal level. Rugged tablet PCs make it possible for those on the warehouse and/or manufacturing floor to handle complex data entry and inventory tracking in real time.

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These full screen computers offer the high quality processor performance and support full versions of manufacturing and warehouse management software applications. These comprehensive software applications not only facilitate data entry and transfer; but real time access to inventory, assets, work in progress and much more.

What Makes a Rugged Tablet PC Rugged?

After the introduction of the Apple iPad in 2009 consumer interest in tablet PCs began to grow exponentially. The portability and robust functionalities of these computer devices have made them a commodity. Unfortunately consumer-grade PC tablets, such as the iPad, are not built to withstand the harsh conditions found on a manufacturing or warehouse floor. There is however a solutions; the ruggedized tablet PC.

For a tablet PC to be considered "rugged" it must comply with some level of standards or certification. At present there is no industry standard for rugged tablet certification; many rugged tablet manufacturers instead comply with a set of baseline standards set forth by the U.S. military.

The MIL-STD-810G standards outline a series of tests which can be used to prove that rugged PCs, including tablets, are in fact equipped to withstand harsh environments. Tests include: drop testing, exposure to shock, pressure, high and low temperatures, humidity, solar radiation, and harsh environmental conditions including: rain, ice, freezing rain, sand and dust. Devices are then rated on a scale of consumer-grade, durable, semi-rugged and fully rugged.

The Manufacturing Workforce and Rugged Tablet PC

The ultimate goal of any manufacturing company is to safely and efficiently produce and distribute goods. The durable design and portability of a rugged tablet equip the manufacturing workforces with the resources they need to reach that goal. Rugged tablets give manufacturing professionals real-time access to critical information including: inventory, quality assurance, shipping and receiving and more; enabling them to focus on productivity.

Rugged Tablet Features Include:

- Use as a handheld, vehicle-mounted or stationary device
- 1D and 2D bar code scanning
- Integrated numeric keypad data entry
- High-speed, secure wireless LAN and WWAN access
- RFID technology options
- Meets stringent MIL-STD-810G standards for durability

Additionally these resilient devices enable management to efficiently monitor and assist their workforce from any location. Having the ability to assess productivity, monitor work in progress and track time and attendance gives you the tools you need to be an effective leader. Rugged tablets essentially make it possible to manage a cohesive operation, regardless of the size or proximity of your workforce.

Rugged Tablet Applications in Manufacturing

Just as the Tablet PC industry has grown in recent years, so too has the tablet application industry. More and more businesses requiring real-time data at the point of work has fueled the ever increasing demand for vertical applications.

Manufacturing applications running on rugged tablet PCs are designed to streamline work processes and provide instantaneous access to critical information. They can help mobile workers track materials and access production reports at every stage of the production process. They can improve accuracy in parts ordering to better facilitate just-in-time manufacturing. They can also help ensure quality control and a more efficient operation.

Manufacturing and warehousing applications include:

- Shop Floor Data Collection
- Security
- Work in Progress
- Receiving and Shipping
- Quality Assurance
- Parts Tracking
- Inventory and Asset Management
- Maintenance
- Pick and Put Away Functions

These comprehensive software applications are specially designed for the unique needs of the manufacturing industry, arming your skilled workforce with the resources they need to operate safely and efficiently.
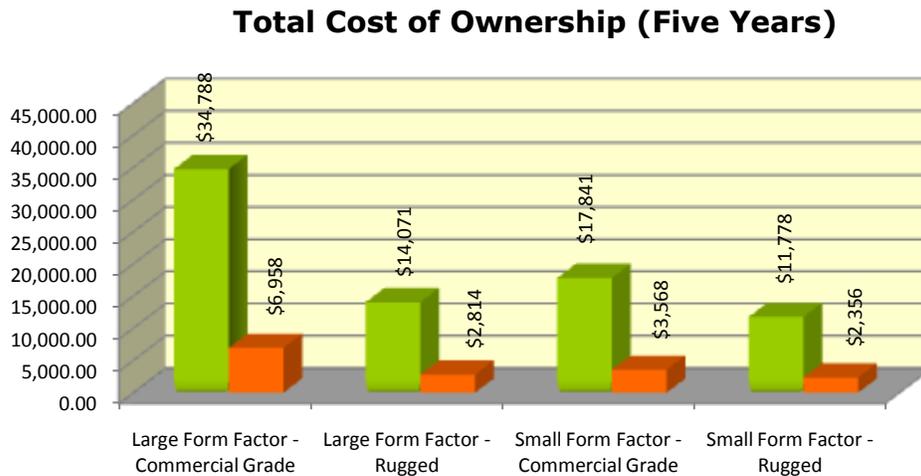
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The Rugged Tablet & Total Cost of Ownership

Total cost of ownership is an essential element to consider when making a purchase. For a device, or tool, to increase efficiencies it must also be cost effective.

A study recently conducted by the Venture Development Corporation (VDC) determined that the average annual total cost of ownership (TCO) of a rugged tablet computer is $2,814 while the average TCO of a non-rugged tablet is approximately $6,598. With an approximate savings of 59% rugged over non-rugged tablet; the rugged tablet clearly provides a more cost effective solution.
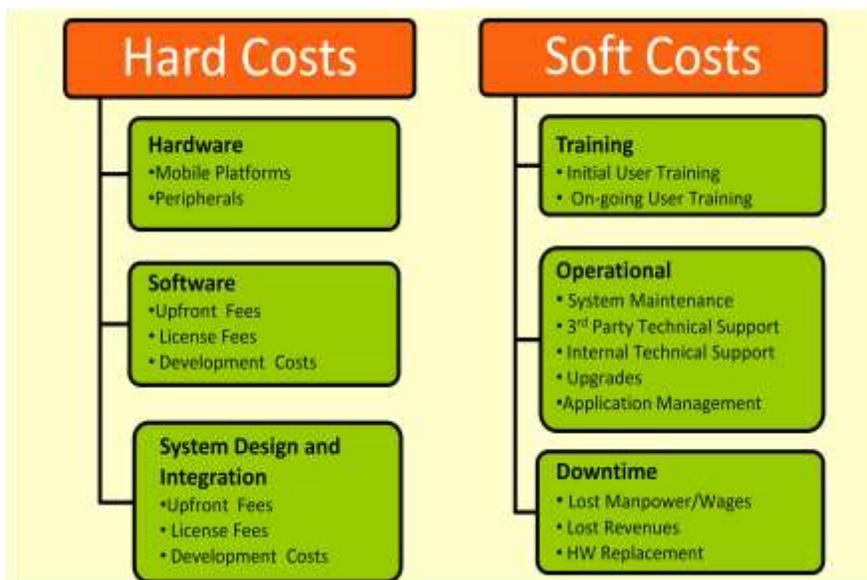
Taking those numbers and projecting over a 5-year period, the average TCO is $14,071 vs. $34,788; a 40.4 percent difference in favor of rugged devices.

Total Cost of Ownership (Five Years)

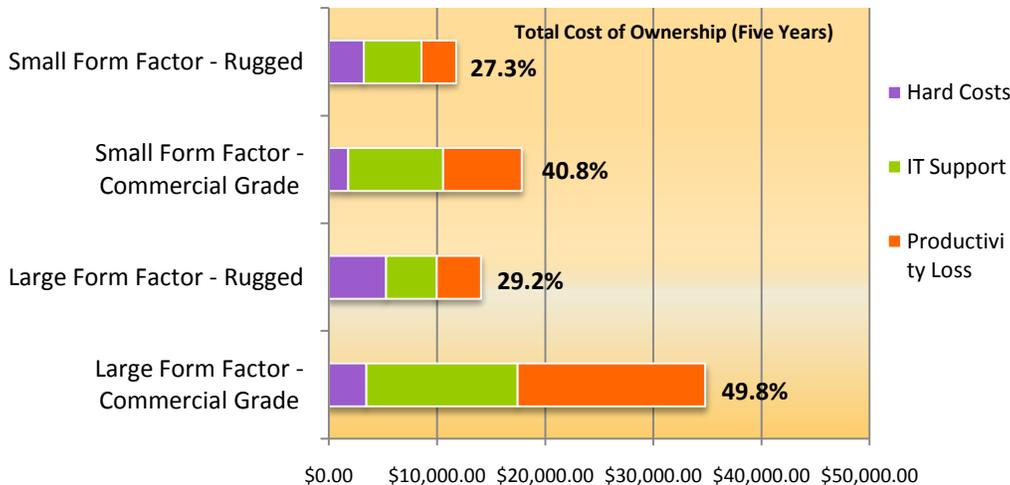ᵖ 2009 VDC Research Group, Inc., Mobile and Wireless Practice

This same study by VDC also found that roughly 50 percent of the total cost of use of a mobile computing device, in the workforce results from lost employee productivity when the device fails. By properly training your workforce much of this cost can be mitigated.

Lost employee productivity is an example of a soft cost, additional soft costs to consider are: training, system updates and other operational elements.

The Venture Development Corporation study also found:

- The average organization budgets for a mobile computing device to remain viable for 3.5 years, however less than one in five non-rugged model devices will remain in use for that time. Furthermore, rugged mobile computing device have an average failure rate of 11 percent while the average failure rate for a comparable non-rugged device is 38 percent.
- When comparing each level of ruggedness of tablets and notebooks (consumer-grade, durable, semi-rugged and fully rugged) the most rugged have the lowest cost of ownership and consumer grade have the highest. A difference which can exceed an annual cost $1,600 per device.

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Total Cost of Ownership (Five Years)

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- Soft costs including: IT support, productivity loss and training account for an average of $1,851 per year for non-rugged devices while soft cost account for an average of $3,205 per year for comparable non-rugged devices.   Costs which total roughly 65 percent of the total cost of ownership for rugged devices, and as much as 87 percent for consumer-grade PDAs.

- Finally, rugged mobile PCs often have come with longer warranty periods and replacement cycles than those of commercial-grade computing devices.

Standardizing with Rugged Tablet PCs

The durability and powerful functionalities of rugged tablet PCs make these compact and portable devices the ideal mobile computing solution for those working in the manufacturing industry. These portable, sleek, easy-to-use devices quickly and effectively standardize workflows, facilitate real-time communications and provide access to mission critical information.

By integrating all essential technologies into a single, mobile device you are effectively arming your workforce with the tools and resources they need to perform to the best of

their ability. With a bit of training your workforce, can operate as a cohesive unit; following safety protocols, workflows and more while on the job.

In addition rugged tablets give management the tools they need to run an effective operation, managing multiple teams remotely or while on the ground. Monitoring efficiencies, time and attendance, project statuses, use of company resources and more are all made possible through rugged tablet technologies.

You depend on your mobile workforce to work safely and efficiently while on the job. Why not equip them with the tools they need to ensure they are prepared to do just that? Rugged tablet technology makes this possible while giving you the peace of mind that you can closely and effectively manage each area of your business operations.

The case for standardizing with rugged tablet technology in manufacturing could not be more evident. The power and versatility of these cutting edge computers coupled with their low cost of ownership make them the ideal tool for standardization in the manufacturing industry. If you are looking to improve productivity and provide your mobile workforce with the resources they need to work efficiently, contact MobileDemand at 319.363.4121, or visit www.mobiledemand.com.

About MobileDemand

MobileDemand is a leading provider of rugged tablet PCs to manufacturing, warehousing, logistics, retail, field service, public sector, military, food and beverage distribution, agriculture and other mobile applications. Our complete family of xTablet rugged PCs was designed to meet the individual needs of each and every client we serve. Because we understand that no two customers are exactly alike we developed a host of products that can be customized to serve professional across all industries and in any environment. Contact us today to learn what sets our complete line of xTablets apart.

MobileDemand 319.363.4121, or visit www.RuggedTabletPC.com.