

THE TCO ADVANTAGE OF THE MOTOROLA ES400 EDA

THE ES400 — BUILT FROM THE INSIDE OUT TO DELIVER A LOW TOTAL COST OF OWNERSHIP (TCO)

Today's businesses are embracing mobility for its well recognized benefits — from increased productivity, customer loyalty, sales and first time fixes to reduced cycle times that reduce costs. While there is a wide array of consumer and enterprise-class devices to choose from, many appear to be identical or very similar in user features and functionality.

When selecting a device, businesses typically place the greatest emphasis on the upfront hard costs. However, the initial cost of the device itself is typically the smallest line item in any mobility solution — roughly just 11 to 18 percent of the total cost of ownership (TCO)¹.

The remainder — and majority — of the costs related to mobile device deployments occur after the initial purchase, from the productivity loss that occurs when

devices fail to the costs associated with maintenance, support and training. Choosing the most cost-effective device for your mobility solution requires looking not only for the right user features, but also for devices that can help control and reduce those soft costs.

While the Motorola ES400 may appear identical to many consumer-class devices, it is designed to meet a very different set of needs. In a class of its own, this business class device is designed to provide users with the feature set they need on the job; IT with simplified everyday management; and finance with an easy justification for this mobility investment — a TCO many times lower than its consumer counterparts.

A HARD LOOK AT THE SOFT COSTS

With an average of 11 to 18 percent of the TCO allocated to initial hard costs (the initial purchase of devices and accessories, software and warranty), the remainder is allocated to the two largest line items for mobility solutions:

- **Productivity loss** — lost wages and/or sales that are incurred when device malfunctions stop employees from working
- **Support costs** — including the device staging; day-to-day management; training; and device and accessory replacement costs

The TCO numbers published by Venture Data Capital (VDC) Research reveal a significant difference in these two numbers for consumer and rugged small form factors:

- The productivity loss for consumer style small handheld devices averages about 125 percent more than their rugged counterparts²
- Support costs for consumer style small handheld devices are approximately 65 percent greater than their rugged counterparts²

While consumer style devices offer attractive savings in hard costs, in the long run, it is the solution built for business use that dramatically reduces the soft costs and the overall TCO. According to 2009 VDC Mobile TCO research, enterprises actually pay a premium for deploying non-rugged consumer grade devices:

A mobility solution deployed on non-rugged consumer grade devices can cost enterprises as much as 41 percent more than rugged handheld devices.²

FIVE FEATURES THAT DELIVER AN ENTERPRISE-WORTHY LOW TCO

The ES400 addresses five enterprise needs required to drive a low TCO — durability, lifecycle, ease-of-use, manageability and support.

Durability — a look at the hard facts

Durability is an important factor in ensuring uptime for your users. The degree of durability of the mobile device you choose directly impacts multiple TCO costs — lost productivity, support time and device replacement costs. Consider the following facts:

Fact #1:

The annual failure rate for consumer-style devices frequently exceeds 20 percent, which can translate into an increase in TCO of over 50 percent.³

Fact #2⁴:

The percentage of non-rugged consumer-style devices that require replacing is roughly five times greater than that of durable, rugged devices:

Percent of Installed Mobile Computer Units Replaced by Year:

	YEAR 1	YEAR 2	YEAR 3
Non rugged	18%	38.5%	82.6%
Rugged	3.3%	7.8%	18.2%

While the ES400 offers the same sleek look as its consumer-styled competitors, it offers a full complement of durability specifications that are virtually absent in consumer-class devices. Even other business-class devices in this category offer only a small subset of the specifications that allow the ES400 to endure all day everyday business use inside and outside the four walls.

The ES400 meets and exceeds the latest U.S. Military standards for rugged design and more — including:

Two drop specifications: Many drop tests are performed only at room temperature. But while a device may pass a test at ambient temperature, plastics and other elements can become brittle when cold and expand when warm, potentially affecting impact resistance. For this reason, Motorola’s 3 ft./0.91 m drop test is performed across the entire ES400 operating temperature range, ensuring reliable operation even if a device is dropped outdoors on a hot summer or cold winter day.

The second drop test ensures uniform durability of the external housing. In order to meet the stringent MIL-STD 810G specification, the ES400 was dropped on all corners, edges and sides from 4 ft./1.22 m, ensuring survivability regardless of which part of the device hits the ground first.

Tumble specification: Where a drop specification tests for impact resistance, the tumble specification tests for endurance. The device is placed in a drum and rotated 150 times. The test subjects the ES400 to 300 consecutive 1.65 ft./0.5 m drops, simulating the real-world tumbling that might occur when a device is dropped on the ground.

Sealing: The ES400 also meets and exceeds IP42 sealing standards, providing protection against dust, as well as the number one cause of device failure⁵ — exposure to water or liquid.

Vibration: The MIL-STD 810G vibration standard ensures that the ES400 can withstand continual exposure to the low level vibrations common in vehicles — from cars to company trucks.

Thermal Shock: As workers walk from the protected environment inside a building to the outdoors, rapid temperature changes can wreck havoc with sensitive electronics. The thermal shock rating ensures that the device can rapidly transition between -20° F/-20° C to 158° F/70° C with no impact on device performance.

Lifecycle

Two features extend the lifespan of the ES400:

A three-year availability cycle

The availability of a mobile device also impacts TCO. Where consumer-style mobile devices offer a typical lifecycle of nine to twelve months, the three-year availability cycle for Motorola’s ES400 ensures that the device you deploy today will be available to deploy to new workers next month — and for several years down the road. The ability to deploy one device type greatly simplifies the mobility architecture, reducing IT support and management costs and protecting application investments — the applications you invest in today will work on the devices you deploy tomorrow.

A network-agnostic pentaband unlocked platform

Motorola MAX FlexWAN provides true WAN technology independence which turns the ES400 into a truly network agnostic device. Either the user or IT can activate the pentaband unlocked platform on either or both the 3.5G HSPA or CDMA EVDO Rev A cellular networks, ensuring utilization throughout the entire useful life of the device. If a user requires a different network, there is no need to retire the device early. If workers leave the company, the enterprise can re-deploy the ES400 anywhere in the world. If a carrier develops network enhancements that can better support mobile workers, the device can be activated on that network. And network flexibility provides purchasing agents with the negotiating power required to help minimize cellular costs.

Ease-of-use

Another 'Motorola only' feature helps address another soft cost — training. The Motorola Enterprise User Interface (MEUI) is one of the most unique features of the ES400, designed specifically to bring a new level of ease of use for business users. An alternative to the standard Windows Mobile interface, the customizable MEUI home screen allows users to access virtually everything they need with just a tap or two. Users enjoy faster and easier access to the many features and business applications they need throughout the day, so users stay focused on serving customers and taking care of business instead of how to work the device. In addition, the interface is very intuitive, reducing training requirements and the associated costs.

Manageability

Day-to-day management of your mobile devices is one of the largest costs associated with any mobility solution. First, there is the time your IT department must spend supporting the device. And second, since nearly 50 percent of failed consumer style small mobile devices are sent to a third party service depot for repair,⁶ there are substantial costs associated with lost productivity.

Motorola drives the cost of mobile device management and lost productivity to an all time low with an optional device management toolkit, the Motorola Mobility Suite. Motorola's Mobility Services Platform (MSP) is at the core of this valuable suite, providing IT with extraordinary centralized control over all ES400 devices, anywhere in the world. IT can remotely stage, provision, monitor, manage security and troubleshoot devices wherever they may be out in the field — all from a single location. The result is maximum uptime with minimal management effort — and minimal management cost.

Capabilities include:

Staging: While other device management systems may allow IT to remotely and automatically load the operating system, firmware updates and all initial applications on mobile devices, MSP goes a step further. Advanced staging capabilities enable the remote configuration of all device and network settings. As a result, devices are truly ready to operate, right out of the box.

Provisioning: Updates to software and settings can be rolled out to all devices around the world with the press of a few buttons — and policies can be set once and automatically enforced on every single device.

“EFFECTIVE USE OF DEVICE MANAGEMENT SOLUTIONS — FOR REMOTE DIAGNOSTICS, SOFTWARE UPGRADES, ETC. — CAN REDUCE THE AVERAGE ANNUAL SUPPORT COSTS PER MOBILE WORKER BY AS MUCH AS 85%.”

Source: VDC Research, White Paper — Enterprise Digital Assistant Leverage in the Emerging Mobile Enterprise; David Krebs/Chris Rezendes; Jan 2010 (file name 10_edu_wp_final.pdf).

Monitoring: Rich monitoring tools provide insight into device issues before users are impacted, allowing IT to take the proactive action that will keep your devices up and running — and your users productive.

Troubleshooting: IT can take complete control of a device to identify and resolve issues, with no or very little user involvement.

Remote management of device-level security: Other modules in the suite enable centralized management of device security, enabling IT to easily and cost-effectively deploy a firewall, intrusion prevention, enforced authentication, data encryption, integrity monitoring and more — including the ability to remotely wipe and lock lost or stolen devices.

Support

Two leading sources of mobile device failure are cracked displays and damaged hard drives.⁷ Motorola's industry leading Service from the Start with Comprehensive Coverage helps minimize these and all other device-related hard costs. This unique program protects your investment from the unexpected, providing all-inclusive

coverage for normal wear and tear, internal and external components that are accidentally damaged, and even select accessories that ship with the device — all for one low fixed cost. No matter what happens, the ES400 is covered — period. The enterprise enjoys reliable support costs that never create surprise budget issues, plus the ability to keep the pool of ES400 devices in ‘like new’ condition throughout their entire life.

THE PROOF IS IN THE MATH

When enterprises select consumer style handheld devices for a mobility deployment, cost is the typical driver. The cost of the consumer style devices does indeed appear to be much lower than its more rugged counterparts — but appearances, in this case, can be deceiving.

Productivity loss is one of the largest TCO line items, representing as much as 41 percent of the mobile device TCO.⁸ With users losing an average of 75 minutes each time a device fails, and with the average consumer device failing as many as 20 times per year, the net result can translate into a loss of \$4,000 per employee per year.⁹ The tab for productivity loss for just 100 people could potentially add up to \$400,000 — nearly a half million in soft costs. The ES400 protects against productivity loss by providing the durability required to minimize device failure and downtime, protecting business continuity.

The second largest line item in a mobile device TCO calculation is support, defined as IT time and replacement costs. A failure rate for rugged devices that is nearly half¹⁰ of that of consumer style handheld devices dramatically reduces the number of incidents IT must support. The ability to centralize, automate and remotely execute management, troubleshooting and issue resolution for the ES400 further reduces the time and cost required to address everyday support. And a truly all-inclusive support program provides all the repairs required over a three-year period for one low preset cost.

When it comes to selecting a device for your mobile deployments, the ES400 offers the durability, remote management, lifecycle, ease of use and superior support required to drive TCO to a low that is well beyond that of competitive consumer style handheld mobile devices. And VDC Research has done the math that proves it. A VDC report reveals that rugged small handheld devices in all industries deliver a TCO that averages 34 percent lower⁸ than their non-rugged counterparts, with the following specific TCO reductions in the ES400’s major target markets:

- 43 percent lower in field mobility ¹¹
- 33 percent lower in healthcare ¹²
- 38 percent lower in retail ¹³

For more information on how you can transform your managers from informed to empowered with Motorola’s ES400 EDA, please visit us on the web at www.motorolasolutions.com/ES400 or access our global contact directory at www.motorolasolutions.com/contactus

CITATIONS

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