



ADVICE FOR BUYERS OF RUGGED MOBILE COMPUTING DEVICES



FOREWORD

Buyers beware. With an increasing number of manufacturers adding a wide range of rugged sounding names and classifications to their mobile computing devices, it is very easy to buy an inappropriate solution for a workforce. This can be a very costly mistake for the business and, in turn, be very frustrating and demotivating for the users.

This independent research, conducted by Opinion Matters and commissioned by Panasonic, shows that the language being used by manufacturers of business and consumer devices is confusing the marketplace. Extreme terms to describe devices are being thrown around like confetti in a bid to convince buyers of the durability and suitability of a device – whether for the business professional, outside worker or consumer. Is it any wonder that the research shows buyers are confused?

Just because a mobile device has an IP Rating or a Military Standard compliant logo or claims to be water or drop proof, does not mean it is fit for purpose. Is the product light and ergonomic enough to be used effectively by the mobile worker, as well as simply durable? Can the manufacturer supply independent certificates to support all its rugged claims? Does it come with the connectivity options that the workforce requires for connection to its office systems?

All these questions and more are important considerations for the buyer if they are to specify a device that will deliver. A well-chosen rugged mobile computing device can deliver a transformation in workforce productivity and be a practical and useful tool for the user – providing a long-term return on investment.

As a result, I would recommend all buyers examine the manufacturers' claims very closely; ask to see test details and certificates. Examine whether the testing was undertaken independently or even under laboratory conditions and then test the products themselves, in the field, with a thorough pilot evaluation before buying.

> JAN KAEMPFER General Manager of Marketing for Panasonic Computer Product Solutions

BUYER PRIORITIES CHANGING

It's also clear from the research that the priorities of businesses are evolving when it comes to rugged devices. Devices that are *just tough* no longer meet the need. Buyers need manufacturers of their rugged devices to have considered important issues such as the type of viewing screen, battery life and power management and the security of data and the device's communications capabilities.

I hope this research helps buyers of rugged notebooks, tablets and handhelds to see through the smog and that it provides them with some useful tips and questions when considering the right type of rugged mobile device for their workforce. Only by manufacturers being much more transparent about the language they use and their rugged claims can we continue to deliver on our promise of transforming mobile workforce productivity.



KEY RESEARCH FINDINGS

Buyers of rugged mobile computing devices are confused by the terminology describing just how tough their notebooks, tablets and handheld devices are.



COMPUTING DEVICES BELIEVE STANDARDS FOR RUGGEDNESS ARE ALREADY IN PLACE - AND YET NONE EXIST.

45% FAIRLY IMPORTANT



88%

OF BUSINESS BUYERS SAID THE RUGGEDNESS OF THEIR NOTEBOOKS, TABLETS AND HANDHELD DEVICES WAS VERY OR FAIRLY IMPORTANT TO THEM WHEN CONSIDERING NEW PURCHASES FOR THEIR WORKFORCE.

CONFUSION **OVER** TERMINOLOGY

Many recognised common rugged terms but when it came to proving their understanding of these terms, the majority failed miserably.

WHICH OF THE FOLLOWING ARE YOU AWARE OF?

48%	IP RATING		
41%	ANSI/IEC STANDARD		
38%	MILITARY STANDARD 810G/MIL-STD 810G		
36%	ATEX ZONE 2		
36%	EMARK		
36%	MILITARY STANDARD 461F		
12%	NONE OF THE ABOVE		

RATINGS Less than half of buyers were aware of Ingress Protection (IP) Ratings and two-thirds were unable to correctly identify that the rating was for protection against particles and liquid and the higher the rating the better the protection. 20 WHEN REFERRING TO IP RATING (IPXY) WHICH OF THE FOLLOWING APPLY? 13-23 DINOSEUEd X IS A RATING OF ENERGY EFFICIENCY AND 40% THE HIGHER THE NUMBER THE BETTER VIS A RATING AGAINST LIQUIDS AND 34% THE HIGHER THE NUMBER THE BETTER X IS A RATING FOR PROTECTION AGAINST 32% PARTICLES AND THE HIGHER THE NUMBER THE BETTER Y IS A RATING FOR TASK EFFECTIVENESS 30% ND THE HIGHER THE NUMBER THE BETTER I DON'T KNOW WHAT APPLIES 24% WHEN REFERRING TO IP RATING X IS A RATING FOR ENERGY 19% EFFICIENCY AND THE LOWER THE NUMBER THE BETTER Y IS A RATING FOR TASK 17% EFFECTIVENESS AND THE LOWER THE NUMBER THE BETTER **X IS A RATING FOR PROTECTION** 17% AGAINST PARTICLES AND THE LOWER THE NUMBER THE BETTER Y IS A RATING AGAINST LIQUIDS AND 14% THE LOWER THE NUMBER THE BETTER NONE OF THE ABOVE 5% APPLY TO IP RATING

0

20

ANDARD

69%

Panasonic

TOUGHBOOK

OF BUYERS BELIEVED OR EXPECTED THE TERMS **"MIL-STD COMPLIANT"** AND "TESTED TO MIL-STD" TO BE A CONSISTENT MEASUREMENT - WHEN THEY ARE NOT.

6% NONE OF THE FOLLOWING

6% I DON'T KNOW WHAT MIL-STD COMPLIANT OR TESTED TO MIL-STD MEANS IN TERMS OF MEASUREMENT BUT WOULDN'T EXPECT IT TO BE A

WHICH OF THE FOLLOWING RELATES TO YOUR UNDERSTANDING OF 'MIL-STD COMPLIANT" **OR "TESTED** TO MIL-STD"?

19% IT ISN'T A CONSISTENT MEASUREMENT

CONSISTENT MEASUREMENT

45% IT IS A CONSISTENT MEASUREMENT

I DON'T KNOW WHAT MIL-STD COMPLIANT OR TESTED TO MIL-STD MEANS IN TERMS OF MEASUREMENT BUT WOULD EXPECT IT TO BE A CONSISTENT MEASUREMENT

24%

Buyers were wildly confused by what was covered in the

WHAT DO YOU THINK IS PERFORMANCE TESTED AS PART OF MILITARY STANDARD 810G / MIL-STD 810G?

涿	42%	SHOCK TESTING
7	40%	VIBRATION TESTING
	38%	ALTITUDE TESTING
	37%	EXPOSURE TO HIGH A
	36%	BATTERY LIFE
	35%	EXPOSURE TO RAIN
	34%	SCREEN PROTECTION
	33%	EXPOSURE TO HUMID
拉	33%	SAND AND DUST EXP
£00,2	32%	PERFORMANCE IN EX
≡>	30%	PERFORMANCE UND
(î;	30%	WIRELESS SIGNAL ST
ന	29 %	CPU PERFORMANCE
7	26%	ELECTRICAL CURREN
?	12%	NOT SURE

In reality, MIL-STD 810G is a series of lab tests designed by the U.S military to test equipment limits in various environmental conditions where it is expected to be used. Although prepared specifically for military applications, the standard is also often used commercially.

commonly quoted US Military Standard 810G, with more than 35% of respondents incorrectly believing it applied to battery life.

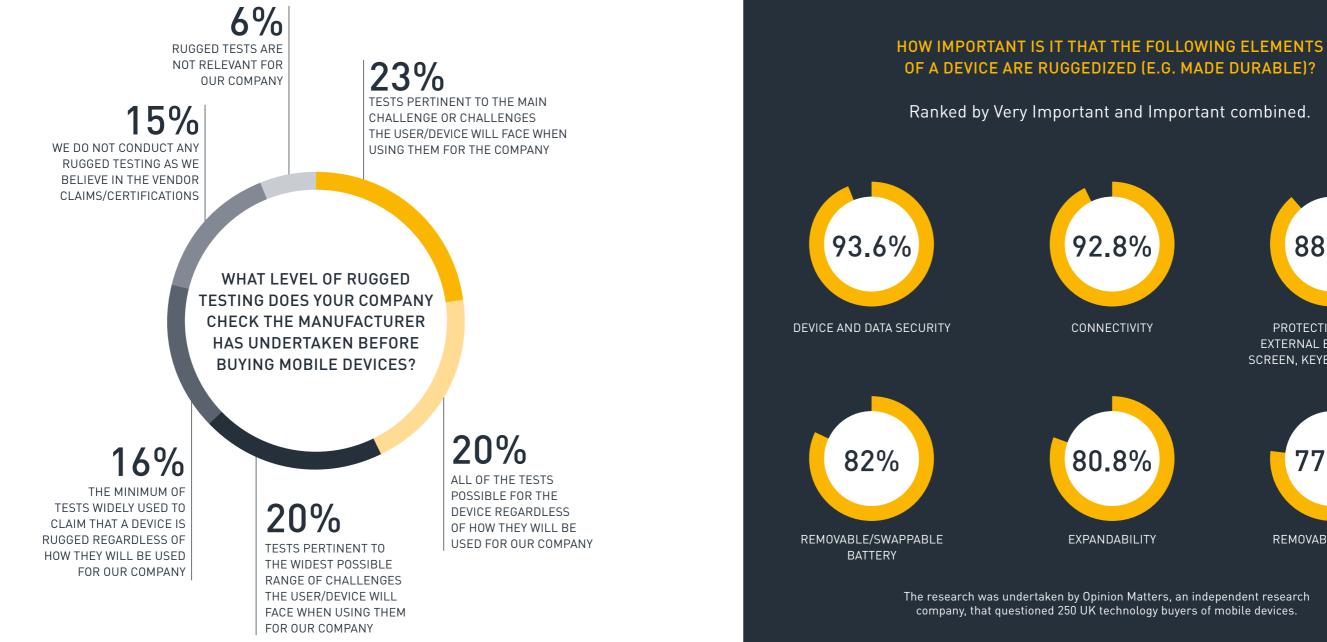
ND LOW TEMPERATURES	
ITY, FUNGUS, SALT, FOG	
DSURE	
PLOSIVE ATMOSPHERES	
RACCELERATION	
RENGTH	
T LEAKAGE	

There are a wide range of conditions covered by the standard but common commercial tests include shock or drop, dust, water and extreme temperatures. The key is to check which tests apply to the product and to ask for proof of test certificates.

OVER-RELIANT ON MANUFACTURERS' CLAIMS

To add to the risk, 20% of buyers confirmed that they do not undertake any tests of their own when buying devices and simply believe the manufacturers' claims.







PROTECTION AGAINST EXTERNAL ENVIRONMENT, SCREEN, KEYBOARD, HOUSING



REMOVABLE STORAGE

TOUGHBOOK'S ADVICE FOR BUSINESS BUYERS OF RUGGED MOBILE COMPUTING DEVICES.

ALWAYS ASK YOUR VENDOR:

- To supply MIL-STD 810G and IP certificates to support any testing or standards claims.
- How their products are engineered to offer light weight without compromising ruggedness or durability.
- If the Military Standard tests have been carried out on one single unit or if they used multiple units to fulfil the tests.
- Which display options their devices support.

- For a device with a high capacity battery option and exchangeable design to improve TCO and ROI.
- Which ports and interfaces are included in the main unit without adapter cables.
- How they support seamless data transfer and the latest connectivity standards.
- How they optimise power management on their devices.







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