Panasonic
BUSINESS

TOUGHBOOK

ADVICE FOR BUYERS OF RUGGED MOBILE COMPUTING DEVICES

Opinion matters

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, we 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.

BUYER PRIORITIES CHANGING

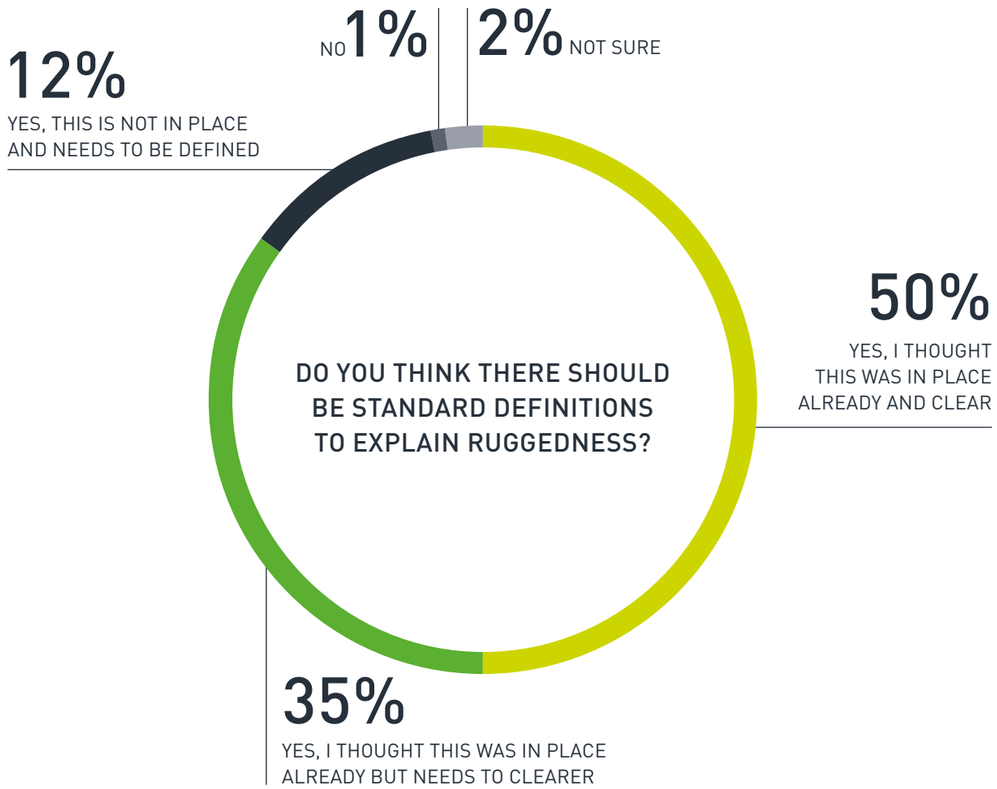
It's also clear from the research that the priorities of businesses are evolving when it comes to rugged devices. Devices that are *just tough* no longer meet the need. Buyers need manufacturers of their rugged devices to have considered important issues such as the type of viewing screen, battery life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

We 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

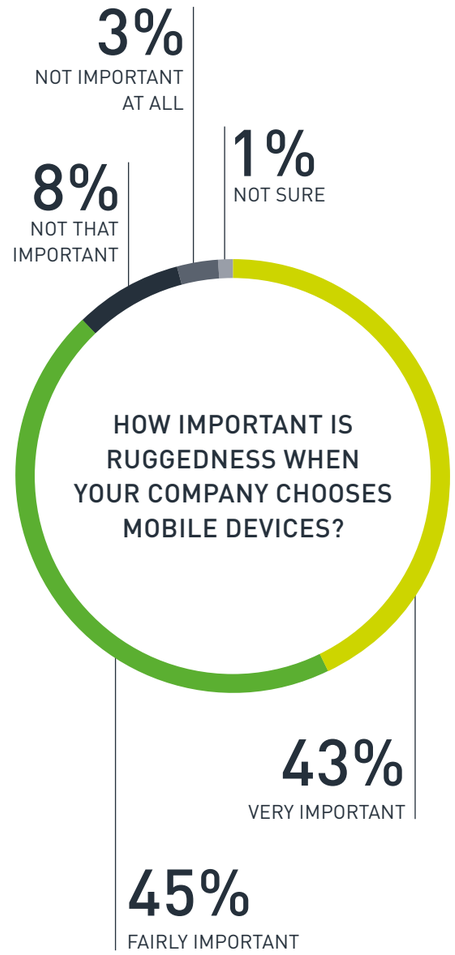
Buyers of rugged mobile computing devices are confused by the terminology describing just how tough their notebooks, tablets and handheld devices are.

CONFUSION OVER RUGGED STANDARDS



85% OF BUSINESS BUYERS OF MOBILE COMPUTING DEVICES BELIEVE STANDARDS FOR RUGGEDNESS ARE ALREADY IN PLACE – AND YET NONE EXIST.

GROWING IMPORTANCE OF RUGGED DEVICES



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

IP 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.

WHEN REFERRING TO IP RATING (IPXY) WHICH OF THE FOLLOWING APPLY?

40%	X IS A RATING OF ENERGY EFFICIENCY AND THE HIGHER THE NUMBER THE BETTER
34%	Y IS A RATING AGAINST LIQUIDS AND THE HIGHER THE NUMBER THE BETTER
32%	X IS A RATING FOR PROTECTION AGAINST PARTICLES AND THE HIGHER THE NUMBER THE BETTER
30%	Y IS A RATING FOR TASK EFFECTIVENESS AND THE HIGHER THE NUMBER THE BETTER
24%	I DON'T KNOW WHAT APPLIES WHEN REFERRING TO IP RATING
19%	X IS A RATING FOR ENERGY EFFICIENCY AND THE LOWER THE NUMBER THE BETTER
17%	Y IS A RATING FOR TASK EFFECTIVENESS AND THE LOWER THE NUMBER THE BETTER
17%	X IS A RATING FOR PROTECTION AGAINST PARTICLES AND THE LOWER THE NUMBER THE BETTER
14%	Y IS A RATING AGAINST LIQUIDS AND THE LOWER THE NUMBER THE BETTER
5%	NONE OF THE ABOVE APPLY TO IP RATING

MILITARY STANDARD

69% OF BUYERS BELIEVED OR EXPECTED THE TERMS "MIL-STD COMPLIANT" AND "TESTED TO MIL-STD" TO BE A CONSISTENT MEASUREMENT – WHEN THEY ARE NOT.

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

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 CONSISTENT MEASUREMENT

19% IT ISN'T A CONSISTENT MEASUREMENT

45% IT IS A CONSISTENT MEASUREMENT

24% 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

Buyers were wildly confused by what was covered in the commonly quoted US Military Standard 810G, with more than 35% of respondents incorrectly believing it applied to battery life.

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

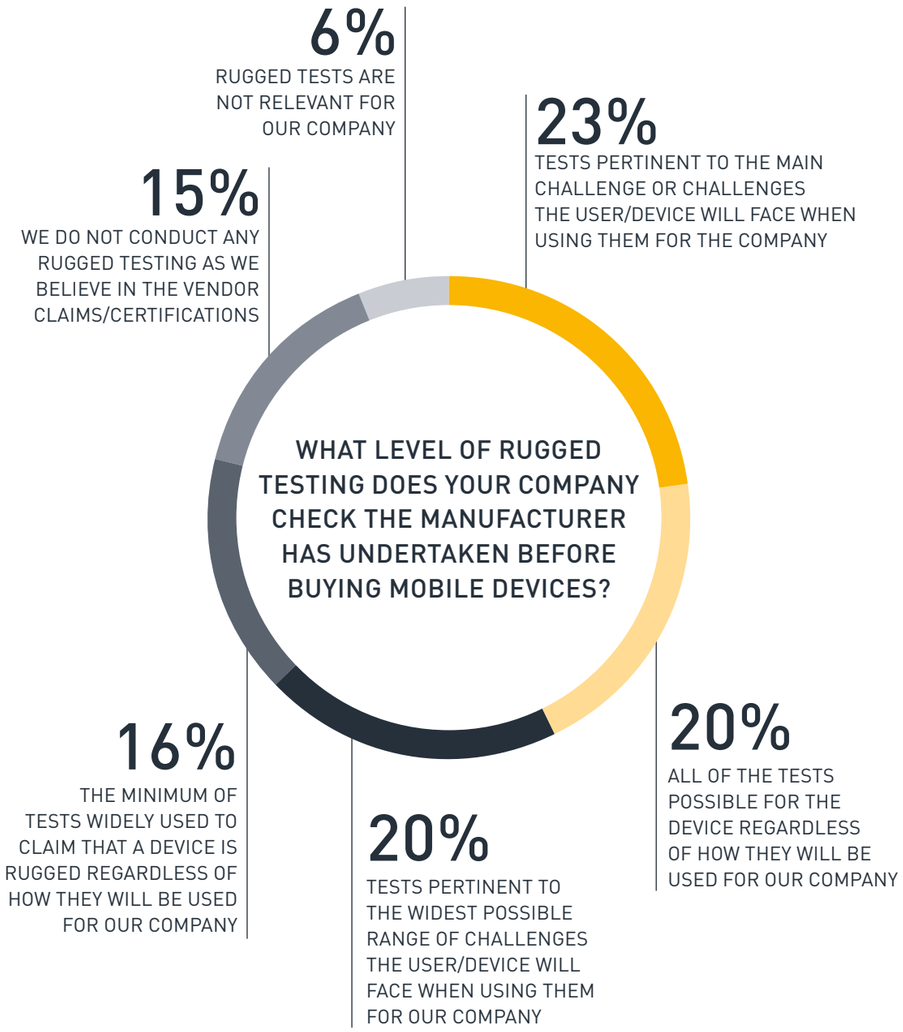
- **42%** SHOCK TESTING
- **40%** VIBRATION TESTING
- **38%** ALTITUDE TESTING
- **37%** EXPOSURE TO HIGH AND LOW TEMPERATURES
- **36%** BATTERY LIFE
- **35%** EXPOSURE TO RAIN
- **34%** SCREEN PROTECTION
- **33%** EXPOSURE TO HUMIDITY, FUNGUS, SALT, FOG
- **33%** SAND AND DUST EXPOSURE
- **32%** PERFORMANCE IN EXPLOSIVE ATMOSPHERES
- **30%** PERFORMANCE UNDER ACCELERATION
- **30%** WIRELESS SIGNAL STRENGTH
- **29%** CPU PERFORMANCE
- **26%** ELECTRICAL CURRENT LEAKAGE
- **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.

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.

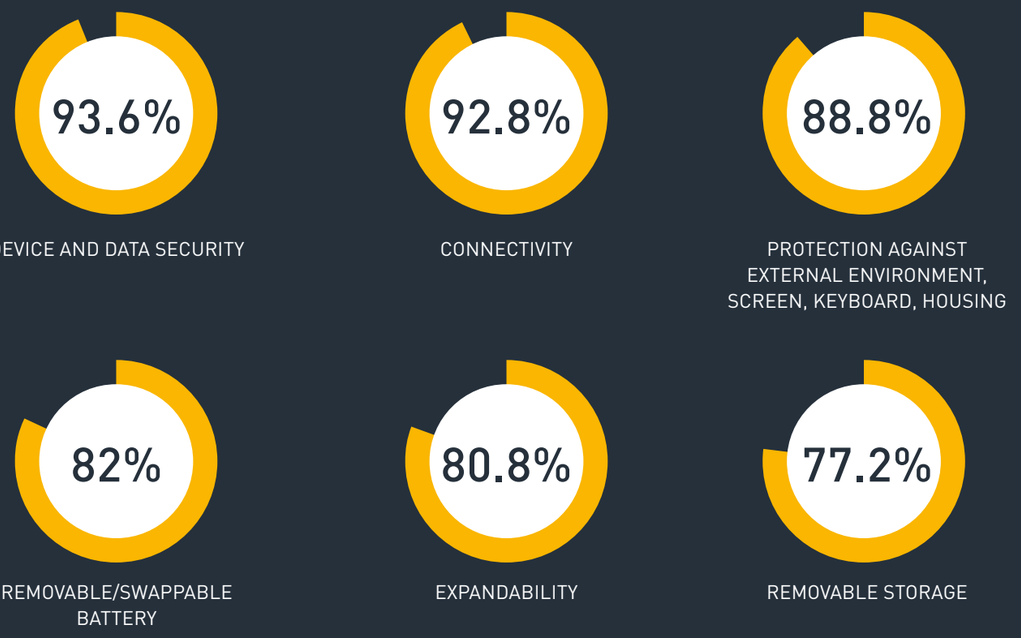
OVER-RELIANT ON MANUFACTURERS' CLAIMS

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.



HOW IMPORTANT IS IT THAT THE FOLLOWING ELEMENTS OF A DEVICE ARE RUGGEDIZED (E.G. MADE DURABLE)?

Ranked by Very Important and Important combined.



The research was undertaken by Opinion Matters, an independent research company, that questioned 250 UK technology buyers of mobile devices.

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.

Panasonic
BUSINESS

Take a look at our full range of exclusive white papers:

business.panasonic.com.au/computer-product/whitepapers
business.panasonic.nz/computer-product/whitepapers

Panasonic, Toughbook and Toughpad are brand names and registered trademarks of Panasonic Corporation. Intel, the Intel logo, Intel Core, Intel vPro, Core Inside and vPro Inside are trademarks of Intel Corporation in the U.S. and other countries. Microsoft ® and Windows ® are registered trademarks of Microsoft ® Corporation of the United States and/or other countries. All other brand names shown are the registered trademarks of the relevant companies. Google, the Google logo, YouTube and Android are trademarks of Google Inc. All rights reserved.

All working conditions, times and figures quoted are optimum or ideal levels and may differ as a result of individual and local circumstances.

Computer Product Solutions (CPS) BU, Panasonic System Communications Company Europe (PSCEU), Panasonic Marketing Europe GmbH, Hagenauer Straße 43, D-65203 Wiesbaden (Germany).

TOUGHBOOK

1_00117609_Rugged confusion whitepaper_V5_JUL2018