

What is military-grade testing, and why should you opt for a notebook that's certified?

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Technology is so entwined in our daily routine that our devices have become synonymous with tools of simpler times. But because they are constructed from finicky (and sometimes expensive) components, they're not as robust as, say, a sword, or a hammer.

These devices aren't used to construct buildings in the literal sense but they could just as well play a role in developing the finished product of a building. And during that process, the user may travel to and visit construction sites. Even more, they may live in a house with pets or small children that aren't conscious of the fragility of technology.

It's essential to ensure that modern-day tools are built to endure any possible scenario that could damage the device. How do you think about every single possibility, though? It's almost incomprehensible, which is why a standard has been developed to uphold device longevity using various vigorous testing methods.

Have you ever noticed a MIL-STD-810 badge slapped on the box of a new device? That's the testing certification you want to see on your box. It's become the industry standard for tech device testing and certification. It ensures that your new phone, notebook or accessory went through rigorous tests before it made its way to your desk.



Meet MIL-STD-180

The MIL-STD-810 standard was developed by the United States Department of Defense in 1967. It's a military standard used for testing specifications of environmental conditions for equipment.

It was specifically developed for the use of the US Department of Defense applications and later adopted to commercial standards because of its reliability. Industrial and Military Grade notebook manufacturers, like ASUS, use the standards as a benchmark to ensure the longevity of their products.

Contained within these standards is a list of criteria for test facilities and environmental tests that are designed to put devices through a variety of strenuous tests.

There are 29 methods total, each representing an environmental element to be tested in a laboratory environment. The standard includes a detailed account of how the test should be conducted and the parameters of the test.

Durability is key

Each tech hardware manufacturer should strive to develop devices that ensure longevity and the ability to last in a variety of environments. ASUS, for example, conducts up to 15 separate tests in environmental conditions, including extreme heat and cold, pressure tests and even drop tests on all of its rated devices.

Complying with this standard means the device has undergone a number of tests proving it's capable of lasting in real-world environments.

Below is a list of the tests conducted by ASUS in monitored environments in its testing facilities.

- **Drop Test:** Drop tests check the resistance of the chassis and internal components to damage from unexpected drops.
- **Shock Test:** Shock tests ensure a laptop can withstand unexpected impacts such as accidental bumps, or jarring movements during shipping.
- **Vibration Test:** Extensive vibration testing ensures that the chassis and internal components can withstand even the most extreme travel conditions.
- **Altitude Test:** This tests the ability to survive extremes of altitude encountered in shipping by air or air travel.
- **Humidity Test:** This tests the ability to operate in hot, humid environments for ten 24-hour cycles.
- **Spill Resistance Keyboard:** The spill-resistant keyboard can cope with liquid spills of up to 66cc without harm, so minor slashes on the desk can be easily drained, cleaned, and dried.
- **Twist-test:** Twist tests confirm that the chassis is strong enough to retain structural integrity even when uneven pressure is applied.
- **Enhanced Hinge Test:** Vigorous testing with over 20,000 open/close cycles helps ensure exceptional hinge strength.
- **Panel Research Test:** Panel resistance tests ensure that the display can endure unexpected bumps or pressure.
- **Temperature Test:** Extremely high or low temperatures tests ensure laptops function consistently for users everywhere.
- **Noise and Audio Test:** Laptops undergo fan, hard drive, and power-supply noise tests to ensure the quietest performance possible.

- **EMI Test:** This ensures that ASUS laptops perform well in internal or external electromagnetic fields.
- **Keyboard Test:** To ensure ultimate keyboard durability, specially designed ASUS robots test individual keys with millions of keystrokes.
- **Port Test:** Port tests ensure that contacts and plugs are durable even in environments where devices are frequently connected and disconnected.
- **Accelerated Life Test:** These simulate the effects of long-term operation, so engineers can identify any possible design or component vulnerabilities.

ASUS ExpertBook range is the toughest on the market

The ExpertBook B9 (B9400CBA) is an ultraportable powerhouse that doesn't compromise quality and performance for size, enabling effortless mobile working and uninterrupted collaboration. The lightweight magnesium-alloy chassis weighs only 880g, with the superior-quality forged magnesium-lithium lid and reinforced construction built to pass military-grade endurance standards and stringent ASUS torture tests.

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