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### PANASONIC TOUGHBOOK 30

THIS FULLY RUGGED NOTEBOOK CAN HANDLE ALL SORTS OF ABUSE AND LASTS NEARLY A FULL WORKDAY ON A CHARGE.

by John R. Delaney

Panasonic Toughbooks have long been known as some of most resilient laptops around, and the Toughbook 30 continues the trend. This fully rugged notebook may not be the best performer on the block, and at \$4,799 it isn't cheap. Still, if you spend the bulk of your time working in the field, this laptop can handle the harshest of environments. Plus, you'll get well over 6 hours of battery life.

#### DESIGN

The notebook-equivalent of a tank, the Toughbook 30 is housed in a sturdy silver and black magnesium alloy chassis with a built-in, briefcase-type handle that pulls out from the front edge of the notebook. Most 13.3-inch systems are typically thin and light, but the Toughbook 30 weighs in at a hefty 8.4 pounds and is 2.8 inches thick. The lid is supported by a pair of heavy-duty hinges and, when closed, is firmly secured to the base using a spring-loaded latch. A retractable antenna for the included Sierra Wireless EV-DO module is embedded into the top left side.

Beneath the lid is a bright, 13.3-inch, daylight-readable display with touchscreen capabilities. The screen's maximum resolution of 1024 x 768 is relatively low by today's standards, but having the ability to view images in any lighting environment, including bright sunlight, is a big plus for the outdoor workforce. We had no problem reading text and viewing Web pages while moving from areas of direct sunlight to darker, shaded areas. The touchscreen is very responsive, with just the right amount of sensitivity for double-clicking



and scrolling with the included stylus or your fingertip.

The keyboard is well spaced, and the keys provided a good response, but the touchpad controller is a bit too small, which is puzzling considering the deck has plenty of room for a larger pad. Below the touchpad are six small activity indicator lights.

#### DURABILITY AND SECURITY

We put the Toughbook 30 through a few durability tests to see how it would hold up against abuse. We dropped the notebook from a height of 36 inches onto a carpeted office floor three times, making sure the unit landed on three different edges. After each drop, the system booted up without a problem

and the system sustained no evidence of physical damage.

We also performed a moisture test on the keyboard and touchpad by pouring an ounce of water on three different spots on the keyboard deck, for a total of 3 ounces. After wiping it down, we fired up the system with no problems. Even the next day, the system functioned properly.

In order to meet the MIL-STD-810F requirements for durability, each and every port and slot, including the power jack, is protected by a gasket-lined cover to prevent moisture and dust intrusion.

The Toughbook 30 includes the latest security features, including a Trusted Platform Module (TPM) chip and a Computrace theft-protection agent,



which resides in the system BIOS and has the ability to track the laptop if it's lost or stolen. Other security options include a biometric fingerprint scanner and a Smart Card reader.

#### PORTS AND SLOTS

The left side of the system contains two doors; behind one are ExpressCard/54 and PC Card slots and a multimedia pocket that will accept an optical drive or a secondary battery pack, neither of which were included with our review system. Charging an extra \$350 for a DVD drive strikes us as being a tad stingy, considering the price of this notebook. Also on this side is a battery compartment with a secure locking mechanism to prevent the cover from opening up accidentally.

A compartment on the right side houses a smallish 80GB hard drive mounted in a shock-resistant cage. Next to that, another covered compartment holds an SD Card reader, a FireWire port, and modem and Ethernet jacks. A USB port and the power connector have their own separate mini-compartments. Sharing a covered compartment around back are two additional USB ports, a port replicator connector, an external

EV-DO antenna jack, a VGA output, and headphone and microphone jacks. There's also a 15-pin serial port behind a separate cover.

#### PERFORMANCE

The Toughbook 30's 1.6-GHz Intel Core 2 Duo L7500 processor and 2GB of DDR2 RAM provide adequate horsepower for running office applications, but don't expect to be bowled over by blazing speed with this configuration. While our review unit came loaded with Windows XP Professional, the Toughbook 30 is available with Windows Vista Business as well as an XP downgrade CD. A score of 3,284 on our PCMark05 test, which measures application performance while running Windows XP, is more than 400 points below average for a mainstream notebook.

On the plus side, the Toughbook 30 needed only 32 seconds to boot into Windows XP. It also managed multitasking well; the system needed 6 minutes and 1 second to convert nearly 2 hours of music to the AAC format using the iTunes encoding function. While running a Windows Defender full scan in the background (a known CPU hog), the same test took only 55 seconds longer

to complete.

You won't get much 3D muscle from the integrated GMA X3100 graphics solution; the Toughbook 30's 3DMark03 (which tests DirectX 9 performance) and 3DMark06 (which tests DirectX 9 3D graphics, CPU, and 3D features) scores of 1436 and 467, respectively, are far below the average for this class of notebook. Its F.E.A.R. score of 4 frames per second while running at the maximum resolution of 1024 x 768 confirms that this system is not meant for 3D gaming. The 80GB hard drive, which spins at 5,400 rpm, delivered a slightly slow speed of 14.7 MBps on our LAPTOP Transfer Test (copying a 4.97GB folder of mixed media).

#### Battery Life and Wireless Performance

The Toughbook 30 lasted an impressive 6 hours and 51 minutes on our Laptop Battery Test (continuous Web surfing over Wi-Fi). That's nearly twice as long as the average time for a mainstream notebook. The Intel WiFi Link 4965AG module turned in throughput scores of 20.7 Mbps (15 feet from our access point) and 18.1 Mbps (50 feet)—not bad for an 802.11a/b/g radio. Our notebook came with built-in EV-DO Rev. A through Sprint (\$59.99/month), and HSDPA broadband is also available through Alltel, AT&T, and Verizon Wireless. Additionally, the Toughbook 30 can be outfitted with Qualcomm's Gobi embedded mobile broadband, as well as a GPS receiver.

Panasonic provides a strong three-year limited warranty, including parts and labor, and 24/7 toll-free tech support.

#### VERDICT

For most users, it's hard to justify spending upwards of \$4,000 on a laptop with a low-res screen and merely average power. However, if you're out in the elements and need a notebook that can take the heat (and dust and moisture), survive multiple drops, and get you through most of your workday on one charge, the Panasonic Toughbook 30 is as good as they come.

