

RuggedPCReview.com

If it's rugged, we review it and write about it

September 2009

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Rugged computers are helping people and companies do more with less

The doomsday economy of the past 18 months or so has affected everyone, but I am totally impressed by how efficiently and intelligently the rugged computing industry has been weathering the crisis! Rather than batten down the hatches and waiting out the storm, rugged systems manufacturers have proactively created and offered new and innovative solutions that help people and companies be more efficient and more productive.



Leaders like [Advantech](#), [Motion Computing](#), [Datalogic](#), [DRS Tactical Systems](#), [General Dynamics Itronix](#), [Getac](#), [Juniper Systems](#), [MobileDemand](#), [RAM Mounts](#), [Samwell](#), [Winmate Communications](#) and [RMT](#) are focusing on forward-looking technologies that increase productivity and lower total cost of ownership, just what is needed to provide a much needed boost in the sectors and industries they support.

Samwell RUGGEDBOOK SR858 -- a rugged convertible notebook with a wide-format touchscreen



Samwell is entering the heavily contested market for rugged notebooks with the tough-looking SR858 that provides a good balance between performance and battery life. Also unique in this class are the wide-format 13.3-inch 1280 x 800 pixel touchscreen and the convertible notebook form factor. We found the RUGGEDBOOK SR858, with its fully sunlight-readable display, an interesting addition to the current rugged notebook offerings. [See review of [Samwell RUGGEDBOOK SR858](#)]

Getac 9213 -- a compact, light, full-function business-rugged notebook for the road

- [MobileDemand](#)
- [Motion Computing](#)
- [RAM Mounts](#)
- [RMT](#)
- [Ruggedbook](#)
- [Winmate](#)

The Getac 9213 is a smartly designed business-rugged machine that offers full commercial notebook functionality and long battery life in an elegant, lightweight package that is far more durable and able to handle the occasional spill and drop.



Unlike netbooks, the Getac 9213 doesn't compromise performance, comes with a DVD Super Multi Drive, a sunlight-viewable 13.3-inch wide screen, and only weighs 3.6 pounds. [See our review of the business-rugged [Getac 9213](#)]

Juniper Systems Archer Longbow: tagging remote targets with a laser-equipped rugged handheld



Juniper Systems, Inc. and Surveylab Ltd. launched the Archer Longbow™ remote positioning GPS handheld. By combining a rugged computer, GPS receiver, 3D compass, digital camera and a laser rangefinder, the Longbow provides the user with an all-in-one mobile GIS data capture solution. The laser is available in 100 meter, 300 meter and 1,000 meter versions. [Read about the [Juniper Archer Longbow](#)]

Core 2 Duo-powered 12.1-inch Winmate tablet



Wimate offers its rugged Tablet PC platform with a variety of displays and processors. For applications that require a large display and full Core 2 Duo processing power while still offering acceptable battery life, the fanless Intel U7500-based Winmate I880 is a strong candidate. Our Windows XP Embedded unit was exceptionally quick and responsive on just 512MB of RAM. [Read review of the [Wimate I880 rugged Tablet PC](#)]

Datalogic's impressive R-Series of vehicle computers



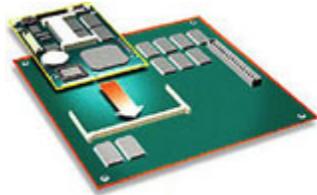
The Datalogic R Series is a trio of vehicle/fixed-mount computers with 7.0, 10.4 and 12.1 inch touchscreens. All three models are fanless, extremely solid, extremely rugged, run the Windows CE operating system, and provide access to a vast library of Windows CE applications and utilities, as well as leveraging customer investment in software and development tools already in use for CE-based handhelds. RuggedPCReview.com takes a detailed look at the Datalogic R Series. [Read review of the [Datalogic R Series](#) of vehicle computer]

The perfect mounting solution: RAM Mounts' new Seat-Mate

A lot of rugged and mobile systems are used in vehicles, but a full, permanent installation isn't always necessary. This is where RAM Mounts' new Seat-Mate comes in. It's a super-simple mounting base that installs in less than a minute and turns almost any passenger seat into a workstation. The Seat-Mate base fits seamlessly into RAM's vast lineup of mounting solutions and components, and can be used with trays for notebooks, netbooks, tablets, and handhelds. [See description of the [RAM Seat-Mate](#)]



Atom Z530 vs. Atom N270: We're benchmarking two Advantech COM-Micro/COM-Express boards



The carrier board/system-on-module approach, popular in embedded system design, separates the CPU, chipset and memory from the carrier or solutions board. This approach, which reduces time-to-market and allows for quick customization, is also used in many rugged systems. We reviewed and benchmarked two new Intel Atom-based COM-Micro/COM-Express boards from Advantech, one with the Atom Z530 and one with the Atom N270. [See review, benchmarks and specs of the Advantech [SOM-6760 and SOM-5761](#)]

Getac PS535F -- rugged GPS handheld with full VGA display

The GETAC PS535F rugged handheld complements the company's lineup of rugged notebook and tablet computers. It is a compact, handy device that offers a well-balanced combination of Windows Mobile/Pocket PC convenience and targeted professional features such as integrated high-accuracy GPS, a full 480 x 640 pixel VGA display, e-Compass, altimeter, and 3-megapixel camera. [Read review of the [GETAC PS535F](#) rugged handheld]



Highly customizable ultra-rugged waterproof handheld computer with 5-megapixel camera



There's rugged, and then there's ultra-rugged, nearly indestructible and fully waterproof. That would describe the highly customizable Hydrus handheld from Two Technologies. It's a 2.5-pound Marvell PXA270/Windows CE-powered handheld with a large 55-key keypad, a 5-megapixel imager/scanner with laser auto-focus and illuminators, 40 hour battery life, and yes, we even tested it underwater [See full review of the [Two Technologies Hydrus](#) and see [YouTube video of the Hydrus underwater](#)]

What else is going on in the Rugged World?

In an increasingly global economy, we mused [where rugged computers come from](#), and also about [Palm and Windows Mobile and how the iPhone really changed everything](#).

We created those nice print-style versions of a number of our reviews. The art of doing nice layouts is getting lost, but we still know how to do it from the days we created and published print magazines. If you're interested, check the ones we recently did for the Winmate [V280](#), [IA80](#), and

[i880](#), and for the [Datalogic R Series](#).

[Motion Computing](#) keeps doing cool stuff. They released their point-of-care Motion Clinical Workstations that work with their C5 and J3400 tablets, they upgraded their C5 and F5 tablets to the unbeatable Hydix AFFS+ display, and then upgraded the processors in almost all their machines. They never stand still.

A while ago we wondered why almost no one is using Marvel's superb 800MHz PXA320 processor. Well, LXE realized what a terrific chip the PXA320 is and used it in its new [LXE MX9](#) ultra-rugged handheld. Congrats.

Panasonic announced that all of its Toughbooks are now tested in accordance with MIL-STD-810G that was issued in October of 2008 and supersedes the venerable MIL-STD-810F. Look for a doing a detailed comparison at RuggedPCReview.com soon.

And, as always, I'm closing with some observations and tips based on what we're seeing in the RuggedPCReview lab:

- Keep an eye on Intel's Atom. It's been a superhit for Intel, but really needs more graphics punch to be truly interesting. Look for Intel to fix that soon.
- LED backlights are on their way to 100% penetration.
- We're seeing Core 2 Duo machines that draw as little or less power than some Atom machines; it's all in the proper use of power management APIs and tools.
- Outdoor/sunlight viewable displays have become MUCH better. Don't be left behind. And please don't settle for a screen with a tiny vertical viewing angle.
- Pick your Atom wisely! We've yet to see a compelling rationale for picking a Silverthorn over a Diamondville chip or vice versa.
- Honestly, we're not seeing that much improvement in Windows 7 over Vista. And XP Embedded remains champ for lean, mean fighting machines.



The picture above shows handwriting recognition underwater, on a Two Technologies Hydrus handheld. Yes, it actually works ([see it on YouTube](#)). Don't try this at home.

Sincerely,

Conrad H. Blickenstorfer
Editor-in-Chief, RuggedPCReview

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