

RuggedPCReview.com

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

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Windows 7, Multi-Touch and Gorilla Glass, oh my.

The rugged computing industry usually moves at a slower, steadier pace than the ever-fickle consumer market, but this year we're seeing a lot of excitement over new trends and developments. There's Windows 7, there's multi-touch, there's the Atom-or-not-Atom debate, and cool stuff with funky names like Gorilla Glass. Microsoft moves forward in the embedded space, the future of Windows Mobile is a bit uncertain, and storage is cheaper than ever. All this makes for a very dynamic market.



Leaders like [Advantech](#), [Motion Computing](#), [Datalogic](#), [DRS Tactical Systems](#), [General Dynamics Itronix](#), [Getac](#), [Juniper Systems](#), [MobileDemand](#), [RAM Mounts](#), [Samwell](#), [Winmate Communications](#) and [RMT](#) are at the forefront of exploring these new trend and technologies, much to the benefit of existing and potential new customers worldwide.

MobileDemand T7000 -- A smaller, lighter version of MobileDemand's rugged tablet computer

Your average full-function rugged Tablet PC weighs between four and five pounds. That's light enough to carry around on the job, but it's still quite substantial. So how about a device that provides pretty much the same functionality as a full-size machine, but is a lot smaller? If that thought appeals to you, check out what MobileDemand of Cedar Rapids, Iowa, has in store for you... [See review of the [MobileDemand T7000](#)]



Samwell RUGGEDBOOK SR800: dual digitizer and a well-balanced design



The SR800 is a compact rugged Tablet PC that offers that prized commodity -- a good balance between

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



performance, features, ruggedness, portability, and battery life. Its 10.4-inch display is larger and has higher resolution than that of most machines in its class and having both pen and touch can be invaluable. [Read about the [Samwell RUGGEDBOOK SR800](#)]

Datalogic Memor -- a rugged little scanner computer phone communicator

Sometimes size and weight matter and you want a mobile computing device that is as small and light as possible. But can you really cram a state-of-the-art PDA, a scanner or imager, a phone and a data communicator all into one package that weighs just nine ounces? You can. [See review of the [Datalogic Memor](#)]



Motion Computing F5 -- now faster and with quite probably the industry's best display



Optimal viewability both indoors and outdoors and from all angles have long been the Holy Grail of the mobile computing industry. Motion is getting several steps closer with the "View Anywhere" version of the Hydys AFFS+ display now used in its rugged F5 tablet. Motion also decided to upgrade to a Core 2 Duo chip instead of Atom, and that worked out quite well. [See review of the [updated Motion F5](#)]

Dell Latitude XT2: how well does multi-touch work?

If nothing else, the Dell Latitude XT2 is a sleek, elegant, competent and full-featured Tablet PC convertible that has a lot to offer in a light and handy package. Its N-trig dual mode digitizer with its multi-touch capability is interesting, and the XT2 is technologically up-to-date. Dell, in fact, stresses the XT2's multi-touch capabilities. Does it work? If so, how well? [Read review of the [Dell Latitude XT2](#)]



RAM Tough-Hub: What if you need a hub in your vehicle?



RAM successfully extended the functionality and utility of the mobile office with the introduction of the RAM Tough-Hub. What is the Tough-Hub? It's a small, compact, and ingenious rugged box that solves computer-related connectivity and power problems in all sorts of vehicles. It does that by providing six powered USB 2.0 ports, 10/100 mbps Ethernet, threaded 12-48 VDC power input, and an ignition trigger in a small, rugged box that can be mounted almost anywhere. [Read about the [RAM Tough-Hub](#)]

Getac PS236: An ultra-rugged Windows Mobile PDA with integrated GPS, altimeter, e-compass, camera, and a hi-res display

For a long time, so-called "convergence" devices that tried to combine multiple functions didn't work too well. That is changing now with several vendors introducing multi-function handhelds. One example is Getac's new PS236 GPS that, on top of standard Windows Mobile functionality and superb GPS performance, includes a 3-megapixel camera, an E-compass, altimeter, a full-VGA display, up to 12GB of storage, Bluetooth and Wifi, and optional HSDPA wireless WWAN. [Read about the [Getac PS236](#) (also sold as the Nautiz X7 by Handheld US)]



Advantech ARK-1388 Box PC



With high-speed wireless data networks becoming increasingly available, we're seeing a great increase in in-vehicle computing solutions. That requires specially designed compact "box" computers with superior reliability, immunity to shock and vibration, a very high operating temperature range, and enough overall ruggedness to withstand the day-to-day punishment of operation in a vehicle. Startup and shutdown of the computer must be linked to the car battery and ignition status. Performance, features and interface connectivity, however, must comply with common industry standards. How does it all look? Check our examination of the [ARK-1388 from Advantech](#).

Handheld U.S. Nautiz X5 -- High-end and handy multi-purpose PDA

We're finally starting to see more devices built on Marvell's speedy PXA310 and PXA320 XScale processors running at up to 806MHz. Combine that with a full 480 x 640 pixel VGA display, a variety of advanced data capture and communications functions, and a tough but still compact housing and you have an excellent multi-function computer and communicator for commercial and industrial jobs. This sort of technology simply wasn't available just a couple of years ago. [Read review of the [Handheld US Nautiz X5](#) rugged handheld]



DAP Technologies Kinysis: Windows Embedded Standard instead of Windows CE



For those who really like the form factor of large-size tablets such as DAP Technologies' CE8640 and CE8800, but need a Windows Embedded Standard OS instead of Windows CE, RMT's DAP Technologies now offers the Kinysis 8900KS and 8900VS. The two new tablets share the CE-versions' design, size and ruggedness (4-foot drop, IP67, -4 to 122F, etc.) but can take advantage of the power and configurability of a full Windows Embedded OS. The Kinysis tablets can also accommodate custom electronic modules within their sealed expansion bay. [See full description and specs of the [DAP Kinysis 8900KS](#) and see [DAP Kinysis 8900VS](#)]

What else is going on in the Rugged World?

With all these rugged products coming into the RuggedPCReview lab, we often have lively debates and blog our opinions. Like on [Windows 7](#), on how [Getac made multi-touch work](#) on its rugged computers, or on [Corning's Gorilla Glass](#) that's making Motion's displays lighter and tougher.

There was a time when Symbol was in the news all the time, and not always for the right reasons. These days we hear about them when they release another Motorola-branded product, like the remarkable [Motorola MC9500](#) or the simple little [MT2000](#). On the business tablet side, we really like Fujitsu's reasonably priced new [Lifebook T4410](#). We're also seeing a lot more announcements of rugged in-vehicle computers such as the [Rave 6100](#). With location-based systems ever more important, we'll be seeing a lot more GPS/mapping/decision support/logistics systems in vehicles.

Almost everyone announced that their lineup is Windows 7 compatible. Since Vista never really took hold in the rugged space, we do hope Windows 7 represents a more suitable platform. Time will tell.

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 Windows Embedded! It's no longer called XP Embedded and we'll soon see a Windows 7-based version. This will be important if Win 7 fails to provide the lean platform rugged systems need.
- Everyone's on the multi-touch bandwagon, but only few systems actually deliver.
- Dual-input digitizers (pen and touch) are now almost mandatory.
- When it comes to battery life, good software-based power management is more important than the choice of processor.
- The MIL-STD-810G superseded MIL-STD-810F a year ago, yet we see very little reference to it yet.
- There continues to be widespread confusion on when to pick an N-Series Atom over a Z-Series Atom, or what their respective strengths are.



The picture above shows shows a Handheld Nautiz X7 (powered by Getac) ultra-rugged computer recording a spec label from an A/C unit. Integrated cameras are starting to become very useful.

Sincerely,

Conrad

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