RuggedPCReview.com
If it's rugged, we review it and write about it
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The end of an era, or opportunity like never before?

Is this the end of an era? With Microsoft CEO Ballmer retiring, Windows 8 struggling to get traction, tablets and smartphones seemingly unstoppable, all the talk of a mobile post-PC era, Intel emphasizing mobile and graphics with their "Haswell" 4th gen Core processors and much better Atom chips, and Android coming on so strong?

Probably not. Unlike word processors which replaced typewriters, or digital which replaced film, smartphones and tablets are complementary, extending technologies that do *some* things better, but not all. Most still do their work on desktops with a mouse. But tablets and smartphones definitely have opened new horizons.

For our industry, there is concern that inexpensive tablets and smartphones threaten to encroach on the rugged market. Is the concern justified? To a degree, yes. But I also see new opportunity for the rugged industry to apply their special expertise to make tough new-gen mobile computing products that meet the requirements of those who need something that won't easily fail or break on the job.

A big thanks to our industry sponsors Advantech, Motion Computing, Getac, the Handheld Group, Juniper Systems, MobileDemand, Samwell, Winmate Communications and Xplore Technologies for making RuggedPCReview.com possible! We get the word out, and we're on your side.

Now, here's some of the cool stuff we've come across and wrote about:

Xplore RangerX: 10.1-inch rugged Android tablet

Xplore Technlogies announced the RangerX, a 2.2-pound, 10.1-inch class rugged Android tablet powered
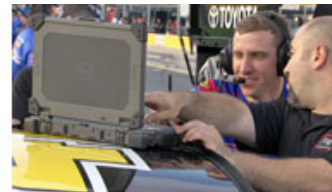
by a 1.5GHz dual-core ARM Cortex A9 processor. Xplore's new tablet merges the kind of state-of-the-art technology consumers expect and demand with the ruggedness and durability business and enterprise need. The RangerX has dual cameras, a high-quality 1366 x 768 pixel IPS projected capacitive touch display, up to 192GB storage, exceptional onboard connectivity (including optional HDMI-in and RJ45), a CAC reader, carries an IP65 ingress protection rating, and has a 10-hour battery life. Pricing starts at US$1,349. [See description, analysis and specs of the Xplore RangerX]

Case Study: Why the JTG Daugherty NASCAR racing team chose rugged Dell gear

RuggedPCReview.com had a chance to speak with representatives from Dell and JTG Daugherty Racing on how they had chosen Dell's rugged technology -- tablets, notebooks, and servers -- and how it was being used in their NASCAR Sprint Cup operation. [See Case Study: NASCAR racing team chooses rugged Dells]

Dell 6430 ATG: Affordable semi-rugged high-performance laptop

The Dell Latitude 6430 ATG is a fortified and toughened-up semi-rugged version of Dell's consumer and enterprise line of Latitude E6430 computers. Equipped with an Intel 3rd generation Core i7 processor (a variety are available), an nVidia discrete graphics card, and speedy solid state storage, the ATG proved to be a superior performer with very good battery life. It's a sturdy, trust-inspiring and highly configurable machine with an outdoor-viewable 14-inch display. The Dell 6430 ATG is also reasonably priced, making it an attractive candidate not only for Dell shops, but anyone looking for a modern semi-rugged notebook computer. [See full review of the Dell Latitude E6430 ATG]

Handheld Algiz 10X -- High-res 10-inch rugged tablet for those who need Windows on the job

The rugged Algiz 10X carries on on the Handheld Group's tradition of offering interesting, versatile mobile computers covering every part of Handheld's target markets. This 3-lbs., 10.1-inch, Intel Atom N2800-powered tablet is for anyone who needs both legacy and state-of-the-art Windows functionality out there in the field, and enough screen real estate for complex applications. [See description, analysis and specs of the Handheld Algiz 10X]

Advantech ARK-1122 Embedded Box PC -- A tiny, rugged, fanless embedded industrial Box PC brings full Windows computing power into spots and locations where nothing else will fit

What if you have a stationary application somewhere out there in the field where ruggedness matters, and you need full Windows, but there just isn't much room at all? Consider the ARK-1122 embedded Box PC

from Advantech. It runs Windows 7 or Windows Embedded Standard 7 on a 1.86GHz Intel Atom N2800, has plenty of standard-size connectivity, yet isn't even as long as a Samsung Galaxy S4 smartphone, and weighs less than the original iPad. [See review of the Advantech ARK-1122 industrial Box PC]

Panasonic Toughpad G1 -- Panasonic dishes up a very fast and very competent new-era Windows tablet

With the Toughpad G1, Panasonic offers what one might call a "new-era" rugged Windows tablet in the 10-inch class. The Intel Core i5-powered Toughpad G1 with its excellent 1920 x 1200 pixel dual input (capacitive touch and active pen) screen is light and sleek, yet still provides the toughness and ruggedness Panasonic mobile computers are known for. We've also found it to be a superior performer that still provides very good battery life. [See our full review of the Panasonic Toughpad G1]

GammaTech Durabook SA14: Another interesting, affordable semi-rugged notebook

The GammaTech Durabook SA14 is a semi-rugged 8-pound notebook computer designed to be substantially tougher and more durable than standard consumer notebooks, but without the high cost of a fully rugged model. RuggedPCReview tested the Durabook SA14 and found it to be a very solid, trust-inspiring machine with a bright, reflection-free 14-inch wide-format display, good connectivity, good battery life, and excellent performance. [See full review of the GammaTech Durabook SA14]

Motorola Solutions MC9200: Moto's best-selling rugged handheld gets a deep tech update

Over the years, Motorola Solutions has sold over two million MC9000 Series rugged handhelds. Now they introduced the MC9200, which is compatible with all 9000 Series peripherals and accessories, but packs considerably more punch with a 1GHz dual-core TI OMAP 4430 processor, twice the memory and storage, and faster WiFi (802.11a/b/g/n). On the software side, it's now Windows Embedded Compact 7 or Embedded Handheld 6.5.3, and there's FIPS 140-2 Level 1 certification. [See description, specs and analysis of the Motorola Solutions MC9200]

Samwell Ruggedbook PC-750: A rugged Intel Atom N2600-based 10.4-inch Windows tablet for on-the-go mobile users

The Samwell Ruggedbook PC-750 provides full Windows 7 functionality in a rugged tablet form factor. Measuring just 10.8 x 7.8 x 1.1 inches and weighing just over three pounds, the Intel Atom N2600-powered PC-750 is considerably lighter than most full-size rugged tablets. Its excellent 10.4-inch resistive touch screen with 1024 x 768 pixel XGA resolution offers enough space to run Windows comfortably. There is plenty of wired connectivity on board, all the connectors are standard size, and there is a wealth of wireless functionality, and also dual integrated cameras. [See full review of the

Samwell Ruggedbook PC-750]

Juniper Aspect: Simple, but state-of-the-art field mapping solution

There's a large demand for the creation of as-built documentation of irrigation systems, infrastructures, buildings, and numerous other assets. Traditional GIS and triangulation surveying are too often expensive for this type of work that does not always need sub-meter accuracy. We looked at Juniper Systems' Aspect field mapping solution, an easy-to-use system with desktop and mobile components, designed for generating informative, attractive as-built documentation. [See description and analysis of the Juniper Systems Aspect field mapping solution]

Winmate M700D: Rugged, handy 7-inch tablet with capacitive touch

With the Intel Atom N2600-powered M700D tablet, Winmate offers a straight-forward and cleanly designed basic tool for tablet jobs that require Microsoft Windows, yet also a tool that's technologically attractive with capacitive touch, and highly customizable by partners/resellers that may use their own branding. And note that Winmate offers a very similar Android 4.1 version of this platform, the M700DT4 [See description, analysis and specs of the Winmate M700D]

Other cool stuff we reviewed:

RuggedPCReview also examined and described the Getac Z710 rugged Android tablet, the Motion CL910 enterprise tablet computer, the TabletKiosk NetSlate a525 and also their Sahara Slate PC i575, the Advantech ARK-2150L, and the MobileDemand xTablet C1300. Among lots of other rugged gear.

RuggedPCReview Blog: Optimizing the legacy Windows interface for touch and tablets

Ever since the iPad, the market has been demanding touch instead of pens. Touch works great with operating environments designed for touch, such as iOS and Android, but not nearly as well with Windows. Capacitive touch and legacy out-of-the-box Windows, in particular, are not a great match. Fortunately, there are ways to optimize the legacy Windows interface for touch and tablets, and RuggedPCReview shows you how... [Read more...]

In closing, here's the benefit of what we learned in the past few months here at the RuggedPCReview lab:

- Intel's "Haswell" 4th gen Core processors came in like a lamb, but don't let that fool you: graphics are much improved, and power consumption much lower.
- The old argument that capacitive touch isn't for rugged tablet seems fading. But it

definitely works better with Android than with Windows.

- At low load, Core-based systems use no more power than Atom-based units.
- We really need perfect horizontal and vertical viewing angles on all mobile systems.
- A good SSD and discrete graphics affect overall performance more than the CPU.
- 10 is the new 4. In hours of battery life, that is.
- We're still not seeing many Windows 8 rugged systems. Or anything with Embedded 8 Handheld or Compact 7. Microsoft really is in a tight spot.
- Outdoor-viewable screen technology seems stuck. Where's the next advance?
- Almost all new Atom devices use the N2600. For good reason.
- Still no decent cameras in rugged gear. Or the type of screen resolution available in consumer tablets and phones. Both could provide competitive advantage.
- There's still a giant window of opportunity for rugged device vendors to really cash in on the smartphone and tablet frenzy.

Stay rugged! And consider joining RuggedPCReview's industry sponsors.

Conrad

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Conrad Blickenstorfer, Ph.D.
Editor-in-Chief
RuggedPCReview.com

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