

Rocket science

Selecting the right solution from the current new wave of chipsets can be confusing, but Advantech Innocore has a product to fit all budgets and applications

The combination of Advantech and Innocore Gaming presents an opportunity for the gaming industry to have the best of all worlds; a massive consumer-scale manufacturing and support infrastructure fused together with the focused, dedicated personal service of a highly specialised supplier. It's an oxymoron to describe something as large and small, global and local, but that's exactly what the new company, Advantech Innocore, represents. The size and scale of the new company presents a host of dramatic enhancements for gaming customers as Advantech Innocore has retained every part of its successful business model and expanded upon its offer to the customer in every way.

"The acquisition of Innocore by Advantech has changed our offer to customers dramatically," explained Advantech Innocore Managing Director, Edward Price. "We are now the only dedicated supplier to the gaming industry that owns its own manufacturing facility. We have our own supply chain that's producing huge volumes from a 100,000sq.m site in China and others in Taiwan. Our infrastructure now spans the world, on all five continents served by over 4,500 staff, 900 of which are dedicated R&D engineers. As a focused business unit of Advantech, we have retained the dedicated personal service of Innocore and added a manufacturing infrastructure and supply chain that spans the globe."

Advantech Innocore is part of the 'early access programs' for all the major chipset manufacturers and has formulated a complete roadmap with both AMD and Intel. "We have two new AMD products one using the latest Fusion chipset, e-Ontario and the other using the more flexible AMD 785E. Samples of the 785E are shipping now with mass production later this half and the first samples of the e-Ontario are shipping in March with a release for mass production early in the second half of 2011," outlined Mr. Price. "The same is happening with Intel, with the Calpella (HM55), the latest flexible and powerful Intel chipset, sampling now with mass production later this half. Our roadmap is to offer both an S-Series and

E-Series range of products to our customers. The S-Series offers the latest chipsets from both manufacturers with excellent integrated graphics in addition to graphics expansion slots, which allows customers to use integrated graphics to keep costs down for single or dual screen functionality. However, if you want superb graphics, different video cards or four or more independent display outputs working together, you can plug in a PCI express expansion board that does not limit you to the integrated solution on the board. If you use an integrated graphics solution and say in two years time want to upgrade the game, the S-Series allows you to plug in a new graphics card and upgrade those cabinets without having the cost of replacing the complete gaming hardware."

A SOLUTION FIT FOR PURPOSE

Basically, Innocore offers an economy E-Series of products for the low to mid end of the market and a higher performance S-Series to address the mid to highest end of the market. The E-series includes the Intel ATOM chipset and Fusion e-Ontario platform, which are low-power, low cost integrated graphics solutions that do not offer expandable graphics slots for additional and future expansion. "We offer two distinct and different product lines that are relevant to the markets our customers serve," explained Mr. Price.

"The E-Series offers good performance and low cost. However, customers needing higher performance or worried about future upgradeability will look at our S-Series range. The S-Series range offers greater flexibility and upgradeability at a different price point. It's not simply a question of categorising AMD or Intel into one clear area. It's more about what you want from the platform today and in the future. As a result, we can't, and don't want to, point towards any one Advantech Innocore product and say: "that's the hot market product" - simply because different segments of the market have different needs," said Mr Price, "Our product roadmap allows the customer to choose from either chipset manufacture and from any of the latest chips provided - that's the Advantech Innocore approach."



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There are, of course, technical differences between AMD and Intel, but the latest chipsets from both companies are following a similar path; increasing performance by integrating everything (CPU and GPU) onto a single piece of fabricated silicon. The result is improved performance and lower costs as there are simply less components. This in turn means that the chips are not having to communicate with each other, but are instead part of the same chipset - which means it's cheaper to produce. "The new chipsets offer a great increase in performance and reduced power consumption," stated Mr. Price. "AMD's Fusion e-Ontario chipset is offered as part of our E-Series of products, offering good integrated graphics performance. However, if your game can't be integrated on Ontario, there aren't many places you can go with that chipset. Fusion is used in laptops and notebooks; hardware that in general people don't seek to upgrade and where cost and low power consumption are overriding criteria and performance has to just be 'adequate.'

Later this year the Fusion chipset will expand to include e-Llano, which will

feature an expandable full speed x16 PCIe slot. We will probably offer e-Llano as part of our S-Series range, offering greater flexibility and upgradeability at a different price point. Intel's latest Sandybridge platform for 2011 also provides the high end performance and scalability required for our S-Series boards with unique Intel features such as Hyper-threading, Turbo Boost Technology. Intel's integrated graphics also takes a huge step up with this platform. Sharing huge capacity L3 cache on chip, the new chipset integrated graphics in the second generation Intel Core i series CPUs boast graphics benchmark scores almost 3 times those of AMD's e-Ontario. But we expect AMD Llano to be impressive too. Chipsets/CPU platforms are targeted at very specific markets. There's not a right, wrong or obvious choice for any customer, just a different set of applications used for different purposes."

It's true to say that over the course of the last decade, AMD and Intel have continuously leap-frogged each other in terms of technological breakthroughs and advances in chip design. While AMD offers slightly better integrated graphics



(Top) Advantech's Kunshan (Shanghai) Manufacturing Centre. "In the past, we could not offer to fix a motherboard within a casino as this was simply too expensive an option for the size and scale of Innocore. However, now that's exactly the kind of product service we can offer our customers thanks to the economies of scale and existing services provided by Advantech."
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than Intel (but only slightly), Intel have a larger more powerful range of CPUs. If you want a best in class CPU, you choose Intel - whereas if you prefer an ATI integrated graphics solution you're probably better served heading down the AMD route. "Our roadmap is clear," stated Mr. Price. "We offer solutions from both manufacturers without any preference as to the preferred option - that's for the customer to decide. Some of our clients like Intel, others prefer AMD, it's down to personal choice, what technical features are important for that customer's application, and their budget" confirmed Mr. Price. "Now we are part of Advantech we also have access to all the group's product development roadmaps which is very exciting and will mean that Innocore can offer customers an even wider range of product choices, newer technology faster and more frequent technology updates"

"Both Intel and AMD are strong companies with products that have excellent feature sets. Our view is to offer both; a balanced approach that fits our clients' needs. There are pros and cons of both the latest chipsets, so we let our customers decide for themselves and remain totally unbiased," stated Mr. Price. The issue with the latest chipsets is that a large number of customers are concerned about choosing integrated graphics solutions. OEMs want the ability and flexibility to run multiple screens with the option to upgrade in the future. "In regards to the e-Ontario Fusion, there's no point heading down that path if you want upgradeability," underlined Mr. Price. "However, if you want low-power consumption, integrated graphics and you're not worried about upgradeability, the e-Ontario platform Fusion range is the ideal solution and one that we offer as part of our E-Series range of products."

FULLY INTEGRATED SOLUTION PROVIDER

While the integration of Advantech and Innocore continues at a pace, with Mr. Price anticipating that the operation will be complete by the summer, the advantages are being passed immediately to Advantech Innocore's customers. The manufacturing capacity alone offers huge capacity, while "AdvantechCare Services" are now offered with extend warranty, guaranteed RMA turnaround, onsite support and stock supply. "Downtime is a significant issue for OEMs," commented Mr. Price. "In the past, we could not offer to fix a motherboard within a casino as this was simply too expensive an option for the size and scale of Innocore. However, now that's exactly the kind of product service we can offer our customers thanks to the economies of scale and existing services provided by Advantech."

The integration of Innocore within Advantech sees the gaming solutions provider retaining its identity as a gaming business unit within the enormous Advantech group. Edward Price continues as Managing Director, Sales and Product Directors Koen Stomph and Craig Stapleton retain their roles, but now as part of a much larger organisation. "We have retained our previous infrastructure, keeping all the benefits of Innocore, but are now part of a strategic business unit of Advantech with over 900 products to offer our customers - the full product suite of Advantech," stated Mr. Price. "We offer the full suite and full services of the group. We have sales teams, warehousing and support infrastructure across the globe. It's powerful and exciting and truly benefits the industry and our customers. No other company can claim the same set-up and infrastructure as Advantech Innocore."