

Receiving Core benefits at the double

Dual-core processing technology looks set to take off over the next few years as the need for multi-tasking comes becomes essential in the workplace. But smart resellers who dive in now and educate the market will capitalise, writes **Mark Dye**

» Unless you have been locked away in a cupboard for the past six months, you won't have failed to notice all the hype around dual-core technology. Intel, for one, has been running a campaign of blanket advertising extolling the virtues of the technology in both the office and home.

It is all about processing power. People who work in the data centre industry have been working on doing more with less for years and understand concepts such as 'Moore's Law', 'heat dissipation', 'sweating their assets' and of course, virtualisation.

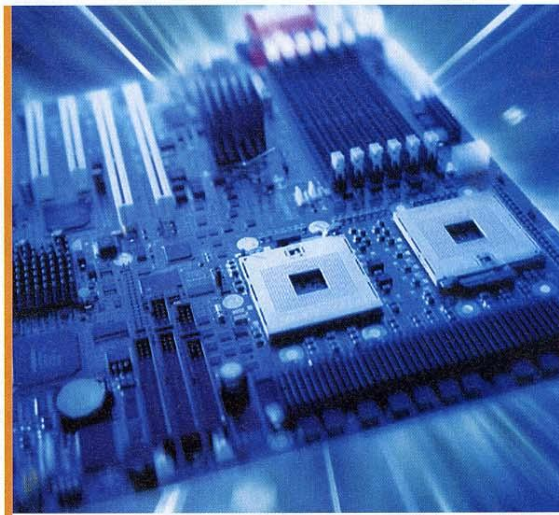
Take Moore's Law, for instance, the idea that processing power doubles every 18 months. With this in mind our obsession with running faster and more complex systems and the need for offerings such as the 64-bit dual-core processors championed by AMD and Intel becomes that bit clearer.

Opening sales figures for the new Intel Core 2 Duo chipsets add weight to this theory – the company shipped five million within the first two months going on sale in July.

For its part, Datamonitor believes that demand will see notebook shipments in the UK topping four million by 2008, with nearly one million of these being Core Duo-equipped mid-range notebooks. Those using industrial PCs will benefit too, with analysts at IMS Research predicting the European market for these to rise to nearly €750m by 2010.



Darren Capon: Dual core offers resellers the opportunity to make some nice margins.



Better than one: Dual-core processors boast improved power over older single core offerings and are well-suited for virtualisation. Both of these features are increasingly driving demand.

As such, the take-up of dual-core processors represents an interesting marketplace that looks set for steady growth and could offer good returns for resellers who get in quickly and seize the bull by the horns.

But just who are these processors aimed at? Technically speaking, dual core will offer benefits to those who need high arithmetic performance and use mainly multi-threaded applications, with programs such as CAD/CAM and those that require high processing power for graphics and audio, such as gamers.

Software benefits from multi-core architectures where it is possible to execute code in parallel. However, under many operating systems, code is required to execute this in separate threads. So, with every application running on a system using its own thread, multiple applications will benefit from multi-core architectures.

To the layman, the benefits of dual core are simple. When several applications are running at the same time, technology allows the user to perform multiple tasks. A good example would be when running an anti-virus scan on a PC, users would be able to continue with other tasks uninterrupted

and forget latency fears. When taking into account the number of times office PCs slow or crash in mid-application because of a lack of processing power, the idea of being equipped with dual-core technology seems sensible.

That said, it is important to remember that dual core may not necessarily mean that systems are quicker.

Robert May, managing director of VAR Ramsac, has a simple way of explaining this. "I liken it to a double-decker bus, rather than a single-decker." He said. "The bus doesn't travel any quicker, but it can carry more or, with a PC, can perform more functions at the same time."

However, there are other reasons why businesses have been buying into the technology. Dual core also solves a number of the heat and noise issues conventionally associated with faster processors, which for many is an attractive feature, according to May.

"The other area of success is of course in servers," he added.

Multi-processor servers are being bought rather than larger servers as the workload dual-core technology offers enables companies to consolidate multiple servers, often using virtualisation.

Virtualisation also means good news for developers because they often need development and test machines. With dual core, each core can be set-up as separate machines, so that should the test machine crash, the development machine carries on.

"The heat and speed benefits of dual core also lend themselves to uptake in blade servers," May said. "This is clearly evident looking at offerings from Dell and Hewlett-Packard."

But for many, dual-core is seen as a technology driver in that it can represent a reason to upgrade.

In theory, said Matthew Wilkins, principal analyst, computer platforms at iSuppli, technology drivers like dual-core make selling easier.

"Couple this with the imminent release of Windows Vista and you have two strong reasons to upgrade," he said. "The PC platform is often criticised as offering a little bit more performance too often without any major performance increases."

He believes dual core represents a marked shift in this pattern and delivers a much simpler message in theory, as it is two processors in one.

According to Alex Ebeid, business desktops category manager for HP UK and Ireland, dual core has definitely taken off because we are seeing a trend towards users in all walks of life running multiple applications at the same time. With single-core processors this ability had been rather limited.

"In administrative areas and office environments especially, this functionality has been very successful, as users deal with lots of data, programs and information at the same time," he said. "However, dual core can benefit every user, giving them the opportunity to be more efficient regardless of their vertical market. It means that now, any user can perform more tasks simultaneously, and this is a benefit for any business needing more computing power."

Ebeid sees dual core as an enabler that gives power back to users, especially those on high-end desktops, notebooks and workstations.

It also means that resellers can assure customers they have more power with less material needs. "It gives VARs the ability to give the

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power back to their customers and to sell their products in an interesting price range, while offering extra benefits," Ebeid added.

Generally speaking, dual core represents a good opportunity for VARs as it gives them more opportunities to talk to their customers regarding the benefits of a technology refresh, server consolidation, virtualisation, less noise, less heat, more productivity and new kit and warranties.

May said that these provide 'compelling reasons' to talk to end-users.

With the whole industry having pushed a lot of funding and effort into promoting dual-core ranges, the massive take-up following a drop in pricing has led to a shortfall in products, especially from AMD, according to Darren Capon, product manager at distributor VIP Computers. However, he believes resellers should not be daunted by this.

"Dual core offers resellers the opportunity to make some nice profit margins due to high demand and poor availability," he said. "With the majority of the dual-core ranges now appealing to all areas of the industry because of their price point, they are now the fastest moving category, even outselling the budget Celeron and Sempron ranges when available."

Ebeid is not surprised by the quick take-up, given the ever-growing need to multi-task and he fully expects this trend will continue given the fact that Microsoft Vista will require more power and multi-tasking to deliver its best results.

May believes that so far this take-up is not down to the channel, with

the advice he has given clients coming through tests and first-hand experience, rather than the usual channel points of communication.

"I think manufacturers have simply switched to dual core without a great deal of education to either the end-user or the reseller," he said.

"Many will see dual core as simply the latest processors and will sell them by default. Our customers aren't demanding dual core, it's more a case that we are educating them and letting them see the need and, more importantly, the business case to be investing in new hardware."

Clive Longbottom, service director at analyst Quocirca, agreed, pointing out that most buyers are not that interested in multi-threading and virtualisation, caring more about whether or not the kit does the job.

"All that resellers can do is to use comparative figures showing how a dual-core system carries out a task faster than a similarly priced non-dual core, and to try to package software with the kit that is highly optimised for dual core," he said.

Essentially, Longbottom feels that it is more a case of most taking a punt with Intel to a point where it looks like the Core Duo tag has been 'slapped' on almost everything. This is despite the fact that it is meaningless to the majority, he said. "It is a trusted brand and it sounds good."

"I don't think that many have taken it further, even though they can talk about the technology face to face, not that the buyer will understand what's being said," he added.

May believes that the shape of the market is not currently changing much and thinks that all parties would



Robert May: The heat and speed benefits of dual core lead to uptake in blade servers.



Alex Ebeid: Dual core can benefit every user regardless of their vertical market.

reap benefits from the chip manufacturers investing in better marketing to educate end-users.

This, coupled with a steady flow of newer higher performance dual-core processors and processor prices dropping by about 25 per cent compared with this time last year, should help.

May also thinks that right now the technology is probably suffering from the amount of software in use that has not been written specifically to support dual core. Once this arrives he expects there to be a further boost in hardware sales.

With Intel and AMD mass producing dual core and working on further multi-core chips, Longbottom sees them as the foreseeable future for laptops, desktops and servers.

He said that this is one reason why it does not really matter what the channel does in the long-term, because multi-cores are becoming the norm.

However, in the short-term, dual core should provide the channel with good inventory control to differentiate against those who have stocks of single-core kit, mainly because dual core is not a great deal more expensive and comparative speed results are compelling for the right applications.

Longbottom would like to see more companies selling the real capabilities in all of this. By this he is referring to PCs that come with virtualisation already built in, a wizard to help configure it, Windows Vista as the main operating system, a copy of Linux as a secondary, parallel operating system that can be running safely alongside Vista, and enough free software to make the most out of such a virtualised environment.

"I'd also like to see systems where service software such as anti-virus,

anti-spam, system monitoring and so on, is offloaded onto a specific virtualised partition on one core," he said. "This leaves a full core available for other software, and the remains of the other core for exception computing or for multi-threading across cores where it makes sense."

With much work still to be done by vendors and manufacturers alike to educate the market, the smart money should be made by resellers educating those unfamiliar with the technology of the benefits that dual core could bring to them in the workplace.

However, Longbottom thinks it is the cyclical nature of computing and a case of history repeating itself.

"This is no different than when SFX was introduced, or when Pentium was introduced, or hyperthreading, and so on," he said. "It's purely a step in the evolution of the computer platform." **CRN**

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Matthew Wilkins: The PC platform is often criticised for offering a little bit, too often.

SUMMARY

- Initial demand for dual core technology is being driven by a need for greater processing power.
- Although dual core may solve many of the problems associated with faster processors, it is important to remember that it may not necessarily be quicker.
- Dual-core processors allow for virtualisation. This allows firms to consolidate multiple servers and machines.
- The technology is a driver and can represent a reason to upgrade.
- Dual core also empowers users, especially those at the high-end, making them more efficient.
- High demand and poor availability means there are good profit margins to be had.
- Both resellers and vendors need to educate customers as to how dual-core technology can improve their business.