

Scan White Cobra

The White Cobra is more awesome than an AH-1W Super Cobra attack helicopter

Price £6,923.68 inc VAT • Manufacturer www.scan.co.uk

Scan has been submitting systems to our annual Dream PC Labs test for longer than any other company that took part this year. Over the years, Scan's entries have sported heat-reactive paint, TEC coolers and even external water chillers. This year's entry, however, takes its inspiration from the UK's first SLI system – the awesomely fast (and expensive) Cobra (see Issue 15, p32).

There are more than a few similarities between the original Cobra and the White Cobra. Both PCs have Intel CPUs, SLI graphics, a pair of Raptor hard disks in RAID 0 and are built inside SilverStone cases. The similarities end there, however. Whereas the original Cobra had two physically separate NetBurst architecture Xeon CPUs running at 3.4GHz, the White Cobra has just one physical CPU, a quad-core 3GHz Core 2 Extreme QX6850 overclocked to 3.75GHz. As quad-core CPUs are so memory bandwidth-hungry, Scan has sensibly overclocked the CPU by raising its FSB from 333MHz (1,333MHz effective) to 417MHz (1,668MHz effective), allowing the CPU to access the main system RAM more quickly. However, the White Cobra not only has far more processing power than its predecessor, it's also far quieter, thanks to its fully customised water-cooling system.

The pearlescent white SilverStone TJ07 case is filled to the brim with cooling hardware, as the White Cobra is cooled by three separate cooling loops. The first of these cools the CPU by pumping coolant through a sizable Aqua Computer Cuplex XT Di 775 waterblock and an enormous triple 120mm-fan radiator cut into the roof of the case. A second loop, also cooled by a



+ COBRA
Awesome gaming performance; quiet; superbly engineered

- ADDER
Power-hungry



triple 120mm-fan radiator, mounted in the bottom of the case, cools the mammoth Aqua Computer 8800GTX Silver 3XS waterblocks fitted to the two graphics cards, while a third loop cools the two VRMs, Northbridge and Southbridge waterblocks. All three loops have their own reservoirs, which are illuminated by blue LEDs and bubble away nicely in the 5.25in bays at the front of the case. In fact, the only part of the White Cobra not water-cooled is the RAM, although this is fitted with a Corsair DHX fan bracket that mounts three 40mm fans above the RAM.

Despite the enormous number of tubes required by the three separate cooling loops, dealing with the heat generated by the CPU and GPUs in this way ensures a quiet, stable and cool PC. To finish off the effect, Scan has cut out the silhouette of two cobras in each side panel, through which you can see the green and blue interior lighting. The optical drive, hard disk caddy, iMon system monitor and sides of the drive bays inside the case are

covered in snakeskin-patterned vinyl. While the White Cobra looks a little theatrical when it's switched off, it looks simply awesome when powered up and fully illuminated, with a quality that's hard to define, but makes you instantly know that you're sitting in front of something special – a Dream PC.

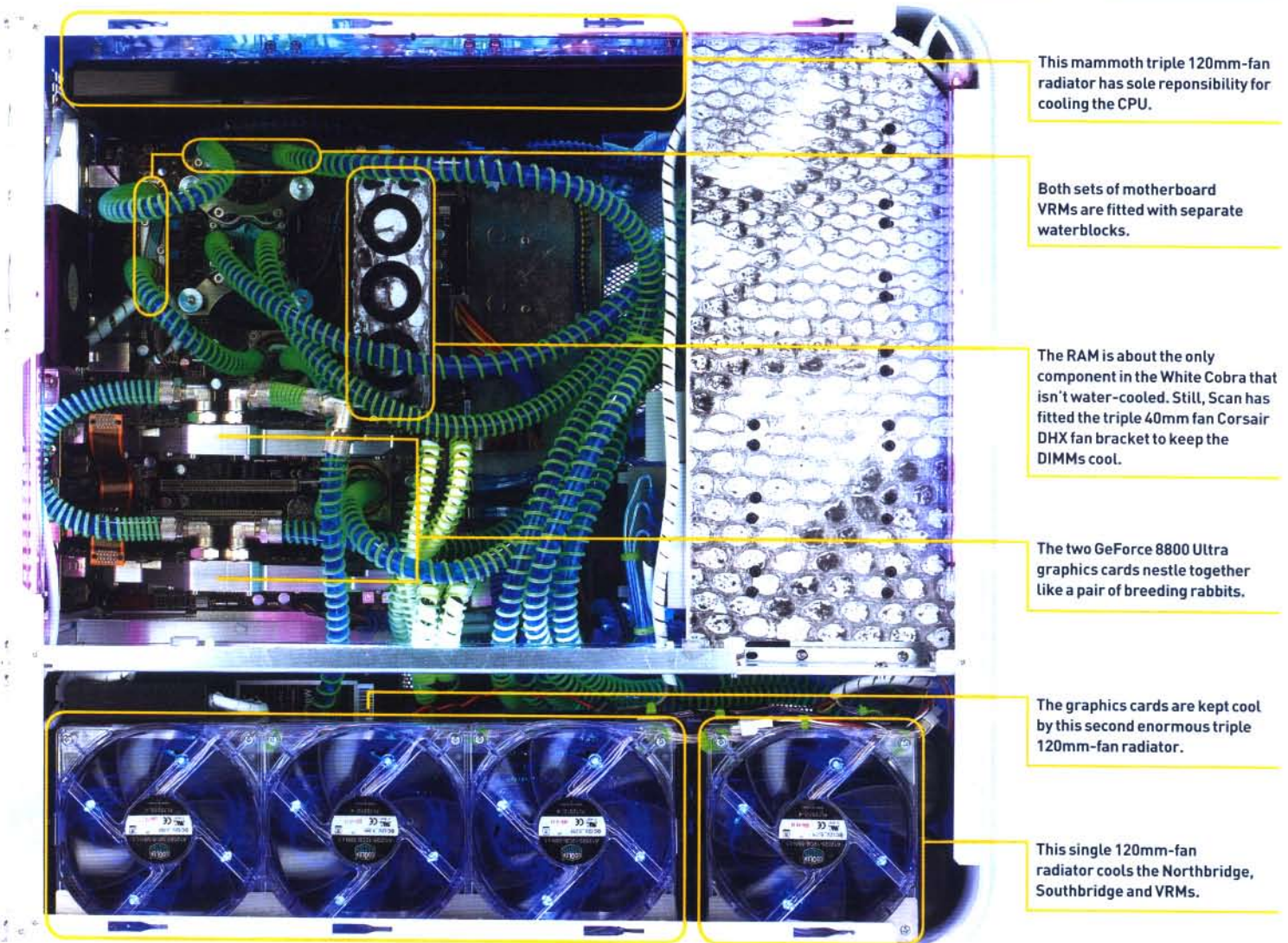
With two graphics cards running together in SLI, only one motherboard will suffice, the Asus Striker Extreme; as already mentioned, this is fully water-cooled. It's populated by 4GB of Corsair XMS2-8500C5D Dominator, some of the best DDR2 RAM money can buy. Meanwhile, the two 16x PCI-E slots are filled with XFX GeForce 8800 Ultra Cobra Edition cards. The Cobra Edition branding means that these hand-picked cards are insanely highly pre-overclocked, with the GPUs set to run at 650MHz and the RAM at 1.15GHz (2.3GHz effective).

While the original Cobra employed two 74GB Raptor hard disks in RAID 0, the White Cobra has two more modern Raptor 150 drives, also in RAID 0. However, as these drives are so small (150GB each), Scan has also fitted the titanic 1TB Hitachi Ultrastar AK71000, the enterprise version of the Deskstar 7K1000 found in this year's other Dream PCs. The Ultrastar differs by having a slightly lower seek time, so it's quicker at finding data than the Deskstar. Like the Gladiator and Vadim Dream PCs, Scan has bundled an HD optical drive with the White Cobra. However, the company has gone one step further by sourcing the first sample of the LG GGW-H10N in the UK – the first drive that can write Blu-ray discs and read HD-DVDs. As it's still unclear which, if either, of the competing HD optical disc standards will take off, this drive is a great choice, as it supports both.

The White Cobra's supporting cast is top-notch too, and includes the stunning 1,920 x 1,200 27in Samsung 275T monitor and 5.1 Logitech Z-5500 Digital speakers. The Logitech G15 keyboard and Logitech G5 mouse are also at the top of their game, alongside a SpeedLink Medusa 5.1 headset and Enermax Galaxy 1kW PSU. Despite the 4GB of RAM, Scan supplies the 32-bit version of Vista Ultimate with the White Cobra, which means a big chunk of this RAM will be unusable due to memory-mapped I/O requirements. Despite sporting more fans (9 x 120mm, 2 x 92mm,



UP CLOSE



This mammoth triple 120mm-fan radiator has sole responsibility for cooling the CPU.

Both sets of motherboard VRMs are fitted with separate waterblocks.

The RAM is about the only component in the White Cobra that isn't water-cooled. Still, Scan has fitted the triple 40mm fan Corsair DHX fan bracket to keep the DIMMs cool.

The two GeForce 8800 Ultra graphics cards nestle together like a pair of breeding rabbits.

The graphics cards are kept cool by this second enormous triple 120mm-fan radiator.

This single 120mm-fan radiator cools the Northbridge, Southbridge and VRMs.

3x40mm) than Jessica Alba, the White Cobra is surprisingly quiet. This is all thanks to an mCubed T-Balancer bigNG fan controller tucked away above the uppermost 5.25in drive bay. The T-Balancer, in conjunction with the iMON system monitor, keeps an eye on the temperature of all the components and dynamically adjusts the speed of the fans to keep everything in check. It's a massively complicated system, and the fact that only Scan and Vadim have dared to take on the T-Balancer challenge is testament to its complexity, although the results are well worth the effort.

PERFORMANCE

Thanks to its incredible overclock and excellent supporting components, the White Cobra was extremely fast in our Media Benchmarks 2007, achieving an overall score of 1,413. This means that the White Cobra is nearly 10 per cent faster than the Dell at tasks such as image editing and video encoding. However, the

White Cobra isn't the fastest PC we've seen – the identically overclocked Vadim Xiphias pummelled the White Cobra into the dirt in our benchmarks, thanks to its use of the faster Intel P35 chipset, DDR3 memory, Windows XP and four SSDs in RAID 0, achieving an overall score of 1,695.

In games, however, it's a different story. SLI and Vista aren't the best of buddies, but when SLI is working efficiently, the White Cobra is stupidly fast. For example, it was nearly twice as fast as the Vadim in Company of Heroes and World in Conflict, the only two DirectX 10 games worth playing right now. In DirectX 9 games, the difference is less pronounced, as many such games are more CPU than GPU limited, even at high resolutions. However, this isn't to say that we're overly enamoured with SLI – it still doesn't work well in enough games – while Nvidia's Vista drivers leave a lot to be desired.

As the White Cobra is packed with so much high-end hardware, it should come as no surprise that it's the most power-

hungry PC we've tested, drawing a ludicrous 746W from the mains at full tilt. However, thanks to the three separate cooling loops (the CPU has a massive triple 120mm-fan radiator all to itself) it maxed out at 74°C, which is cooler than the CPUs in the Gladiator and Vadim PCs.

CONCLUSION

As the successor to the UK's first SLI PC, the White Cobra is a great follow-up to the original Cobra. Its list of accolades includes ludicrously fast performance, quiet and effective cooling, quality engineering and distinctive looks. The Vadim may be faster in 2D applications and games that don't support SLI, but it's nearly £3,500 more expensive and the games that support multiple monitors are even fewer than those that support SLI. As such, the animal charm of the White Cobra allows it to sneak past the Vadim Xiphias and finish off its opponent with a double dose of snake venom.

James gonbold

