SUPERBUDGET PCs

Details	Last month's position	First reviewed	PC World-Bench	Price (ex VAT)	Warranty	Processor type/ speed	RAM	Hard disk/ capacity	Mother-board	Chipset	Modem	USB ports
1 Mesh Matrix XP 1800+ SBPC 020 8208 4702 www.meshcomputers.com	1	Jul 02	115	£699	3-year onsite	AMD Athlon XP 1800+/ 1.53GHz	256MB DDR RAM	Maxtor/ 40GB	Asus A7V333	Via KT333	56K	6
2 CCL Computers Home XPK2 01274 471 267 www.cclcomputers.co.uk	2	Jul 02	117	£699	1-year collect and return, 2-year labour	AMD Athlon XP 2000+/ 1.68GHz	256MB DDR RAM	Maxtor/ 40GB	Soltek SL75-DRV4	Via KT266A	56K	2
3 Systemax Inspire A1700G 0870 729 7364 www.systemaxpc.co.uk	3	Jul 02	113	£699	1-year collect and return, 2-year labour	AMD Athlon XP 1700+/ 1.47GHz	256MB DDR RAM	IBM/ 60GB	MSI MS6380E	Via KT333	56K	4
4 Ideal Computing Aptus L20-XP+ 0870 745 5061 www.idealcomputing.co.uk	4	May 02	116	£699	1-year onsite 2-year return to base	AMD Athlon XP 1700+/ 1.47GHz	256MB DDR RAM	IBM/ 40GB	Chaintech 7VJDA	Via KT266A	56K	2
5 NetHighStreet.com Net PA699 0870 777 5252 www.nethighstreet.com	5	Jul 02	116	£699	1-year return to base	AMD Athlon XP 1900+/ 1.6GHz	256MB DDR RAM	Maxtor/ 40GB	Asus A7V333	Via KT333	56K	6
6 Multivision Vision Elite 420 0121 550 8000 www.multivision.co.uk	6	Jun 02	116	£699	1-year onsite	AMD Athlon XP 1800+/ 1.53GHz	256MB DDR RAM	Seagate/ 60GB	DFI AD 70 SC	Via KT266A	56K	4
7 CCL Computers Home XP202 01274 471 267 www.cclcomputers.co.uk	7	May 02	118	£699	1-year collect and return, 2-year return to base	AMD Athlon XP 1700+/ 1.47GHz	256MB DDR RAM	Maxtor/ 40GB	Soltek SL75-DRV4	Via KT266A	56K	2
8 Easy PC Direct E1800X 0800 195 4353 www.easypcdirect.co.uk	8	Jul 02	112	£699	3-year return to base	AMD Athlon XP 1800+/ 1.53GHz	256MB RAM	Seagate/ 40GB	Jetway	Via KT266	56K	2
9 Wisdom Computers Silver Bullet 0870 050 2299 www.wisdom-computers.com	9	Jul 02	94	£699	1-year onsite, 4-year labour	AMD Duron/ 1GHz	256MB DDR RAM	Maxtor/ 40GB	Eagletec 5SA	Sis 735	56K	4
10 Best Price Poweroid 2012 0870 220 0444 www.poweroid.com	10	Jul 02	102	£699	1-year return to base	Intel Pentium 4/ 1.9GHz	256MB DDR RAM	IBM/ 30GB	Asus P4SC	Sis 650	56K	4

← Mesh holds on to its debut Superbudget Best Buy award for a second month

1 Mesh Matrix XP 1800+ SBPC

Last month saw the first ever Superbudget entry for Mesh – a debut which took it straight to first place. And the Matrix XP 1800+ SBPC holds its position at the head of the Superbudget chart for the second month.

Mesh has chosen the AMD route, packing in an Athlon XP 1800+ processor running at 1.53GHz. Coupled with 256MB of DDR (double data rate) RAM it racked up a WorldBench 4 score of 115 – not the fastest of the new entries, but not far off.

The Maxtor hard drive is a 40GB model, and there's a 48-/40-/12-speed (read/write/rewrite) Teac CD-RW for backup and a 16-speed Pioneer DVD-ROM. Sound comes from the onboard Cmedia audio chip which, while integrated, can still support six channels for surround sound. Unfortunately this isn't exploited by the Creative FPS1600 speaker set, which only runs to four satellites and a subwoofer.

The graphics are ably taken care of by nVidia's GeForce4 MX 440 chip, which is a budget option but impressive all the same. Running through the Annihilator demo in Quake3 resulted in a frame rate of 69.1fps (frames per second) at 1,024x768 resolution.

The 17in NEC/Mitsubishi MS 75F monitor produces a good, solid display but is let down by its maximum resolution setting of 1,280x960, rather than the more usual 1,280x1,024.

Unfortunately, in the Superbudget category compromises have to be made. Thankfully, Mesh hasn't skimped on the warranty, topping off the package with a comprehensive three-year onsite deal.

2 CCL Computers Home XPK2

Opting for AMD's second-fastest processor, the 1.68GHz Athlon XP 2000+, proves a winning choice for CCL Computers again this month as the Home XPK2 retains second place and a Recommended award. Supported by 256MB of DDR (double data rate) RAM, this CCL system achieved a WorldBench 4 score of 117. The Home XPK2's 40GB of storage courtesy of Maxtor's hard drive doesn't disappoint either. Optical honours are taken care of by a 12-speed DVD-ROM and a 40-/32-/12-speed (read/write/rewrite) CD-RW.

Like the Best Buy Mesh Matrix, CCL has opted for the GeForce4 MX 440 graphics chip, allowing the Home XPK2 to produce 67fps (frames per second) running the Annihilator Quake3 demo at 1,024x768. The EX710F monitor from CTX provides a truly vivid display and even stretches to a resolution of 1,600x1,200, although some may find icons too small at that setting on a 17in display. To keep the cost down, sound comes from an onboard solution and the speakers only run to two desktop units.

Monitor	Screen size	Dot pitch	Max resolution @75Hz	Graphics card	Graphics chip	Graphics card memory	Sound card	Speakers	No of speakers/ subwoofer	DVD -ROM speed	CD-RW read/write/ rewrite rate	Operating system, software & other extras
NEC/ Mitsubishi MS 75F	17in	0.25mm	1,024x768	nVidia GeForce4 MX 440	nVidia GeForce2 MX 440	64MB	onboard	Creative FPS1600	4/Y	16x	48x/40x/12x	Windows XP Home, Lotus SmartSuite
CTX EX710F	17in	0.25mm	1,600x1,200	XFX GeForce4 MX 440	nVidia GeForce4 MX 440	64MB	onboard	Genius SP-G16	2/N	12x	40x/32x/12x	Windows XP Home
CTX EX760F	17in	0.25mm	1,280x1,024	Gainward GeForce2 MX 420	nVidia GeForce4 MX 420	64MB	onboard	Systemax CA4400	4/Y	16x	40x/32x/10x	Windows XP Home, Lotus SmartSuite
CTX EX710F	17in	0.25mm	1,600x1,200	Gainward GeForce2 Ti 450	nVidia GeForce2 Ti 450	64MB	onboard	Nisis S5 4.1	4/Y	16x	40x/16x/12x	Windows XP Home, Star Office
Hansol 720E	17in	0.27mm	1,024x768	Gainward GeForce3 Ti 200	nVidia GeForce3 Ti 200	128MB	onboard	Creative FPS1600	4/Y	16x	40x/24x/10x	Windows XP Home
NEC/ Mitsubishi MS 75F	17in	0.25mm	1,024x768	nVidia GeForce4 MX 420	nVidia GeForce4 MX 420	64MB	Creative Labs Live 5.1	Videologic ZXR 500	5/Y	16x	40x/32x/10x	Windows XP Home, Lotus SmartSuite
CTX EX710F	17in	0.25mm	1,600x1,200	WinFast GeForce2 Ti 200	nVidia GeForce2 Ti 200	64MB	onboard	Genius 200W	2/N	16x	40x/24x/10x	Windows XP Home, Microsoft Works 2001
Relisys TF770	17in	0.25mm	1,280x1,024	Gainward GeForce4 MX 440	nVidia GeForce4 MX 440	64MB	onboard	Mercury SW 880	2/Y	16x	48x/32x/12x	Windows XP Home, PC-cillin Encyclopaedia Britannica Lotus SmartSuite
AOC 7VLR	17in	0.27mm	1,024x768	Mentor GeForce4 MX 400	nVidia GeForce4 MX 400	64MB	Creative Labs Live 5.1	Creative Inspire 5300	5/Y	16x	40x/24x/10x	Windows XP Home, SmartSuite Millennium
Iiyama LS902	19in	0.26mm	1,600x1,200	onboard	onboard	32MB	onboard	Creative SBS35	2/N	16x	40x/16x/10x	Windows XP Home, Star Office

↑ CCL Computers' new entry, the Home XPK2, is the fastest system to enter the chart this month

The package isn't as generous as Mesh's on the support side, with the warranty offering just one-year collect-and-return followed by two years cover for labour only.

CCL Computers has put together a good system, and offers one of the fastest systems in the chart this month. However, the Home XPK2 is not dramatically faster than the competition and ultimately the difference isn't going to be that noticeable in everyday use. This PC is a competent runner-up, but could have benefitted from a more generous warranty.

3 Systemax Inspire A1700G

Weighing up the price/ performance issue, Systemax has chosen AMD's 1700+ chip running at 1.47GHz, which managed a WorldBench 4 score of 113. There's the standard 256MB of DDR (double data rate) RAM, but Systemax has pushed the boat out when it comes to storage, bundling a 60GB IBM hard drive.

The 40-/32-/10-speed (read/write/ rewrite) Systemax CD-RW is fairly standard, as is the own-brand 16-speed DVD-ROM. Like the Mesh Matrix, the onboard audio chip is capable of providing six-channel sound, although you won't get the full benefit from the Systemax CA4400 speaker setup as it only includes four satellites and a subwoofer.

The CTX EX700F monitor generates the same quality of display provided by the EX710F bundled with the CCL system, but it can't quite offer the same resolution support, topping out at 1,280x1,024. The Gainward GeForce4 graphics card uses the nVidia MX 420 chip, managing 65.1fps (frames per second) with the Quake3 Annihilator demo.

↑ The Systemax Inspire A1700G features an impressively large 60GB IBM hard drive

The Inspire's USB ports have been thoughtfully front-mounted – a handy option, especially if you frequently need to plug and unplug different devices like digital cameras or external drives. There's also a bundled copy of Lotus SmartSuite to get you going.

The Systemax's warranty is unfortunately a little lacking, stretching to just one-year collect-and-return followed by a further two years covering labour only. But ultimately the Inspire remains a worthy Recommended contender, pipped at the post by the competition.

SUPERBUDGET PCs

↑ Clinging on to fourth place and our last award is this former Best Buy from Ideal Computing

4 Ideal Computing Aptus L20-XP+

Ideal's former Best Buy hangs in at number four, claiming the final Recommended award. The 1.47GHz AMD 1700+ Athlon XP processor is well complemented by 256MB of DDR (double data rate) RAM and an adequate 40GB hard drive, achieving a WorldBench 4 score of 116.

The 17in CTX EX710F monitor remains one of the best shadow mask displays on the market, with a Gainward 64MB GeForce2 Ti 450 card ensuring top-quality graphics. Likewise, the Cmedia audio chip is better than the typical AC97 codec on motherboards and the Nisis S5 4.1 speakers provide good playback.

We also praise Ideal Computing for putting in a CD-RW drive – something that was sorely missed on the Aptus 1600XP, reviewed in February 02. The warranty is a reasonable one-year onsite, two-year return-to-base.

5 NetHighStreet.com Net PA699

Firmly in the middle of the chart is NetHighStreet's Net PA699. With a 1.6GHz AMD Athlon XP 1900+ coupled with 256MB of DDR (double data rate) RAM, it got a WorldBench 4 result of 116. Rather than opt for nVidia's latest graphics card, NetHighStreet went for a GeForce3 Ti200-based card, which gave 64.4fps (frames per second) at 1,024x768 running the Annihilator demo in Quake3.

The curvy 17in Hansol 720E monitor does the job, but it's not the best. Sound comes from a six-channel onboard chip, but again you won't get the full effect from the four speakers and subwoofer in the Creative FPS1600 setup. The warranty unfortunately only runs to a pitiful one-year return-to-base cover.

The Net PA699 system we saw suffered from overheating problems during testing. However, NetHighStreet assured us that production units would include a case fan to alleviate the problem.

↓ The Net PA699 continues to hold steady in fifth place for another month

↑ A decent system in its heyday, these days the Vision Elite 420 has to make way for more powerful systems

6 Multivision Vision Elite 420

The Vision Elite 420 from Multivision offered great base specifications and broke a few Superbudget barriers in its time, but now we see it relegated to sixth place. While it isn't the fastest Superbudget PC in the chart, the Multivision's WorldBench 4 score of 116 reflects its high-end specifications. AMD's Athlon XP 1800+ processor is a quick runner at 1.53GHz and this is aided by 256MB of DDR (double data rate) RAM and a vast 60GB hard drive. Further backup is provided by a fast 40-/32-/10-speed (read/write/rewrite) CD-RW drive.

The stylish Videologic ZXR 500 speakers and a SoundBlaster Live 5.1 card are up to scratch. The GeForce4 MX 420 card supplies the 17in NEC/Mitsubishi MS 75F screen which, though fair, has limited resolution support. With useful software and decent Logitech peripherals, the Vision Elite 420 is good, but has to make way for new entries.

What is RAM?

Random access memory, or RAM as it is more commonly known, is where a PC stores recently used information and applications. It is often called the main memory, and is set apart from ROM, which is read only memory, as your computer can access and retrieve data from RAM, while ROM is used to store programs that start up the computer.

There are many types of RAM, including SDRAM, DDR RAM and Rambus (see the boxout on page 94 for more details on these different memory types), but all are used for much the same purpose, the difference being how fast they can retrieve data. Obviously the faster your memory can transfer data, the better the performance of the PC. Indeed you will often find that extra, faster memory can improve performance more than adding in a slightly faster processor.

However, when you are choosing your PC, be aware that anything above 256MB of memory will not really make much difference unless you commonly carry out multitasking. Extra RAM will make running lots of programs simultaneously faster, but if you don't often do this, then there is no point in paying for more memory than you need.

Recently manufacturers have cut back on the amount of RAM supplied because of shortages leading to price increases, but even on a Superbudget PC you can expect to get 256MB, while Power PCs offer as much as 512MB.

SUPERBUDGET PCs

↑ Although the Home XP202 sits at number seven, it is still the fastest PC in the chart

PC WorldBench 4: Superbudget PCs

(longer bars are better)   → faster

	40	60	80	100	120
CCL Computers Home XP202				118	
CCL Computers Home XPK2				117	
Ideal Computing Aptus L20-XP+				116	
Multivision Vision Elite 420				116	
NetHighStreet.com Net PA699				116	
Mesh Matrix XP 1800+ SBPC				115	
Systemax Inspire A1700G				113	
Easy PC Direct E1800X				112	
Best Price Poweroid 2012			102		
Wisdom Computers Silver Bullet		94			

7 CCL Computers Home XP202

Hanging in at number seven is the Home XP202 from CCL Computers. The 1.47GHz processor, combined with 256MB of DDR (double data rate) RAM helped the system achieve a WorldBench 4 score of 118 – the fastest in the chart – and storage is provided by a 40GB Maxtor hard drive.

The CTX EX710F monitor offers a pin-sharp resolution of 1,600x1,200 at 75Hz, plus there's a WinFast 64MB GeForce2 Ti 200 graphics card. The audio hardware, however, leaves something to be desired. There are only two Genius speakers with no subwoofer to beef up the all-important bass, and the onboard sound is bottom of the range. The warranty is fair, though, offering one-year collect-and-return, two-year return-to-base cover.
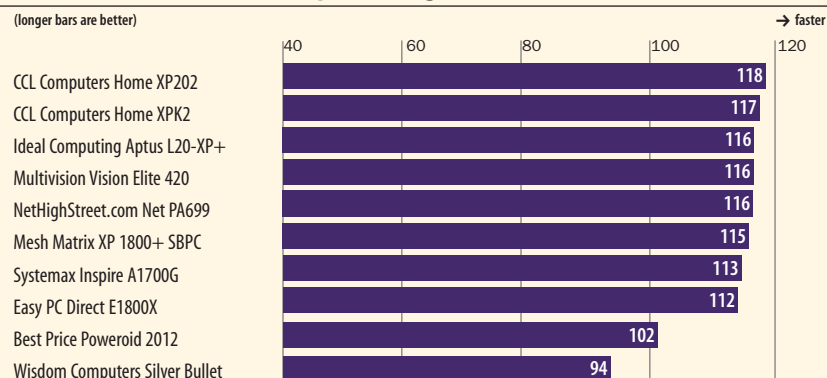
8 Easy PC Direct E1800X

The E1800X features a 1.53GHz Athlon XP 1800+ processor, 40GB Seagate hard drive and 256MB RAM which combined to achieve a WorldBench 4 score of 112. Graphics are courtesy of a GeForce4 MX 440-based card hooked up to a fair 17in Relisys TF770 monitor.

Sound on the E1800X is catered for by an onboard solution and a set of Mercury SW880 speakers offering two satellites and a subwoofer. It's a shame that the small case is so cramped, making it a bad choice if you're keen on upgrading. But worse, we found the power supply on the review system we received hadn't been attached properly and fell into the case on setup. Easy PC has assured us this was an isolated incident and won't occur on shipping units.

↑ The Easy PC Direct E1800X will prove difficult to upgrade due to its cramped case

9 Wisdom Computers Silver Bullet

Looking like a cast-off from the set of *Terminator 2,* the Silver Bullet from Wisdom Computers has the type of styling that you'll either love or hate. Inside there's an AMD Duron chip running at 1GHz which, unable to match the performance of the Athlons, only managed a WorldBench 4 score of 94 with 256MB of DDR (double data rate) RAM.

↓ A low WorldBench score means Wisdom Computers' Silver Bullet fails to figure higher in the chart

Storage runs to 40GB and the requisite DVD-ROM and CD-RW are also installed. The 17in AOC monitor, though noticeably curvy, is backed up by a GeForce4 MX 400 graphics card. Sound is well catered for by Creative's Live 5.1 card and a set of excellent Creative 5300 Inspire speakers.

10 Best Price Poweroid 2012

If you're after a compact system, then the Best Price Poweroid 2012 might be the one for you. However, it's not the fastest setup: the 1.9GHz Pentium 4 processor and 256MB of DDR (double data rate) RAM only managed a WorldBench 4 score of 102.

There's 30GB of storage, a 16-speed DVD-ROM and a 40-/16-/10-speed (read/write/rewrite) CD-RW drive. And while graphics and sound are sufficient for office use, they're far from ideal for gamers. The one-year return-to-base warranty is also rather meagre.

↓ Bringing up the rear at number 10 in our chart is the Best Price Poweroid 2012

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