

Crucial MX500

A SATA 3 drive in M.2 disguise, but if capacity and price are your priorities then add it to your list

SCORE ★★★★★

SUPPLIER pcpro.link/293cruc2

PRICE MATRIX

£47 250GB (£39 exc VAT)	£72 500GB (£60 exc VAT)	£119 1TB (£119 exc VAT)
--------------------------------------	--------------------------------------	--------------------------------------

For most people M.2 is synonymous with NVMe and PCIe 3 x4, but you don't have to go the high-performance route. Some manufacturers are, like Crucial, producing SATA drives that fit into the M.2 slot but support the older SATA 3 protocols instead. Not every M.2 slot on your motherboard will support one of these drives, but you are effectively getting a SATA drive in the smaller, more convenient form factor.



Why should you bother when performance won't be anywhere near NVMe levels? After all, where other M.2 drives on test are capable of 3,600MB/sec and 3,000MB/sec transfer speeds, the MX500 maxes out at a stated 560MB/sec and 510MB/sec. The answer is price per GB. You can pick up a 500GB MX500 for less than some 256GB NVMe drives, and a 1TB model for not much more than a 512GB NVMe drive.

Unsurprisingly, its sequential transfer speeds take a massive hit compared to NVMe drives. CrystalDiskMark puts read/write speeds at 565MB/Sec and 525MB/sec respectively – puny when set against the Toshiba's 3,000MB/sec or more for both. And the news isn't better on random read/write speeds. On Q32-T1 workloads the MX500 sits far behind the leaders on read speeds, though the gap is closer on write

ABOVE The MX500 will fit into a M.2 slot and the performance is decent – if you don't mind waiting a bit

speeds. On 4KB random reads and writes it's miles behind.

What's more, you will notice the difference if you're running more demanding Windows software. The MX500 took over 30 seconds longer to complete our multitasking benchmark than the Samsung 970 Pro and nearly 20 seconds longer on video transcoding. Transfer 20GB of mixed files and you'll be left waiting an extra 11 seconds.

Arguably, though, general performance still feels nippy, and if you're not too bothered about a few seconds here and there then you might find the less performance, more capacity argument adds up – and that goes double if you're switching from a smaller SSD or slower hard disk. If so, the MX500 is a great little drive, with good reliability specs and a five-year limited warranty, giving you plenty of storage for the price.

Samsung 970 Evo

The 970 Evo faces stiffer competition than ever, but it's still the mainstream SSD champ

SCORE ★★★★★

SUPPLIER pcpro.link/293evo

PRICE MATRIX

£69 256GB (£58 exc VAT)	£121 512GB (£101 exc VAT)	£210 1TB (£175 exc VAT)	£497 2TB (£414 exc VAT)
--------------------------------------	--	--------------------------------------	--------------------------------------

The Samsung 970 Evo is a regular sight in the PC Pro Labs – it's the choice of many a system builder looking to get the most performance from their desktop PC. It's not hard to see why, with the 970 Evo based on the same 64-layer Samsung V-NAND MLC flash memory as the class-leading 970 Pro, but at a more approachable, mainstream cost. There are differences between the two drives in terms of the architecture and the use of 2-bit versus 3-bit V-NAND,



but the 970 Evo uses the same Phoenix controller and doesn't perform like a second-class drive.

Admittedly, you're not quite seeing it at its best if you plump for the entry-level 256GB model. All bar the 2TB version have the same 3,400MB/sec max sequential read speed, but the 250GB's sequential write speed tops out at 1,500MB/sec where the 500GB hits 2,300MB/sec and the 1TB and 2TB models reach 2,500MB/sec. Bear this in mind when looking at the benchmark figures, though remember that, in day-to-day usage, read speeds and smaller random read/write speeds tend to matter more.

In tests, sequential read speeds are excellent, the 970 Evo going beyond the stated speeds in CrystalDiskMark and reaching 2,585MB/sec in AS SSD, ahead of the 970 Pro. The Pro moves in front on write speeds – as do the higher-capacity Toshiba XG6, Corsair

ABOVE The 970 Evo is based on the same V-NAND MLC flash memory as its sibling, the 970 Pro



MP510 and WD Black drives – but the Evo's sticks pretty close to its stated specs. And when it comes to random read/write times, there's less between them. The 970 Evo was designed for high-performance desktop usage, and that's where it shines.

This also comes through in our real-world benchmark tests. The 970 Evo falls slightly behind the 970 Pro and the Corsair Force MP510 in our own benchmarks, but in both the video transcoding and multitasking tests it's ahead of the others in the pack. File-transfer speeds are great, so in most scenarios this performs like a leading SSD. Go for the higher capacity versions and the differences will be even less distinct. The 970 Evo now faces more competition, from the Corsair Force MP510 and the WD Black, but we suspect it will continue to appear in PCs gracing these pages, because it's still a superb SSD.