

Antec TruePower New TP-650

Stable, efficient, quiet, modular and great value – everything a PSU should be

Price £69.99 inc VAT • Supplier www.scan.co.uk
Manufacturer www.antec.com



WHY IT'S GREAT

- 100 per cent stable
- Modular cables for a neat PC
- Quiet cooling fan
- Power efficient

Antec was arguably the first company to market and sell a branded PSU, as opposed to a generic one. Generic PSUs are typical of those sold in small independent PC shops, or which are labelled as the house brand by large retailers. Antec has also made some great power supplies over the years, such as one of this model's predecessors, the very similar-sounding TruePower Trio TP3-650 (see Issue 44, p56).

The TruePower series has been given a big overhaul since then. Rather than having captive cables like the older models, the TruePower New TP-650 has partially modular cables. This design helps to reduce cable clutter when building a system, as few PCs will need to use all 26 connectors.

The 20/24-pin ATX connector is hard-wired in, along with the 4-pin ATX12V, 8-pin EPS12V, three Molex, one FDD, three SATA, one 6+2-pin PCI-E and one 6-pin PCI-E connectors. That leaves four colour-coded modular sockets on the front of the case. The black sockets can power up to six more Molex and six more SATA devices, while one of the red sockets is for the one remaining 6+2-pin PCI-E and one 6-pin PCI-E cable. The second red modular socket is unused, since Antec uses the chassis for other models with different cables.

Like many of the other PSUs we've reviewed over the years, the TruePower New TP-650 is

manufactured by Seasonic, although it's designed by Antec. It has four 12V rails, the first two being rated at up to 22A each, with the latter two each rated up to 25A. They're configured so that 12V¹ powers the motherboard and both the captive and modular disk drives. The CPU is powered by 12V², while 12V³ powers the captive PCI-E and one of the modular PCI-E sockets. The final 12V rail, 12V⁴, provides power to the remaining modular PCI-E socket. We'd recommend connecting the modular PCI-E cable to 12V⁴, which is the red socket furthest from the black modular sockets. This will ensure that your graphics card(s) are powered by separate 12V rails.

The four 12V rails have a combined output of 54A and are accompanied by 25A-rated 3.3V and 5V rails, plus a 0.8A-rated -12V rail and 3A-rated 5VSB rail. The latter is important if you have a lot of USB peripherals such as external hard disks, game controllers and headsets.

The case is a dull metallic grey and is cooled by a PWM-controlled 120mm fan. At 50 per cent load, the fan spins so slowly that it's essentially silent, although at full load, it begins to make a whooshing noise.

However, at least this is simply caused by air movement and isn't an annoying electronic noise, such as the sounds emitted by some of the Tagan and XFX PSUs we've seen over the years.

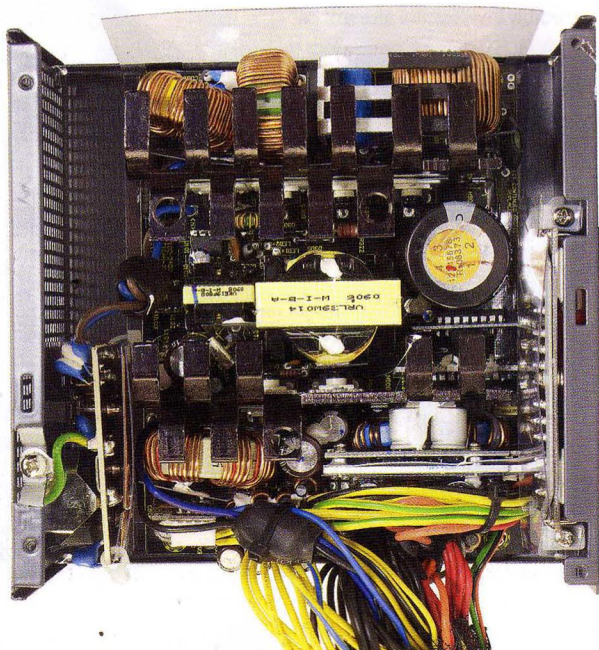
All of the TruePower New TP-650's rails output a perfectly stable voltage at 50 per cent load, staying well within the limits of the ATX spec. What's more, it only required 376W to produce 326W, so it was a remarkable 87 per cent efficient.

Even when we upped the ante to full load, the rails all behaved themselves, with the 12V rails in particular barely straying more than 0.05V from 12V. Although the TruePower New TP-650 is slightly less efficient at full load, averaging 86 per cent, this is still above average for a sub-£100 PSU, and far superior to similar-wattage PSUs of a few years ago. For any PSU to be in with a chance of a recommendation from us, it must pass 100 per cent of the voltage stability tests we carry out using the Chroma machine. However, while stability is crucial, for a PSU to really catch our eye, it also has to offer something special.

In the case of the TruePower New TP-650, this is its low price of just £70. This wouldn't be a bad price for a captive-cabled PSU, so the TruePower New TP-650 is simply amazing value for money, as it has partially modular cables.

What's more, it sports as many cables as the more expensive PSUs, including four PCI-E connectors. This means it can cope with the power demands of multiple graphics cards. Given its above-average power efficiency and super-quiet fan (when running at normal load levels), we have no hesitation in crowning it the king of mid-range PSUs.

JAMES GORBOLD



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