

# Kyocera Mita FS-C5016N **PC PRO A LIST**

PRICE £1,025 (£1,204 inc VAT)

SUPPLIER [www.kyoceraprintershop.com](http://www.kyoceraprintershop.com)

VERDICT Great quality and incredibly cheap running costs make the Kyocera a deserving winner.

With the FS-1020D mono laser currently residing on our A List, we were expecting good things from Kyocera's FS-C5016N. However, as the most expensive machine in this test, it was going to have to impress us across the board.

A good start is that print quality was the best of the group. Our Excel document printed with no bleeding, had vibrant colours, and grey areas had some of the best dithering we've seen. Even tiny black text on grey was completely legible. Our colour montage printed breathtakingly well for a laser printer. We were pleased by the lack of grain and faithful colour reproduction, while black and white areas of the image were printed using composite black to good effect.

The FS-C5016N's quality is matched by its expansion options. The 96MB of RAM can be upgraded to 608MB, while you can add a 500-sheet input tray for £188 and a 250-sheet output tray for £222. A duplex unit isn't included – it costs £215.

There's built-in 10/100 Ethernet, although



802.11b Wi-Fi costs a significant £299, and the network hardware is backed up by excellent KM-Net software. This displays printer status over a network and can also send instructions to the printer for tasks such as locking the front-panel buttons or controlling who gets access to colour printing. It's also possible to set up the system to send emails about faults and problems.

Speed was the only real disappointment.

Despite being a one-pass laser, the 12-page Excel document printed in 1 minute, 32 seconds – just 9.7ppm. Our 23-page DTP was slightly slower, and printed at 7.8ppm. As with the other files, quality was flawless. The 50-page mono document printed at 12.5ppm, while the colour version printed at 11.5ppm.

But, the FS-C5016N's running costs easily make up for this shortfall. Instead of selling consumables separately, Kyocera sells a maintenance kit for £439, which includes a fuser, image drum, transfer belt and other items that last for 200,000 pages. Colour toner costs £66 per cartridge, while mono cartridges cost £43 and each one will last for an impressive 8,000 pages. With all of these costs factored in, colour pages cost a humble 3.2p per page, while mono prints cost 0.8p per page. Even the TallyGenicom, which offers free black toner, can't match the economical running of the FS-C5016N. If the speed doesn't bother you, there's little to beat it. If it does, consider the TallyGenicom.

## PC PRO RATINGS

QUALITY	★★★★★★
SPEED	★★★★★
FEATURES	★★★★★
RUNNING COSTS	★★★★★★
VALUE FOR MONEY	★★★★★★
OVERALL	★★★★★

# Lexmark C760

PRICE £701 (£824 inc VAT)

SUPPLIER [www.ameiva.co.uk](http://www.ameiva.co.uk)

**VERDICT** A fast, good-quality printer, but note that it suffers from high running costs and no integrated networking.

Although the photo doesn't show it, the C760 is the bulkiest printer on test by some distance. Everything about the C760 feels like it will last forever. The page yields quoted by Lexmark back this up – the engine life is quoted at 1 million pages, while the fuser should last for 200,000 pages. We're used to seeing transfer belt lives of about 25,000 pages, so Lexmark's estimate of 120,000 means less hassle.

However, long-life components don't necessarily make for a low cost per page. The image drums are integrated into the toner cartridges, which means prices are higher than average. Colour toner is expensive at £133 per cartridge, especially when it lasts for only 6,000 pages. It leads to a cost per colour page of 8.2p, while mono pages cost only 1.6p.

The C760 is no slouch though. The single-pass engine made short work of our mono and colour tests, printing both at 24ppm. Our 12-page Excel document printed in just 49 seconds. Though our PDF document slowed



the C760 down, 17ppm should keep most people happy.

The quality of the business graphics was excellent. Our Excel spreadsheet is a complicated mixture of black text on yellow, white text on red and black text on grey, and some lasers can struggle to produce vibrant colour while maintaining the legibility of text. The C760 excelled, producing sharp text and grey areas with little grain.

Text quality was generally good, although we were shocked at how illegibly cyan text printed. Photographic quality wasn't the best – images had noticeable grain, but were redeemed by excellent colour reproduction. While mono images were printed using composite instead of pure black, the image quality was much better than many of the printers that used pure black.

Workgroup features were good for those who will attach the C760 to a print server or install the optional £148 10/100 Ethernet adaptor. The driver lets you send a document to the printer, but won't print until the user enters a PIN number through the front panel: useful for those working with sensitive documents.

Overall, the C760 is a reasonable colour workhorse, but this month the competition was just too tough. Although you can buy the C760dn, which adds networking and a duplex unit, it costs about twice the price. This means the C760 loses out to the TallyGenicom, which costs just £125 more, while the Kyocera Mita beats it all round.

PC PRO RATINGS	
QUALITY	★★★★★
SPEED	★★★★★
FEATURES	★★★★★
RUNNING COSTS	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	★★★★★

# Oki C3100

PRICE £299 (£351 inc VAT)

SUPPLIER [www.shopoki.co.uk](http://www.shopoki.co.uk)

**VERDICT** Fast and cheap to buy, the Oki is ideal for those who don't want to spend much, can do without network capabilities and won't be printing many pages per month.

Oki's C3100 is the cheapest printer in this month's Labs, but you wouldn't guess that from its performance. £299 for a single-pass colour printer is a fantastic deal, and while it lacks optional networking, a duplex unit and remote management software, it's good value if you don't require those functions.

The C3100 employs LEDs to write to its four image drums, a much cheaper technology than laser – there are fewer moving parts. LED printers have been criticised for being lower-quality than lasers, but our results show that nothing was so bad that you'd be put off buying the Oki for everyday use.

Our Excel spreadsheet, the best indicator of business graphics quality, was more than acceptable. There was some noticeable grain on grey areas, but yellow shading and text quality was fine. But, if you want to print lots of images, the C3100 isn't the best. Its composite greyscale images were poor, while colours in the photo montage weren't accurate enough. Of course, this makes it okay for internal documents



and business documents that don't require colour accuracy.

Speed is the main bonus at this price though. The Oki averaged 20.1ppm in the mono 50-page test and about 12ppm for the Excel, Word DTP and colour letter tests. Considering that most other printers were slower in the Excel test, had more memory and were more expensive than the C3100, it adds yet another

reason to why it wins the Best Value award. If you mainly print short documents, the first page will appear in 26 seconds whether mono or colour. This is slightly below average on test, but nothing major to worry about.

Running costs were mixed. Mono prints cost 1.5p per page, while colour pages were higher than average at 8.8p. Essentially, though, if printing levels aren't too high, the £299 price means you'll end up spending less than if you bought the Labs-winning Kyocera.

The high colour price is partly due to the fact that there are four drums, meaning you need an entirely new set (at a total cost of £262) every 14,000 pages. Fortunately, Oki includes full toner cartridges with the C3100, so you'll be able to print at least 3,000 pages straight out of the box.

Overall, if you're certain you'll be printing less than 500 pages per month, whether they be in mono or colour, the Oki is an excellent choice. Otherwise, running costs will outstrip the purchase price after only a year of medium use (see p122 for more details).

PC PRO RATINGS	
QUALITY	★★★★★
SPEED	★★★★★
FEATURES	★★★★★
RUNNING COSTS	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	★★★★★



# TallyGenicom T8024

PRICE £826 (£970 inc VAT)

SUPPLIER [www.dabs.com/uk/2WPTD1](http://www.dabs.com/uk/2WPTD1)

**VERDICT** With plentiful features, free toner and excellent after-sales support, the T8024 is beaten only by the more economical Kyocera.

TallyGenicom's T8024 has the most features of all the printers this month: Ethernet, a duplex unit and full toner cartridges all helped it to scoop a Recommended award.

Our speed tests revealed a fast engine. Even though there was a long calibration pause in both of our 50-page tests, we still saw a decent 18ppm. The shorter Excel test printed at 25ppm – faster than the quoted 24ppm. Our 23-page Word document and four-page PDF printed at 25ppm and 24ppm respectively.

Quality was better than the Epson AcuLaser C3000, which is built using the same chassis and print engine, but it fell noticeably short of the Kyocera FS-C5016N's standard. Dithering was below par for a machine of this price, and once black text on a grey background dropped below 12pts in size, it became tricky to read. White text on a red background wasn't as crisp as it should have been either.

The mono quality test showed another slight weakness. The T8024 detected the mono document and printed with only black toner – a



clever trick, but nonetheless one that resulted in a poorly finished image that would have benefited from composite black. At the default settings we were pleased enough with the quality of the photo montage, although there are printers that will do better.

All the printers costing more than £700 have formidable workgroup credentials, and the T8024 is one of the best of the bunch. You can add to the existing 500-sheet tray with a second for £299, while those who get through reams of

paper will appreciate the dual 500-sheet feeder, which costs £499. This latter unit has wheels, freeing the T8024 from the desk. As you'd expect, it's compatible with both PCL6 and PostScript 3.

A bonus is that TallyGenicom is currently offering up to one free black cartridge per month for the first two years. This reduces mono pages to 1.2p, while colour will cost 5.9p. Otherwise, they'd be 1.6p and 6.3p per page respectively. TallyGenicom also offers the longest after-sales support, with two years of on-site coverage. Plus, high-capacity toner cartridges are included, capable of 9,000 mono pages and 6,000 in colour. The company is even offering the T8024 rent-free to users who purchase a £599 starter pack and then commit to buy a four-pack colour toner bundle each year.

While we still have some reservations about quality, the T8024 is a great printer, and came within a whisker of winning this month's Labs. However, the slower Kyocera is much cheaper to run – and offers better quality – so should be first choice if you print high volumes every month.

PC PRO RATINGS	
QUALITY	★★★★★
SPEED	★★★★★
FEATURES	★★★★★
RUNNING COSTS	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	★★★★★

# Xerox Phaser 8400DP

PRICE £994 (£1,168 inc VAT)

SUPPLIER [www.porthale-printers.co.uk](http://www.porthale-printers.co.uk)

**VERDICT** With low running costs and great quality, the 8400DP is just slightly too expensive overall to fend off competition from Kyocera and TallyGenicom. But, cheaper variations are available.

Changing toner cartridges is usually an occupational hazard due to the fact that toner is harmful if inhaled. Xerox's Phaser 8400DP dispenses with toner and uses solid ink instead. It isn't anything new, but the process of using 'ink sticks' has been refined over the years. These waxy blocks are melted inside the printer, printed directly onto the imaging drum and then transferred onto the paper in a single pass.

The main benefit of this system is the low cost per page. The only consumables in the 8400DP are the ink sticks and a maintenance roller, which ensures good print transfer by pressing the paper against the imaging drum. This leads to a cost per colour page of just 3.4p, and 1.4p per mono page.

Xerox claims up to 24ppm for the 8400DP, but in practice we had to set the driver to draft mode to attain these speeds. This degraded print quality to that of a poor inkjet. Operation in draft mode was also far too noisy. Switching to standard-quality



mode resulted in laser-quality text and images, although print speeds were halved to 12ppm. Our Excel test printed at 11ppm, while our Word DTP document printed at 13ppm. Our four-page PDF didn't phase the 8400DP, and printed at a respectable 12ppm.

The quality of these prints was excellent, and remained so whatever paper we loaded – the second major benefit of solid ink.

Large areas of ink, such as in our photo montage, have a distinctly waxy feel. This is the disadvantage – the ink is still too easy to scratch off. However, those looking for great colour won't be disappointed.

The built-in 10/100 Ethernet adaptor and duplex unit are other useful features, while the 525-sheet paper tray can be augmented with a second for £349. If you don't need the duplexer or networking, cheaper models are available.

The bundled network software is rather sparse, but the driver is logically laid out, if slightly underfeatured. There's no option to print multiple pages per sheet, and those wishing to convert single pages into a poster will likewise be disappointed.

For users who expect to print colour pages day in, day out, the Xerox 8400DP is a great economical choice. Just beware that it needs to be left on permanently due to the ink, and the Kyocera works out cheaper overall. But the faster print speeds mean it should still be on your shortlist.

PC PRO RATINGS	
QUALITY	★★★★★
SPEED	★★★★★
FEATURES	★★★★★
RUNNING COSTS	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	★★★★★

# The true Total Cost of Ownership

Last month we performed an intensive investigation into the running costs of various inkjet printers when printing text and photos. This relied on a fairly simple, yet time-consuming process of printing pages until cartridges ran out to establish quantity, and then dividing the number of pages by the cost of the ink. However, the running cost of a laser printer isn't decided simply by the price of toner.

## CONSUMABLES

It's impractical to test cartridge yield, as tens of thousands of pages per printer would be involved. There are also plenty of other consumables, which isn't the case with inkjets. Image drums, fuser units and transfer belts all need to be periodically replaced, and the costs of these need to be added to the price of a page. Fortunately, the industry is keen not to hide these expenses, and all companies now publish figures stating standard running costs.

We've calculated the total cost per page of the printers on test using the retail prices of the consumables and dividing them by their page yields, which are given to us by each manufacturer. The most expensive printers to run are four-pass units. As each sheet of paper has to run past the image drum four times (once per colour), there's extra wear and tear on the drum and transfer belt, and in some cases the waste toner bottle fills up faster. Page yields for these components when printing colour pages are a quarter of what they'd be for single-pass printers. The latter are cheaper to run because each sheet of paper runs through the printer only once.

## Cost to the Earth

Let's not forget the environmental considerations. The generally accepted value for CO<sub>2</sub> emissions from power stations is 620g of carbon dioxide per kilowatt-hour (kWh) (see *Papering over the cracks*, issue 113, p295).

With this in mind, you may be a shocked to learn that the greenest printer on test will pump out about 131kg of CO<sub>2</sub> in a year. The worst offender, the Xerox 8400DP, will pump out about 700kg. Over the coming months we'll be investigating these hidden running costs in greater detail.

Using these combinations we worked out a cost per year based on printing 5,000 pages per month – 2,500 each of colour and mono. As you can see, there's a huge difference between printers. You can calculate the cost per year for your expected print-runs using the costs per page, which are listed on the feature table.

## POWER TRIP

Since laser printers require more power than inkjets and are generally never turned off, the price of electricity used should also be taken into consideration before making a purchase.

All of this month's printers have earned an Energy Star award, which means they make use of a power-saving mode that cuts energy consumption by at least 60 per cent. However, it's only the percentage reduction that's important. All of the printers this month are essentially of a similar size yet the difference in power consumption varies widely.

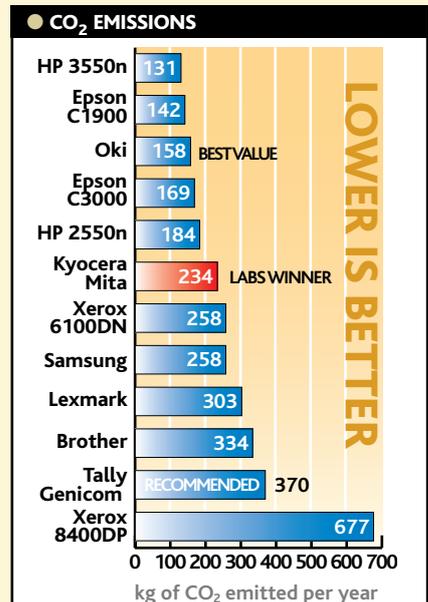
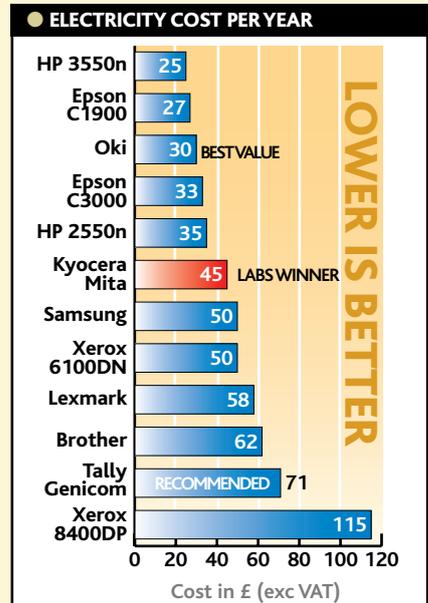
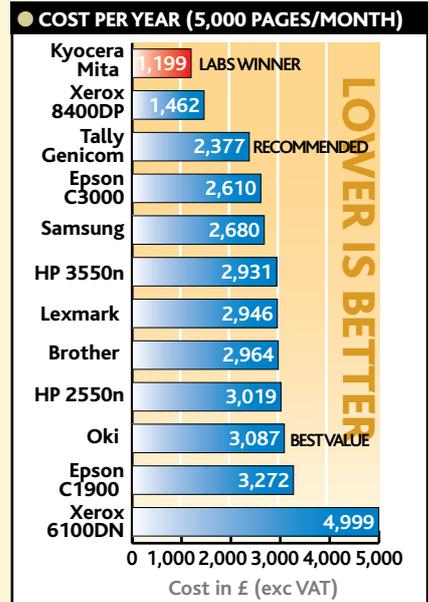
Standby consumption wattage can vary from the HP LaserJet 2550n's 10W to the Xerox Phaser 8400DP's 120W. When printing, power consumption ranges from 230W to 670W. The former figure is for the same Xerox machine, so it picks up the low-power kudos, while the Brother represents the latter amount.

Naturally, this is all fairly meaningless until it's translated into real money. We used British Gas as the electricity provider for the sake of uniformity (though cheaper alternatives can be found at [www.energyhelpline.com](http://www.energyhelpline.com)), with prices based on standard tariffs with quarterly billing. Also, our model assumes that the printer will be in standby mode for 23 hours a day and actively printing for one hour. While real usage will vary, it's a good overall guide.

The graph shows that the general trend is expensive printers consume more electricity per year. Anomalies include the Xerox Phaser 6100DN, which costs about £20 more per year to run than its similarly priced peers, and the Xerox Phaser 8400DP which, at almost £115 per year, adds a significant increase to the cost of ownership.

However, when compared to the cost of consumables, unless you print few pages, they're rendered practically irrelevant. Anyone printing more than 1,000 sheets per month can disregard the electricity costs and focus on consumables if TCO is the prime concern.

NICK ROSS, DAVE STEVENSON





# Brother HL-2700CN

PRICE £470 (£552 inc VAT)

SUPPLIER [www.ebuyer.com](http://www.ebuyer.com)

VERDICT Good colour quality and incredible mono speed, but it's expensive to run.

Most of the four-pass printers on test here are slow, but Brother bucks the trend with the HL-2700CN, which printed our colour Word document at a rate of 7.9ppm. It also proved to be the fastest mono printer, with an incredible rate of 31.3ppm for our mono letter.

The trickier Excel document printed slower at 4.4ppm, although we were pleased with the quality. White text on a red background was beautifully reproduced, and although the shaded grey areas weren't the best we've seen, the grain wasn't a distraction.



The HL-2700CN wasn't without its problems, however. The default setting is colour printing, irrespective of the content. This means mono pages print using four passes unless you opt for mono. The other annoyance was that the HL-2700CN was one of the noisiest printers.

Running costs aren't the lowest either. At 2.1p per mono page it's more expensive than all but Xerox's Phaser 6100DN. Colour pages were a more reasonable 7.8p each.

If you want fast mono prints and need colour only occasionally, the HL-2700CN is a good choice. However, HP's 3550n costs only £49 more, is cheaper per mono page and faster in colour, albeit more expensive per page. Don't look too much at the initial cost – it's rendered irrelevant after only a year or so of relatively light use. With lower running costs, the Brother may have done better, but unless you can find consumables cheaper, there are better deals.

## PC PRO RATINGS

QUALITY	★★★★★
SPEED	★★★★★
FEATURES	★★★★★
RUNNING COSTS	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	★★★★★

# Epson C1900

PRICE £392 (£460 inc VAT)

SUPPLIER [www.ameiva.co.uk](http://www.ameiva.co.uk)

VERDICT Exceptional colour quality for the price, but slow and expensive to run.

Epson's C1900 is an updated version of the C900, which won our Best Value award in issue 109. Similarly priced, but with a 300MHz processor and 32MB of RAM, the C1900 is a four-pass printer including a 10/100 Ethernet adaptor for less than £400.

Wireless networking can be added for £229, as can a duplex unit for £252. Using PC133 SDRAM, you can upgrade to the maximum of 1GB cheaply.

Our 50-page mono document printed at a decent 16.1ppm, while our colour document printed over four-passes at a rate of 4ppm, as did the 12-page Excel workbook. Our Word DTP document printed at 6.5ppm, thanks to



the driver automatically detecting mono pages and printing them in a single pass.

Considering the price of the C1900, we were surprised at its uncompromising quality. The colour montage was the best on display, with neither half-toning nor banding, while colour reproduction was accurate – particularly on skin tones. Our Excel spreadsheet was also good – sharp text and exceptionally good dithering makes the C1900 ideal for producing presentation handouts.

But it's one of the more expensive units to run, with 9.7p per colour page being down to the inefficient four-pass engine. The cost per mono page is a more affordable 1.2p. If you expect to print hundreds of colour pages per week, the low purchase price is of no benefit. However, the network software is excellent, and those who need great quality prints won't be disappointed.

## PC PRO RATINGS

QUALITY	★★★★★
SPEED	★★★★★
FEATURES	★★★★★
RUNNING COSTS	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	★★★★★

# HP Color LaserJet 2550n

PRICE £379 (£445 inc VAT)

SUPPLIER [www.hpstore.hp.co.uk](http://www.hpstore.hp.co.uk)

VERDICT The 2550n lacks speed and isn't the cheapest to run by a long way.

The 2550n is the networked version of the 2550, HP's entry-level colour laser. It offers stylish looks, easy installation and great quality output.

Our Excel document printed well, and we were particularly impressed by the dithering that produced solid areas of grey. Photo quality



was excellent for a laser, with superb colour reproduction. Colour fades were also good, showing no noticeable banding. Greyscale images were printed in composite black, meaning longer print times, but quality was good.

However, the four-pass engine is slow. Excel and Word documents printed at the quoted 4ppm, while our four-page PDF printed at 3.4ppm. Mono documents printed at a decent 13.2ppm, but not the claimed 19ppm. If the 2550n is for a single user, speed won't be a big issue, but waiting times will increase vastly in a busy workgroup.

HP bundles full-capacity toner cartridges, which is handy considering the low price. Unfortunately, running costs will quickly add up. The image drum lasts for only 20,000 pages in mono, and because of the four-pass print mechanism, just 5,000 colour pages. We're also concerned that the fuser unit isn't user-replaceable – and HP doesn't give a lifetime figure for it. Ultimately, good value is spoiled by the cost per page of 1.7p in mono and 8.4p in colour, as this makes the 2550n one of the more expensive printers to run.

## PC PRO RATINGS

QUALITY	★★★★★
SPEED	★★★★★
FEATURES	★★★★★
RUNNING COSTS	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	★★★★★

# HP Color LaserJet 3550n

PRICE £519 (£609 inc VAT)

SUPPLIER [www.hpstore.hp.co.uk](http://www.hpstore.hp.co.uk)

**VERDICT** A solid machine that offers below-par quality and average running costs.

**H**P's 3550n is the little brother of HP's 3700. A slower 266MHz processor, just 64MB of RAM and no PCL or PostScript compatibility are the trade-offs for a £210 price reduction. Networking comes in the form of HP's external JetDirect network adaptor.

Print speeds were good in both colour and mono. Our mono 50-page letter printed at a rate of 15.4ppm, while our colour letter printed slightly faster, at 15.6ppm. Unfortunately, our Excel test proved too much for the 3550n, which wheezed along at a paltry 5.4ppm.

Like the 2550n, HP includes full toner cartridges with the 3550n, meaning that you'll be able to print 6,000 mono and 4,000 colour



pages before you need to buy more. Overall running costs were average, with each colour page costing 8.2p and each mono page, 1.6p.

Given our experience of HP lasers, we expected quality to be better. Our Excel document showed slight ghosting around characters, while the grey background appeared lilac. Images and photos were the highlight, though. Colour reproduction was good, while skin tones were realistic. There was slight banding on our colour fades, but nothing that will be noticeable from arm's length. At least mono transitions were some of the best we've seen.

The 3550n isn't a bad printer, but it was up against tough competition. Although it's half the price of the Labs-winning Kyocera, in terms of quality, features and running costs, the FS-C5016N is better value.

## PC PRO RATINGS

QUALITY	★★★★★
SPEED	★★★★★
FEATURES	★★★★★
RUNNING COSTS	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	★★★★★

# Samsung CLP-550

PRICE £377 (£442 inc VAT)

SUPPLIER [www.ameiva.co.uk](http://www.ameiva.co.uk)

**VERDICT** Compact and capable of decent quality, but it lacks features and is slow.

**T**he CLP-550 is built around the same engine and chassis as Xerox's 6100DN, and its performance is therefore similar – 20ppm in mono and just 4.4ppm in colour. Like the 6100DN, a duplex unit is built-in, which is impressive for this price.

Unlike the 6100DN, however, print quality was fairly good. The Excel print-out was clean, without any of the bleeding that we noticed with the 6100DN. But, grain was still visible on solid areas of grey and our photo montage was too dark.

Running costs for the CLP-550 were better than those for the 6100DN, thanks to cheaper consumables. The transfer belt for the CLP-550 costs £79, while the 6100DN's is £121. The transfer belt for the Samsung isn't compatible with Xerox's



**EXCLUSIVE**

machine, though. Installing consumables is easy although, unlike the 6100DN, the fuser isn't considered a user-serviceable part. Colour pages cost 7.5p each, while mono pages are also reasonable at 1.4p.

There's no built-in Ethernet adaptor; the 6100DN includes one card and is £71 cheaper. But if you need two-sided printing, you could do worse than the Samsung. It isn't overly expensive to run, and produces decent quality. But it's slow and lacks features, and comes with only low-capacity cartridges. Ultimately, you can do better all round and for total cost of ownership.

## PC PRO RATINGS

QUALITY	★★★★★
SPEED	★★★★★
FEATURES	★★★★★
RUNNING COSTS	★★★★★
VALUE FOR MONEY	★★★★★
OVERALL	★★★★★

# Xerox Phaser 6100DN

PRICE £306 (£360 inc VAT)

SUPPLIER [www.ameiva.co.uk](http://www.ameiva.co.uk)

**VERDICT** Cheap to buy but running costs are astronomical and quality is poor

**X**erox's Phaser 6100DN was the weakest printer in the Labs this month. Although two-sided printing and 10/100 Ethernet for less than £350 seem like a great deal, there are many good reasons to avoid the 6100DN.

The first is the four-pass engine, which limits colour speed to 4ppm. But the 20ppm it achieved for our mono document was good and we could recommend the 6100DN for occasional colour work if its print quality wasn't



so poor. White text on a red background resulted in noticeable artefacts, while solid patches of grey printed with a mottled effect. Photo and image reproduction was also poor. Although colours were generally accurate, the overall images had noticeable grain. Mono pages printed with composite black, which meant they needed four passes. There was also a noticeable red hue to composite images.

Running costs are the other main reason to avoid the 6100DN. Colour pages cost 14p – far higher than anything else on test. Mono pages are also the most expensive on test at 2.7p each.

But, the final nail in the 6100DN's coffin is Samsung's CLP-550 (see left). It's the same machine with better drivers as well as improved print quality for an additional £71. Add to this compatibility with PCL 6, PostScript 3 and much lower running costs, and it's clear that buying a budget unit doesn't necessarily mean you're getting a great deal.

## PC PRO RATINGS

QUALITY	★★★☆☆
SPEED	★★★★★
FEATURES	★★★★★
RUNNING COSTS	★★★★★
VALUE FOR MONEY	★★★☆☆
OVERALL	★★★☆☆