



# Dell Latitude D410



PRICE £1,199 (£1,409 inc VAT)

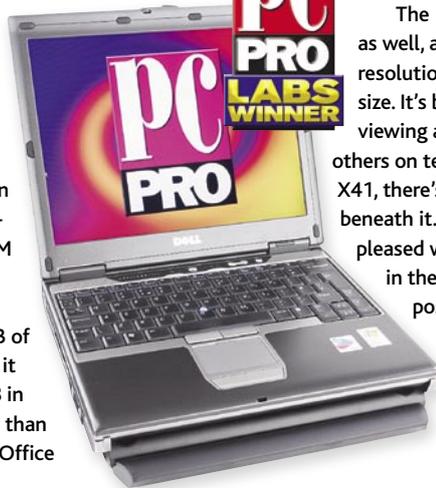
SUPPLIER Dell 0870 152 4699

**VERDICT** Top-notch performance, great design and impressive build quality too. Its only flaw is the lack of an integrated optical drive, but a three-year on-site warranty makes it excellent value.

**S**elling as many notebooks as it does, Dell knows the winning formula for just about every type of user. The D410 may not be the lightest notebook on test, but it manages to combine top performance with portability, great ergonomics and a low price.

Weighing in at 1.95kg and being only 35mm thick, there aren't many mobile users who wouldn't want to carry the D410 on their travels. It's built around the new Sonoma version of Centrino, and its low-voltage 2GHz Pentium M is an ideal choice for a notebook of this size.

Combined with 1GB of speedy PC2-4300 RAM, it returned a score of 1.88 in our benchmarks – more than sufficient for Microsoft Office



applications and demanding multimedia work. The Hitachi Travelstar hard disk is also a high-spec component. At 60GB it isn't the largest, but it's more than enough for business use, while the 5,400rpm spindle speed makes it quicker than others at transferring files to RAM.

The 12.1in TFT is great quality as well, and the 1,024 x 768 resolution is appropriate for the size. It's bright and clear, while viewing angles are as good as others on test. As with the ThinkPad X41, there's an excellent keyboard beneath it. We were especially pleased with the layout: keys are in their normal places as far as possible. We also appreciate the dual mouse pointers – you can choose between trackpoint and touchpad.

One factor to note is

that the optical drive isn't built in. Instead, it's installed in Dell's 'media slice', a docking station included in the price. Adding the media slice pushes the weight up to 3.2kg, but it also gains you extra ports like parallel and serial. Plus, the dock means you can use both the supplied batteries at once; a unique feature this month. On the larger battery (which protrudes out in front of the palmrest), our intensive test returned two hours, 12 minutes of use, while the smaller battery lasted for one hour, 35 minutes. Combined together, they gave a great eight hours, 43 minutes in our light-use test.

At this price, it's heartening to see a three-year on-site warranty. It's also good that Dell has integrated both 802.11a, b, g and Bluetooth, plus there are three USB 2 ports.

It may not be the lightest notebook, and the lack of an integral optical drive will be frustrating for some, but with great build quality, a fabulous screen and keyboard, plus the superb warranty, the D410 is the clear leader here. Use E-Value code MAG-D410PCP1 to order.

PC PRO RATINGS	
PERFORMANCE	★★★★★
BATTERY LIFE	★★★★☆
FEATURES & DESIGN	★★★★★
VALUE FOR MONEY	★★★★☆
OVERALL	★★★★★

## Focus on... methanol fuel cells

**T**hanks to Wi-Fi, Bluetooth and soon wireless USB, the power cable will be the last thing tethering your notebook to a desk. Or perhaps not: by next year, we could see the first notebooks that use methanol fuel-cell batteries.

Fuel cells generate electricity from the reaction that occurs when methanol is mixed with water in the presence of a catalyst. The technology isn't new – in fact, it's over a century old – but companies like Toshiba are making big steps to miniaturise it. 'The challenge is to increase the proportion of methanol to water,' said Steve Crawley, product marketing manager, Toshiba UK. 'It was at around 3 per cent, but we're now approaching 30 to 40 per cent.' By doing so, a methanol-fuel cell battery should provide twice as much energy per kilogram as its lithium-ion counterpart.

Toshiba has already produced a prototype fuel-cell battery the size of a Memory Stick that will power an iPod for six hours, and it has also demonstrated a larger fuel-cell battery (as pictured) that kept a notebook powered for 12 hours. 'Our focus now is to get 12 hours of life

from an unobtrusive battery, and we hope to release the first products by the end of next year,' said Crawley.

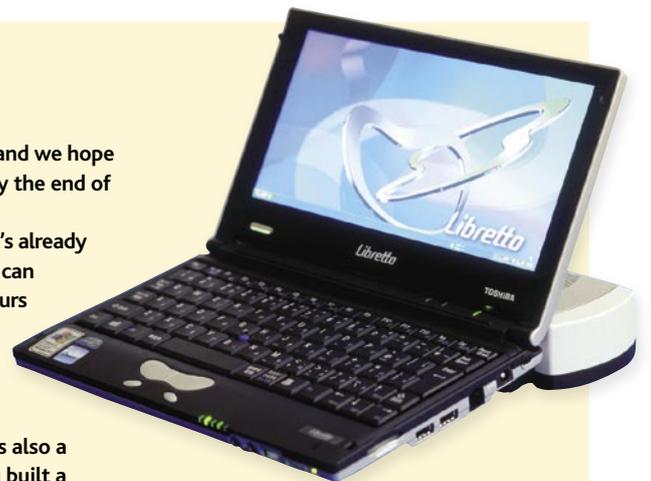
NEC is just as ambitious. It's already built a prototype fuel cell that can power a laptop for up to 24 hours without a recharge, and is now working on extending power to last a full week.

The chief advantage is naturally longevity, but there's also a weight saving: in 2003, Fujitsu built a battery that could power a laptop for between eight and ten hours on 300ml of methanol.

There are disadvantages too. You won't be able to recharge a fuel-cell battery, you'll have to buy replacement cartridges. Initially, the cost could be up to £5, but this price should drop to £1.

Also, fuel cells may not be allowed onto planes, as methanol is flammable. However, the industry has already taken the first step required by IATA (International Air Transport Association) to allow cells on board in the future.

It's also unlikely that fuel cells will offer variable voltage, so they'll be



A methanol fuel cell could power your laptop for whole days at a time.

producing maximum power all the time. Instead of a fuel-cell battery alone, it seems likely a normal lithium-ion battery would power the laptop, while a fuel cell constantly recharges it.

While fuel cells clearly need more development, they're the future for portability. Imagine a trip abroad where you just had to take two fuel cells (likely to be smaller than size B batteries), and it's clear why companies like Fujitsu, NEC and Toshiba are so determined to bring fuel cells into the mainstream.