

Entroware Proteus

A new-ish company sources ideas from the web to make this Linux-bundled laptop. Mike Saunders checks it out.

DATA

Web
www.entroware.com
Manufacturer
Entroware/Clevo
Price
From £649 (for below specs: £754)

SPECIFICATIONS

CPU Intel i5-4210M @ 2.60GHz
RAM 8GB DDR3 1600 MHz
Storage 120GB Samsung 840 EVO SSD
Graphics Nvidia GeForce GTX 860M
Display 13.3-inch Matte IPS LED, 1920x1080
Webcam 2.0MP
Battery 5600 mAh, 62.16Wh
Size (MM): 32H x 330W x 228D
Weight 2.04kg

Linux and laptops don't always make for the happiest of bedfellows. Custom hardware, coupled with the reluctance of manufacturers to share driver information, means that Linux support ranges from pretty good (for example, on older Thinkpads) to utterly terrible. If you're running Linux on your laptop, you've probably encountered some kind of issue, whether it's to do with battery life, suspend/hibernate or the webcam. A few machines work perfectly – but they're rare.

So when Entroware arrived on the scene as a vendor selling PCs and laptops with Linux pre-installed, we were naturally curious. And doubly so, because the small UK-based company didn't just throw out some generic machines and try to grab cash from desperate Linux users, but actually went out to the community to ask what people wanted. Entroware asked /r/linux on Reddit: What would you like to see from Linux computer retailers? There were almost 200 responses, and Entroware has taken them into account with its new flagship laptop, the Proteus.

We were lent a review unit for a couple of weeks, so have spent quite a bit of time with it. It's a boxy, angular machine, with black plastic on the underside, silvery plastic around the keyboard, and a slightly rubberised black top. The machine's original design manufacturer is Clevo (model W230SS), and it's sold by resellers in some markets as a gaming laptop.

We love the keyboard. It's a chiclet design, quiet and with chunky Enter and Backspace keys. (Our



This image shows the US keyboard layout; the UK model has satisfyingly large Enter and Backspace keys.

review unit was supplied with Windows logo keys, but Entroware aims to change those.) The keyboard is backlit, the keys themselves have a decent amount of travel, and there's barely any flex behind them – it feels very well made. The screen exhibits a little more flexing under pressure, but not to any scary degree.

But here we come to our first minor gripe: the trackpad. It's not bad, but it's just small. Sure, this

The origins of Entroware

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LV How did Entroware get started?
Anthony Pich: The idea to start the company was made after I bought a new laptop preloaded with Windows. After immediately formatting it and installing Ubuntu, due to poor hardware support, I had to mess around with drivers and configuration files with most updates. When we looked at buying machines that

were Linux compatible out of the box, we found that the UK's offerings were expensive and not customisable. Even manufacturers overseas seem to be price gouging, so we decided to source the parts ourselves.

LV How many people work there, and what do you do?
AP: As we are still very much in our infancy, we have two highly trained employees, whose responsibilities vary from manufacturing and quality control to marketing and accounting. For hardware

research and testing, we like to involve the whole team. We will be taking on more staff in the coming weeks to coincide with the launch of EU shipping.

LV What's the biggest challenge in selling Linux-compatible laptops?
AP: Our biggest challenges so far have stemmed from hardware compatibility. With each product launch, we thoroughly research and stress test every individual component. This includes graphics cards and SSDs to less obvious components such as Bluetooth and card readers.

is only a 13-inch laptop, but we've seen bigger on other similarly sized machines, and when you've tried the giant football-field-esque trackpads on Apple's laptops, it's hard to go back.

You're hot then you're cold

The front of the machine contains power/activity LEDs and SD card slot, while the right provides access to three USB 3.0 ports, HDMI, VGA, Ethernet, power and a Kensington lock. On the left is an extra USB 2 port, headphone and mic ports, and a grille for the fan. And this is the second of our gripes: the fan positioning. The cooling system sucks in air from underneath the laptop, and blows it out of the left-hand side. This means you always need to use it on a flat surface (so not directly on your lap or a bed, in case you block the vent underneath). And if you're a left-hander, with a mouse plugged in, you'll feel a steady stream of warm air on your hand.

On the upside, the machine stayed cool in our testing, even when stressing both CPU cores with maximum load, and the fans weren't especially noisy unless at absolute peak. Most importantly, the fans are barely audible when playing HD video – so you can enjoy movies without being distracted.

Onto the screen: it's a 13.3-inch IPS LED panel with 1920x1080 resolution. (An ultra high-res 3200x1800 display is available for an extra £50, but as HiDPI support on Linux is a mixed bag right now, we wouldn't recommend it unless you absolutely need it.) The contrast and horizontal viewing angles are good, although we noticed a tiny amount of light bleed from the bottom of the display when showing a full black screen – it's not annoying though.

Performance will depend on the chip you choose when configuring the machine: the £649 unit is equipped with a dual-core Intel i3 at 2.5GHz, but you can ramp it up to a quad-core i7 at 2.5GHz for an extra £95, or go full whack for a 2.9-GHz i7 for an extra £374. Similarly, the base unit is supplied with 4GB of RAM, but you can bump it up to 8GB for £30 or 16GB for £90. All models ship with Nvidia GeForce GTX 860M graphics with 2GB RAM.

But what's the battery life like? On our Core i5 review machine, with middle-level screen brightness and low keyboard backlight, we did some web browsing, played half an hour of *Minecraft*, and had an internet radio station running all the time (Flash, using around 7% CPU). With this setup we eked out just over four hours from the battery. If you're doing light browsing and typing work, you can expect to get over five hours. Suspend worked out of the box, taking five seconds to suspend and the same amount of time to resume.

Upgrade-friendly

Excellent, the Proteus is easy to upgrade and maintain: just remove four cross-head screws from the panel on the underside of the machine, and you get access to the hard drive, RAM slots, Wi-Fi card



The top has a slightly rubberised feel, which looks great but needs the occasional wipe to remove fingerprints.

slot, and even the heatsink and fan. As Linux users we like to tinker with things, so we don't want sealed-up, locked-down machines that can't be opened without all sorts of hassle (cough, Apple). So plus points for Entroware here.

The laptop is bundled with Ubuntu 14.10; that's the OS that Entroware officially supports, but the company told us that it will try to assist users if they have problems on a different distro. Even if you don't want to run Ubuntu, at least you know that the hardware has been checked for Linux compatibility and everything should work, given the right configuration.

In all, the Proteus is a good all-round portable workstation. It packs plenty of power for the price – especially if you bump it up to 8GB of RAM and add an SSD – and it's also well built with a lovely keyboard. The dinky trackpad and underside fan vent fan are slight downers, but they won't be an problem for everyone. And even if those issues are making you think twice, there's still the matter of supporting Linux-friendly companies.

Would you rather buy a laptop with a slightly better cooling layout from a giant faceless company that doesn't give a hoot about Linux, and that forces you to pay the Windows tax? Or would you rather support a new Linux-focused company that's easy to talk to? We'd say the latter makes more sense. 🐧

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LINUX VOICE VERDICT

A solid workhorse with decent specs and battery life, and a smashing keyboard, from an accessible, Linux-friendly company. A good purchase.

