System76’s Lemur Pro: A powerful, ultralight OEM Linux laptop

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- Lemur Pro comes in a large box for such a small, sleek laptop.
  Jim Salter
- I’m not big on unboxing, but the print on the inside of System76’s boxes is undeniably fun. My son got a good week of play and crafting out of the similar box my own Galago Pro arrived in last year.
  Jim Salter
- System76 eschews foam for its packaging. Instead, the company uses origami-ed heavy cardboard, with plastic wrap pulled taut by the way the cardboard is folded.
  Jim Salter
- Once you unfold the cardboard “frame,” the plastic sheeting holding your laptop tightly in becomes very loose, and the laptop slides right out.
  Jim Salter
- The first impression of the unwrapped Lemur Pro is very good. The minimal logo laser-etched in bright white on the dark magnesium alloy chassis is striking.
  Jim Salter
- It takes significantly less time and annoyance to power your way through Pop!_OS’s new user wizard than it does to get through the one for Windows 10.
  Jim Salter

System76’s Lemur Pro is a 14.1-inch, lightweight powerhouse of an OEM Linux laptop, with an attractive black-finished magnesium-aluminum alloy chassis. If you’re looking for a laptop that gets the occasional jealous look at coffee shops (or technical conferences), the Lemur Pro will not disappoint.

System76 Lemur Pro

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As configured at $1,563, the Lemur Pro is not a cheap laptop—but it doesn’t look, feel, or perform like one, either. The Intel Comet Lake CPU wouldn’t be our first choice if we designed a laptop from scratch, but as an entire system, it’s hard to find much fault with the Lemur Pro—particularly when limiting the field to OEM Linux laptops alone.

As always, “the unboxing experience” isn’t exactly at the forefront of our review criteria—but if it’s important to you, System76 won’t leave you hanging. The inside of the box is gaily printed with fun, golden-age sci-fi motifs that your kids might appreciate even if you don’t, and the laptop is protected by folded heavy cardboard rather than foam bricks. It’s lightweight, eco-friendly, doesn’t leave a mess on the floor, and is highly reusable to boot—as long as you don’t make the unnecessary mistake of cutting it with a knife, that is.

Once you’ve got the laptop out and fired up, the experience remains pleasant. The OEM Pop!_OS Linux distribution’s new user setup wizard is brief, to the point, and mercifully free of Cortana’s “friendly” babble. You’re prompted to choose a keyboard style, choose whether to enable location services, connect your Wi-Fi, and confirm your time zone. With that done, name your account and pick a password, and you’re ready

to play.

Specifications

- Left side, L-R: DC barrel jack, full-size HDMI, USB 3.1 type A, USB type C.
  Jim Salter
- Right side, L-R: power button, microSD slot, 3.5mm combo audio jack, USB 3.1 type A, Kensington lock slot.
  Jim Salter

Specs at a glance: Lemur Pro, as reviewed	
OS	Pop!_OS 20.04 LTS
CPU	4c/8t Intel i7-10510u
RAM	40GiB DDR4 (8GiB + 32GiB)
GPU	integrated Intel UHD 620
Wi-Fi	dual-band, 1×1 Intel Wireless-AC 9462
SSD	500GB Samsung 970 Evo Plus NVMe
Battery	73Wh
Webcam	720p, top bezel

Display	14.1″ matte 1080p
Connectivity	**left side:** • DC barrel jack • full-size HDMI out • USB 3.1 type A • USB type C **right side:** • 3.5mm phones/mic combo jack • MicroSD card slot • USB 3.1 type A • Kensington lock slot
Price as tested	$1,563 as configured

With 40GiB of RAM and a 500GiB Samsung Evo Plus SSD, our Comet Lake i7-powered Lemur Pro review sample was very close to System 76's absolute top-of-line loadout. The only upgrade we did not get was to the Wi-Fi, which was the base Intel Wireless-AC 9462 rather than the optional Wi-Fi 6 upgrade (presumably, though not specified, Intel AX-200).

We do have a nit to pick with the specifications as listed on System76's Lemur Pro configuration page, though. We don't really like the fact that it doesn't specify *what* Wi-Fi card you're getting by model; instead, the company chooses to identify them rather vaguely by PHY rate and/or Wi-Fi 6 support… but what's worse, System76 gets the PHY rate it's vaguely identifying the options with wrong.

The two Wi-Fi options available are shown as “up to 867Mbps Wi-Fi + Bluetooth” and “Upgrade to Wi-Fi 6 + Bluetooth,” but neither one accurately describes the system we received. The Wireless-AC 9462 chipset in our Lemur Pro test unit is a dual-band, 1×1 chipset with support for 5GHz channels up to 80MHz only—and the PHY rate for such a connection is 433Mbps, not 867Mbps.

This, of course, is entirely aside from the fact that PHY rates do not correspond to actual data transmission rates, and the entire industry should stop misleading customers with them. We’re not trying to lay the blame at System76’s feet for that entire industry-wide practice… but if you’re *going* to refer vaguely to your Wi-Fi chipset by PHY rates rather than specifying the actual model used, it’s important to at least get that PHY rate correct.

Aside from the labeling *faux pas*, we’re happy with the rest of the loadout on the Lemur Pro. The Samsung Evo Plus NVMe drive is a good choice, the Comet Lake CPU is snappy, and the 73Wh battery is a hoss—particularly in such a slim (15.5mm), lightweight (2.4 lb) laptop. The system can be charged with the 65W DC barrel jack charger (included) or at up to the same rate via its left-side USB-C port (USB charger not included).

Aside from the 1×1 base Wi-Fi, the weakest component in our opinion is the 720p webcam—not premium gear, but quite adequate for casual personal or business teleconferencing. We also found the touchpad mediocre—it tracked fine when positioning the cursor, but missed the occasional single or double-fingered tap.

- My usual impression of laptop keyboards is either “it’s fine” or “it’s an abomination.” The Lemur Pro’s is one of the few that gives me an outright *positive* impression.
  Jim Salter

- I do miss the Ubuntu logo on the Super key, from the pre-Pop!_OS days. Whatever this replacement icon is, it does not spark joy.
  Jim Salter

The *best* feature of the Lemur Pro is its keyboard. It's an absolute joy. Typing at great length for the week or so we used the Lemur Pro produced no errors and no frustration. The magnesium alloy chassis means just about zero flex when typing, the travel, weight, and spacing are good, and—apart from the usual laptop-style compressed arrow key layout some of you hate—the keys' size and position felt flawless as well.

We do miss the Ubuntu logo that used to live on the Super key, though. Granted, the logo isn't really appropriate anymore, given that the system doesn't ship with Ubuntu by default. But the generic icon replacing it didn't really grab us.

Performance and battery life

- If you're looking for a long battery life—specifically, long battery life *under Linux*—you'll have difficulty doing better than the Lemur Pro.
  Jim Salter
- Multithreaded CPU performance is the Lemur Pro's weakest area—which is unsurprising, given what a weak year 2020 was for Intel CPUs.
  Jim Salter
- The Lemur Pro does fine on *single*-threaded CPU performance, of course. There's rarely much to choose from there.
  Jim Salter

Since the Lemur Pro is an OEM Linux laptop, we're sharply limited on meaningful desktop-experience benchmarking. Geekbench 5 is thankfully cross-platform, so we can see there that the Lemur Pro is great single-threaded, but multithreaded

performance is pretty underwhelming when compared to other laptops with high-end processors.

This shouldn't come as any surprise—Intel hasn't exactly had a banner year for CPU processors, and the four-core i7-10510u isn't one of the faster Comet Lake i7 CPUs. With that said, these were noticeably unimpressive results even by comparison with other i7-10510u-powered laptops—scores in the low- to mid-3,000s are more common for laptops with that CPU on the public Geekbench 5 leaderboards. System76 has tuned the Lemur Pro for aggressive battery life, not aggressive raw performance.

We're not sure we're *mad* about that, though. While the Lemur Pro doesn't get every last drop of performance out of its midgrade i7 CPU, it does offer significantly better battery runtime under Linux than we've seen out of any recently reviewed laptop. Running the BBC's "10 Hours of Relaxing Oceanscapes" video at full-screen 1080p and max brightness, the Lemur Pro beat our current champion, last year's HP Elite Dragonfly, by nearly an hour.

Conclusions

If you're looking for a solid general-purpose Linux laptop that looks great, feels great to type on, and has crazy-long battery life, the Lemur Pro will suit you nicely. Although its Intel Comet Lake CPU choices are mediocre performers, you're unlikely to feel "Ugh, this laptop is slow" in normal use. The 298-nit display is bright, sharp, and attractive; the keyboard is great; and the SSD is a top pick also.

Developers who are constantly compiling code—or anybody else with really heavy multithreaded workloads—might consider passing up the Lemur Pro in favor of a Ryzen 4000-based laptop, though. Its single-threaded performance is good, and *most* tasks don't really need more than four cores… but the ones that do will run tremendously faster on Ryzen 4000-based

systems. You can also get increased multithreaded performance out of a system with one of the higher-end, six-threaded Intel Comet Lake laptops, if you're allergic to AMD.

We also can't recommend the Lemur Pro for gaming. Comet Lake's built-in UHD 620 graphics is plenty for normal desktop use, video playback, or *casual* gaming—but Ice Lake's Iris+ or Ryzen 4000's Vega integrated graphics will both kick sand in its face and laugh at it, to say nothing of what a discrete Nvidia GPU would do.

The Good

- Truly excellent look and feel—and not just "for a Linux laptop"
- Outstanding keyboard
- Bright, attractive display
- The best battery life we've ever seen from a Linux laptop
- Lightweight
- Full-size HDMI out
- USB-C charging supported

The Bad

- Touchpad could be better—missed a tap-to-click every now and then
- Intel UHD 620 graphics don't game well

The Ugly

- Mislabeled 1×1 base Wi-Fi—the Wi-Fi 6 upgrade is definitely worth considering

Listing image by Jim Salter

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