

Anker, Bambu, Prusa, Creality: 3D printers suddenly have a need for speed

3D printers can take hours or even days to produce simple parts – but it only took two weeks for the biggest names in consumer 3D printing to declare that era is over.

On March 29th, Prusa announced the \$799 Prusa MK4, its first new printer in four years. The company boasts it can print a “draft mode” 3DBenchy boat in under 20 minutes, four times faster than the 80 minutes it took with the previous generation.

On April 9th, Creality – makers of the famous Ender 3 – announced the new \$599 K1 and K1 Max printers with 600mm/s default speeds, claiming they can now print a Benchy in just 13 minutes.

Speed isn’t everything. It doesn’t matter how fast your printer can throw its extruder around if the result is a pile of goop – or really anywhere below the level of quality you need.

“Input shaping” and “pressure advance” are the buzzwords in high-speed printing

But each of these companies is suggesting (if not downright promising) that beefed-up components and updated algorithms let their printers maintain these speeds. Input shaping changes *how* they throw the tool head around, pressure advance

maintains a proper flow of plastic, and auto-leveling features make sure your part literally starts out on the right foot. All have filament runout sensors to pause your print when you're out of plastic, and some feature a camera with computer vision that claims to automatically detect errors.

What's more, many of these companies are promising that kind of printing experience right out of the box. While you'll still need to pay \$1,099 for a Prusa MK4 that's fully assembled, the \$599 Creality K1 is a monolithic machine that it claims is all ready to go, enclosure and all. The Bambu and AnkerMake each claim 15-minute setup, whether you're attaching the AnkerMake's tower to its base or freeing the Bambu's parts from their confinement and connecting its LCD screen.

And I can tell you, having tested the AnkerMake M5 for months, that those claims aren't far-fetched. Here is a 3DBenchy printed on the AnkerMake at 250mm/s and another at 500mm/s, using Anker's default slicer settings.

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dark: [>a: hover]: text-gray-bd dark: [>a: hover]: shadow-underline-gray [>a]: shadow-underline-gray-63 dark: [>a]: text-gray-bd dark: [>a]: shadow-underline-gray">Photo by Sean Hollister / The Verge

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dark: [>a: hover]: text-gray-bd dark: [>a: hover]: shadow-underline-gray [>a]: shadow-underline-gray-63 dark: [>a]: text-gray-bd dark: [>a]: shadow-underline-gray">Photo by Sean Hollister / The Verge

They are *far* from perfect. But my old Ender 3 Pro would have produced a pile of plastic spaghetti at either speed.

This printer made these parts practically out of the box.

I'm working on a full review of the AnkerMake M5 and spoiler alert: I can't recommend it without reservations. (For one thing, I've found its "AI camera" absolutely useless so far.)

But I'm so happy there's more competition in the space because competition is clearly doing its job.

I can't wait for the day you can just buy a 3D printer, load some filament, pick a 3D model to print, and expect it to just work.

<https://www.theverge.com/2023/4/13/23681219/anker-bambu-prusa-creality-3d-printer-speed-arms-race>