

RepRapPro Ormerod Complete 3D Printing Kit

3D printing is fast becoming an essential part of the design process for both electronics and mechanics, with the ability to create quick turn-around prototypes saving months in the design cycle. Thanks to the RepRap Project, 3D printing is now low-cost and can be used for small production runs.

The RepRapPro Ormerod is one of the most versatile 3D printers available. Its primary design goal is to offer a printer which is easy to expand in functionality, fast to replicate, and fast to assemble and commission. This new model builds on the already established RepRapPro product portfolio which has undergone brisk development and heavy testing since inception in 2004.

The Ormerod uses a process known as fused filament fabrication, which it employs to build 3-dimensional objects in a range of plastics and in a variety of colours. This process enables the user to create almost any shape which can be modelled on a computer, including some which could not be produced by traditional manufacturing techniques at all.

The RepRapPro Ormerod is a monochrome 3D printer configured to work with one type of plastic at a time. However, the RepRapPro Ormerod head is fundamentally designed to work with three deposition heads and an upgrade kit will be available soon for this machine. The RepRapPro Ormerod is shipped as kit of parts containing all the components required to get you printing. Full assembly is required.

Specifications:

- Full open-source self-replicating RepRap
- New 32-bit Arduino-compatible Duet electronics enable control via a web-browser
- Wiring loom for simple plug-in connection – no soldering
- IR probing for self-aligned printing – no bed adjustment required
- Build volume: 200x200x200mm
- Overall size: 500x460x410mm
- Printing materials: ABS, PLA, 1.75mm diameter thermoplastic.
- Build surface: PCB-heated bed to reduce complexity of assembly and to ensure parts do not warp.
- Computer interface: USB
- X-carriage: Three Z-adjustable deposition head mounts; one head supplied.
- Standard nozzle size: 0.5mm
- Accuracy: 0.1mm*
- Resolution: 0.0125mm*
- Building speed: 1,800 mm/min
- Moving speed: 12,000 mm/min
- Deposition rate: 33 cm³ / hr
- Motion: Linear ball bearings on X and Y axes, Igus low friction bushings on Z axis.
- Pre-soldered electronics with built-in microSD card slot for standalone printing.
- Enhancements to the printed parts to improve the ease of assembly of the X and Y axes

*The resolution is how fine a step the motors can make. The accuracy is how accurately the machine can position things. So the resolution is finer than the accuracy because the accuracy is influenced by other factors, for example how well the timing belt is manufactured.

Contents include:

- All printed parts
- All hardware (threaded and smooth rods, screws, nuts, washers, belts, bearings etc)
- Pre-soldered and programmed electronics
- MicroSD card + adapter
- Heated PCB build surface (requires eight soldered joints)
- Motors
- Nozzle assembly and extruder drive mechanism
- 100m of 1.75mm diameter PLA filament (approx 300g) for printing with
- Plug supplied (EU, UK, & AUS)
- Software to run the machine is also provided with both, including the firmware for the electronics
- 1x reel of filament

The above contents are subject to improvement without notice. Complete kits will always be provided with all components required to get you printing.