





All3DP

**BEST
3D PRINTER**

PRUSA RESEARCH
Original Prusa i3 MK3S

Summer 2019

WITH THE ORIGINAL PRUSA i3 MK3S WE ARE INTRODUCING:

NEW FILAMENT SENSOR



The previous sensor didn't work well with some specific filaments. The new sensor is using the optical sensor which is triggered by a simple mechanical lever. This sensor doesn't care about the optical properties of the filament and cannot die because of mechanical wear.

BETTER SERVICE & PRINTS



Thanks to completely reworked extruder changing the nozzle or PTFE tube is easier than ever before. As a bonus, the nozzle and the extruder motor is much closer to the X axis, this means less resonance and better prints too. MK3S is also better for printing from flexible materials.

DOZENS OF TWEAKS



MK3S includes all the cumulative upgrades from the entire life cycle of the MK3 like genuine Gates belts, textile sleeves, a new Einsy case for easier Raspberry Pi connection, an anti-rust coating on smooth PEI sheets and, of course, dozens of firmware and plastic parts enhancements.

[Read more about features of Original Prusa i3 MK3 below!](#)

The Original Prusa i3 MK3/S is the "**Best 3D printer**" according to [All3DP.com](#) and [MAKE: Magazine](#), where MK3/S also received "Editor's Choice" as the highest-rated 3D printer in 2019 Digital Fabrication Guide. The MK3S features a rebuilt extruder, numerous sensors, and various smart features. Plus, a new **magnetic MK52 heated bed with replaceable PEI spring steel print sheet**. Dozens of various tweaks and upgrades improve the reliability and ease of use. MK3S's functionality can be further expended with the unique [Multi-Material Upgrade 2S add-on](#) for printing with up to 5 materials simultaneously.



WHAT WE ARE PROUD OF...

The most significant features of Original Prusa i3 MK3S

REMOVABLE HEATBED



The new MK3S Magnetic HeatBed holds a replaceable alloy spring steel sheet with a PEI surface. You can choose between two types of sheets - smooth PEI sheet (default option, already available) and textured powder coated PEI (this will be available later).

FRAME STABILITY



With the MK3S we are introducing the reworked Y axis from **aluminum extrusion**. It provides the same rigidity as some other printers while providing the sleek look of our milled Dural frame. The frame is also optimized to add 10 mm of Z height totaling at 210 mm.

SILENT & FASTER PRINTING



Thanks to the new Trinamic2130 drivers and Noctua fan, the MK3S is extremely quiet in the **stealth mode**. But the MK3S is quieter than 99 % of the available printers, even in the Normal mode. In normal mode, we have also increased the printing speed. Now you can achieve more than 200 mm/s!

POWER PANIC



Have you ever tripped over the extension cord and lost a 20-hours print? MK3S will save you! The printer can **fully recover from the loss of power**. It detects power interruption and shuts down the heatbed and extruder heating. After restoring the power, you can continue with printing.

FILAMENT SENSOR



With MK3S we are introducing a completely reworked extruder with a new filament sensor. The new sensor is using the optical sensor which is triggered by a simple mechanical lever. This sensor doesn't care about the optical properties of the filament (it can be completely invisible) and cannot die because of mechanical wear.

PREVENTS SHIFTED LAYERS



The new **EINSY RAMBo** motherboard with Trinamic drivers not only makes the MK3S silent but it also can **detect skipped steps and layer shifting**. This is a big step forward in the reliability of the printer and the user comfort. You can say goodbye to ugly prints!

BONDTECH EXTRUDER



The extruder has now upgraded with **Bondtech drive gear**. It grips the filament from both sides, increasing the push force and making the printer more **reliable**. This is useful especially for flexible filaments. Also, the print fan now cools part from two sides, increasing the overall performance.

P.I.N.D.A. 2 PROBE



MK3S has two new thermistors. The first one measures ambient temperature on the electronics, preventing MINTEMP errors in rooms with 15°C or less. The second one is embedded in the **new P.I.N.D.A. 2 probe** to compensate for temperature drift. So the first layer will always be spot on!

E3D V6 NOZZLE



E3D V6 is market-leading all metal hotend well known for its high-temperature performance. The MK3S utilizes a **custom** heatbreak developed together with E3D. The reliability has proved in our Multi Material upgrade and continues to deliver great performance in surprisingly small form factor.

Read more about features of our brand new Original Prusa i3 MK3S in the article at PrusaPrinters.org

FULL FEATURES LIST (MAY 2019 EDITION)

NEW FEATURES

- **Removable magnetic spring steel sheet with PEI surface** (*)
- Brand new **EINSY RAMBo** motherboard
- Silent **Trinamic drivers** with 256 microstepping
- Faster printing: **200+ mm/s**
- Sensorless homing for X and Y axes
- Detection and **recovery of shifted layers**
- **Improved frame rigidity** with aluminium extrusions
- **Power loss detection and recovery**
- Better cooling from both sides of the object
- Optional WIFI with Octoprint interface **included**
- **Bondtech extruder drive** - filament is driven from both sides
- **IR filament sensor**
- Automatic loading of filament when filament is inserted
- Both extruder cooling fan and print cooling fan **detect RPM**. When extruder fan is blocked, the printer will stop to prevent damage of extruder. Same applies for the print cooling fan.
- Extra silent **Noctua fan**
- New P.I.N.D.A. 2 probe with **included thermistor** - faster temperature calibration
- Room **ambient temperature sensor**

* Consumable parts, such as PEI sheets (smooth, textured, etc.) are not covered by warranty as the coatings are designed to diminish over time unless failure has occurred due to a defect in materials or workmanship. Cosmetic damage, including but not limited to scratches, dents, cracks or other cosmetic damage is also not covered by the warranty. Only defective sheets on arrival are covered by warranty.

BASIC FEATURES

- **Great build volume** – 11,025 cm³ (25 x 21 x 21 cm or 9,84 x 8,3 x 8,3 in)
- Integrated LCD and SD card controller (8GB included)
- **0.4mm nozzle** (easily changeable) for 1.75 mm filament
- Layer height from 0.05 mm
- **Automatic mesh bed levelling**
- **Heatbed with cold corners compensation** – for warpless 3D printing from any material
- **Automatic skew axes compensation**
- **Hassle free PEI print surface** - no glass, no glue, no ABS juice
- Supported materials – PLA, ABS, PET, HIPS, Flex PP, Ninjaflex, Laywood, Laybrick, Nylon, Bamboofill, Bronzefill, ASA, T-Glase, Carbon-fibers enhanced filaments, Polycarbonates...
- Easy **multicolor** printing based on layer height
- **1 kg (2 lbs) silver PLA filament included**
- **Kit box dimensions:** 11 kg, 42×43×24 cm; 16.5×16.9×9.5 in (L×H×W)
- **Printer dimensions (without spool):** 7 kg, 50×55×40 cm; 19.6×21.6×15.7 in (L×H×W)
- **Power consumption:** PLA settings: 80W / ABS settings: 120W