Ultimaker S5

Powerful. Reliable. Versatile.

Ultimaker

Ultimaker S5

Office-friendly 3D printer, industrial-class results

Meet the easy-to-use desktop 3D printer with a large build volume that delivers accurate, industrial-grade parts, time and again.

Built to run continuously and maximize uptime, Ultimaker S5 combines dual extrusion, advanced connectivity, and an open filament system – ready to make 3D printing accessible for even more applications, from rapid prototyping to creating on-demand tooling and end-use parts.

Scale up with powerful 3D printing

A large build volume for a desktop 3D printer lets you print bigger models, or put multiple parts on a single build plate so you can meet demand with maximum efficiency.

Design freedom for even more applications

Print with a wide range of engineering materials and easy-to-remove support. Ultimaker's dual-extrusion technology enables designers and engineers to create complex geometries, for applications from prototyping to manufacturing aids and end-use parts.

Reliability from first layer to finished part

Enhanced multi-point bed leveling ensures a perfect first layer by compensating for slight variations in build plate topography, and sensors monitor material flow while printing – so you can trust the S5 to do its job while you do yours.

Easy control at your fingertips

Touchscreen control, swappable print cores, and notifications to your desktop or the new Ultimaker app all help make operating the Ultimaker S5 easy, so there's no need for training. This is powerful 3D printing, without the hassle.

Learn more at ultimaker.com

Reliability at scale

Every day, hundreds of thousands of engineers, designers, architects, and medical professionals around the world rely on Ultimaker 3D printers for their work. Ultimaker S5 takes this dependability and performance to the next level with a range of new and refined features.

Bigger build volume

A build volume of 330 x 240 x 300 mm (13 x 9.4 x 11.8 inches) is the biggest yet in an Ultimaker 3D printer, but still fits comfortably on your desk. Thoroughly tested printing profiles in our Ultimaker Cura software, smart printer features, and a new material option – Tough PLA – ensure great results and unparalleled ease of use even with large prints.

Enhanced first-layer adhesion

A quality 3D printed part is built on a good first layer, which needs a level bed. The Ultimaker S5 print head's capacitive sensor scans the build plate at multiple points and compensates for any tiny variations in its surface by adjusting the Z-axis height in your print's first layers, ensuring your print starts perfectly, time and again.

Improved printing environment

Glass doors help control airflow inside the printer for even better print quality and reliability, as well as providing added safety. A new anodized aluminum build plate also gives a more reliable printing experience for engineering materials and a more consistent surface finish on the base of your model. A glass plate is also included.

Filament flow sensor

Ultimaker S5 detects if you need to replenish filament during a print, pauses, and notifies you to add more material before resuming. The result? You can still finish a print even if you run out of material – and more successful prints means greater return on your investment, and increased efficiency.
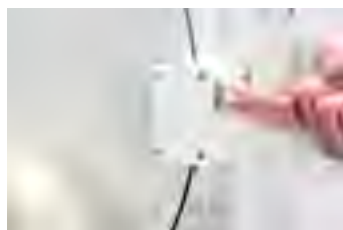
Dual extrusion for complex designs

Ultimaker's dual-extrusion technology is the most reliable on the market, enabling you to print in two materials or colors. Print with Nylon, CPE, or PLA combined with water-soluble PVA support material to realize complex, technical models, then simply dissolve away supports to leave a flawless surface finish.

Fast, customizable setup with print cores

Material-matching print cores with built-in EEPROM chips are auto-detected by the printer, minimizing downtime during configuration. Swap print cores in seconds to switch from a build and support material combination to dual-color 3D printing. Print cores are available in a range of nozzle sizes, from 0.8 mm for rapid prints down to 0.25 mm for fine detail.

Productivity has never been easier

A 4.7-inch (11.9 cm) touch display makes operation effortless, with images to help explain how to configure the printer, plus a visual preview of your print. Ultimaker S5 is designed for an easy user experience in every way, with the power adapter now integrated into the printer for easier installation, especially when placed on a rack.

Discover a seamless, end-to-end 3D printing workflow

At Ultimaker, we know that the 3D printer is only one part of a successful 3D printing experience. That's why we offer an integrated solution of powerful software, reliable hardware, and industrial-grade materials, all backed up by global support coverage – so your complete workflow is taken care of.

Ultimaker app

You can now control your Ultimaker 3D printers with a few taps from your phone or tablet when you're on the same local network, and get notifications wherever you are so you can always stay updated on your print's progress.

The Ultimaker app is available free on Android and iOS from May 15, 2018, and works with Ultimaker S5 and Ultimaker 3 3D printers.

Ultimaker S5 – designed to connect

The Ultimaker S5's built-in connectivity delivers a seamless 3D printing experience, so you spend less time setting up and checking your 3D printer and more focusing on important tasks.

- Print over WiFi, Ethernet connection, or from a USB stick
- NFC technology automatically detects which material is loaded
- Over-the-air firmware updates make adding the latest features simple

Powerful Ultimaker Cura software

Trusted by more than 2 million users, Ultimaker Cura prepares your 3D model for printing. And with preconfigured Ultimaker S5 profiles, you get the best results instantly.

- Load your design file and in seconds you're ready to 3D print
- Or take a deep dive into 200 plus settings for fine-tuned results
- Free to download, with no need for user licenses or costly training

Do more with Cura Connect

Connect one or more network-enabled Ultimaker 3D printers and create your own automated, mini-production line – perfect for 3D printing in the office.

- Send print jobs to a central queue, monitor progress and track maintenance
- As soon as a print is removed, the next starts automatically
- Available free on desktop as part of Ultimaker Cura, or the Ultimaker app

Learn more at ultimaker.com

Materials to suit your needs

Whether you need quick and simple concept models, strong tooling ready for the wear and tear of the production line, or parts with special resistant properties, it's all possible with Ultimaker materials. Or take advantage of the Ultimaker S5's open filament system for a custom material solution.

Our range of material options is extensively tested by our engineers to give the best results with Ultimaker 3D printers. We also develop preconfigured printing profiles in Ultimaker Cura, so there's no wasted time choosing printing parameters.

Tough PLA

Tough like ABS, easy to print

With an impact strength similar to Ultimaker ABS, Tough PLA is perfect for reliably printing technical models at larger sizes. As safe and easy to use as regular PLA (polylactic acid), you get peace of mind with big prints knowing there will be no delamination or warping.

Our Tough PLA is also compatible with Ultimaker support materials (PVA and Breakaway), so you have full geometric freedom ideal for designing tough functional prototypes or tooling.

Nylon

Abrasion-resistant, and durable

A fantastic all-rounder. Our Nylon offers high strength-to-weight ratio, plus excellent durability and low friction. Handling up to 80 °C, it's a great choice for functional prototypes, end-use parts, and tools.

ABS

Durable and tough

ABS (acrylonitrile butadiene styrene) can withstand temperatures of up to 85 °C. It has great mechanical properties, making it suitable for complex end-use parts and functional prototypes.

PLA
Safe and fast to print

PLA features good tensile strength and surface quality, ideal for high-resolution prints and hassle-free prototypes with aesthetic detail.

PC
Strong, tough, and heat-resistant

With PC (polycarbonate), you can print strong, tough parts that retain dimensional stability when subjected to temperatures as high as 110 °C.

CPE
Chemical-resistant and tough

CPE (co-polyester) is chemical-resistant, with great tensile and flexural strength. Choose for functional prototypes and mechanical parts.

CPE+
Heat, chemical-resistant, and tough

Offers added heat resistance for functional prototypes and mechanical parts, handling temperatures up to 100 °C, compared to CPE's 70 °C.

PP
Fatigue and chemical-resistant

PP (polypropylene) has excellent temperature, chemical, and fatigue resistance. A perfect choice for durable parts and prototypes.

TPU 95A
Semi-flexible and durable

Semi-flexible and chemical-resistant, our TPU boasts a Shore-A hardness of 95 and an elongation of as much as 580% at break. Handles up to 100 °C.

PVA
Water-soluble supports

PVA (polyvinyl alcohol) lets you print complex models with large overhangs, cavities, and intricate geometries, then dissolves away.

Breakaway
Quick-to-remove supports

Use Breakaway to support overhangs in your model, then peel away to leave a smooth surface finish and perfect dimensional accuracy.

Our dedicated network – your global support team

Ultimaker places quality at the heart of our company. That's why all our 3D printers and software come with lifetime technical support and customer service – wherever you are, and whenever you need it.

We select, train, and certify our service partners carefully, ensuring they have the right industry expertise and knowledge to provide you with the right level of support. You can be sure, whenever you get in contact, you'll be talking to someone with the credentials to help you, in your own language and time zone.

- **We care.** Your Ultimaker experience matters, and we're dedicated to ensuring it's a great one

- **We train.** Every Ultimaker service partner is fully trained and certified, without exception

- **We collaborate.** Ultimaker works closely with all partners, always improving and perfecting our services

- **We educate.** We constantly update our already extensive knowledge base with useful print resources, handy tips and informative guides

✓ Professional help in your time zone and language
✓ Spare parts and materials always in stock
✓ Local warranty ensuring you're well protected
✓ Online community of experts always ready to help

Ultimaker S5 Specifications

Printer and printing properties	Technology	Fused filament fabrication (FFF)
	Print head	Dual-extrusion print head with an auto-nozzle lifting system and swappable print cores
	Build volume	XYZ: 330 x 240 x 300 mm (13 x 9.4 x 11.8 inches) (left or right nozzle, or dual extrusion)
	Filament diameter	2.85 mm
	Layer resolution	0.25 mm nozzle: 150 - 60 micron 0.4 mm nozzle: 200 - 20 micron 0.8 mm nozzle: 600 - 20 micron
	XYZ resolution	6.9, 6.9, 2.5 micron
	Build speed	<24 mm³/s
	Build plate	Heated glass build plate Heated aluminum build plate (available fall 2018)
	Build plate temperature	20 - 140 °C
	Build plate leveling	Active leveling
	Supported materials	Optimized for: PLA, Tough PLA, Nylon, ABS, CPE, CPE+, PC, TPU 95A, PP, PVA, Breakaway (Also supports third-party materials) In the box: Ultimaker Tough PLA Black 750 g, Ultimaker PVA 750 g
	Feeder type	Dual-geared, abrasion-resistant (ready for composite materials)
	Nozzle diameter	0.25 mm, 0.4 mm, 0.8 mm
	Nozzle temperature	180 - 280 °C
	Nozzle heat up time	<2 min
	Build plate heat up time	<4 min (from 20 to 60 °C)
	Operating sound	50 dBA
	Power rating	500 W
	Material recognition	Auto-recognition with NFC scanner
	Connectivity	Wi-Fi, LAN, USB port
	Display	4.7-inch (11.9 cm) color touchscreen
	Language support	English, Dutch, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish, Simplified Chinese
	Monitoring	Live camera (view from desktop or app)
Physical dimensions	Dimensions	495 x 457 x 520 mm (19.5 x 18 x 20.5 inches) 495 x 585 x 780 mm (19.5 x 23 x 30.7 inches) (with bowden tubes and spool holder)
	Net weight	20.6 kg
	Shipping weight	29 kg
	Shipping box dimensions	650 x 600 x 700 mm
Ambient conditions	Operating ambient temperature	15 - 32 °C, 10 - 90% RH non-condensing
	Non-operating temperature	0 - 32 °C
Software	Supplied software	Ultimaker Cura, our free print preparation software Cura Connect, our free printer management solution
	Supported OS	MacOS, Windows and Linux
	Plugin integration	SolidWorks, Siemens NX
	File types	Ultimaker Cura: STL, OBJ, X3D, 3MF, BMP, GIF, JPG, PNG Printable formats: G, GCODE, GCODE.gz, UFP
Warranty and service	Warranty period	12 months
	Technical support	Lifetime support from Ultimaker's global network of certified service partners

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