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Origin® Two

High Accuracy 3D Printing

Engineered for end-use production

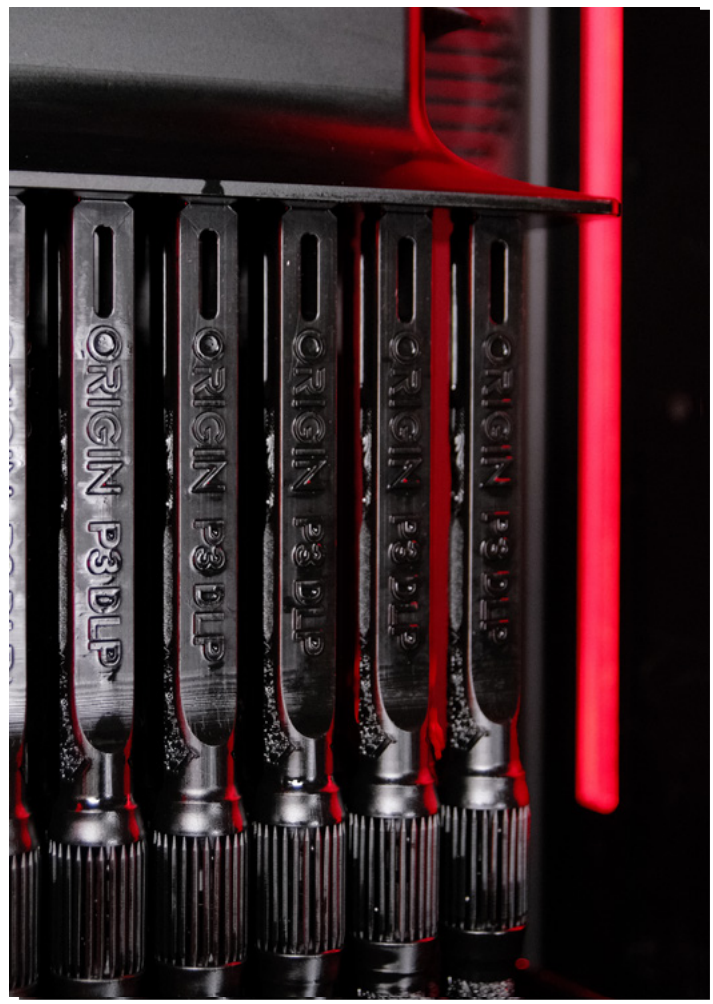
Elevating industrial 3D printing to a completely new level with unparalleled accuracy, proven repeatability, tight tolerances, and superb surface finish

3D printing has revolutionized product design and prototyping, but its true potential lies in solving supply chain and sourcing challenges as it offers an economic viable solution for small batches end-use production:

- Local, on-demand printing of spare parts for reduced inventory and next-day delivery.
- Bringing tooling and final production in-house to mitigate supply chain disruptions.
- Meeting volatile demand and quickly producing small run, cost effective, built-to-order quantities.
- Reducing SKUs through part consolidation using designs not possible with traditional methods.

Achieving these benefits requires access to specific 3D printing technology that can fulfill the most stringent end-use production standards—especially for accuracy, repeatability, surface finish, and functional and mechanical performance, surpassing prototyping capabilities and entry-base product quality.

Powered by P3™ DLP technology designed for the most demanding standards, the Origin platform offers a holistic solution with a meticulous combination of reliable hardware, sophisticated software, and high-quality materials, all carefully managed into a validated workflow to ensure that every component meets stringent standards, essential for real-world applications.



Part Quality & Performance

Achieve unparalleled accuracy, tight tolerances, excellent surface finish and durable physical properties.

Repeatability

Attain repeatable production while meeting your customers' stringent requirements, using a validated workflow.

Service & Support

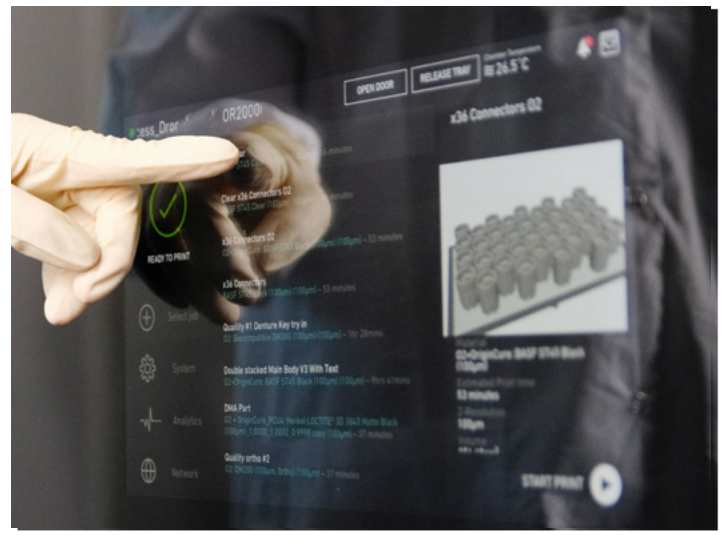
Our technicians will quickly set you up and keep you printing while our experts provide training and support so you get the most out of your investment.

Unwavering Process Control.

When we talk about industrial production, we're looking at the precise replication of your CAD model across all prints. From the first part to the hundredth or more, Origin Two repeatedly produces parts that meet your high standards, every time, with no surprises. No wonder all leading DLP material providers develop their high-performance materials on Origin printers!

Achieve Repeatability Without Recalibration

Origin Two delivers high accuracy and proven repeatability, without the need for recalibration of build heads between prints or even across different printers. The new build head and validated curing solution of Origin Cure™ lets you set up a print job once and simply repeat - today, tomorrow, or next month - with the same print results, anywhere in the world.



Benefit from the Tightest Tolerances

Tolerance defines the allowable variation in a part's dimensions vs. the CAD model. Origin Two achieves the tightest tolerances in 3D printing, with an XY and Z tolerance of up to +/-50 µm for validated applications and +/- 100 µm in general.

Certify Your Workflow with High-Temperature Printing

With its heated chamber, Origin Two constantly controls the processing temperature up to 60°C, for printing high-temperature and very high-viscosity materials. It makes Origin the system of choice for many UL- and FR/FST-certified workflows as well as DLP material developers.

Get Real-time Data and Printing Monitoring

With the ability to extract comprehensive data from the Origin Two system, you gain insights into every aspect of your production, from workflow efficiency to the perfection of each part. Monitor all your Origin printers at a glance to ensure maximum printer productivity and uptime.

Boost Your Throughput and Time-to-Part

Yes, print speed matters. But time-to-part and throughput of the whole process are the true relevant metrics for production efficiency. Origin Two excels with short post-processing times, often less than five minutes! P3 DLP technology achieves high green strength, minimizing curing time and outpacing alternatives like LCD or mSLA which demand longer curing times despite potentially faster print speeds

Enhance Post-Processing

Origin Cure™ enhances post-print curing process for Origin Two optimizing part accuracy and durability with its advanced 360-degree and multi-wavelength LED curing. It maintains intricate design elements and enhances the mechanical properties of the final product.

Reduce Print Management Complexity

GrabCAD Print™ for Origin offers intuitive, easy software to reduce print preparation time and fully control your workflow. Reduce prep time with automated support generation, slicing, and native CAD file support. Material freedom is the name of the game: go for a predefined profile by specific materials family, customize our validated materials to your needs, or develop your own materials with the OpenAM™ License. Choose between cloud-based or local solutions and benefit from software flexibility and integration with industry-leading solutions.

Achieve unmatched part quality and performance.

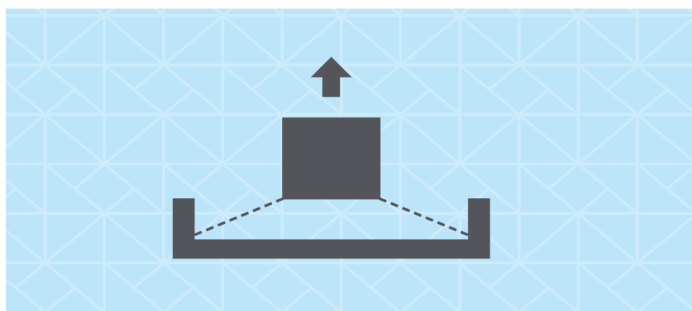
Print end-use parts with part quality and performance superior to your traditional manufacturing products. Powered by a unique combination of technological advances, Origin Two sets a new standard in precision additive manufacturing.

Highest Accuracy

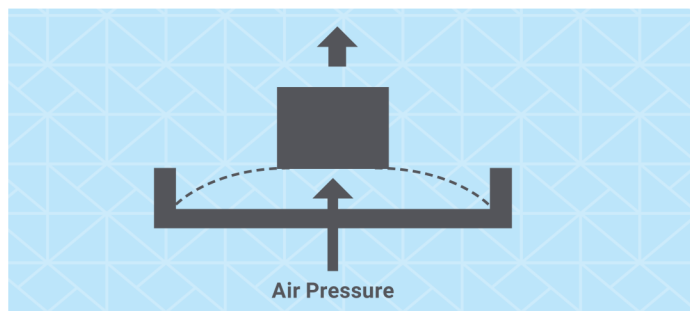
Powered by a new 5K DLP projector, the heart of any DLP system, Origin Two delivers the highest accuracy and smoothest surface finish of all resin technologies. It combines 38.5 µm pixel size and tight 2.5 standard deviation projector uniformity, to deliver accuracies up to +/-50 µm (selected applications) to +/-100 µm, consistently across builds and printers, without pixel-to-pixel light bleed. Running at 385nm, a wavelength to which resins respond better, it favors reduced through-cure and enhances higher accuracy compared to 405nm alternatives.

Surface Finish Comparable to Injection Molding

The advanced DLP projector contributes to the injection-molding quality surface of parts straight off the printer. In combination with the patented pneumatic mechanism, Origin Two achieves high surface smoothness while maintaining print speeds of less than 20 mm/hour. The lower separation forces of Origin Two enable printing with fewer supports, allowing you to skip additional post-processing.



Typical separation mechanisms apply strong pull forces on the printed part.



Origin's pneumatic separation mechanism applies much less separation force: the membrane gradually peels off each cured layer as the build platform goes up.

Large Cross-Sections and Fine Features

With the lower separation forces of the pneumatic mechanism, Origin Two adeptly handles large cross sections as well as fine details, offering maximum geometric flexibility.

Physical Properties for Functional End-Use Parts

With Origin Two, you not only get the widest range of high-performance materials in the industry, you also get a system that can accurately and repeatably print that broad variety – from high temperature resins to high-viscosity materials. Its heated build chamber constantly controls the temperature up to 60°C, and the new DLP light engine with 5 mW/cm2 irradiation prints parts with high green strength and properties very close to the final stage, straight off the printer. Curing only takes a few minutes, and with our validated curing options, you maintain part performance and quality. And unlike other 2K material solutions, Origin Two has no resin pot life limitation that might restrict post-processing.

Material Flexibility Drives Production Flexibility

Origin is the platform of choice for leading material suppliers who take advantage of its robustness and ease of use to develop next generation materials. Select one of the pre-tested and optimized material profiles from the broad list of validated materials or go for your own print parameters with the Open Materials License. Uniquely, Origin Two allows you to custom-define layer thickness in Z axis between 25-200 µm, balancing layer resolution with print speed.

Get expert service and support when you need it.

When you shift from prototyping to production, machine uptime becomes critical across all your teams and production sites. Our engineers and technicians know how to make the most of your printer investment and address problems when they occur on a global scale.

When you need help, our team is here to assist, from professional installation to application guidance to contract manufacturing services. Whether improving your design, optimizing your print results, solving a problem, providing extensive training, or making parts for you, Stratasys support and contract services have the experience and reach to keep you operational.

More information

To learn more about Stratasys Origin Two, contact a Stratasys representative by visiting Stratasys.com/contact-us.

Get in touch

+91-80-4150 6070 / 4153 9734
enquiry@altem.com
www.altem.com

https://altem.com/3d-printers/origin-two/

Address: No 22, Altem EcoSquare, 3rd Floor,9th C Main, 5th Block, Jayanagar, Bangalore - 560041, Karnataka