

2025
Suzhou China




FASTFORM



From Prototype to Mass Production
FastForm · Redefine Rapid Manufacturing

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Product Brochure

From Prototype to Mass Production
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COMPANY PROFILE

01

From Prototype to Mass Production
FASTFORM · Redefining Rapid Manufacturing

FastForm 3D Technology Co., Ltd., abbr: "FastForm", was jointly established by a doctoral research team from Nanyang Technological University and Huazhong University of Science and Technology. We specialize in industrial applications of metal 3D printer, offer additive manufacturing full solutions for global dental, industrial, research and educational sectors. Our integrated technological ecosystem encompasses complete industrial chain capabilities including equipment R&D, materials science, process optimization and intelligent software development.

Through our fully own R&D system, FastForm has pioneered China's first comprehensive additive manufacturing equipment of spanning from desktop to industrial-grade solutions(DeskFab/M140/M180/M220/M300/M420/M500/M800). Our FastLayer® Intelligent Industrial Platform, incorporating open source architecture and AI algorithms, has broken through conventional process limitations and secured 38 domestic and international patents. This innovative platform establishes new digital production paradigms for precision manufacturing in medical personalization, industrial components, precision tooling, aerospace and other advanced sectors. With nearly 1,500 units installed across 40+ countries worldwide, we consistently help clients achieve cost-efficiency improvements.

As a Pioneer in China's additive manufacturing industrialization and mass production, FastForm implements a three-pillar strategy of "independent technology, intelligent processes and global services". We remain committed to our vision of "Redefining Rapid Manufacturing from Prototype to Mass Production", empowering the global manufacturing sector's digital and intelligent transformation.

FASTFORM

2016

FOUNDED IN

40⁺

EXPORT COUNTRIES

1500⁺

GLOBAL INSTALLATION

10000⁺ m²

FACTORY AREA

02 DEVELOPMENT HISTORY



FASTFORM Development History

2016

- Apr. The company was established with angel investment.
- Oct. Successfully developed China's first commercial dual-laser dual-galvo M500 system, breaking foreign technological monopolies.
- Nov. Awarded funding under the 7th batch of the 'HaiChuang Program' (Overseas High-level Talent Innovation and Entrepreneurship Program).

2017

- Oct. The FastLayer system has been successfully developed and patented.

2020

- Jul. Signed contract for the M800 system - one of China's largest build-volume industrial 3D printers at the time.

2021

- Sep. Jiangsu Company was established, marking the beginning of a new development chapter.

2022

- Sep. The dual-laser dental-specific system was successfully launched, establishing itself as one of the most efficient dental 3D printing solutions on the market at that time.

2023

- May. Launched the cost-effective FF-M140C system, redefining single-laser metal 3D printing.
- Nov. Completed Series A strategic financing with participation from Huagong Tech (SZSE: 000988) and multiple institutional funds.
- Dec. Launched the multi-laser FF-M420Q system for shoe molds and consumer electronics applications, leading to a new era of industrialized metal 3D printing.

2024

- Jun. Launched the industrial mass-production model FF-M300S.
- Dec. Launched the desktop metal 3D printer - DeskFab.

FASTFORM

03 PATENT CERTIFICATE



18⁺ Authorized Patents

30⁺ Software Copyrights



A Metal Wire Additive Manufacturing Equipment and Additive Manufacturing Method Based on Alternating Magnetic Field



High - Temperature - Resistant Material 3D Printer



Real - time Detection Software V1.0 for Metal 3D - Printing Melten Pool



Scanlab Galvo Distortion Automatic Calibration Software



FastLayer Slicing Software V1.1

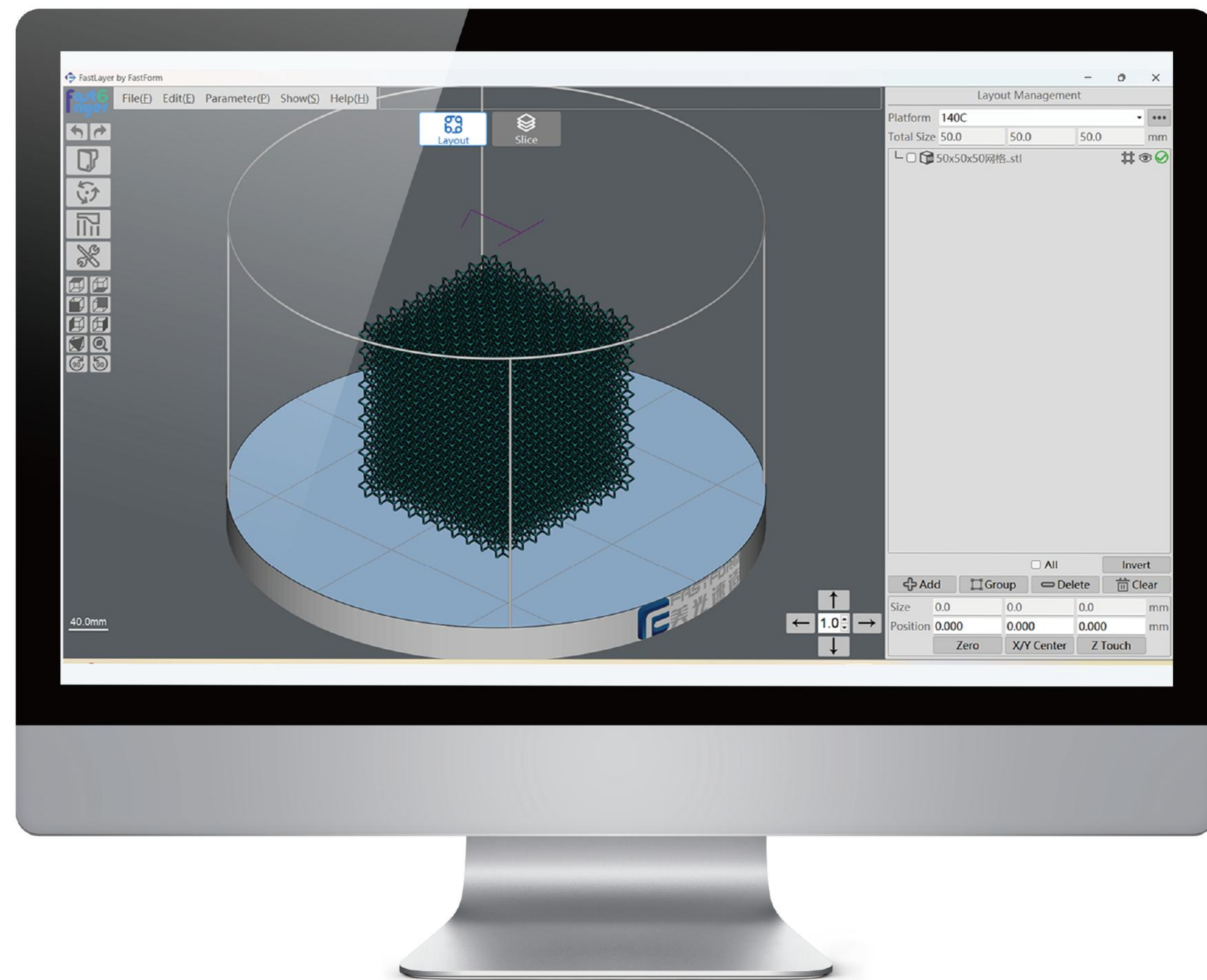


High - tech Enterprise Certificate



Metal 3D - Printing Filtration System

04 SOFTWARE INTRODUCTION



FastLayer

Intelligent Model Preprocessing Engine

Utilizing AI-powered topology optimization algorithms to automatically identify stress concentration areas in complex models such as aero-engine blades and medical implants.

Intelligently Generates lightweight Support Structures and Optimized layout Solutions

"Supports multi-model differential parameter configuration (120+ core parameter library), enabling one-click slicing for specialized processes such as gradient material components and conformal cooling molds."

Large-Scale Industrial Data Processing

The world's first metal slicing system supporting 10GB-level binary data (e.g., satellite fuel tank brackets, nuclear reactor components).

Featuring a CUDA-based GPU acceleration architecture, it delivers 300% higher slicing efficiency compared to conventional software, with daily processing capacity reaching 20 sets of 2.5-meter-scale aerospace components.

AI Self-Repairing Process

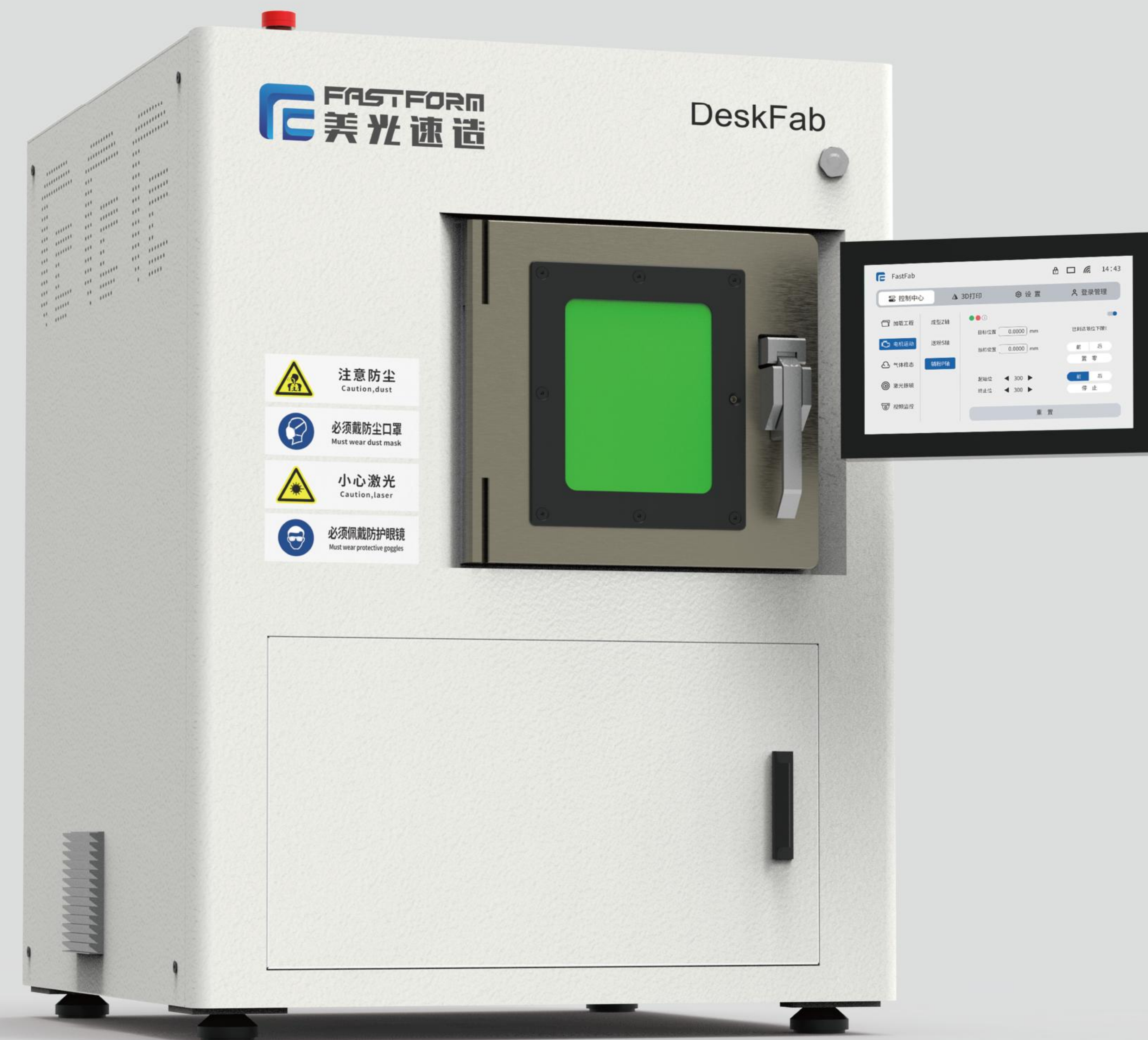
"Integrated GAN-based intelligent repair module automatically corrects non-manifold edges, holes, and normal errors, achieving 99.6% pass-through rate for damaged models;
Real-time thermo-mechanical coupling simulation system predicts and compensates for printing deformation in titanium/aluminum alloys, ensuring $\pm 15\mu\text{m}$ dimensional accuracy for critical features."

Multi-laser Intelligent Collaborative Control

In the dynamic stitching mode of the 36 - galvanometer, the AI path planning algorithm achieves the precise control of the heat - affected zone overlap rate within 5%;

The stress optimization algorithm makes the tensile strength dispersion of the multi - laser stitching area less than 3%, reaching 98% of the mechanical properties of the overall formed part.

05 PRODUCT INTRODUCTION



FUNCTIONAL CHARACTERISTICS

All-in-one Integration Space Revolution	Permanent Filtration System 0 Cost, 0 Replacement, 0 Risk
One-to-N intelligent collaboration Education & Scientific research	One-click printing & one-click typesetting Friendly master it for beginners
LFPT - Light Following Powder Spreading Technology	Multi-functional metal 3D printer Available for multiple metal materials

TECHNICAL PARAMETERS

Name	Parameters	Name	Parameters
Building Volume	Φ100×80mm	Printer Dimensions	600×650×860mm (L×W×H)
Machine Weight	120kg	Protective Gas	Nitrogen, Argon
Laser Power	Single laser, 300W	Recoater Type	Flexible soft blade
Layer Thickness	30-60μm (adjustable)	Powder feeding Type	Top powder feeding, one-way recoating
Rated Power	1.5kW	Baseplate Installation	Quick-release magnetic fixed
Layout Method	Fully automatic layout and path planning	Filtration Lifetime	Permanent filter ≥ 30,000 hours
Software	FastForm FastLayer slicing software & FastFab control software		
Printing Materials	Cobalt-chromium alloy, titanium alloy, pure titanium, etc.		

APPLICATION DEMONSTRATION



DeskFab series

Desktop 3D Printer series

DeskFabH1 — Desktop metal 3D printer dedicated to education and scientific research;

DeskFabX1 — Desktop metal 3D printer specialized for dentistry.



Dental



Education/
Research

05 PRODUCT INTRODUCTION



FUNCTIONAL CHARACTERISTICS

7 years of verification Worry-free operation	FastForm programmed own software , Open source for parameter database Simply work-flow for operation
Worry-free after-sales service Worry-free usage	Permanent filtration system 0 cost,0 replacement, 0 risk
Supports up to 150µm layer thickness process development	>7 years of verification ,built-in HD camera Online remote monitoring and operation Real-time tracking production status

TECHNICAL PARAMETERS

Name	Parameters	Name	Parameters
Building Volume	Φ140×100mm	Printer Dimensions	1050×870×1750mm (L×W×H)
Protective Gas	Nitrogen, Argon	Layer thickness	20µm-150µm
Machine Weight	450kg	Recoater Type	Flexible soft blade
Beam size	50-80µm	Laser Power	Single laser, 1x500W
Rated Power	1.5kW	Baseplate Installation	Quick-release magnetic fixed
Layout Method	Fully automatic layout and path planning	Filtration Lifetime	Permanent filter ≥ 30,000 hours
Software	FastForm FastLayer slicing software & FastFab control software		
Printing Materials	Stainless steel, titanium alloy, tool steel, high-entropy alloy, cobalt alloy, aluminum alloy, copper alloy, etc.		

APPLICATION DEMONSTRATION



FF-M140 series

Desktop 3D Printer M140 series

FF-M140H-Single Laser metal 3D printer for education & scientific research;

FF-M140C-Single Laser metal 3D printer for dentistry.



Dental



Education/
Research

05 PRODUCT INTRODUCTION



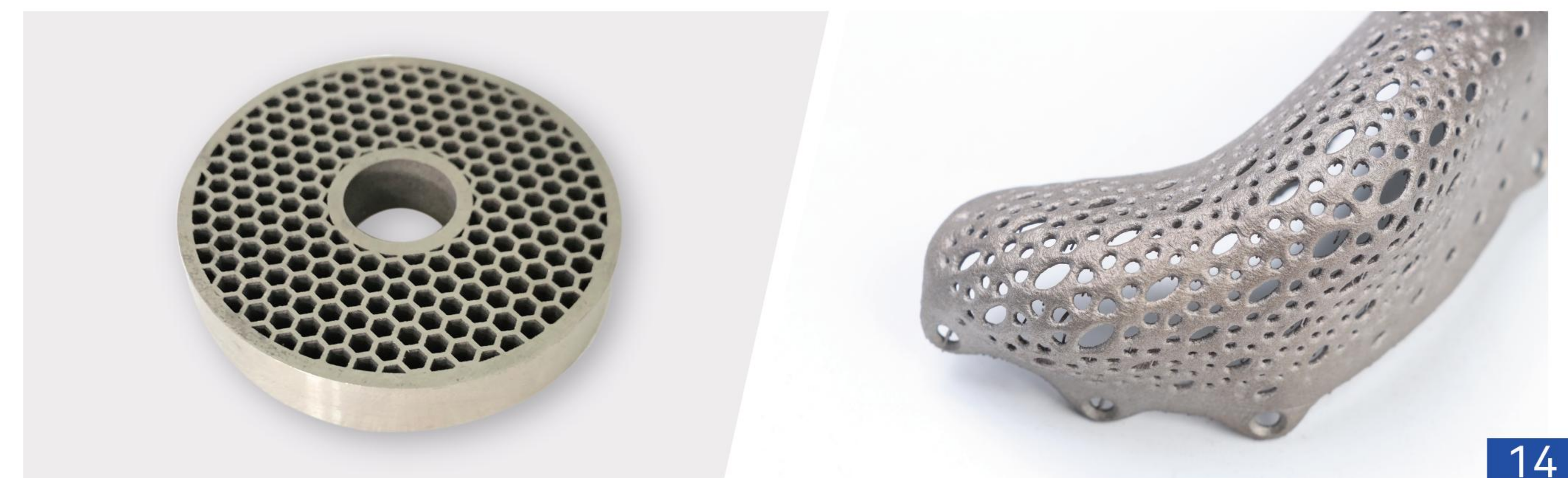
FUNCTIONAL CHARACTERISTICS

Dual-laser large-format Production efficiency increased by 200%	One-click printing & one-click typesetting Friendly master it for beginners
Stable equipment Mature process	Permanent filtration system 0 cost, 0 replacement, 0 risk
LFPT - Light Following Powder Spreading Technology	Worry-free after-sales service Worry-free operation

TECHNICAL PARAMETERS

Name	Parameters	Name	Parameters
Building Volume	220×140×100/200mm(L×W×H)	Printer Dimensions	1150×750×1800mm (L×W×H)
Protective Gas	Nitrogen, Argon	Layer thickness	20μm-100μm
Machine Weight	500kg	Recoater Type	Flexible soft blade
Beam size	50-80μm	Laser Power	Dual lasers, 2x500W
Rated Power	2.5kW	Baseplate Installation	Quick-release magnetic fixed
Layout Method	Fully automatic layout and path planning	Filtration Lifetime	Permanent filter ≥ 30,000 hours
Software	FastForm FastLayer slicing software & FastFab control software		
Printing Materials	Stainless steel, titanium alloy, tool steel, high-entropy alloy, CoCr alloy, aluminum alloy, copper alloy, etc.		

APPLICATION DEMONSTRATION



FF-M220 series

Dual-Laser Metal 3D Printer M220 Series
 FF-M220—Medical & Dental Metal 3D Printer;
 FF-M220—Prototype Metal 3D Printer.



Prototype



Dental

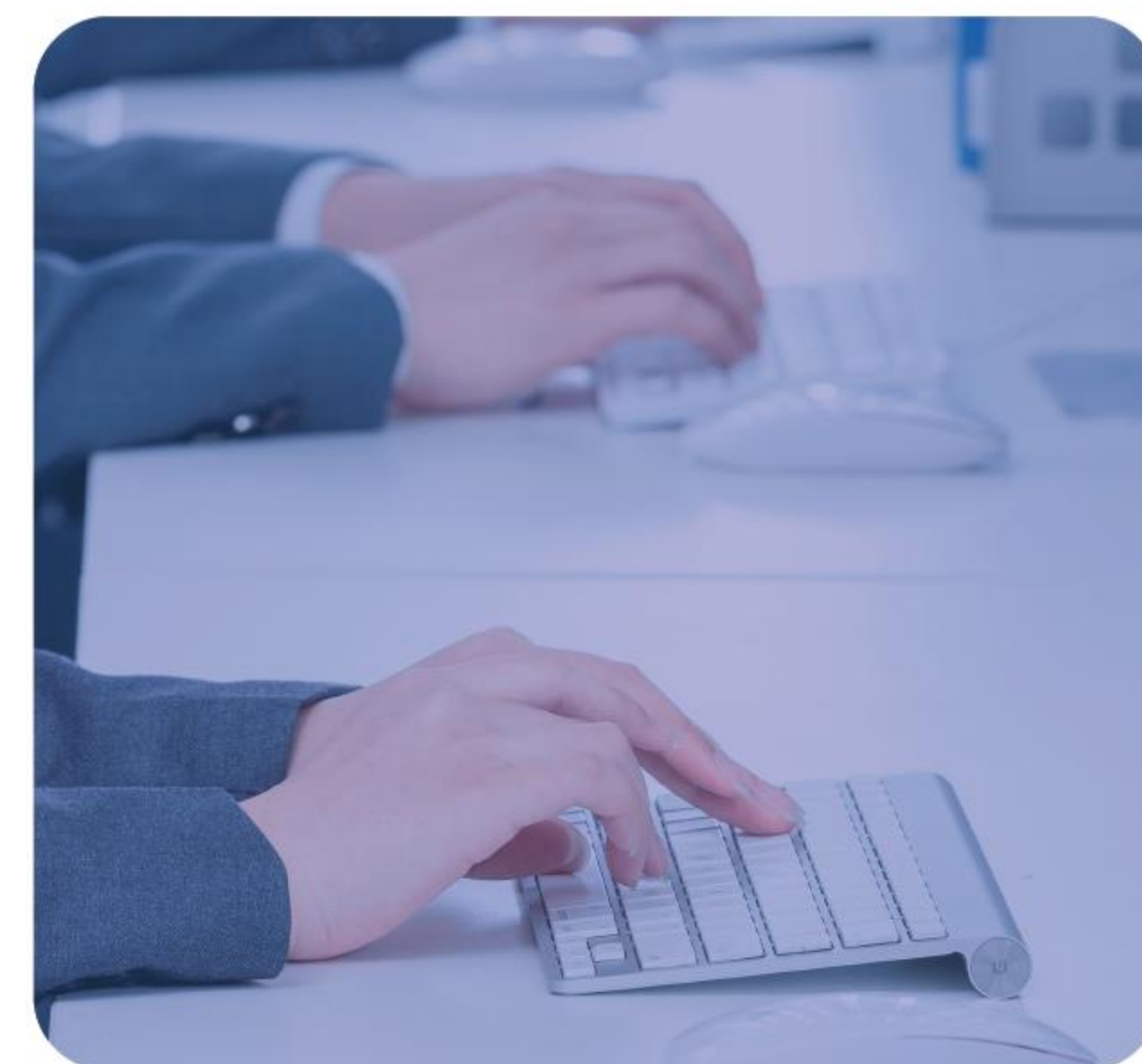


Medical

06 GLOBAL LAYOUT



07 SERVICE SUPPORT



FASTFORM • Dedicated service to meet all needs

