FASTFORM

FASTFORM COMPANY PROFILE

FASTFORM

Bits Power Atoms
AI Redefines Metal AM

FASTFORM

CONTENTS

FASTFORM

Company Overview

COMPANY INTRODUCTION

01

Company Introduction

FASTFORM

2016
Founded

3,000 + Units
Deployed Worldwide

80+
Countries & Regions Served

10,000 m²+
Factory Area

FastForm (Jiangsu) 3D Technology Co., Ltd. was founded by doctoral teams from Nanyang Technological University and Huazhong University of Science and Technology. The company focuses on the industrial application of metal 3D printing systems and delivers end-to-end additive manufacturing solutions for dental, industrial, research institutions and educational organizations worldwide.

FastForm has built an integrated technology platform spanning equipment R&D, materials science, process optimization and intelligent software, with products ranging from desktop to industrial systems. Its proprietary FastLayer® intelligent industrial platform combines an open architecture with AI algorithms and is backed by 38 patents and certifications in China and abroad.

More than 3,000 FastForm systems have been deployed across over 80 countries and regions, serving personalized healthcare, industrial components, precision tooling, aerospace and other applications.

As an early mover in the industrialization and scaled production of additive manufacturing in China, FastForm advances independent technology, intelligent processes and global service, empowering manufacturers worldwide to transition toward digital, intelligent production.

Company Milestones

FASTFORM

2016

Apr
Company founded;
Angel investment secured from a listed company

Oct
China's first commercial dual-laser, dual-galvanometer M500 developed, reducing dependence on imported systems

2017

Oct
FastLayer developed and patented

2020

Jul
Contract signed for the M800—then one of the largest-build-volume metal AM systems developed in China at the time

2021

Sep
Jiangsu company established, opening a new chapter of growth

2022

Sep
Dual-laser dental system launched, becoming one of the market's most productive dedicated dental printers

2023

May
Cost-effective FF-M140C launched, redefining single-laser metal 3D printing

Nov
First strategic financing round completed, led by listed company HGTECH with several funds

Dec
Multi-beam FF-M420Q launched for footwear molds and consumer electronics, ushering in a new era of industrial metal 3D-printing production

2024

Jun
FF-M300S industrial production system launched

Dec
DeskFab desktop metal 3D printer launched

2025

Mar
Nearly RMB 100 million raised in Series A financing

Aug
Nearly RMB 100 million raised in Series A++ financing, exclusively from Walden International

Dec
RMB 60 million in strategic investment secured from Walden and Yiheda

2026

May
FastForm became the world's top-selling metal 3D printer brand

Jun
FastLayer 7 AI fully automated preprocessing system launched
AM Build: AI model for real-time adaptive process control
AM Mind: AI model for autonomous operations and maintenance
Enabling truly AI-driven mass production

FASTFORM

R&D Capabilities

PRODUCT & TECHNOLOGY CAPABILITY

02

R&D Excellence

FastForm holds **38** patents and certifications in China and abroad, forming a proprietary technology portfolio across core equipment, process parameters and software systems. This foundation continuously supports product performance and scalable deployment.

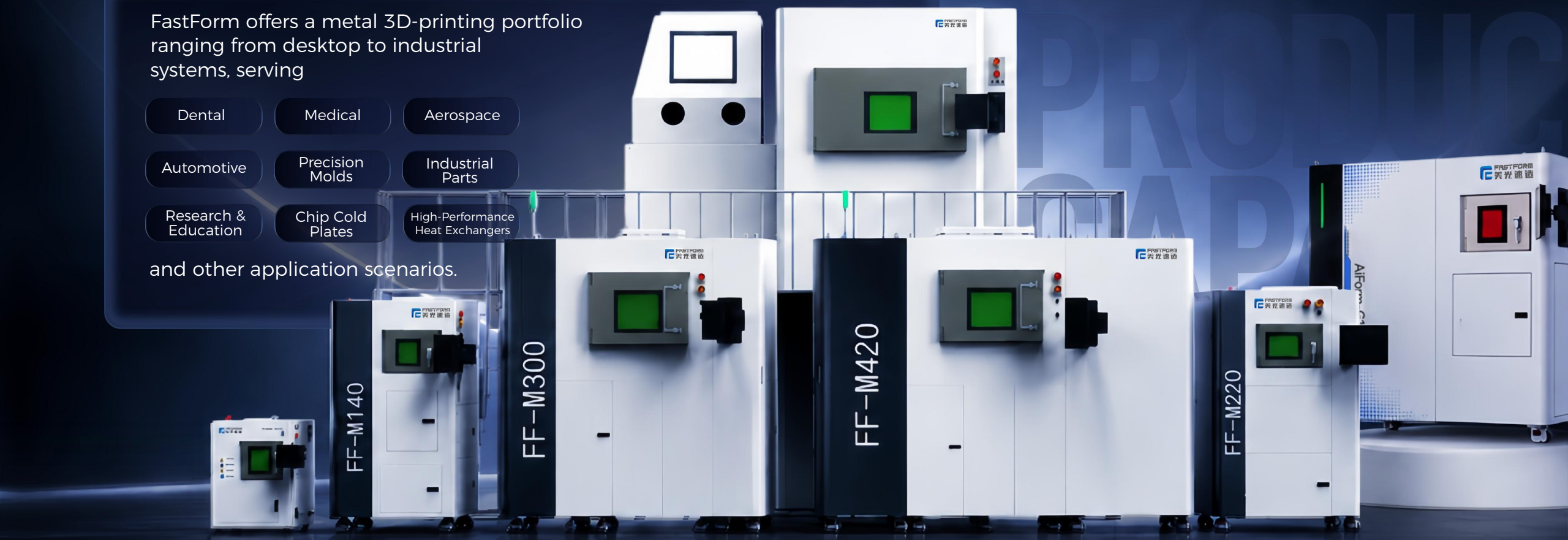
FastForm drives product evolution through technological innovation. Its team of more than **60** R&D professionals, many of whom hold master's or doctoral degrees, advances coordinated innovation across equipment, processes, materials and intelligent software.

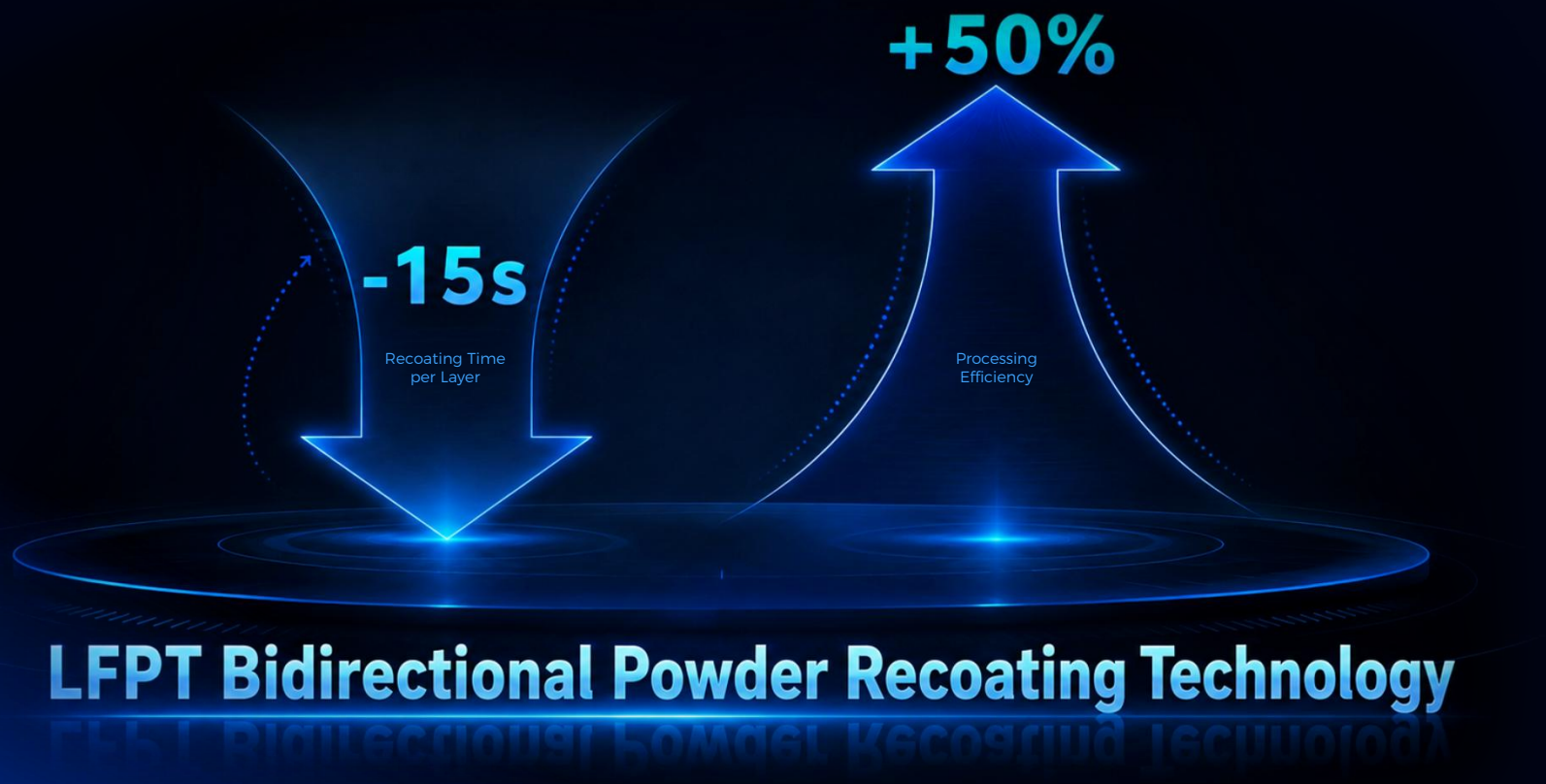
Product Portfolio

FastForm offers a metal 3D-printing portfolio ranging from desktop to industrial systems, serving

- Dental
- Medical
- Aerospace
- Automotive
- Precision Molds
- Industrial Parts
- Research & Education
- Chip Cold Plates
- High-Performance Heat Exchangers

and other application scenarios.



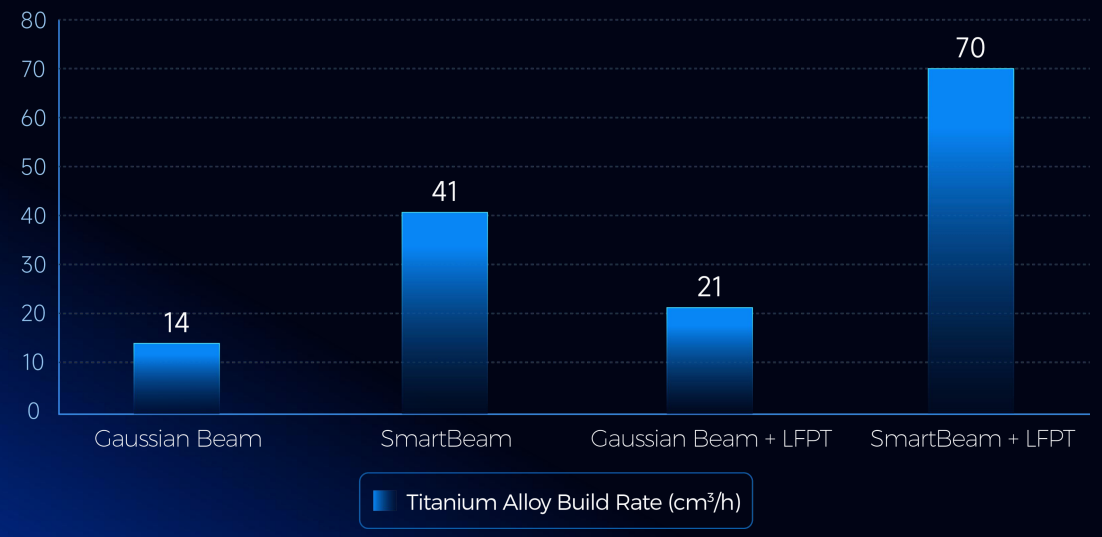


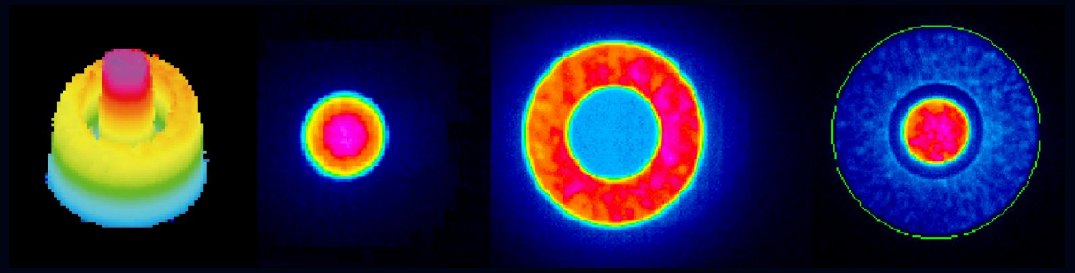
LFPT

(Laser-Following Powder Technology)

A core technology of the FastForm FastFab metal 3D-printing system, LFPT synchronizes laser exposure with powder recoating to replace conventional sequential processing with parallel operation. Dynamic path planning and high-precision timing control cut recoating time by up to **15** seconds per layer—raising efficiency by 50%—and can shorten a 1,000-layer build by nearly **10** hours, significantly improving throughput and utilization.

SmartBeam Mode





Titanium Alloy Density Micrograph

Gaussian-Beam Density

SmartBeam Density

Higher Productivity Without Compromising Quality

Powered by AI-based multithreaded parallel computing, the SmartBeam system uses intelligent zoning to analyze a 3D model's voxel structure. It applies annular multimodal beam shaping to solid regions and adaptive thick-layer deposition, increasing build rates to 200% of conventional levels.

FastLayer
Intelligent Manufacturing Platform

FASTFORM

Cloud Collaboration & Digital Production

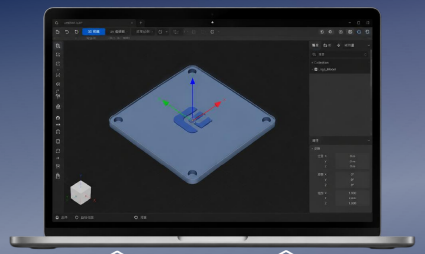
FastLayer Client
Workflow routing · Data synchronization · Production collaboration

Cloud Process Parameter Center
- Certified parameters
- Continuous updates and optimization
- Optimal parameters in one click

Cloud Parameter Sync
- Cloud backup of parameter settings
- Rapid recovery across systems
- Data available wherever you work

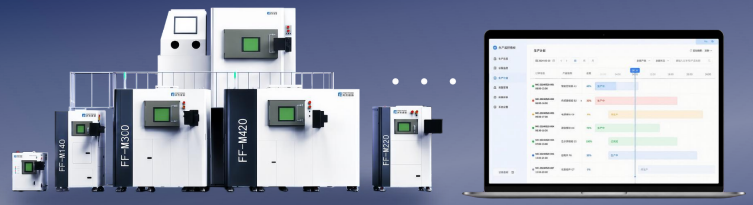
Lightweight MES Integration
- Centralized job management
- Equipment status monitoring
- Multi-Machine Scheduling

FastLayer Client
Model Preparation
Support Design · Slice Generation



Import Model → Support Generation / Nesting → Generate Slices → Dispatch Job

3D Printer Fleet
Multi-System Coordination
Real-Time Monitoring · Efficient Production



Production Dashboard

Status Feedback
Data Capture

Cloud-connected processes and equipment create an integrated digital platform from design to production

FastLayer uses AI-driven data processing to integrate automatic nesting, intelligent support generation, process matching and multi-system coordination. It supports dental, footwear mold, tooling and industrial-part applications, while cloud parameter management and MES integration improve productivity and production stability.

AM Build

AI Dynamic Process Adaptation System

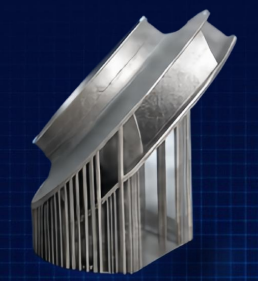
FASTFORM

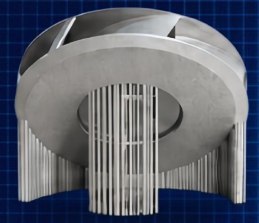
AM Build–Enabled Printing

60%
Less Support Material

30%
Less Powder Consumption

50%
Less Processing Time

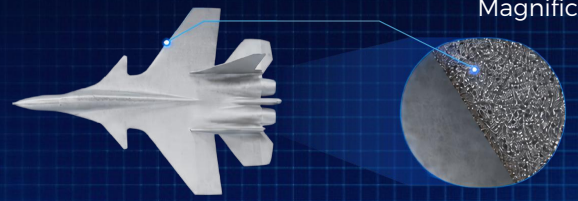




AM Build–Enabled Printing

Printed in one build:
fine, smooth and uniformly colored

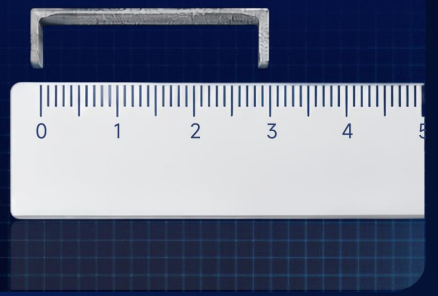
20×
Magnification



AM Build–Enabled Printing

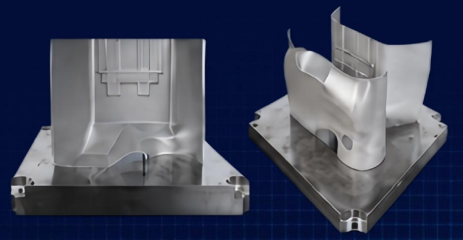
Support-Free, One-Piece Build
with Improved Feature Integrity

Maximum
Horizontal Bridge
25mm

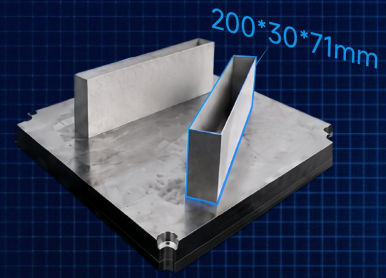


AM Build–Enabled Printing

No Anti-Deformation Plate Required
No Repeated Trial and Error



Thin-Wall Sheet-Metal Part



AM Build

AI algorithms optimize printing strategies in real time, automatically matching parameters to each structure, angle and process condition so every layer remains stable.

The system enables support-free, low-angle and thin-wall distortion-resistant printing beyond the conventional 45° limit, reducing support material and post-processing while improving quality and lowering total manufacturing cost.

AM Mind

Fully Autonomous AI Model for Intelligent O&M

FASTFORM

Millions of Simulations Grounded in Physical Principles

Mastered
60M+ lines
Real Industrial Data

Stress-Tested
10000 hours
Real-Machine Operation

Mastered
3000 units
Complete Equipment Operating Profiles

Digested
100,000+ pages
Technical Manuals

Refined
60 experts **/10** years
Expert Know-How

AM Mind

AM Mind is a proprietary AI model for additive-manufacturing operations. It combines production monitoring, equipment management, anomaly analysis and intelligent interaction. With the Xiaomei voice assistant, operators can quickly check machine status and identify production issues through voice interaction, improving shop-floor efficiency.
Trained on real operating data from 3,000 systems, industry manuals and expert knowledge—and calibrated with physical rules—the platform reduces incorrect diagnoses and hallucinations to deliver professional, accurate and reliable analysis for intelligent, highly automated production.

FASTFORM

Applications

INDUSTRY SOLUTIONS

03

Dental Solutions

FASTFORM

Industry Challenges

- Long conventional denture workflows with heavy reliance on manual labor
- Low efficiency and inconsistent quality in mass customization
- Pressure from post-processing, fitting and delivery lead times

FastForm Solutions

- Enable mass customization of dental prostheses with metal 3D printing
- Improve first-pass build efficiency through intelligent nesting and stable processes
- Reduce manual processing and rework costs

Typical Applications

- Removable denture frameworks, crowns and bridges
- Implants, abutments and orthodontic metal parts

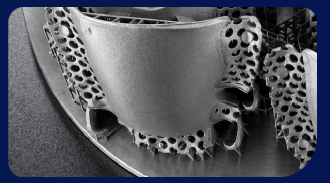
↘

Up to **40%** shorter delivery lead time

30% lower total production cost

Greater batch consistency and dimensional stability

Applications: denture frameworks, crowns and bridges, implants, orthodontic and customized dental components



Recommended Systems

DeskFab / FF-M140 / FF-M220

For clinics, small dental laboratories and high-volume dental production centers

Biomedical Solutions

Industry Challenges

- Complex patient-specific implants are difficult to machine conventionally
- Porous trabecular structures demand high accuracy and consistency
- Small-batch, multi-variant products face long validation cycles

FastForm Solutions

- Build complex structures using medical-grade metals, including titanium alloys
- Enable porous, biomimetic, lightweight and personalized designs
- Switch rapidly from prototype validation to small-batch production

Typical Applications

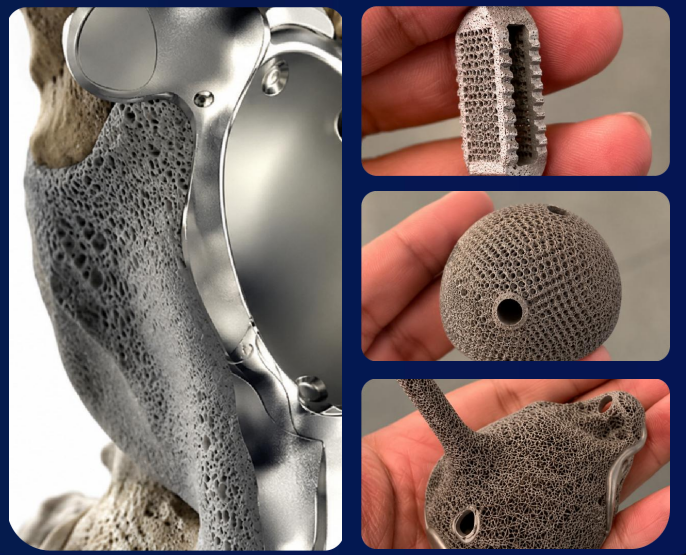
- Spinal and joint implants; acetabular cups
- Cranio-maxillofacial repairs and porous trabecular structures
- Medical-device structural components

Build complex porous structures in one piece

Improve implant fit and design freedom

Shorten personalized-product development and delivery

Applications: porous implants, orthopedic repairs, patient-specific prostheses and medical research devices



Recommended Systems

FF-M140 / FF-M220 / FF-M300
For R&D validation, small-batch customization and medical-device production

Consumer Electronics Solutions

Industry Challenges

- Titanium alloys are difficult and costly to process, with significant yield and cost challenges
- Rapid iteration drives thinner, lighter and more irregular structures
- Precision appearance parts require consistent surface quality

FastForm Solutions

- Print precision titanium structures and complex cosmetic components
- Support rapid iteration from small-batch validation to volume production
- Integrate with post-processing for an end-to-end manufacturing chain

Typical Applications

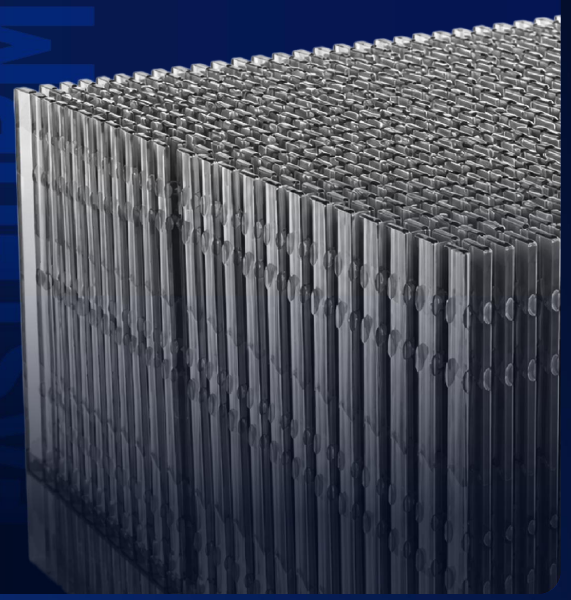
- Smart-watch cases, bands and structural parts
- Phone frames, hinges, buttons and precision brackets
- Thermal-management and lightweight functional structures

↘

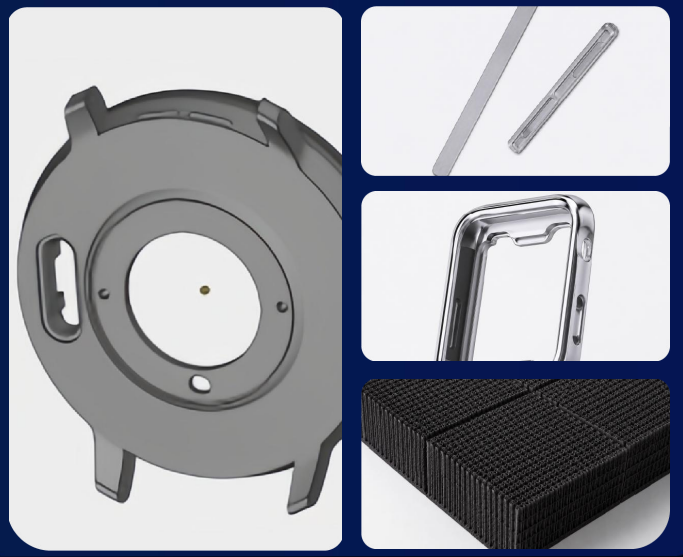
Shorter new-product validation cycles

Greater design freedom for complex structures

Lightweight strength with a precision finish



Applications: titanium components for consumer electronics, thermal components, wearables and precision consumer-electronics parts



Recommended Systems

FF-M300 / FF-M420

For efficient, high-mix production of precision titanium parts

Industrial Tooling & Footwear Mold Solutions

Industry Challenges

- Complex molds require lengthy conventional machining and assembly
- Conformal cooling and intricate textures are hard to make conventionally
- Many variants and small batches create delivery pressure

FastForm Solutions

- Metal 3D printing enables intricate textures, conformal channels and one-piece builds
- Intelligent nesting raises batch productivity
- Stable processes deliver mold durability and consistency

Typical Applications

- Footwear molds and textured sole molds
- Inserts for injection, die-casting and thermoforming molds
- Conformal cooling channels and complex tooling fixtures

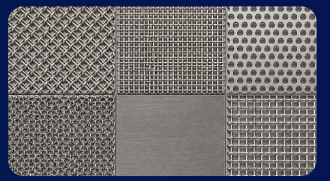
↘

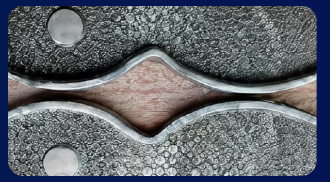
Shorter mold-development cycles

Higher cooling efficiency, part quality, and production yield

Lower manufacturing and maintenance costs for complex molds

Applications: footwear molds, industrial tooling, heat exchangers, impellers and complex functional parts





Recommended Systems

FF-M300 / FF-M420 / FF-M800

For mold prototypes, volume production and large industrial applications

Automotive Solutions

Industry Challenges

- Fast vehicle-development cycles demand quicker prototype iteration
- Dies and tools constrain complex channels and thin-wall parts
- Lightweighting, strength, heat resistance and batch quality are difficult to balance

FastForm Solutions

- Tool-free direct manufacturing shortens prototype validation
- One-piece printing breaks conventional limits on complex structures
- Part consolidation reduces welding, assembly, prototyping and iteration costs
- Compatible with aluminum, titanium, stainless steel and high-temperature alloys

Typical Applications

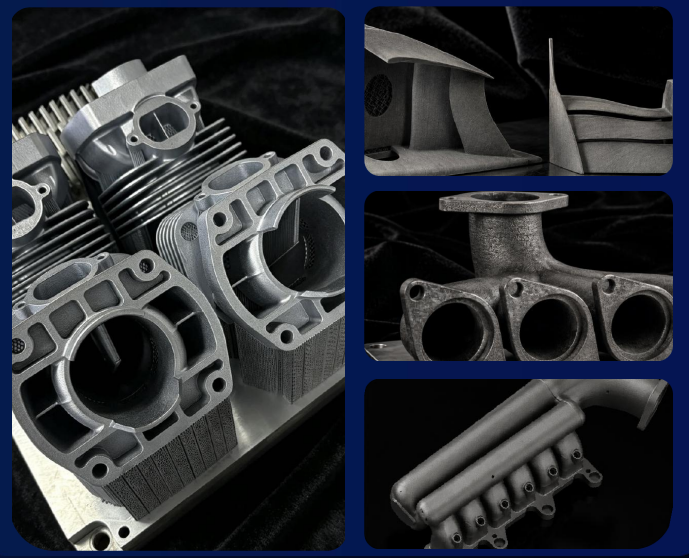
- Intake/exhaust manifolds and complex flow-path components
- Thin-wall, irregular and lightweight functional structures
- Powertrain and electric vehicle components

Shorter functional-prototype and validation cycles

Greater freedom for complex channels and lightweight design

One-piece production of complex automotive components

Applications: automotive manifolds and channels, thin-wall lightweight structures, powertrain parts, thermal-management



Recommended Systems

FF-M300 / FF-M420 / FF-M800

For complex automotive channels, thin-wall lightweight structures and low-to-medium-volume functional parts

Defense & Aerospace Solutions

Industry Challenges

- Complex parts with demanding lightweight requirements
- Low-volume, high-mix production and long conventional lead times
- High-temperature, high-strength service demands stable materials and processes

FastForm Solutions

- Build complex channels, thin walls and topology-optimized structures
- Efficient multi-laser processing for medium and large parts
- Process parameters and quality control ensure batch stability

Typical Applications

- Aero-engine structures, turbines and impellers
- Military aircraft, missile and spacecraft structures
- Ground-support tooling and complex connectors

↘

Shorter prototyping cycles for complex parts

Less assembly and welding

Greater design freedom for lightweight, complex structures

Applications: engine structures, impellers and blades, flow-path components and lightweight complex components

Recommended Systems

FF-M300 / FF-M420

From medium structural parts to efficient large-format industrial production

FASTFORM

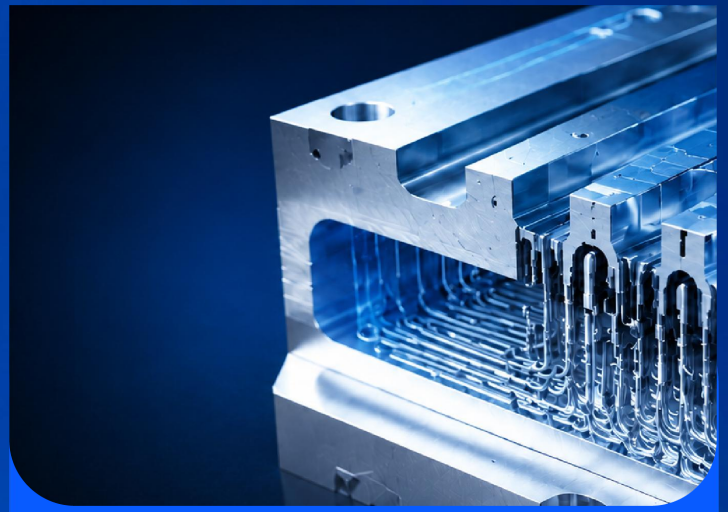
Thermal Innovations

LIQUID COOLING APPLICATION

04

Liquid Cooling Solutions

Additive manufacturing enables high-power liquid cooling—from complex-structure validation to volume production



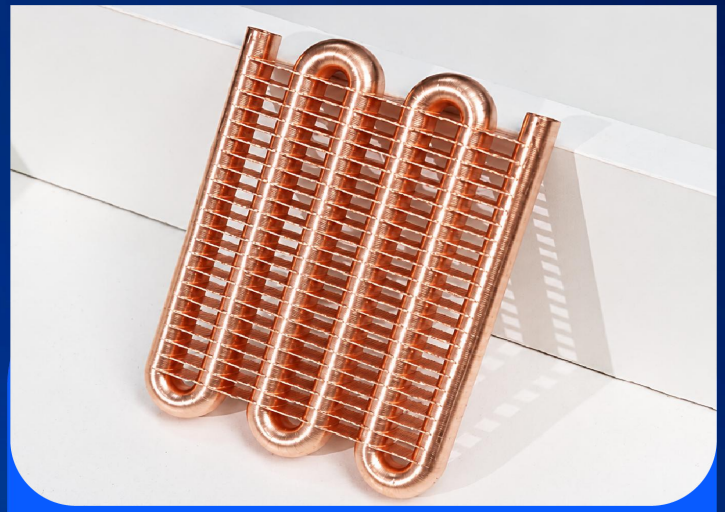
INDUSTRY CHALLENGE

Conventional Thermal Management Is Reaching Its Limits

As AI computing power rises rapidly, data-center PUE and high-heat-flux component cooling have become critical to system efficiency.

Chips, optical modules and other high-power devices require more efficient, compact liquid-cooling structures.

Conventional processes are limited in complex channels, structural integration, leak control and rapid iteration.



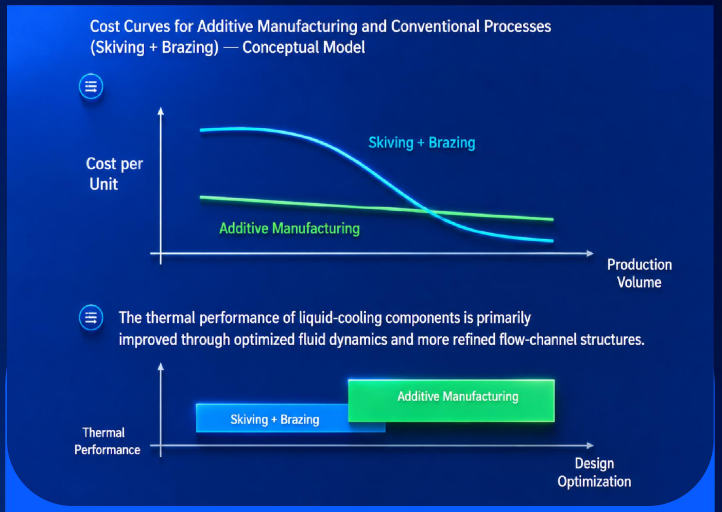
FASTFORM APPROACH

Materials × Structures × Processes

Pure copper absorbs green laser energy more efficiently, enabling dense, high-quality builds.

Integrated fabrication supports microchannels, TPMS and biomimetic structures, complex cavities and layered flow paths.

FastLayer, AM Build and the process database close the loop from structural design and parameter matching to print validation.



CUSTOMER VALUE

Better Heat Transfer, Lower Risk

Larger heat-transfer area and more balanced flow and temperature reduce local hot spots.

One-piece construction reduces joining and assembly, lowering leak risk and inspection points.

Rapid prototyping, iterative validation and design iteration create a strong foundation for volume production.

FASTFORM

From Prototyping to Mass Production: The FastForm Technology Path

FROM VALIDATION TO MASS PRODUCTION | Solving five critical challenges in materials, structures, depowdering, inspection and cost

Materials & Process Breakthrough

Green-laser pure-copper printing
High-density builds

Complex Structure Manufacturing

0.1 mm fin thickness / 0.07 mm fin spacing
Multilayer, variable-cross-section flow channels

Closed-Loop Validation

Pressure / cleanliness / heat-transfer efficiency
Flow resistance and dimensional inspection

Higher Volume -Production Efficiency

Multi-laser / beam shaping / LFPT
Material recycling and parameter optimization

Challenge 01 Printing Pure Copper

Pure copper efficiently absorbs green laser energy, enabling high-density builds.

Pure copper thermal conductivity ≥350 W/(m·K), and graphene-copper ≥400 W/(m·K), supporting high-performance liquid-cooling components.

Challenge 02 Complex Structures

Integrated builds support TPMS, biomimetic structures, microchannels, fins and variable-section flow paths.

Fewer joins, assembly steps and inspection points improve consistency and reduce leakage risk.

Challenge 03 Validation & Cost

A validation system covers raw materials, dimensions, physical and chemical properties, pressure resistance, cleanliness, heat-transfer efficiency and flow resistance.

Multi-laser processing, beam shaping, synchronized recoating, material recycling and high-throughput parameter development move liquid-cooling AM parts from validation to volume production.

FASTFORM

Customer Support

Service & Delivery Assurance

05

SERVICE & DELIVERY

Standardized Service & Delivery System

FastForm's standardized service system spans installation and commissioning, performance verification, customer training, final acceptance and after-sales support—helping equipment enter production quickly and operate reliably over time.

01

Factory Acceptance Coverage

Acceptance checks cover equipment serial number and configuration, appearance and mechanical systems, electrical and safety interlocks, gas-handling system and build atmosphere, laser and galvanometer systems, software and data management—ensuring the delivered system matches the contract and delivery standards.

02

Standard Test Builds

Tests cover the center, four corners, multi-laser overlap zones and four-laser intersection zones, verifying first-layer formation, process stability, dimensional accuracy, relative density, surface quality and overlap-zone quality.

03

Inspection Reports & Traceability

Acceptance generates a traceable inspection report linking the report number, sample, equipment, parameters and process records—supporting on-site acceptance and subsequent production ramp-up.

04

Customer Training & Handover

Training covers startup, shutdown and safety; build-plate installation; powder loading and recovery; build-chamber purging and inert-gas preparation; job setup and parameter selection; depowdering and part removal; routine maintenance; alarm handling; data backup; and delivery of spares and tools.

FASTFORM

Dedicated Service for Every Need

Comprehensive Training

A systematic training process and rigorous hands-on assessment enable users to operate the system confidently and realize value sooner.

Bits Power Atoms | AI Redefines Metal AM

FASTFORM

Equipment Assurance Program

A comprehensive preventive-maintenance program includes professional installation and commissioning, regular follow-ups, timely sharing of new technologies and lifetime maintenance support.

Lifetime Technical Support

Our experienced technology and process-development teams provide highly tailored solutions, help develop optimal process parameters for new materials and deliver lifetime technical support.

Fast, Responsive After-Sales Service

24/7 after-sales service with rapid response, prompt remote support and on-site maintenance—giving customers complete peace of mind.

FASTFORM

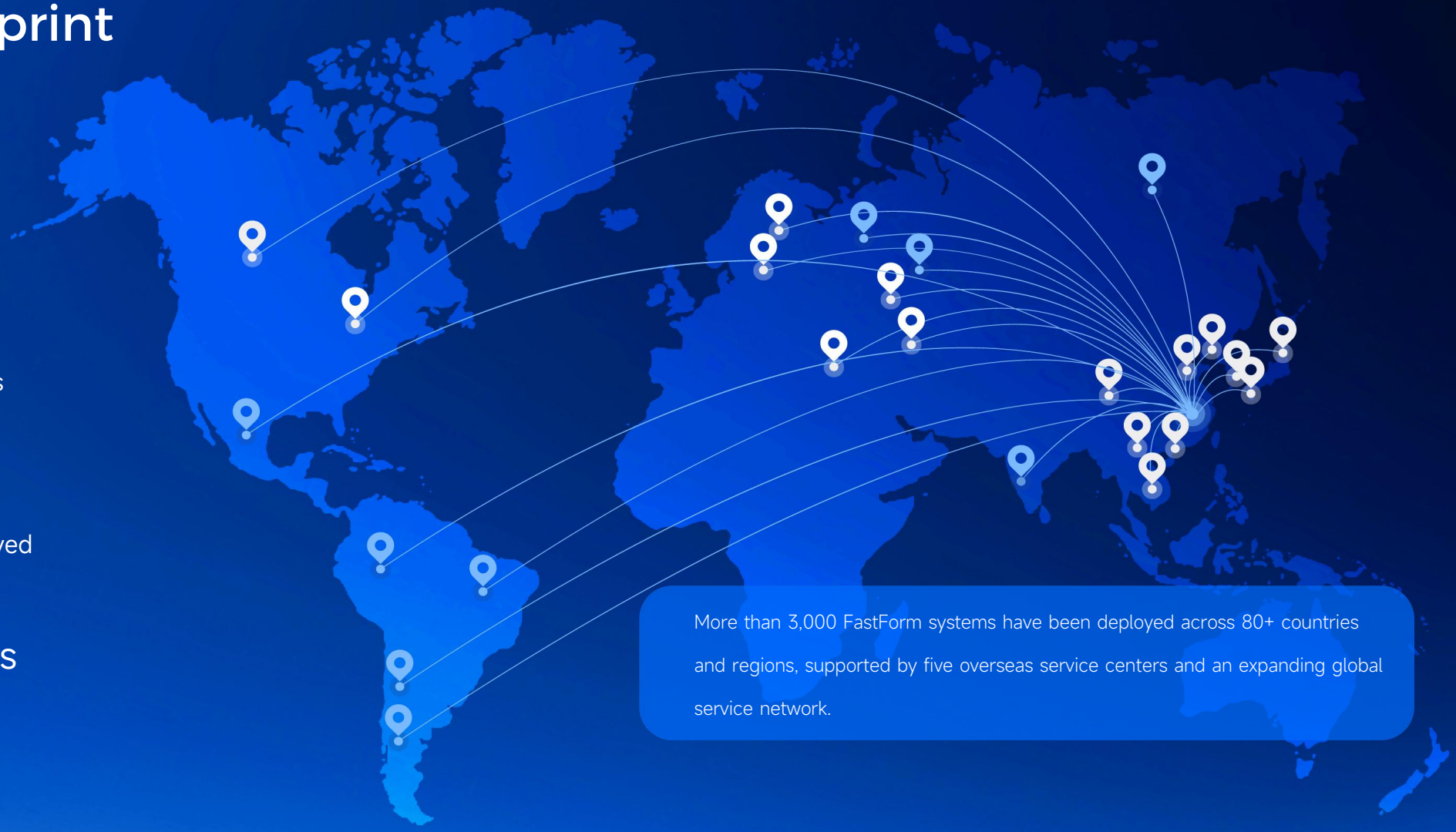
Customer Support

GLOBAL OPERATIONS

06

Global Presence

Global Footprint



5+

Overseas Service Centers

80+

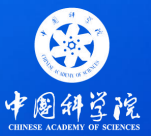
Countries & Regions Served

3,000+ units

Deployed Worldwide

More than 3,000 FastForm systems have been deployed across 80+ countries and regions, supported by five overseas service centers and an expanding global service network.

Global Partnerships



Global Trade Shows

FASTFORM

Bits Power Atoms | AI Redefines Metal AM.

TikTok

YouTube

Facebook
@FastForm3d

LinkedIn
@FastForm3d

Instagram

X