

iSun3D

**iSUN3D 3D PRINTING
CUSTOMIZED INSOLES SOLUTION**

Foot & Spine Rehabilitation 3D Printing Solution



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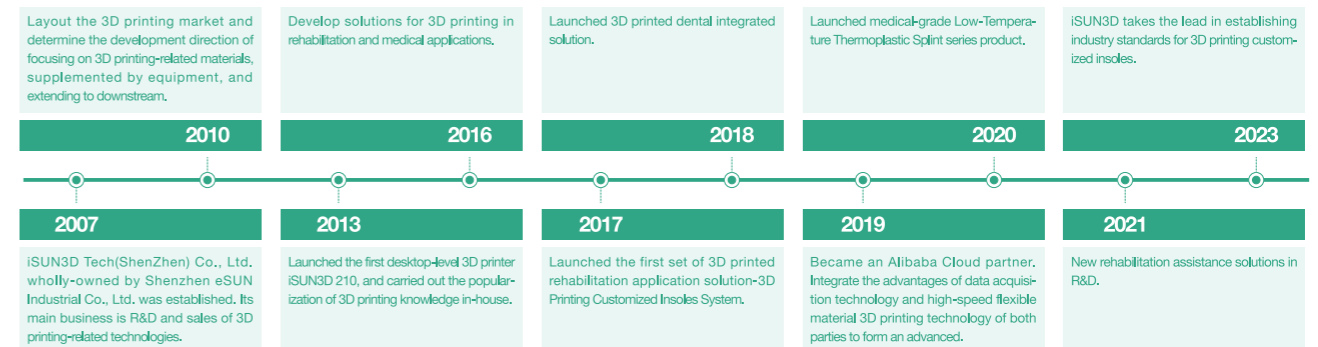
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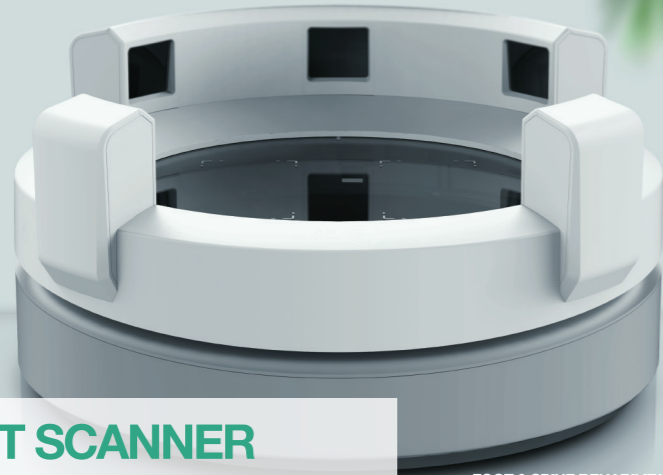
FOOT & SPINE REHABILITATION 3D PRINTING SOLUTION

■ INTRODUCTION:

iSUN3D is specialized in digital custom orthotic insole system ,which integrates "scanning-diagnostic design-3D printing-post-processing" technologies. It can provide each customer with a unique customized insole. The system was first launched by Shenzhen Guanghua Weiye Co., Ltd. in 2017. After several updates and iterations, it gradually became mature and systematic. At present,in the field of rehabilitation and orthotics, iSUN3D has successfully established friendly cooperative relationship with global partners.

■ DEVELOPMENT HISTORY:





iFEET 3D FOOT SCANNER

FOOT & SPINE REHABILITATION 3D PRINTING SOLUTION

■ INTRODUCTION:

Intelligent 3D scanning instrument for customized insole. High Tech 3D scanning instrument for both full feet, using tablet computer to finish whole scanning and foot data uploading. Using laser scanning technology, detecting objects automatically.

■ FEATURES:

- Both full feet scanning, only 3 seconds can finish the scanning of two feet, from the ankle to foot bottom.
- 11 sets of high-definition cameras-360° collection of foot data without dead ends.
- Generating 3D model data.
- Automatically identifying obvious foot positions and measuring key sizes.
- The obtained 3D model data can be processed in the insole design software.
- Cloud computing function, generate foot health assessment reports automatically.
- Data accuracy can meet the production of customized products needs, such as customized shoes and insoles.

■ TECHNICAL PARAMETER:

Scanning Time:	3s
Equipment Dimensions(L*W*H):	660 × 660 × 310 mm
Measuring Area(L*W):	440 × 440 mm
Net Weight:	29 kg
Data Transmission:	WIFI
Load-bearing:	150kg
Generated File Format:	STL and PDF evaluation sheet

■ ADVANTAGES:

- Offer high experience feelings to the customers
- Scanning data can be upload directly
- Tablet control, convenient to operate
- Both for custom insoles and footwear
- Only 3 seconds can finish the scanning



iFEET NEO 3D FOOT SCANNER

FOOT & SPINE REHABILITATION 3D PRINTING SOLUTION

■ INTRODUCTION:

- Precise: 3D infrared structured light technology, millimeter-level precision
- Efficient: Rapidly scan in 1 second, produce report in 5 seconds
- Comprehensive: 30+ foot data, 1:1 truthful 3D model
- Interactive: One-key scanning, strong interactivity, simple interaction
- Safe: Non-contact scanning, safe, stable and harmless
- Convenient: Small covering area, support external screen display, flexible and convenient

■ FEATURES:

iFEET Neo can generate 3D foot model and 3D foot scanning report, includes Flat foot evaluation and Strephenopodia evaluation. It can also provide Foot health digital archive and AI foot health solution. Smart screen interaction and store management back-end make operation and management more efficient.

■ Product Application: iFEET Neo widely used Personalized shoes customization and AI foot health solution, such as 3D insoles printing, Orthotics design, Foot correction rehabilitation, Sports and fitness optimization, Orthopedic medicine, Shoe last digitization, and Shoe shape Big Data.

■ Target Scenario: iFEET Neo can be used in Store of shoes and clothes, Rehabilitation institutions, Sports and fitness stadium, Orthopedic medical institutions, Chain shoe enterprises, Sports brands, and Foot bath healthcare center.

■ TECHNICAL PARAMETER:

Scanning Principle: Carry multi-group structured light camera, collect high-quality depth image within range, configured with self-developed data algorithm to reach purpose of scanning and analysis

Foot Diagnosis: Foot length, foot width, metatarsophalangeal circumference, tarsal circumference, ankle circumference, heel heart length, heel heart width, inner arch height, back height, medium/European/American/English shoe size, toe shape, foot width index, plantar analysis, toe Angle, heel angle

Scanning Speed: About 1 second

Scanning Precision: ±5mm (millimeter-level)

Point Cloud Quantity: Point cloud quantity: About 2 million, Point cloud density: About 28/cm²

Measuring Scope: Range in device glass surface 400mm (length)*400mm (width)*150mm (height to glass surface)

Appreciate Foot Length: 5cm-30cm

Device Dimension: Device dimension (W×H×D, mm): 700×700×460 (Table height 210mm, upper support height 250mm) Covering area: About 0.49m²

Device Weight: Transport weight: About 65.3kg (including handrails and support weight); Product net weight: About 41kg (only net weight for food measuring platform)



iFOOT 3D FOOT SCANNER

FOOT & SPINE REHABILITATION 3D PRINTING SOLUTION

■ INTRODUCTION:

Applicable for the soles of human feet, foot plaster casts or footprint boxes scanning. Identifying obvious foot positions and measuring key sizes to generate 3D model data. It is a high-efficiency and high-precision laser measuring instrument.

■ FEATURES:

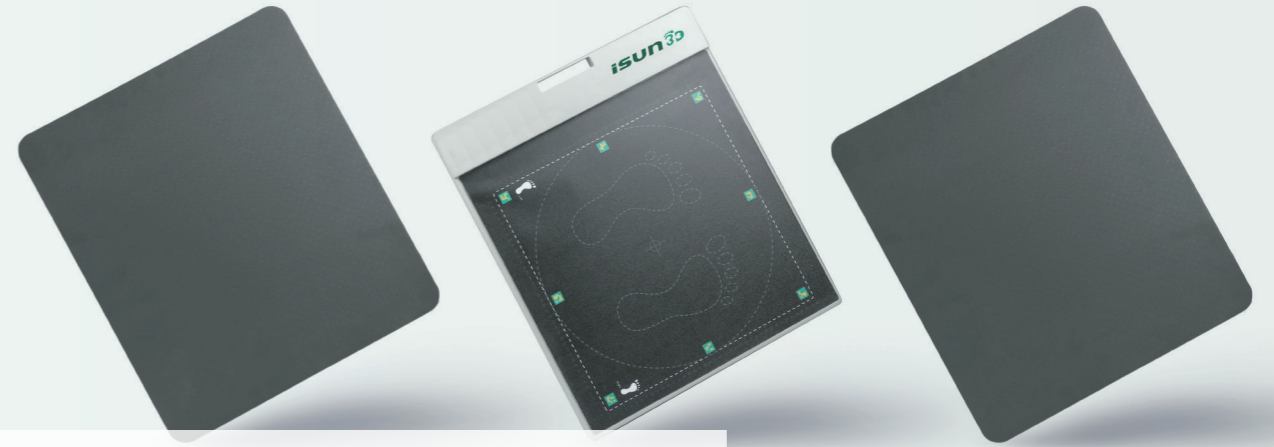
- About 5-7 seconds to complete 3D foot scan.
- Intelligent biological force line detection testing equipment.
- Structured-light scanning, harmless to human body.
- "One-button" scanning operation, no calibration required.
- Detecting automatically, such as soles of feet, foot plaster casts or footprint box.

■ TECHNICAL PARAMETER:

Equipment Dimensions(L*W*H):	495 × 231 × 70mm
Measuring Area(L*W):	365 × 140mm
Net Weight:	4.7kg
Data Transmission:	USB 2.0/USB 3.0
Load-bearing :	180kg
Generated File Format:	STL/WRL/USL

■ ADVANTAGES:

- Cost-effective
- Lightweight and easy to transport
- Suitable for both inside or outside custom insoles service



iGAIT SENSOR BOARD

FOOT & SPINE REHABILITATION 3D PRINTING SOLUTION

■ INTRODUCTION:

- 45cm*45cm smart trail, valued substitute products, breaking the price monopoly of present gait sensor board.
- Mass sensor matrix distribution design, 3600 high-sensitivity sensors, non-linearity less than 1%, sensor 12bit A/D conversion, High-precision acquisition and high real-time performance.
- Supported by medical and sports analysis algorithms, multiple parameters such as foot pressure distribution, walking mode, and step.

■ FEATURES:

- Static Data and Dynamic Data Analyzing.
- Support Medical and Sports algorithms analysis.
- Provide foot pressure distribution, walking pattern, footwork demonstration parameters.
- Intelligent cloud data management system.
- Operated by tablet.
- Understandable report.
- Support clients management, equipment management and distributor management Specification.

■ TECHNICAL PARAMETER:

Sensor:	Resistive sensor Input
Specification:	5V~500ma Output power: 2.5w
Number of Sensors:	3600 units, (high-sensitivity sensors, non-linearity less than 1%, sensors 12bit A/D conversion.)
Distance:	10m
Effective Collection Size:	450 × 450 mm

■ PLANTAR PRESSURE ANALYSIS INCLUDING:

- ✓ Plantar pressure distribution map
- ✓ Left and right foot dynamic data
- ✓ Stability analysis
- ✓ Foot arch analysis
- ✓ Arch elastic analysis
- ✓ Left and right foot-foot pressure distribution ratio
- ✓ Front and rear foot-foot pressure distribution ratio
- ✓ Heel pressure analysis
- ✓ Foot varus/valgus



iGait MAX SENSOR BOARD

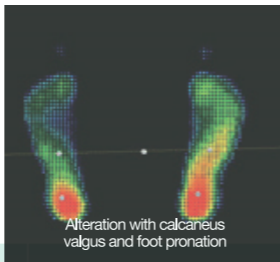
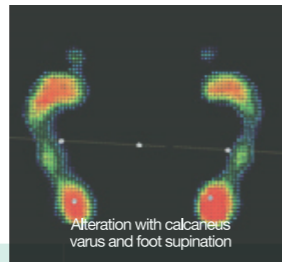
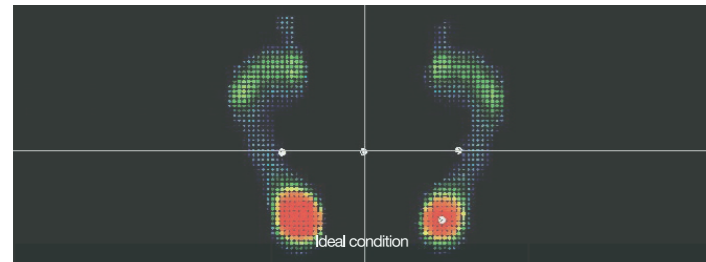
FOOT & SPINE REHABILITATION 3D PRINTING SOLUTION

■ INTRODUCTION:

The iGait MAX platforms, made of aluminum alloy, are resistant, lightweight and versatile. Available in 40 to 160 centimeters length, they satisfy all possible needs of professionals. The technology used allows to obtain a sampling frequency higher than 400 Hz in real time, while the resistive sensors coated in 24K gold guarantee extreme reliability and repeatability. Long service life up to 1,000,000 examinations. Interfaceable on USB or Bluetooth (optional) to iSUNStep software for Windows. Easy to use and install. All configurations are equipped with passive entry and exit surface for spontaneous walking and motion analysis.

■ TECHNICAL PARAMETER:

Resolution for XY and Z axis:	2.5 DPI8 BIT
Collection frequency:	400HZ
Connection interface:	USB 2.0/Bluetooth
Effective collection size:	1600x400mm
Thickness:	8MM
Number of sensors:	4/cm ²
Maximum pressure capacity:	150N/cm
Sensor's lifespan:	one million times



iFIT MIRROR 3D BODY MEASURING SCANNER

■ INTRODUCTION:

GLOBAL FIRST LIGHTWEIGHT 3D BODY MEASURING MIRROR

iFit Mirror could be used for AI Physique Counselor, AI Wearing Counselor or AI Health Counselor. It can generate 720° 3D digital body model and scanning report, including 128 items of 3D physical sign data, 45 items of body circumference data, 20 chest diagnostic data; it also show the Physical health diagnosis, 3D bone assessment, Recommended size, 4D body shape dynamic comparison, and Personalized outfit report.

■ FEATURES:

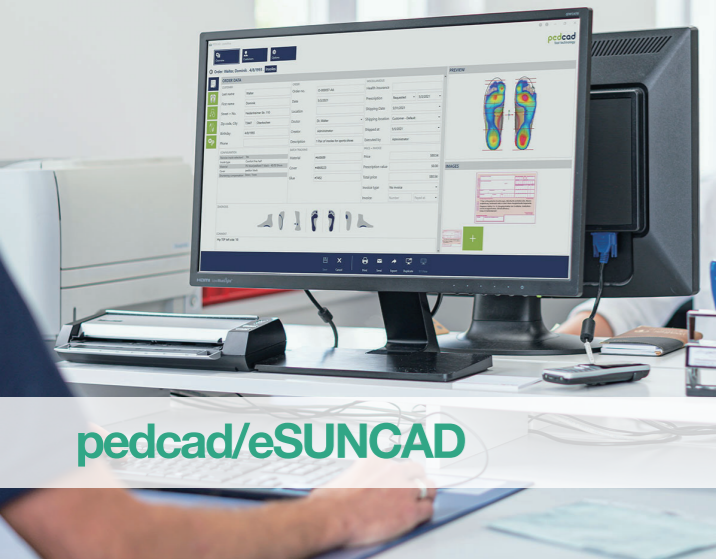
- **Fast:** Complete 128 physique data scanning and measuring in 1 minutes.
- **Smart:** Full stack 3D digital human reconstruction engine etc. several globally leading exclusive algorithms.
- **Precise:** Industry top structured light sensor, millimeter-level scanning precision, safe and stable.
- **Broad:** Broad application sectors, provide one-stop solution for multiple industries.
- **Strong:** Strong and comprehensive functions, both software and hardware are all superior to the peer products in market.
- **Intelligent:** AI black technology brings brand new intelligent funny experience, simple operation, self-owned social traffic.

■ APPLICATION SCENARIO:

Beauty industry stores, Clothes stores, Post-natal rehabilitation stores, Health institutions etc

■ TECHNICAL PARAMETER:

Dimension Parameter:	Mirror body: 1760*500*40 mm; Rotary table: Diameter 450±2*70±2(I-I)mm; Total using area: About 0.43 m ²
Display Screen:	32-inch high-definition liquid crystal touch screen
Product Weight:	Body measuring mirror: About 45.3kg Rotary table: About 4.7kg
Support Network:	Wired network/wireless network
Device Interaction:	Touch screen man-machine interaction
Standard Configuration List:	Body measuring mirror, rotary table, data cable of rotary table, power cable, product instruction, base or wall mounting (including screws), non-woven fabrics, mat
Weight Range:	10-200 KG
Data Storage:	1*1M.2 128G SATA SSD
Data Service:	Physique data, body shape, physical change trend, body composition etc. one hundred and twenty-eight 3D physique data



pedcad/eSUNCAD



FOOT & SPINE REHABILITATION 3D PRINTING SOLUTION

■ INTRODUCTION:

- Support to import multiple formats (such as stl, obj etc.) or different scanning files, and 2D pictures or 3D scans can be imported simultaneously or separately.
- No design experience required, just follow the operation steps, and finally export it for production.
- It has a professional prefabricated mode, which can be referenced by professional designers.
- One pair of insoles can be designed at the same time within one interface, no need to turn pages repeatedly. Several modes for designers to choose.
- The bottom shape of the heel part can be adjusted arbitrarily, Bottom and edge joints can be rounded, Right angle or slipper shape. An orthopaedic model included.
- pedcad/eSUNCAD has over 30 kinds of pads, designers can also create the necessary pads according to their own needs.
- Support to export in multiple formats, suitable for 3D printing and other production processes.

■ ADVANTAGES:

- Has a powerful virtual insole database, and the insole designs suitable for different shapes and types of shoes.
- Insole design for common diseases, such as flat feet, high arched feet, etc..
- Users can create new suitable models in the database, so that greatly reducing the workload.

■ The concise users' interface adapts to the needs of users ,and facilitates the establishment of a foot model.

■ Two buttons and one mouse can finish the software operation, it has a completed plugins database for orthopedic insole design (toe pads, arch pads, pressure-free pads, etc.)

■ And it can be freely modified in size and height, which is convenient for designing proprioceptive insoles, diabetic insoles and other complex insoles.



iSUN3D TPU-ANTIBACTERIA

FOOT & SPINE REHABILITATION 3D PRINTING SOLUTION

■ INTRODUCTION:

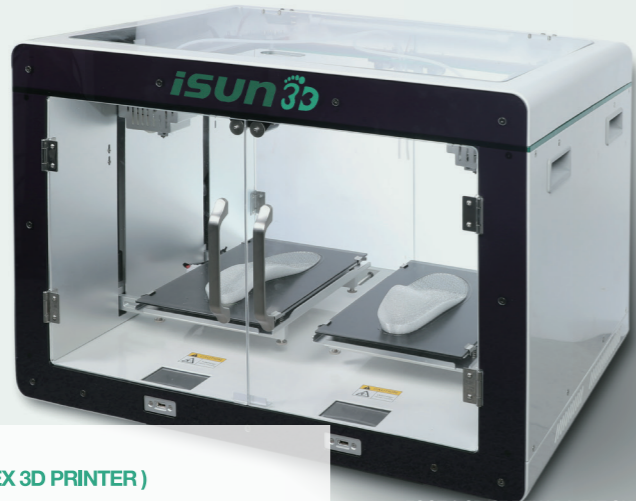
iSUN3D TPU-Antibacteria is added with long-term nano-silver compounds as antibacterial agents. During the manufacturing process, the nano-silver is evenly distributed on the inside and surface of the material through the control of phase separation. It has a stable inhibitory effect on bacteria and fungi that come into contact with the material

■ FEATURES:

- Anti-mold Erosion, Hardness 95A, High Speed Printing.
- Antibacterial and Anti-mildew, Anti-mold Erosion.
- The antibacterial rate against Escherichia coli and Staphylococcus aureus is as high as 99.9%.
- The Anti-mildew level can reach level 0—Anti-mold Erosion.
- High-speed printing, Save printing time.
- Adjust the balance of flowing temperature and viscosity.
- Maintain high fluidity while taking strength and formability into account.

■ TECHNICAL PARAMETER:

Melt Flow Index:	1.2 (190 C /2.16kg)
Density:	1.21 g/cm ³
Tensile Strength:	35 MPa
Elongation at Break:	>800%
Extruder Temperature:	220-250 C
Bed temperature:	45-60 C
Fan Speed:	100%
Printing Speed:	50-100mm/s



iSUN3D FLX2 (DUPLIX 3D PRINTER)

FOOT & SPINE REHABILITATION 3D PRINTING SOLUTION

■ INTRODUCTION:

Duplex position, two insoles can be printed independently at the same time. The forming time for one pair of insoles is 30-60 minutes. Printing insoles with different softness for different patients. Supporting breakage detection, Smooth Printing Surface. And simple post-processing after molding.

■ FEATURES:

- Maximum flexible printing speed is 120mm/s.
- Double Station, Two insoles printed at the same time.
- Only 30-60mins to print a pair a adult insoles.
- 3.5 inches HD touch screen.
- Support lamen fracture detecting.
- Professional designed for Flexible Materials.
- Fit for materials of different hardness.

■ TECHNICAL PARAMETER:

Printing Technology:	FDM/FFF
Printing Mode :	U disk off-line printing
Stations:	Double Stations(Run Independently)
Printing Size:	190 × 300 × 200 mm (Unilateral)
Printer Size:	700 × 540 × 540mm
Net Weight:	50 KG
Input Voltage:	AC100-240V , 50/60Hz
Output Power:	≤350W
Extrusion Head:	Double Motors
Extruder temperature:	175~260 C Adjustable
Extrusion Head Size:	0.4/0.6/0.8/1.0 (default0.8)
Structural Material:	Metal Frame Structure
Supported material :	PLA,ABS,TPU, etc.
Support File Format:	STL,OBJ,G-Code
Accuracy:	XY axis-0.11 mm Z axis-0.025 mm
Extrusion Hot-end:	Air Cooling & Thermistor
Temperature Control:	0-275°C
Certi cation:	CE/FCC



iSUN3D FLX3 (7*24 HOURS 3D PRINTER)

FOOT & SPINE REHABILITATION 3D PRINTING SOLUTION

■ INTRODUCTION:

The iSUN-FLX3 3D continuous wireless printer has made breakthroughs and innovations in functions.Such as remote control, remote monitoring, and continuous printing. It provides technical support for the establishment of regional large-scale production centers and realizes batch cloud printing .

iSUN-FLX3 not only keeps the high-speed printing characteristics of the previous generation products, but also adds the functions of remote control, centralized collection, and continuous printing, which can effectively reduce labor costs, improve production efficiency, and achieve 7*24 hours of unmanned production.

■ FEATURES:

- 7*24h non stopping to print.
- Suitable for central production center.
- Remote control and batch printing online.

■ TECHNICAL PARAMETER:

Printing Technology:	FDM/FFF
Printing Mode:	U disk off-line printing
Operation interface:	LCD capacitive screen
Printing speed:	20-120MM/S
Printing Size:	200 × 350 × 200 mm
Printer Size:	624 × 549 × 649MM
Input Voltage:	AC100-220V, 50/60HZ
Output Power:	≤350W
Extruder temperature:	175~260 C Adjustable
Extrusion Head Size:	0.4/0.6/0.8/1.0 (default0.8)
Structural Material:	Metal Frame Structure
Supported material :	PLA, ABS, TPU, etc.
Support File Format:	G-Code
Printing bed temperature:	0~100°C
Camera Resolution:	1080P
Temperature Control:	0-275°C
Certi cation:	CE/FCC



iSUN3D FLX4

FOOT & SPINE REHABILITATION 3D PRINTING SOLUTION



TECHNOLOGY PATENTS AND SYSTEM COMPONENTS

■ INTRODUCTION:

The iSUN-FLX4 features a brand new exterior design and integrates the filament rack internally, giving it a more high-end and sophisticated overall appearance. It introduces a new logo indicator light system that provides status reminders, allowing users to distinguish device status by the color of the indicator light. The nozzle adopts a magnetic suction design, making it more convenient to replace and maintain. It enables high-speed local file transfer, and the device's operating temperature status can be viewed and controlled on a mobile phone. Print status can be monitored on both mobile phones and computers.

■ FEATURES:

- 7*24h non stopping to print.
- Suitable for central production center.
- Remote control and batch printing online.

■ TECHNICAL PARAMETER:

Printing Technology:	FDM/FFF
Printing Mode:	U disk off-line printing
Operation interface:	LCD capacitive screen
Printing speed:	20-120MM/S
Printing Size:	200 × 350 × 200 mm
Printer Size:	624 × 549 × 649MM
Input Voltage:	AC100-220V, 50/60HZ
Output Power:	≤350W
Extruder temperature:	175~260°C Adjustable
Extrusion Head Size:	0.4/0.6/0.8/1.0 (default0.8)
Structural Material:	Metal Frame Structure
Supported material :	PLA, ABS, TPU, etc.
Support File Format:	G-Code
Printing bed temperature:	0~100°C
Camera Resolution:	1080P
Temperature Control:	0-275°C
Certi cation:	CE/FCC

■ TECHNOLOGY PATENTS AND SYSTEM COMPONENTS:

iSUN3D holds multiple proprietary intellectual property patents. At present, iSUN3D has been granted 19 patents. The company has successively obtained EU EMC certification, EU LVD certification, EU ROHS certification, and U.S. FCC certification. In 2016, it was assessed by an expert panel and recognized as a national high-tech enterprise.

■ COOPERATION MODELS:

