

Fiber-Flying

Laser Marking Machine

DLM-FA

Laser Power:

20W / 30W / 50W / 60W / 100W (Optional)

Marking Range:

110*110 / 150*150 / 175*175 / 220*220 / 300*300mm (Optional)



Machine Introduce

DLM-FA fiber flying laser marking machine is equipped with a flying-type floor-standing column, saving space. By adjusting the movement along the X-axis and Y-axis, the laser head's working position can be modified. Combined with the flying marking control system and production line, it enables batch, high-speed marking production.

High beam quality: Fiber lasers have excellent beam quality, making the marking effect clearer and more accurate.

High efficiency: Energy conversion efficiency of fiber lasers is high, save energy, no consumables, and reduce usage costs.

Long lifespan: Fiber lasers have a long service life, up to tens of thousands of hours, and reduce maintenance costs.

Common Material Range:

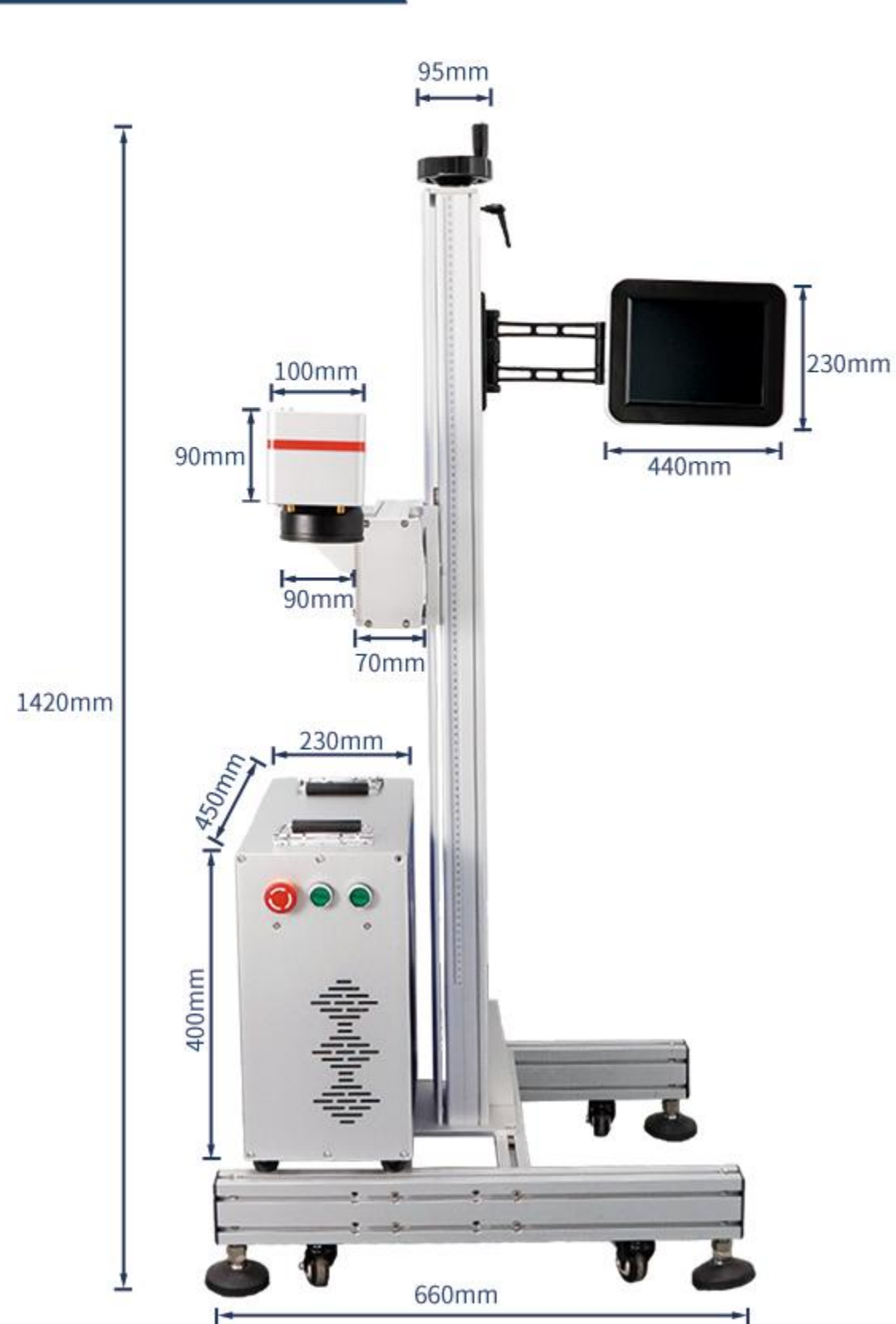
Metal - various metal materials such as stainless steel, iron, copper, aluminum, gold, silver, etc;

Plastic - hard opaque plastics such as PC, ABS, PVC, PC+ABS, PES, engineering plastics, etc;

Other - paint surfaces, electroplating, oxides, coated products, sprayed surfaces, silicon, nylon, clay and other materials

Application areas: Widely used in industries such as 3C, automotive parts, electronic components, integrated circuits, precision instruments, hardware products, building materials, jewelry, craft gifts, etc.

Machine Size



Machine Front



Machine Side

(The angle and position of the laser head can be adjusted)



Component Introduce

Model	DLM-FA
Machine Size	510*660*1420mm
Machine Weight	51.2kg
Packing Size	650*910*1690mm
Packing Weight	115kg

Flying series

Fiber Flying Laser Marking Machine

Flying laser marking machine is a device specifically designed for high-speed, non-contact marking on assembly lines. Its body can be flexibly installed and used in conjunction with production lines, and the rack can be adjusted by moving up and down, left and right. The marking head can be rotated and adjusted according to production needs. Using online high-speed non-stop laser marking, combined with a high-speed galvanometer system, the production efficiency is extremely high, and it can work in both static and high-speed flow states on the production line.

The DLM-FA fiber optic flying laser marking machine adopts branded lasers, with stable laser beam quality and long service life, suitable for marking various metal and some non-metal materials.

Parameter Information

Model	DLM-FA					
Laser Parameter	Laser wavelength	1064nm				
	Output power	20W	30W	50W	60W	100W
	Plus width	120~150ns	130~160ns	120~150ns	120~150ns	50~110ns
	Reception frequency	30-60kHz	40-60kHz	50~100kHz	55~100kHz	20~200kHz
	Service life	Lifespan of up to 100000 hours				
Galvanometer	Marking speed	7000mm/s				
	Marking depth	≤0.2mm (View materials)				
	Reception accuracy	0.01mm				
	Min line wide	0.06mm @ F=163mm (View materials)				
	Min character	0.2mm @ F=163mm				
Field Lens	Focal length	F=163mm	F=210mm	F=254mm	F=330mm	F=420mm
	Marking range	110*110mm	150*150mm	175*175mm	220*220mm	300*300mm
Control System	Control card	BSL / JCZ-LV7				
	Software language	CN/EN/DE/FR/ES/TC/JA/KO ect.				
	Support system	High-speed control system / Windows				
	Support file format	PLT/DXF/AI/SVG JPG/GIF/BMP/PNG etc.				
Other	Cooling method	Air cooling				
	Power support standard	110V-220V 50HZ-60HZ				
	Power consumption	≤0.55kW·h				

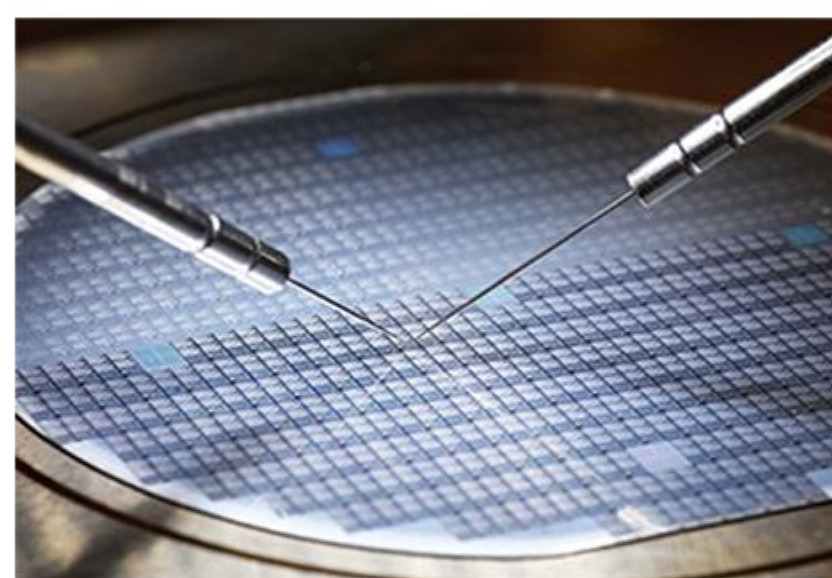
Application Scenarios



● 3C Electronics Industry



● IC Industry



● Semiconductor Industry



● Automotive Industry



● Packing Industry



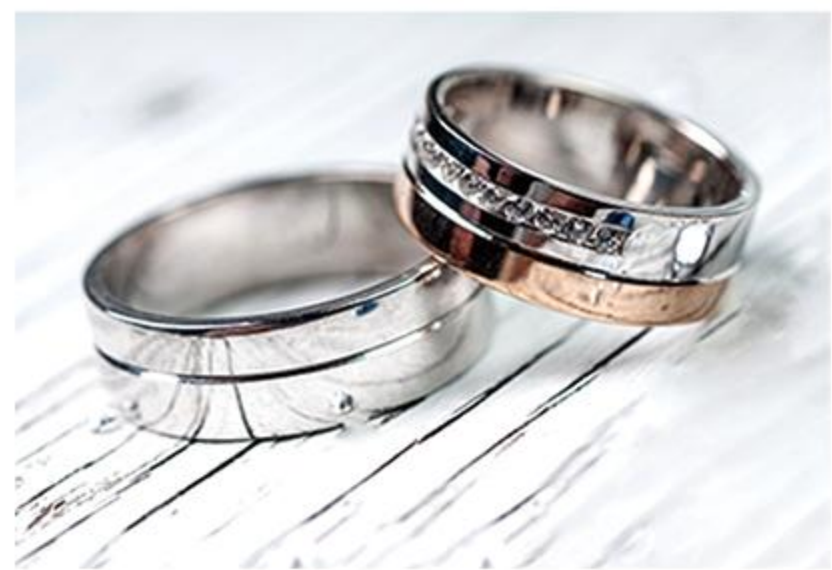
● Kitchen and Bath Industry



● Building Materials Industry

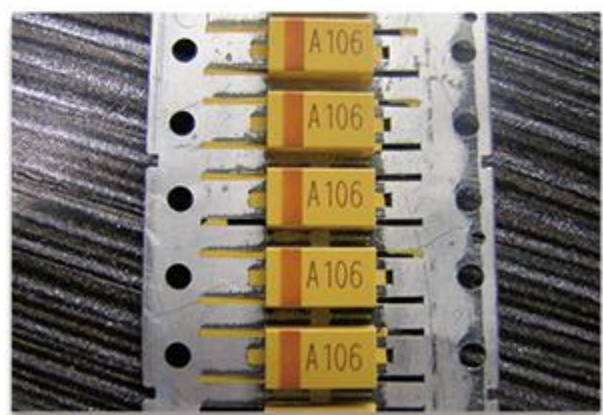


● Medical Industry



● Jewellery Industry

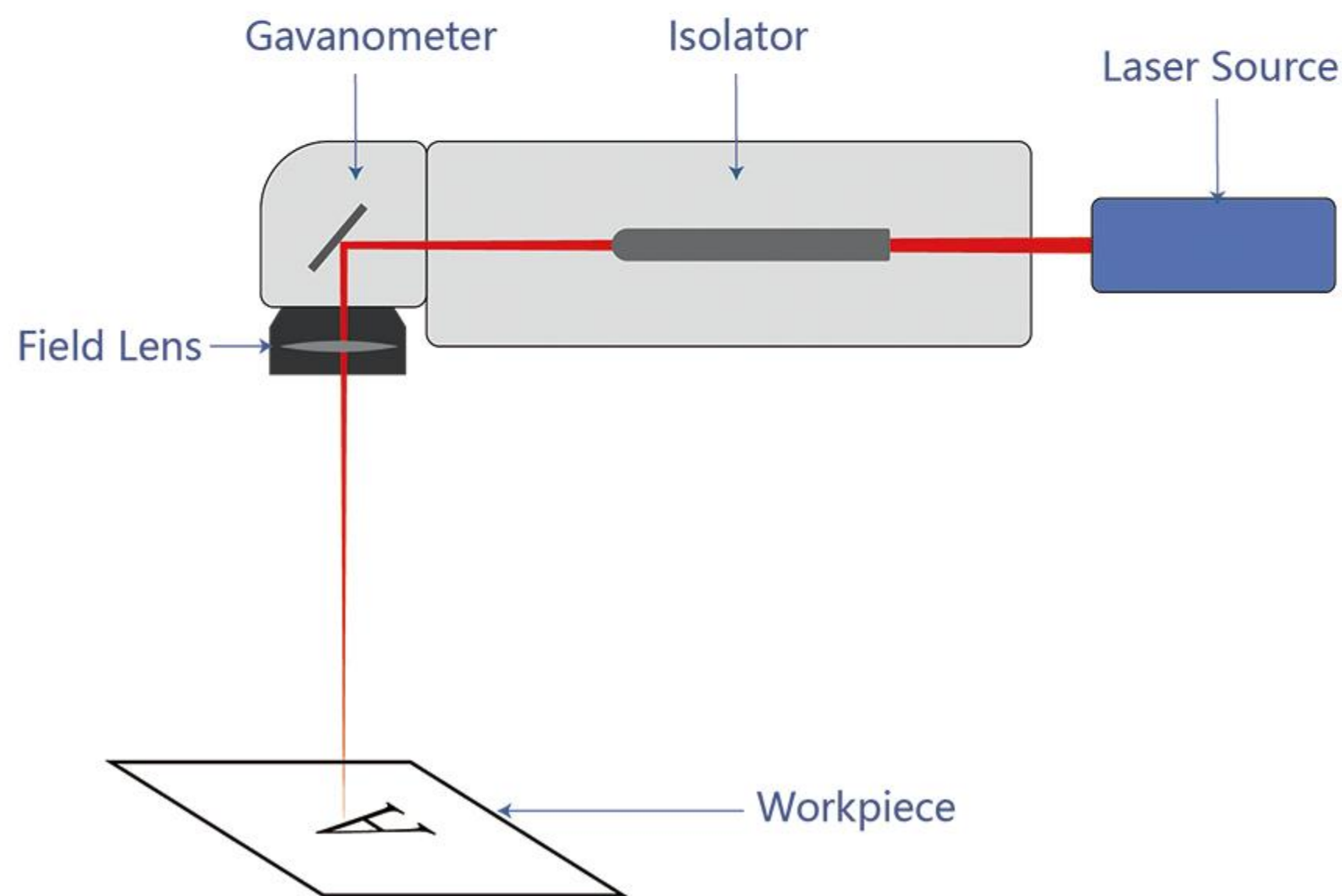
Sample



Core Component

Laser Source

The laser beam generated by the fiber laser, which is focused on the surface of the object to be marked by galvanometer scanning and field lens system, forms a permanent mark by making physical or chemical changes in the material.



Common Brand



Galvanometer

After computer sends instructions, the control card drives the high-speed deflection of the galvanometer, thereby changing the angle of the lens. The fixed laser beam is continuously reflected by the lens and finally focused by the field lens to form a controllable motion spot on the surface of the workpiece, which is combined into the desired pattern.

Optional Type



● Ordinary (Standard)



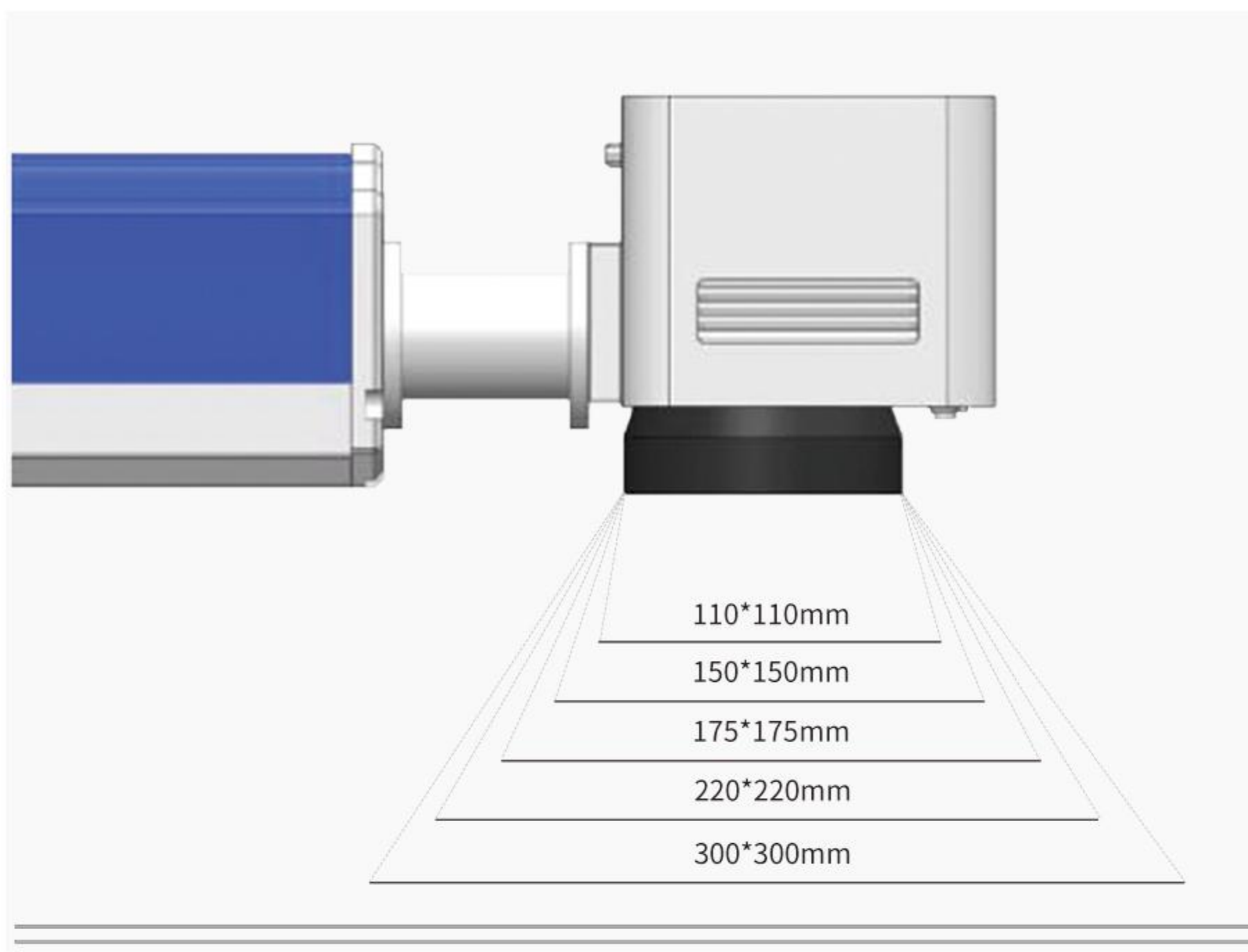
● High-speed (Optional)



● Dual Red Light (Optional)

Field Lens

The incident laser reflected by the galvanometer at different angles is focused on the same plane to ensure the accuracy of the process pattern throughout the entire area. Meanwhile, focal length of the field lens directly determines marking range. The shorter the focal length, the smaller the marking range, the smaller the light spot, and the clearer the marking effect.

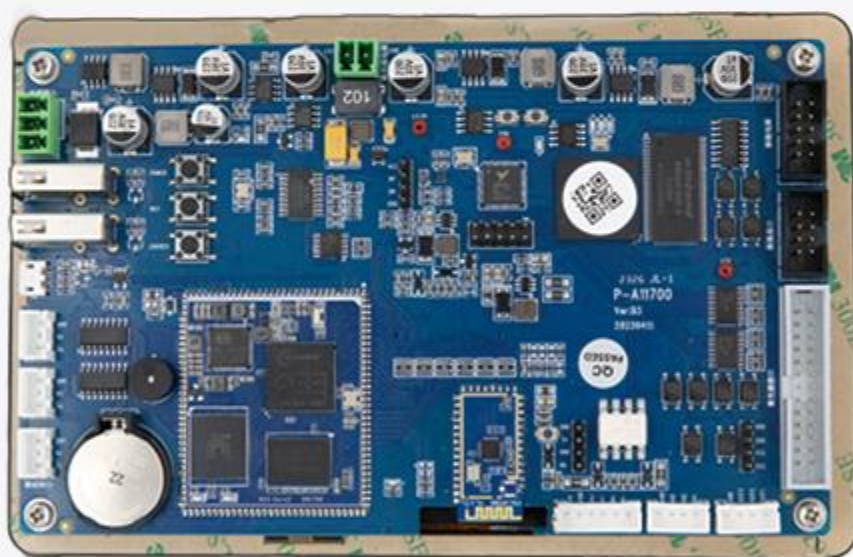


Comparison Table of Field Mirror Optional Range

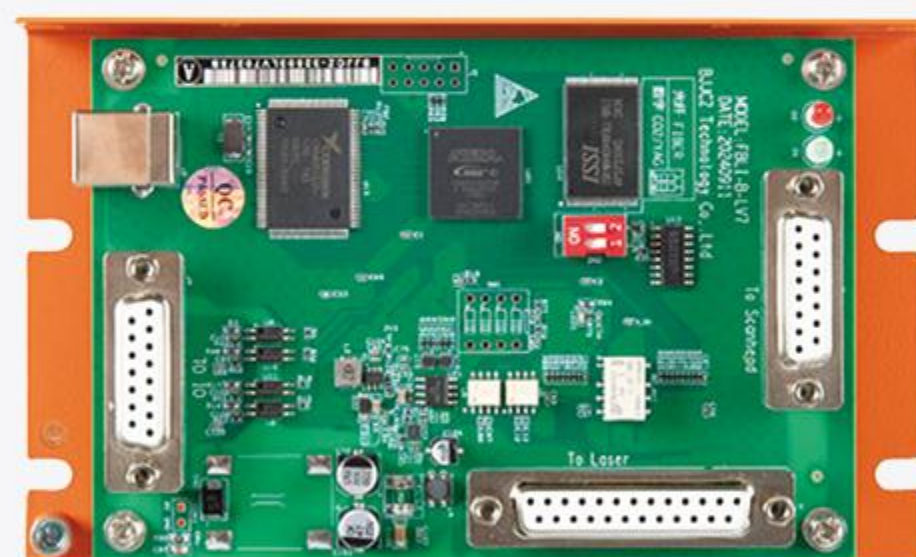
Focal Length	F=163mm (Standard)	F=210mm	F=254mm	F=330mm	F=420mm
Scanning Range	110*110mm	150*150mm	175*175mm	220*220mm	300*300mm
Working Range	176.94mm	228.63mm	271.98mm	352.47mm	438mm

Control Card

The fiber flying laser marking machine system operates extremely stably, with good consistency in marking quality. Its ultimate dynamic marking and real-time tracking capabilities can effectively improve marking speed and accuracy. According to actual production needs, you can also choose the upgraded LV7 control card from JCZ, which is compatible with multiple laser types and extend axis modes. Has strong anti-interference ability and can achieve precise marking control.



● BSL Control Card (Standard)



● JCZ-LV7 Control Card (Optional)

BSL High-speed Control System

Software has powerful functions, supports switching between multiple languages, and has a graphical interface that is easy to operate and user-friendly; Supports various vector graphics, TrueType fonts, and can generate and optimize various one-dimensional and two-dimensional codes; Built in core algorithm that can dynamically adjust marking instructions based on real-time location, improving marking efficiency; Provide a dedicated and intuitive flight marking setting window for convenient parameter setting, delay, marking direction, etc.



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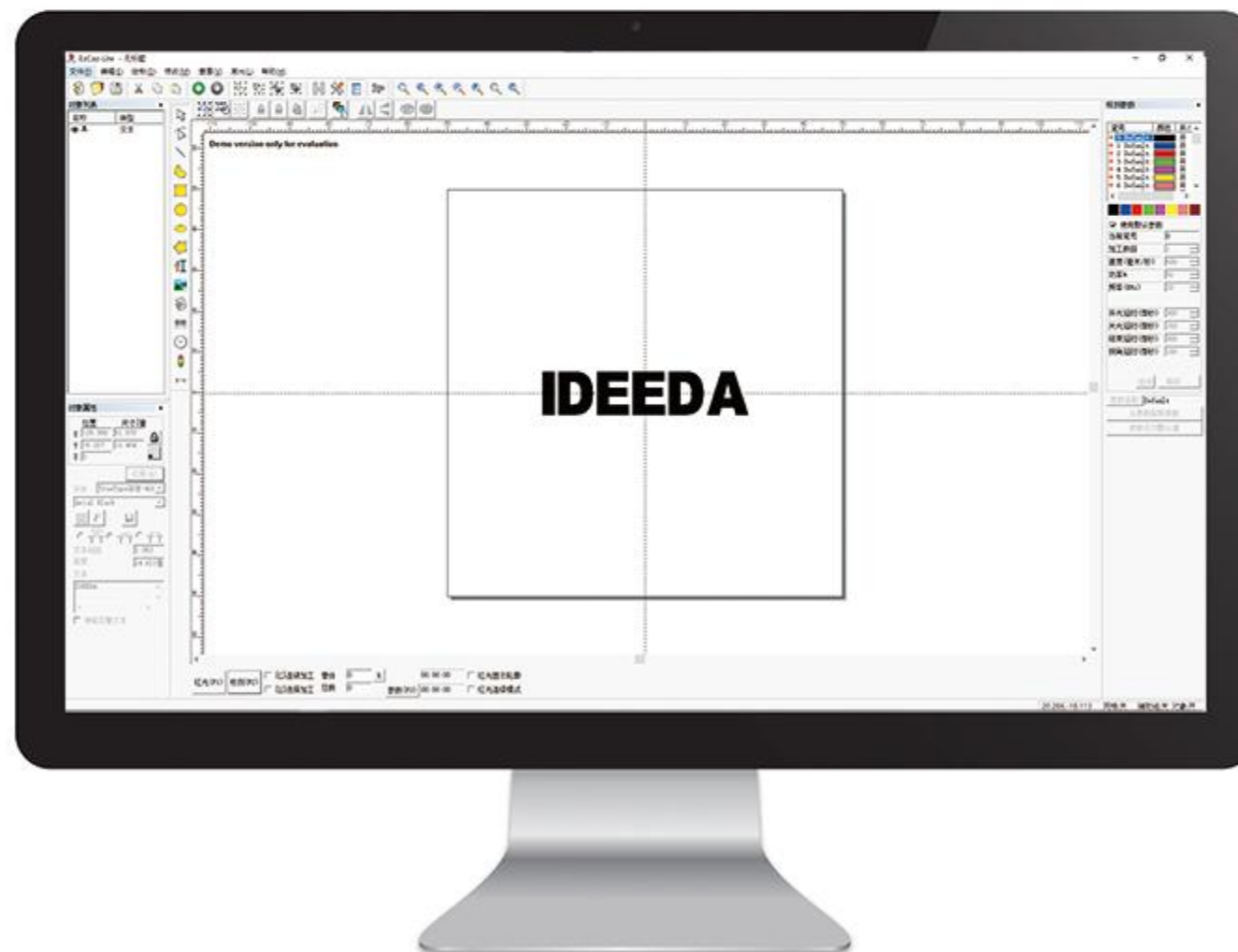


Ezcad2 (Compatible with LightBurn)

It adopts the Ezcad2 professional marking software, which is easy to operate and get started with.

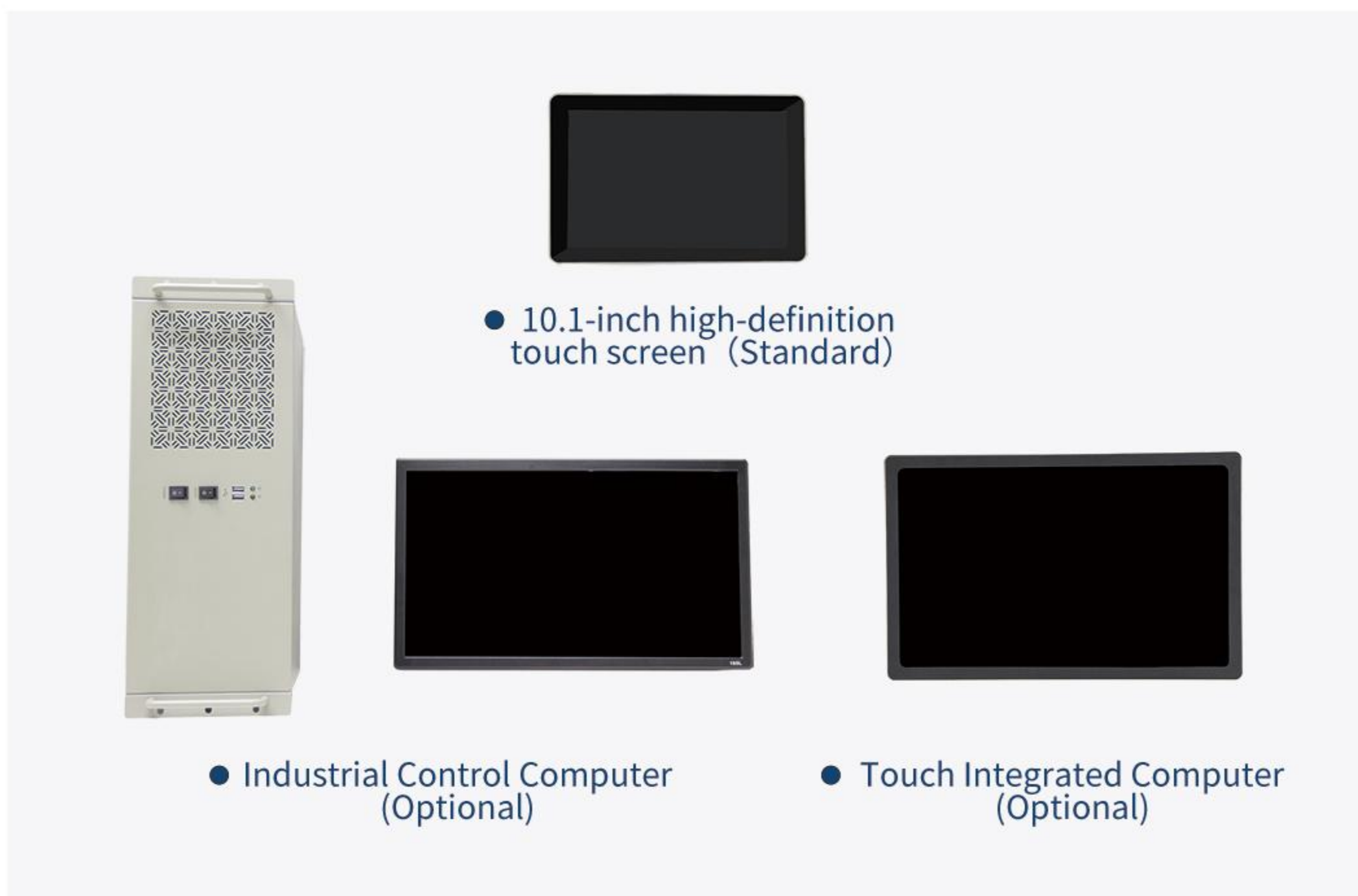
Supports Windows system, compatible with LightBurn; Software support PLT/DXF/AI/SVG/JPG, GIF, BMP etc. file format;

Software supports text, characters, images, vector graphics, barcodes, QR codes and other contents, as well as regular code skipping contents such as serial numbers, dates and batch numbers.



Computer

Flying laser marking machine adopts a 10.1-inch high-definition touch screen with a metal shell, and the small screen design saves more space; Equipped with professional flight parameter settings, easy to operate and learn. Optional industrial control computer, touch integrated computer, built-in Windows system, rich compatibility, supports multiple software, can be connected to various extensions, sturdy and durable.



Accessories

Standard Accessories



Protective glasses



USB flash drive



Calibration paper



Focusing film



Foot switch



Ruler



Hexagonal wrench



Positioning bar



Data line



Power cord

Optional Accessories



Vision CCD



XY moving platform



Smoke purifier



Assembly line