

UV-Flying

Laser Marking Machine

DLM-UA

Laser Power:

5W / 10W / 15W / 20W (Optional)

Marking Range:

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



Machine Introduce

DLM-UA UV 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: UV laser belongs to cold light source, with low heat during laser operation and minimal damage to material surface. It can be used for ultra fine and special material marking.

High precise: UV laser has the characteristics of small spot size and concentrated beam quality, which can achieve higher resolution and finer marking effects.

High speed: The UV laser marking machine has a high marking speed and is suitable for mass production.

Common Material Range:

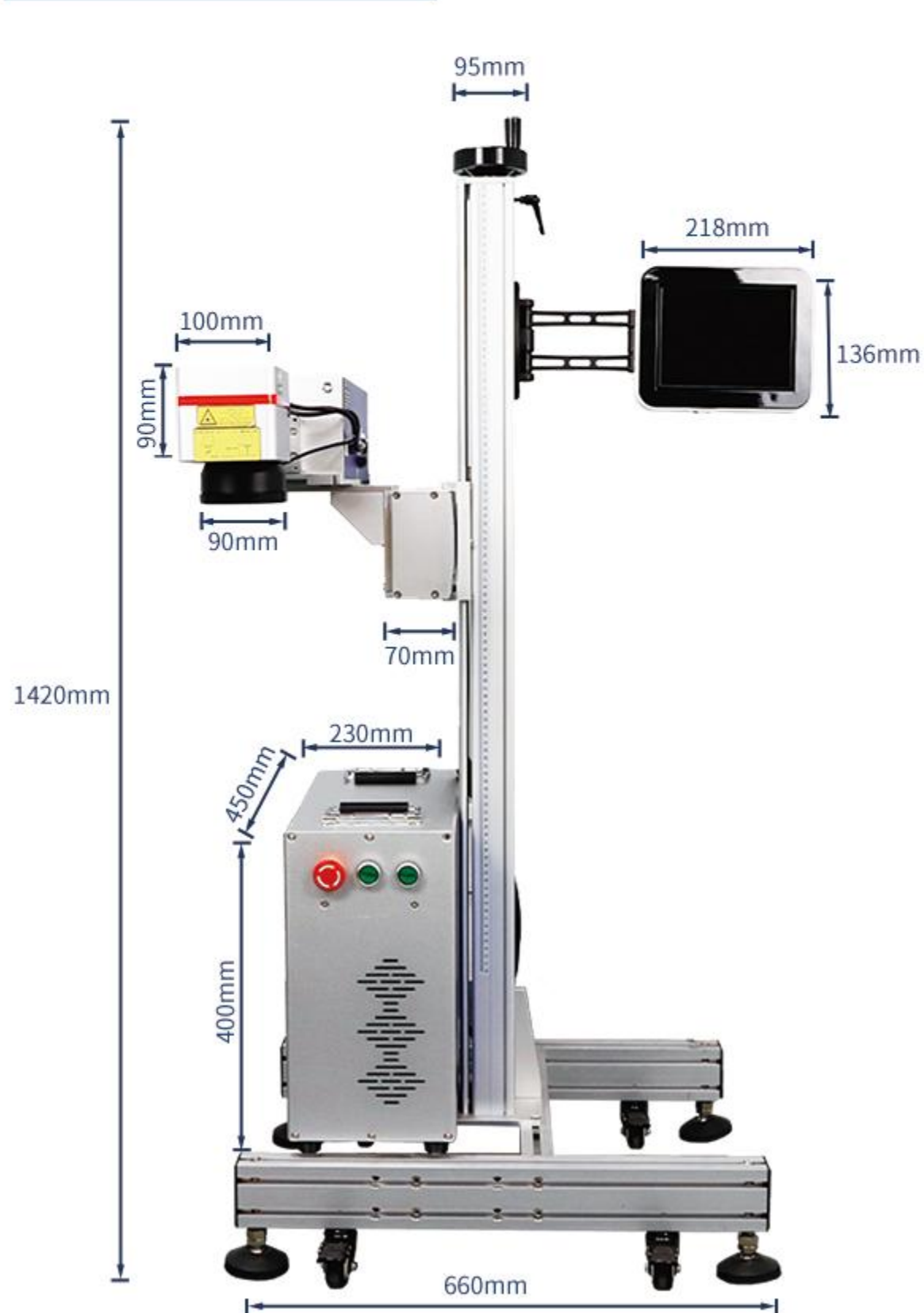
UV laser has a short wavelength and can be absorbed and reacted by various common materials.

Commonly used in various materials such as plastic, glass, metal, silicone, wood, bamboo, paper, film, ceramics, leather, acrylic, as well as DIY applications such as leaves and food surfaces.

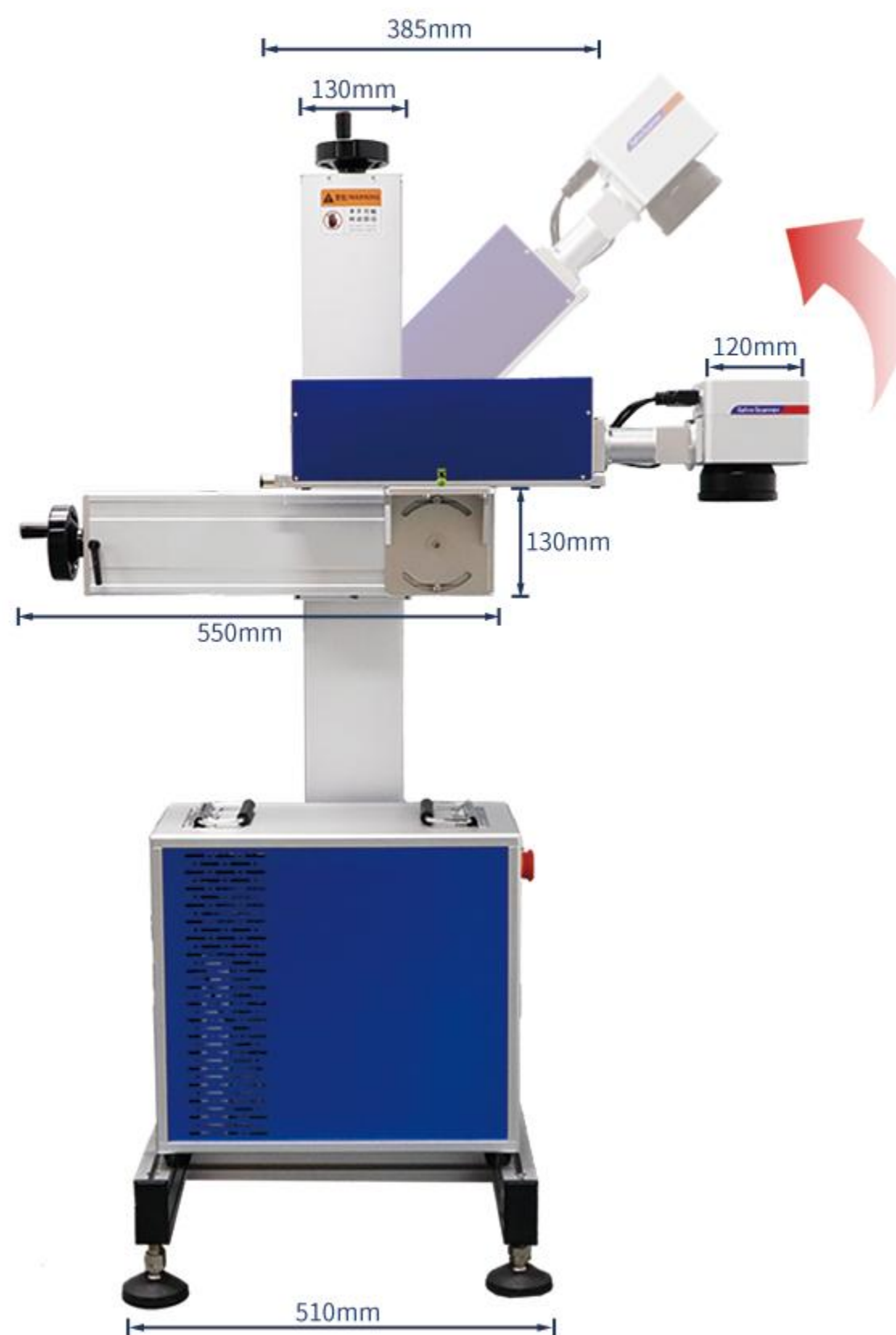
Application areas:

Widely used in precision instruments, medical equipment, electronic components, integrated circuits, various packaging materials, flexible PCB boards, silicon wafer micro hole and blind hole processing, as well as glass and metal coating marking.

Machine Size



Machine Front



Machine Side

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



Component Introduction



	Machine	Chiller
Size	510*660*1420mm	580*290*520mm
Weight	53.2kg	20kg
Packing Size	650*910*1690mm	650*360*560mm
Packing Weight	117kg	22kg

Flying series

UV 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.

DLM-UA UV flying laser marking machine adopts branded lasers, with stable laser beam quality, fast marking speed, high accuracy, wide application range, and suitable for marking various materials.

Parameter Information

Model	DLM-UA					
Laser Parameter	Laser wavelength	355nm				
	Output power	5W	10W	15W	20W	
	Repetition frequency	20~100kHz			40~300kHz	
	Pulse width range	15~25ns @ 30kHz （View brand）				
	Q Pulse width	1~33ns				
Galvanometer	Marking speed	7000mm/s				
	Marking depth	≤0.1mm （View materials）				
	Repeatability accuracy	0.01mm				
	Min line width	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				
	Software language	CN/EN/DE/FR/ES/TC/JA/KOR etc.				
	Support system	High-speed control system / Windows				
	Support file format	PLT/DXF/AI/SVG JPG/GIF/BMP/PNG etc.				
Other	Cooling method	Water cooling				
	Power supply	110V-220V 50HZ-60HZ				
	Power consumption	≤0.55kW·h				

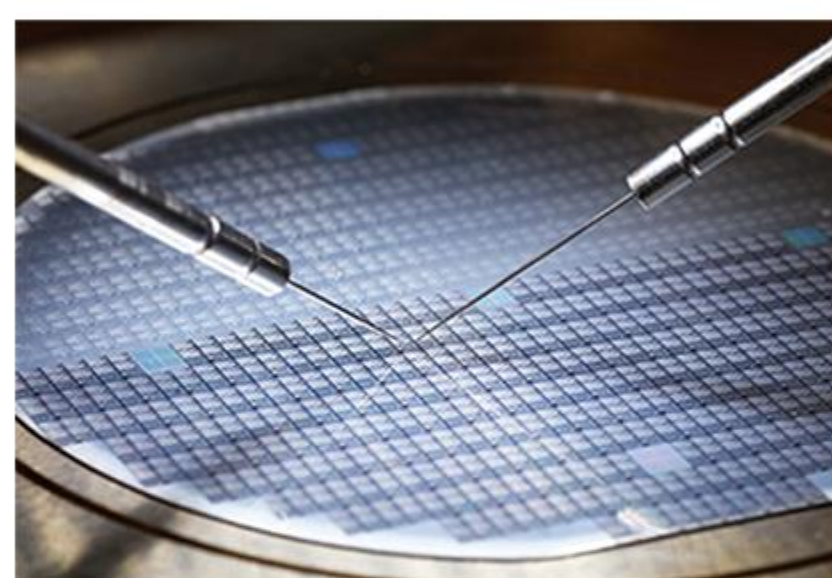
Application Scenarios



● 3C Electronics Industry



● IC Industry



● Semiconductor Industry



● Automotive Industry



● Packing Industry



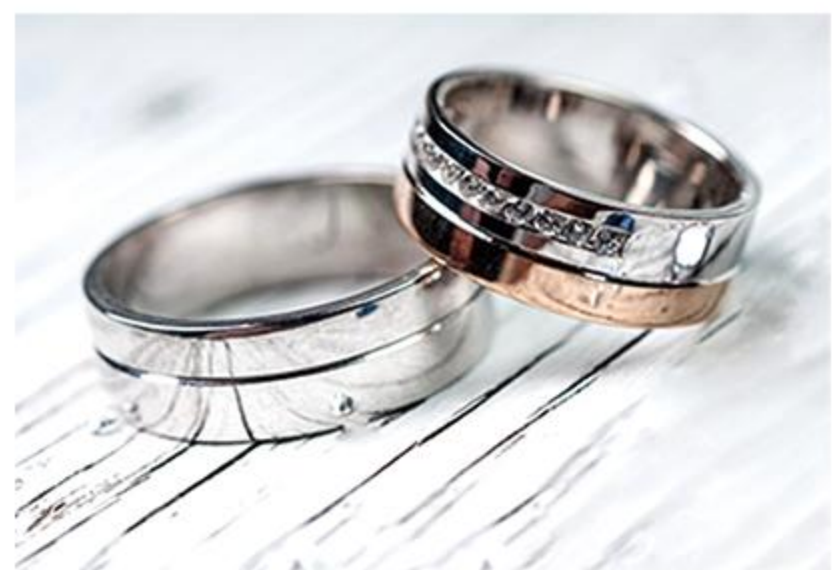
● Kitchen and Bath Industry



● Building Materials Industry

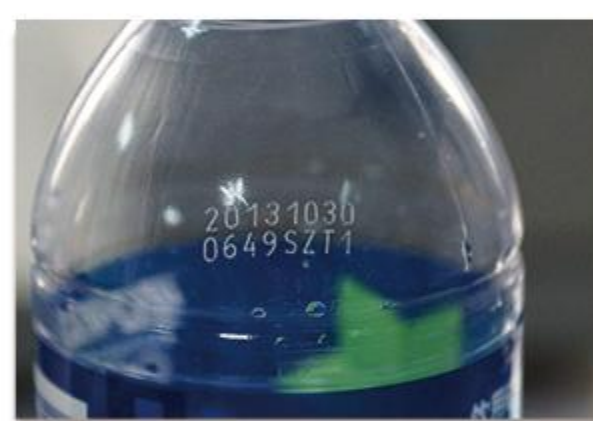


● Medical Industry



● Jewellery Industry

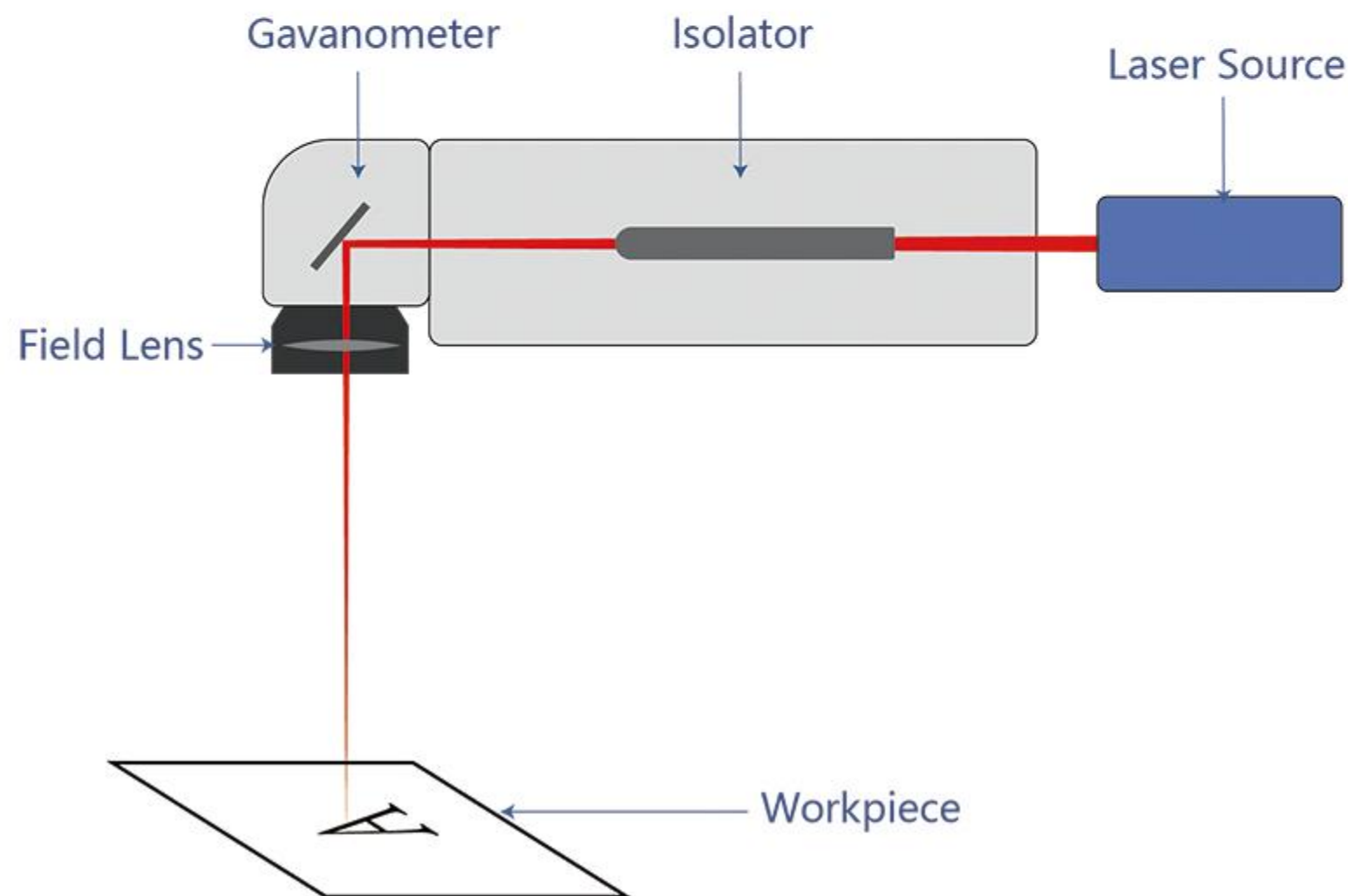
Sample



Core Component

Laser Source

The UV laser marking machine uses a 355nm UV laser to generate a laser beam of a certain wavelength. The laser beam is then focused on the surface of the workpiece through galvanometer scanning system, causing physical or chemical changes in the material and resulting in permanent marking. Meanwhile, UV laser can perform ultra fine marking due to its extremely small focused spot and minimal thermal impact during processing.



Common Brand



● JPT Laser



● Gainlaser



● HAN'S Laser



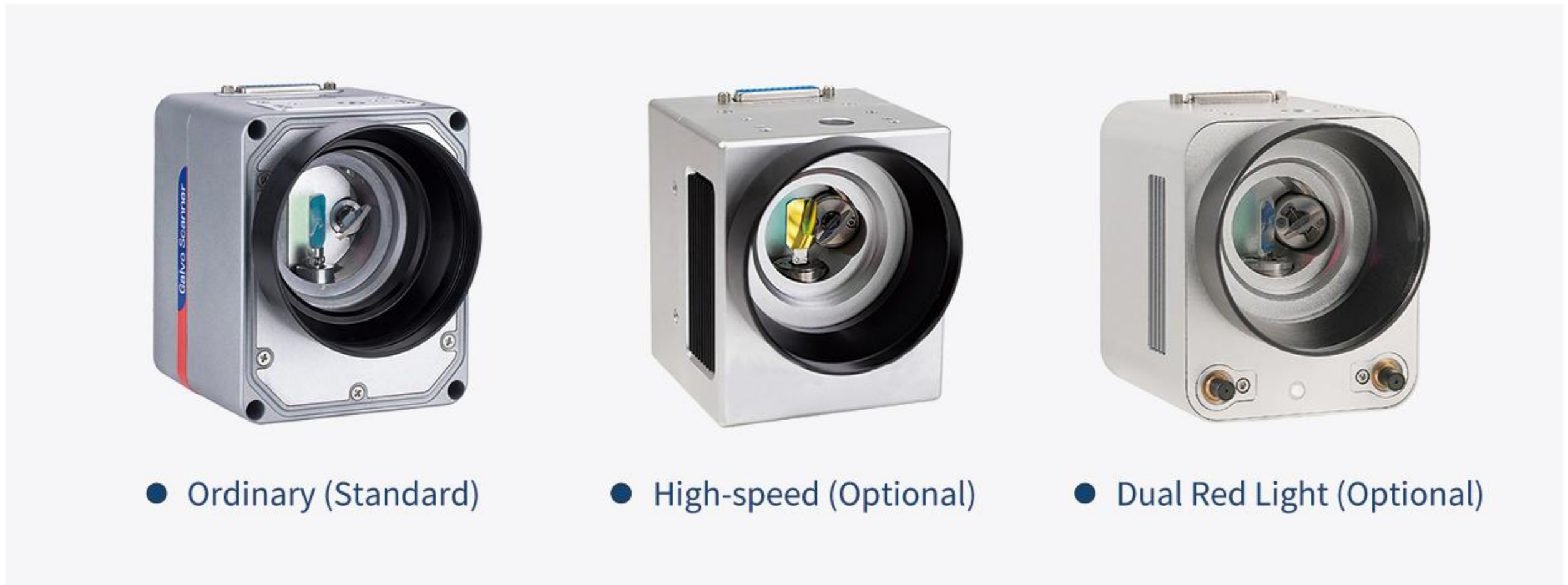
● RFH Laser



● DXT Laser

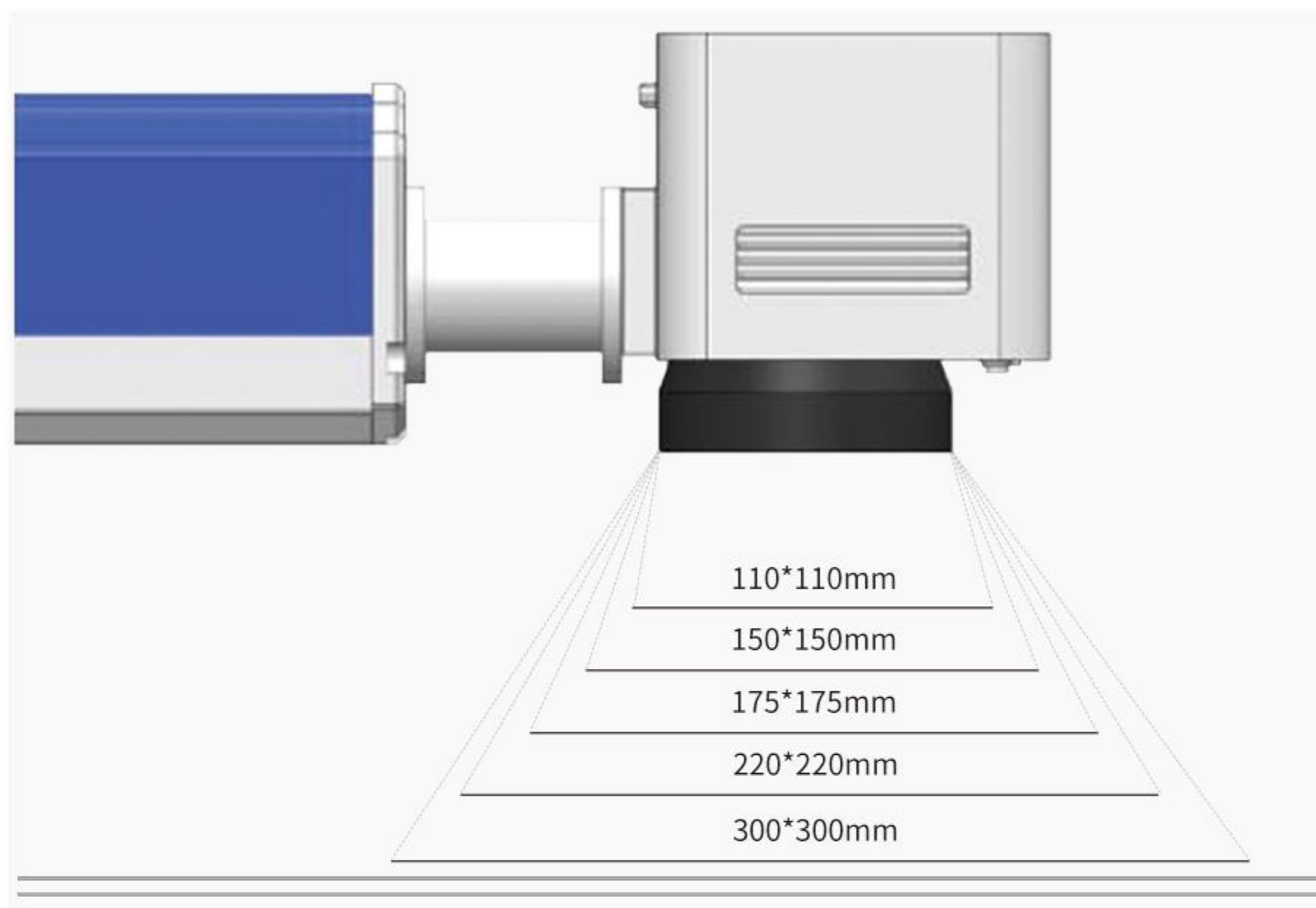
Galvanometer

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.



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.

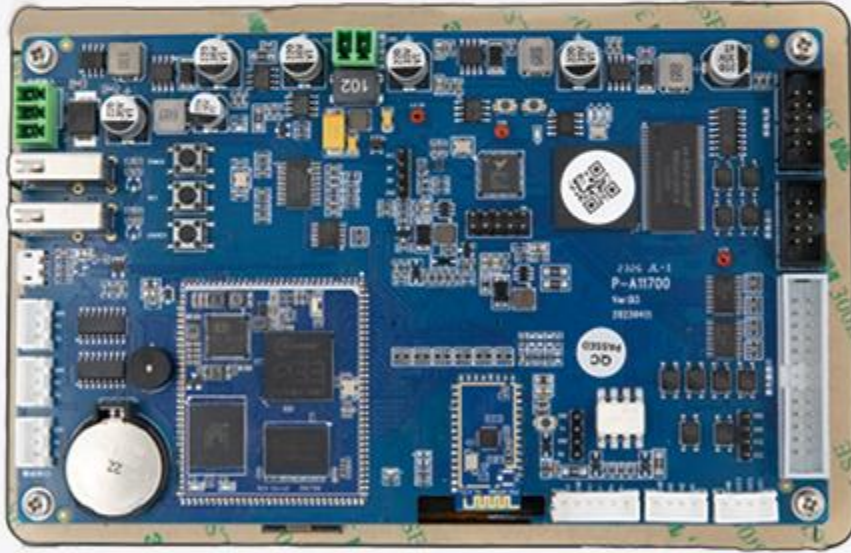


Comparison Table Of Field Lens Optional Range

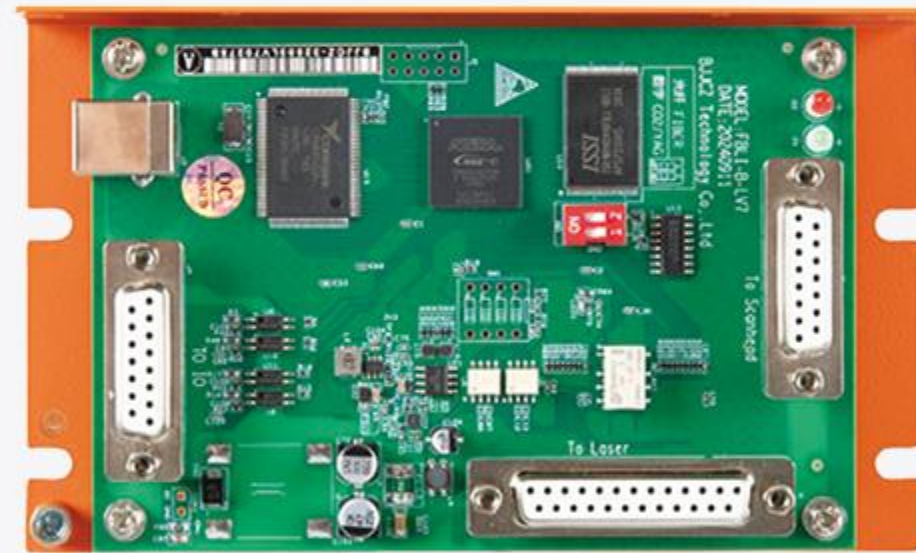
Focal Length	F=163mm (Standard)	F=210mm	F=254mm	F=330mm	F=420mm
Scanning Range	110*110mm	150*150mm	175*175mm	220*220mm	300*300mm
Working Range	176.94mm	228.63mm	271.98mm	352.47mm	438mm

Control Card

The UV 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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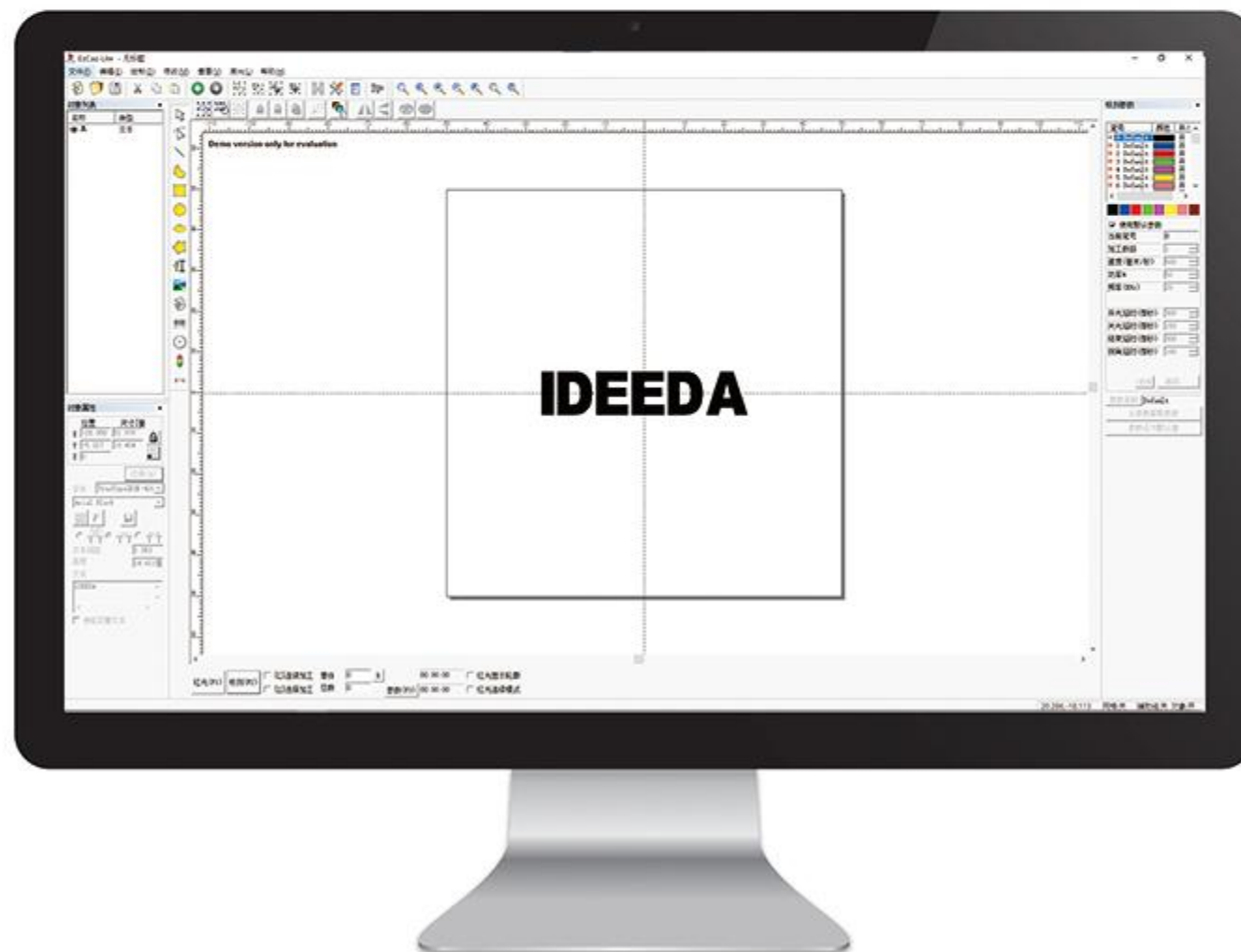


Ezcad2 (Compatible with LightBurn)

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

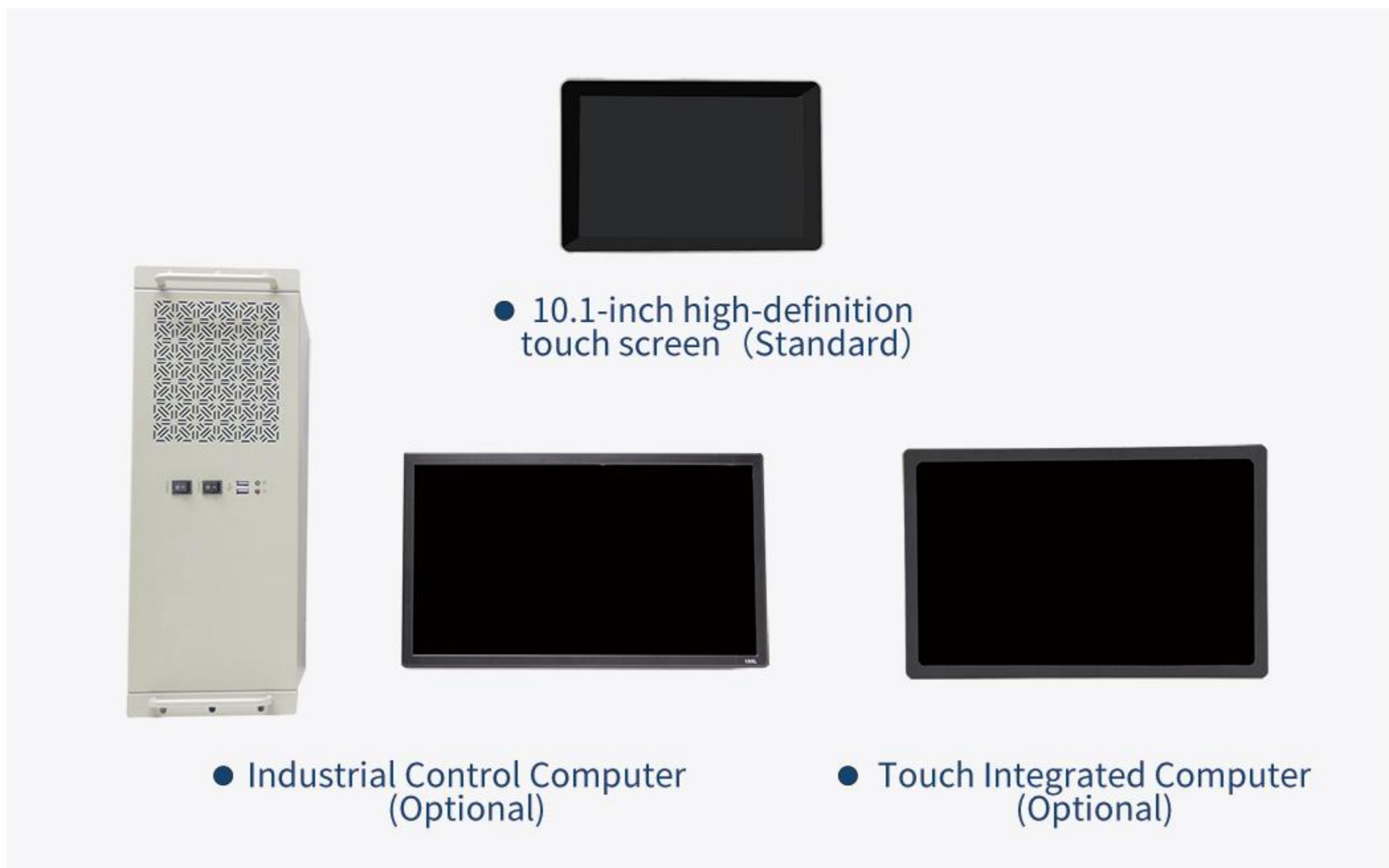
Supports Windows system, compatible with LightBurn; Software support PLT/DXF/AI/SVG/JPG, GIF, BMP etc. file format;

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