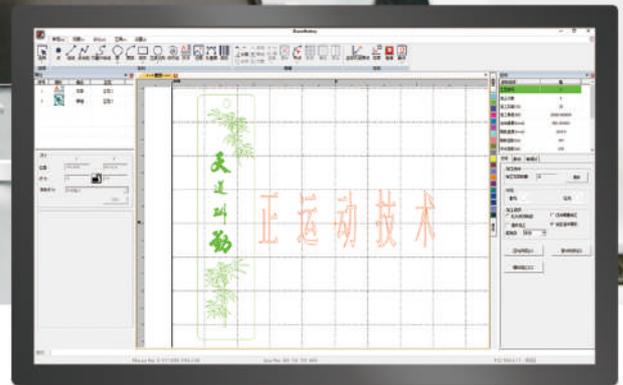
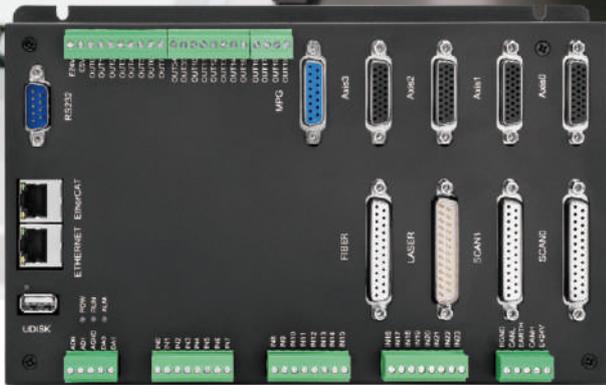


# Zmotion Laser Processing Solution

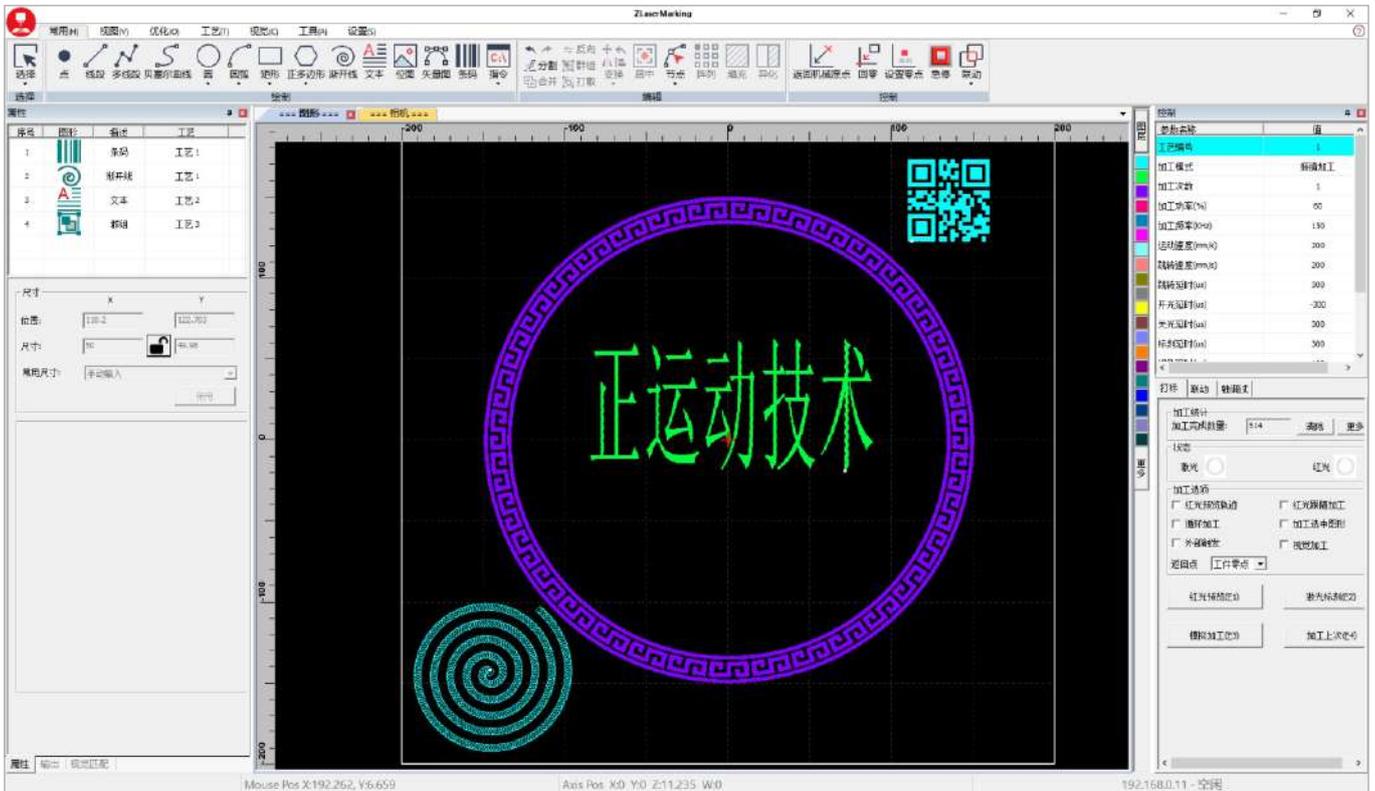
Vision Laser Processing System | Laser Cleaning System

深圳市正运动技术  
有限公司



# ZLaserMarking Laser Marking Control System

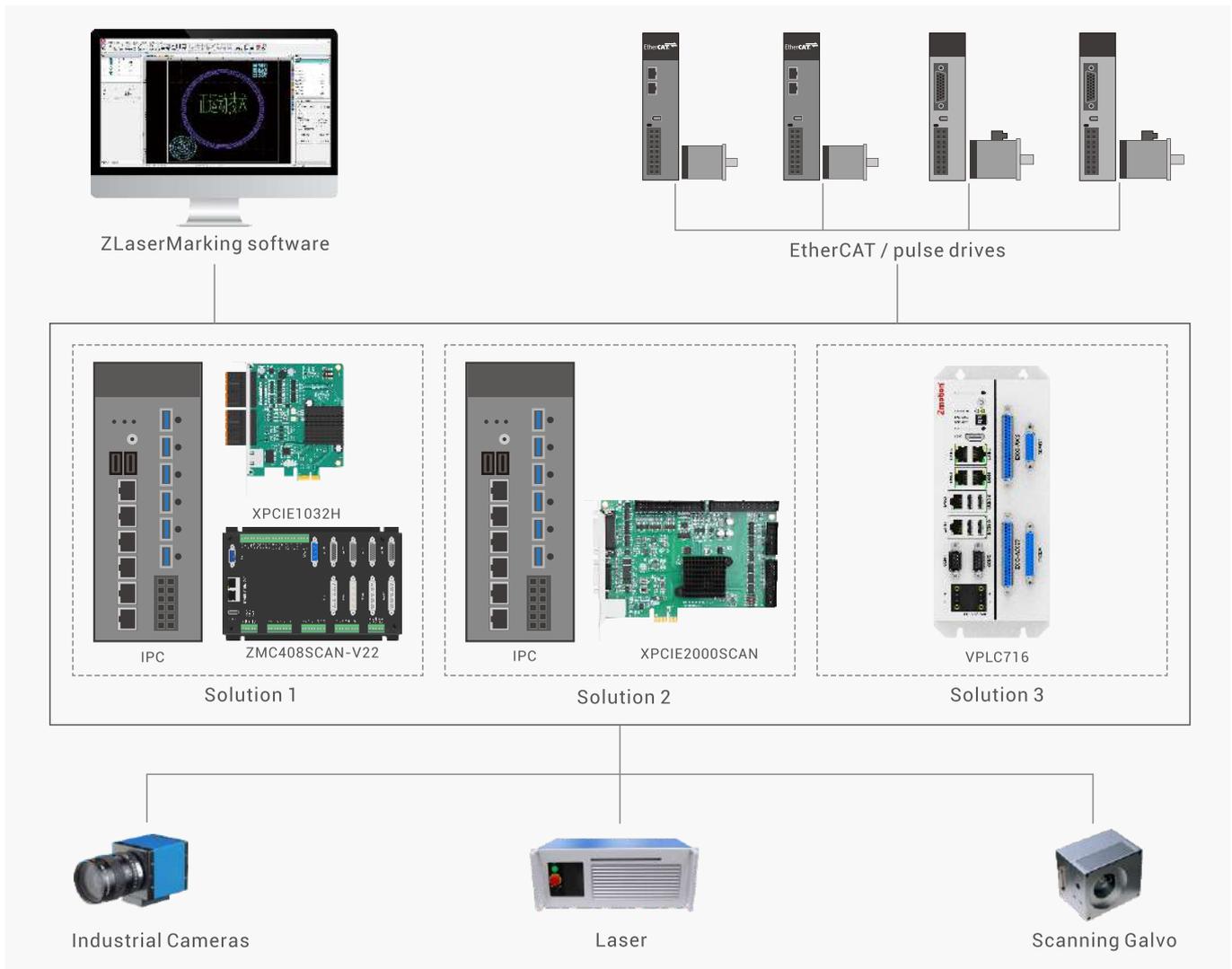
ZLaserMarking is one powerful general laser processing software, which integrates galvanometer control, machine vision, motion control with laser control. There are many advanced functions, such as, graphic editing, vision correction & deviation, multi-axis linkage, etc., then it can be used in laser cutting, laser marking, laser welding machines. In addition, it provides secondary programming interface, to develop one full and efficient laser solution for you, making laser process more accurate, more efficient, and more convenient.



## Product Advantages

- |                           |   |  |
|---------------------------|---|--|
| <b>Multi-Process Mode</b> | <ul style="list-style-type: none"> <li>■ process online / offline</li> <li>■ splicing, flying, rotating</li> </ul>                          | <ul style="list-style-type: none"> <li>■ 4-axis linked processing</li> <li>■ mixed of platform &amp; scan</li> </ul> |
| <b>Rich Technology</b>    | <ul style="list-style-type: none"> <li>■ PSO, power following</li> <li>■ auto lead-in / auto lead-out, marking at constant speed</li> </ul> | <ul style="list-style-type: none"> <li>■ curve path jitter &amp; distortion</li> </ul>                               |
| <b>Open Software</b>      | <ul style="list-style-type: none"> <li>■ embedded RTHmi interface</li> </ul>  | <ul style="list-style-type: none"> <li>■ complete secondary programming interface</li> </ul>                         |
| <b>Multi-Process Mode</b> | <ul style="list-style-type: none"> <li>■ vision positioning deviation</li> <li>■ servo axis pitch compensation, 2D compensation</li> </ul>  | <ul style="list-style-type: none"> <li>■ path &amp; curve optimization</li> </ul>                                    |

# Hardware Structure

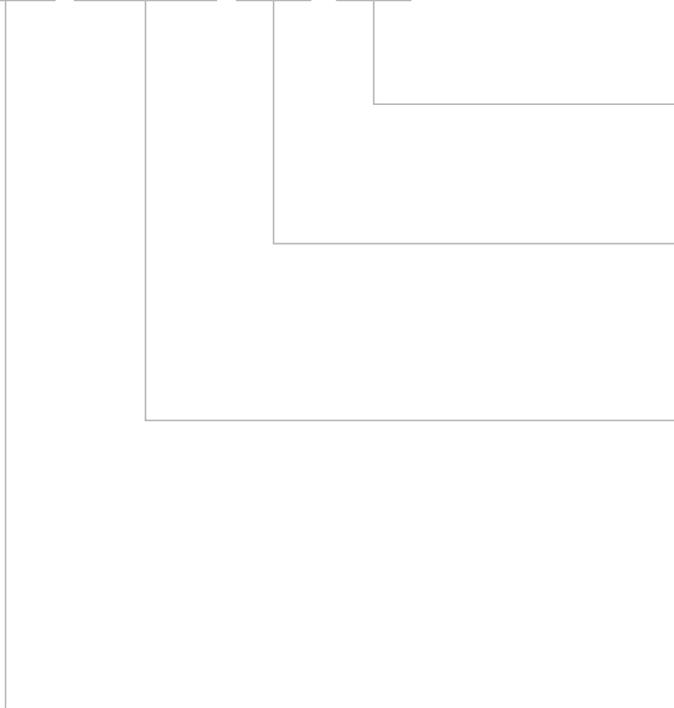


## System Model Selection / Configurations

Software Configuration	
System Version	Windows 64-bit
Laser	FIBER, CO2, YAG, continuous lasers, etc., you could self-define the type according to laser control time sequence.
Scan Correction	support coefficient, multi-point, scanner and high-precision vision calibration.
Graphic Editing	it can edit / draw any curves and graphics, including "group/ungroup", "split/merge".
Curve Distortion	spiral, sin & cos curve, sawtooth, ellipse, 8-shaped distortions, enabling rapid editing of welding trajectories.
Graphic Filling	unidirectional, bidirectional, bow-shaped, annular, and radial; support 8 sets of independent filling parameters.
Text Editing	it can add needed customized text library file, and dynamic text.
Bar Code & QR Code	valid code types: CODE, EAN, QR, DATE, MATRIX, UPC, etc.
CAD File	valid vector graphic types: DXF, PLT, AI, DST, AI, etc.; valid bitmap types: BMP, GIF, JPG, JPE, PNG, etc.
Multi-Document Marking	multiple ZMO project files can be used; processing also can be triggered by external IO.
Offline Operation	max 16 processing files can be loaded offline; and the total size of offline file can be up to 156M.
Processing Modes	modes: galvo static, segmented, flying, single-axis rotary, galvo & platform synchronous, platform only.
Software Technologies	power following, trajectory lead in-out, Z axis following, uniform speed marking.
Axis Control	4-8 pulse / EtherCAT control.
More Functions	It can do offline motion control and second program the HMI interface.
Vision (optional)	Do scan high-precision correction, positioning deviation.v
Linkage (optional)	XY platform can do linked motion with galvo, promoting processing efficiency and accuracy.

# System Model Selection

## ZMARK-408SCAN-AX04-LM11



Mark	Functions
LM00	standard function
LM01	4-axis linked (please use 408SCAN)

Mark	Axis Numbers
AX04	4-axis
Ax06	6-axis
Ax08	8-axis

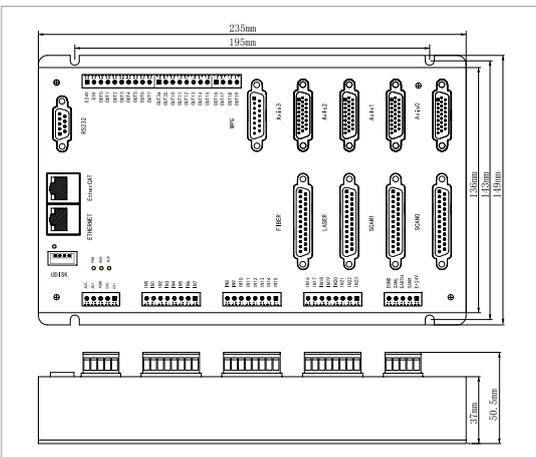
Mark	Hardware Models
403SCAN	ECI403SCAN laser galvo control card
406SCAN	ECI406SCAN laser galvo control card
408SCAN	ZMC408SCAN-V22 laser galvo controller
304SCAN	ZMC304SCAN laser galvo controller
2000SCAN	XPCIE2000SCAN laser galvo control card
VPLC716	VPLC716 vision motion controller

Mark	Content
ZMARK	marking system

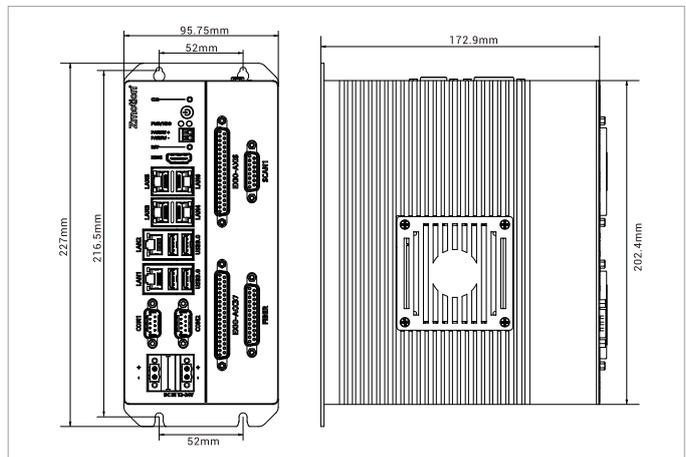
## Models with Vision (Optional)

	Models	Functions
Models with Vision	XPCIE1032-AX02-M01-ZV	PCIe vision card (used together with SCAN card)
	XPCIE2000SCAN-AX08-ZV	PCIe vision galvo card
	VPLC716G6S0000-AX08-SCAN1-ZV	Vision & SCAN & Motion Controller

## Product Size



ZMC408SCAN-V22

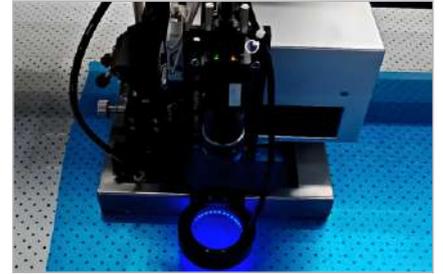
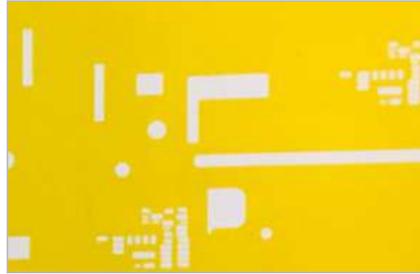
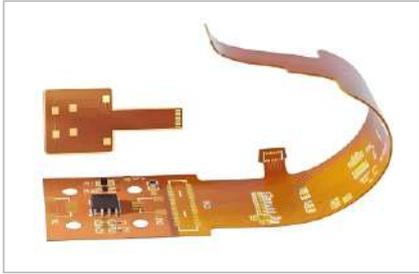


VPLC716

# Solution Applications

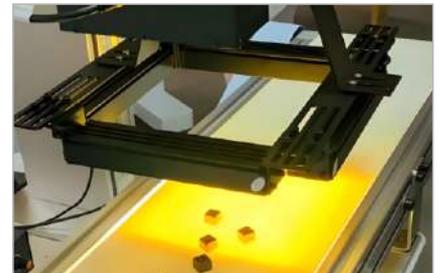
## PCB Industry Solutions

Mainly used for large-format linked laser cutting of materials such as rigid PCBs, flexible FPCs, cover lays (CVL), PET/PI films, etc.



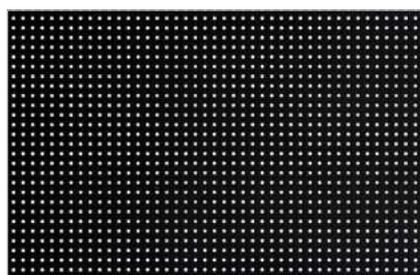
## Assembly Line Solutions

It is mainly used for visual laser marking in scenarios such as engraving production date, shelf life, batch No. on food packaging in assembly lines, as well as marking model and specification on metal or plastic shells.



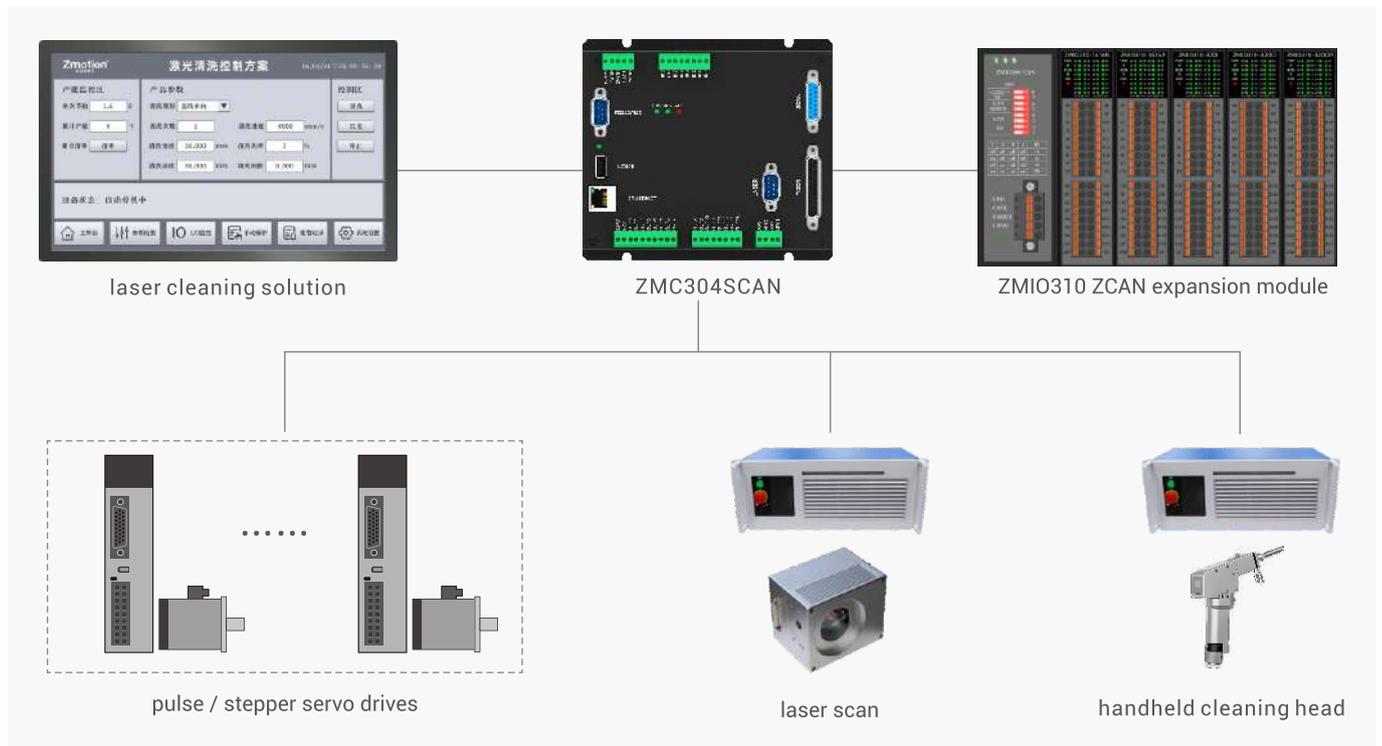
## "Display" Industry Solutions

Mainly used for light guide plate etching, flexible OLED laser cutting, LED laser paint stripping and other applications.



# Laser Cleaning Control Solution

## Hardware Structure



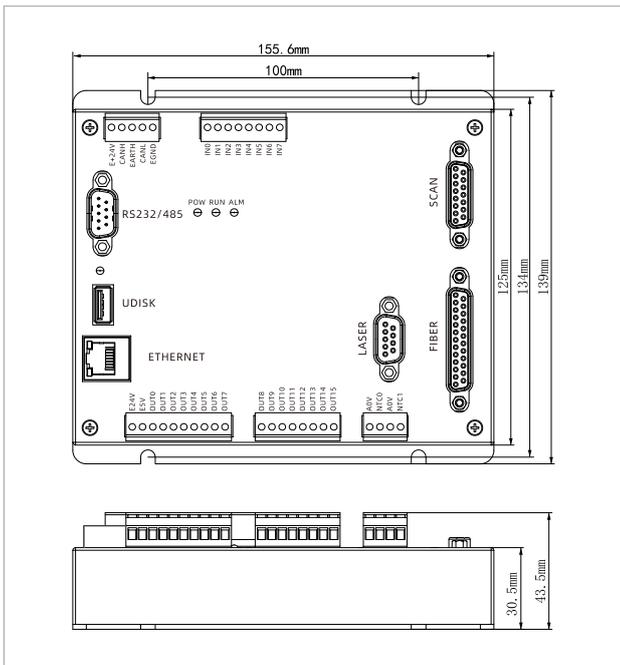
## Application Functions

- 01** support handheld cleaning, and 4-axis motion platform automatic cleaning control.
- 02** support fiber pulse lasers, analog continuous lasers.
- 03** support multiple cleaning-trajectory modes: line, spiral involute, sine wave, figure 8, grid, etc.
- 04** support Ethernet touch screens of 4.3-inch, 7-inch, 10-inch.
- 05** support temperature alarm, waveform viewing.
- 06** support laser analog power fade-in/fade-out and extended lead control.
- 07** it can save up to 100 groups of technology file / recipe file.
- 08** it can watch mainstream lasers' communication states.
- 09** support second-program needed actions

# System Model Selection

ZCLEAN-304SCAN-H70-\*\*\*

	Mark	Function
	***	customized function
	Mark	Function
	H43	4.3-inch touch screen
	H70	7-inch touch screen
	H10	10-inch touch screen
	Mark	Function
	302SCAN	ZMC302SCAN laser galvo controller
	304SCAN	ZMC304SCAN laser galvo controller
	406SCAN	ECI406SCAN laser galvo control card
	Mark	Function
	ZCLEAN	system name



ZMC304SCAN



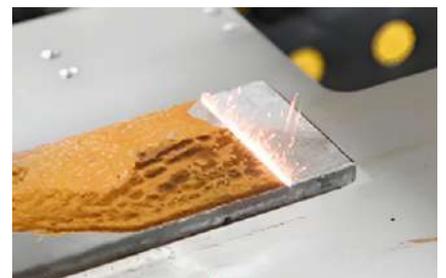
## Typical Applications



Paint Laser Cleaning



Rust Laser Cleaning



Dirty Laser Cleaning