

MPC6525A

Laser, 3-axis

MPC6525A is designed for the open-loop motion control system for the laser machine only. It is upgraded from MPC6515. Based on DSP and FPGA technology, the advanced velocity look-ahead and trajectory blending algorithm ensure the velocity invariableness and transition smoothness between any two-trajectory segments during the high speed X-Y continuous trajectory motion. And therefore the perfect smoothness and precision of the machining can be easily achieved.

Applications

Over 10-year experience in CO₂ (analog command) or RF (PWM command) compatible laser machine exclusively, open-loop motion control system.

Features

- Both servo and stepper motor supported
- Break-point resume
- 2-3 axes linear interpolation and 2-axis circular interpolation
- High speed multi-axis continuous contouring
- Velocity look-ahead and trajectory blending
- Position comparison and trigger output
- Laser control is synchronized with laser head motion
- Flying-optics compensation
- Individual laser power control for dual-head system
- Master/slave USB interface
- Embedded 128MB memory
- All digital inputs and outputs are 2500Vrms isolated

Laser Control Functionality

Motion Control

- High precision interpolation, circular interpolation resolution under 0.5 pulse
- Engraving control resolution is in ONE pulse on the frequency of less than 2MHz

For CO₂ tube

- Laser ON, TTL compatible
- Laser power control: PWM, frequency or analog voltage (user select)

Power

- 24VDC, 2A

For RF tube

- Laser ON, TTL compatible
- Q pulse signal, programmable duty and frequency

Software Environment

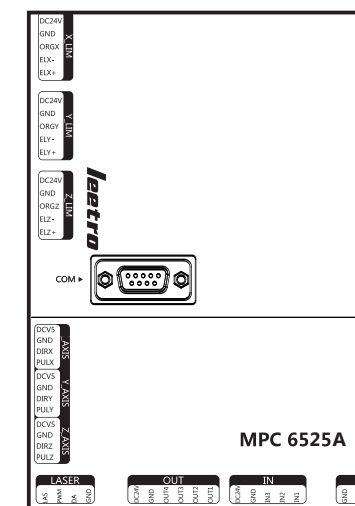
- Windows 2000/XP/VISTA/7/8/8.1/10 (32 and 64-bit)
- Bundled with application software, LaserCut5.3 or 6.0

Working Environment

- Temperature: 0-60°C
- Humidity: 5-90%, non condensing



The Connection Pin Definition



Group	Pins					
	1	2	3	4	5	6
X1	24VDC, 2A	24V GND	-	-	-	-
X2	Pedal Switch	Uncapping Protection	Reserve	5V/24V GND	5V/24V	-
X3	Z-axis Forward Limit	Z-axis Reverse Limit	Z-axis Origin	5V/24V GND	5V/24V	-
X4	Y-axis Forward Limit	Y-axis Reverse Limit	Y-axis Origin	5V/24V GND	5V/24V	-
X5	X-axis Forward Limit	X-axis Reverse Limit	X-axis Origin	5V/24V GND	5V/24V	-
Y1	Blow-off	Processing Finished	Udisk Indicator	Reserve	5V/24V GND	5V/24V
Y2	Laser Power GND	Analog Output	PWM	Laser On/Off	-	-
Y3	Z-axis Pulse	Z-axis Direction	5V GND	5V	-	-
Y4	Y-axis Pulse	Y-axis Direction	5V GND	5V	-	-
Y5	X-axis Pulse	X-axis Direction	5V GND	5V	-	-

Order List

Order Code	Model	Description	Qty (pc)	Approx. Size (mm)	Net Weight (Kg)	Type
1011.00.126	MPC6525A	Motion Control Board	1	200*125*40	0.49	Standard
1012.00.713	PAD03-E	Operation Panel, English	1	150*100*27	0.21	Standard
1012.00.900	C4-PAD03-1.5M	Cable connects MPC6525A and PAD03-E	1	Length 1500	0.13	Standard
1012.01.000	USB-AB-3M	USB Cable	1	Length 3000	0.13	Standard
1012.01.400	Dongle-WHITE	Software Key for LaserCut Software	1	55*18*8	0.01	Standard
1012.00.804	PAD04A-E	upgraded from PAD03-E, English	1	170*120*35	0.33	Optional
1012.01.005	COM-W4-2.5M	Cable connects MPC6525A and PAD04A-E	1	Length 2500	0.29	Optional