

JCZ-FLY-STATION-D

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1 Summarize

JCZ-FLY-STATION-D is especially for laser marking machine, embedded computer and control board together. Can send data to other PC through RJ45 internet port.

1.1 JCZ-FLY-STATION-D structure



- CON1: SCANHEAD signal, DB15;
- CON2: Laser signal, DB25;
- CON3: Mark on fly, connect to encoder, DB9;
- CON4: Power and IO, DB15.

1.2 Main feature

- Digital scanhead signals, support international digital scanhead.
- Mark on fly: supply encoder signal and electric-optics signal, timely check conveyor fly speed to make sure high speed marking.
- Can control YAG / CO2 laser type.
- 9 routes of input digital signal(TTL), IN0---IN6, IN8, IN9.
- 6 routes of output digital signal(TTL), OUT4—OUT7, EXOUT0, EXOUT2.
- ReMark (repeat mark cache data) : mark fixed content and high marking speed. Foot switch connect to START IO, also can connect to general input IO. if mark serial number, please use general input, not use start IO.
- Compatible USB2.0.

2 Electric wire

2.1 Interface

2.1.1 Power

Output 5V DC current.

Note: if use 5V output, don't short it to GND, because will burn the card.

CON3 pin	name	illustration
8	VCC	+5V, anode of the power supply
9	GND	Ground, cathode of the power supply.

2.1.2 CON1 : DB15 scanhead control

Digital scanhead signal, support xy2-100 protocol. also we supply DA board if you use analog scanhead.

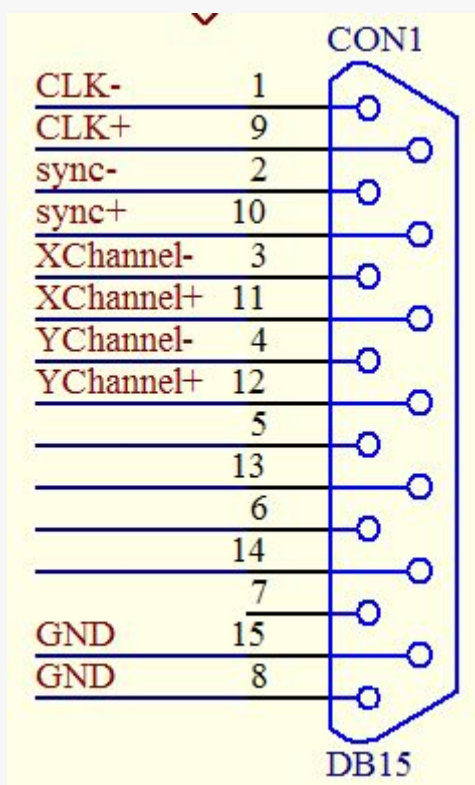


Fig 2-1 CON1

Pin	Name	Illustration
1, 9	CLK- / CLK+	Clock signal. Difference output
2, 10	SYNC- / SYNC+	Synchronized signal. Difference output
3, 11	X Channel- / X Channel+	Digital signal of X axis galvo. Difference output
4, 12	Y Channel- / Y Channel+	Digital signal of Y axis galvo. Difference output
5, 13		
6, 14,		
7	NULL	Reserved
8, 15	GND	Ground

For the common two-dimension Galvo, only connecting CLK, SYNC XChannel, Ychannel four groups with GND signal together 9 lines is enough. We suggest use twisted-pair (such as net-line) for connecting for digital signal.



Fig 2-2 CON1

2.1.3 CON2 : DB25 Laser Control

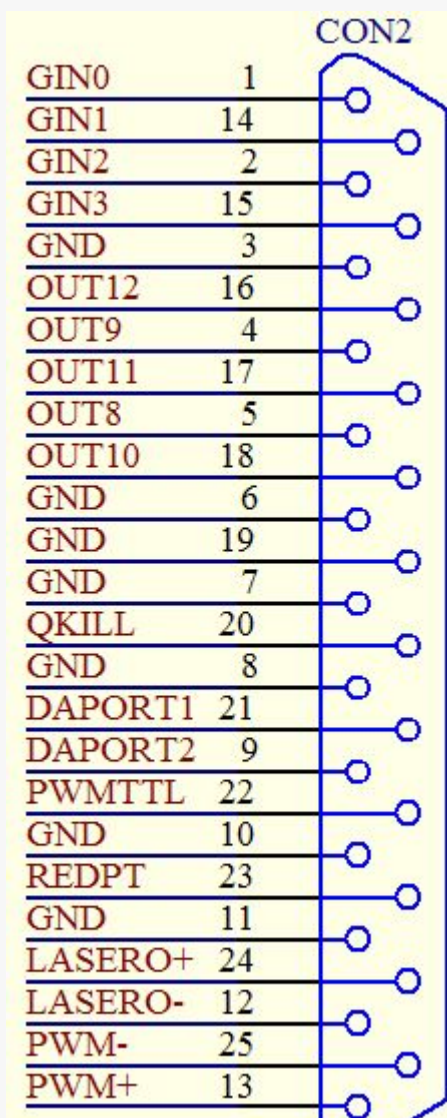


Fig 2-3 CON2

Pin	Name	Illustration
1, 2, 14, 15	IN0—3	General input signal 0—3, return to GND, responds to In0-3.
3, 6, 7, 8, 10, 11, 19	GND	Reference GND of the control board.also reference ground of the 5V input power, it is all the reference ground of the board signal.
5, 4, 18, 17, 16	OUT8, OUT9, OUT10, OUT11, OUT12	General output signal OUT8, OUT9, OUT10, OUT11, OUT12,reference to GND,it is TTL signal. When Low level,voltage is 0,when high level,voltage is same as VCC(5V).

20	QKILL	First Pulse Killer signal. TTL output. Reference Ground signal is GND.
9	DAPORT2	Frequency control signal / FPK signal. This signal is the analog signal of [0V~5V], maximum current being 5mA. This signal can be set in the software. Forms a return circuit with GND signal.
21	DAPORT1	Laser power control signal, and the analog signal of [0V~9.5V], maximum drive current being 5mA. Forms a return circuit with GND signal.
23	RedPt	Red point signal, TTL output, reference to the GND.
12	LaserO-	Laser switch signal. TTL output. Reference ground signal is GND. Low level effect.
24	LaserO+	Laser switch signal. TTL output. Reference ground signal is GND. High level effect.
25, 13	PWM-/PWM+	PWM signal, Differential output.
22	PWMTTL	PWM signal, TTL output, reference to GND. For CO2 laser, this signal is used to set laser power and also as output of Tickle signal; for Yag laser, this signal is used for driver Q as repeat frequency signal.

2.1.4 CON3 : DB9 Fly mark

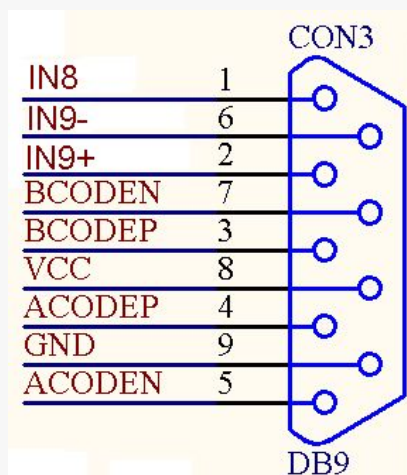


Fig 2-3 CON3

Pin	Name	Remark	
1	IN8	Input 8	Return to GND
2, 6	IN9+, IN9-	Input 9	TTL input signal with internal 1K current-limited resistor. External current-limited resistance is suggested if voltage is over 12V.

3, 7	BCODEP/ BCODEN	Encoder input B+ /B-	
4, 5	ACODEP/ACODEN	Encoder inputA+ / A-	
8	VCC	+5V output	Return to pin9,this signal is output, so don't connect power supply to this pin!
9	GND	Ground	



Fig 2-4 CON3

2.1.5 CON4 : DB15 Power supply and IO

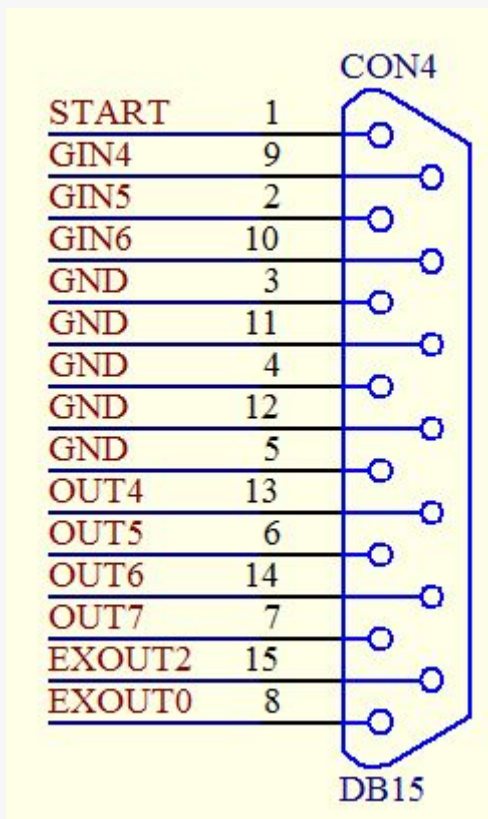


Fig 2- 4 CON4

Pins	Name	Remark
1	START	Start signal, which forms a return circuit with GND signal. To use this signal, just connect it and the GND signal respectively to either terminal of the switch. This is an input signal.
9, 2, 10	IN4, IN5, IN6	Common input signal 4,5,6 return to GND
13, 6, 14, 7	OUT4, OUT5, OUT6, OUT7	Common input signal,TTL,return to GND.
3, 11, 4, 12, 5	GND	Ground
8,	EXOUT0,	EXOUT0 is measure distance output signal,connect to IN9,used to trigger the mark, the connect is control by SW1.
15	EXOUT2	EXOUT2 is alarm signal when encoder direction reverse.

2.1.6 LAN : internet port

2.1.7 USB : USB port

2.1.8 VGA : monitor port

2.1.9 Multi-Function Port

Multi-Function Port is for audio player,mouse,keyboard,serial port,connect these through multi-function cable

2.1.10 COM5 : serial port

2.1.11 DCIN : JCZ-FLY-STATION-D power supply

2. 2 Dial switch SW1

When the switch up means EXOUT0 connect to IN9,when it down means disconnected.

2.3 Digital IO connection.

2.3.1 Input signal which directly connect to GND

In0-6 can directly connect to GND through one switch

About the connection we suggest follow fig 2-7,2-8:

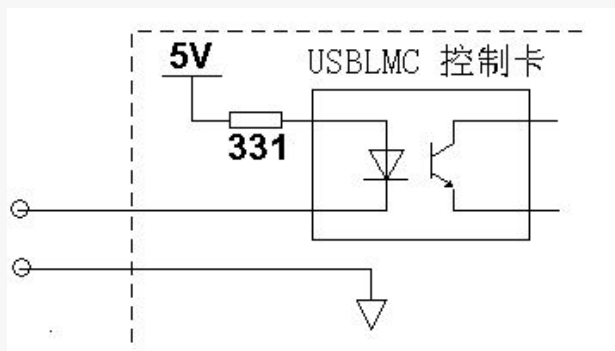


Fig 2-7

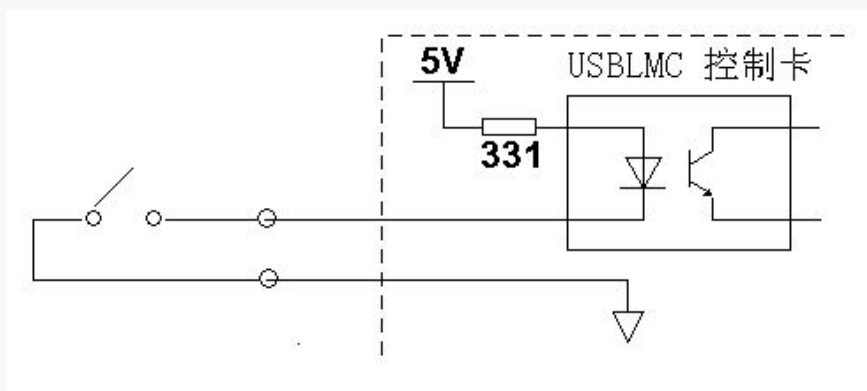


Fig 2-8

2.3.2 Output signal

Output signal OUT4, OUT5,OUT6, EXOUT0,EXOUT2 is TTL output.