



ST90X Series

TTL Level Magnetic Card Reader

Feature

- Low power consumption, CMOS for TTL interface
- ISO 7811 conformance
- Data processing rate: 300 ~ 15,000 bps per track
- Widely operating voltage range 3.3V~5.5V
- Reading single, dual or triple track



Specification

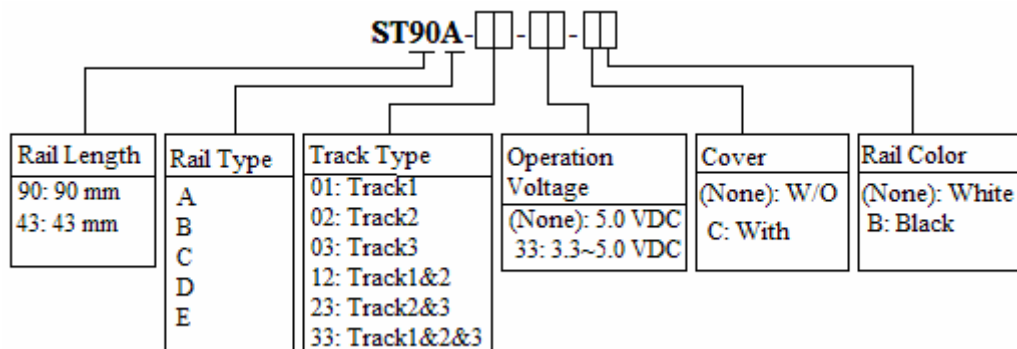
Item	Content		
	Single track	Dual track	Triple track
ST90A-XX	Single track	Dual track	Triple track
Max DC Current @ DC5V	3.5 mA	3.5 mA	5.5 mA
ST90A-XX-33	Single track	Dual track	Triple track
Max DC Current @ DC3.3V	1.5 mA	1.5 mA	3.5 mA
Connector	11 pin 2.54mm Molex		
Card operation speed	10 ~ 180 cm/sec		
Decoding method	F/2F		
Operation temperature	-10 ~ 50°C		
Life time of head	Approx. 300,000 passes		
Card standard	ISO 7811		
Cable length	15 cm		

Guaranteed operating ranges

Symbol	Parameter	Min.	Typ.	Max.	Unit
Vcc	Supply Voltage	3.3	5	5.25	V
IoH	Output Current-High	—	—	-5	mA
IoL	Output Current-Low	—	—	6	mA

TA=25°C

Model description

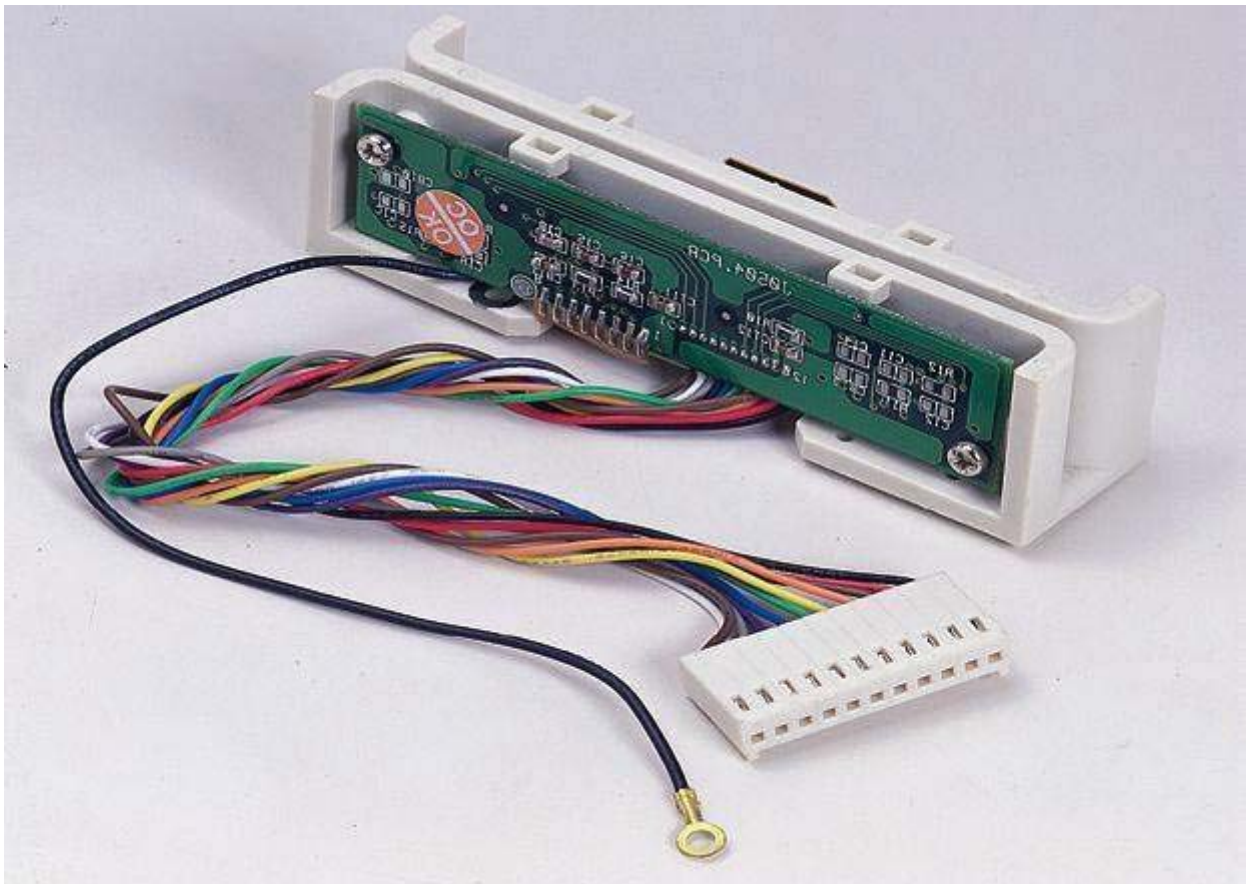
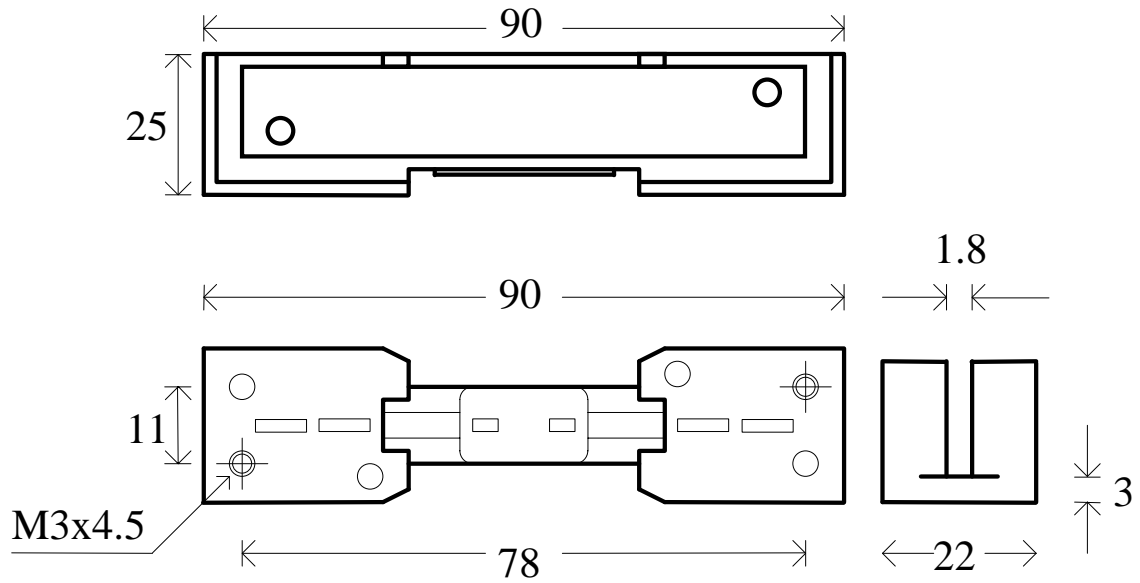


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Dimension 90A

- Without Cover

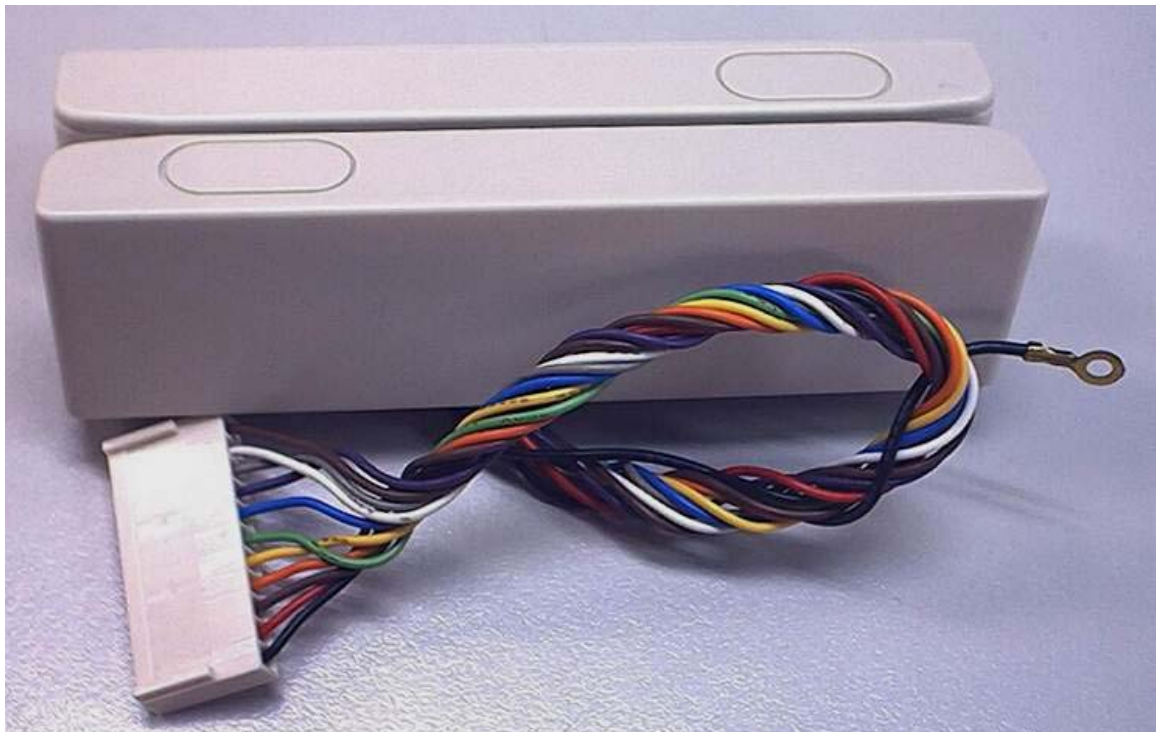
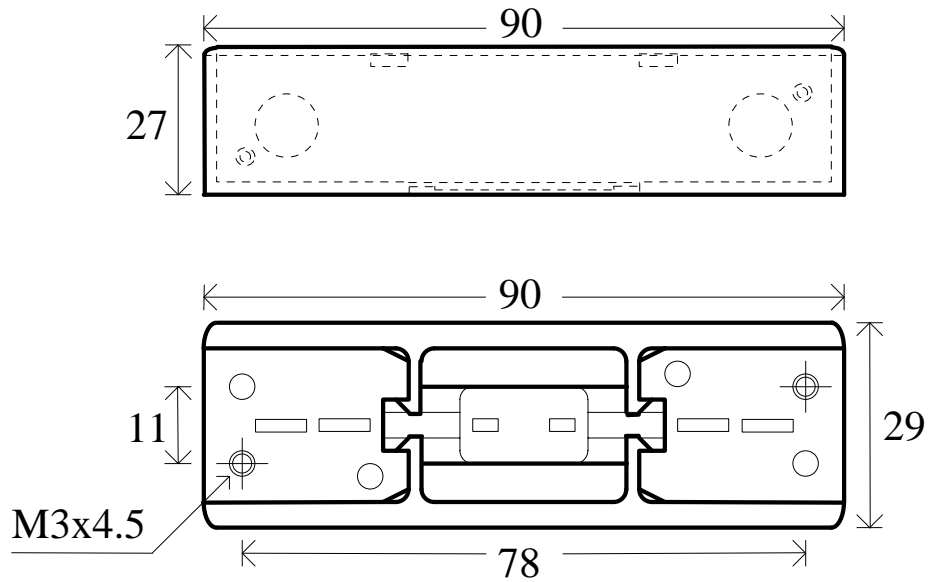


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Dimension 90A

- With Cover

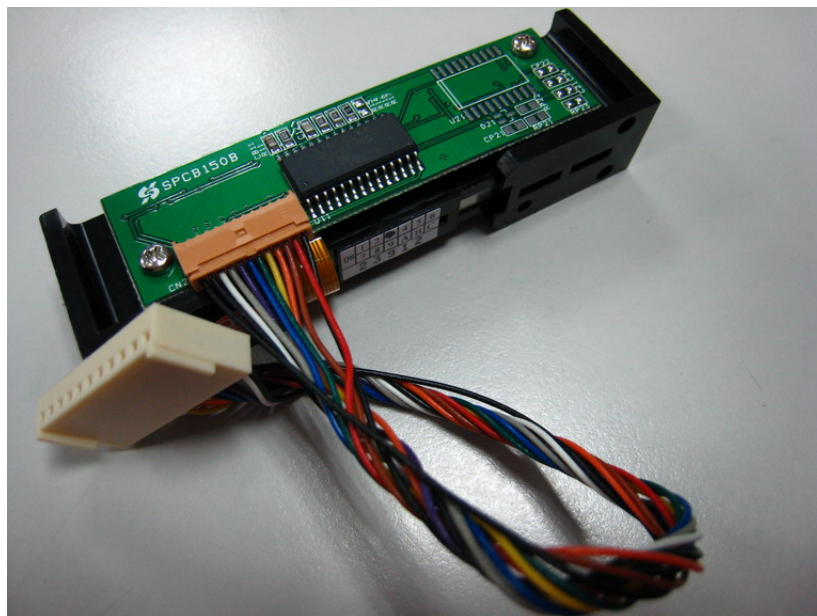
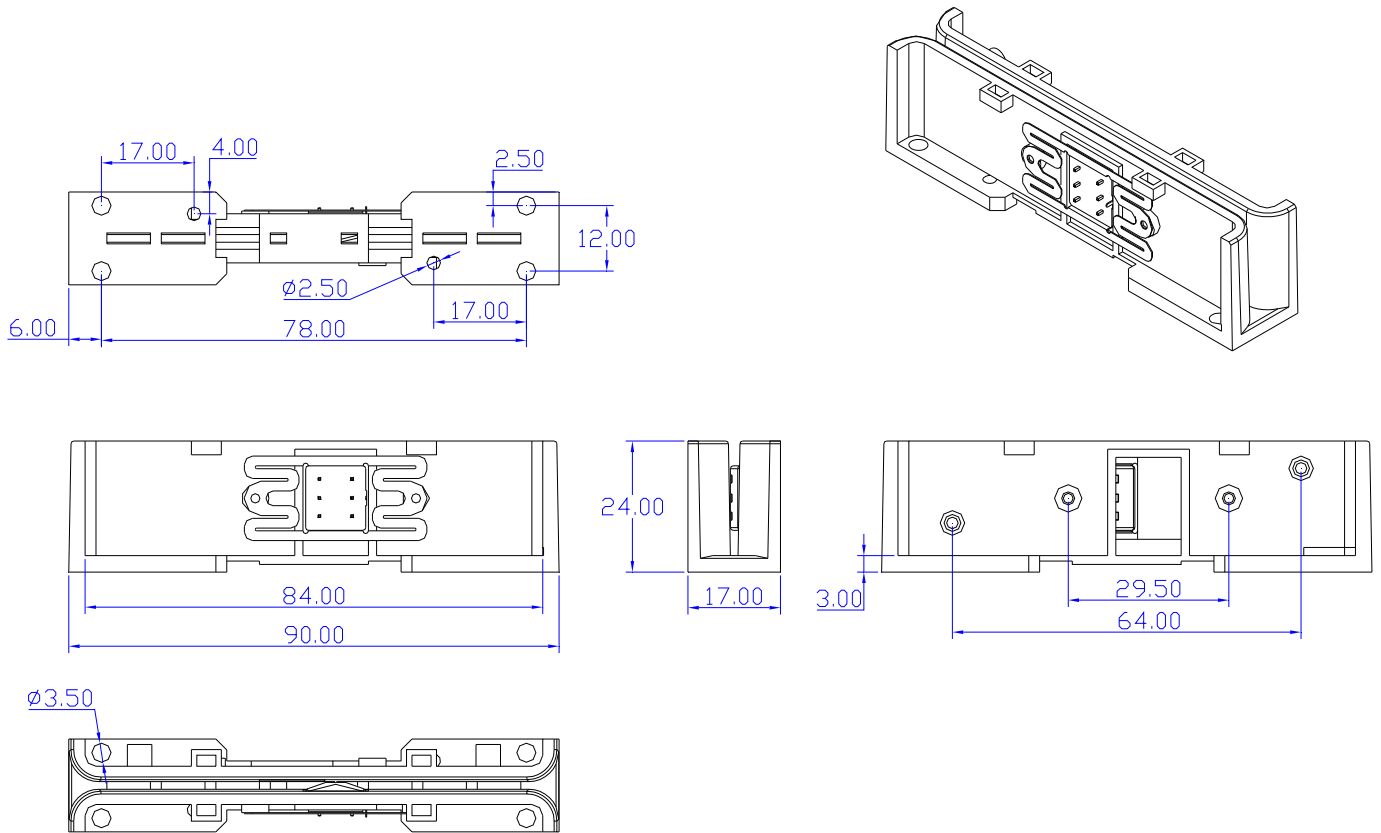




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Dimension 90D (single-side magnetic head without cover)

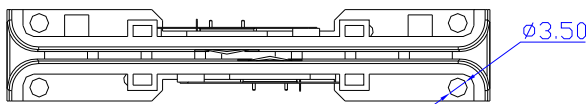
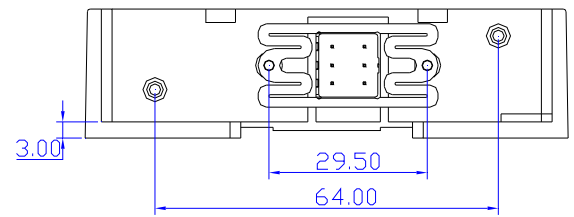
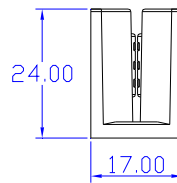
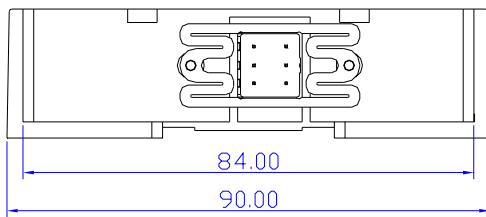
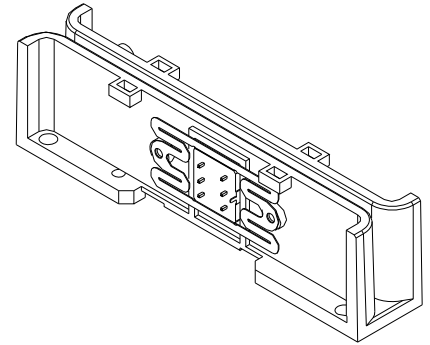
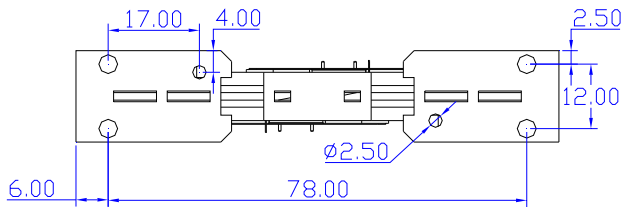




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TTL Level Magnetic Card Reader

Dimension 90E (dual-side magnetic head without cover)

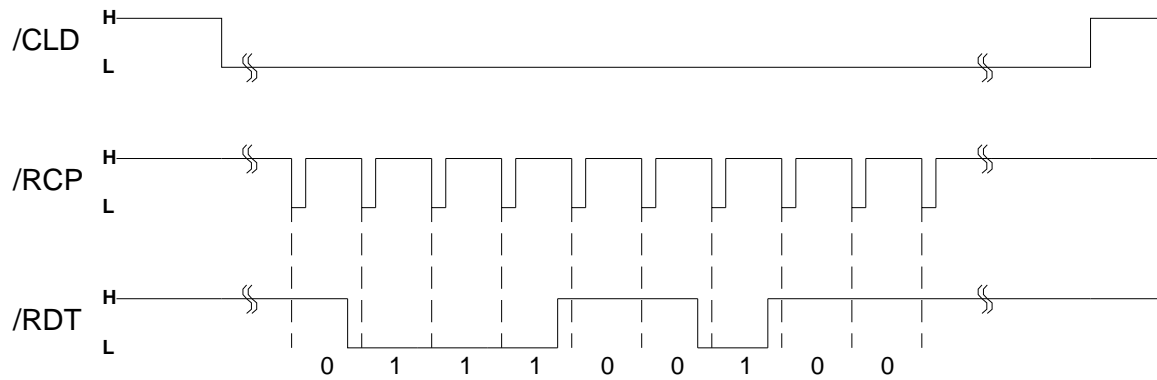




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Timing

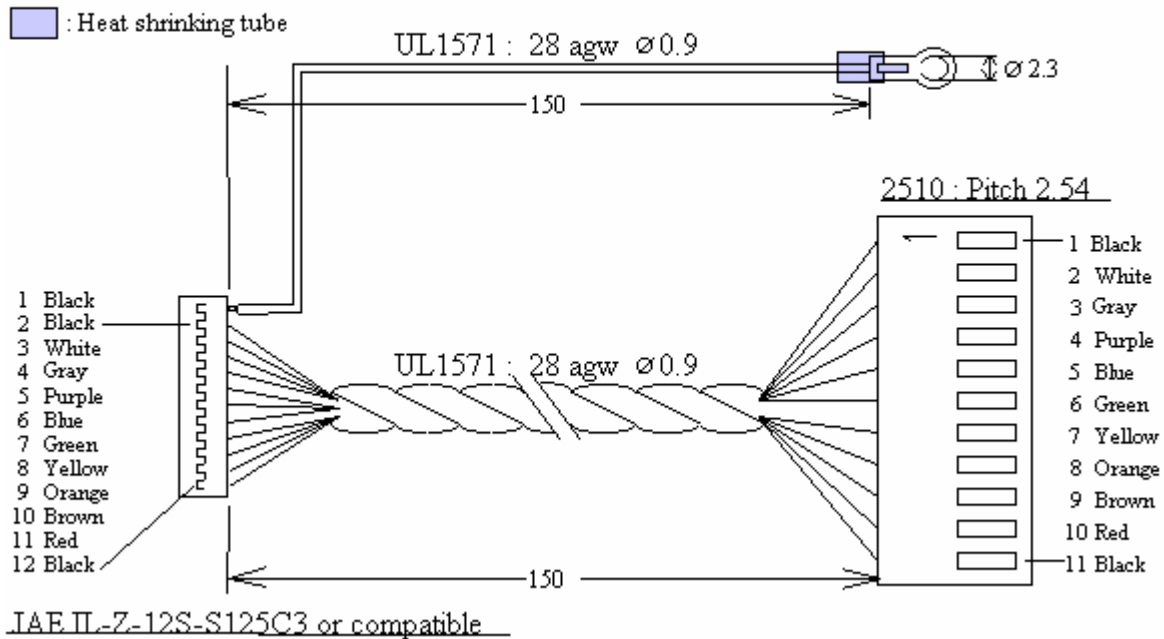


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Cable Specification

ST43-33



Cable pin assignment

Pin NO.	Signal	Wire color	Function
1	/RCP3	Black	Track 3 clock
2	/RDT3	White	Track 3 data
3	/CLD3	Gray	Card load 3
4	/RCP2	Purple	Track 2 clock
5	/RDT2	Blue	Track 2 data
6	/CLD2	Green	Card load 2
7	/RCP1	Yellow	Track 1 clock
8	/RDT1	Orange	Track 1 data
9	/CLD1	Brown	Card load 1
10	VCC	Red	DC power supply
11	GND	Black	Power ground
CG	CGND	Black	Case ground

Recommend header type

Housing type	SMT type header	Through hole type	
		Straight header	Right angle header
JAE IL-Z-03S-S125C3	JAE IL-Z-03PL-SMTY-E1500	JAE IL-Z-03P-S125T3-E	JAE IL-Z-03P-S125L3-E
JAE IL-Z-07S-S125C3	JAE IL-Z-07PL-SMTY-E1500	JAE IL-Z-07P-S125T3-E	JAE IL-Z-07P-S125L3-E
2510-11P		2520-11P-S	2520-11P-R