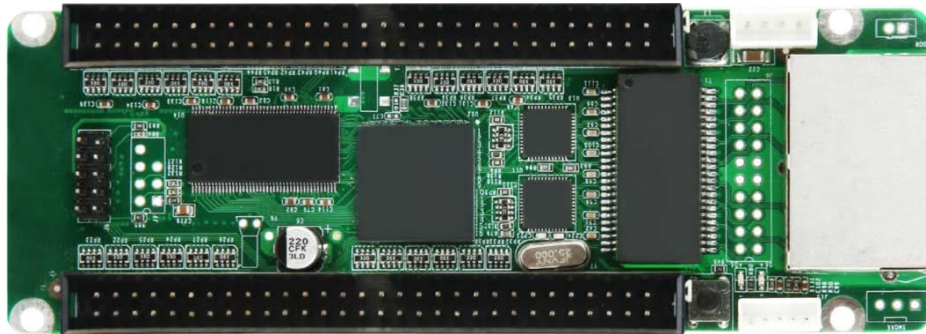


i5A-905

Overview

i5A-905 is specially designed for the more and more compact and portable LED displays, such as LED color screen and casting aluminum cabinet. It inherits all the advantages and features as 5A series have and its size and interfaces are the most suitable for LED color screen and casting aluminum display.



Features

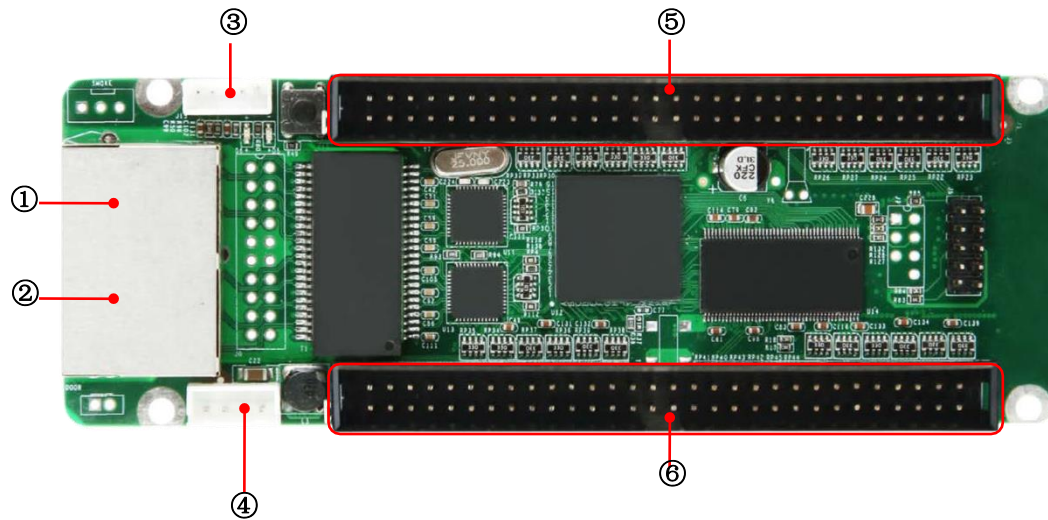
- Mini size most suitable for the compact structure designs ,like color screen and casting aluminum cabinet
- Power supply from pin board without the need of external power supply
- High refresh rate, high gray scale and high brightness
- Better detail processing: Partial dark at row, reddish at low gray, shadow problems can be solved.
- Support normal chip, PWM, lighting chip
- Support any scan mode from static to 1/32 scan
- Supports Brightness and chromaticity calibration
- Support various freeform display, spherical display, diamond display, creative display, etc
- Support signal output for 16 groups of R'GBR' and 24groups of RGB
- Large load capacity
- Advanced design, high quality components, rigorous aging test, zero malfunction of final products
- Wide working voltage range with DC3.3 -6V
- Compatible with iT7, iQ7, iQ7E,gigabit NIC, etc.

Specifications

Control system parameters	
Sending device	iT7 Sender , iQ7 HD Sender, iQ7E UHD Sender, Gigabit NIC, C1 Series Sender, T8 , etc.
Control area of every card	Full-color: 256*256 Pixels, for special applications the column can be extended to 1024 pixels.
Cascade control area of the largest regional	65536*65536 pixels
Cascade card number	65536 PCS
Network port exchange	support
Synchronization	Nanosecond synchronization between the card and the card
Display Quality	
Refresh rate for conventional chip	Static: 64*64, up to 16000Hz 1/8 scan: 128*128, up to 10000Hz
Serial frequency	0.2MHz-41.7MHz
Gradation	65536
Minimum unit of OE values	8ns, 8ns multiples steps
Gray scale compensation	Each level grayscale separate compensation
Display module compatibility	
Chip supports	Support conventional chips, PWM chips, lighting chips and other mainstream chips.
PWM chip supports	Support hundreds of different specifications of the PWM chip, such as MBI5042 (requires a separate program)
Scan mode	Two scanning methods to support refresh rate multiplier
Scan type	Support static sweep to 1/32 scan
module specifications Support	Support 4096 pixels within any row, any column
The direction of the cable	Support route from left to right, from right to left, from top to bottom, from bottom to top.
Data Sets	Different sets in different work modes, 28 groups in the maximum
Data folded	Support to the fold, reverse fold, with the already discounted, such as refresh rate significantly improved.
Module snapshot	Support any pumping point

Data serial transmission	RGB, R8G8B8, R16G16B16, etc. in the form of serial
Data Expansion	Support the D signal as a clock extension, the total amount of data can be extended to 32.
Compatible device and interface type	
Communication distance	UTP cable≤140M CAT6 cable≤170M OPTIC FIBER transmission distance unrestricted
Compatible with transmission equipment	Gigabit switch, fiber transceiver, optical switches.
power interface	Wire terminal
HUB Interface Type	All types
Physical parameters	
Size	137* 48mm
Input voltage	DC 3.3V-6V
Rated current	0.6A
Rated power	3W
Storage and transport temperature	-50 °C to 125°C
Operating Temperature	-25 °C to 85°C
Body static resistance	2KV
Weight	70g
Monitoring function (in conjunction with multi-function card)	
Monitoring functions	Temperature, humidity, smoke, relay switch
Remote control	Support for relay switch to turn on/off the power supply of equipments remotely
Pixel level calibration	
Brightness calibration	Support
Chromaticity calibration	Support
Other features	
Double backup	Support
Shaped screen	Any offset of the 16sets of data, drawn at random points, the performance of data exchange control profiled screen.

Hardware



1、interface function

No.	Name	Function	Remarks
1	Network port A	RJ45 , For transmitting data signals	The dual network ports can achieve import/export at random, which can be identified in an intelligent way by the system.
2	Network port B	RJ45 , For transmitting data signals	
3	External interfaces	For Indicate lamp and test button	Two kinds of interface definitions
4	Power	Connect DC5V power supply for the receiver card	
5	signal output J1	connect to the LED module, interface definition shown behind	
6	signal output J2	connect to the LED module, interface definition shown behind	

2、Interface definition

The i5A-905 has 2 60P data output interface. i5A-905 Receiver card supports 3 different working modes, each mode has different interface definitions of the 60P outputs, which are as follows:

2.1 The standard model :

Support 1/32 scanning , 16 groups RGBR' data parallel output.

J1				J2			
definition	pin	pin	definition	definition	pin	pin	definition
C	1	2	A	C	1	2	A
B	3	4	OE	B	3	4	OE
LAT	5	6	CLK	LAT	5	6	CLK
D	7	8	E	D	7	8	E
R1	9	10	G1	R9	9	10	G9
R1'	11	12	B1	R9'	11	12	B9
GND	13	14	R2	GND	13	14	R10
G2	15	16	R2'	G10	15	16	R10'
B2	17	18	R3	B10	17	18	R11
G3	19	20	GND	G11	19	20	GND
R3'	21	22	B3	R11'	21	22	B11
R4	23	24	G4	R12	23	24	G12
R4'	25	26	B4	R12'	25	26	B12
x	27	28	x	x	27	28	x
x	29	30	VCC	x	29	30	VCC
C	31	32	A	C	31	32	A
B	33	34	OE	B	33	34	OE
LAT	35	36	CLK	LAT	35	36	CLK
D	37	38	E	D	37	38	E
R5	39	40	G5	R13	39	40	G13
R5'	41	42	B5	R13'	41	42	B13
GND	43	44	R6	GND	43	44	R14
G6	45	46	R6'	G14	45	46	R14'
B6	47	48	R7	B14	47	48	R15
G7	49	50	GND	G15	49	50	GND
R7'	51	52	B7	R15'	51	52	B15
R8	53	54	G8	R16	53	54	G16
R8'	55	56	B8	R16'	55	56	B16
x	57	58	x	x	57	58	x
x	59	60	VCC	x	59	60	VCC

2.2 Output 24 groups mode :

Support 1/32 scanning , 24 groups RGB data parallel output.

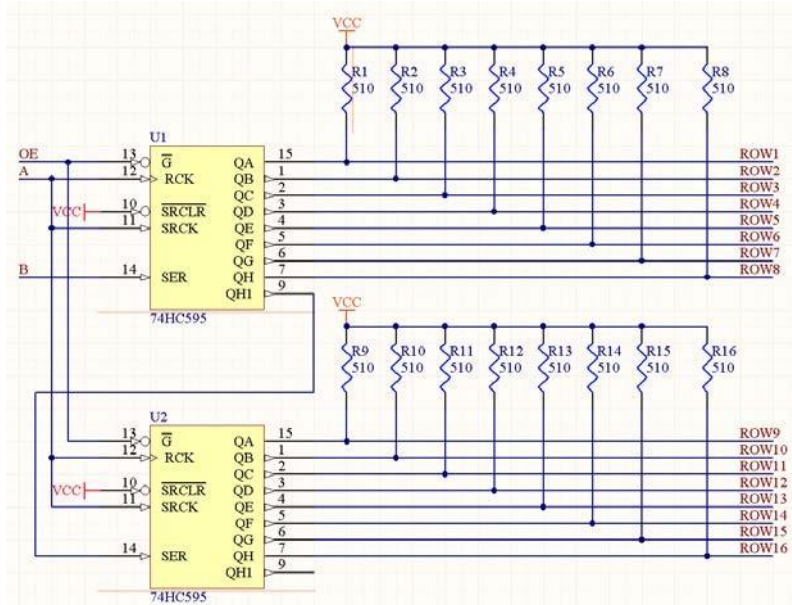
J1				J2			
definition	pin	pin	definition	definition	pin	pin	definition
C	1	2	A	C	1	2	A
B	3	4	OE	B	3	4	OE
LAT	5	6	CLK	LAT	5	6	CLK
D	7	8	E	D	7	8	E
CTRL1/NC	9	10	R1	CTRL1/NC	9	10	R13
G1	11	12	B1	G13	11	12	B13
GND	13	14	R2	GND	13	14	R14
G2	15	16	B2	G14	15	16	B14
R3	17	18	G3	R15	17	18	G15
B3	19	20	GND	B15	19	20	GND
R4	21	22	G4	R16	21	22	G16
B4	23	24	R5	B16	23	24	R17
G5	25	26	B5	G17	25	26	B17
R6	27	28	G6	R18	27	28	G18
B6	29	30	VCC	B18	29	30	VCC
C	31	32	A	C	31	32	A
B	33	34	OE	B	33	34	OE
LAT	35	36	CLK	LAT	35	36	CLK
D	37	38	E	D	37	38	E
CTRL1/NC	39	40	R7	CTRL1/NC	39	40	R19
G7	41	42	B7	G19	41	42	B19
GND	43	44	R8	GND	43	44	R20
G8	45	46	B8	G20	45	46	B20
R9	47	48	G9	R21	47	48	G21
B9	49	50	GND	B21	49	50	GND
R10	51	52	G10	R22	51	52	G22
B10	53	54	R11	B22	53	54	R23
G11	55	56	B11	G23	55	56	B23
R12	57	58	G12	R24	57	58	G24
B12	59	60	VCC	B24	59	60	VCC

2.3 Output 28 groups mode :

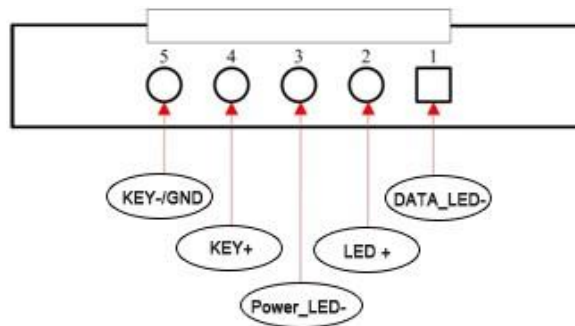
Support 1/8 scanning , 28 groups RGB parallel output ; for 1/8~1/32, there need a serial decoding circuit as shown below.

J1				J2			
definition	pin	pin	definition	definition	pin	pin	definition
C	1	2	A	C	1	2	A
B	3	4	OE	B	3	4	OE
LAT	5	6	CLK	LAT	5	6	CLK
R1	7	8	G1	R15	7	8	G15
B1	9	10	R2	B15	9	10	R16
G2	11	12	B2	G16	11	12	B16
GND	13	14	R3	GND	13	14	R17
G3	15	16	B3	G17	15	16	B17
R4	17	18	G4	R18	17	18	G18
B4	19	20	GND	B18	19	20	GND
R5	21	22	G5	R19	21	22	G19
B5	23	24	R6	B19	23	24	R20
G6	25	26	B6	G20	25	26	B20
R7	27	28	G7	R21	27	28	G21
B7	29	30	VCC	B21	29	30	VCC
C	31	32	A	C	31	32	A
B	33	34	OE	B	33	34	OE
LAT	35	36	CLK	LAT	35	36	CLK
R8	37	38	G8	R22	37	38	G22
B8	39	40	R9	B22	39	40	R23
G9	41	42	B9	G23	41	42	B23
GND	43	44	R10	GND	43	44	R24
G10	45	46	B10	G24	45	46	B24
R11	47	48	G11	R25	47	48	G25
B11	49	50	GND	B25	49	50	GND
R12	51	52	G12	R26	51	52	G26
B12	53	54	R13	B26	53	54	R27
G13	55	56	B13	G27	55	56	B27
R14	57	58	G14	R28	57	58	G28
B14	59	60	VCC	B28	59	60	VCC

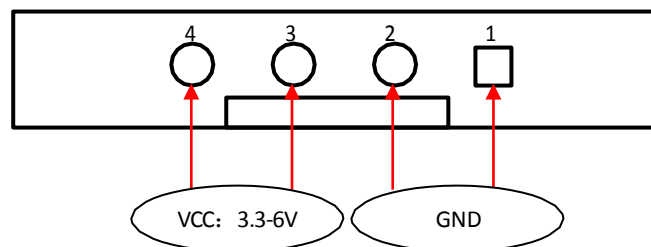
3、Serial decoding circuit



4、External interface definition



5、Power interface pin definition



6、 Figure for receiving card size and hole position

Unit : mm

