

# H8s

## LED Receiving series

Version: v2.2

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## Specifications



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Professional Ultra HD Video Display  
Control system integrated solution and service provider

## Version record

version number	Change details	release time
V2.0	First edition released	2021.11.08
V2.1	Modify the cover	2021.11.15
V2.2	Modify the load size and interface definition	2022.05.31

## Product description

### 1.1 Applications

The H8s receiving card is a small-sized, full-featured high-end receiving card. It is used in LED display as a receiving device for displaying data. It is used to convert the received data into a signal that can be recognized by the driver chip, and stitch it into an image on a large screen. displayed above.

### 1.2 Features

- Supports 40 sets of parallel data.
- Maximum load of single card is 512\*640 pixels.
- Using high-density connector interface, the connection is stable and reliable.
- Integrated network transformer to improve electromagnetic compatibility.
- Unique arbitrary frequency doubling technology, mobile phone photo without scanning lines.
- The unique color reproduction technology makes the skin color of the human face more realistic.
- Support a variety of common chips, dual-latch chips and PWM chips.
- Support HDR10 high dynamic range display.
- Support low light and high gray display.
- Supports pixel-by-pixel chromaticity correction.
- Support dual card backup.
- Support dual power backup detection function.
- Support external LCD module.
- Support light board FLASH management.
- Support Mapping function
- Supports temperature and voltage monitoring functions.
- Support one-key read back configuration file information function.
- Support one-key repair function, worry-free card replacement.
- Support network communication status real-time detection function.
- Supports display screen rotation at any angle.
- Support any snap point, easily set up various special-shaped screens.

- Compliant with EU RoHS standards.
- CE, FCC certification.

## 2 Appearance

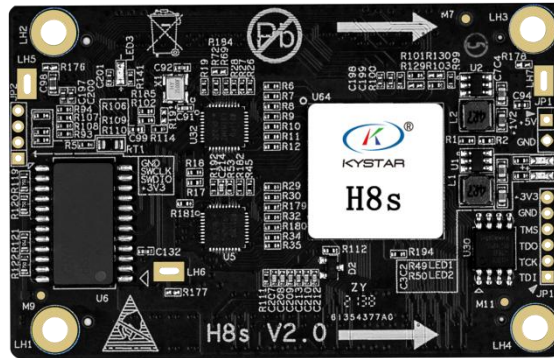


Figure 1 Front view of H8s receiving card

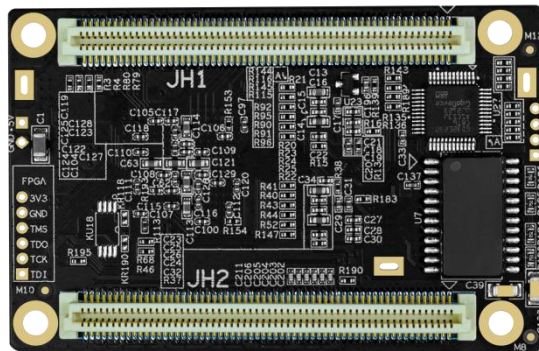


Figure 2 Rear view of H8s receiving card

## 3 Interface Signal Definition

### 3.1 32 groups of parallel data interfaces

		JH1					
		GND	1	2	GND		
		NC	3	4	NC		
LCD	RS signal of LCD	EXT_LCD_RS	5	6	B40		Note 2
	LCD clock signal	EXT_LCD_SCL	7	8	G40		
	LCD data signal	EXT_LCD_SDA	9	10	R40		
	LCD backlight signal 1	EXT_LCD_BL0	11	12	B39		
	LCD backlight signal 2	EXT_LCD_BL1	13	14	G39		

	LCD control buttons	EXT_KEY	15	16	R39	
<a href="#">Note 5</a>	/	RFU1	17	18	B38	
	/	RFU2	19	20	G38	
		GND	21	22	R38	
		NC	23	24	B37	
		GND	25	26	GND	
<a href="#">Note 2</a>	/	G17	27	28	R17	/
	/	R18	29	30	B17	/
	/	B18	31	32	G18	/
	/	G19	33	34	R19	/
	/	R20	35	36	B19	/
	/	B20	37	38	G20	/
		GND	39	40	GND	
<a href="#">Note 2</a>	/	G21	41	42	R21	/
	/	R22	43	44	B21	/
	/	B22	45	46	G22	/
	/	G23	47	48	R23	/
	/	R24	49	50	B23	/
	/	B24	51	52	G24	/
		GND	53	54	GND	
<a href="#">Note 2</a>		G25	55	56	R25	
		R26	57	58	B25	
		B26	59	60	G26	
		G27	61	62	R27	
		R28	63	64	B27	
		B28	65	66	G28	
		GND	67	68	GND	
<a href="#">Note 2</a>		G29	69	70	R29	
		R30	71	72	B29	
		B30	73	74	G30	
		G31	75	76	B31	
		R32	77	78	B31	
		B32	79	80	G32	
		GND	81	82	GND	
<a href="#">Note 5</a>	/	RFU4	83	84	RFU3	/
	/	RFU6	85	86	RFU5	/
	/	RFU8	87	88	RFU7	/

	/	RFU10	89	90	RFU9	/	
	/	RFU12	91	92	RFU11	/	
	/	RFU14	93	94	RFU13	/	
		GND	95	96	GND		
<a href="#">Note 5</a>	/	RFU16	97	98	RFU15	/	<a href="#">Note 5</a>
	/	RUF18	99	100	RFU17	/	
		NC	101	102	RFU19	/	
		G33	103	104	R33		<a href="#">Note 2</a>
		R34	105	106	B33		
		B34	107	108	G34		
		GND	109	110	GND		
		GND	111	112	GND		
		NC	113	114	NC		
<a href="#">Note 1</a>		VCC	115	116	VCC		<a href="#">Note 1</a>
		VCC	117	118	VCC		
		VCC	119	120	VCC		

JH2							
	case ground	Eth_Sheild	1	2	Eth_Sheild	case ground	
	case ground	Eth_Sheild	3	4	Eth_Sheild	case ground	
		NC	5	6	NC		
		NC	7	8	NC		
Gigabit network port	/	Port1_T0+	9	10	Port2_T0+	/	Gigabit network port
	/	Port1_T0-	11	12	Port2_T0-	/	
		NC	13	14	NC		
	/	Port1_T1+	15	16	Port2_T1+	/	
	/	Port1_T1-	17	18	Port2_T1-	/	
		NC	19	20	NC		
	/	Port1_T2+	21	22	Port2_T2+	/	
	/	Port1_T2-	23	24	Port2_T2-	/	
		NC	25	26	NC		
	/	Port1_T3+	27	28	Port2_T3+	/	
	/	Port1_T3-	29	30	Port2_T3-	/	
		NC	31	32	NC		
		NC	33	34	NC		
	Test button	TEST_INPUT_KEY	35	36	STA_LED-	Run indicator light	<a href="#">Note 3</a>

		GND	37	38	GND		
	row decoded signal	A	39	40	DCLK	The first shift clock output	
	row decoded signal	B	41	42	DCLK_2	The second shift clock output	
	row decoded signal	C	43	44	LAT	LAT latch signal output	
	row decoded signal	D	45	46	CTRL	Afterglow control signal	
	row decoded signal	E	47	48	OE_RED	display enable	<a href="#">Note 4</a>
Note 4	display enable	OE_BLUE	49	50	OE_GREEN	display enable	
		GND	51	52	GND		
<a href="#">Note 2</a>	/	G1	53	54	R1	/	<a href="#">Note 2</a>
	/	R2	55	56	B1	/	
	/	B2	57	58	G2	/	
	/	G3	59	60	R3	/	
	/	R4	61	62	B3	/	
		GND	63	64	G4	/	
		GND	65	66	GND		
<a href="#">Note 2</a>	/	G5	67	68	R5	/	<a href="#">Note 2</a>
	/	R6	69	70	B5	/	
	/	B6	71	72	G6	/	
	/	G7	73	74	R7	/	
	/	R8	75	76	B7	/	
		GND	77	78	G8	/	
		GND	79	80	GND		
<a href="#">Note 2</a>	/	G9	81	82	R9	/	<a href="#">Note 2</a>
	/	R10	83	84	B9	/	
	/	B10	85	86	G10	/	
	/	G11	87	88	R11	/	
	/	R12	89	90	B11	/	
		GND	91	92	G12	/	
		GND	93	94	GND		
<a href="#">Note 2</a>	/	G13	95	96	R13	/	<a href="#">Note 2</a>
	/	R14	97	98	B13	/	
	/	B14	99	100	G14	/	

	/	G15	101	102	R15	/	
	/	R16	103	104	B15	/	
	/	B16	105	106	G16	/	
		GND	107	108	GND		
Note 2		G35	109	110	R35		Note 2
		R36	111	112	B35		
		B36	113	114	G36		
		G37	115	116	R37		
		GND	117	118	GND		
		GND	119	120	GND		

Remarks 1. The input power VCC is recommended to use 3.5V-5.5V.

Remark 2. RGB data sets must be used in groups.

Note 3. The running indicator is active low.

Remark 4. OE\_RED, OE\_GREEN, OE\_BLUE are display enable pins. Use OE\_RED when OE\_RGB is not controlled separately. When using PWM chip, it is GCLK signal.

Note 5. RFU1~19 are reserved extension function interfaces. For details, please refer to "3.2 Extension Function Reference Design"

### 3.2 Extended Function Reference Design

Extended function interface description			
Extension ports	Recommended intelligent module interface	Recommended light board Flash interface	explanation
RFU1	/	/	/
RFU2	/	/	/
RFU3	HUB_CODE0	HUB_CODE0	Flash Control Interface 1
RFU4	HUB_SPI_CLK	HUB_SPI_CLK	Serial interface clock signal
RFU5	HUB_CODE1	HUB_CODE1	Flash Control Interface 2
RFU6	HUB_SPI_CS	HUB_SPI_CS	CS signal of serial interface
RFU7	HUB_CODE2	HUB_CODE2	Flash Control Interface 3
RFU8	/	HUB_SPI_MOSI	Lamp board Flash storage data input
	HUB_UART_TX	/	Intelligent module TX signal
RFU9	HUB_CODE3	HUB_CODE3	Flash Control Interface 4
RFU10	/	HUB_SPI_MISO	Lamp board Flash storage data output
	HUB_UART_RX	/	Intelligent module RX signal
RFU11	HUB_H164_CSD	HUB_H164_CSD	74HC164 data signal
RFU12	/	/	/
RFU13	HUB_H164_CLK	HUB_H164_CLK	74HC164 clock signal
RFU14	POWER_STA1	POWER_STA1	Dual power detection signal 1
RFU15	MS_DATA	MS_DATA	Dual card backup connection signal



RFU16	POWER_STA2	POWER_STA2	Dual power detection signal 2
RFU17	MS_ID	MS_ID	Dual card backup ID signal
RFU18	HUB_CODE4	HUB_CODE4	Flash Control Interface 5
RFU19	/	/	/

Note: RFU8 and RFU10 are signal multiplexing expansion interfaces. You can only choose one of "Recommended Smart Module Interface" and "Recommended Module Flash Interface".

## 4 Indicator status description

Indicator status	
LED1	The power indicator is red, always on means the power supply is normal, off Delegate not powered on
LED2	The device running indicator is green, flashes when there is a signal input, and is off or always on when there is no signal

## 5 Electrical parameters

Project	parameter value
Rated voltage	DC 3.3V-5.5V
Rated current	0.5A
Operating temperature	-10°C- 70°C
Working humidity	0% - 95%

## 6 Dimensions

The unit is mm, the thickness of the board is not more than 2.0mm, and the total thickness (thickness of the board + thickness of the front and back devices) is not more than 8.5mm.

