



DH7516

receive card

Nova control board embedded software V1.1 (embedded in DH7516)



Xi'an Nova Nebula Technology Co., Ltd.

Specifications

update record

Document version	release time	update description
V1.3.1	2022-12-27	<ul style="list-style-type: none"> ÿUpdate the description of the maximum load resolution Updated dimension drawing ÿUpdate input voltage Update packaging size ÿ Delete the double backup of configuration parameters
V1.3.0	2021-10-29	Updated appearance
V1.2.0	2021-08-20	Updated appearance
V1.1.1	2021-08-03	<ul style="list-style-type: none"> ÿAdd certification related instructions Update feature description
V1.1.0	2021-05-07	Updated appearance
V1.0.0	2021-04-21	First release

Introduction

Xi'an Nova Nebula Technology Co., Ltd.

DH7516 is a universal receiving card launched by Nova Technology. For PWM driver IC, the maximum resolution of a single card is 512x384@60Hz; for general

Driver IC, single card maximum load resolution 384x384@60Hz. Support brightness correction, fast bright and dark line adjustment, 3D, RGB independent Gamma adjustment and other functions

Yes, it can improve the picture display effect and enhance the user experience.

DH7516 uses 16 standard HUB75E interfaces for communication, has high stability, supports up to 32 sets of RGB parallel data, and is suitable for a variety of on-site environments.

The construction.

Certification

RoHS/EMC Class Aÿ

If the product does not have relevant certification in the country or region where it is sold, please contact Nova Nebula for confirmation or processing as soon as possible. Otherwise, if it causes relevant legal risks, the customer

You need to bear the responsibility yourself or Nova Nebula has the right to seek compensation.

characteristic

Improve display effects

ÿBrightness correction

Cooperate with NovaLCT and calibration platform to adjust the brightness of each light point.

Line correction effectively eliminates brightness differences and makes the brightness of the entire screen reach

Highly consistent, improving the image quality of the display.

The calibration platform is recommended to use CalCube MiniLED V1.1.0 and above

Previous version.

ÿFast light and dark line adjustment

Adjust the bright and dark lines caused by module splicing and cabinet splicing to improve the brightness

The visual abruptness caused by the dark line. The adjustment process takes effect immediately.

Simple and easy to use.

ÿ 3D function

Use with a sending card that supports 3D function to output 3D images.

γ RGB independent Gamma adjustment With the sending card and NovaLCT (V5.2.0 and above) that supports RGB independent Gamma adjustment, by adjusting "Red Gamma", "Green Gamma" and "Blue Gamma" respectively, it can effectively control the problems of uneven low gray and white balance drift of the display screen, making the picture more realistic. [Improve maintainability](#)

γ Quick upload of correction coefficients

Correction coefficients can be quickly uploaded to the receiving card to improve efficiency.

γ The Mapping function displays

the receiving card number and network port information on the cabinet, clearly obtaining the location and routing of the receiving card.

γ Pre-stored screen settings customize

the screen image when the computer is turned on, the network cable is disconnected, or there is no video source signal.

γ Temperature and voltage monitoring

Monitor the temperature and voltage of the receiving card itself without the need for other peripherals.

γ The cabinet LCD display displays

the temperature, voltage, single operation time and total operation time of the receiving card through the cabinet LCD module.

[Improve reliability](#)

γ Loop backup

The receiving card and the sending card are connected to form a loop through the main and backup lines. When a fault occurs somewhere in the line, the screen can still display normally.

γ Error detection

Check the communication quality of the receiving card network port, record the number of error packets, and help eliminate network communication risks.

NovaLCT must be V5.2.0 or above.

γ Firmware program read back

Read back the firmware program of the receiving card and save it locally.

NovaLCT must be V5.2.0 or above.

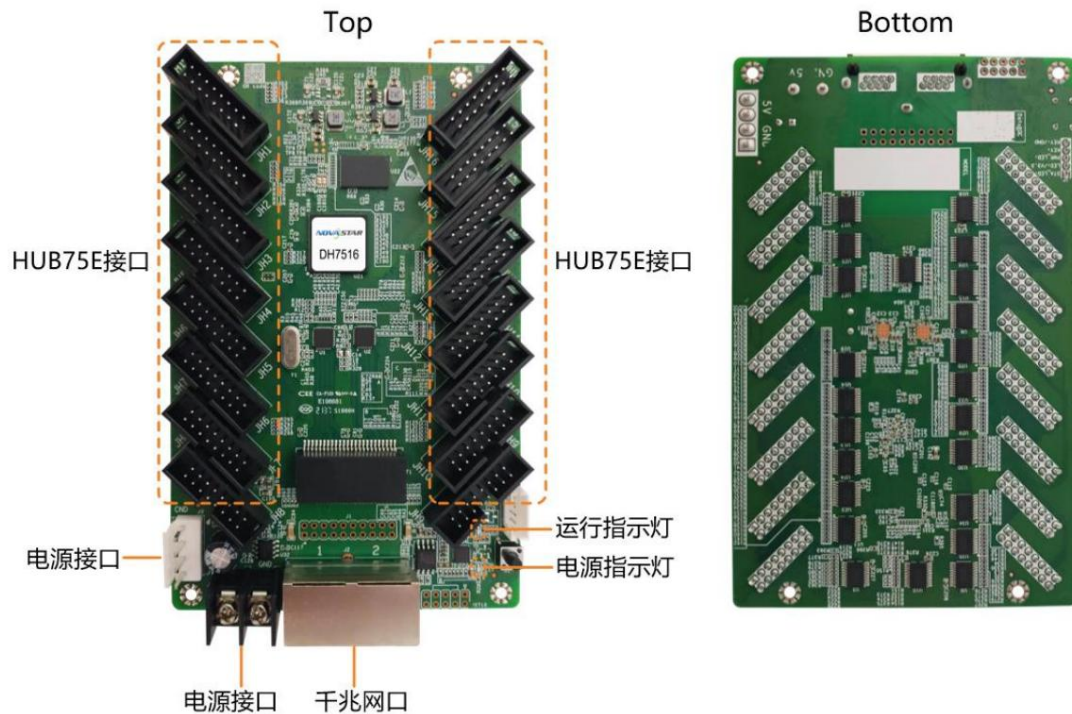
γ Configuration parameter readback

Read back the configuration parameters of the receiving card and save them locally.

γ Dual program backup The

receiving card has two firmware programs saved in the application area when it leaves the factory to prevent the receiving card from deadlocking due to abnormal program update process.

Exterior



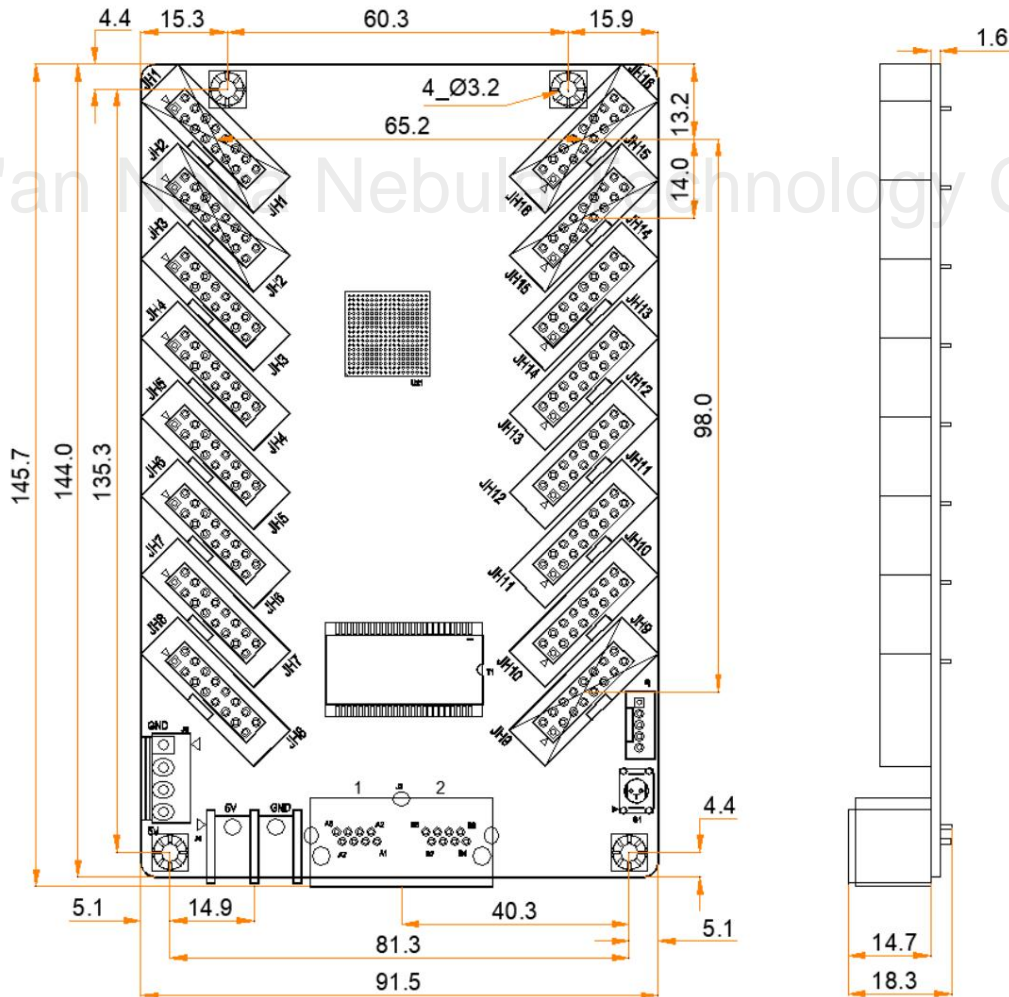
The product photos in this article are for reference only. Please refer to the actual products purchased.

Indicator Lights

Indicator Lights	Color Status	illustrate
The green indicator light flashes once every 1s.		The receiving card is working properly, the network cable is connected normally, and there is video source input
	Flashes once every 3s	Network cable connection abnormality
	Flashes 3 times with an interval of 0.5s. The network	cable is connected normally, but there is no video source input.
	Flashes once every 0.2s Application area	program loading failed, entering the backup program working state
	Flashes 8 times with an interval of 0.5s. Redundancy switching of the network port occurs and loop backup takes effect.	
The power indicator is solid red		Power input is normal

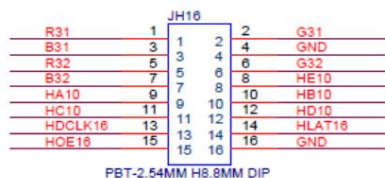
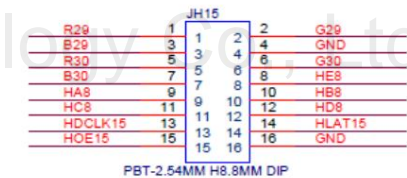
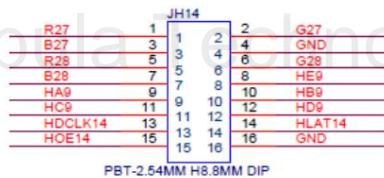
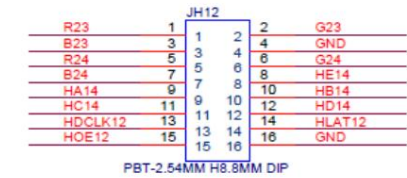
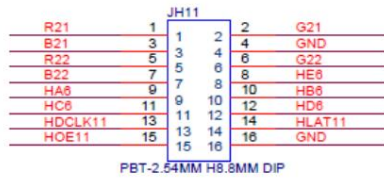
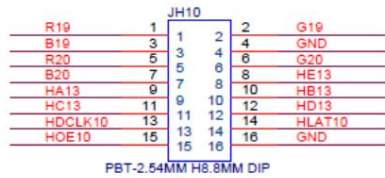
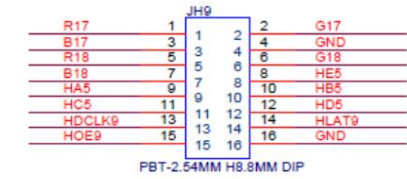
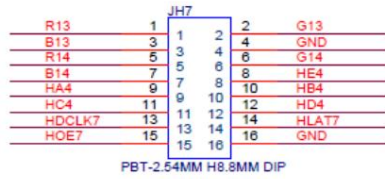
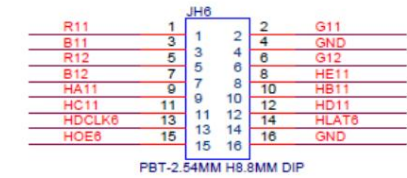
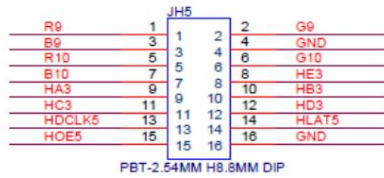
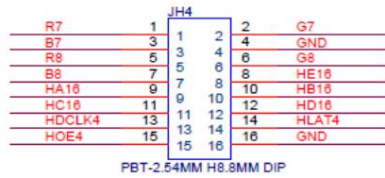
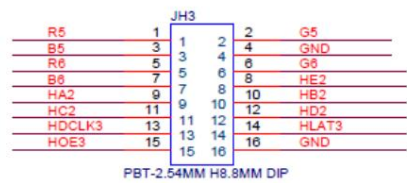
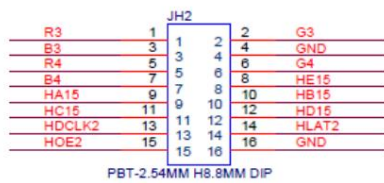
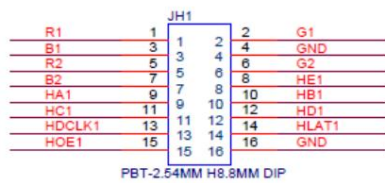
size

The board thickness is no more than 2.0mm, and the total thickness (board thickness + thickness of components on the front and back) is no more than 19.0mm. The positioning hole is connected to the signal ground (GND).



Tolerance: ±0.3 Unit: mm

Data interface diagram



Data interface definition (taking JH1 as an example)					
/	R1	1	2	G1	/
/	B1	3	4	GND	Grounding
/	R2	5	6	G2	/
//	B2	7	8	HE1	Line decoding signal
Line decoding signal	HA1	9	10	HB1	
	HC1	11	12	HD1	
Shift clock	HDCLK1	13	14	HLAT1	Latch signal
display enable	HOE1	15	16	GND	Grounding

Product Specifications

Maximum load	512x384@60Hz (PWM type driver IC)
	384x384@60Hz (general purpose driver IC)

Electrical Specifications	Input voltage	DC 3.8V \pm 5.5V
	Rated current	0.5A
	Rated power consumption	2.5W
working environment	temperature	-20 \pm +70 \pm
	humidity	10%RH \pm 90%RH, no condensation
Storage Environment	temperature	-25 \pm +125 \pm
	humidity	0%RH \pm 95%RH, no condensation
Physical specifications	size	145.7mm \times 91.5mm \times 18.3mm
	net weight	101.9g Note: Single card weight
	Total weight	13.78kg Note: When using the following packaging, the total weight of the product, printed matter, and packaging materials is
Packaging Information	Packaging rules	Single card blister packaging, 100 receiving cards per box
	Packing box size	625.0mm \times 180.0mm \times 470.0mm

Current and power consumption may vary depending on product settings, environment, usage and many other factors.

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