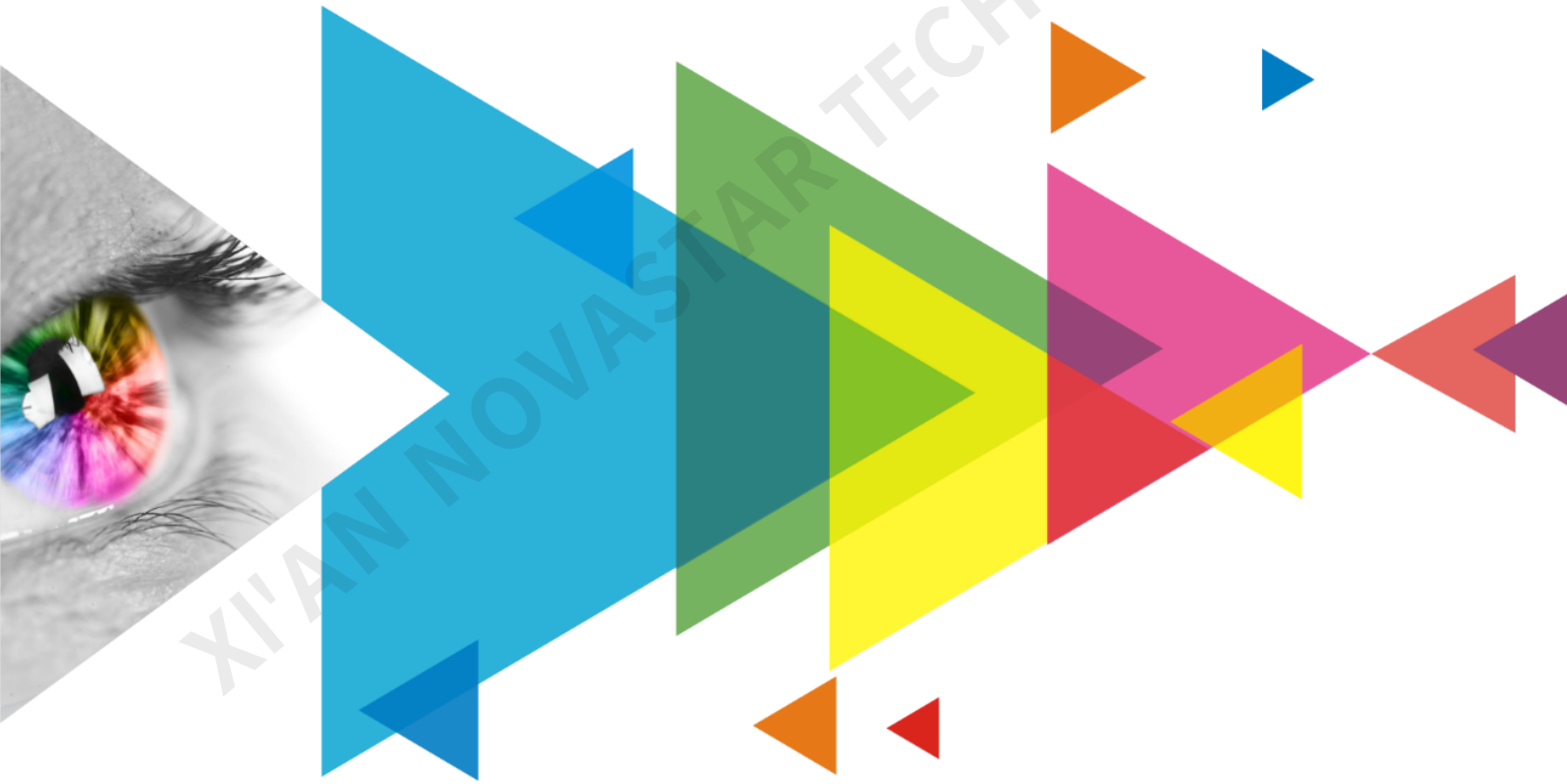
DH426

Receiving Card



Specifications

Change History

Document Version	Release Date	Description
V1.1.3	2022-08-31	• Added the table of appearance description. • Updated the appearance diagram. • Updated the input voltage. • Updated the packing information.
V1.1.2	2022-03-26	• Added the certifications description. • Added the dimensions diagram description. • Updated some feature descriptions. • Updated the pins section.
V1.1.1	2020-09-11	• Optimized the feature description. • Optimized the legends in the appearance diagram. • Optimized the indicator description. • Optimized the dimensions diagram. • Updated the packing Information.
V1.1.0	2020-04-10	• Updated the maximum loading capacity. • Updated the feature description.
V1.0.1	2019-10-28	Increased the version number only.
V1.0.0	2019-09-26	First release

Introduction

The DH426 is a general receiving card developed by Xi'an NovaStar Tech Co., Ltd. (hereinafter referred to as NovaStar). Working with NovaLCT V5.3.0 or later, a single DH426 supports resolutions up to 512×384@60Hz. Supporting various functions such as the brightness calibration, quick adjustment of dark or bright lines, 3D, and individual gamma adjustment for RGB, the DH426 can significantly improve the display effect and user experience.

The DH426 uses 16 standard HUB75E connectors for communication, resulting in high stability. It supports up to 32 groups of parallel RGB data and is suitable for various on-site setups.

Certifications

RoHS, EMC Class A

If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact NovaStar to confirm or address the problem. Otherwise, the customer shall be responsible for the legal risks caused or NovaStar has the right to claim compensation.

Features

Improvements to Display Effect

- Brightness Calibration
  Work with NovaStar's high-precision calibration system to calibrate the brightness of each pixel, effectively removing brightness differences and enabling high brightness consistency.
- Quick adjustment of dark or bright lines
  The dark or bright lines caused by splicing of modules or cabinets can be adjusted to improve the visual experience. The adjustment can be easily made and takes effect immediately.

- 3D function
  Working with the sending card that supports 3D function, the receiving card supports 3D output.
- Individual gamma adjustment for RGB
  Working with NovaLCT (V5.2.0 or later) and the sending card that supports this function, the receiving card supports individual adjustment of red gamma, green gamma and blue gamma, which can effectively control image non-uniformity under low grayscale and white balance offset, allowing for a more realistic image.

Improvements to Maintainability

- Mapping function
  The cabinets can display the receiving card number and Ethernet port information, allowing users to easily obtain the locations and connection topology of receiving cards.
- Temperature and voltage monitoring
  The receiving card temperature and voltage can be monitored without using peripherals.
- Bite error detection
  The Ethernet port communication quality of the receiving card can be monitored and the number of erroneous packets can be recorded to help troubleshoot network communication problems.

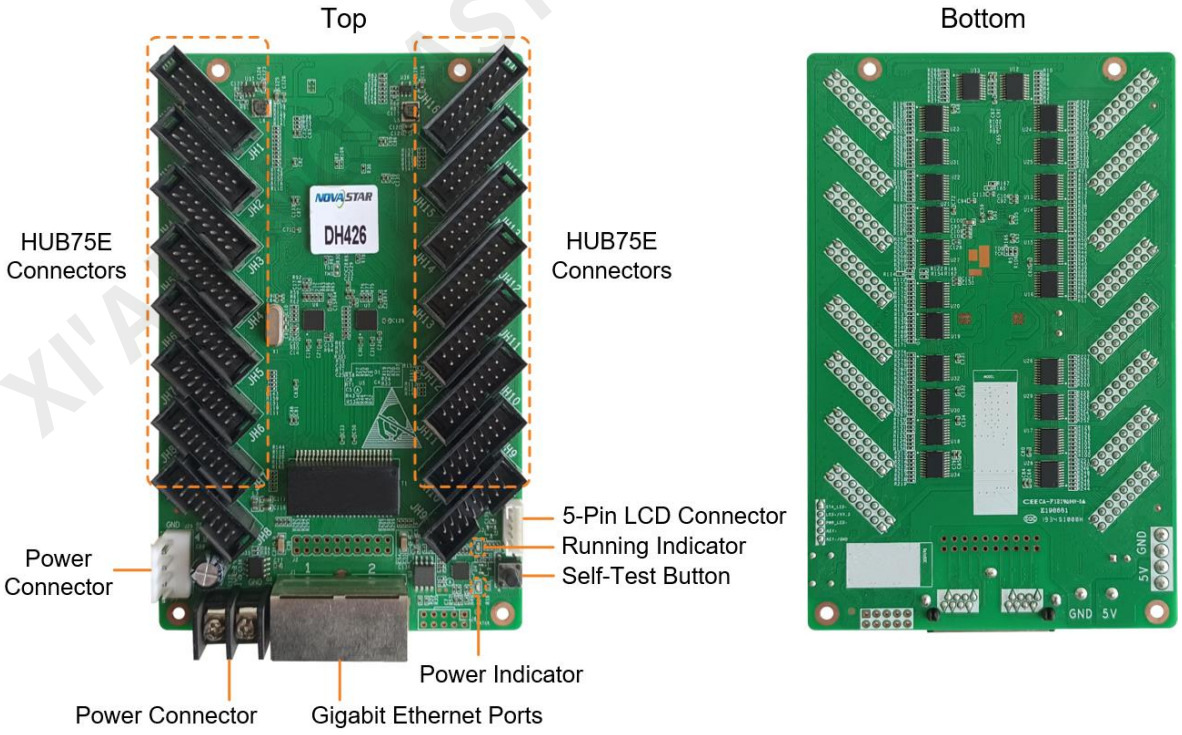
  NovaLCT V5.2.0 or later is required.
- Firmware program readback
  The receiving card firmware program can be read back and saved to the local computer.

  NovaLCT V5.2.0 or later is required.
- Configuration parameter readback
  The receiving card configuration parameters can be read back and saved to the local computer.

Improvements to Reliability

- Loop backup
  The receiving card and sending card form a loop via the main and backup line connections. If a fault occurs at a location of the lines, the screen can still display the image normally.
- Dual program backup
  Two copies of firmware program are stored in the application area of the receiving card at the factory to avoid the problem that the receiving card may get stuck abnormally during program update.

Appearance



All product pictures shown in this document are for illustration purpose only. Actual product may vary.

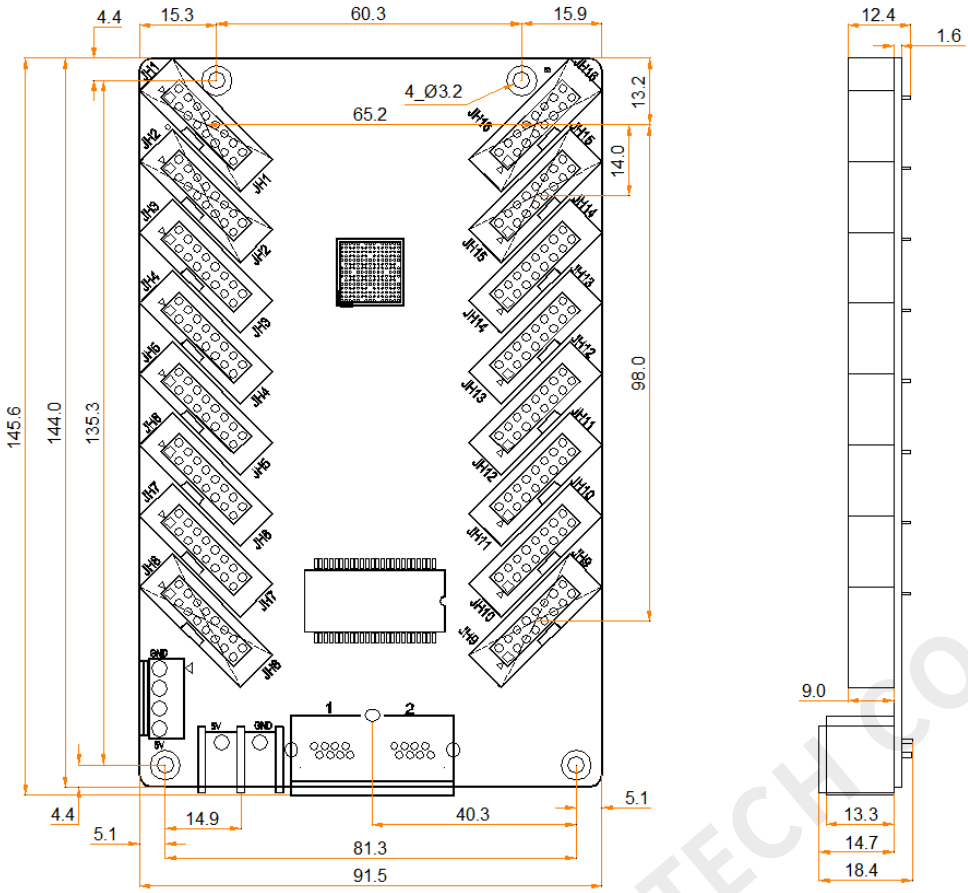
Name	Description
HUB75E Connectors	Connect to the module.
Power Connector	Connect to the input power. Either of the connectors can be chosen.
Gigabit Ethernet Ports	Connect to the sending card, and cascade other receiving cards. Each connector can be used as input or output.
Self-Test Button	Set the test pattern. After the Ethernet cable is disconnected, press the button twice, and the test pattern will be displayed on the screen. Press the button again to switch the pattern.
5-Pin LCD Connector	Connect to the LCD.

Indicators

Indicator	Color	Status	Description
Running indicator	Green	Flashing once every 1s	The receiving card is functioning normally. Ethernet cable connection is normal, and video source input is available.
		Flashing once every 3s	Ethernet cable connection is abnormal.
		Flashing 3 times every 0.5s	Ethernet cable connection is normal, but no video source input is available.
		Flashing once every 0.2s	The receiving card failed to load the program in the application area and is now using the backup program.
		Flashing 8 times every 0.5s	A redundancy switchover occurred on the Ethernet port and the loop backup has taken effect.
Power indicator	Red	Always on	The power input is normal.

Dimensions

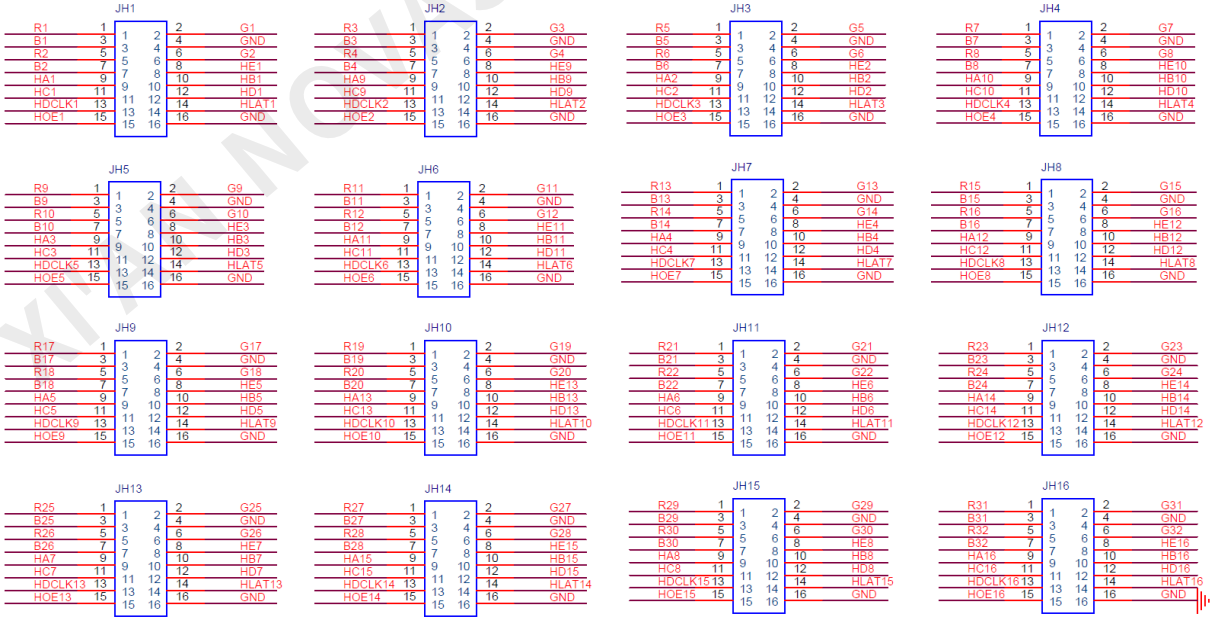
The board thickness is not greater than 2.0 mm, and the total thickness (board thickness + thickness of components on the top and bottom sides) is not greater than 19.0 mm. Ground connection (GND) is enabled for mounting holes.



Tolerance: ±0.3 Unit: mm

To make molds or trepan mounting holes, please contact NovaStar for a higher-precision structural drawing.

Pins



Pin Definitions (Take JH1 as an example)					
/	R1	1	2	G1	/
/	B1	3	4	GND	Ground
/	R2	5	6	G2	/
/	B2	7	8	HE1	Line decoding signal
Line decoding signal	HA1	9	10	HB1	Line decoding signal
Line decoding signal	HC1	11	12	HD1	Line decoding signal

Pin Definitions (Take JH1 as an example)					
Shift clock	HDCLK1	13	14	HLAT1	Latch signal
Display enable signal	HOE1	15	16	GND	Ground

Specifications

Maximum Resolution	PWM IC: 512×384@60Hz Common IC: 384×384@60Hz	
Electrical Specifications	Input voltage	DC 3.8 V to 5.5 V
	Rated current	0.5 A
	Rated power consumption	2.5 W
Operating Environment	Temperature	–20°C to +70°C
	Humidity	10% RH to 90% RH, non-condensing
Storage Environment	Temperature	–25°C to +125°C
	Humidity	0% RH to 95% RH, non-condensing
Physical Specifications	Dimensions	145.6 mm × 91.5 mm × 18.4 mm
	Net weight	100.1 g Note: It is the weight of a single receiving card only.
Packing Information	Packing specifications	Each receiving card is packaged in a blister pack. Each packing box contains 100 receiving cards.
	Packing box dimensions	625.0 mm × 180.0 mm × 470.0 mm

The amount of current and power consumption may vary depending on various factors such as product settings, usage, and environment.

Trademark

NOVASTAR is a trademark of Xi'an NovaStar Tech Co., Ltd.

Statement

Thank you for choosing NovaStar's product. This document is intended to help you understand and use the product. For accuracy and reliability, NovaStar may make improvements and/or changes to this document at any time and without notice. If you experience any problems in use or have any suggestions, please contact us via the contact information given in this document. We will do our best to solve any issues, as well as evaluate and implement any suggestions.

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