
N645D-3V3 vehicle module specification

1. Scope of application

The information contained in this specification is applicable to N645D-3V3 vehicle module and contains key information such as module specifications, appearance dimensions and operation instructions.

2. Overview

The N645D-3V3 module is composed of 1 / 4.5 inch, 1 megapixel color image CMOS, sensor and ISP image processing chip, and output 720P analog HD image. ISP has the functions of color matrix, sharpness, gamma correction, automatic electronic shutter, automatic white balance, automatic gain control, adaptive backlight compensation, 2D noise reduction, 3D noise reduction reversing auxiliary line and so on.

3. Technical parameters

order number	The parameter name	Parameter specifications
1	Sensor type:	CMOS
2	Sensory size:	1/4.5 "
3	Effective pixels:	1280(H)x720(V)
4	CRA:	15 °
5	white balance:	voluntarily
6	Automatic Gain Control AGC:	voluntarily
7	Backlight compensation:	have
8	denoise:	2D DNR
9	noise-signal ratio:	>52dB(AGC OFF)
10	Video Format:	AHD 720P@25FPS; AHD 720P@30FPS
11	Video Output:	And 1.0 Vp-p / 75 ohms
12	Gamma correction:	0.45
13	Operating Voltage:	DC3.3V
13	Operating current:	100 ~ 130mA
14	Power:	0.3W (U=3.3V)
15	Working temperature:	-30°C~+85°C
16	Exterior Dimensions:	The 16mm round shape

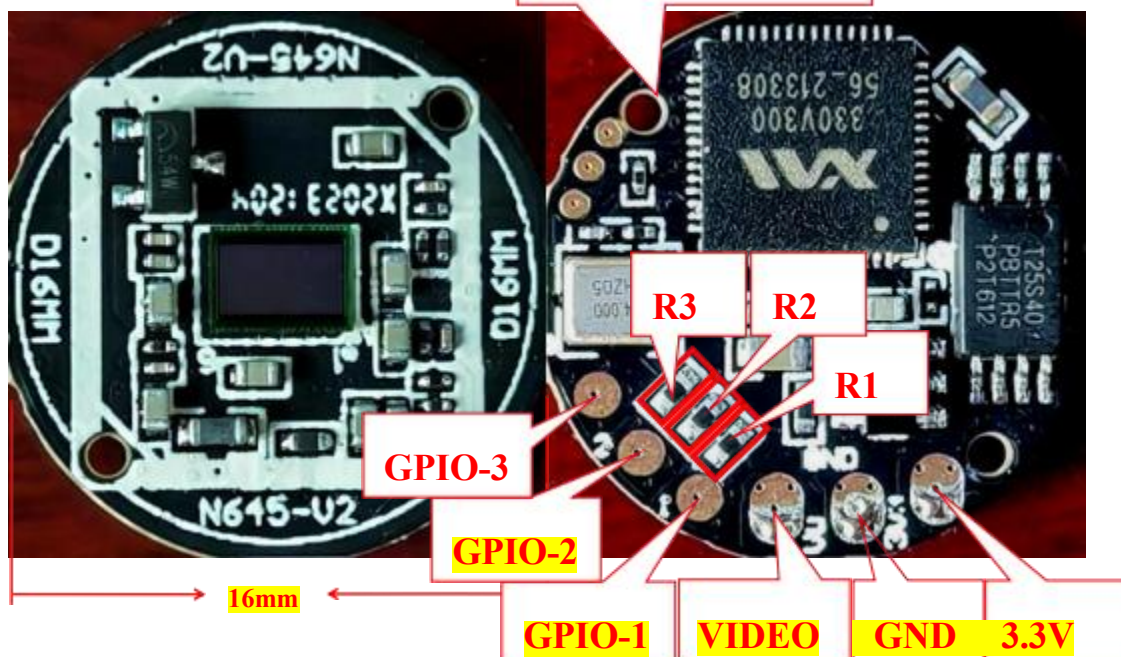
4. Storage method

A. Good storage conditions: refers to the temperature less than 25 degrees, relative humidity less than 65%, with temperature control, indoor environment without corrosive gas, electrostatic bag packaging storage.

B. General storage conditions: refers to the temperature is not higher than 35 degrees, the relative humidity is less than 75%, the indoor environment without corrosive gas, electrostatic bag packaging storage.

C. Long-term storage: if you need to use, avoid moisture risk, need high temperature 80 degrees baking for 4, hours, must be re-tested.

5. Appearance and interface



3.3V	power input
GND	the earth
VIDEO	video monitor 525 vidicon video out
GPIO-1 (R1 off-post)	Control system: 1080P / 720P; 1080P / CVBS; 720P / CVBS.
GPIO-2 (R2 off-post)	Control the mirror image: the default mirror image, the ground positive image.(Reverse-adjustable)
GPIO-3 (R3 off-post)	Control reverse line: default no mark, ground mark.(Reverse-adjustable)
Note: 1. GPIO-1, GPIO-2, GPIO-3 functions can be customized and adjusted, standard switching, control reversing line, control mirror image, control upper and lower image reversal, etc., subject to the actual procedure setting. 2. GPIO-1, GPIO-2, and GPIO-3 can all connect with the contact site to change the image function.	

6. Video output mode

order number	standard	Switch function
1	AHD-720P25FPS	Mirror switch; line marking switch.
2	AHD-720P30FPS	Mirror switch; line marking switch.
3	AHD-1080P25FPS	Mirror switch; line marking switch.
4	AHD-1080P30FPS	Mirror switch; line marking switch.
5	CVBS-PAL	Mirror switch; line marking switch.
6	CVBS-NTSC	Mirror switch; line marking switch.
Note: The standard switching supports any two types in the table.		

The above models are the same board, all the hardware is the same, the difference is that the firmware is different.

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