



PRODUCT SPECIFICATION

Full Color Asynchronous Control Card
HD-D16

Version number: V2.1

Update history:

Release version	Release time	Release Notes
V2.1	October 22th, 2024	Added 3 sets of IO detection, optimized Wi-Fi module circuitry to improve transmission rate
V1.1	July 23th, 2024	Updated typography
V1.0	September 25th, 2023	First release

1. Product Overview

HD-D16 Full color asynchronous Control System is an LED display control system for Lintel led screens, car screen and full color small size led screens, 4 standard HUB75E ports on board. It is equipped with Wi-Fi module, support mobile APP control and Internet remote cluster control.

Supporting computer control software HDPlayer, mobile phone control software LedArt and HD technology clouds management platform.

Support USB interface to update the playback program; support external various environmental monitoring sensors; support playback of video, pictures, Gif animation, text, WPS documents, tables, clocks, timing and other program content; support 60Hz frame rate output.

2. Product Features

Input:

1. Support 1 channel 100M communication network port for debugging parameters, sending programs and accessing the internet;
2. Support 1 channel USB communication interface for updating programs and expanding capacity;
3. Support 1 channel sensor interface, 1 channel GPS interface and 1 channel temperature sensor interface.

Output:

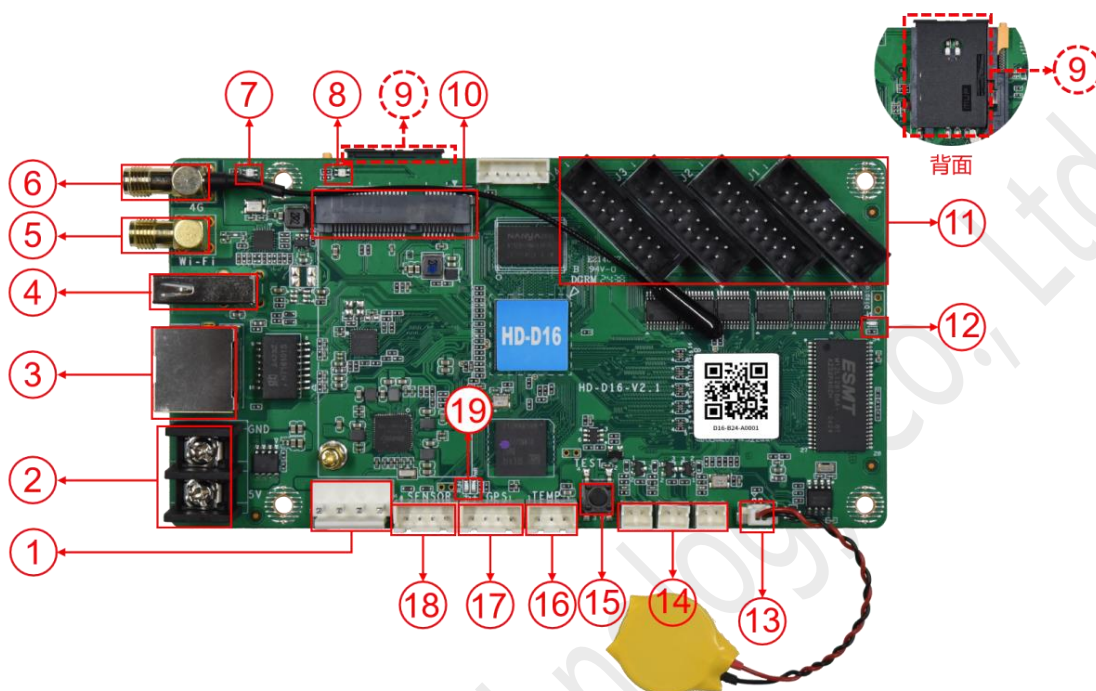
1. Maximum control range of 65,000 pixels, supporting the widest 1024 pixels or the highest 256 pixels;
2. 4 HUB75E interfaces on board.

Function:

1. Standard Wi-Fi module, support AP mode and STA mode, in STA mode the device can connect to the nearby Wi-Fi network (operating distance recommended within 15M);

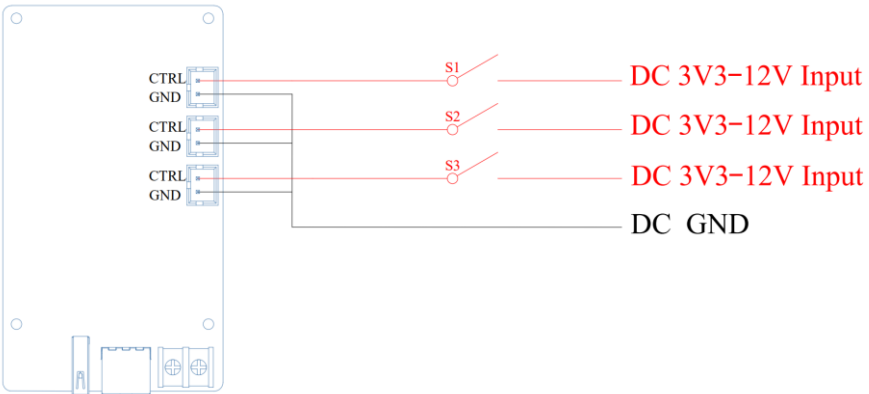
2. Support 1 channel video window playback;
1. 3. Support 4G access to the small gray cloud platform Internet remote cluster management (4G module optional); 4. Support 3 groups of CTRL function, switching detection, detection of 12V level input, control the bright screen/black screen/switching the program;
4. Support for UART communication;
5. Support for 1 channel RS-232 or RS-485 communication (optional);
6. Support for video, Support video, picture, text, animation word, clock, neon background, animation background and other special effects;
7. Support optional external relay, remote control of the power supply.

3. Interface Description

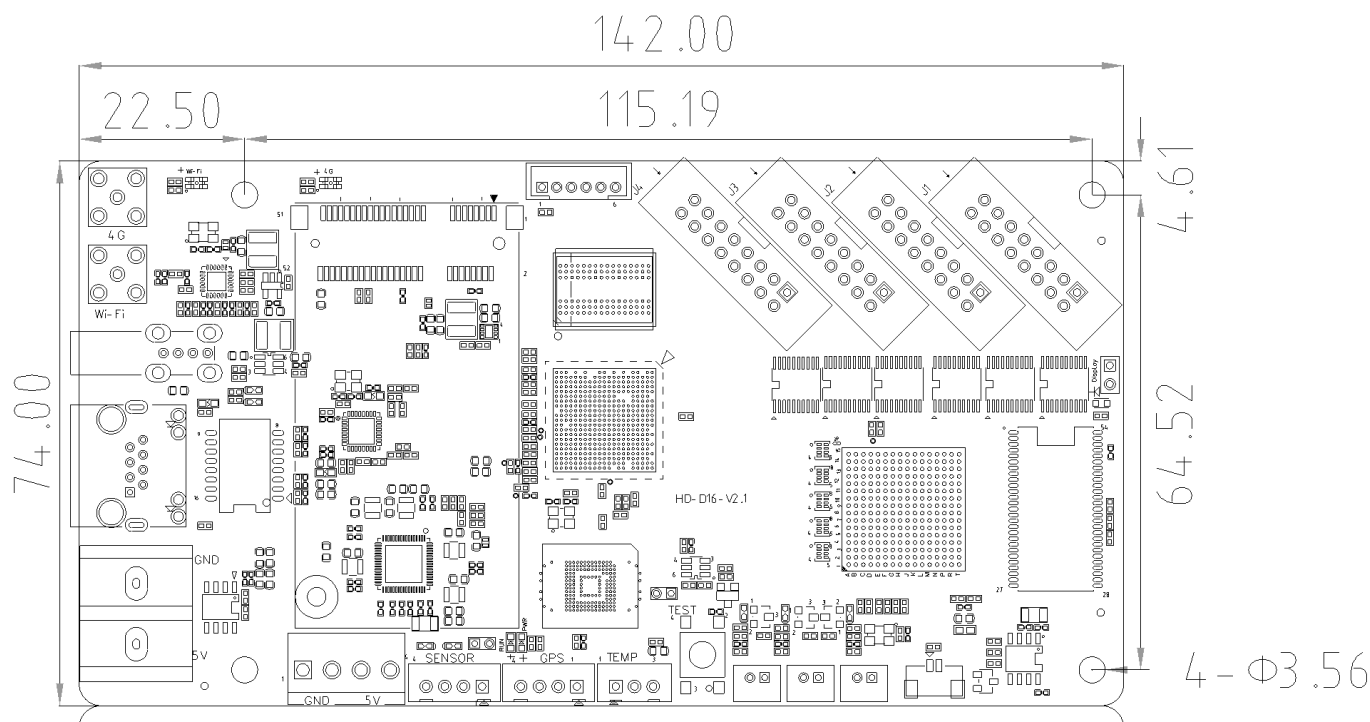


Serial number	Name	Description
1	Power terminal	DC 5V
2	Power terminal	DC 5V
3	Ethernet port	Connected to the computer network port, router or switch, the normal working condition is that the orange light is always on and the green light is flashing
4	USB port	connect to the USB device for update program
5	Wi-Fi Antenna connector socket	weld antenna socket of Wi-Fi
6	4G Antenna connector socket	weld antenna socket of 4G(Optional)
7	Wi-Fi indicator light	display Wi-Fi work status ② AP mode is normal, green light blinks;

		② No module detected, light is not on; ③ Cannot connect to hotspot Red light blinks. STA mode: ② STA mode is normal, green light is always on; ② Bridge can not connect to Wi-Fi hotspot, red light is always on; ③ Bridge can not connect to server, yellow light is always on.
8	4G indicator light	Display 4G network status ① Green light is always on, connect to cloud server successfully; ② Yellow light is always on, can't connect to cloud service; ③ Red light is always on, no signal or SIM is in arrears or can't be dialed; ④ Red light is blinking, SIM can't be detected; ④ Light doesn't come on, no module can be detected.
9	SIM card holder	Standard SIM card interface (optional 4G module for networking)
10	PCIE-4G Interface	External 4G module for providing control card internet access (optional 4G module)
11	HUB75E port	Connect LED screen by cable
12	Display light	Normal working state is flashing
13	Battery connector	Connecting a 2PIN RTC Battery
14	CTRL×3	Switching detection, detect 12V level input, control bright screen/black screen/program switching

		
15	Test button	for test the brightness and contrast of the display screen
16	Temperature Sensor port	for connect to Temperature
17	GPS port	for connect to GPS module, use for time correction and fixed position
18	Sensor port	for connect external sensor, Such as environmental monitoring, multi-function sensors, etc.
19	Indicator light	Serial port ① Default TTL level, support RS232/RS485 option (soldered chip) ② Connect external sensor accessories, such as environmental monitoring, multi-function sensors, etc. (optional devices)

4. Size Parameters



Tolerance: ± 0.3 Unit: mm

5. Product Specifications

Media Type:

Program control	Support program sequence playback, timer playback, support program insertion
Video Formats	60Hz frame rate output, support 720P video hardware decoding, direct transmission, no trans-coding waiting. AVI, WMV, MP4, 3GP, ASF, MPG, FLV, F4V, MKV, MOV, DAT, VOB, TRP, TS, WEBM, etc.
Animation Formats	SWF, FLV, GIF
Image Formats	BMP, JPG, JPEG, PNG etc.
Text	Support text message editing, inserting picture;
Time	analog clock, digital clock and a variety of dial clock functions

Basic parameters:

Module type	Static to 1-64 scan modules
Control Range	1024*64, Widest: 1024, Highest: 256

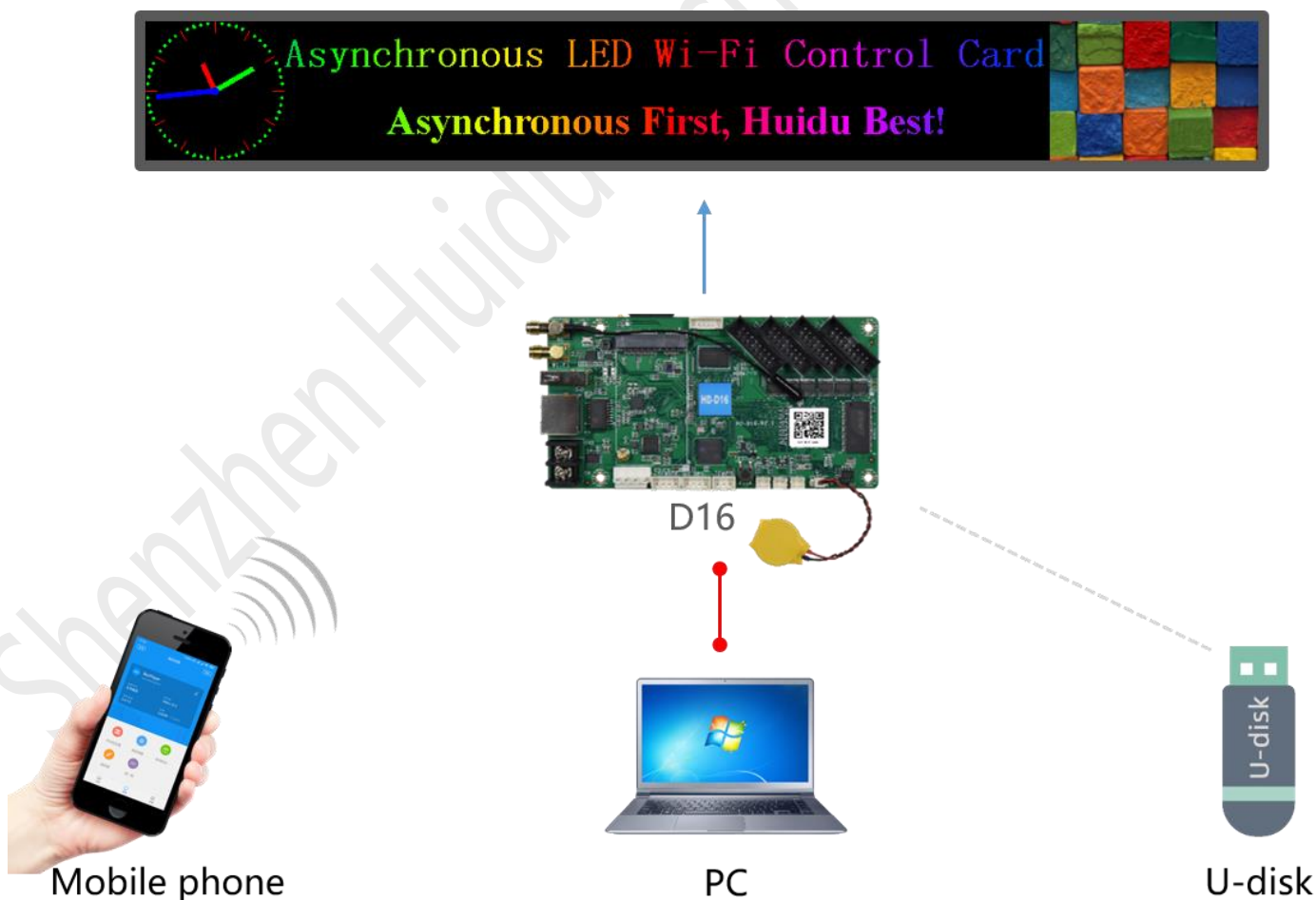
Gray Scale	256~65536
Video Formats	60Hz frame rate output, support 720P video hardware decoding, direct transmission, no trans-coding waiting. AVI, WMV, MP4, 3GP, ASF, MPG, FLV, F4V, MKV, MOV, DAT, VOB, TRP, TS, WEBM, etc.
Animation Formats	SWF,FLV ,GIF
Image Formats	BMP,JPG,JPEG,PNG etc.
Text	Support text message editing, inserting picture;
Time	analog clock, digital clock and a variety of dial clock functions
Other function	Neon, animations function; Clockwise/counter-clockwise count; support temperature and humidity; Adaptive brightness adjustment function
Memory	4GB memory, more than 4 hours' program support. Indefinitely expanding memory by U-disk;
Communication	U-disk/Wi-Fi/LAN/4G(Optional)
Port	5V Power *1, 10/100M RJ45 *1, USB 2.0 *1, HUB75E *4
Power	5W

Electrical parameters	Input Power	DC 5V (4.6V~5.5V)
	Maximum power consumption	5W
Hardware parameters	Hardware performance	1.5GHz, Quad-Core CPU, Mali-G31 GPU Support 1080p@60fps Hard Decode Playback Support 1080p@30fps Hardware Encoding
Storage space	Internal storage	4GB (2G available)
Storage environment	Temperature	-40℃ ~ 80℃
	Humidity level	0%RH ~ 80%RH(non-condensing)
Working environment	Temperature	-40℃ ~ 80℃
	Humidity level	0%RH ~ 80%RH(non-condensing)

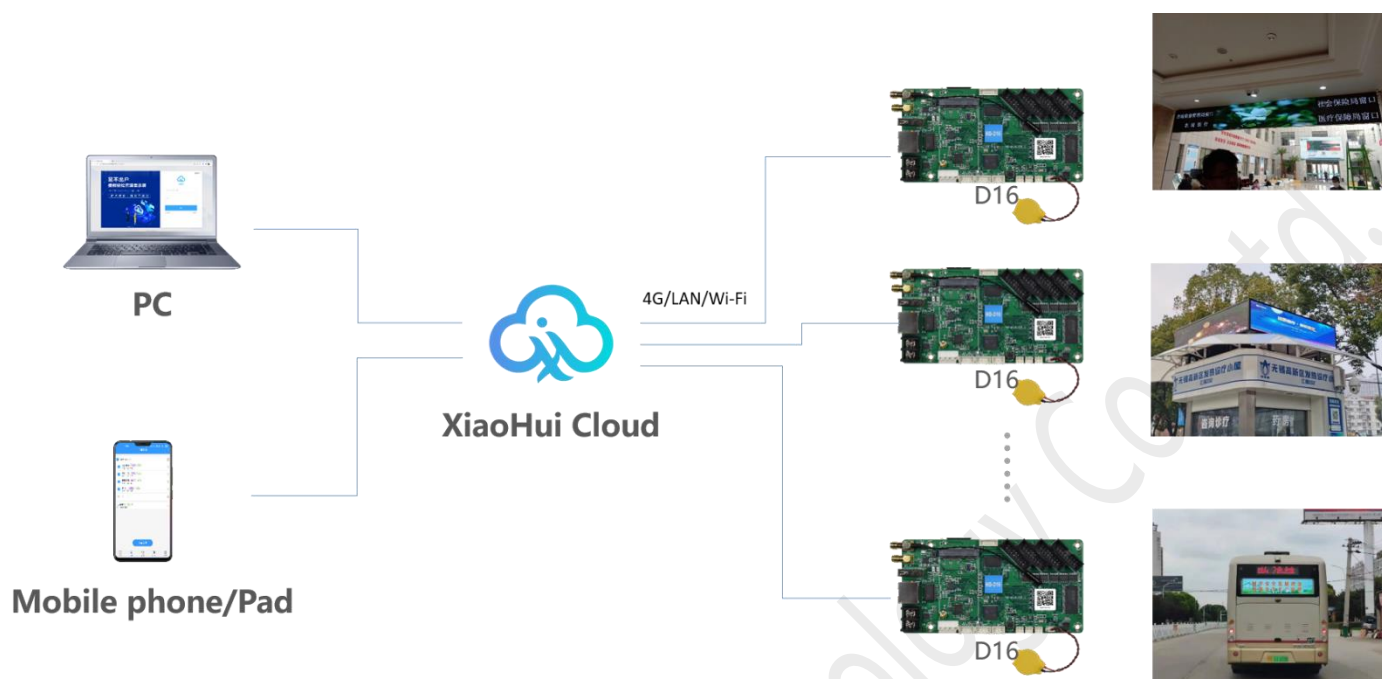
Packaging Information	List: 1×D16 1×WiFi antenna 1×Certificate of Conformity Description: 4G antenna comes with optional 4G module 1PCS
Sizes	142mm×74mm
Net weight	0.08kg
Protection class	The bare board is not waterproof, prevent water from dripping into the product, and do not get the product wet or rinsed.
System software	Linux 4.4 operating system software FPGA software

6. Way of Communication

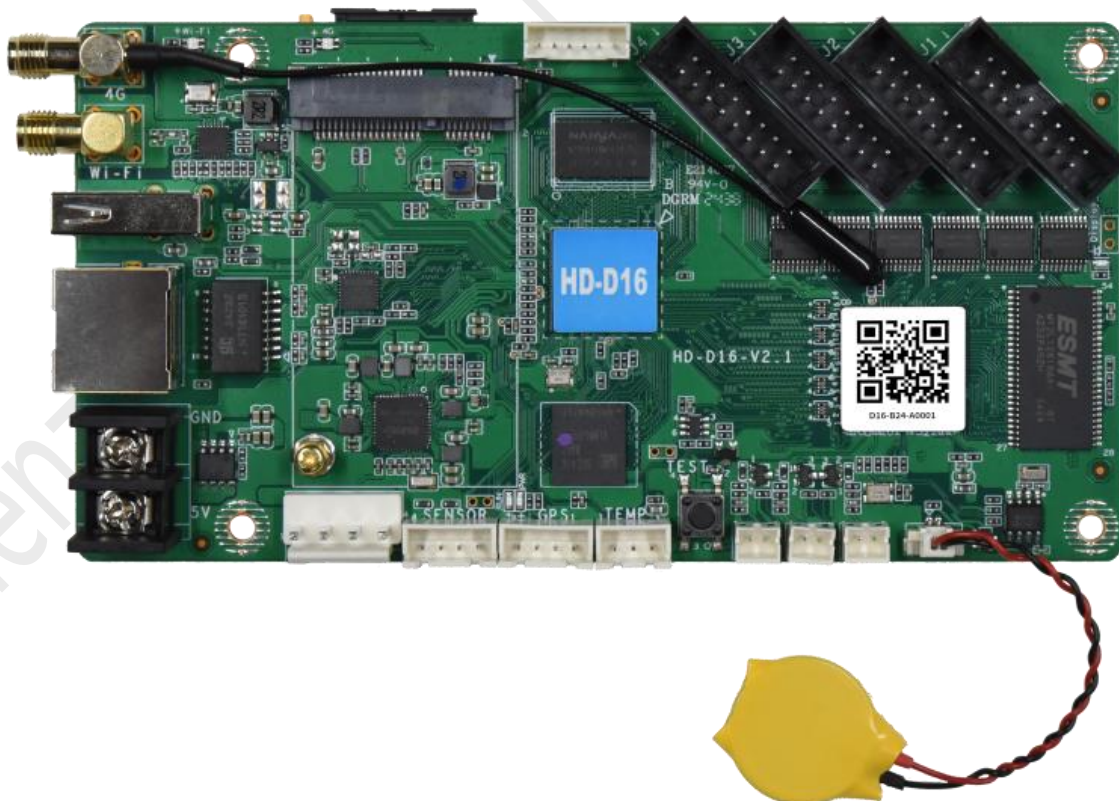
1. Cluster control, supports Internet remote control.



2. Stand-alone control, supports Wi-Fi, network port direct connection, and USB interface for communication.



7. Appearance





Illustrate:

Welcome to choose Huidu Technology products. There may be differences between the product pictures in the specification and the actual appearance (such as interface caps, antenna installation, etc.). Please refer to the actual product. If you have any questions, please contact technical support or salesperson for confirmation.