



PRODUCT SPECIFICATION

Professional LED
Poster Screen Control System
HD-B6L

Version: V1.3

Updates:

Release version	Release time	Update Notes
V1.3	Jun. 3, 2025	Update the product dimensions
V1.2	Nov. 28, 2024	The maximum loading capacity of the height increased to 8192 pixels.
V1.1	Oct. 24, 2024	Added LED indicator board
V1.0	May 30, 2024	First release

1. Overview

HD-B6L (B6L for short) is a multimedia control card for LED poster screens. It comes with HDMI input and output as standard, and supports HDMI splicing display. It also supports playing videos, pictures, Gif animations, text, WPS documents, tables, clocks, timing and other program contents.

B6L comes with Wi-Fi as standard, and supports wireless control via the mobile phone APP "LedArt". It supports remote cluster management and power control via the Internet; it supports USB interface to update/play programs. It supports synchronous playback of HDMI signals. It supports external connection of various environmental monitoring sensors to realize real-time viewing of environmental monitoring data. It is widely used in display fields such as mobile poster screens, mirror screens, and splicing screens.

2. Features

Input:

1. Support 1 Gigabit input network port for debugging parameters, sending programs and accessing the Internet;
2. Support 1 HDMI input interface, support automatic zooming of synchronous images, and support synchronous and asynchronous picture-in-picture functions;
3. Support 1 USB communication interface for updating programs and expanding capacity;
4. Support 2 dedicated sensor interfaces for external environmental monitoring sensors or GPS, etc.

Output:

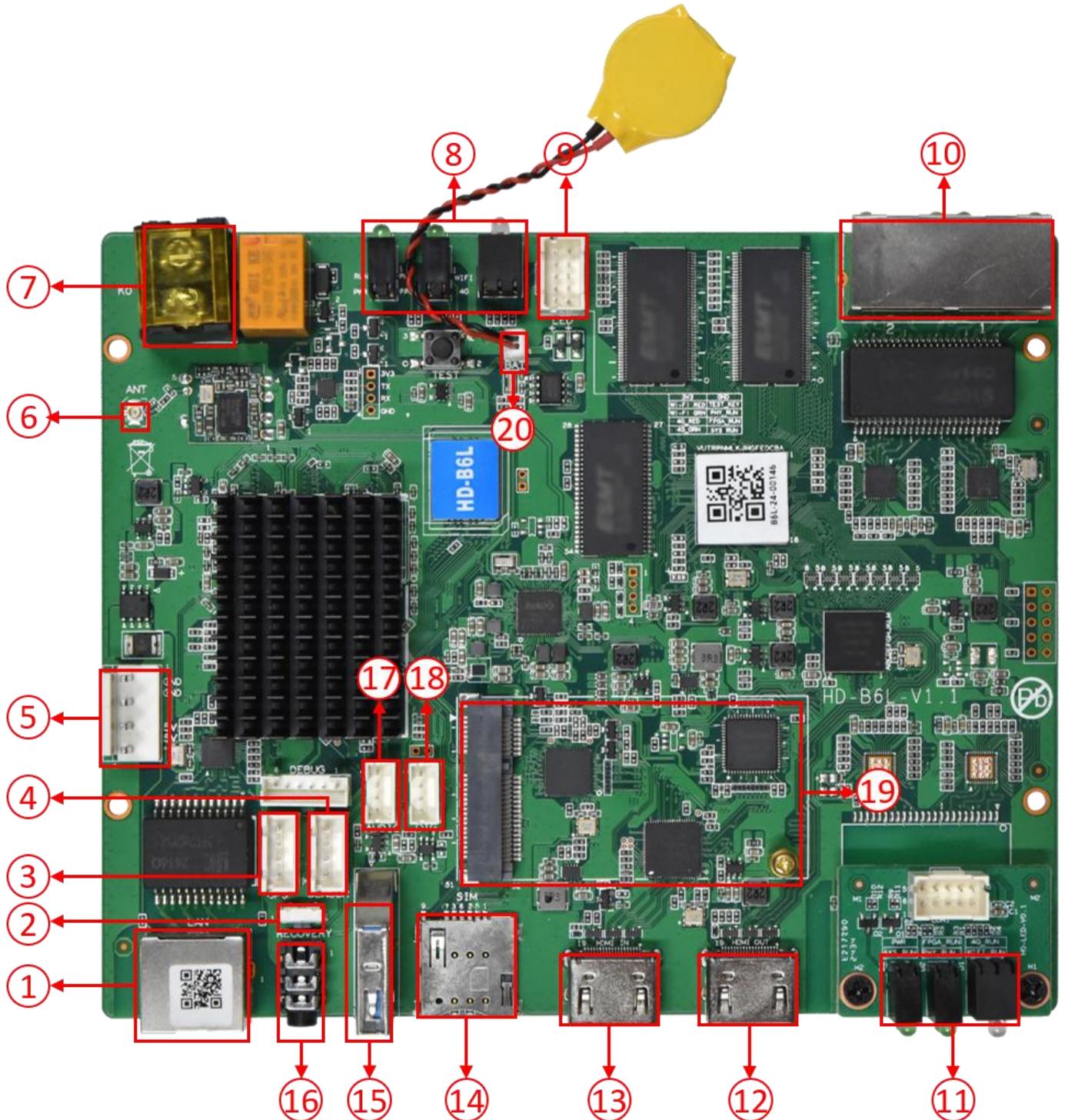
1. Standard 2 Gigabit output network ports, Cascade with receiving card to realize display screen loading.
2. The maximum control range of Single B6L is 130W pixels, supports a maximum width of 16,384 pixels or a maximum high of 8,192 pixels, and the cascade splicing can reach 260W pixels(for Multiple B6L);
3. 1 TRS 3.5mm and 1 4PIN standard two-channel audio output;
4. 1 HDMI signal output for cascade splicing, supporting up to 10 levels.

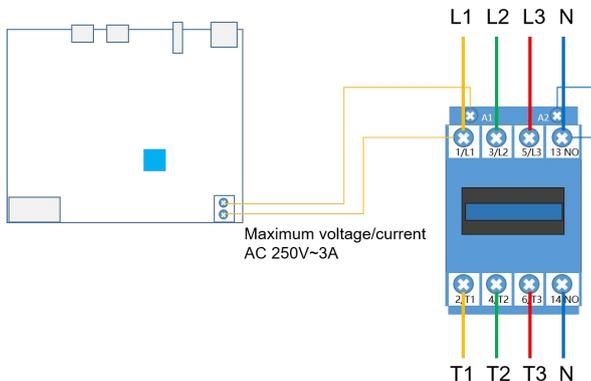
Function:

1. Standard 2.4GHz Wi-Fi, supports mobile phone APP wireless control (supports Wi-Fi AP, Wi-Fi STA mode);
2. Onboard 1 relay for remote power control;
3. Support multi-channel video window playback (support up to 2 channels of 4K or 6 channels of 1080P or 10 channels of 720P or 20 channels of 360P);

4. Support 4G access to XiaoHui Cloud Platform to achieve Internet remote cluster management (optional);
5. The cascade state supports the basic parameters, connection relationship and brightness parameters of the secondary screen synchronization receiving card of the main screen;
6. Support synchronous playback, asynchronous playback and synchronous and asynchronous mixed playback.

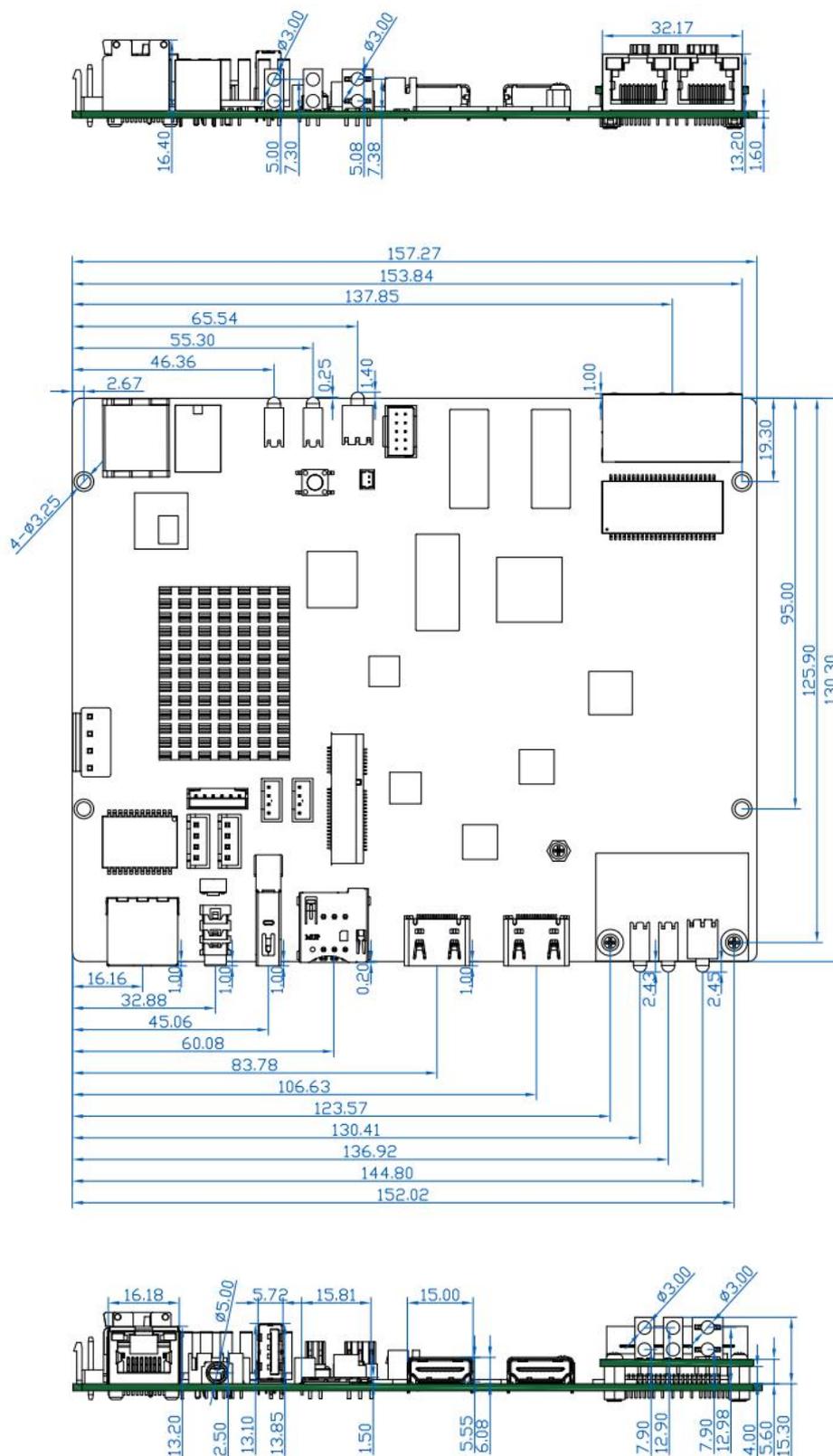
3. Interface Description



Number	Name	Description
1	Ethernet port	Gigabit input network port communication, and is used for Configuration, sending programs and accessing the Internet.
2	Reset button	Reset pinhole button, power off and restart device, long press button to restore the initial parameters.
3	GPS Interface	Connect a GPS module for positioning and time calibration.
4	Sensor interface	External temperature, humidity, brightness, wind speed, wind direction, noise, PM2.5, PM10, CO ₂ and other sensors.
5	Power seat	5V DC input interface.
6	Wi-Fi antenna interface	Wi-Fi dedicated interface, connect the Wi-Fi antenna to enhance the wireless signal.
7	Relay	<p>Relay on/off, supports maximum load: AC 250V~3A or DC 30V~3A.</p> <p>Connection method is as follows :</p> 
8	Indicator lights	<p>PWR: Power indicator light, green light is always on, power input is normal.</p> <p>RUN: System operation light, green light flashes, operating system is running normally; green light is always on or off, system is running abnormally.</p> <p>DISP: Display indicator light, green light flashes, FPGA system is running normally; green light is always on or off, system is running abnormally.</p> <p>Wi-Fi: Wireless indicator light</p> <p>A. In AP mode, green light flashes to indicate normal; red light flashes to indicate abnormality;</p> <p>B. In STA mode, green light is always on to indicate normal; red light flashes to indicate abnormality; yellow light is always on to indicate failure to connect to the server.</p> <p>4G: 4G network indicator light</p> <p>A. Green light always on means: connection to cloud server is successful;</p> <p>B. Yellow light always on means: cannot connect to cloud service;</p> <p>C. Red light always on means: no signal or SIM card is in arrears or cannot dial;</p> <p>D. Red light flashing means: SIM card cannot be detected;</p> <p>E: No light on means: 4G module cannot be detected without LAN port cable connection.</p>

9	Indicator light external interface	10PIN external extension interface.
10	Output network port	Gigabit output network port, cascaded with receiving card.
11	LED indicator board	Connect to serial number 9 via the light board cable (below) to synchronize the indicator status. 
12	HDMI output	HDMI1.4b output interface.
13	HDMI input	HDMI1.4b synchronous signal input interface, supports adaptive scaling.
14	SIM card slot	Micro SIM card slot, insert a SIM card to provide 4G networking, and remote control can be achieved through XiaoHui Cloud Platform (optional 4G module required).
15	USB interface	USB3.0, used for updating programs, insert programs or expanding capacity.
16	TRS audio output	TRS 3.5mm standard dual-channel audio output port.
17	4PIN audio output	Reserved 4PIN dual-channel audio output interface.
18	OTG interface	Used for debugging.
19	PCIE-4G seat	4G module holder (optional function, installed with 4G antenna by default).
20	Battery interface	Connect 2PIN RTC battery.

4. Product Size



Tolerance: ± 0.3 , Unit: mm

5. Product Specifications

1. Basic parameters:

Electrical parameters	Input power	DC 5V (4.6V~5.5V)
	Maximum power consumption	18W
Storage	Running memory	2GB
	Internal storage	16GB
Storage environment	Temperature	-40℃ ~ 80℃
	Humidity	0%RH ~ 80%RH(No condensation)
Work environment	Temperature	-40℃ ~ 70℃
	Humidity	0%RH ~ 80%RH(No condensation)
Packaging information	List: <ul style="list-style-type: none"> ● 1×B6L; ● 1×HDMI Cable; ● 1×WiFi Antenna; ● 1×Certificate of conformity; ● Note: 4G antenna is optional with 4G module 	
Size	157mm×130mm	
Net weight	0.16kg	

Protection level	Please pay attention to waterproofing, such as preventing water from dripping into the product, and do not get the product wet or rinse it
System software	Android 11.0 operating system software Android terminal application software FPGA software

2. Image decoding specifications :

Category	Decoding	Size	Format	Note
JPEG	JFIF file format 1.02	96x32pixels to 817x8176 pixels	JPG、JPEG	Does not support non-interlaced scanning, supports SRGB JPEG, supports AdobeRGB JPEG
BMP	BMP	Unlimited	BMP	NA
GIF	GIF	Unlimited	GIF	NA
PNG	PNG	Unlimited	PNG	NA
WEBP	WEBP	Unlimited	WEBP	NA

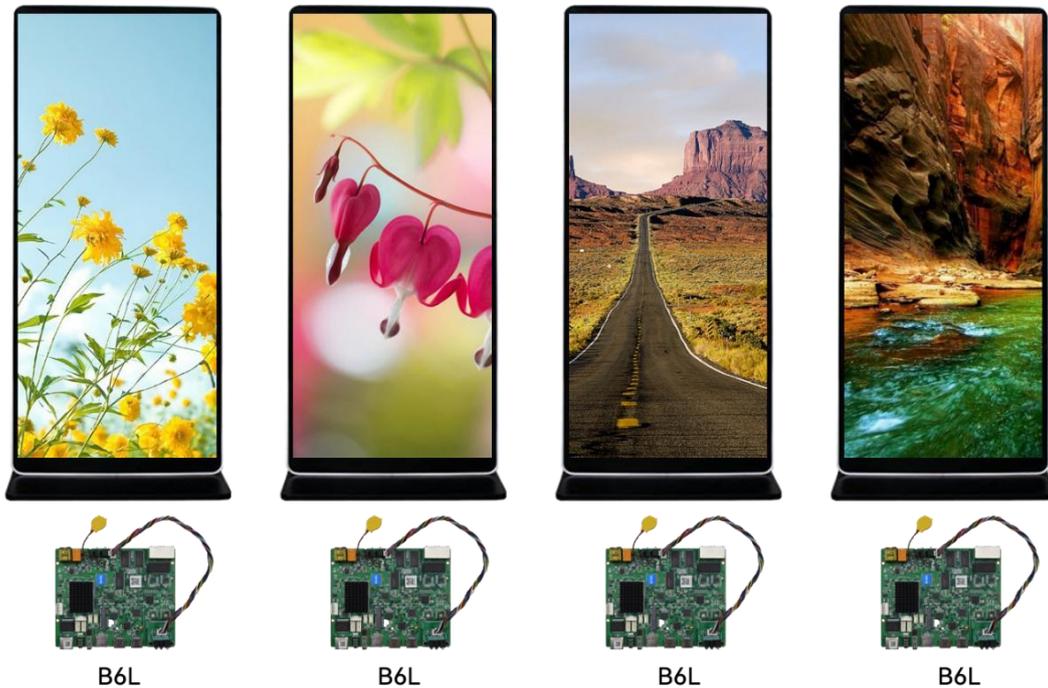
3. Video decoding specifications

Category	Decoding	Resolution	Maximum frame rate	Maximum bit rate	Format	Note
MPEG-1/2	MPEG-1/2	48x48 pixels to 1920x1088 pixels	30fps	80Mbps	DAT、MPG、VOB、TS	Support Field Coding

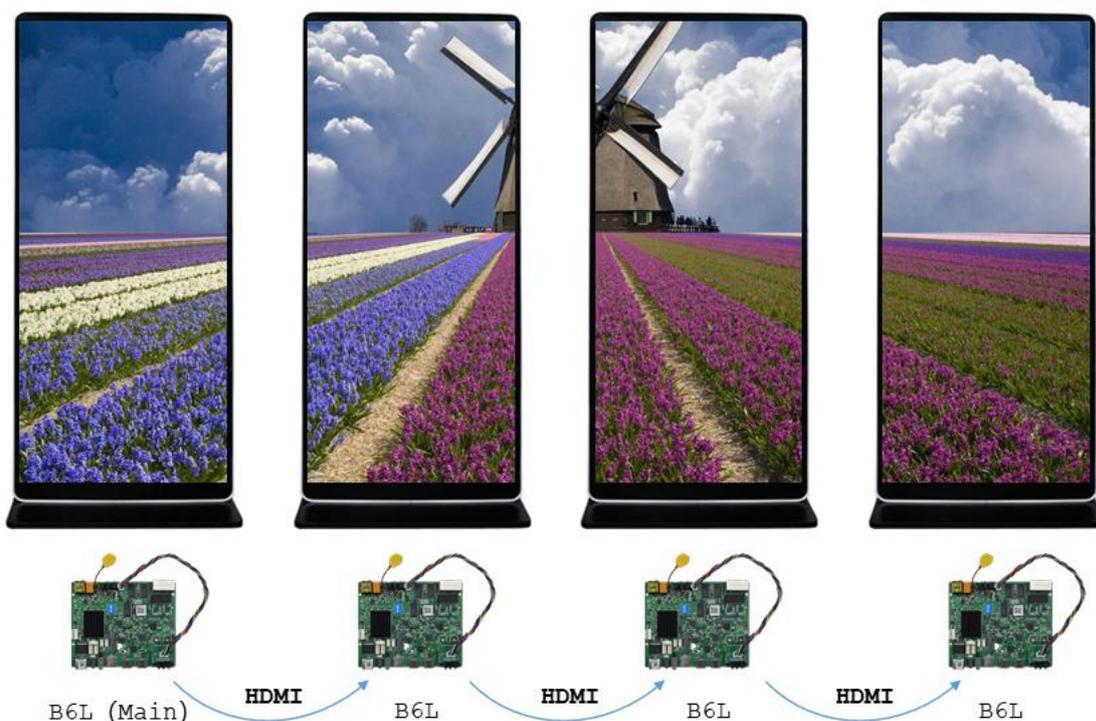
MPEG-4	MPEG-4	48×48 pixels to 1920×1088 pixels	30fps	38.4Mbps	AVI、MKV、MP4、MOV、3GP	Not Support MS、MPEG4 v1/v2/v3、GMC
H.264/AVC	H.264	48×48 pixels to 4096×2304 pixels	2304P@60fps	80Mbps	AVI、MKV、MP4、MOV、3GP、TS、FLV	Support Field Coding、MBAFF
MVC	H.264 MVC	48×48 pixels to 4096×2304 pixels	2304P@60fps	100Mbps	MKV 、 TS	Only Support Stereo High Profile
H.265/HEVC	H.265/HEVC	64×64 pixels to 4096×2304 pixels	2304P@60fps	100Mbps	MKV 、 MP4、MOV 、 TS	Support Main Profile、 Tile & Slice
GOOGLE VP8	VP8	48×48 pixels to 1920×1088 pixels	30fps	38.4Mbps	WEBM 、 MKV	NA
GOOGLE VP9	VP9	64×64 pixels to 4096×2304 pixels	60fps	80Mbps	WEBM 、 MKV	NA
H.263	H.263	SQCIF(128×96) QCIF(176×144) CIF(352×288) 4CIF(704×576)	30fps	38.4Mbps	3GP、MOV、MP4	不支持 H.263+
VC-1	VC-1	48×48 pixels to 1920×1088 pixels	30fps	45Mbps	WMV、ASF、TS、MKV、AVI	NA
MOTION JPEG	MJPEG	48×48 pixels to 1920×1088 pixels	60fps	60Mbps	AVI	NA

6. Poster Screen Application

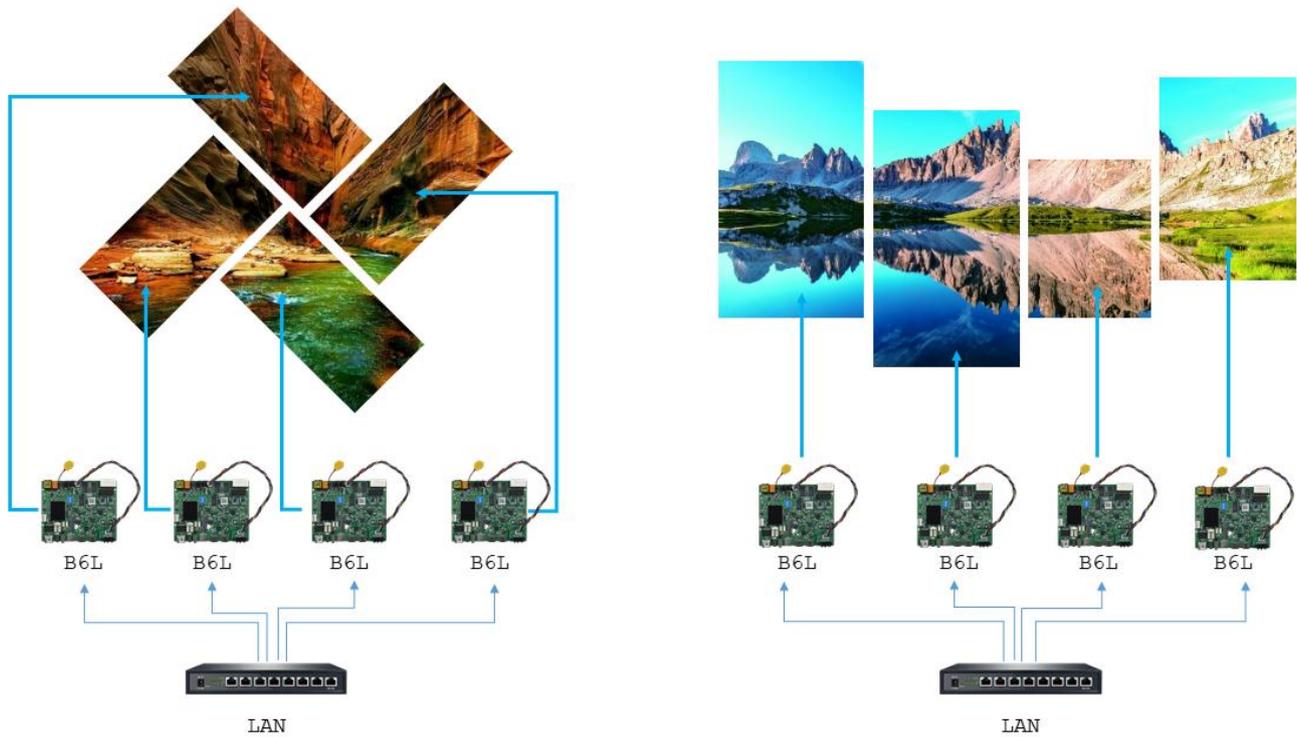
1. **Display independently**: Each display screen is independent and plays independently without interfering with each other.



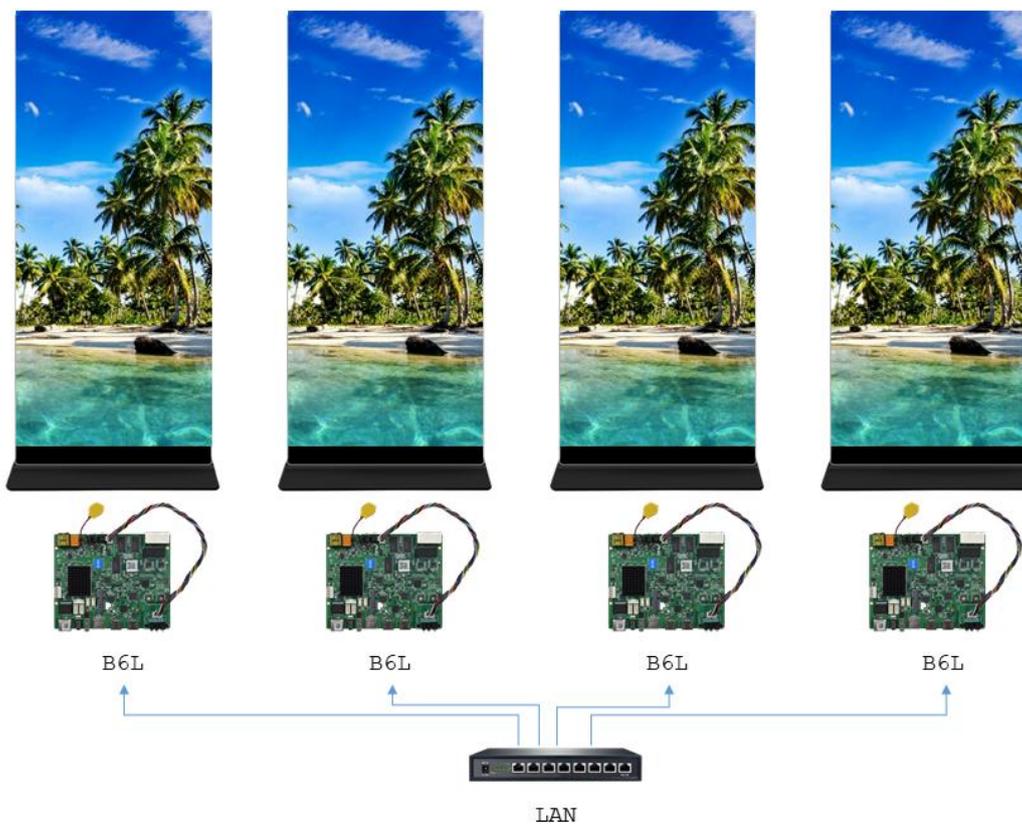
2. **Spliced display**: With HDMI high-definition cable connected to put the contents of multiple display screens into a whole picture.



3. **Creative display:** supports 360° free splicing of multiple displays with different resolutions in any direction.

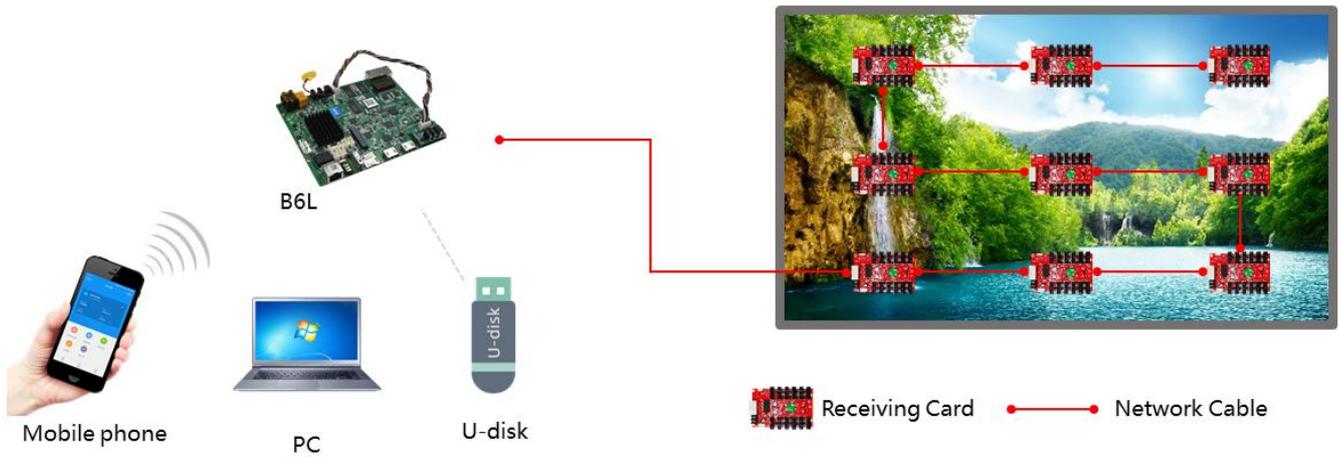


4. **Multi-screen synchronization display :** Multiple independent displays synchronously display the same image at the same time.

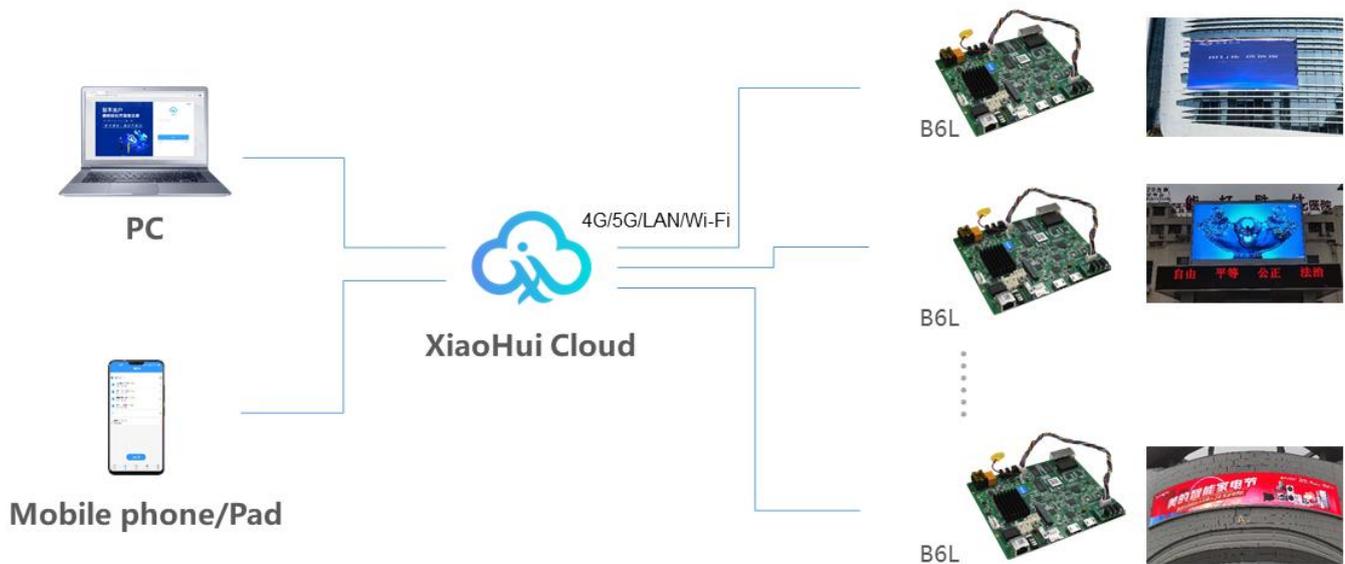


7. Communication Methods

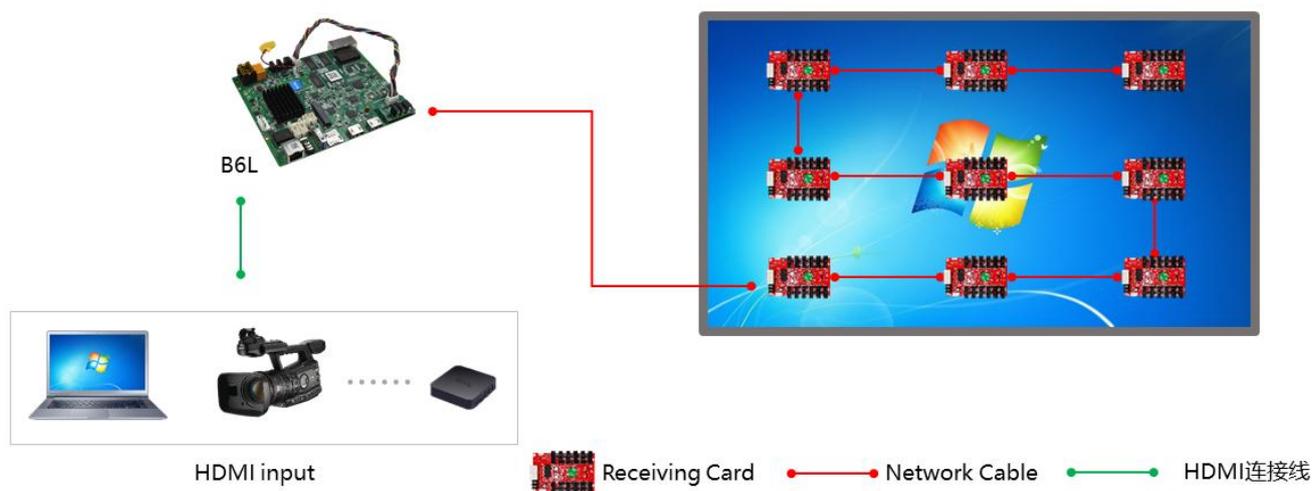
1. Stand-alone control, supports Wi-Fi, network port direct connection, and USB interface for communication.



2. Cluster control, support Internet remote control.



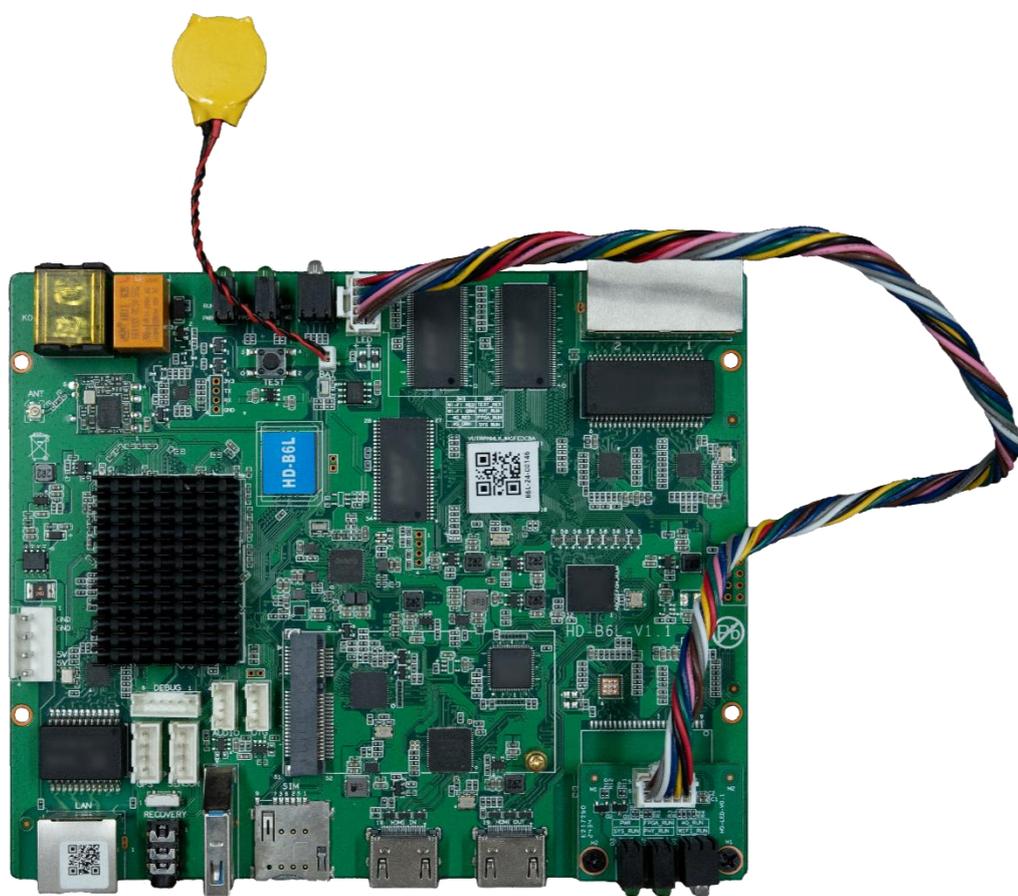
3. Synchronous control, synchronous playback via HDMI signal input.



8. System Supporting Software

Name	Type	Description
HDPlayer	PC	Local display screen management system, used for configuring, program editing, program publishing, etc.
Xiaohui Cloud	Web	Cloud display information release system, log in through the browser, realize LED display remote cluster management and information release functions
LEDArt	Mobile APP	Supports Android, IOS, and Harmony platforms to realize the control of LED display screens and wireless program publishing.

9. Attachment: Product Appearance



Declaration:

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