MAGNIMAGE

LED-M36E
Receiving Card

Specification

Version V1.1

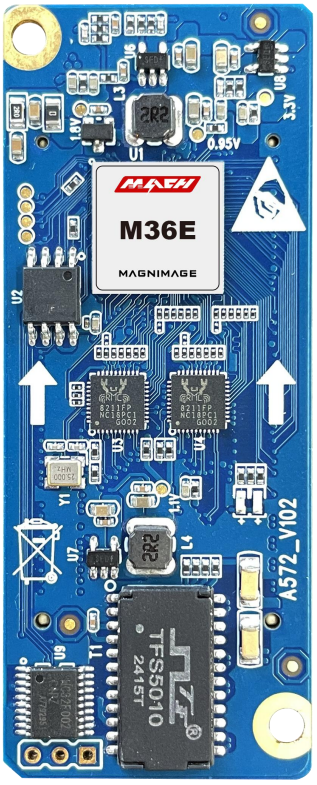
Revision History

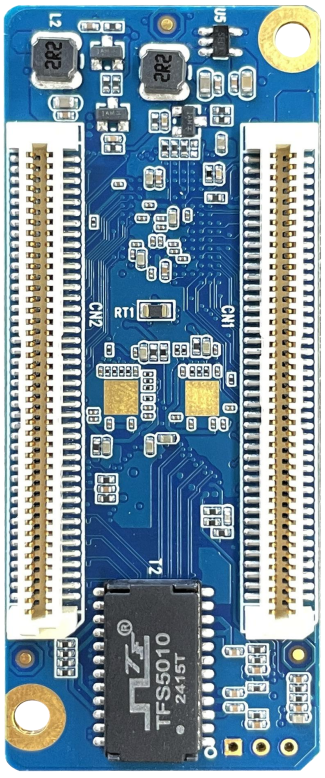
No.	Summary of Revision Content	Date	Version
1	First Release	2024/8/5	V1.0
2	Change the input voltage	2024/10/22	V1.1
3			
4			
5			
6			
7			
8			
9			
10			
11			

LED-M36E Receiving card

Product Description

The LED-M36E is a fine-pitch receiving card introduced by MAGNIMAGE. It features high-precision interfaces and has a maximum capacity of 192k (384*512) pixels per card. It supports up to 32 groups of RGB parallel data and 96 groups of RGB serial data. Additionally, it supports up to 64 scans and offers various advanced features including point-by-point brightness correction, fast light and dark line repair, non-upgradable dead card prevention, customizable RGB gamma adjustment, module flash management, smart module support, automatic module calibration, color restoration, contour smoothing (18bit+), HDR10, HLG, and 3D display capabilities. When used with MH series sending devices in MH mode, a single network port can load up tp 2.2 million (2048*1080) pixels.





Payload Capacity

Data signal	Maximum Load (Pixels)	Supported Scan Lines
32 groups of RGB parallel data and 96 groups of RGB serial data	192K	1-64 scans

Improved Display Performance

Color Restoration	Utilizing a color analyzer, the LED's original color space is measured and then converted to various standard color spaces or user-defined ones, eliminating color deviations between the playback source and the LED, resulting in a display that closely resembles reality.
Contour Smoothing (18bit+)	Effectively addresses the issue of grayscale loss on the display screen, particularly in low brightness conditions, enhancing the improvement of dark details in images and thus elevating the quality of LED displays.
RGB Customizable RGB Gamma Adjustment	Independently adjusts the gamma of red, green, and blue, effectively addressing issues such as unevenness and color deviation in low gray levels of LEDs.

Fast Bright and Dark Line Repair	Improves the bright and dark lines caused by uneven installation between modules or cabinets, enhancing overall display uniformity.。
Brightness Correction	With the assistance of calibration software, performs brightness correction on each LED pixel individually, effectively eliminating color deviations to achieve highly consistent displays and improve display quality.s
3D Display	Achieves LED 3D display when combined with sending devices that support 3D functionality.
Rotate by multiples of 90 degrees"	The display supports rotation in increments of 90 degrees.
Mirror display	Horizontal or vertical mirroring.

Enhanced Portability of Operation

Communication detection	The system assesses the communication quality between the network ports of the receiving cards. In tandem with the display on the cabinet and the flickering of indicator lights, it aids users in swiftly pinpointing the location of potential issues.
Mapping	Upon activating the intelligent numbering feature within the CLINK software, the cabinet will display the receiving card's identification number and network port information, thereby facilitating a clear understanding of the receiving card's location and wiring configuration.

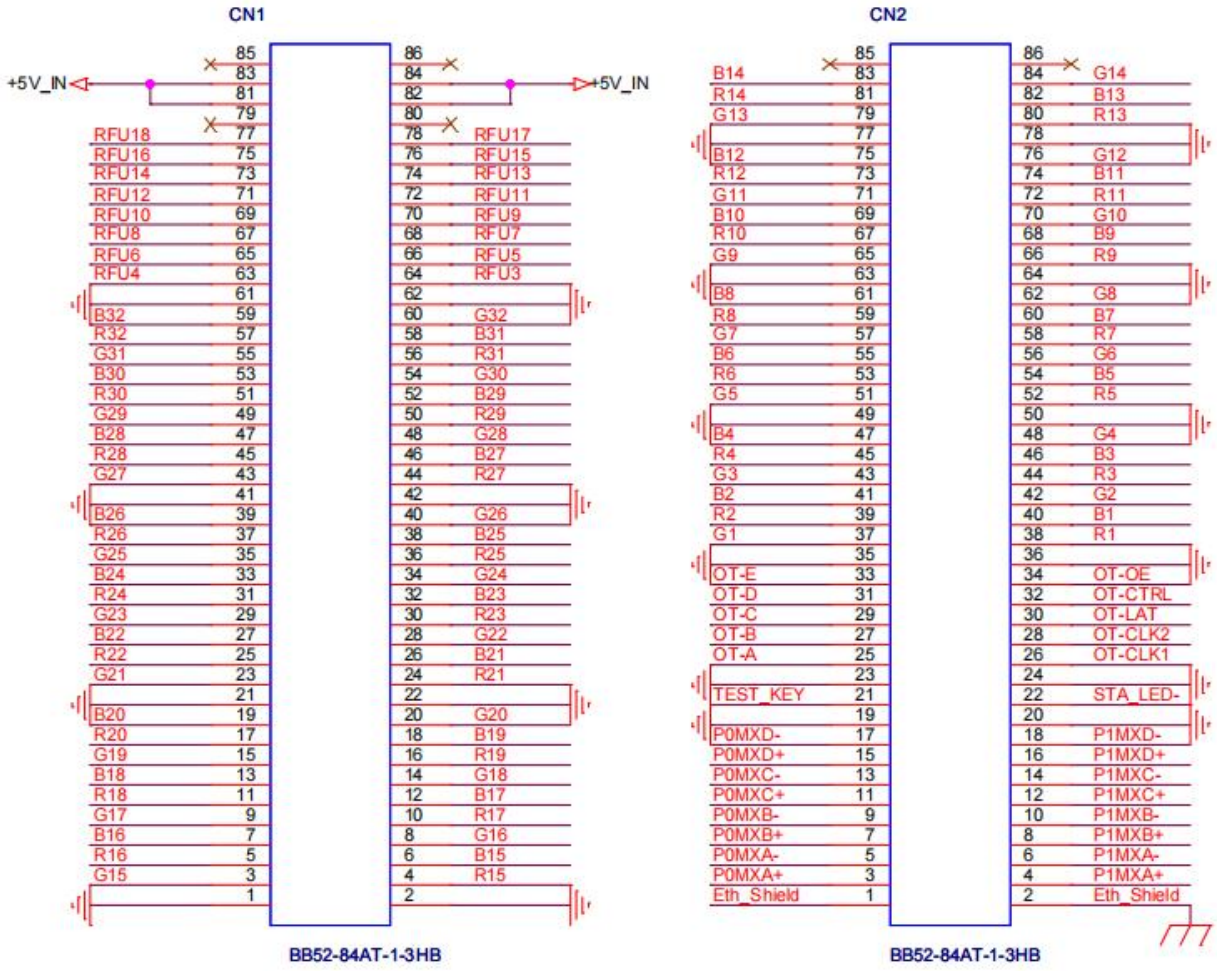
Upgrade-free	The factory firmware is compatible with conventional and the vast majority of dual-latch and PWM chips.
parameter readback	It supports the parameter read-back function for the configuration of the receiving card.
Pre-stored Image	The display image shown on the LED when there is no input signal or when the network cable is disconnected.。
Data interface Customizable	In conjunction with Clink software, it is possible to monitor and edit the output data of the receiving card.

● Enhanced Stability

Ethernet port loopback backup	The network port is non-directional and can be used arbitrarily, supporting hot backup for primary and secondary network cables.
Firmware readback	The receiver card firmware program supports factory reset and read-back functions to prevent issues such as dead cards after upgrades.
Error Rate Detection	Monitors the communication quality between the network ports of the receiving card, records error
Temperature and Voltage Monitoring	Detects the temperature and voltage of the receiving card itself.
Parameter backup	The configuration file can be saved to the factory area of the receiving card.

Output interface definition

Definition of 32 sets of parallel data interfaces.



CN1 Definition:

Instructions for use	Definition	pin	Pin	Definition	Instructions for use
3.3V-5.0V	VCC	83	84	VCC	3.3V-5.0V

	VCC	81	82	VCC	
	NC	79	80	NC	
Reserved	RFU18	77	78	RFU17	Reserved
	RFU16	75	76	RFU15	
	RFU14	73	74	RFU13	
	RFU12	71	72	RFU11	
	RFU10	69	70	RFU9	
	RFU8	67	68	RFU7	
	RFU6	65	66	RFU5	
	RFU4	63	64	RFU3	
Grounding	GND	61	62	GND	Grounding
Serial data	B32	59	60	G32	Serial data
	R32	57	58	B31	
	G31	55	56	R31	
	B30	53	54	G30	
	R30	51	52	B29	
	G29	49	50	R29	
	B28	47	48	G28	
	R28	45	46	B27	
	G27	43	44	R27	
Grounding	GND	41	42	GND	Grounding
Serial data	B26	39	40	G26	Serial data
	G25	37	38	B23	
	B24	35	36	R23	

	G23	33	34	G22	
	B22	31	32	B21	
	R22	29	30	R21	
	B22	27	28	G22	
	R22	25	26	B21	
	G21	23	24	R21	
Grounding	GND	21	22	GND	Grounding
Parallel data	B20	19	20	G20	Parallel data
	R20	17	18	B19	
	G19	15	16	R19	
	B18	13	14	G18	
	R18	11	12	B17	
	G17	9	10	R17	
	B16	7	8	G16	
	R16	5	6	B15	
	G15	3	4	R15	
Grounding	GND	1	2	GND	Grounding

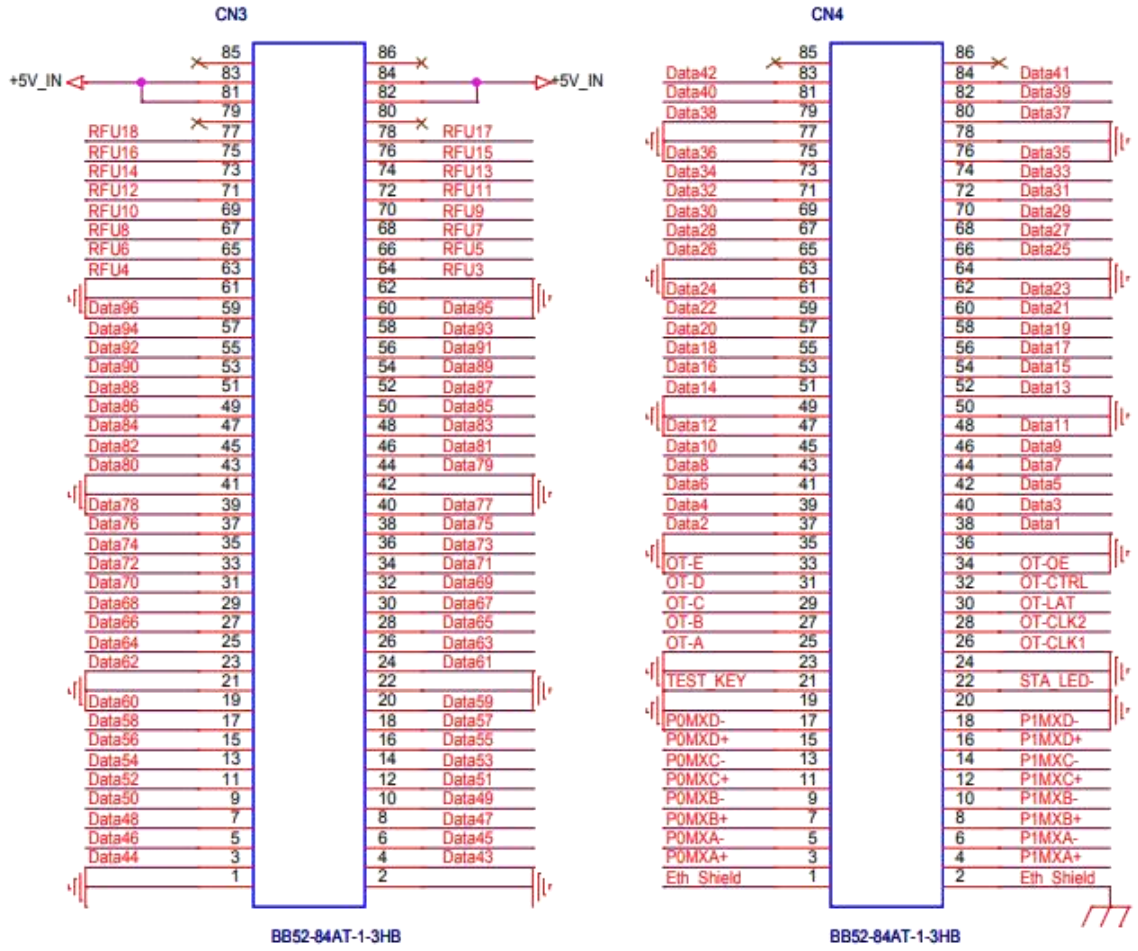
CN2 Definition:

Instructions for use	Definition	pin	pin	Definition	Instructions for use
Parallel data	B14	83	84	G14	Parallel data
	R14	81	82	B13	

	G13	79	80	R13	
Grounding	GND	77	78	GND	Grounding
Parallel data	B12	75	76	G12	Parallel data
	R12	73	74	B11	
	G11	71	72	R11	
	B10	69	70	G10	
	R10	67	68	B9	
	G9	65	66	R9	
Grounding	GND	63	64	GND	Grounding
Serial data	B8	61	62	G8	Serial data
	R8	59	60	B7	
	G7	57	58	R7	
	B6	55	56	G6	
	R6	53	54	B5	
	G5	51	52	R5	
Grounding	GND	49	50	GND	Grounding
Serial data	B4	47	48	G4	Serial data
	R4	45	46	B3	
	G3	43	44	R3	
	B2	41	42	G2	
	R2	39	40	B1	
	G1	37	38	R1	
Case Ground	GND	35	36	GND	Case Ground
Line decoding	OT-E	33	34	OT-OE	Display enable

signal	OT-D	31	32	OT-CTRL	control signal
	OT-C	29	30	OT-LAT	Latch signal
	OT-B	27	28	OT-DCLK 2	Shift clock
	OT-A	25	26	OT-DCLK 1	Shift clock
Grounding	GND	23	24	GND	Grounding
Test button	TEST_KEY	21	22	STA_LED	Running indicator light
Grounding	GND	19	20	GND	Grounding
Gigabit Ethernet port	POMXD-	17	18	P1MXD-	Gigabit Ethernet port
	POMXD+	15	16	P1MXD+	
	POMXC-	13	14	P1MXD-	
	POMXC+	11	12	P1MXD+	
	POMXB-	9	10	P1MXD-	
	POMXB+	7	8	P1MXD+	
	POMXA-	5	6	P1MXD-	
	POMXA+	3	4	P1MXD+	
Case ground	Eth_Sheild	1	2	Eth_Sheild	Case ground

Definition of 96 sets of serial data in interfaces



CN3 Definition:

Instructions for use	Definition	Pin	pin	Definition	Instructions for use
3.3V-5.0V	VCC	83	84	VCC	3.3V-5.0V
	VCC	81	82	VCC	
	NC	79	80	NC	
Reserved	RFU18	77	78	RFU17	Reserved
	RFU16	75	76	RFU15	
	RFU14	73	74	RFU13	
	RFU12	71	72	RFU11	
	RFU10	69	70	RFU9	
	RFU8	67	68	RFU7	
	RFU6	65	66	RFU5	
	RFU4	63	64	RFU3	
Grounding	GND	61	62	GND	Grounding
Serial data	Data96	59	60	Data95	Serial data
	Data94	57	58	Data93	
	Data92	55	56	Data91	
	Data90	53	54	Data89	
	Data88	51	52	Data87	
	Data86	49	50	Data85	
	Data84	47	48	Data83	
	Data82	45	46	Data81	
	Data80	43	44	Data79	

Grounding	GND	41	42	GND	Grounding
Serial data	Data78	39	40	Data77	Serial data
	Data76	37	38	Data75	
	Data74	35	36	Data73	
	Data72	33	34	Data71	
	Data70	31	32	Data69	
	Data68	29	30	Data67	
	Data66	27	28	Data65	
	Data64	25	26	Data63	
	Data62	23	24	Data61	
Grounding	GND	21	22	GND	Grounding
Serial data	Data60	19	20	Data59	Serial data
	Data58	17	18	Data57	
	Data56	15	16	Data55	
	Data54	13	14	Data53	
	Data52	11	12	Data51	
	Data50	9	10	Data49	
	Data48	7	8	Data47	
	Data46	5	6	Data45	
	Data44	3	4	Data43	
Grounding	GND	1	2	GND	Grounding

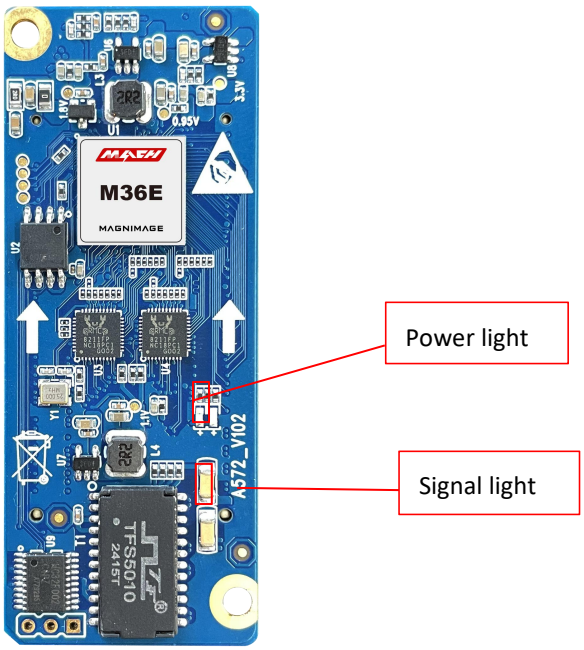
CN4 Definition:

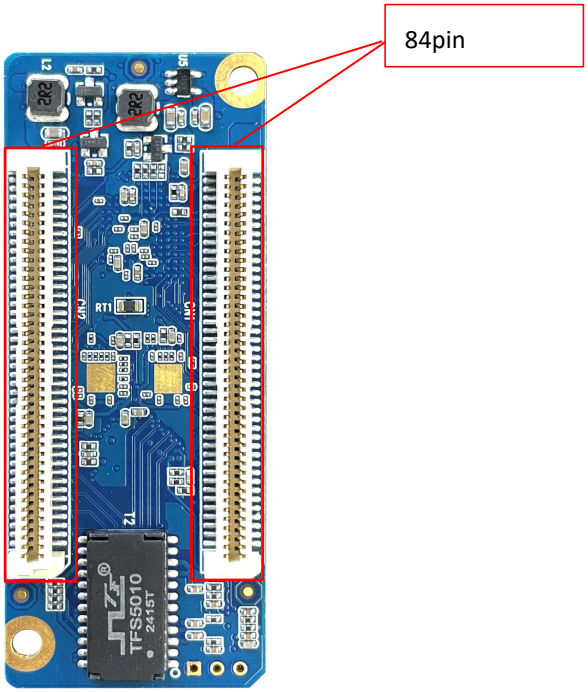
Instructions for use	Definition	pin	pin	Definition	Instructions for use
Serial data	Data42	83	84	Data41	Serial data
	Data40	81	82	Data39	
	Data38	79	80	Data37	
Grounding	GND	77	78	GND	v
Serial data	Data36	75	76	Data35	Serial data
	Data34	73	74	Data33	
	Data32	71	72	Data31	
	Data30	69	70	Data29	
	Data28	67	68	Data27	
	Data26	65	66	Data25	
Grounding	GND	63	64	GND	Grounding
Serial data	Data24	61	62	Data23	Serial data
	Data22	59	60	Data21	
	Data20	57	58	Data19	
	Data18	55	56	Data17	
	Data16	53	54	Data15	
	Data14	51	52	Data13	
Grounding	GND	49	50	GND	Grounding
Serial data	Data12	47	48	Data11	Serial data
	Data10	45	46	Data9	
	Data8	43	44	Data7	

	Data6	41	42	Data5	
	Data4	39	40	Data3	
	Data2	37	38	Data1	
Grounding	GND	35	36	GND	Grounding
Line decoding signal	E	33	34	OT-OE	Display enable
	D	31	32	OT-CTRL	Control signal
	C	29	30	OT-LAT	Latch signal
	B	27	28	OT-DCLK2	Shift lock
	A	25	26	OT-DCLK1	Shift lock
Grounding	GND	23	24	GND	Grounding
Test button	TEST_KEY	21	22	STA_LED	Running indicator light
Grounding	GND	19	20	GND	Grounding
Gigabit Ethernet port	POMXD-	17	18	P1MXD-	Gigabit Ethernet port
	POMXD+	15	16	P1MXD+	
	POMXC-	13	14	P1MXD-	
	POMXC+	11	12	P1MXD+	
	POMXB-	9	10	P1MXD-	
	POMXB+	7	8	P1MXD+	
	POMXA-	5	6	P1MXD-	
	POMXA+	3	4	P1MXD+	
Case ground	Eth_Sheild	1	2	Eth_Sheild	Case ground

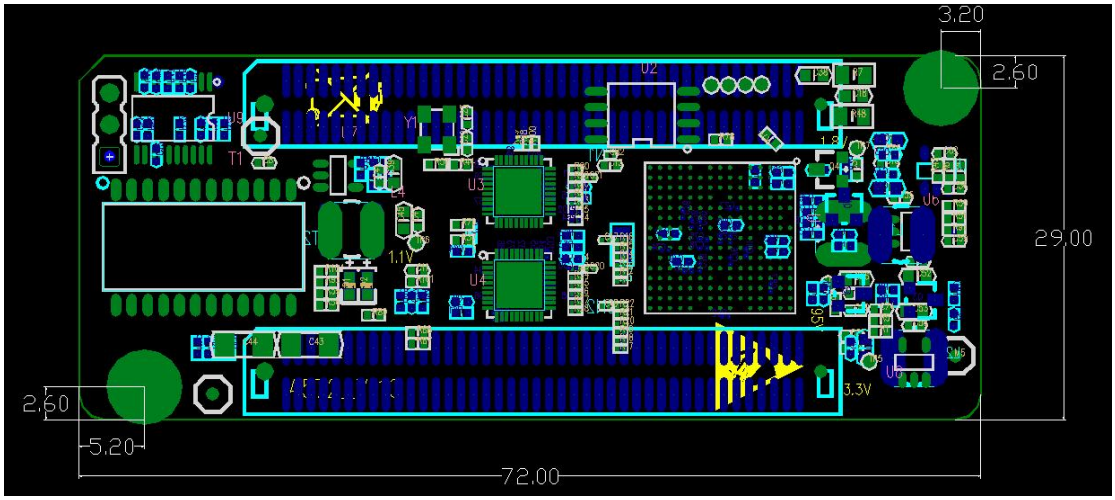
Indicator light description

pilot lamp	position	status	instruction
Status indicator light (Green)	D15	Uniform slow flashing	The receiving card is working properly, the network cable connection is normal, and there is no video signal
		Uniform Flash	The receiving card is working properly, the network cable is connected properly, and
		Constant extinction	No gigabit network signal
		Flash twice between	The receiving card is working properly, the network cable circuit is connected, and there is a video signal input.
Status indicator light(red)	D14	Light	Power supply is normal





- **Product dimensions and appearance unit(mm) tolerance (± 0.3)**



Working Parameters

Electrical parameters	INPUT VOLTAGE	DC3.8-5.5V
	Rated current	0.6A
	Rated power	3W
Working environment	Working temperature	-20℃ - 70℃
	Working humidity	10%RH-90%RH
Saving environment	Temperature	-25℃～125℃
Size	72mmX29mm	
Weight	18.3g	

Note

- Must be installed by professional staff
- Must be anti static
- Attention of water and dust

24h 400-6868-203

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