

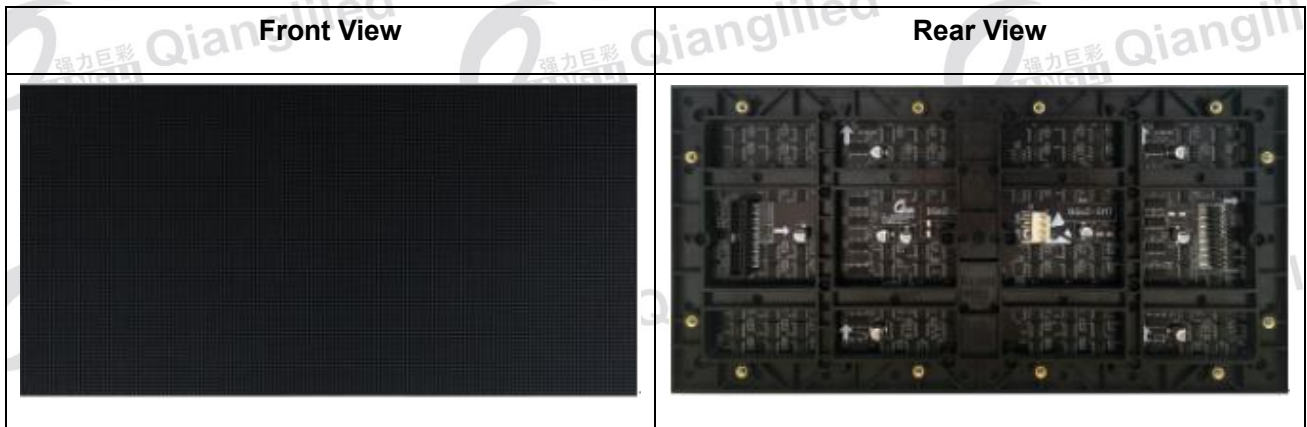
# Product Specification

**Product:** Indoor Full Color P1.6 1/32 Scan Module

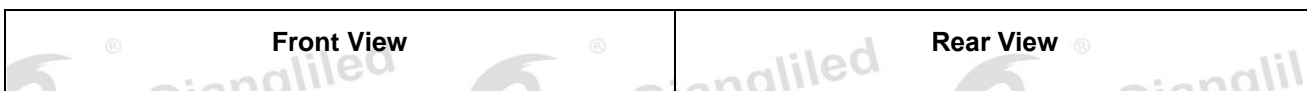
**Item No.:** Q1.6-32S-Pro-1010

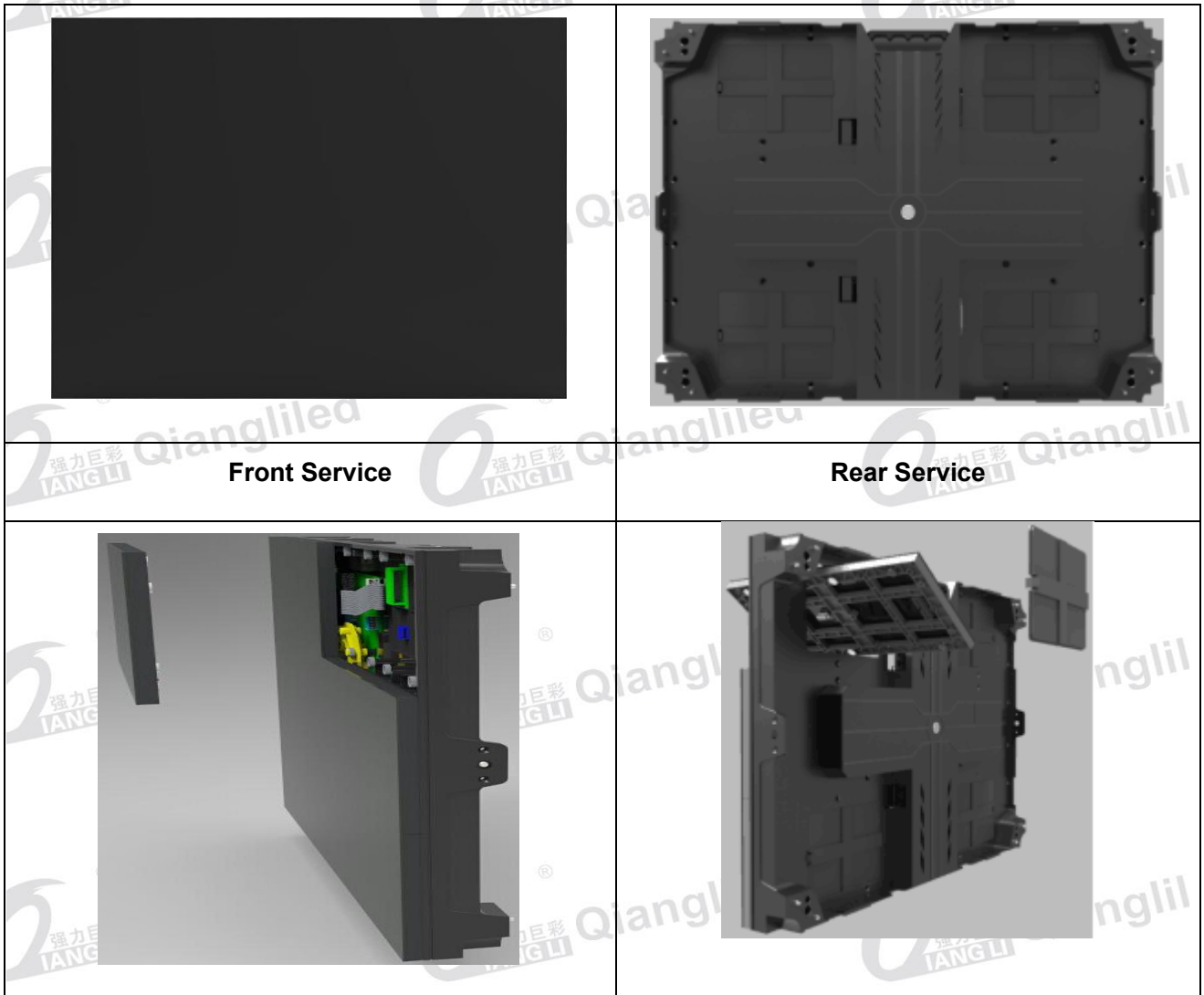
**Version:** 2.1

## 1. Module Picture



## 2. Suggestion Cabinet -(640\*480 MGLED )





### 3. Technical Specification

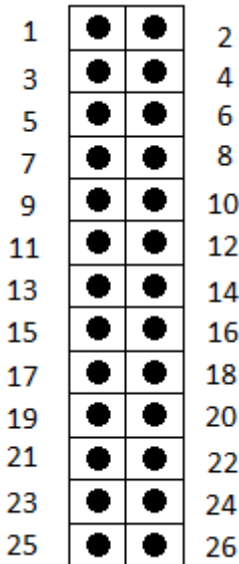
Module	Pixel Pitch	1.666 mm	Pixel Density	360 000 Dots/m <sup>2</sup>
	Configuration	1R1G1B	LED Lamp	SMD 1010
	Size (Width*Height*Depth)	320*160*14.5mm	Weight	0.47kg±0.01kg
	Structure	Lamp & IC in same PCB	Resolution	192*96=18432 Dots

	Input Voltage (DC)	4.5±0.1V	Maximum Current	≤6.6 A
	Power Consumption	≤30 W	Driving Method	Constant Current 1/32 Scan
	40A Power Supply for	3-4 pcs module	80A Power Supply for	8-10 pcs module
	40A PFC Power Supply for	4-5 pcs module		
Cabinet (MGLED)	Cabinet Size (Width*Height*Thickness)		640*480*84.5mm (with module, cabinet, connecting plate)	
	Cabinet Pixel Density		384*288=110 592 Dots	
	Cabinet Area		0.307 m <sup>2</sup>	
	Cabinet Weight		7.67kg ±0.05 kg	
	Cabinet Max Power Consumption		≤178W	
	Average Power Consumption (1/3 Max)		≤59W	
	Distribution Power (Power Supply Capacity 78%)		≤228W	
Screen	Brightness	≥600cd/m <sup>2</sup>	Brightness Uniformity	>0.95
	Horizontal Viewing Angle	160 ±10 degree	Vertical Viewing Angle	160 ±10 degree
	Best Viewing Distance	≥1.7 m	Black Spot Ratio	< 0.0003
	Max Power Consumption	≤580 W/m <sup>2</sup>	Operation Environment	Indoor
	Grayscale	14-16bits (RGB each)	Display Color	4398 Billion
	Frame Frequency	≥60 frame/sec	Refresh Frequency	≥3840 Hz
	Control Mode	Computer control, Point-to-point	Brightness Adjustment	256-grade manual / automatic
	Life Span	≥100,000 hours	Average Failure Free Time	≥10,000 hours
	Attenuation	≤15%	Operating Humidity	10%-65%RH

	(3 years later)		
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### 3. Signal Pin

#### HUB320



Pin	Signal	Function	Pin	Signal	Function
1	R1	Red data signal	2	G1	Green data signal
3	B1	Blue data signal	4	GND	GND
5	R2	Red data signal	6	G2	Green data signal
7	B2	Blue data signal	8	GND	GND
9	R3	Red data signal	10	G3	Green data signal
11	B3	Blue data signal	12	GND	GND
13	R4	Red data signal	14	G4	Green data signal
15	B4	Blue data signal	16	GND	GND
17	A	Line power control signal	18	B	Line power control signal
19	C	Line power control signal	20	D	Line power control signal
21	E	Line power control signal	22	GND	GND
23	CLK	Clock signal	24	LAT	Data locking signal
25	OE	Enable signal	26	GND	GND

## 4. Precautions

Item	Description
Temperature requirement	<p>Storage temperature range: -10 ° C - 30 ° C, over 30 ° C needs to do cooling treatment.</p> <p>Operating temperature range: -20 ° C -40 ° C, other temperature range, need to install temperature control equipment.</p> <p>Lamp surface temperature (working time): ≤60°C, temperature control equipment is required to be installed when temperature exceeding the standard</p>
Humidity requirement	<p>Storage humidity range: 10% RH-60% RH, humidity over 60% RH requires dehumidification treatment.</p> <p>Operating humidity range: 10% RH-65% RH, If the humidity exceeds the standard, it must be dehumidified before it can be used normally.</p>
Environmental Precautions	<p>If the product has been stored for more than one month, need to do 6 hours of aging test before it can be used.</p> <p>The aging mode is: 10%Full brightness setting-1H, 30%Full brightness setting-1H, 60%Full brightness setting-2H, 80%Full brightness setting-1H, 100%Full brightness setting-1H (increase brightness gradually in aging test)</p>
Dust-proof requirements	<p>Indoor products have no protection level or IP30, and the display should not be exposed to heavy dusty environments, such as decoration and renovation. Special protection is required to protect the display. Installing LED display screen during decoration is strictly prohibited.</p>
Avoiding corrosive gas	<p>Corrosive gas contains salt or acid gas in the environment, may cause corrosion of electronic components, crystallization, leakage and so on.</p>
Avoiding electromagnetic radiation	<p>The display screen should not be installed in an environment where electromagnetic radiation and radio</p>

		frequency radiation exceed the field strength of 5V/m interference source.
	Avoid strong light	Strong light will affect the display effect and life span of screen. It should be install in the direction where there is shorter direct sun shining.
	Keep away from water	Indoor products have low level of protection, water can make the module short circuit, and leads to circuit device damage, so it is necessary to keep away from the water source.
	Electrostatic hazard, Prevent lightning strikes	The metal components of the screen, the shell of power supply and the cabinet should be grounded well, and the grounding resistance should be less than 10Ω. Prevent electrostatic damage to electronic devices in humid environment, while avoiding electric leakage to harm human body.
	Personal injury	The angle and height of the display installation should be appropriate, and the sharp corners should be packaged to prevent damage to the human body from the tough outer casing.
	Special environment	Display screen for special environment (1, seaside, swimming pool, bathing room, basement, tunnel; 2, chemical environment, vulcanization environment, halogen environment; 3, dust, dusty environment; 4, strong ultraviolet environment; 5, the environment of strong electromagnetic fields; 6, less than -20 degrees, higher than +40 degrees of the environment), The review process is required before placing the order.
Operational precautions	Electro-static Protection	The worker must wear an anti-electrostatic wrist strap and anti- electrostatic glove. Various tools must be strictly grounded during assembly
	Product batch control	Different batches of products cannot be installed in the same screen, otherwise there will be color blocks (mosaic) on the display.

	Product wiring	The module cannot be directly connected to 220V, and the module positive and negative poles connection must be right.
	Disassembly and transportation	Do not throw, push, squeeze or press the module to avoid damaging the display screen.
	Disassembly and maintenance liquid protection	Sweat or other liquid cannot be dripped on the display screen during disassembly and assembly operation. If it is dripped, then use alcohol to clean the product, to prevent the liquid from corroding the product.
	Installation Torque Control	In connection with power supply, it is necessary to ensure tightening of terminal joint screw to prevent joint position from loosening, resulting in wire burning or product damage caused by high contact resistance. Torque of M4 screw is 6.0-8.0 Kgf.cm, and that of M3 screw is 4.0-6.0 Kgf.cm.
	Prohibited work with electricity	It is forbidden to assemble the LED module when the power is on. The LED module should be assembled with the main power input disconnected. It is not allowed to insert the power wire and signal cable when there are with electricity.
	Prohibited touch with electricity	It is forbidden for people to touch the LED display screen when the LED screen is in usage, so as to avoid electrostatic breakdown of LED lights and chips and other components caused by human body friction.
	Environmental inspection	Temperature and humidity meters should be equipped on the installation site to monitor the surrounding environment of the screen in time. After heavy rain, it is necessary to check whether there are any problems such as dampness, water droplets and over humidity in the screen in time.



Requirements for moisture proof	Fixed Installation Display Screen	<p>Within 10% ~ 65% RH relative humidity range, it is recommended to turn on the display 1 time per day, and work at least 4 hours to remove moisture on the display.</p>
		<p>When the relative humidity of the environment is over 65% RH, dehumidification treatment should be carried out for the operating environment. It is suggested to use the screen for more than 8H per day in this environment, and doors and windows should be closed at night to prevent the display from dampness.</p>
		<p>When the display screen is not used for a long time, it is necessary to preheat and dehumidify the whole screen for 8H before using, so as to avoid damaging the lamp tube after dampness. The dehumidification methods are: full brightness set 10%- 1H, full brightness set 30% 2H, full brightness set 60% -2H, full brightness set 80% -2H, full brightness set 100% -1H (brightness gradually increasing aging).</p>
	Rental screen display:	<p>After usage , immediately put into flight case and seal the flight case;</p>
		<p>In each flight case, please put a desiccant or hygroscopic bag of not less than 50g.</p>
		<p>In the range of 10% to 65% RH relative humidity, the screen should be lighted on more than 2H every half month; More than 65% RH and in the resurgence weather, the screen must be lighted on more than 2H every week. After finished the display, need to put it back to flight case, sealed and stored. (please check whether there is any failure of the desiccant or hygroscopic bag in the aviation, it needs to be replaced every 2 months, and more desiccant can increase</p>

		<p>the dryness inside the box.)</p> <p>When the display screen is not in use for a long time, it is necessary to reduce the brightness of the whole screen by 50% in advance and play it for 12 hours, and preheat it for "dehumidification" 12H to avoid damaging the light tube after the LED screen is damped.</p> <p>While renting, do not touch the display screen with water. If there is any water, make sure that the water on the screen is dried. After 2H, light the display screen 2H, and evaporate the water by lamp and IC heat.</p> <p>It is strictly forbidden to use indoor rental screens as outdoor rental screens, especially in the open air environment.</p>
	<p>Avoid construction work to the installed LED screen</p>	<p>It is strictly forbidden to rebuild after the installation of the LED display screen, so as to prevent the LED display screen from being affected by the impact of high current and dust, such as welding, electric saw and other equipment.</p>