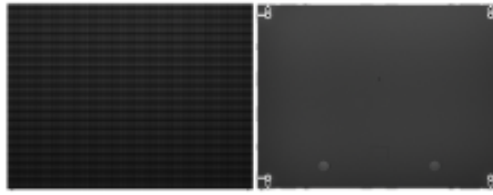# C2.0 (C2.0-4:3) Indoor Full Color LED Video Wall

C2.0-4:3GOB

Description

It has the characteristics of seamless splicing, perfect display, long service lifespan, fast frame changing speed, high refresh rate, good uniformity, wide viewing angle, high grayscale, natural color reproduction, etc. It is widely used in command and dispatch, security monitoring, video conference, studio display, and various conference display occasions.

Feature

*The LED display screen adopts CNC one-piece die-cast aluminum cabinet, and the selected materials meet the standard of "GB/T 15115-2009 Die-cast Aluminum Alloy".

*The LED display screen module adopts a plastic-free bottom shell kit design. The die-cast aluminum cabinet is in direct contact with the PCB circuit board. The edge of the PCB circuit board directly contacts the four sides of the die-cast box to improve the thermal conductivity. Compared with the bottom shell with a plastic kit, it can better solve the color drift problem and ensure that the screen body is accelerated aging and reduced service life due to heat conduction. The product surface temperature rises by ≤5℃ after lighting for 5 minutes under normal video playback, and its temperature rises by ≤10℃ after lighting for 10 minutes.

*The LED display screen unit module and the unit cabinet use industrial-grade precision wireless connectors, which have the ability to fine-tune and correct deviations, and the connection is more stable. The whole screen joint can be finely adjusted in units of modules to avoid the light and dark line effect between modules due to the joints. The signal cable and low-voltage power cable cannot be seen inside the cabinet, and it can be plugged in and out directly with power on.

*The LED display screen adopts a non-contact magnetic suspension front maintenance design, which can remove low-voltage devices such as modules, receiving cards, and power supplies from the front, and has hot-swappable capabilities.

*The bottom of the LED display box adopts a positioning column boss design, which can effectively prevent the module from contacting the ground during installation and transportation, resulting in knocking and falling lights.

*In order to ensure the horizontal angle, vertical angle, and flatness of the screen installed on site and improve the customer's final viewing experience, the LED display screen has a horizontal and vertical detection module inside the LED box. The horizontal and vertical angles can be intuitively corrected on site to ensure the horizontality and verticality of the LED box structure during the project construction.

*The LED display switching power supply has a PFC function, a power factor ≥0.95, a power efficiency ≥91%@25℃, and has overcurrent, short circuit, overvoltage, and undervoltage protection functions.

*LED display color uniformity is within ±0.001Cx,Cy; the relative deviation of the center distance of the LED display pixel is ≤1%; the average fault recovery time (MTTR) of the LED display is ≤2 minutes.

*LED display screen color temperature 100K-20000K continuously adjustable, can be set to cool color, warm color, standard and other multi-level white field adjustment, when the color temperature is 8500K, 100%, 75%, 50%, 25% four-level white field adjustment color temperature error ≤100K.

*LED display screen to prevent metal ion migration, line short circuit phenomenon, PCB FR-4 four-layer board of the same grade or higher material, PCB wire wider, wire spacing and via spacing larger, can better prevent module black screen, display abnormality, lamp bead color, caterpillar and other phenomena, surface immersion gold treatment, board thickness ≥1.6mm, copper thickness ≥1 ounce, TG ≥170℃, PCB board surface with moisture/dust/anti-static/anti-oxidation, mildew resistance level ≤1 level.

*The LED display screen has HUB port signal connection detection, module voltage detection, module temperature detection, real-time detection of the working status of the display screen, and has an automatic fault alarm function and notifies the corresponding technical operation and maintenance personnel by email.

*LED display screen is based on GB/T 5169.16-2017 standard, the test temperature is 650℃, the time is 30 seconds, the sample burning flame or molten material should be extinguished within 30 seconds after the glow wire test, and the burning flame or molten material of the sample should not cause the test paper below to burn when dripping, and the flame retardant level (PCB board, wire, power supply, connector) reaches V-0 level.

*LED display screen meets EMCCLASSB anti-interference ability, and requires stable operation without interference from external radio frequency electromagnetic fields.

*The LED display screen has multiple sets of built-in parameters, which automatically call the corresponding parameters according to the brightness level 0-255. When the brightness level is ≥16, the refresh rate is ≥240Hz, when the brightness level is ≥30, the refresh rate is ≥600Hz, when the brightness level is ≥50, the refresh rate is ≥1920Hz, when the brightness level is ≥60, the refresh rate is ≥2880Hz, and when the brightness level is ≥75, the refresh rate is ≥4200Hz.

*The back of the LED display box has a test button, which can realize four monochrome displays of red, green, blue and white, and scan and display in horizontal and vertical scanning. There is no need to remove the front module of the box and press the button inside the box to perform this test function.

*LED display screen has a single power leakage current ≤0.3mA, which eliminates the risk of leakage current formed by multiple power supplies causing tripping of the upper electric box.

*The LED display has a low blue light mode. You can select 30%, 40%, and 70% in the control software to adjust the blue light output of the display, effectively reducing the damage of blue light radiation to the eyes.

*One box, one card, and one power supply can be directly mounted on the wall, embedded, or floor-mounted.

*The box size adopts a 4:3 ratio design, providing an excellent visual experience and meeting the needs of the mainstream market.

*The box adopts a front-to-back installation method, which can fit the wall at a close distance, effectively saving space and achieving harmonious integration with the surrounding environment.

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Specification

Module parameters	
LED encapsulation	SMD2020 black light(GOB)
Pixel pitch	2.0mm
Resolution	250000 pixels/m²
Lamp beads/IC	Domestic high-quality copper wire/high refresh rate
Pixel configuration	1R1G1B
Module resolution	160*80
Module size (mm)	320*160
Cabinet resolution	320*240
Cabinet size (mm)	640*480*31.5
Cabinet weight	≤5.7Kg/piece
Working voltage	DC+4.2V~+5V
Main parameters	
Best viewing distance	≥6.0m
Horizontal viewing angle	≥175°
Vertical viewing angle	≥175°
Maintenance method	Front maintenance
Control mode	Synchronous control
Drive device	Constant current drive
Refresh rate	≥4200Hz
Frame rate	≥60Hz
Scanning method	40S
Brightness	200-800CD/m²
Grayscale	12/14/16/18bit
Contrast	≥10000:1
Attenuation rate (after working for 3 years)	≤15%
Brightness adjustment method	0-100% adjustment through supporting software; support automatic/manual, support setting brightness timing adjustment
MTBF	≥20000H
Lifespan	≥100000H
Failed rate	≤1/100000 and no continuous failed pixels
Storage temperature	-35℃~+85℃
Working temperature	-20℃~+60℃
Working voltage (AC)	220V±10%/50Hz/60Hz
Average power consumption	≤125W/m² at 800CD/m² (≤95W/m² at 600CD/m²)
Maximum power consumption	≤500W/m² at 800CD/m² (≤380W/m² at 600CD/m²)
Cabinet material	Die-cast aluminum cabinet
Brightness uniformity	≥99%
Protection class	IP5X

Common anode   Product main advantages

itC

4200Hz ultra high refresh rate

Temp. & RH detection

Record the screen running time, record the env. parameters during the operation, etc.

One click to enable low blue light mode

Three optional levels of 30%, 40%, 70% to adjust the display blue light output

Ultra-low leakage

Optimized circuit design to increase insulation material and reduce leakage current

Failed pixels

The module has a built-in AI chip, which can detect the failed pixels of the display, ensuring timely identification of failed pixels problems of the LED display to protect its normal operation

Horizontal module

With horizontal and vertical detection function

Test key

External Test key. Enter the test mode without disassembly

Module encryption

Module built-in AI chip with advanced module encryption technology to ensure module security

Flash memory

Correction factors are stored in the module

Brightness correction

LED screen brightness correction, with balanced consistency, to improve display quality

With PFC power

Highly stable output voltage

Multi-layer multi-parameter structure

Automatically adjust the corresponding parameters based on brightness level changes to achieve the best display effect
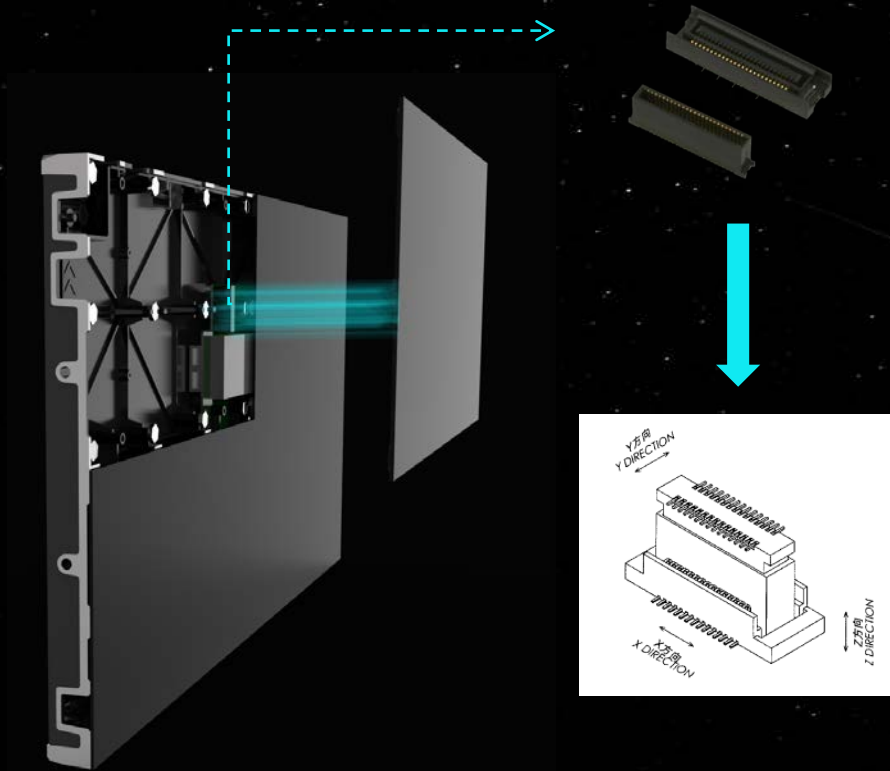
High precision and high level driver chip

Precise control, improve the display effect to make the LED display shine

Wireless connection, quick installation

itc

## High stability
Faster installation

- Precision floating connection, **integrated transmission**, itc private protocol, one interface can achieve power supply, signal transmission

- The connector **contact surface is plated with gold**, which can effectively prevent oxidation and corrosion, thus ensuring the stability and durability of connector contact.

- The internal power supply →HUB board → module are all connected by **wireless connection**, which effectively reduces the risk of failure caused by excessive connected physical points. The use of supporting maintenance function can realize the rapid replacement of modules in seconds
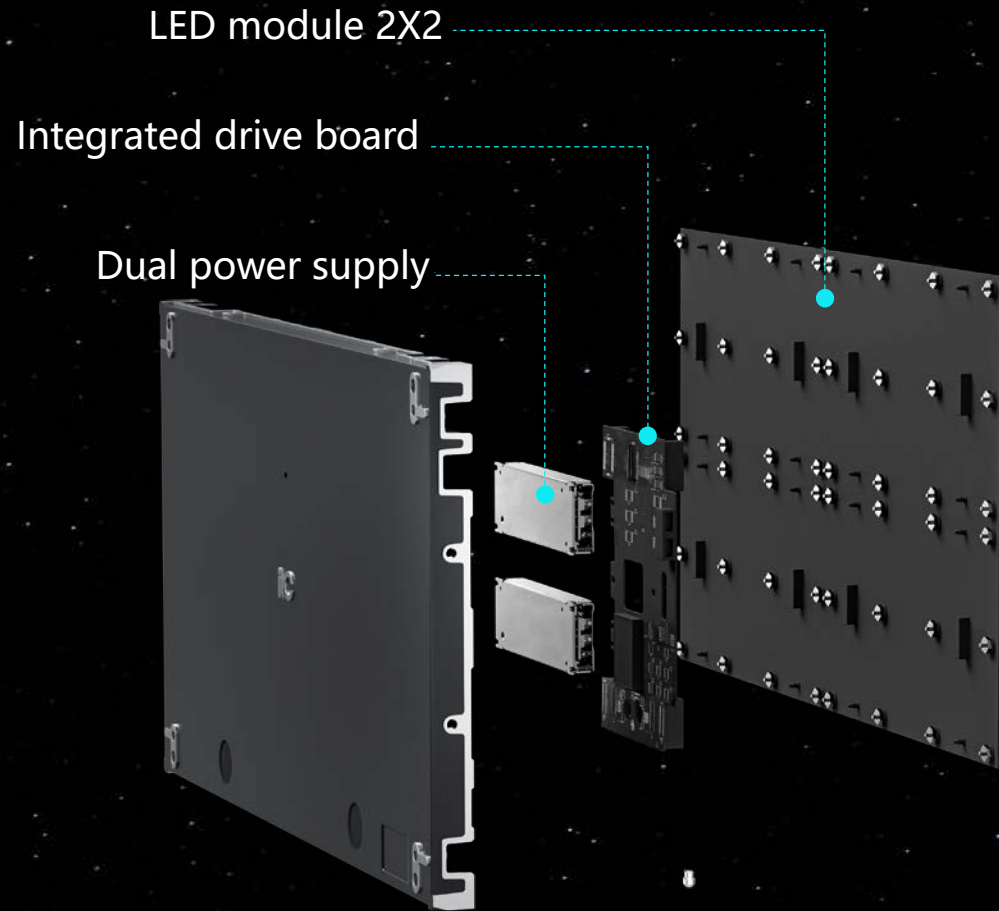
Thin and simple design saves space

> **Wireless connection between boxes**

- With die-casting integrated design, 16:9 box ratio, the box thickness is only **31.5mm**, saving installation space;

- Hidden track, reducing the cable connection between boxes, saving labor and money

31.5mm
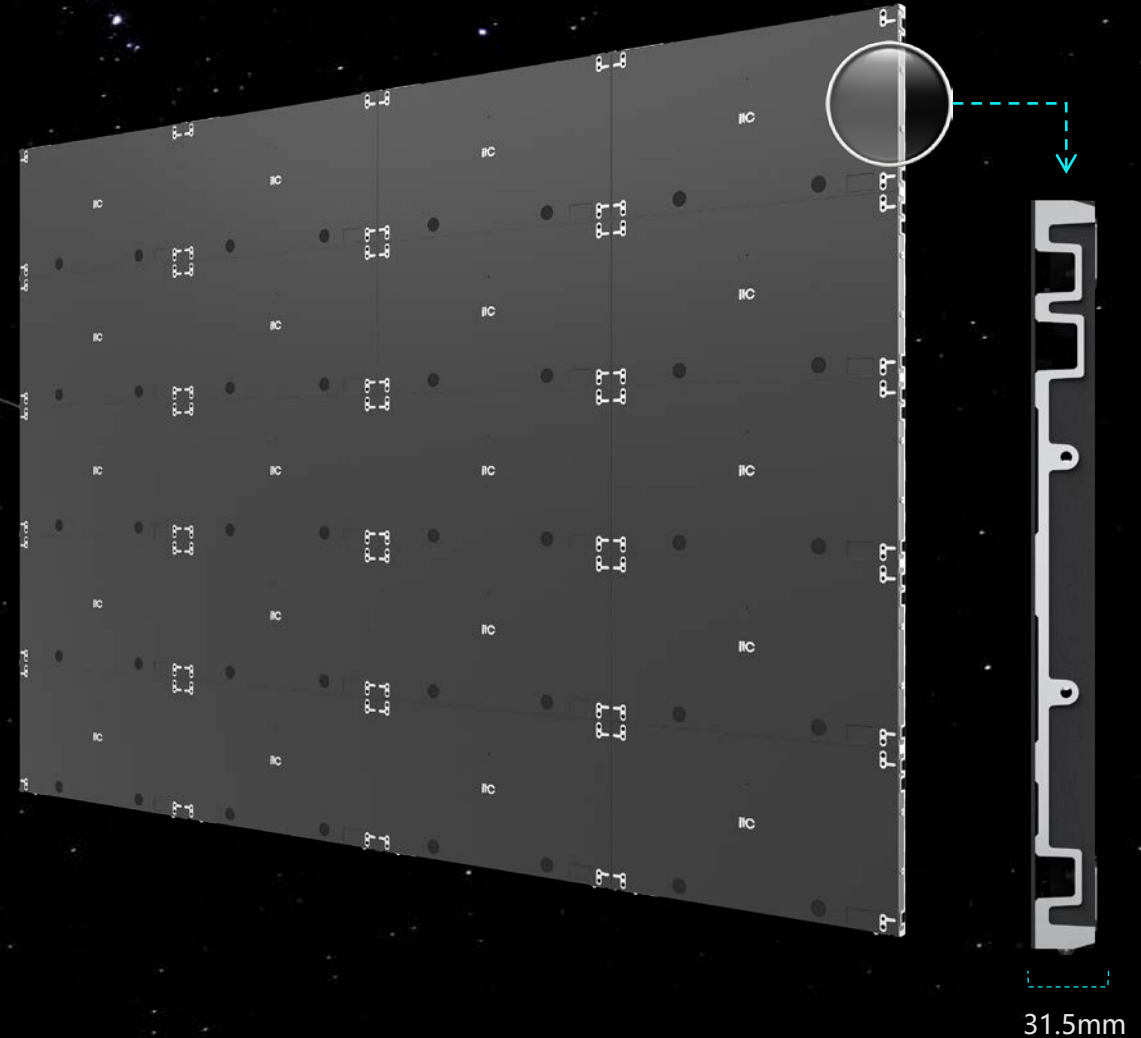
Minimalist structure design

LED module 2X2

Integrated drive board

Dual power supply

Neat and orderly
No need for multiple steps

Simplified connection mode, simpler installation, neat and orderly wiring, solving the problem of numerous wires, reducing security risks

itC

4200Hz

4200Hz Ultra High Refresh Rate

Refresh Vision, Shocking Presentation

The refresh rate can reach 4200Hz , which is ahead of the 3840Hz products on the market. The screen does not flicker, long time viewing without fatigue, smooth and clear images, bring shocking visual enjoyment. High refresh rate LED displays are not only suitable for media fields such as movies, videos , and games, but also for other fields that require high frame rate display and high-precision display, such as professional design , medical consultation, studio halls, etc. The scope of application is wider than conventional displays.

Dynamic contrast

10000 : 1

Restore true vision

Measurement of different brightness levels between the brightest white and the darkest black. The larger the difference range, the greater the contrast. The smaller the difference range, the smaller the contrast.

LED light adopts high-quality black surface-mount technology to increase the brightness of the light while reducing the brightness of the screen when it is black, the contrast ratio is as high as 10000:1

| Bright | Reality | Enhance |

Accurate color
Restore the beauty of color

10bit=1024 11bit=2048

12bit=4096 13bit=8192

14bit=16384 15bit=32768

16bit=65536

It can achieve a visual refresh rate of more than 4200hz and 8192 levels of different brightness on the LED display . The 18bit+ mode grayscale expansion greatly improves the grayscale of the screen, displays more low-gray details, and presents a more realistic image.

Low gray level

High gray level

extra color   extra color   extra color   extra color

Turn on low blue light mode with one click

Not turned on low blue light mode

Low blue light
More thoughtful eye protection option

The low blue light mode is a display mode that reduces the exposure of blue light to the eyes, thereby reducing a certain amount of visual fatigue. The built-in low blue light mode will reduce the blue light in the standard mode, and the image will be more warm-toned, thus reducing the damage to the human eye.
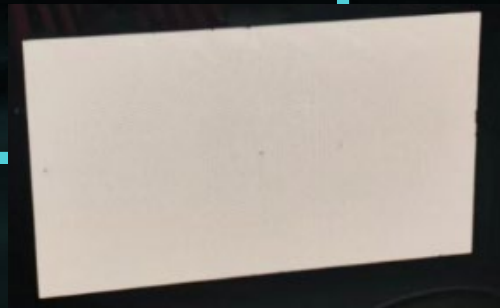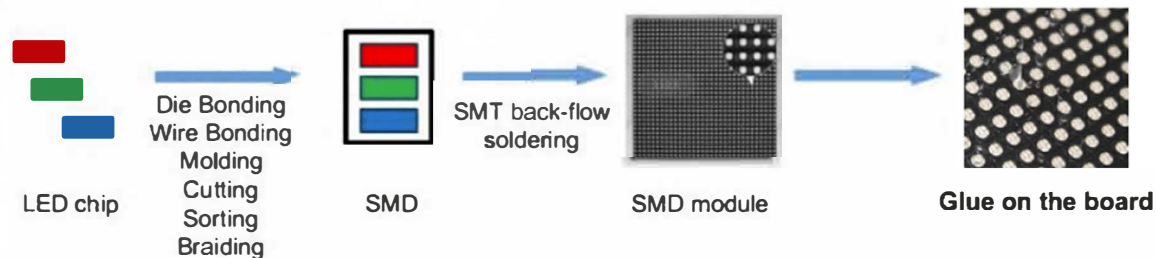
Turn on low blue light mode

can choose **30%**

can choose **40%**

can choose **70%**

LED display: **ITC C series P2**

GOB production process

LED chip → Die Bonding / Wire Bonding / Molding / Cutting / Sorting / Braiding → SMD → SMT back-flow soldering → SMD module → Glue on the board

GOB LED:

GOB LED The screen's transportation is protected, easily resistant to distortion.

SMD LED:

SMD LED The screens are prone to damage and susceptible to heat exposure.

GOB

SMD