Indoor full-color LED video wall

A0.9375 (A0.9375J)

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.
*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 in the normal video playback state, 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 floating wireless connectors, which have the ability of chimeric correction and more stable connection. The whole screen joint can be finely adjusted by module to avoid the light and dark line effect between modules due to the joint. The signal cable and low-voltage power cable cannot be seen inside the cabinet, and it can be directly plugged in and out 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 knocks and lights falling off.
*In order to ensure the horizontal angle, vertical angle, and flatness of the screen installed on site and improve the final viewing experience of customers, the LED display screen has horizontal and vertical detection modules 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 project construction.
*The switching power supply of the LED display screen has a PFC function, a power factor ≥0.95, a power efficiency ≥91%@25℃, and has overcurrent, short circuit, overvoltage, and undervoltage protection functions.
*The color uniformity of LED display is within ±0.001Cx,Cy; the relative deviation of the center distance of the LED display pixel is ≤1%; the mean fault recovery time (MTTR) of the LED display is ≤2 minutes.
*The color temperature of the LED display screen is continuously adjustable from 100K to 20000K. It can be set to cold, warm, standard and other multi-level white field adjustments. When the color temperature is 8500K, the color temperature error of the four-level white field adjustment of 100%, 75%, 50%, and 25% is ≤100K.
*In order to prevent metal ion migration and line short circuit, the PCB of the LED display screen adopts FR-4 four-layer board of the same grade or higher material. The PCB wire is wider, and the wire spacing and via spacing are larger, which can better prevent module black screen, display abnormality, lamp bead color loss, caterpillars and other phenomena. The surface is treated with gold immersion, the board thickness is ≥2mm, the copper thickness is ≥1 ounce, TG ≥170℃, and the PCB board surface is moisture-proof/dust-proof/anti-static/anti-oxidation, and the mildew-proof level is ≤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 a fault automatic alarm function and notifies the corresponding technical operation and maintenance personnel by email.
*The LED display screen has single-point out-of-control point detection, out-of-control point data transmission function, real-time detection of the working status of the display screen, automatic fault alarm function and notification of the corresponding technical operation and maintenance personnel by email.
*The LED display screen has a FLASH intelligent storage circuit, which can store module correction data. The module can be automatically read back when the module is replaced. The storage capacity is ≥1MB.
*The LED display screen has multiple sets of built-in parameters, which automatically call the corresponding parameters according to the brightness level changes of 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; when the brightness level is ≥75, the refresh rate is ≥4200Hz.
*The back of the LED display screen 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.
*The LED display screen has a single power supply leakage current ≤0.3mA, eliminating the risk of leakage current formed by multiple power supplies causing tripping of the upper electric box.
*The LED display screen has a low blue light mode, and you can select 30%, 40%, and 70% in the control software to adjust the blue light output of the display screen, effectively reducing the damage of blue light radiation to the eyes.
*The LED display screen module adopts hardware encryption circuit design, cooperates with the decoding board and software to generate keys, and the authorized use time can be set before leaving the factory. When the authorized use time is reached, the screen will be automatically locked. The user must unlock the authorized password before using the screen normally.
*One box, one card, one power supply, can be directly mounted on the wall, embedded, or floor-mounted.
*The box size adopts the golden ratio of 16:9, providing an excellent visual experience and meeting the needs of the mainstream market.
*The box adopts the front and back installation method, which can fit the wall at a close distance, effectively save space, and achieve harmonious integration with the surrounding environment.

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Specification

Module parameters	
LED encapsulation	4 in 1 common cathode
Pixel pitch	0.9375mm
Resolution	1137778 points/m²
Lamp beads/IC	Nationstar gold wire/high refresh rate
Pixel configuration	1R1G1B
Module resolution	320*180
Module size (mm)	300*168.75
Cabinet resolution	640*360
Cabinet dimension(mm)	600*337.5*31.5
Cabinet weight	≤4Kg/piece
Working voltage	DC+2.8V/+3.8V
Main parameters	
Best viewing distance	≥2.8m
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	60S
Brightness	200-800CD/m²
Grayscale	12/14/16/18/22/24bit
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