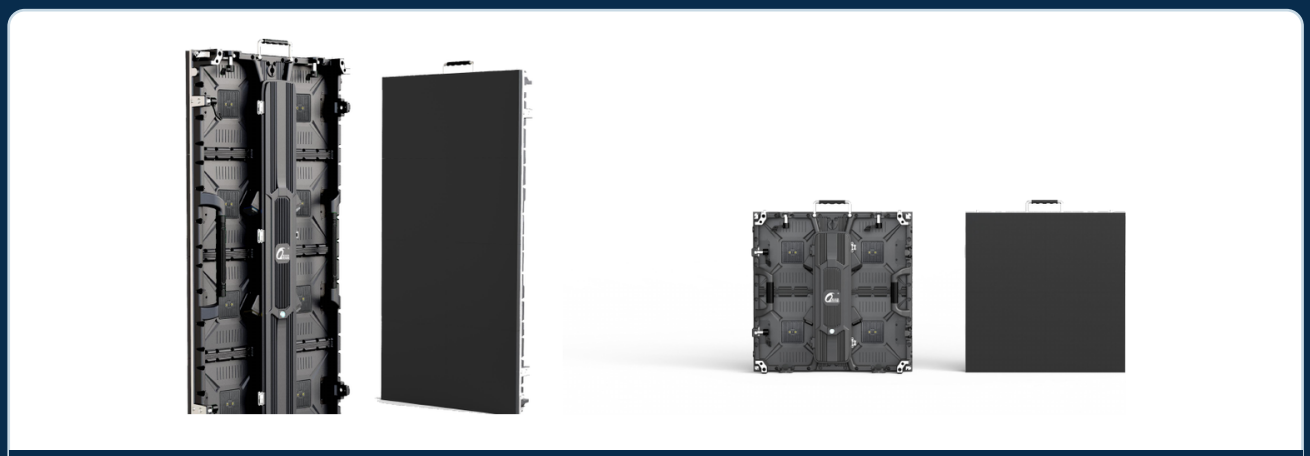
HITU DISPLAY

RENTAL LED DISPLAY SYSTEM SPECIFICATION

Indoor Rental LED Display System

HY2.9-21S-2020-H-7680

HY Series | Soft connection | 7680 Hz



COMPLETE RENTAL DISPLAY

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SCOPE AND COMPLETE-SYSTEM DEFINITION

This document specifies the complete rental LED display system. The 500 x 500 mm and 500 x 1000 mm cabinets share the same LED module platform; their cabinet structure, module quantity, resolution, weight and total electrical load differ.

DOCUMENT SCOPE	
Product	Indoor Rental LED Display System
Complete-system model	HY2.9-21S-2020-H-7680
Series / connection	HY / Soft connection
Operating environment	Indoor
Cabinet formats	500 x 500 x 84 mm / 500 x 1000 x 84 mm
Shared module	250 x 250 x 16mm, 84 x 84 = 7056 dots
Refresh rate	7680 Hz
Installation	Hanging or floor stacking

1 Shared module

Optical, driving and module electrical parameters are common to both cabinet formats.

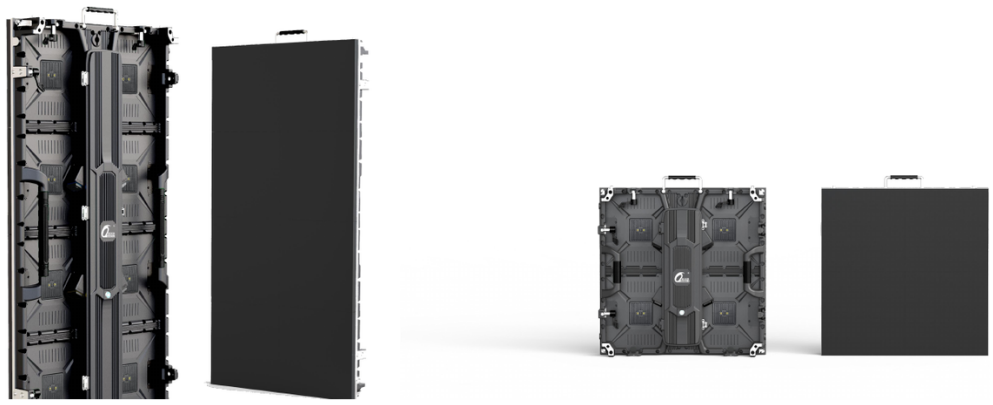
2 Different structure

Cabinet size, weight, installed module count, pixel count and total load are listed separately.

3 Rental use

Fast assembly, repeatable alignment, hanging and floor-stacking support.

PRODUCT OVERVIEW AND KEY FEATURES



COMPLETE SYSTEM / CABINET FAMILY

The HY Series is a modular indoor rental LED display designed around a shared 250 x 250 mm module platform and two compatible cabinet formats.

1. **500 x 500 mm and 500 x 1000 mm cabinets can be combined in one screen**
2. **Fast-lock rental structure for rapid assembly and dismantling**
3. **Flexible-cable power and signal architecture**
4. **Die-cast aluminum cabinet for low weight and repeatable alignment**

PITCH	BRIGHTNESS	SCAN	REFRESH
2.9mm	≥600cd/m2	1/21	7680 Hz

CABINET CONFIGURATION AND CALCULATED LOADS

COMPLETE-CABINET DATA AND LOAD CALCULATION

Parameter	500 x 500 cabinet	500 x 1000 cabinet
Cabinet dimensions	500 x 500 x 84 mm	500 x 1000 x 84 mm
Installed shared modules	4 modules	8 modules
Cabinet resolution	168 x 168 dots	168 x 336 dots
Total pixels	28,224 pixels	56,448 pixels
Display area	0.25 m2	0.50 m2
Cabinet weight	7.0 kg	11.0 kg
Maximum cabinet load	≤92 W	≤184 W
Average cabinet load	≤31 W	≤61 W
Cabinet material	Die-cast aluminum	Die-cast aluminum
Protection rating	IP30 (indoor)	IP30 (indoor)

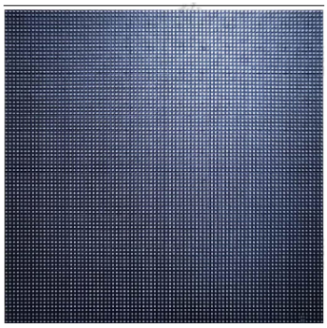
CALCULATION BASIS

Cabinet pixel matrix = cabinet width and height divided by pixel pitch. Installed module count = cabinet area divided by 0.0625 m2 per 250 x 250 mm module. Declared cabinet power values take precedence over theoretical module multiplication.

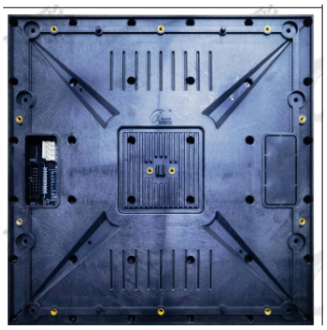
DISPLAY AND SYSTEM SPECIFICATIONS

COMPLETE-DISPLAY OPTICAL AND SYSTEM DATA	
Pixel pitch	2.9mm
Pixel density	112896Dots/m2
Pixel configuration	1R1G1B
LED package	SMD2020
Brightness	≥600cd/m2
Brightness uniformity	>0.95
Contrast ratio	5000:1
Horizontal viewing angle	140±10°
Vertical viewing angle	130±10°
Recommended viewing distance	≥4m
Refresh rate	7680 Hz
Frame rate	≥60 fps
Grayscale	14-16bits
Display colors	4.398 trillion colors
Operating temperature	-20 to +40°C
Operating humidity	10%-65% RH
Application	Indoor

SHARED MODULE DETAILED SPECIFICATIONS



MODULE FRONT



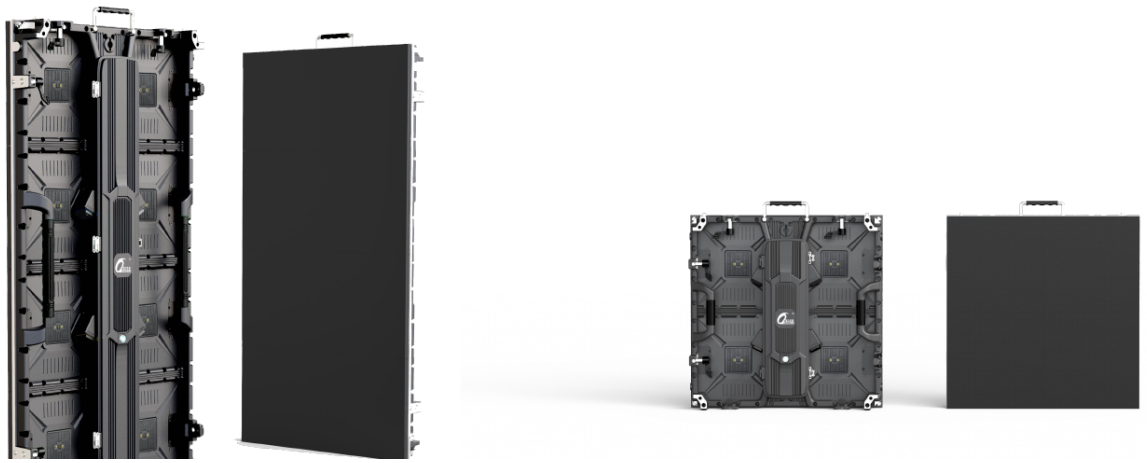
MODULE REAR / ASSEMBLY

COMMON MODULE PLATFORM

Module dimensions	250 x 250 x 16mm
Module resolution	84 x 84 = 7056 dots
Module weight	0.485kg±0.01kg
LED package	SMD2020
DC input voltage	4.5±0.1V
Maximum current	≤5.2A
Maximum module power	≤23 W
Drive / scan method	1/21 constant-current drive
Signal interface	HUB75E
Maximum module power per m2	≤368 W/m2
Recommended distribution capacity	≤555 W/m2

The same module specification is used in both complete-cabinet formats. Cabinet totals vary only because the 500 x 1000 mm cabinet contains twice the module quantity and display area of the 500 x 500 mm cabinet.

CABINET STRUCTURE AND MECHANICAL FEATURES



CABINET STRUCTURE / FORMAT REFERENCE

MECHANICAL CONFIGURATION

Cabinet formats	500 x 500 x 84 mm / 500 x 1000 x 84 mm
Material	Die-cast aluminum
Connection architecture	Soft connection
Module service access	Rear service
Installation modes	Hanging or floor stacking
Protection	IP30 (indoor)

1. Confirm that the support frame is level, rigid and grounded.

2. Engage all positioning pins and fast locks before energizing the screen.

3. Keep cabinet seams uniform; do not force a cabinet into alignment.

4. For outdoor systems, complete project-level waterproofing around the assembled screen.

POWER, SIGNAL AND INSTALLATION GUIDANCE

CABINET POWER AND SIGNAL SUMMARY

Parameter	500 x 500 cabinet	500 x 1000 cabinet
Shared module quantity	4 modules	8 modules
Maximum cabinet load	≤92 W	≤184 W
Average cabinet load	≤31 W	≤61 W
Signal interface	HUB75E	HUB75E
Service access	Rear service	Rear service

RECOMMENDED CONNECTION FLOW

Video processor — Sending system — Receiving card — Shared modules

1. Isolate AC power before connecting or replacing cabinets and modules.
2. Verify protective earth, DC polarity, voltage and connector retention.
3. Distribute circuits from the declared maximum cabinet load, including project safety margin.
4. Power on by section while monitoring current, temperature and image mapping.
5. Separate signal and power routes where practical; protect cables from strain and sharp bends.

INSPECTION, ACCEPTANCE AND CONTACT

COMPLETE-SYSTEM ACCEPTANCE CHECKLIST	
Visual inspection	No damaged LEDs, deformed modules, loose locks, loose connectors or abnormal contamination.
Mechanical check	Cabinet alignment, seams, hanging/floor hardware and service access are complete.
Electrical check	Grounding, polarity, voltage, circuit protection and cable retention have been verified.
Image test	Red, green, blue, white and grayscale patterns show no persistent uncontrolled pixels.
Uniformity	Brightness and color are consistent; calibration data is loaded when required.
System test	Stable operation at 7680 Hz with the project controller and mapping file.
Environmental check	Installation matches indoor use and the declared IP30 (indoor) protection.

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Document note: confirm project-specific drawings, controller settings and final power distribution before production.