



Aurora
Displays
Group

Innovation.**Always**

USER MANUAL

Thin Cabinet Series

LDC1000 • LDC750 • LDC500 • LDC250

Indoor fine-pitch LED display cabinets. 33.4 mm build depth, front maintenance, dual power and signal backup.

T1.9 • T2.5 • T2.6

33.4 mm depth

IP20 indoor

Front maintenance

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Australia 1300 841 542 • aurorasingnage.com.au
Global +86 400 850 5098 • auroradisplays.cn

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WARNING This manual covers indoor Thin Cabinet Series products only. Installation must be carried out by competent trade personnel in accordance with AS/NZS 3000 and any other regulations applying at the site. Where site conditions differ from the arrangements shown here, refer to Aurora Displays before proceeding.

APPLICABLE MODELS

LDC1000 • LDC750 • LDC500 • LDC250
Pitch variants T1.9, T2.5, T2.6

CERTIFICATION

EMC • CE • ETL • FCC • CB

Table of contents

1 Safety information

2 Product introduction

2.1 Thin Cabinet Series

2.2 Features

2.3 Cabinet dimensions

2.4 Cabinet detail

2.5 Specification sheet

3 Installation

3.1 Installation accessories and tools

3.2 Power-up verification

3.3 Timber wall installation

3.4 Concrete wall installation

3.5 Wall-mount rail installation

3.6 Hoist installation

3.7 Steel structure installation

4 Maintenance

4.1 Module replacement

4.2 Receiving card replacement

4.3 Troubleshooting

5 Packaging

NOTE Page numbers appear in the footer of every page. Section 3.2 carries the power-up verification procedure referenced by all five installation methods.

SECTION 1

1 Safety information

WARNING Read the safety precautions in this section carefully before installation, connection, operation or maintenance.



Before you begin

Before installing, powering, operating or maintaining this product, read this manual carefully so that you understand the meaning of every sign used in the manual and on the product itself. Follow the protective measures listed here without exception.



**ELECTRIC
SHOCK**

Electric shock prevention

- Connect only to a supply within 100–240 V at 50–60 Hz.
- Keep the earth conductor connected at all times. Isolate the supply when the display is not in use.
- Confirm that all equipment is in sound condition before use.
- Never use a damaged, faulty or overheated power cord or plug.
- Do not open any covers.



FIRE

Fire prevention

- Do not modify this product by any method not described in this manual.
- Do not operate at full power where the ambient temperature is above 40 °C or below –20 °C.



INJURY

Injury prevention

- Barricade the work area or restrict access whenever this product is installed, maintained or moved.
- Check that all external covers and hardware are correctly secured.
- When hoisting, install from the top down and dismantle from the bottom up.

POWER
SYSTEM**Power system**

Power cable The power cords supplied with the system carry dedicated protection and are not user-serviceable. If a cord is damaged, replace it with a new one — do not attempt a repair.

Data cable The data cables supplied with the system carry dedicated protection and are not user-serviceable. If a cable is damaged, replace it with a new one — do not attempt a repair.

WARNING All maintenance and installation work described in this manual must be carried out with the supply isolated.

SECTION 2

2 Product introduction

2.1 Thin Cabinet Series

The Thin Cabinet Series reproduces high-quality content with excellent clarity and detail, making it a strong performer for indoor display work. Flexibility in size and shape allows the cabinets to be configured to suit almost any space, and they can be tilted to create distinctive installations. The result is a versatile, durable solution across a wide range of indoor video applications.

2.2 Features

1. Cabinet and module use independent protective structures, giving better protection.
2. Module and power supply are front-maintainable, so servicing is quick and the cabinets suit a wide range of sites.
3. Cabinet and module are separate assemblies, which speeds up maintenance.
4. High brightness, high greyscale and high refresh options are available; high-contrast images remain clearly visible.
5. The metal cabinet dissipates heat across the whole body, so no additional cooling equipment is required. This lowers cabinet power draw and extends service life.
6. Supports hoisting, wall-mount rail, floor-standing and direct wall-fixed installation.
7. Supports dual backup of signal and power.
8. Module-level correction supports brightness calibration.

33.4

mm cabinet depth

20kg/m² cabinet weight**3840**

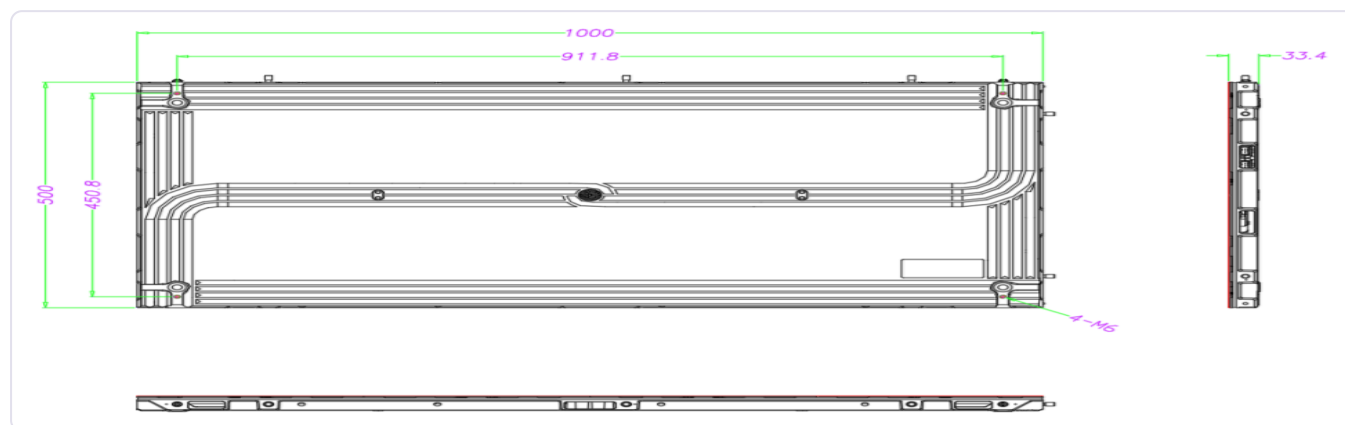
Hz refresh

≥14

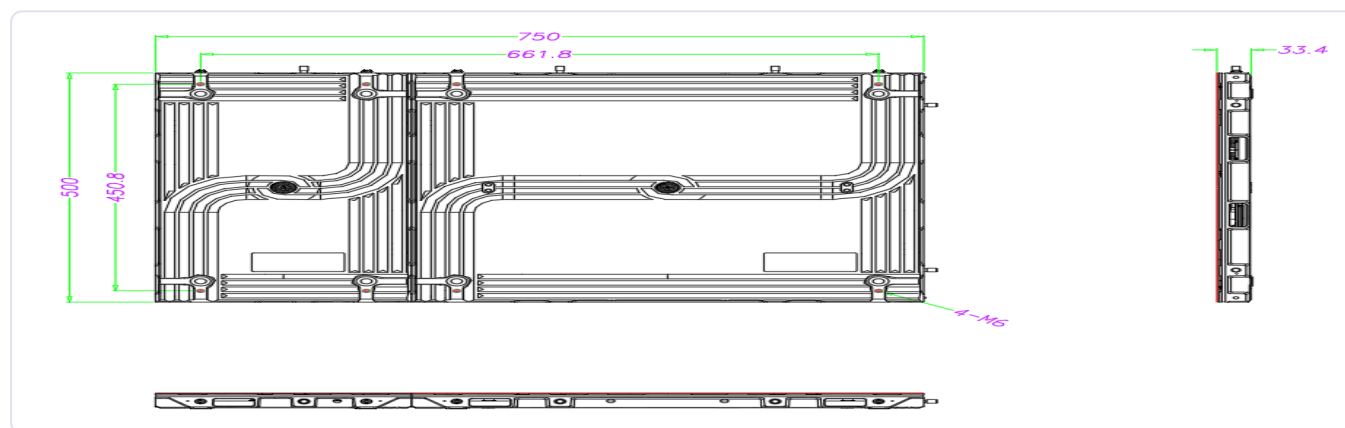
bit greyscale

2.3 Cabinet dimensions

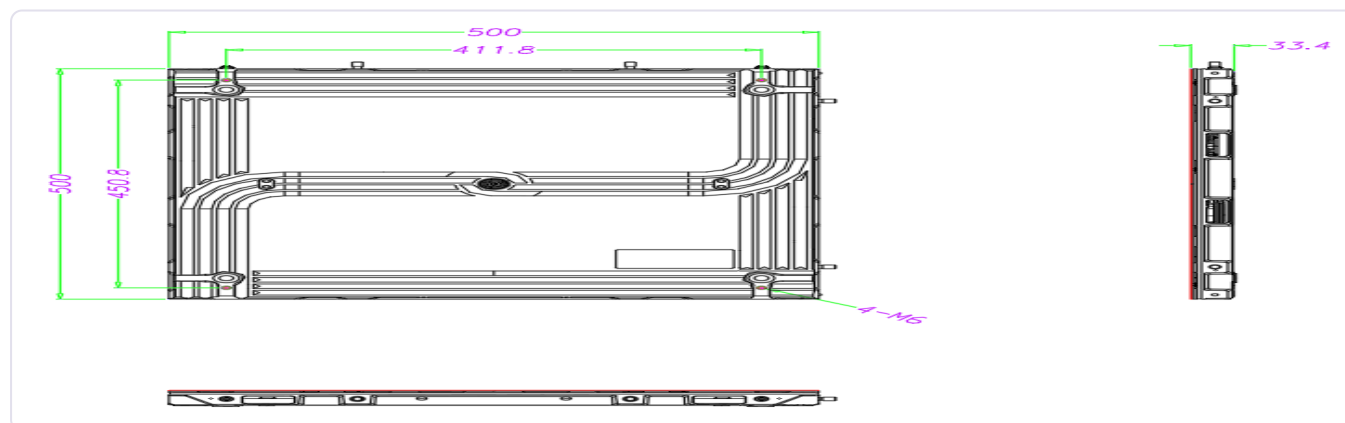
Six cabinet formats share a common 33.4 mm depth and a four-point M6 fixing pattern. All dimensions in millimetres.



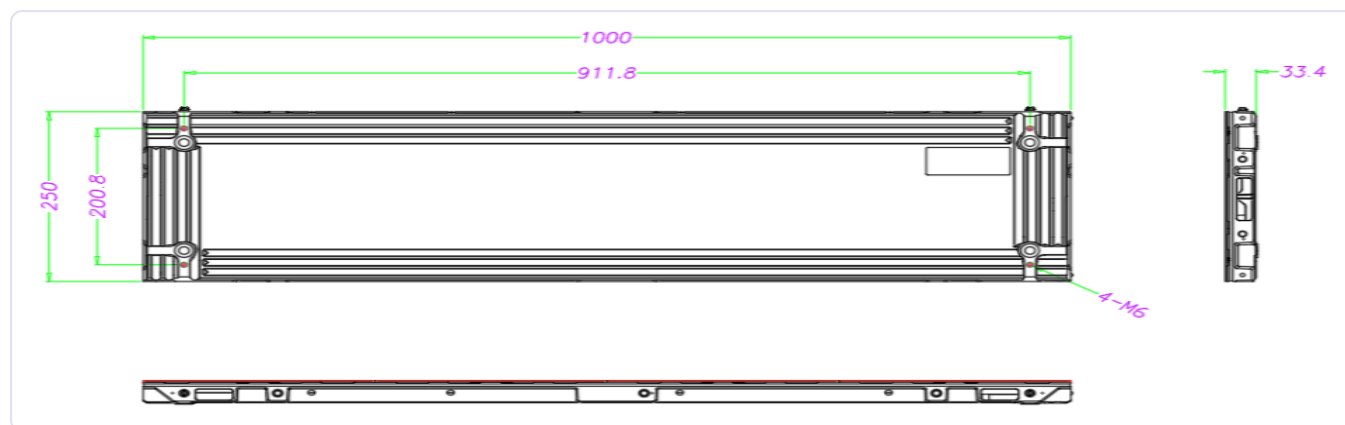
1000 × 500 mm



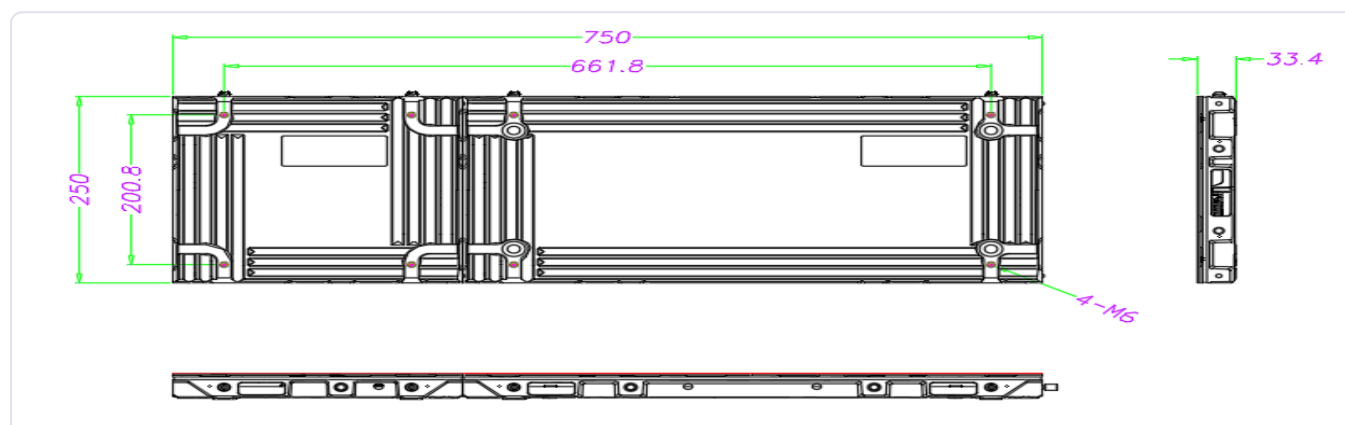
750 × 500 mm



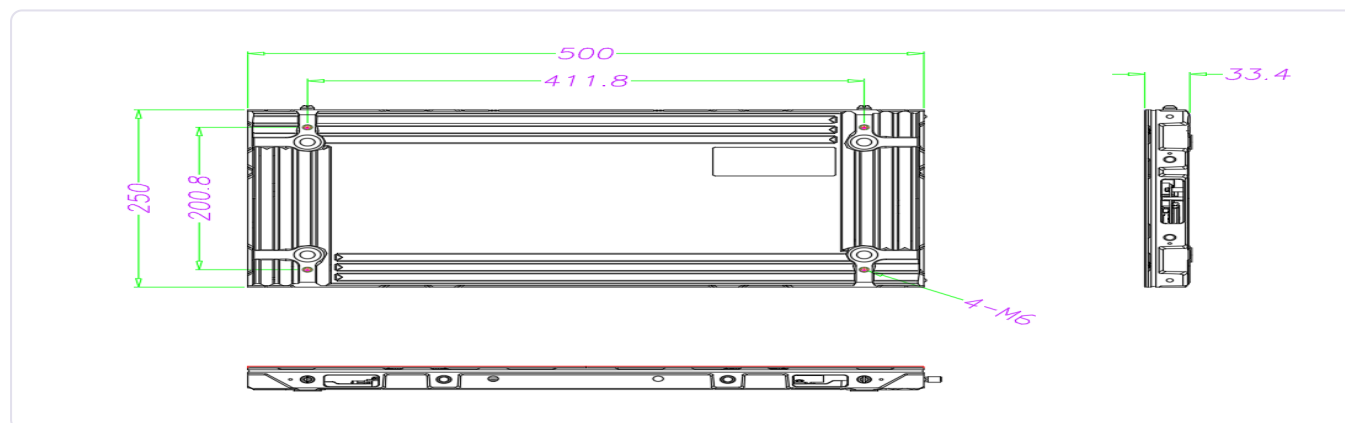
500 × 500 mm



1000 × 250 mm



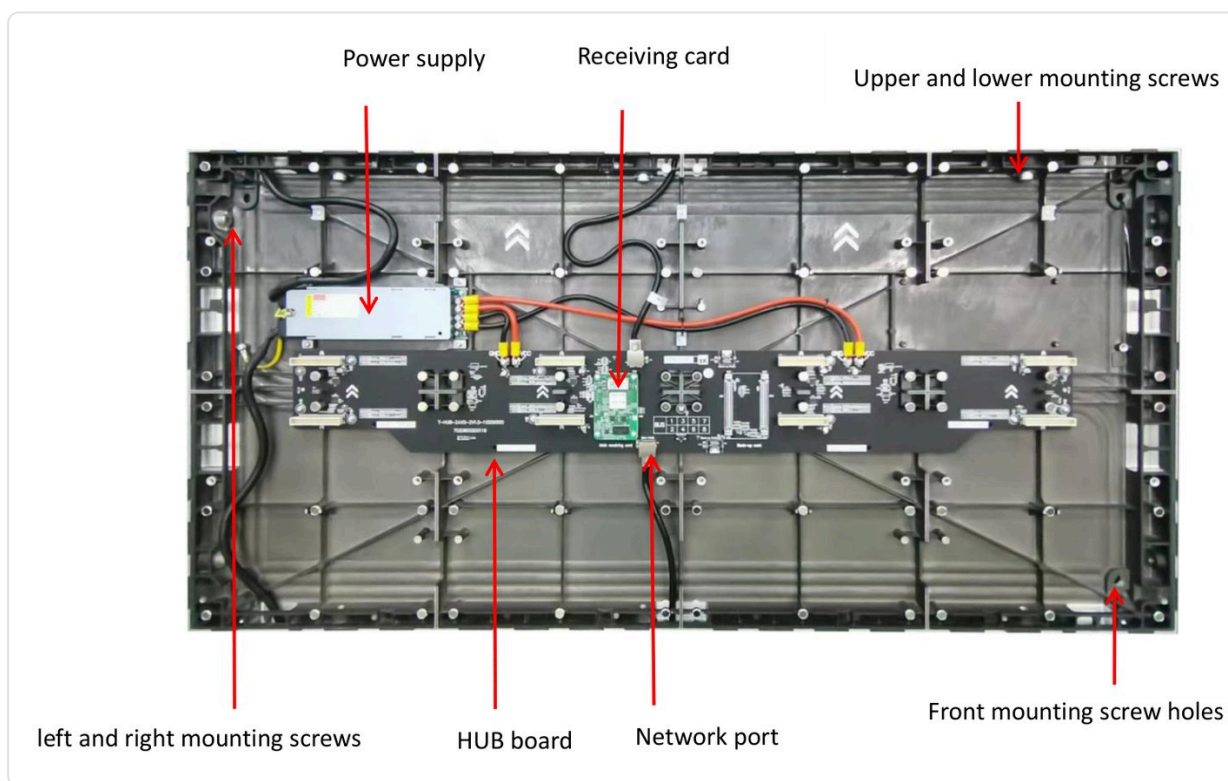
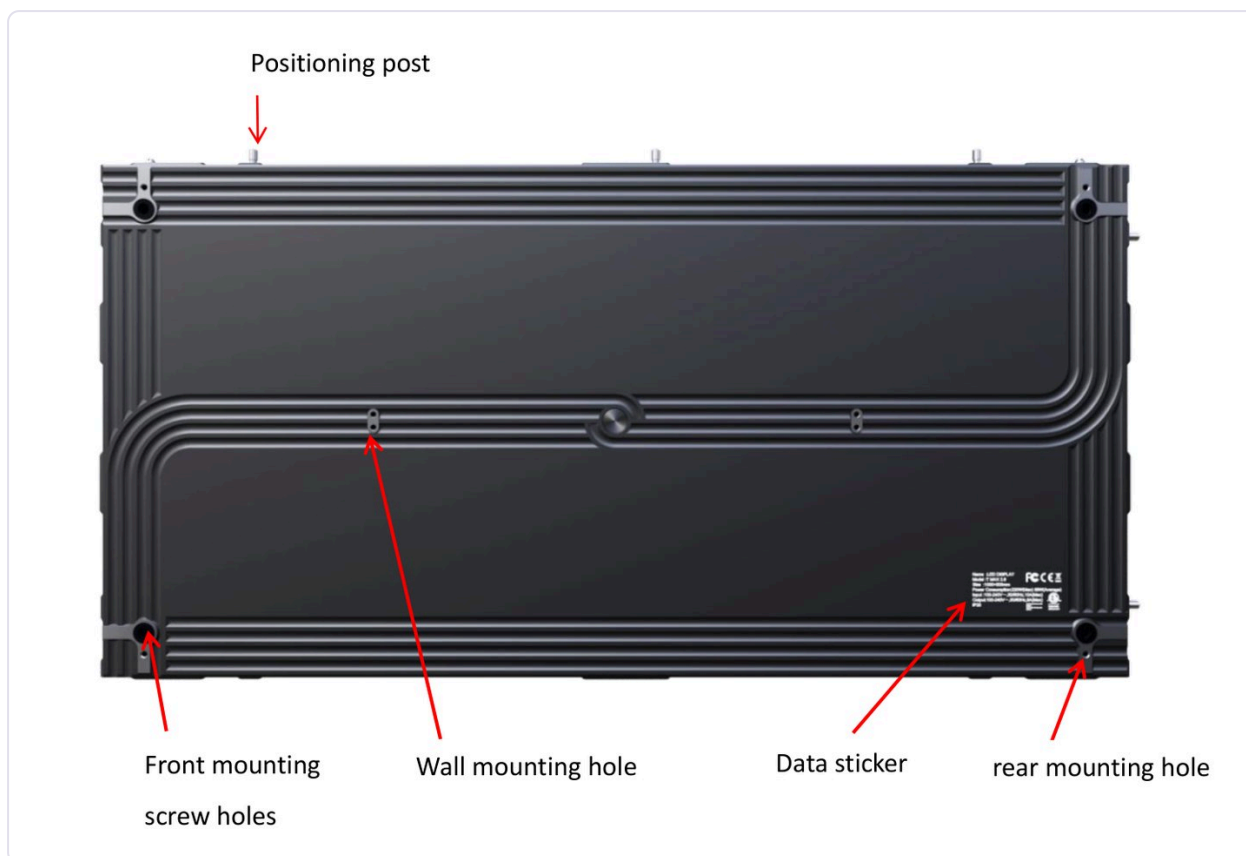
750 × 250 mm

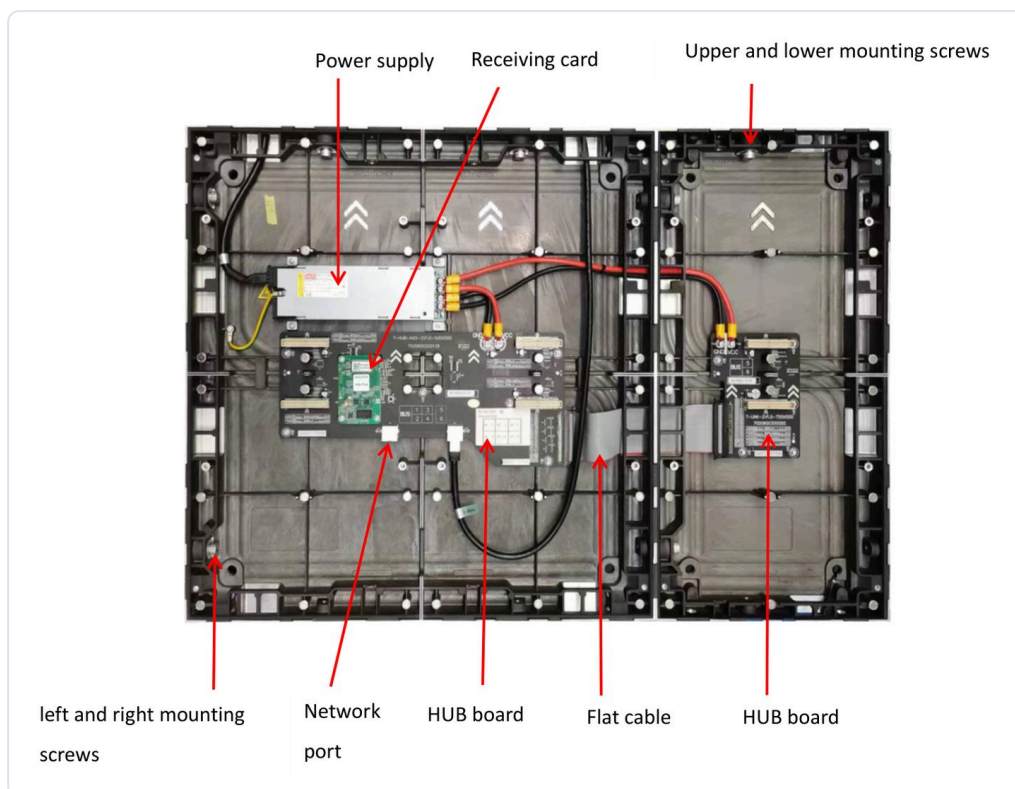


500 × 250 mm

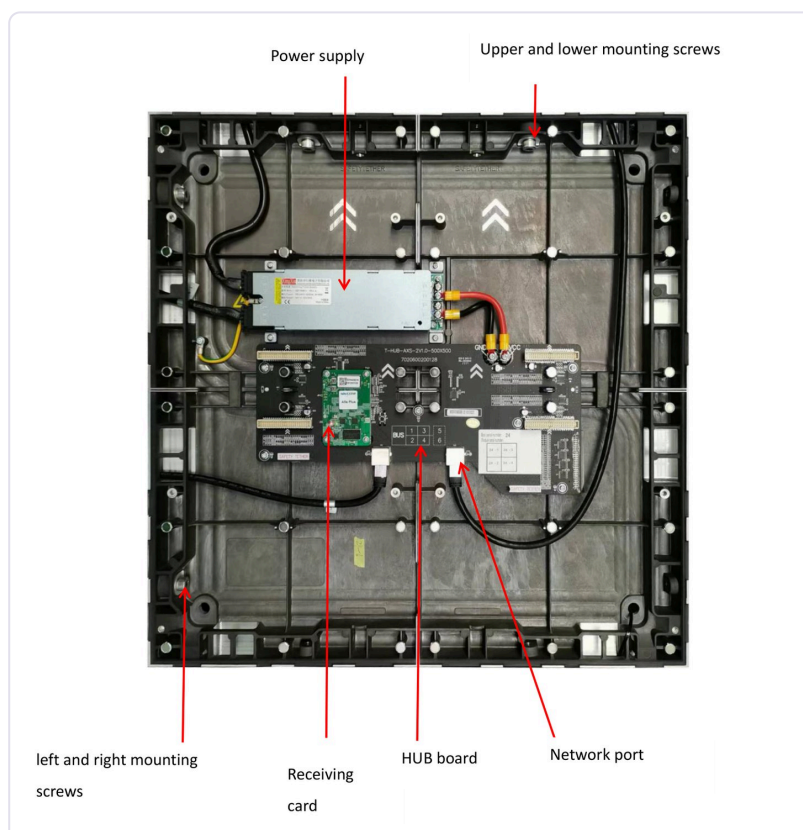
NOTE Every cabinet carries four M6 fixing points and a 33.4 mm overall depth, so formats can be mixed within a single screen without affecting the mounting plane.

2.4 Cabinet detail





750 × 500 mm cabinet — front, module removed



500 × 500 mm cabinet — front, module removed

2.5 Specification sheet

MODULE SPECIFICATIONS

Model	T1.9	T2.5	T2.6
Pixel pitch (mm)	1.95	2.5	2.6
Pixel density (dot/m ²)	262,144	160,000	147,456
LED lamp	SMD1212	SMD1515	SMD2121
Module size (mm)	250 × 250	250 × 250	250 × 250
Module weight (kg)	0.46	0.46	0.46
Module resolution (px)	128 × 128	100 × 100	96 × 96
Drive mode	Constant current	Constant current	Constant current
Horizontal viewing angle	160°	160°	160°
Vertical viewing angle	140°	140°	140°
Brightness (cd/m ²)	600	800	1000
Greyscale (bit)	≥14	≥14	≥14
Refresh rate (Hz)	3840	3840	3840
Peak power (W/m ²)	520	520	520
Average power (W/m ²)	200	200	200

CABINET AND SYSTEM SPECIFICATIONS

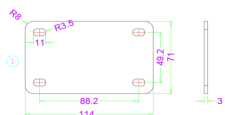
Cabinet sizes (mm)	1000 × 500 • 750 × 500 • 500 × 500 • 1000 × 250 • 750 × 250 • 500 × 250
Cabinet weight	20 kg/m ²
Cabinet depth	33.4 mm
Working voltage	110–220 V
Operating temperature	-20 °C to +55 °C
Operating humidity	10%–95% RH
Storage temperature	-40 °C to +80 °C
Storage humidity	10%–90% RH
Ingress protection	IP20
Operating environment	Indoor
Maintenance access	Front maintenance
Certification	EMC, CE, ETL, FCC, CB

NOTE Specifications apply across all six cabinet formats. Brightness, greyscale and refresh figures are factory-calibrated values measured at full white.

SECTION 3

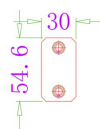
3 Installation

3.1 Installation accessories and tools



Connection plate

Used during installation and front maintenance of the cabinet.



Top connection plate

Fixes the cabinet to the suspension beam.



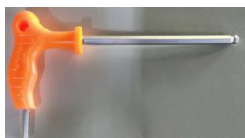
M6 × 55 screws

Fix suspension beams to connection plates.



M6 × 16 screws

Fix the cabinet to the connection plate during front maintenance.



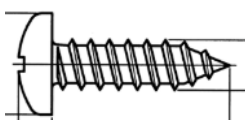
Locking tab tool

Hex key, M6 and M8.



Module extraction tool

Vacuum tool — required for P2.97, P3.91 and P4.81 modules.



PA5 × 25 self-tapping screws

For installation onto timber walls.



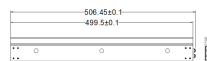
M10 × 80 expansion bolts

For installation onto concrete walls.



1 m mounting rail

For wall-mount rail installation.



0.5 m mounting rail

For wall-mount rail installation.



Wall-mount hook

For wall-mount rail installation.



1 m hanging bar

For hoist installation.



0.5 m hanging beam

For hoist installation.



Allen wrench

General assembly.



Laser level

Checking substrate flatness and setting out.



Spirit level

Levelling the bottom row and vertical members.

3.2 Power-up verification

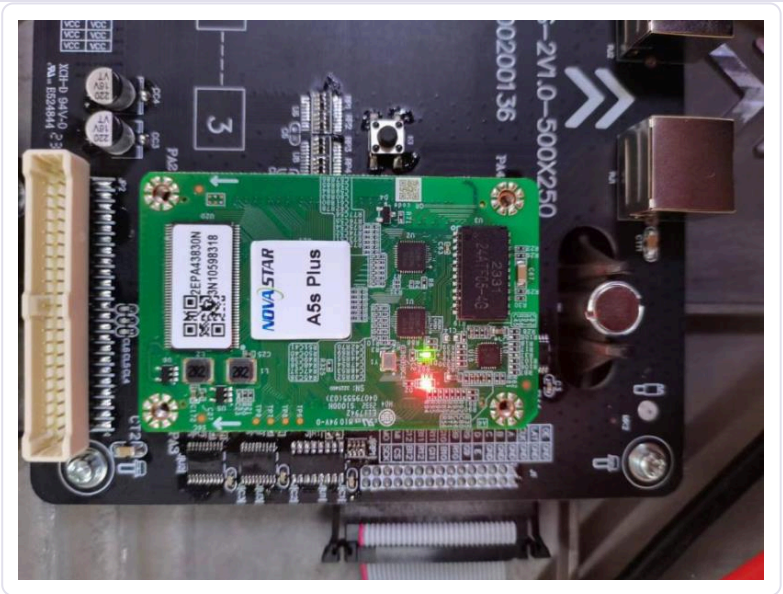
Every installation method in this section finishes with the same power-up check. Carry it out once all cabinets are fixed and wired, and before the modules are refitted. Confirm that each cabinet powers up, that the receiving card has signal, and that the indicators behave as set out below.

POWER INDICATOR

Indicator	Colour	State	Meaning
Power	Red	On continuously	Supply input normal

RUNNING INDICATOR

Colour	State	Meaning
Green	Flashes once per second	Receiving card operating normally; data connection active with video input
	Flashes once every three seconds	Data connection abnormal
	Three flashes at 0.5 s intervals	Data connection normal, no video input
	One flash at 0.2 s intervals	Program load failed; backup program has started
	Eight flashes at 0.5 s intervals	Network port redundancy has switched; loop backup is active



Receiving card indicators — red power LED on, green running LED flashing

3.3 Timber wall installation

Confirm that the timber wall on site meets the construction requirements and that the materials are to standard. Use a laser level to check the mounting face of the board and confirm that the wall surface is flat.

1 Remove the modules

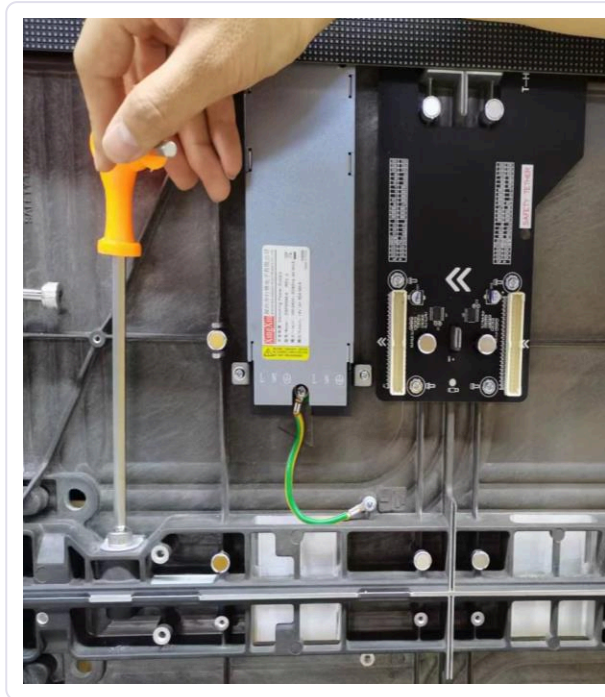
Take the cabinet out of its case and use the vacuum tool to draw the module off the cabinet. Where modules are shipped separately, install the cabinet directly and skip this step.



2 Fix the cabinets

Use a drill driver to fix the cabinet to the timber wall with self-tapping screws through the four corner holes, then repeat for each cabinet to complete a single bay. Install the bottom row first and lock the left and right connecting screws of the cabinet.





Locking the left and right connecting screws

Once the bottom row is installed, work upwards one cabinet at a time, locking the upper and lower connecting screws and the left and right connecting screws between cabinets until the whole screen is built.

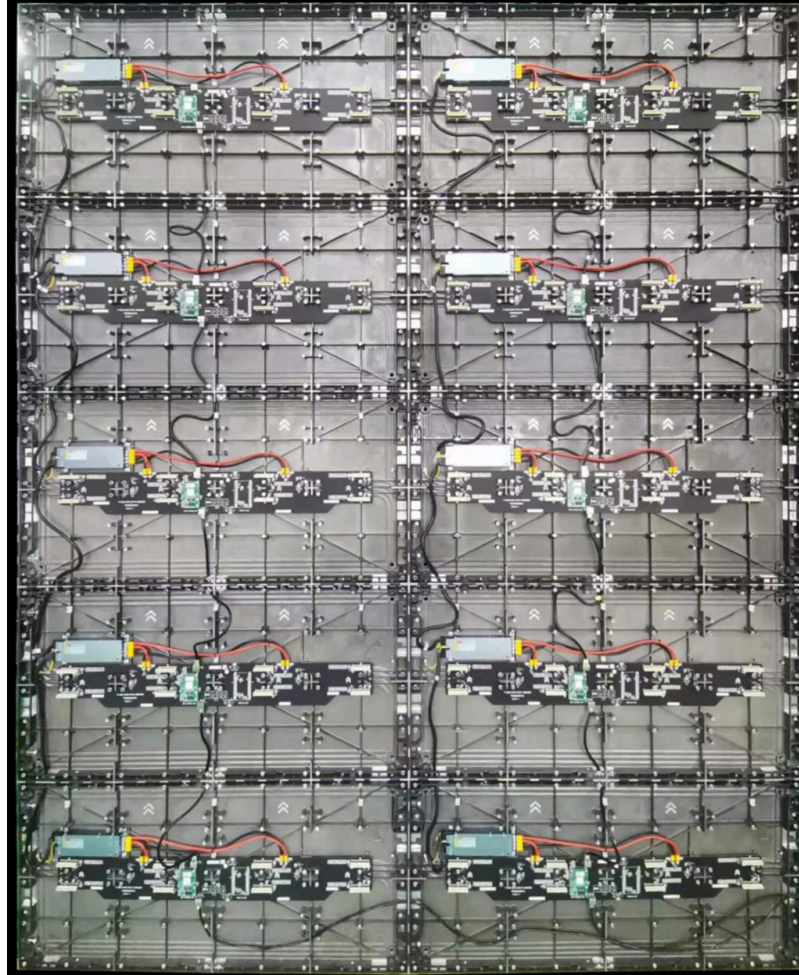


Locking the upper and lower connecting screws

3

Connect the wiring

Follow the connection diagram issued with the project to run the data and power cabling so that it matches the drawings, then complete every connection.



Completed rear cabling — data cable and power cord

4

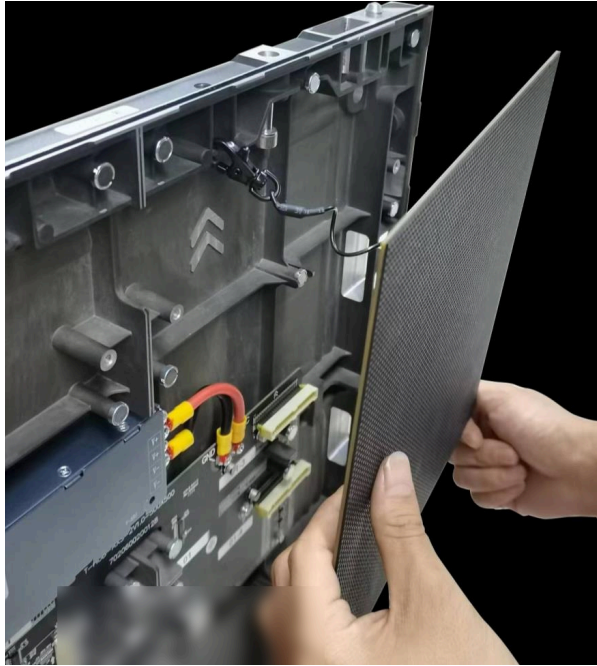
Power up and verify

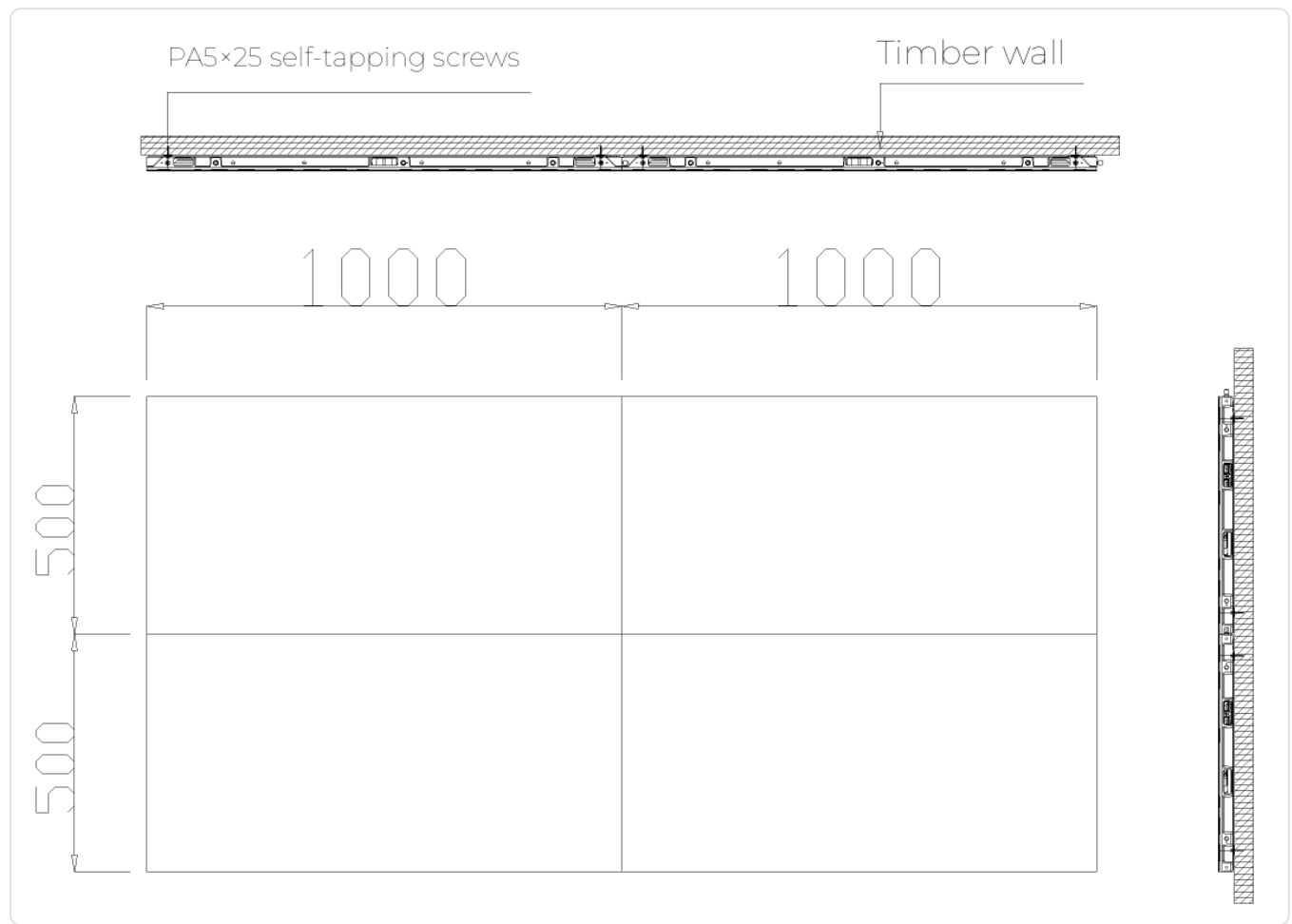
Switch on the supply and complete the power-up verification in **3.2**. Confirm that every cabinet powers up, that the receiving card has signal, and that the indicators flash normally.

5

Refit the modules

Hang the module safety lanyard on the cabinet body at the matching position, then refit the modules in sequence. The display face must finish flat, with no front-to-back step between modules.





Timber wall — partial installation diagram

NOTE Fixings land on the four corner holes of every cabinet. Set out the bottom row from a laser line and work upwards, checking the face for flatness at each row before locking the connecting screws.

3.4 Concrete wall installation

Confirm that the concrete wall on site meets the construction requirements and that the materials are to standard. Use a laser level to check the mounting face and confirm that the wall is flat.

1 Remove the modules

Take the cabinet out of its case and draw the module off the cabinet. Where modules are shipped separately, install the cabinet directly and skip this step.

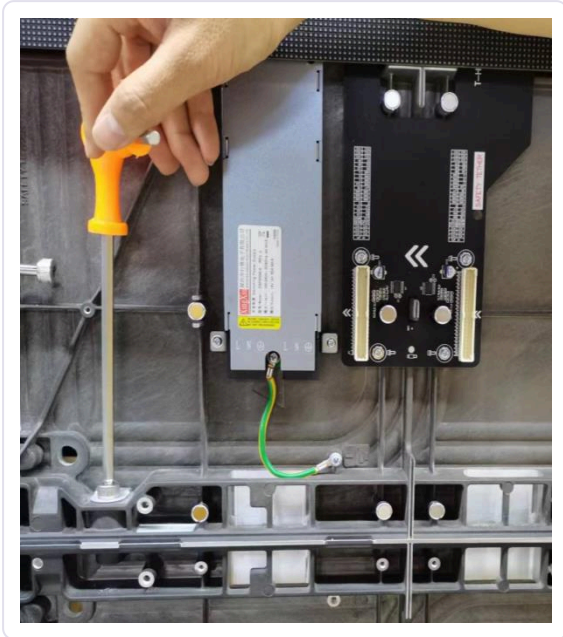


2 Drill and fix

Drill the wall with a rotary hammer and fix the cabinets to the concrete with expansion bolts through the four corner holes. Repeat across the whole screen to complete the installation.



Install the bottom row first and lock the left and right connecting screws of the cabinets. Then work upwards one cabinet at a time, locking the upper and lower connecting screws and the left and right connecting screws between cabinets until the whole screen is built.



Left and right connecting screws



Upper and lower connecting screws

3

Connect the wiring

Follow the connection diagram issued with the project so that the cabling matches the drawings, then complete every connection.



Completed rear cabling — data cable and power cord

4

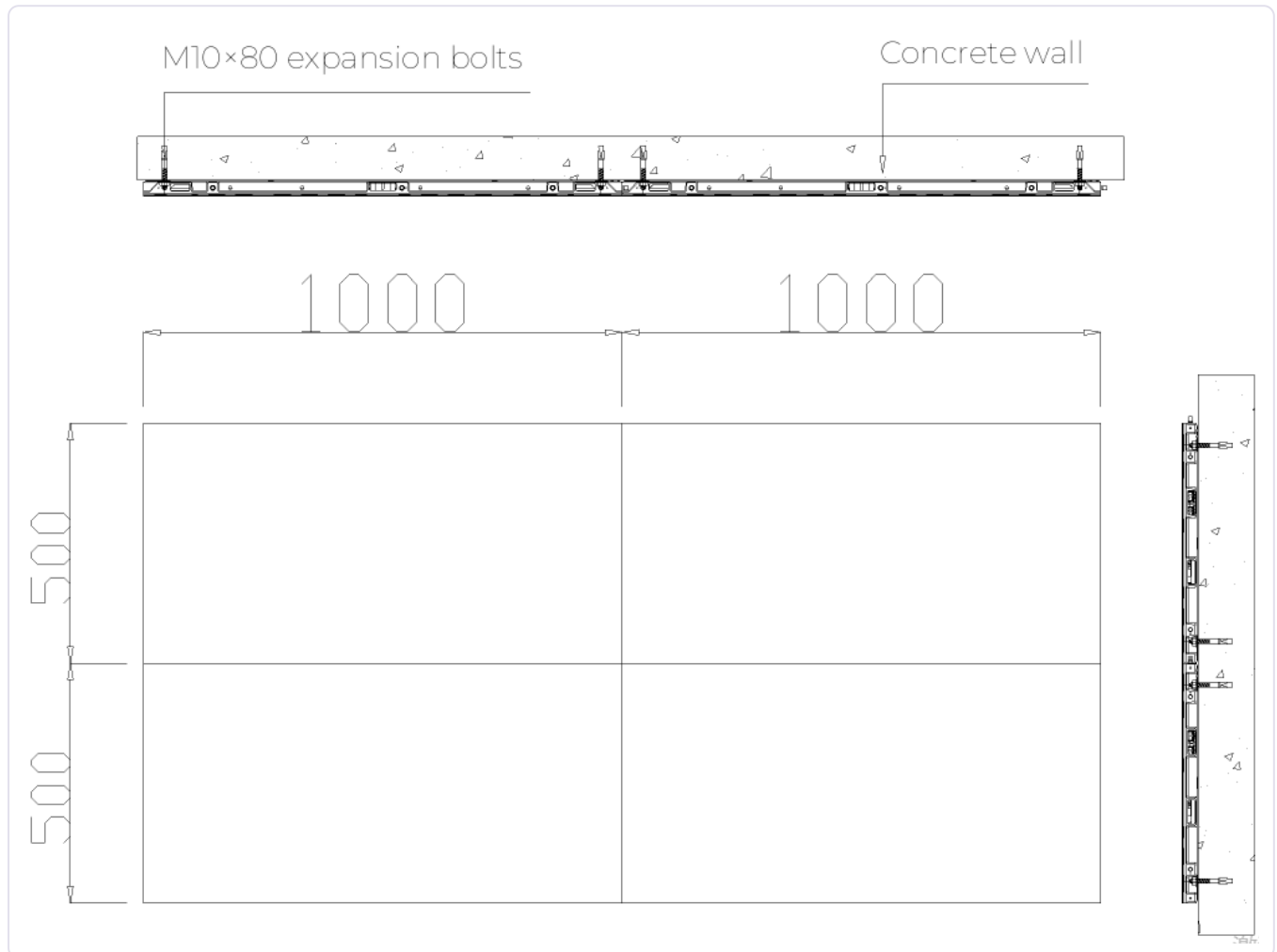
Power up and verify

Switch on the supply and complete the power-up verification in **3.2**.

5

Refit the modules

Hang the module safety lanyard at the matching position on the cabinet, then refit the modules in sequence. The display face must finish flat, with no front-to-back step.



Concrete wall — partial installation diagram

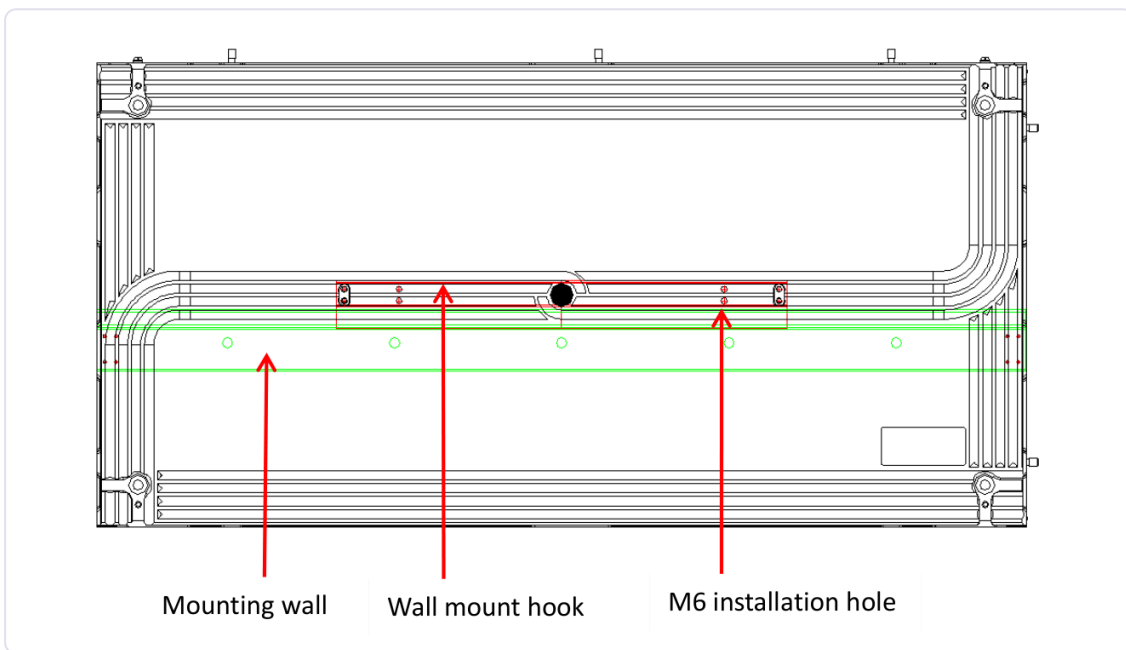
3.5 Wall-mount rail installation

Confirm that the wall on site meets the construction requirements and that the materials are to standard. Use a laser level to check that the concrete mounting face is flat.

NOTE Preparation — on a screen built from multiple cabinets, remove all modules first so that cabinet wiring and connections can be made easily. Once every cabinet is installed, follow the connection diagram issued with the project, complete the wiring and refit the modules. Where modules are shipped separately, install the cabinets directly.

1 Fit the hook beam

Adjust the hook beam to line up with the cabinet holes and lock the M6 × 20 screws to secure it.



Hook beam position on the cabinet rear

2 Install the wall rail

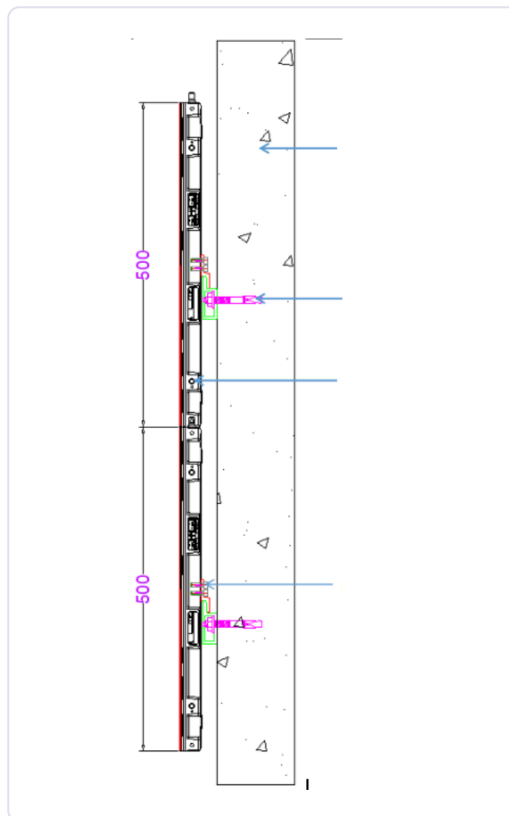
Drill the wall on a common level line and fix the wall hanging rail with M10 × 80 expansion bolts.

3 Hang the cabinets

Place the assembled cabinet and hook beam onto the wall mounting rail to complete the fix. Check that the installation sits flush.

4 Continue across the screen

Repeat for the remaining cabinets. Lock the upper and lower connecting screws and the left and right connecting screws between cabinets, then check that the finished screen is flush.

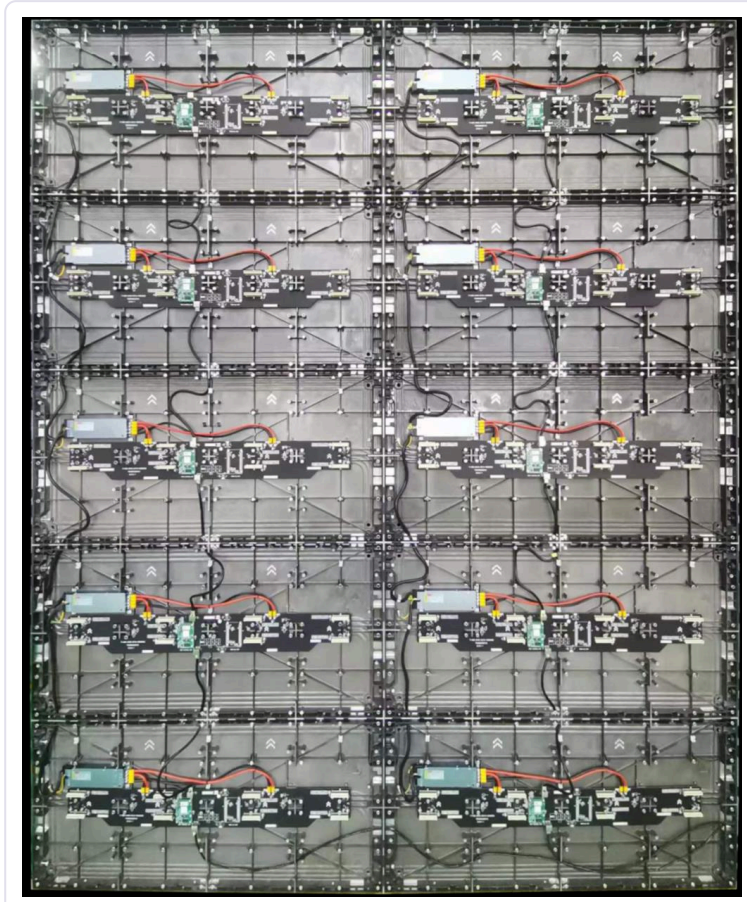


Wall-mount rail — installation section

5

Connect the wiring

Follow the connection diagram issued with the project so that the cabling matches the drawings, complete every connection and refit the modules.



Completed rear cabling — data cable and power cord

6

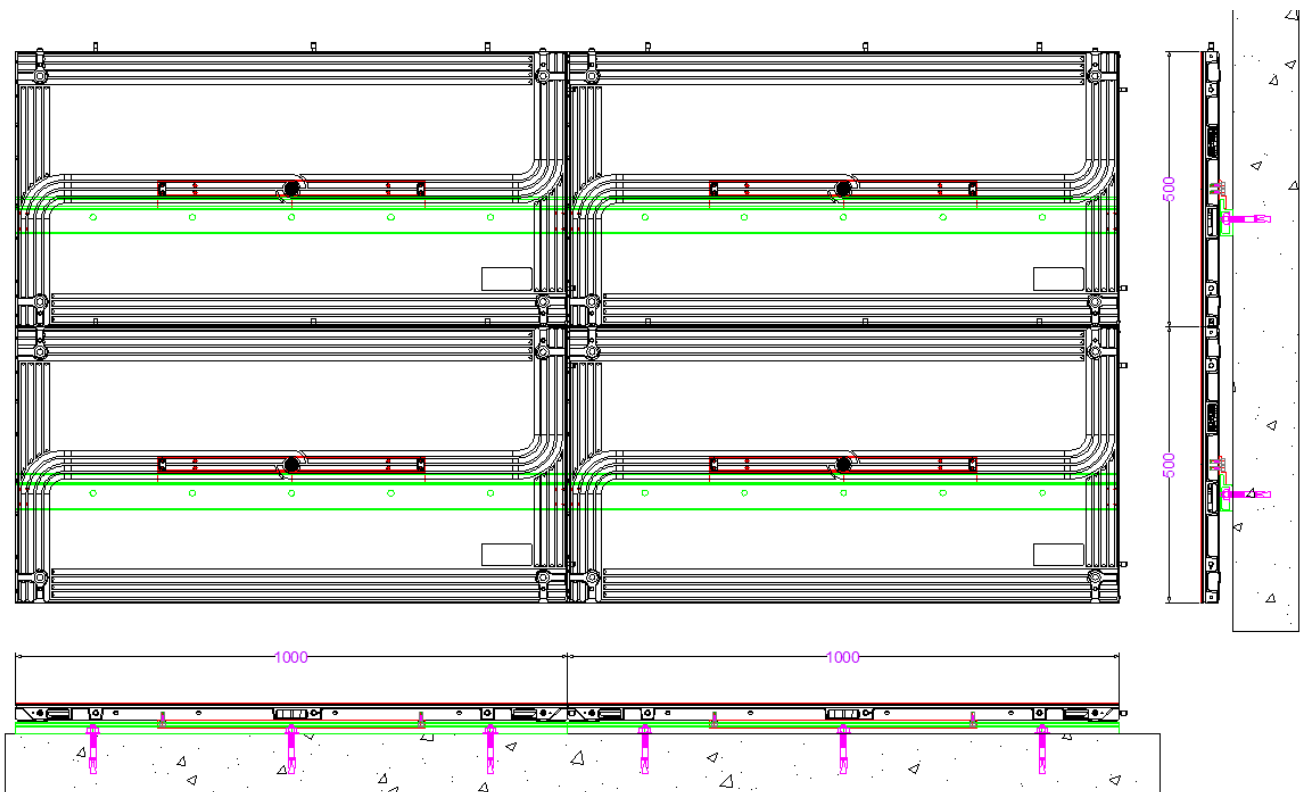
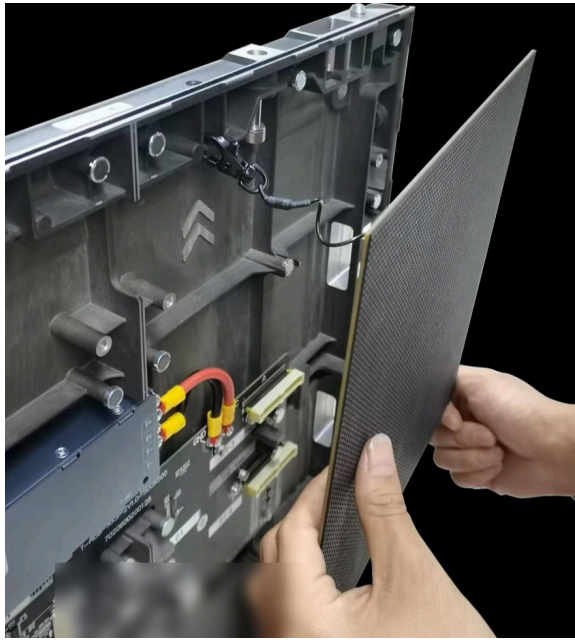
Power up and verify

Switch on the supply and complete the power-up verification in **3.2**. Confirm also that the display cabinets finish flush.

7

Refit the modules

Hang the module safety lanyard at the matching position on the cabinet, then refit the modules in sequence. The display face must finish flat, with no front-to-back step.



Wall-mount rail — partial installation diagram

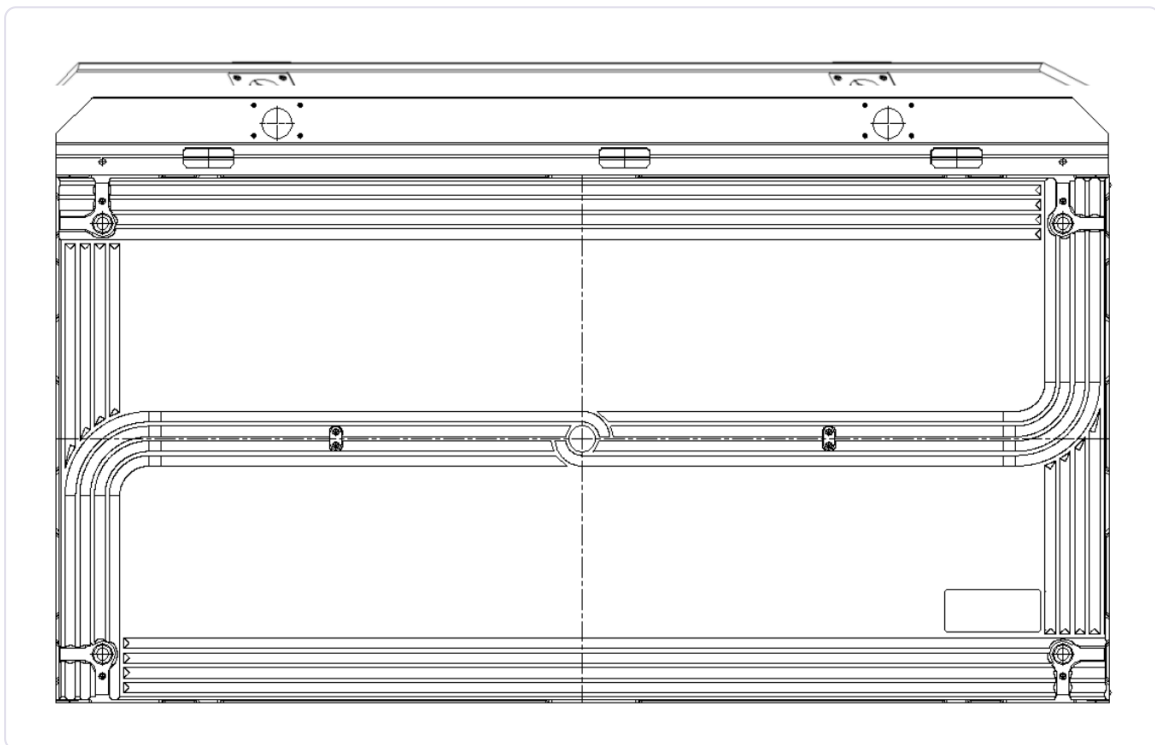
3.6 Hoist installation

Confirm that the site meets the requirements for lifting work and that the lifting points, lifting ropes and associated hardware meet the installation standards.

NOTE Preparation — on screens with a large number of cabinets, remove all modules first so that cabinet wiring and connections can be made easily. Once every cabinet is installed, follow the connection diagram issued with the project, complete the wiring and refit the modules.

1 Set the first hanging beam

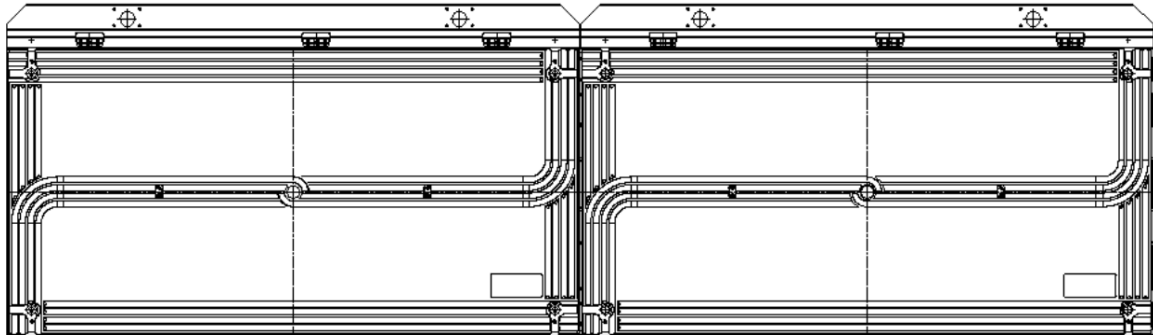
Find the hanging bar matching the cabinet, install the hanging beam at the corresponding hole positions and adjust the beam face for flatness. Fix and install the first cabinet.



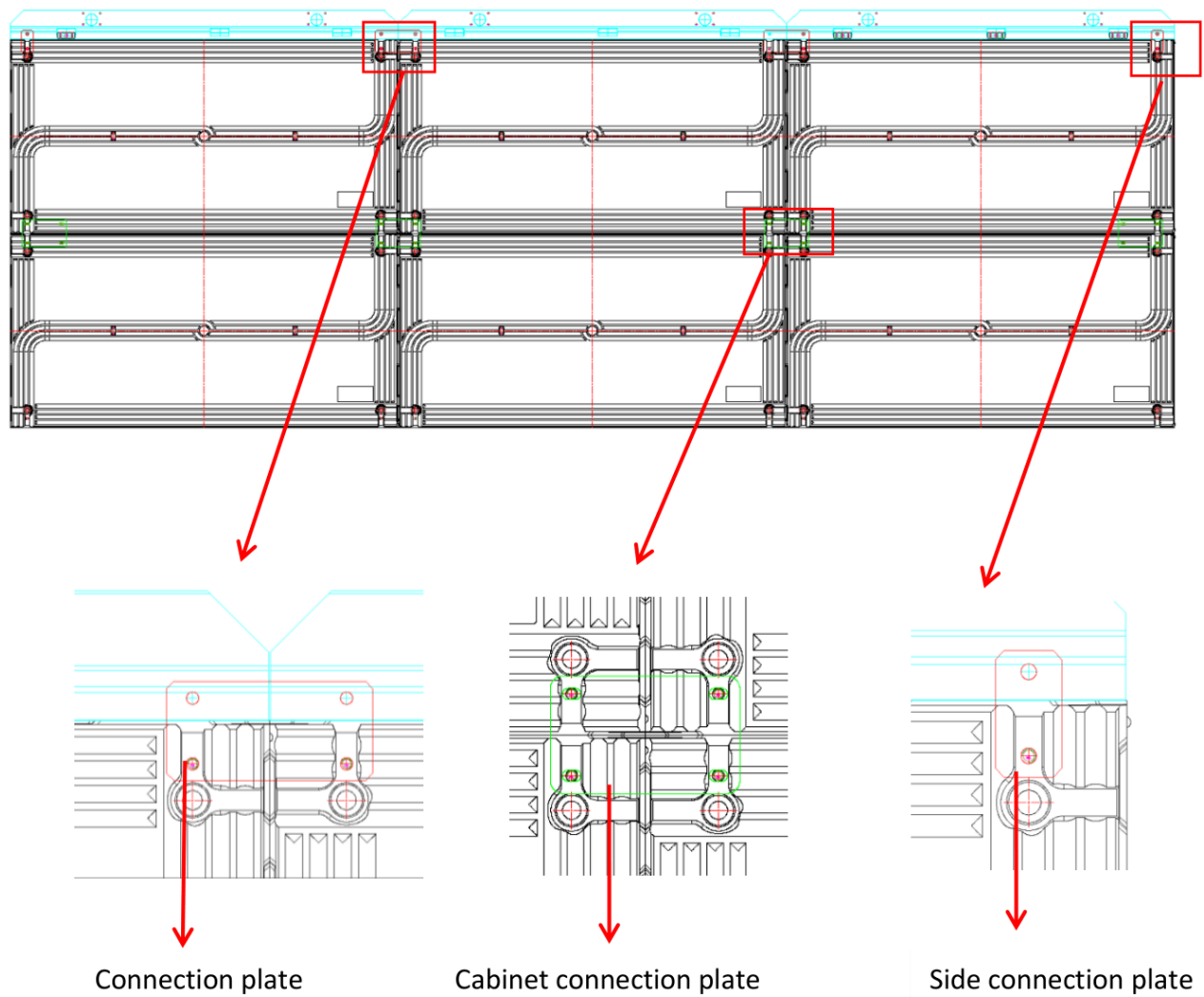
Single cabinet and hanging bar

2 Add the second beam and cabinet

Install the second suspension beam and cabinet using the same method, then lock the left and right connecting screws between cabinets.

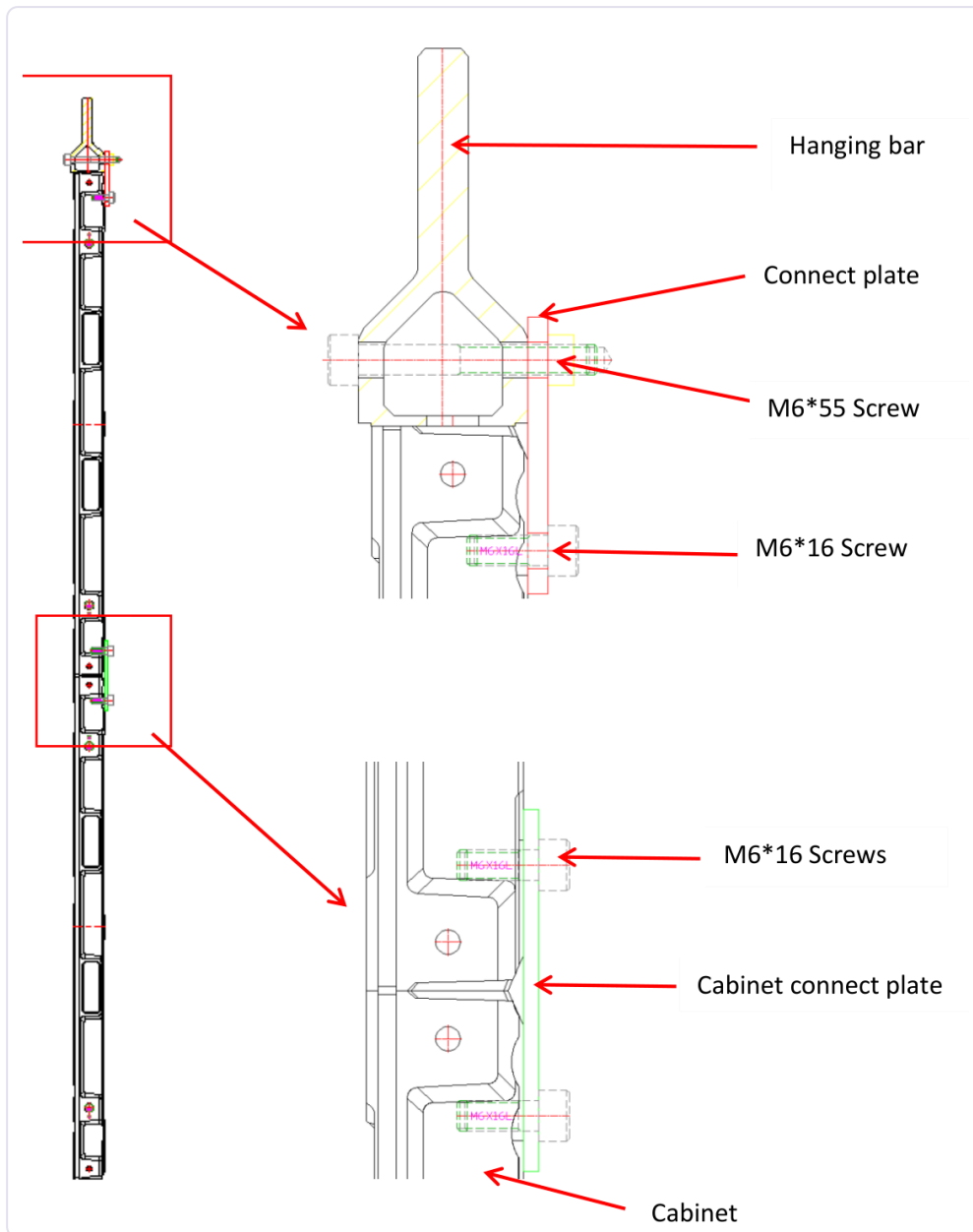
**3 Complete the screen**

Install the remaining cabinets in the same way. Lock the left and right connecting screws and the upper and lower connecting screws between cabinets, fit the corresponding connecting plates and adjust for flatness.



Connecting plate positions across the hoisted screen

NOTE Three plate types are used across a hoisted screen: the connection plate at the beam, the cabinet connection plate between cabinets, and the side connection plate at each screen edge. Fit every plate before final flatness adjustment.



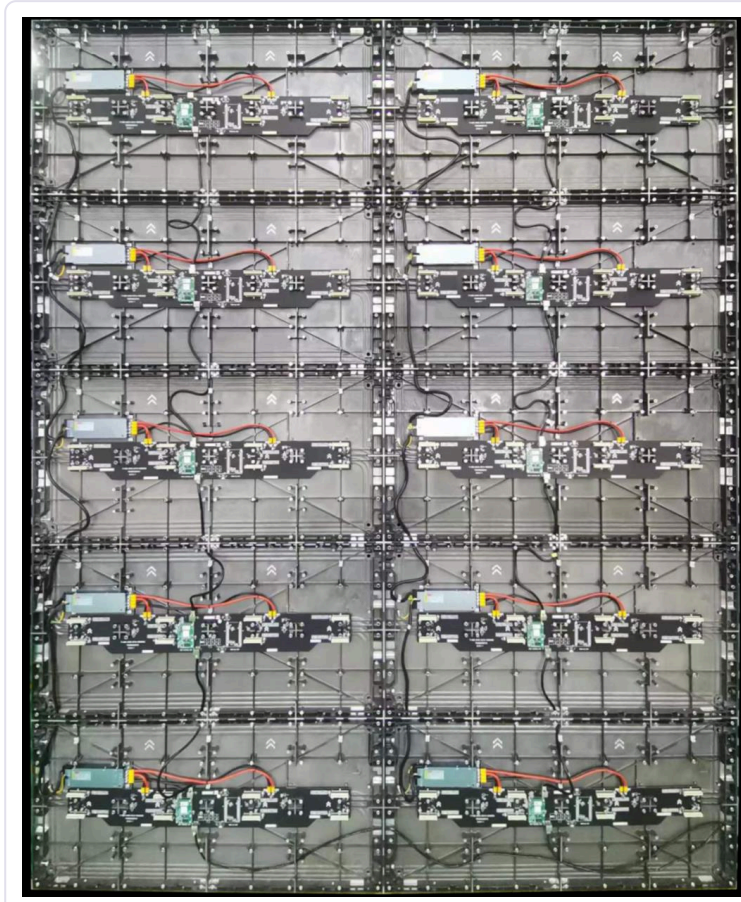
Hoist installation — side view

NOTE M6 × 55 screws fix the hanging bar to the connection plate; M6 × 16 screws fix the connection plate and cabinet connection plate to the cabinet. Install from the top down and dismantle from the bottom up.

4

Wire and power up

Connect the power cords and data cabling in accordance with the drawings issued with the project. Switch on the supply and complete the power-up verification in **3.2**.



Completed rear cabling — data cable and power cord

5

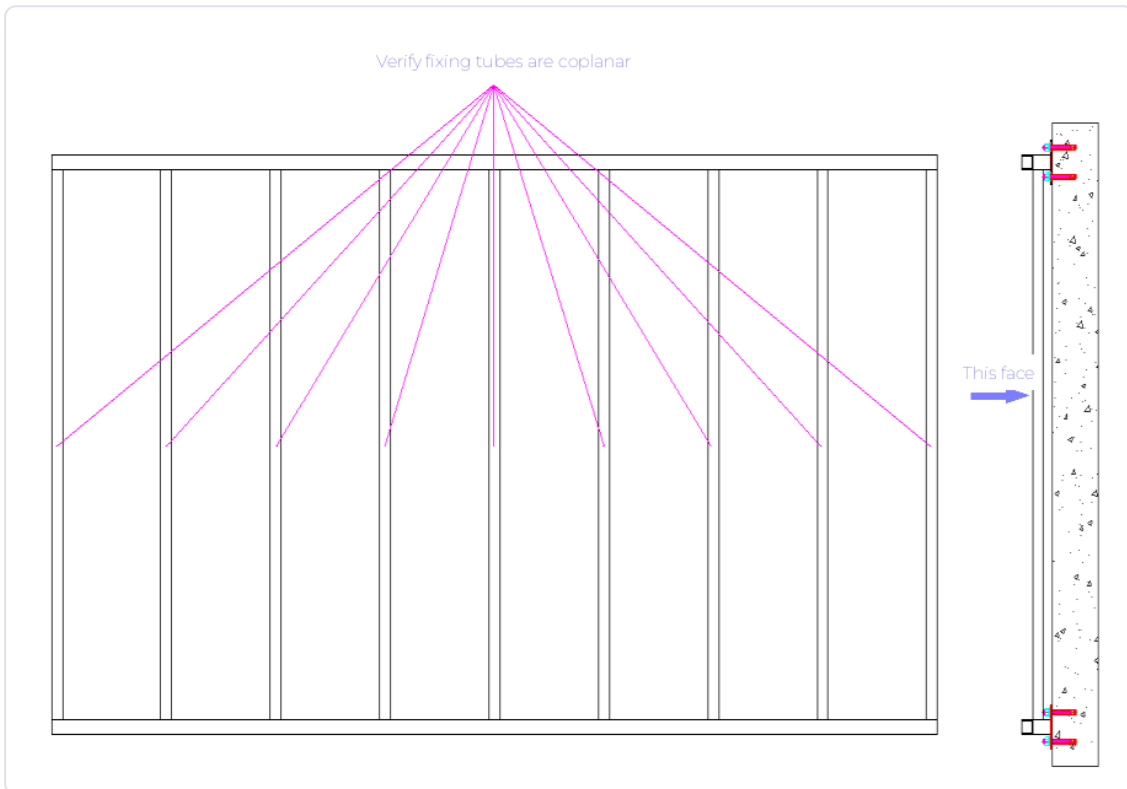
Refit the modules

Hang the module safety lanyard at the matching position on the cabinet, then refit the modules in sequence. The display face must finish flat, with no front-to-back step.

3.7 Steel structure installation

Confirm that the steel structure on site matches the dimensions on the drawing, that it is welded soundly and that the materials are to standard. Use a laser level to check the mounting face of the steelwork and confirm that the square tube carrying the screen sits in a true vertical plane.

Use a laser level and spirit level to confirm that the bottom structure of the display is level and square to the vertical posts. Complete these checks and confirm that there are no problems before starting the installation.

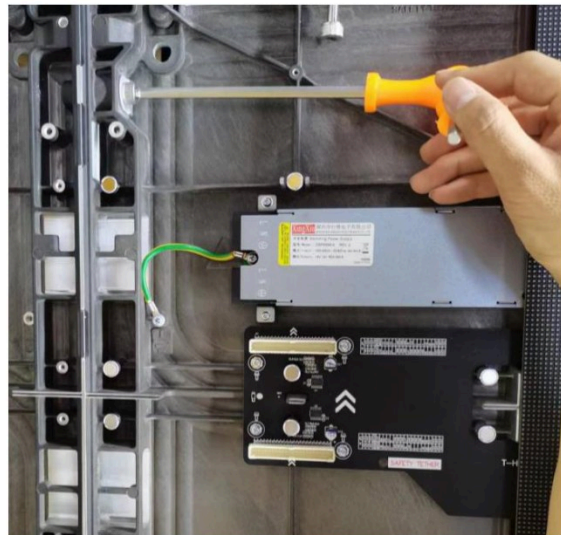
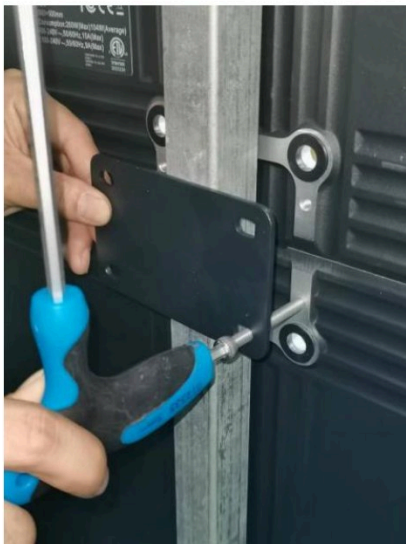
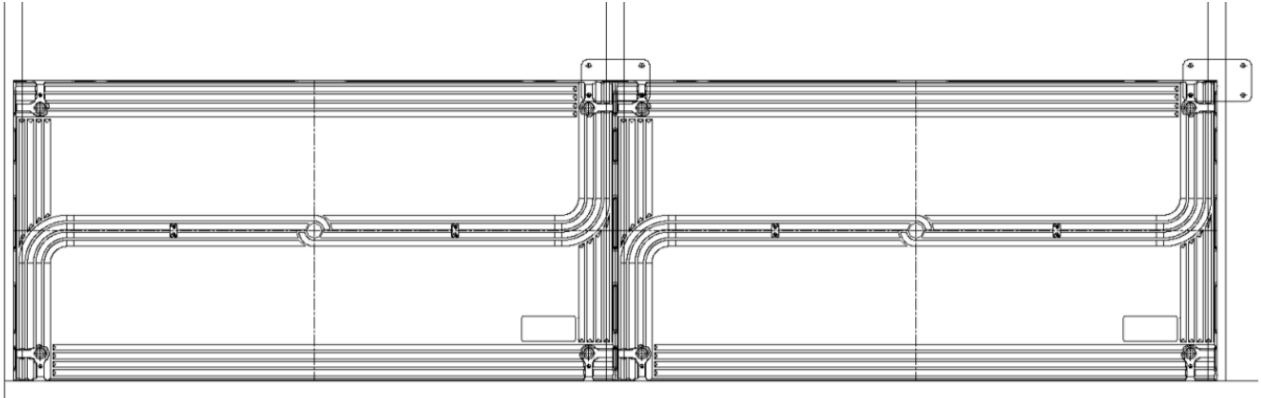


Steel structure — setting-out check

1

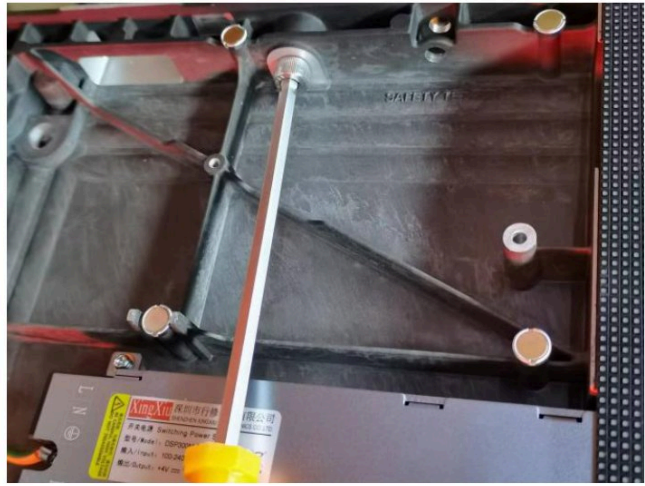
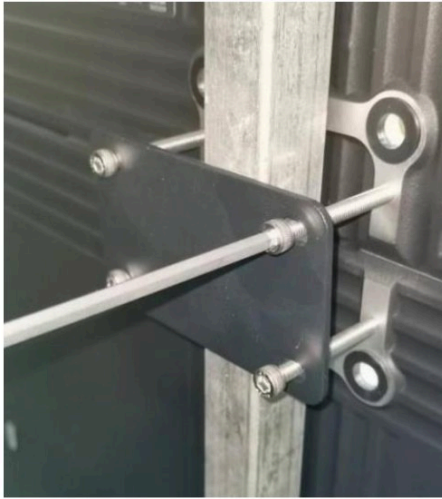
Set the first cabinets

Place a cabinet squarely onto the horizontal square tube and align both sides with the centre of the vertical member. Add the next cabinet, lock the connecting plate, then lock the left and right connecting screws of the cabinet.

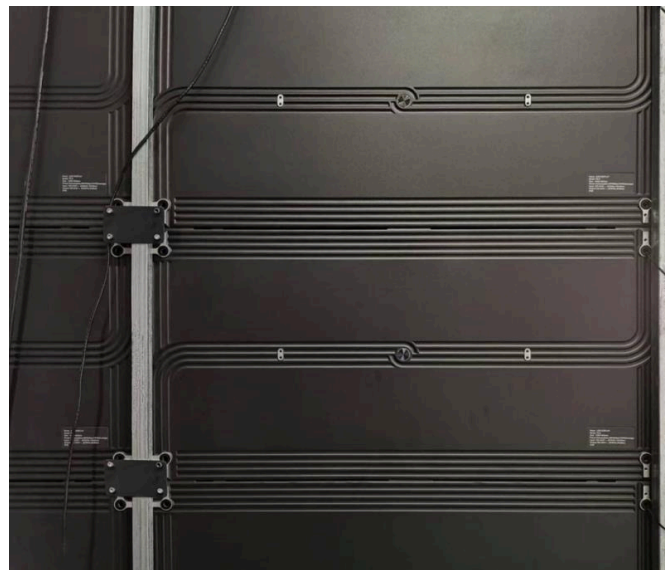


2 Build upwards

Install the bottom row in the same way, then add the upper cabinets in sequence, locking the connecting plates and the connecting screws between cabinets.

**3 Repeat to completion**

Repeat steps 1 and 2 until the whole screen is installed.

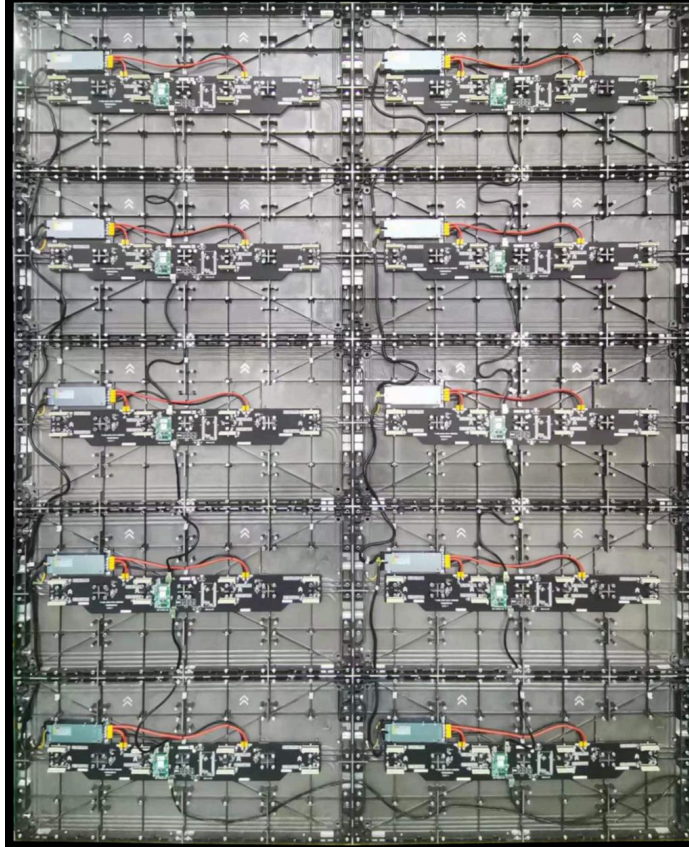


Completed steel structure installation

4

Wire and power up

Connect the power cords and data cabling in accordance with the drawings issued with the project. Switch on the supply and complete the power-up verification in **3.2**.



Completed rear cabling — data cable and power cord

5

Refit the modules

Hang the module safety lanyard at the matching position on the cabinet, then refit the modules in sequence. The display face must finish flat, with no front-to-back step.

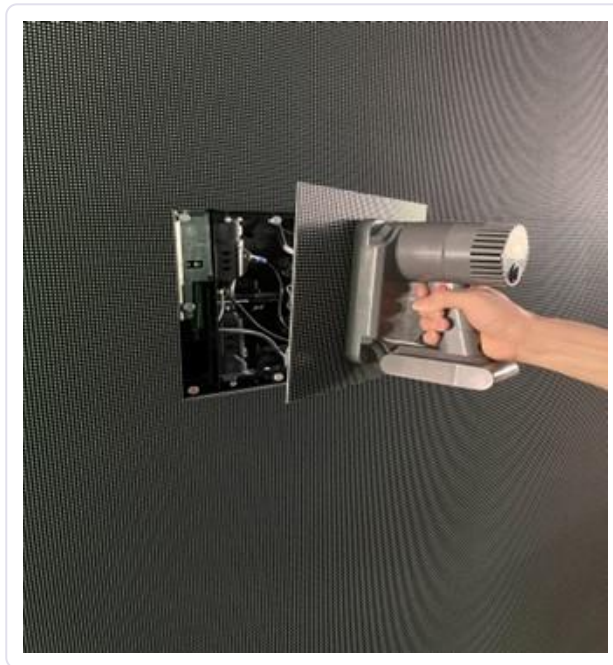
SECTION 4

4 Maintenance

WARNING To keep the work safe, all maintenance and installation operations must be carried out with the supply isolated.

4.1 Module replacement

- Hold the electric vacuum tool against the module face and press the button to draw the module clear.
- Support both the tool and the module throughout the operation so that the module cannot fall.
- When refitting, confirm that the arrow on the back of the module points the same way as the arrow on the hub board.



Drawing a module off the cabinet with the vacuum tool

4.2 Receiving card replacement

1. Isolate the supply and remove the four screws holding the receiving card.
2. Fit the replacement card and refit the screws removed earlier.
3. Assemble in the direction shown by the arrows, then repeat the power-up verification in **3.2** to confirm normal operation.

4.3 Troubleshooting

Fault	Probable cause	Action
Display will not power up	1. No supply to the display. 2. Signal transmission cable not connected correctly. 3. Graphics card not seated correctly. 4. Screen switched off in the control software, or a fault in the control system. 5. Receiving card damaged. 6. Control system holds no program parameters.	1. Confirm that the screen supply is correct. 2. Check that the DVI and other transmission cables are properly connected. Set the computer graphics card to duplicate or extend mode. 3. Set the control system software to the open state. 4. Check that the control system is correctly installed. A flashing green light with the red light on indicates normal operation; a green light that is steady or off indicates a damaged receiving card or no signal. Replace the card if it is damaged. 5. Check that the receiving card is working normally (red light on) and that the transmission signal is present (green light flashing). 6. Open the control software, load the program parameters for the display and send them to the receiving card for storage.
Display level abnormal	1. Program parameters sent to the display are incorrect. 2. Resolution setting of the graphics card or control system is incorrect.	1. Check that the display parameters sent are correct. If parameters are missing, contact Aurora Displays. 2. Reset the resolution of the graphics card and control system. Restart the computer after changing the control system resolution; where an external sending unit is used, isolate its supply and restart.
Black screen or duplicated picture	1. Power cord damaged. 2. Receiving card damaged.	1. Check that the supply to the cabinet is correct. 2. Check that the receiving card is working normally (red light on) and transmitting signal (green light flashing). If the green light is steady or off, replace the receiving card.

Fault	Probable cause	Action
Single cabinet loses power	1. Power supply abnormal, or the ribbon cable to the module is loose. 2. Input ribbon cable to the module damaged by displacement. 3. Signal receiving IC damaged, or no output signal from the module above.	1. Check that the supply voltage at the module is normal. 2. Reseat the ribbon cable. 3. Replace the input ribbon cable for the module. 4. Replace the module. 5. Replace the module above this one.
Colours missing on one module	1. Ribbon cable to the module is loose. 2. Input ribbon cable damaged by displacement.	1. Reseat the female connector on the 2.0 interface. 2. Replace the input header ribbon for the module.
Multiple LEDs dead or missing colours	1. LED failure, dry joint or short circuit. 2. Driver IC controlling the affected LEDs is damaged.	1. Reflow the LED pins or the driver IC pins with a soldering iron, or replace the LED. 2. Replace the integrated circuit.
Cannot connect to the control system	1. Graphics card settings incorrect. 2. Control system USB not inserted correctly, or driver software not installed. 3. Cabinet or module failure.	1. Check that the graphics card settings are correct. 2. Check that the USB control cable is properly connected and that the USB driver software is correctly installed. 3. Check the module for faults.

NOTE Where a fault persists after the actions above, record the cabinet position, the indicator behaviour and the control system parameters, then contact Aurora Displays technical support.

SECTION 5

5 Packaging

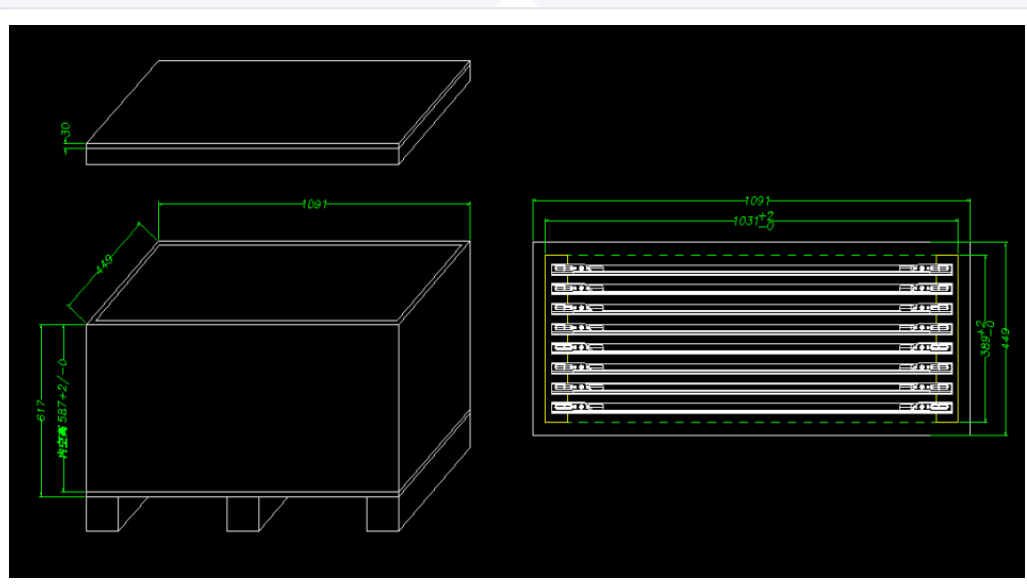
Standard packaging ships cabinets and modules separately.

8

cabinets per timber case

64

modules per case



Standard packaging arrangement

NOTE Check all cases for transit damage before signing for delivery. Retain the timber cases where cabinets may need to be relocated or returned.



Aurora
Displays
Group

Innovation.**Always**

Thin Cabinet Series

User Manual

AUSTRALIA

Aurora Signage
1300 841 542
sales@aurorasignage.com.au
aurorasignage.com.au

GLOBAL

Aurora Displays
+86 400 850 5098
auroradisplays.cn

DOCUMENT

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