



TRUE PERFORMANCE · CARE FOR DVLED VIDEO WALLS

Cleaning and Maintenance Instructions

How to keep your LED video wall clean, safe and colour accurate: cleaning by surface type, operation, maintenance schedule, module replacement and troubleshooting, for indoor and outdoor installations.



Before you start

An LED wall runs on mains voltage and is often mounted at height. These rules apply to every cleaning job and every intervention.



Switch off and isolate

Before any cleaning with cleaner or intervention, switch the wall off and disconnect the mains supply. Secure it against being switched back on, for example at the sub distribution board.



Let it cool down

Wait at least 15 minutes after switching off. Modules and power supplies can be warm, and a damp cloth on a warm surface leaves streaks.



Avoid static discharge

Work on modules, receiving cards and cables only with a grounded ESD wrist strap. Hold electronics by the frame, never by components or contacts.



Who may do what

Trained staff may clean the surface. Work on cabinets, power supplies and cabling is for qualified electricians or the TRUE service team only.



Working at height

Use only inspected ladders, scaffolds or lifts. Never lean on the LED surface and never put tools down on it.



Power supplies, screen controllers and data cables behind the wall: work here only when isolated and by qualified staff.



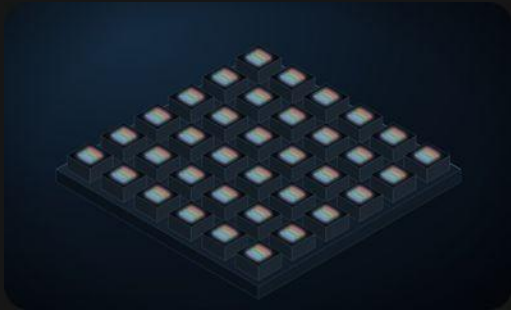
No liquid inside the wall

Water, cleaning agents or condensation must never reach joints, vents or connectors. That is why you never spray the surface: you only ever dampen the cloth.



Know the surface before you clean it

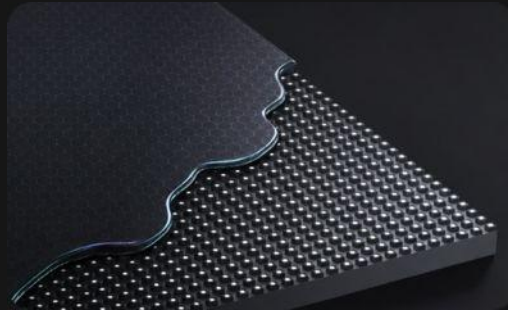
How a wall may be cleaned depends on how its LEDs are protected. The technology of your wall is listed in the panel data sheet.



Open SMD and IMD

Dry: brush, air blower or Cyber Clean

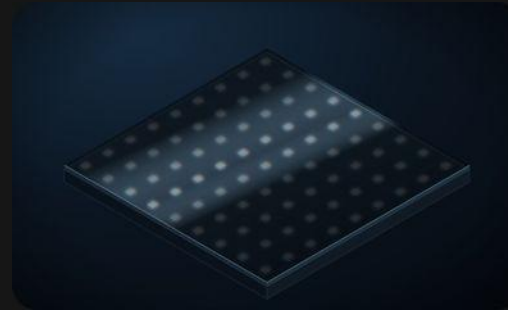
The LEDs stand proud on the board. A cloth, a fingernail or an edge can shear one off. No cloth, no liquid.



GOB and X-GOB

Dry, or microfibre cloth with Würth TFT/LCD cleaner

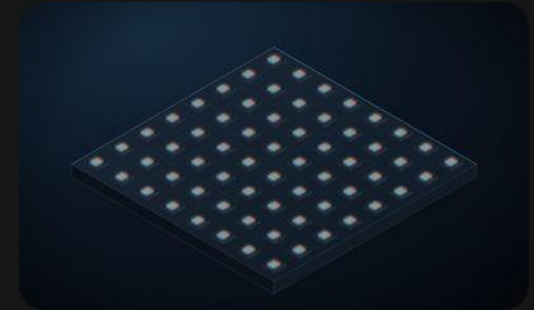
A transparent protective layer covers the LEDs. The surface is flat and can be wiped with light pressure. Module edges stay sensitive.



COB

Dry, or microfibre cloth with Würth TFT/LCD cleaner

The LED chips sit under one continuous resin layer. The most robust surface, but matt: lift grease and fingerprints with a clean cloth, do not rub.



MIP

Depends on the version, if unsure treat as SMD

Micro LED in Package comes open or coated. Check the data sheet. Without a coating the same care applies as for open SMD.

When in doubt, always choose the gentlest method: dry and without contact. A quick question to TRUE service costs nothing, a sheared pixel costs a module swap.



Cleaning in six steps

For routine care, step 2 is usually all it takes. Wipe with cleaner only when dust removal is not enough and the surface is coated.



1

Switch off and cool down

Switch the wall off through the control system and isolate the mains when using cleaner. Let it cool for 15 minutes. On a dark surface, side light shows dust and streaks best.



2

Remove dust dry

Soft antistatic brush or air blower, from top to bottom. Compressed air only oil free, at low pressure and from 30 cm. Open LEDs also with Cyber Clean (page 5).



3

Cleaner on the cloth, not the wall

Only for GOB, X-GOB and COB: spray Würth TFT/LCD cleaner (item 0890150100) sparingly onto a microfibre cloth or a Zewa kitchen towel. No other cleaners.



4

Wipe gently in one direction

Wipe horizontally along the module rows with minimal pressure, not in circles and never levering over module edges. Turn the cloth often so dirt is not dragged across the surface.



5

Let it dry completely

Wait at least 30 minutes before switching on. Joints and edges must be visibly dry, pick up remaining moisture with a dry cloth.



6

Switch on and check

Show test images in white, grey and the primary colours at reduced brightness. Look for dark pixels, colour patches and streaks, and check the status in ERMAC.

Avoid fingerprints: anyone working at the wall wears clean, lint free cotton or nitrile gloves.



What helps the surface and what harms it

Most damage to LED walls does not happen in operation but during cleaning. This list belongs in your cleaning plan.



Do

- Soft antistatic brush
- Air blower or oil free compressed air at low pressure
- Clean microfibre cloth, or a Zewa kitchen towel with Würth TFT/LCD cleaner
- Würth TFT/LCD cleaner sprayed onto the cloth, on GOB, X-GOB and COB only
- Cyber Clean on open LEDs, only while soft and before its expiry date
- Clean gloves when working at the surface
- Wipe along the module rows with minimal pressure



Never

- Solvents such as acetone, thinner or petrol
- Other cleaners: alcohol, glass cleaner with ammonia or chlorine
- Abrasives and scouring sponges
- Spraying directly onto the wall
- Pressure washers or steam cleaners
- Hard, crumbling or expired cleaning compound
- Vacuum cleaner with a brush nozzle directly on the LEDs
- Fingernails, scrapers or adhesive tape on the surface, pressure on single modules



X-GOB coating: flat and wipeable, yet still sensitive at the module edges.

Cyber Clean for open LEDs

A soft cleaning compound for electronics that lifts dust from joints and between the LEDs. Press on gently, wait a moment, pull straight off, never rub. Use it only while it is soft and elastic: check the expiry date and discard hard or crumbling compound at once, or pieces stay between the LEDs. Turned grey means used up. Do not store it warm.



Outdoor specifics

Rain does not clean an outdoor wall, it leaves lime and dust marks behind. The location sets the rhythm.



Interval by location

Usually every three to six months. More often on main roads, at the coast, under trees, near building sites and in industrial areas.



Low pressure, soft brush

Remove sand and dust dry first. Then wash with a mild, diluted cleaner and a soft brush, horizontally and from top to bottom, and rinse with cold water without pressure. Let it dry for 12 hours before switching on.



Bird droppings, pollen, salt

Soften and rinse off bird droppings and salt deposits promptly, never scrape them off. Left for long, they attack coating and seals.



Seals and drainage

At every cleaning, check the rear cover, cable glands and drainage openings. Remove leaves and dirt so water can run off.



Keep the light sensor clean

The brightness sensor drives the luminance through ERMAC. If it is dirty or covered, the wall runs too dark by day or too bright at night.



IP65 spray test from both sides: protected against water jets, not against high pressure.

Why no pressure washer?

IP65 means protection against water jets from a 6.3 mm nozzle at 12.5 l/min from about 3 m. A pressure washer works at 100 bar and more, often from a few centimetres. That forces water past every seal and can damage the coating and the LEDs.



Operation and environment

Temperature, humidity and a few operating habits have a real effect on the service life of the wall.

AMBIENT CONDITIONS (TYPICAL)

	Indoor operation	Outdoor operation	Storage
Temperature	-10 to +40 °C	-20 to +50 °C	-20 to +60 °C
Relative humidity	10 to 80 %	10 to 90 %	10 to 85 %
Condensation	not permitted	not permitted	not permitted

The values in the data sheet of your series are binding. Condensation forms mainly when cold cabinets are brought into warm, humid rooms.



Power on and off in order

On: control system and sources first, then the wall, never into a full white image. Off: the wall first, then the control system.



No still images for hours

Logos in a fixed position age the LEDs unevenly. Vary the content, and avoid full white at maximum brightness for long periods.



Keep ventilation clear

Keep vents and rack fans free of dust. Never point air conditioning or a humidifier directly at the wall.

After a long shutdown: power up in steps

LED components absorb moisture while switched off. If the wall was off for a long time or in storage, raise the brightness in steps so the moisture escapes slowly.

Step	Brightness	Duration
1	10 %	2 hours
2	30 %	2 hours
3	60 %	2 hours
4	80 %	2 hours
5	100 %	1 hour, then normal operation

Apply after more than 7 days off in high humidity, after more than 30 days off or in storage, and after any moisture ingress. Better to prevent it: run the wall at least twice a week for two hours.



Maintenance schedule at a glance

Guide values for continuous operation. For rental use, the plan also applies before and after every job.

Interval	Task	Indoor	Outdoor
Daily	Visual check of the image, check status messages in ERMAC (temperature, voltage, connection)	●	●
Monthly	Remove dust dry, check vents and rack fans, check a test image for dark pixels	●	●
Quarterly	Clean the surface as in chapter 3, clean the light sensor, check fans and filters, check cables and connectors are seated firmly	○	●
Every 6 months	Check seals, cable glands and drainage, look for water marks inside cabinets, check fixings and corrosion	○	●
Yearly	Electrical inspection and grounding to local regulations, back up the ERMAC configuration, colour and brightness measurement	●	●
Yearly	Have structure and fixings, lightning and surge protection inspected by a qualified contractor	○	●
After an event	After storm, hail, water ingress, impact or modification: visual inspection and function test before switching back on	●	●

● recommended ○ as required. Keep a maintenance log with date, findings and replaced parts. TRUE carries out inspection, recalibration and on site service on request.



Module replacement and spare parts

Modules are replaced from the front while the wall stays in place. ERMAC makes sure the new module does not stand out.



Use the right tool only

Depending on the series, use the magnetic or suction lifter, placed in the centre of one module, never across a joint. Never lever at edges with a screwdriver or fingers.



ESD protection

Isolate the wall, wear an ESD wrist strap, hold the module by its frame only and lay it LED side up on a soft, clean surface.



Insert it straight

Align the module with its guides and insert it straight without tilting the connectors. It must then sit flush with its neighbours.



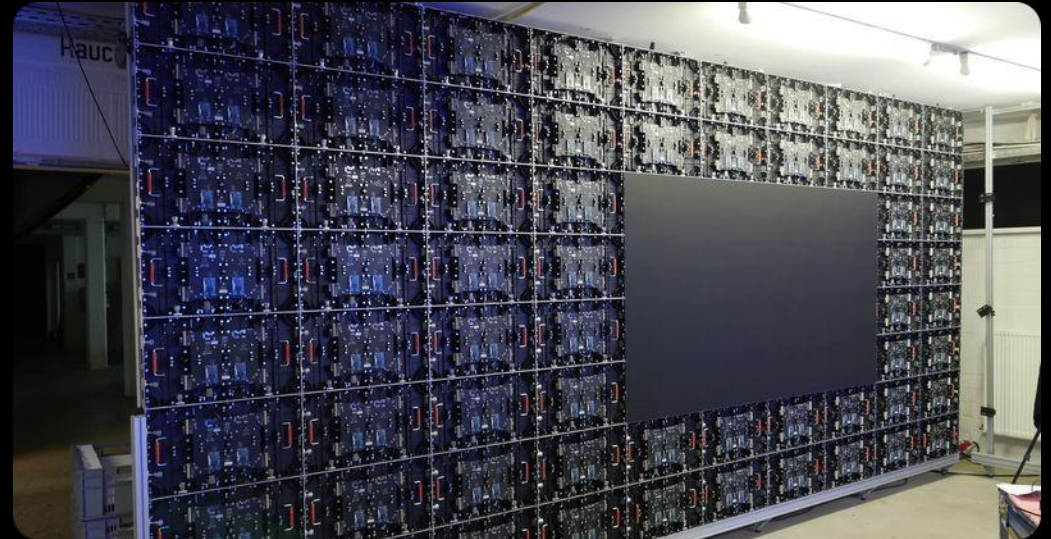
Automatic recalibration

ERMAC detects the new module and applies the calibration data. It blends in with its neighbours in brightness and colour.



Spares from the same batch

Use spare modules from the production batch of your wall where possible, and log each swap with position and serial number.



Front service: modules sit individually in the cabinet and go in from the front, cabinet and cabling stay untouched.

Storing spare parts correctly

- In original packaging and ESD bag, dry at 10 to 30 °C and below 60 % relative humidity
- Do not stack without protecting the LED side
- Before fitting, power up stored modules in steps as after a shutdown



Troubleshooting: look first, then replace

ERMAC reports the state, temperature and voltages of every cabinet. Many faults can be narrowed down before anyone fetches a ladder.

Symptom	Possible cause	Action
Single pixels dark or always on	LED or driver channel faulty	Note the position, swap the module at the next service, do not press on the LED
One module dark or wrong colours	Connector loose, module faulty	Reseat the module while isolated, replace with a spare if needed
A whole cabinet dark	Power supply or receiving card	Check the power supply and its status in ERMAC, check mains and data cables at the cabinet
Chain dark from one cabinet onwards	Data cable or loop interrupted	Check and reseat the data cable at the first affected cabinet
Whole wall black	No signal, processor or mains	Check the source, the SPU-32 input, the fibre to the LSC and the mains supply
Replaced module stands out	Calibration data not applied	Trigger recalibration in ERMAC or contact TRUE service
Outdoor too dark by day, too bright at night	Light sensor dirty or covered	Clean the sensor, keep its view clear, check the brightness curve in ERMAC
Flicker or stripes only on camera	Frame rate, shutter, sync	Check frame rate and genlock on the SPU-32, adjust the camera shutter

If there is moisture in the wall, a burning smell, smoke or damaged cables, isolate the wall immediately and call TRUE service.



Questions about care? We are here to help.

For a service request, have the project number, the serial number of the cabinet or module, a photo of the fault and the ERMAC status message ready. We start with remote diagnosis and, if needed, come to you with the right spare part.



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