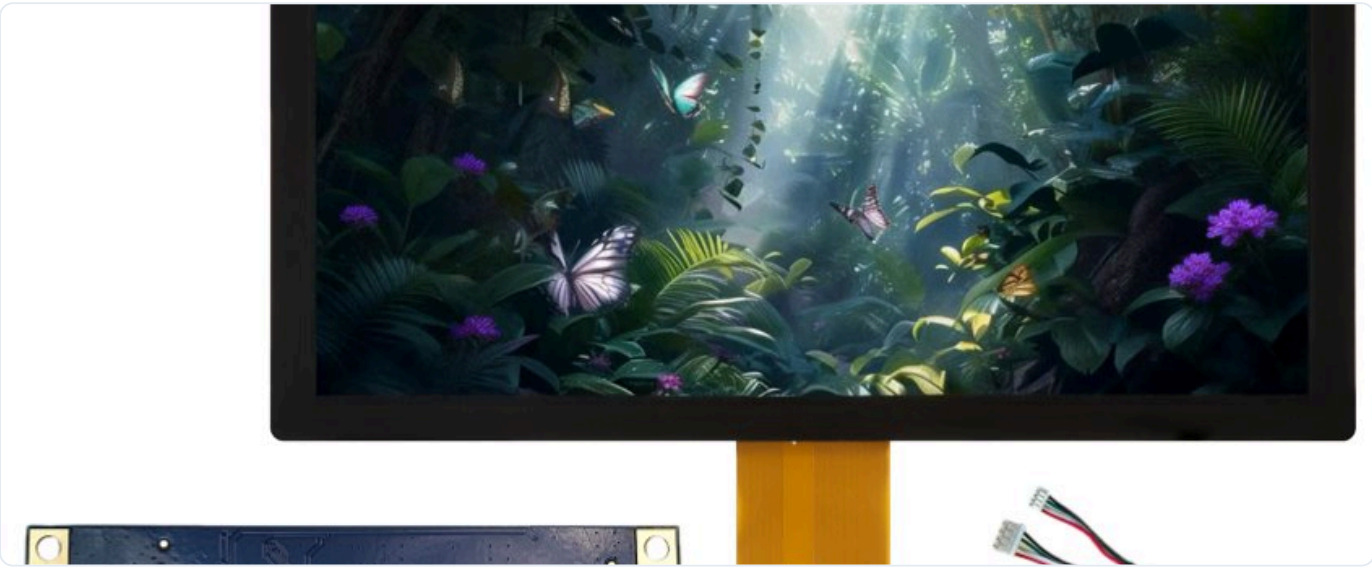
WCIMCI

INSTALLATION & CALIBRATION GUIDE · 2026

From crate to first touch

Eight steps for an infrared frame, six for a capacitive panel, the fault table we use on support calls, and the calibration routine that keeps a profile alive across a re-image.



Technical support direct: info@wcimci.com · WhatsApp +86 153 2343 9001 · WeChat wm-lcd
Remote calibration sessions, 10–15 minutes, screen shared both ends.
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1. Infrared frame — eight steps

1

Check the frame against the display before you unwrap anything else

Lay the frame face down on a clean surface and measure the diagonal and both outer edges. A frame that is 5 mm out will still mount, but the active area will stop short of the display edge and the first finger at the border will read off-centre.

2

Leave the gap the drawing asks for

The frame sits around the display, not on it. The usual clearance is 1.5–2 mm between the LCD bezel and the inside of the frame extrusion. Zero gap pinches the filter strip; a 5 mm gap lets ambient light into the beam path and shows up as ghost touches in a bright room.

3

Fix the corners first, then the middle

Torque corner blocks to 0.5 N·m and work outward. Overtightening twists the extrusion, and a twisted frame reads as a linearity error that no amount of calibration will remove.

4

Fit the filter strips before the display goes in

The strip is what gives the frame its 30,000 lux immunity. It sits in the groove on the inner face and must not be stretched — a stretched strip leaves a gap at the corner, which is exactly where ghost touches appear.

5

Ground the frame to the chassis

Under 4 Ω, measured from the extrusion to the chassis, not through anodising. Use a toothed washer against bare metal. A floating frame picks up switching noise from the LED driver and shows it as cursor jitter that only some units have.

6

Route the USB cable away from the inverter

USB 2.0 is reliable to about 3 m passive. Beyond that use a powered hub or an active extension — never a passive 5 m cable with a 40-point frame. Keep the run at least 100 mm from the backlight inverter or LED driver; a 200 Hz report rate is easy to disturb.

7

Plug in with the display off, then power up

Enumerating while the panel is booting occasionally leaves the controller in mouse mode. Power the display first, wait for it to settle, then connect the frame.

8

Calibrate last, with the frame already fixed

Calibrating on the bench and mounting afterwards is the single most common cause of a frame that reads 4 mm off at one corner. Fix, then calibrate, then test all four edges 5 mm in from the border.

2. Capacitive panel — six steps

1. **Decide the bonding before you cut the housing**

   OCA sheet, liquid OCR, double-sided tape, or an air gap. OCA is cleanest and costs the most; tape is fine indoors and fogs outdoors. The stack-up decides your housing depth, so this is a drawing-stage decision.

2. **Bond in a clean area, not on the line**

   One particle between sensor and glass is a bubble, and a bubble over 0.3 mm in the active area is a reject. Laminating in the same room as the frame saw is the most common cause of a bad first batch.

3. **Keep the FPC bend radius at three times its thickness**

   No creases, no 90° folds, no tension on the connector. Tape the tail down within 10 mm of the connector so vibration cannot walk it out. A tail that fails in the field always fails at the crease.

4. **Ground the sensor shield to the chassis**

   Under 4 Ω, same rule as infrared. A floating shield picks up SMPS noise and appears as jitter on some units only.

5. **Match the cover glass to the firmware**

   1.1 mm, 1.8 mm and 3 mm glass need different sensitivity settings. The panel is tuned for the stack you declare; if you change glass after approval, the tuning has to change with it.

6. **Test twenty points and all four edges**

   Twenty simultaneous fingers, then a finger dragged along each edge 5 mm in from the border. Edge linearity is where a panel that passed a five-point centre test still fails in the field.

3. Calibration

Infrared frames are calibrated in the controller, not in the operating system. The profile is written to EEPROM, so a re-image, a motherboard swap or a different host does not lose it. A capacitive panel is tuned in firmware and does not need a desktop calibration at all.

Mode	Time	Use it for
4-point	20 s	Flat panel, frame already fixed, no visible offset
9-point	45 s	Default for kiosks and meeting boards; corrects mild edge bow
25-point	2 min	Above 86 inch, curved frames, video walls and L-shape builds
Profile clone	5 s	Production line: write one known-good profile to every unit

> **Remote calibration.** Share the screen, install the tool, we drive the four or nine points with you on the call. Most sessions finish in 10–15 minutes including the download.

4. When it does not work

Symptom	Usual cause	Fix

Cursor sits a few mm off, worse toward one corner	Frame mounted after calibration, or a twisted frame	Re-run calibration with the frame fixed; check for rock at the corners
Ghost touches in dry weather	Frame not grounded, or grounded through anodising	Toothed washer to bare metal, measure under 4 Ω
Works, then drops out when the display wakes	USB port browning out — 320 mA peak at 40-point	Powered hub, or a port that holds 500 mA; check with a USB power meter
Dead vertical stripe	One LED tube failed, or a glass edge crossing the beam	Swap the tube; move the glass inside the active area
Touches register only near the centre	Dirty filter strip, or calibration done with an object on the glass	Clean the strip with isopropyl, clear the surface, recalibrate
Two-finger gestures report as one finger	Controller flashed in single-touch mode	Send the label photo — reflash tool or controller swap
OS shows “HID-compliant mouse”	Wrong HID descriptor	Reflash to the touch descriptor
Capacitive panel jitters only on some units	Sensor shield not grounded, or SMPS noise	Bond the shield to chassis, route the tail away from the supply
Capacitive dead band along one edge	Air gap too large, or printed border overlapping the sensor	Reduce the gap; check the border width against the drawing
No touch on Linux, fine on Windows	hid_multitouch not loaded	modprobe hid_multitouch, then check dmesg

5. Before you call support

- Photograph the controller label — it carries the flash version and the touch-point profile.
- On Windows: Device Manager → Human Interface Devices; look for “HID-compliant touch screen”.
- On Linux: `lsusb`, `dmesg | grep -i hid`, `libinput list-devices`, `evtest`.
- On Android: `getevent -l` — a working digitizer streams ABS_MT_POSITION_X; a mis-mapped one streams REL_X like a mouse.
- Tell us what changed since it last worked: new cable, new image, new housing, new mounting position.

Send those five things and the reply is usually a fix rather than a form. **info@wcimci.com** · WhatsApp +86 153 2343 9001.