

Capacitive Touch Design Checklist

Design inputs for capacitive touch panels, overlays, sensor circuits and HMI assemblies.

Use this before requesting a capacitive touch interface, glass/acrylic panel or touch-sensitive overlay.

Touch panel overview

Application/device

Overlay material

Overlay thickness

Touch key count

Controller/IC preference

Use with gloves or water

Mechanical and overlay details

- ☐ Overlay material and thickness are selected: PET, PC, acrylic, glass or other panel.
- ☐ Touch active areas, icons and spacing are clearly marked.
- ☐ Display window, LED window, dead-front icons and backlighting needs are shown.
- ☐ Housing grounding, metal frame and mounting method are reviewed.
- ☐ Adhesive layer and air gap are controlled because they affect sensitivity.
- ☐ Surface finish, printing, window clarity and cleaning resistance are defined.

Electrical and firmware inputs

- ☐ Sensor layout, channel count and controller preference are known or open for JASPER review.
- ☐ Power supply, communication interface and connector/pinout are stated.
- ☐ Grounding, shielding and noise source locations are identified.
- ☐ ESD, EMI, water film, gloves or false touch requirements are stated.
- ☐ LED/display/backlight circuits are separated from touch sensing risk areas.
- ☐ Firmware tuning or customer controller validation plan is defined.

Prototype and validation

- [] Samples will be tested inside the real housing, not only on the bench.
- [] User conditions are known: dry finger, wet finger, gloves, cleaning, vibration or outdoor use.
- [] Sensitivity acceptance and false-trigger conditions are defined.
- [] Temperature and humidity range is included in validation.
- [] Touch response is checked near edges, display openings and grounded metal parts.
- [] Revision control covers overlay artwork, sensor circuit and firmware parameters.

Information to send to JASPER

- Mechanical drawing and artwork.
- Overlay material/thickness target or appearance sample.
- Touch key layout and expected operating conditions.
- Controller, connector and communication requirements.
- Housing drawing, grounding plan and nearby noise sources.
- Validation requirements for gloves, water, ESD or EMI.

Touch design decision log

Overlay approved

Sensor layout approved

Controller approved

Ground/shielding approved

Validation test required

Open issues

Send drawings and requirements to JASPER engineering

sales@jasperele.com | +86-769-87002271 | www.jasperle.com