

CapKey®

Capacitive Buttons, Sliders and Wheels

Specification sheet

Features:

- Capacitive Buttons, Sliders and/or Wheels behind a glass or plastic front.
- Standalone User Interface or in combination with a PCAP touchscreen.
- Transparent capacitive sensors (based on ITO material).
- Can be used in front of an illuminating LED, a LCD screen or an insert layer.
- Large design freedom in button shape and size.

Mechanical properties:

Sensor type	Aspect	Properties
Button	Size	5x5 mm or larger
	Spacing	6 mm or wider, center to center
	Shape	solid or ring shaped electrodes, almost any size and shape possible
	Panel thickness	Up to 15 mm glass Up to 10 mm plastic
Wheel	Diameter	30 mm ... 80 mm
	Panel thickness	Up to 4 mm glass Up to 3 mm plastic
Slider	Length	Typical: 50 ... 100 mm
	Width	Typical: 12 mm
	Shape	Straight, bended arc or other irregular shape
	Panel thickness	Up to 4 mm glass Up to 3 mm plastic

Support is given for the following capacitive controller technologies:

Manufacturer	Acquisition	
	Method	Name
Atmel	Self	QTouch
	Self	QTouchADC
	Mutual	QMatrix
Cypress	Self	CapSense Express
Freescale	Self	MPR121 controller
Microchip	Self	CVD
	Self	CTMU
	Self	RightTouch
ON Semiconductor	Mutual	LC717 controller

Sensor design according to the manufacturers Design Rules and own experience.

Electrical properties (dependent on the selected controller)	
Supply voltage	1.7V up to 5.5V
Communication	I ² C, SPI, UART or digital I/O
Temperature range	-40° C ... +85° C
Max no. of keys (single controller)	14 (Self capacitance) 48 (Mutual capacitance)