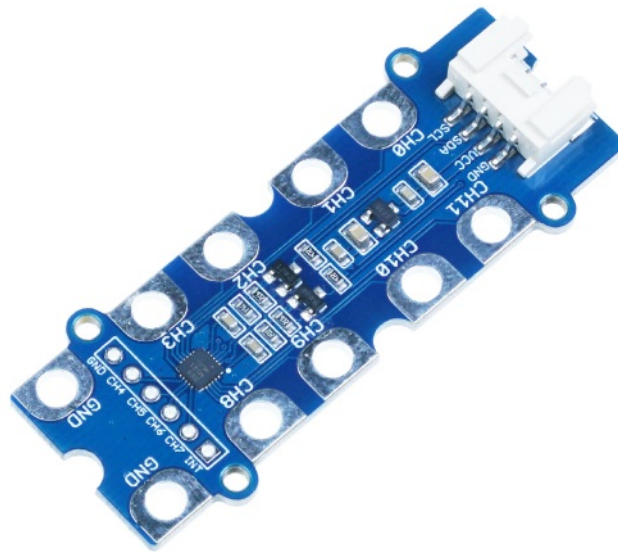


Grove - 12 Key Capacitive I2C Touch Sensor V3 (MPR121)



SKU

101020872

Grove - 12 Key Capacitive I2C Touch Sensor V3 (MPR121), Capacitance Sensor

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PRODUCT DETAILS

The Grove - 12 Key Capacitive I2C Touch Sensor V3 (MPR121) is a multi-channel proximity capacitive touch sensor. It's a 3-in-1 module with the following features: Capacitance Sensing. Touch Sensing.

Capacitance Sensing: This module uses a constant DC current capacitance sensing scheme. It can measure capacitances ranging from 10 pF to ov

Touch Sensing: Once the electrode capacitance data is acquired, the electrode touch/release status is determined comparing it to the capacitance l

Based on Freescale MPR121, this sensor has 12 completely independent electrodes with build-in autoconfiguration. Thanks to I2C interface, you can detect all the 12 electrodes signals with only one Grove port and the I2C address is hardware configurable from 0X5B to 0X5D. this also makes it possible for multiple Grove -12 Key Capacitive I2C Touch Sensor V3 (MPR121) to be used together for channel expansions in a single system, you can build a touch system which contains max 36 electrodes.

This sensor is an upgrade version of [Grove - 12 Key Capacitive I2C Touch Sensor V2 \(MPR121\)](#), it adds two more GND ports to the head in order to be more stable, meanwhile, the front Pin are spaced more widely so as to avoid a short circuit caused by the lines accidentally touch.

Features

- Internal 10-bit ADC
- Integrated independent autocalibration for each electrode input
- Completely independent electrodes with built-in autoconfiguration
- I2C interface, with IRQ, Interrupt output to advise electrode status changes

- Hardware configurable I2C address
- 12 electrodes/capacitance sensing inputs in which 8 are multifunctional for LED driving and GPIO
- Autoconfiguration of charge current and charge time for each electrode input
- Separate touch and release trip thresholds for each electrode, providing hysteresis and electrode independence
- Add two more GND pin and expand the gap of pins for safe handling

Typical Applications

- PC Peripherals
- MP3 Players
- Remote Controls
- Mobile Phones
- Lighting Controls

Technical details

Dimensions	60mm x 20mm x 7mm
Weight	G.W 11g
Battery	Exclude
Operating Voltage	3.3 V / 5V
Operating Temperature Range	- 40°C to 85°C
Storage Temperature Range	- 40°C to 125°C
Capacitances Range	10 pF to over 2000 pF
Resolution	0.01 pF
Interface	I2C
I2C address range	0x5B,0x5C,0x5D
Default I2C address	0x5B

Part List

- **Grove - 12 Key Capacitive I2C Touch Sensor V3 (MPR121) X 1**
- **Grove Cable X 1**

ECCN/HTS

HSCODE 9031900090

UPC