

Sensors, Microcontrollers and Actuators

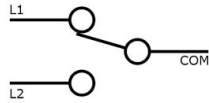
Sensor overview

Actuator overview

Wireless/Wired

Misc. devices

Passive sensors (1)



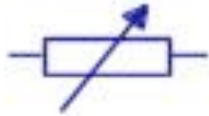
Switch

On/Off



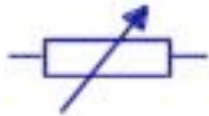
FSR (Force sensing Resistor)

Force



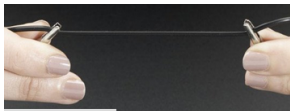
Potentiometer

Rotation



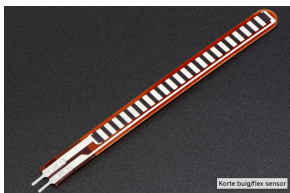
Lin. transducer

Displacement



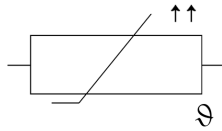
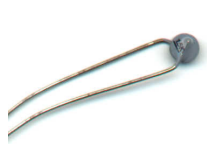
Conductive Rubber/Stretch

Force/Displacement



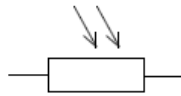
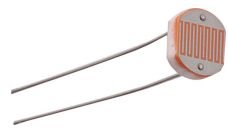
Flex Sensor

Bending



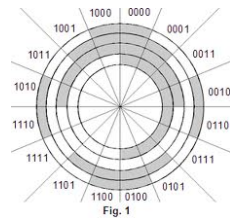
NTC / PTC
(Negative /Positive temp coefficient)

Temperature



LDR (Light depended resistor)

Light



Graycode sensor

Rotation/position



IR diode

IR light



Capacitive sensors

Touch/level liquid

Passive sensors (3)



Lin Pos Sensor

(finger) position



Piezo

Sound/pressure



Piezo

Movement



speaker

Movement



Dynamic microphone

Sound

Active sensors (1)



Accelerometer (x,y)

x, y movement, rotation



Compass

Northpole



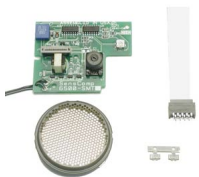
Gyroscope

Rotation, compass



Hall sensor

Magnetic field



Polaroid sensor

Distance

Active sensors (2)



Ultrasonic sensor

Distance



IR motion sensor

Motion



Smoke detector

Smoke



video camera

movement/color/location



IR distance measurement

Distance



Air Pressure sensor

Air pressure (e.a) breathing

Medical/Body



Heart Rate sensor

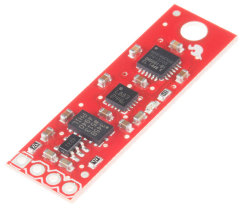
Heartbeat / pulse



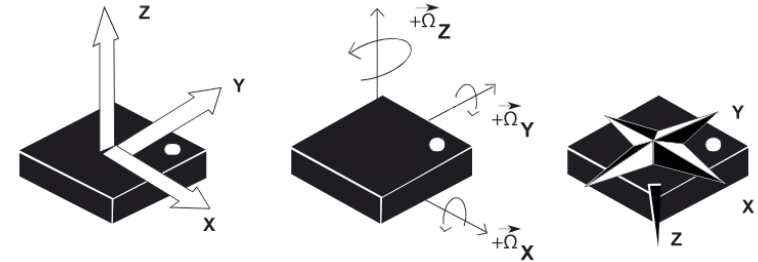
Muscle sensor

Muscle movement

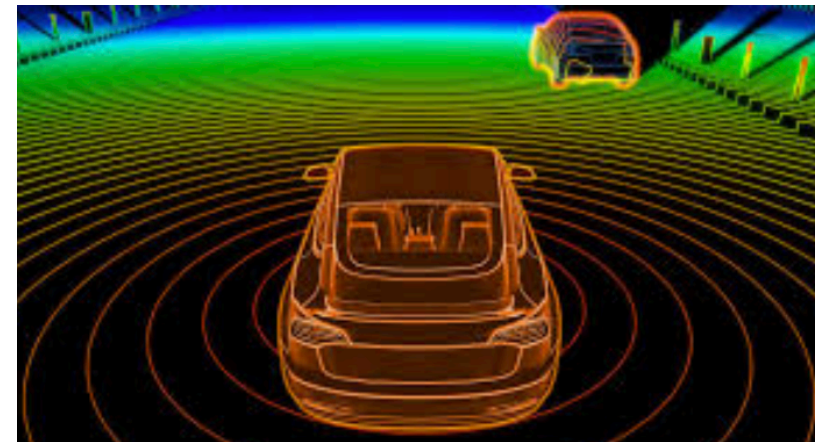
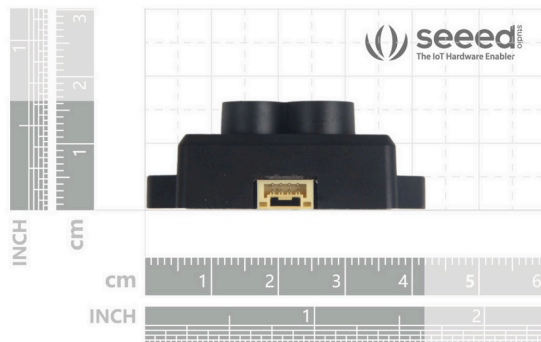




9 degrees of freedom (9dof)



Lidar (Light Detection and Ranging)





DC / AC motor

Movement/rotation



Solenoids

Displacement



Servomotor

Rotation, displacement



Stepper-motor

Rotation, position,
displacement



Relay

Voltage controlled switch



Speaker

Movement / sound



Led's / lights

Light



heavy duty light

light



Piezo

Sound



Electromagnets

Magnetic field



Xbee (zigbee) /Minibee

Arduino, ...



Wireless LAN

Ipson, Arduino ...



Bluetooth

Arduino/Wii/Mouse ..



FM / AM modules

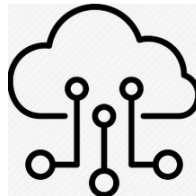
...



Infra-red (IR)

...

Internet of Things



lot ESP8266

Misc. devices



Wii Controller

bluetooth / Accelerometer



iPhone/iPad/iPod

bluetooth/Wlan / Accelerometer
Touch OSC



Microphone

Audio / Data



Mouse

Movement / Switch



Kinect

Movement/position



GameController

Multi sensor