

ESKI

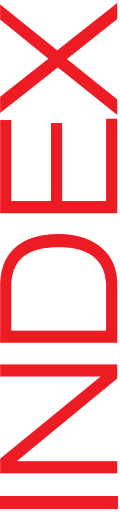
INSPIRE,
IDEATE,
INNOVATE.™

SENSORS
AND OTHER
ELECTRONIC
INGREDIENTS



This list of sensors and electronic components is to us what spices are to chefs. They give a distinct flavor to our creations and, mixed with a little inspiration, they can create whole new experiences.

We hope they'll inspire you to create your own recipes. We'll help you out during cooking !



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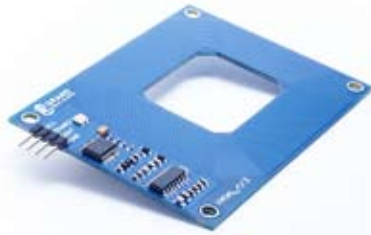
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04 OBJECT TRACKING SYSTEMS



1.1

RADIO FREQUENCY IDENTIFICATION

A radio frequency identification (RFID) system functions very much like a bar code system, but it does not require line of sight. Paper-thin tags can be placed on objects that make the objects trackable through their unique radio frequency identification number.

COMMERCIAL USAGE

- | Pallet tracking
- | Luggage tracking
- | Animal tagging
- | Security systems
- | Automated payment systems

APPLICATION POTENTIAL

- | Object/person identification
- | Object/person tracking space
- | Automated and personalized systems

1.2

COMPASS

A digital compass can precisely measure the orientation of an object in space relative to the Earth's magnetic field.

COMMERCIAL USAGE

- | Pallet tracking
- | Outdoors equipment
- | Military

APPLICATION POTENTIAL

- | Object tracking
- | Orientation sensing

1.3

GLOBAL POSITIONING SYSTEM

A GPS can track accurately objects outdoors anywhere in the world with about 3 meters accuracy. It can provide the object's latitude, longitude, altitude, speed, direction of movement, etc.

COMMERCIAL USAGE

- | Car navigation systems
- | Pallet tracking
- | Military

APPLICATION POTENTIAL

- | Object tracking
- | Orientation sensing
- | Speed tracking



2.1

ESKI WIRELESS TRANSCIVER

The ESKI ZigBee-capable wireless transceiver can enable devices to communicate to one another wirelessly using the unlicensed 2.4GHz radio frequency band. It is approved by Industry Canada and does not require extra.

COMMERCIAL USAGE

- | Mesh networks
- | Wireless communication
- | Wireless sensor networks

APPLICATION POTENTIAL

- | Multi-hop networks
- | Wireless communication
- | Data transfer



2.2

USB MODULE

A USB module can connect any object to a computer via USB.

COMMERCIAL USAGE

- | Data logging
- | Human interface devices
- | High speed data transfer

APPLICATION POTENTIAL

- | Data transfer
- | Computer controllers
- | Networking



2.3

INTERNET WEB SERVER

A web server can be used to send emails, host web pages and control devices over the web.

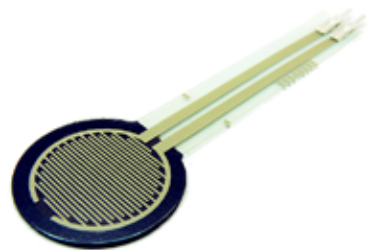
COMMERCIAL USAGE

- | Monitoring
- | Data logging

APPLICATION POTENTIAL

- | Monitoring objects
- | Controlling devices through web interfaces
- | Data transfer

06 HUMAN ACTIVITY SENSORS



3.1

CAPACITIVE TOUCH SENSOR

The capacitive touch sensor detects human touch. It behaves like a switch, but users don't have to apply pressure on the object to be detected.

COMMERCIAL USAGE

- | iPods
- | Touch screens
- | Keypads
- | Airbag sensors

APPLICATION POTENTIAL

- | Human presence detection
- | Touch sensing
- | Motion detection

3.2

FLEX SENSOR

The flex sensor detects bending in one axis. It can measure the angle at which it is bent from flat to 90 degrees bending.

COMMERCIAL USAGE

- | Power Glove
- | Athletes' training
- | Kinesiology

APPLICATION POTENTIAL

- | Human posture measurement
- | Gesture recognition
- | Mechanical stress analysis on objects

3.3

FORCE SENSITIVE RESISTOR

Force sensitive resistors are very thin sheets of polymer that measure the pressure applied to them.

COMMERCIAL USAGE

- | Pressure sensitive pads

APPLICATION POTENTIAL

- | Pressure sensor
- | Posture monitoring
- | Athletes' training



3.4

TILT SENSOR

The tilt sensor detects if an object is being tilted and can also detect the direction where it is being tilted.

COMMERCIAL USAGE

- | Automotive testing
- | Package monitoring
- | Leveling

APPLICATION POTENTIAL

- | Gesture recognition
- | Object monitoring
- | Positioning



3.5

PIEZOELECTRIC TRANSDUCER

A piezoelectric transducer can detect vibrations at various frequencies. It can be used as a microphone, collision sensor, tap sensor or vibration sensor.

COMMERCIAL USAGE

- | Microphones
- | Collision detection
- | Large window touch screens

APPLICATION POTENTIAL

- | Gesture recognition
- | Object monitoring
- | Room activity sensor
- | Microphone



3.6

ACCELEROMETER

An accelerometer measures changes in acceleration and deceleration. It is a very accurate sensor for measuring gravity and detecting precisely the tilting of an object by analyzing the gravity vector.

COMMERCIAL USAGE

- | Automotive testing
- | Athletes' training
- | Collision detection
- | Mechanical stress analysis on objects

APPLICATION POTENTIAL

- | Gesture recognition
- | Tilts sensing
- | Vibration detection
- | Collision monitoring

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3.7

IR PROXIMITY SENSOR

The IR proximity sensor detects the distance of the nearest person/object in front of it. Its range varies from 1 meter to 5 millimeters.

COMMERCIAL USAGE

- | Public washrooms
- | Automatic door openers
- | Car back-off alarms

APPLICATION POTENTIAL

- | Human presence detection
- | Object collision
- | Gesture recognition
- | Motion detection



3.8

PYROELECTRIC SENSORS

A pyroelectric sensor measures the amount of infrared radiation around it. It is particularly well suited for detecting the presence and motion of humans in a room because it only detects infrared emitting organisms.

COMMERCIAL USAGE

- | Motion detectors

APPLICATION POTENTIAL

- | Human motion detection
- | Fire detection
- | Wireless thermal sensor



3.9

ULTRA SONIC RANGE FINDER

An ultra sonic range finder precisely measures the distance of the nearest person/object in front of it. Its range varies from 10 centimeters to 7 meters.

COMMERCIAL USAGE

- | Speed radar
- | Sonar

APPLICATION POTENTIAL

- | Human presence detection
- | Object collision
- | Gesture recognition
- | Motion detection



3.10

INFRARED DETECTOR

Infrared detectors behave like non-contact switches and are used to monitor the presence of humans or objects between the emitter and the detector.

COMMERCIAL USAGE

- | Public washrooms
- | Traffic counters
- | Motion detectors

APPLICATION POTENTIAL

- | Motion detection
- | Counting objects/people
- | Non-contact switch

4.1

AMBIENT LIGHT DETECTOR

The ambient light detector detects the intensity of light. It can precisely detect the intensity of direct sunlight or artificial light or be used to detect shadows.

COMMERCIAL USAGE

- | Automated lighting systems
- | Photographic exposure sensor

APPLICATION POTENTIAL

- | Day/night sensor
- | Shadow detection
- | Room activity sensor

4.2

AMBIENT AIR MONITOR

An ambient air monitor responds to a large number of airborne toxic compounds.

COMMERCIAL USAGE

- | Laboratories
- | HVAC

APPLICATION POTENTIAL

- | Gas leak alarm
- | Automatic ventilator control
- | Air quality monitor

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4.3

TEMPERATURE SENSOR

A temperature sensor can precisely measure the ambient temperature.

COMMERCIAL USAGE

- | Food industry
- | Home automation

APPLICATION POTENTIAL

- | Ambient temperature monitoring
- | Energy saving systems
- | Water temperature monitor
- | Home automation



4.4

HUMIDITY SENSOR

A humidity sensor measures the relative humidity of the ambient air.

COMMERCIAL USAGE

- | Ambient air monitor
- | Home automation

APPLICATION POTENTIAL

- | Air quality analysis
- | Home automation
- | Environmental analysis



4.5

FLUIDIC PRESSURE SENSOR

Fluidic pressure sensors measure the pressure of a gas or a liquid in the environment or within a closed system.

COMMERCIAL USAGE

- | Diving equipment
- | Industrial automation

APPLICATION POTENTIAL

- | Water equipment
- | Home automation



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