

COMMONLY USED SENSORS

Sensor	Basic function	Example applications
Accelerometer	Detects acceleration (change in speed or direction)	Helps with robot balance; used for motion control
Chemical Sensors	Detects changes in chemical composition or presence of certain gasses	Many diverse applications; presence of solvents used in bombs or explosives, determining atmosphere composition
Electronic compass	Localizes based on magnetic fields	Used for navigation or area mapping
Global Positioning System (GPS)	Localizes based on satellites	Used for precise navigation in self-driving cars
Gyroscope	Detects pitch, yaw and roll	Helps with robot balance; used with unmanned drones and allowing iPads to sense when to rotate the screen
Image Sensor	Collects a visual representation of surrounding area	Vision recognition software allows object recognition, identifying faces or specific items
Infrared range finder	Detects reflected infrared waves	Used for robot navigation and collision avoidance
Lidar (laser range finder)	Detects reflected laser light	Used for robot navigation and collision avoidance
Light sensor	Detects light or changes in light	Used for mine or cave exploration and basic navigation
Microphone	Detects and records speech	
Motion Detector	Detects movement in the sensor's area	Used to sense movement of an object for inspection or collision avoidance
Pressure Sensor	Detects force applied to an area	Used to determine how much force is being applied or the impact of a collision
Radar	Detects reflected radio waves	
Sonar	Detects reflected acoustic (sound) waves	
Sound Sensor	Detects sound	
Thermometer	Detects temperature	Delivers internal (the robot) or external (the environment) temperature measurements
Touch Sensor	Detects contact with physical objects	Used to avoid impact, also useful for picking up objects
Ultrasonic range finder	Detects reflected ultrasonic acoustic (sound) waves	
WiFi Dector	Detects and analyzes the presence of Wi-Fi networks	