**IMU-Inertial Measurement Unit**

An IMU is an electronic device that measures and reports a body's [specific force](https://en.wikipedia.org/wiki/Specific_force), angular rate, and sometimes the magnetic field surrounding the body, using a combination of [accelerometers](https://en.wikipedia.org/wiki/Accelerometer) and [gyroscopes](https://en.wikipedia.org/wiki/Gyroscope), sometimes also [magnetometers](https://en.wikipedia.org/wiki/Magnetometers). IMUs are typically used to maneuver [aircraft](https://en.wikipedia.org/wiki/Aircraft), including [unmanned aerial vehicles](https://en.wikipedia.org/wiki/Unmanned_aerial_vehicle) (UAVs), among many others, and [spacecraft](https://en.wikipedia.org/wiki/Spacecraft), including [satellites](https://en.wikipedia.org/wiki/Satellite) and [landers](https://en.wikipedia.org/wiki/Lander_(spacecraft)). Recent developments allow for the production of IMU-enabled [GPS](https://en.wikipedia.org/wiki/GPS) devices. An IMU allows a GPS receiver to work when GPS-signals are unavailable, such as in tunnels, inside buildings, or when electronic interference is present.[[1]](https://en.wikipedia.org/wiki/Inertial_measurement_unit" \l "cite_note-1) A [wireless](https://en.wikipedia.org/wiki/Wireless) IMU is known as a WIMU.

The IMU is the main component of [inertial navigation systems](https://en.wikipedia.org/wiki/Inertial_navigation_system) used in [aircraft](https://en.wikipedia.org/wiki/Aircraft), [spacecraft](https://en.wikipedia.org/wiki/Spacecraft), [watercraft](https://en.wikipedia.org/wiki/Watercraft), [drones](https://en.wikipedia.org/wiki/Unmanned_aerial_vehicle), [UAV](https://en.wikipedia.org/wiki/UAV) and [guided missiles](https://en.wikipedia.org/wiki/Guided_missiles) among others. In this capacity, the data collected from the IMU's sensors allow a computer to track a craft's position, using a method known as [dead reckoning](https://en.wikipedia.org/wiki/Dead_reckoning).