MPU6050 Circuit Design

The attitude sensor integrates a three-axis gyroscope, a three-axis accelerometer, a temperature sensor, and a built-in digital motion processor DMP.

Basic functions

Three-axis gyroscope: can measure the angular velocity around the X, Y, and Z axes, and is used to detect the rotation and turning motion of an object;
Three-axis accelerometer: can measure the acceleration in the X, Y, and Z axes, including the acceleration of gravity and the linear acceleration of the object;
Temperature sensor: MPU6050 also integrates a temperature sensor to measure the temperature of the environment.

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DMP is the motion engine inside the MPU6050, the full name of which is Digital
Motion Processor. It directly outputs quaternions, which can reduce the workload
of the peripheral microprocessor and avoid cumbersome filtering and data fusion
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MPU6050 circuit

The development board presets the MPU6050 installation interface to facilitate users to install and replace modules.

MPU6050 uses IIC for communication, SDA and SCL are pulled up to VCC using pull-up resistors, and the master responds to data updates in real time based on the INT pin.