wit motion MPU6050 SINDT-TTL Digital Accelerometer User Manual

Contents

wit motion MPU6050 SINDT-TTL Digital Accelerometer

Specifications

- **Product Name**: SINDT TTL IP67 Inclinometer
- **Function**: Multi-sensor device detecting acceleration, angular velocity, and angle
- **Application**: AGV Truck, Platform Stability, Auto Safety System, 3D Virtual Reality, Industrial Control, Robot, Car Navigation, UAV, Truck-mounted Satellite Antenna Equipment
- **Features**: Robust housing, small outline, suitable for industrial retrofit applications

Product Usage Instructions

Introduction
The SINDT is a multi-sensor device that detects acceleration, angular velocity, and angle. It is suitable for industrial retrofit applications like condition monitoring and predictive maintenance. By configuring the device, users can address various use cases using smart algorithms to interpret sensor data.

Warning Statement

- Do not put more than 5 Volts across the sensor wiring of the main power supply to avoid permanent damage.
- Avoid direct connection between VCC and GND to prevent circuit board burning.
- For proper instrument grounding, use WITMOTION with its original factory-made cable or accessories. Avoid accessing the I2C interface unless necessary.
- For secondary developing projects or integration, use WITMOTION with its compiled sample code.

Use Instructions

To access software and drivers, follow the hyperlink to the document or download center for:

- Software and driver download
- Quick-guide Manual

- Teaching Video
- Common Software with detailed instructions
- SDK (sample code)
- SDK Tutorial Documentation
- Communication Protocol

Software Introduction
Check the software function introduction by following the provided link to understand the functions of the software menu.

MCU Connection
Details on MCU connection are available in the user manual provided. Follow the instructions to establish proper connections for the SINDT device.

Tutorial Link

Google Drive
Link to instructions DEMO: WITMOTION Youtube Channel SINDT Playlist

If you have technical problems or cannot find the information that you need in the provided documents, please contact our support team. Our engineering team is committed to providing the required support necessary to ensure that you are successful with the operation of our AHRS sensors.

Contact
Technical Support Contact Info

Application

- AGV Truck
- Platform Stability
- Auto Safety System
- 3D Virtual Reality
- Industrial Control
- Robot
- Car Navigation
- UAV
- Truck-mounted Satellite Antenna Equipment

Introduction

The SINDT is a multi-sensor device detecting acceleration, angular velocity, and angle. The robust housing and the small outline make it perfectly suitable for industrial retrofit applications such as condition monitoring and predictive maintenance. Configuring the device enables the customer to address a broad variety of use cases by interpreting the sensor data by smart algorithms.
SINDT's scientific name is AHRS IMU sensor. A sensor measures 3-axis angle, angular velocity as well as acceleration. Its strength lies in the algorithm which can calculate dual-axis angle accurately.

SINDT offers several advantages over competing sensors

- Heated for best data availability: new WITMOTION patented zero-bias automatic detection calibration algorithm outperforms traditional accelerometer sensor
- High precision Roll Pitch Yaw (X Y Z) Acceleration + Angular Velocity + Angle
- Low cost of ownership: remote diagnostics and lifetime technical support by the WITMOTION service team
- Developed tutorial: providing manual, datasheet, Demo video, free software for Windows computer, APP for Android smartphones , and sample code for MCU integration including 51 serial, STM32, Arduino, Matlab, Raspberry Pi, communication protocol for project development
- WITMOTION sensors have been praised by thousands of engineers as a recommended attitude measurement solution

Warning Statement

- Putting more than 5 Volt across the sensor wiring of the main power supply can lead to permanent damage to the sensor.
- VCC cannot connect with GND directly, otherwise it will lead to the burning of the circuit board.
- For proper instrument grounding: use WITMOTION with its original factory-made cable or accessories.
- Do not access the I2C interface.
- For secondary developing project or integration: use WITMOTION with its compiled sample code.

Use Instructions

Hit the hyperlink direct to the document or download center

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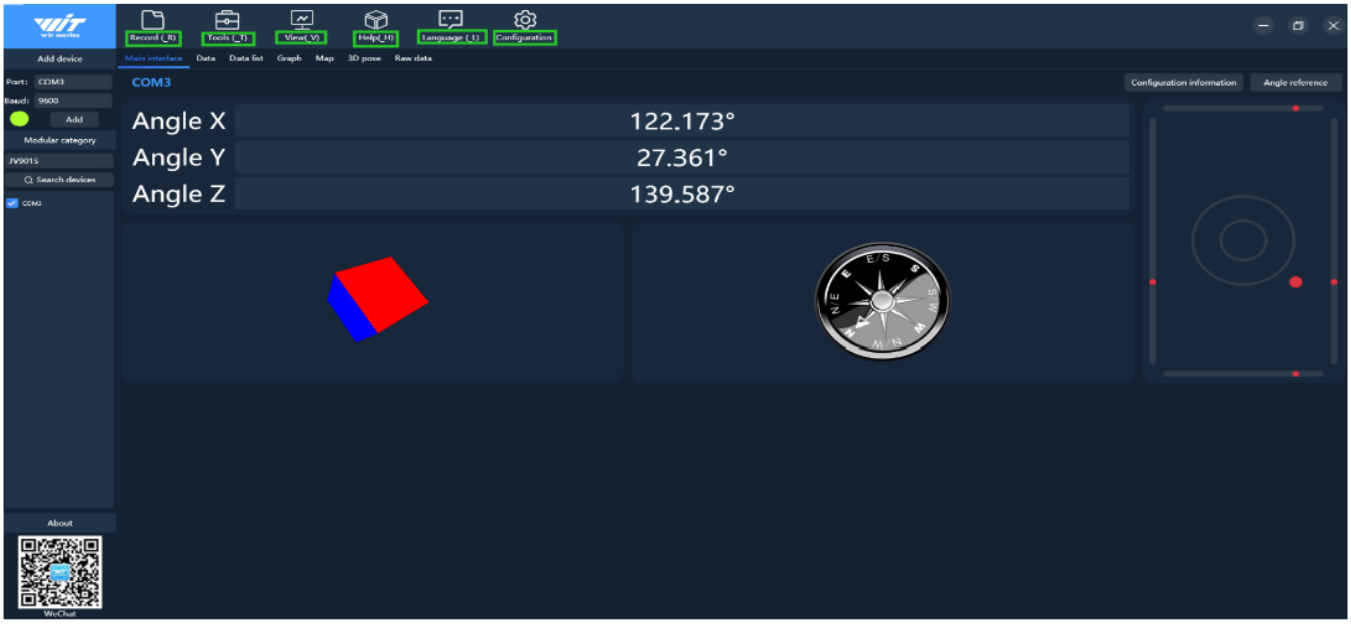
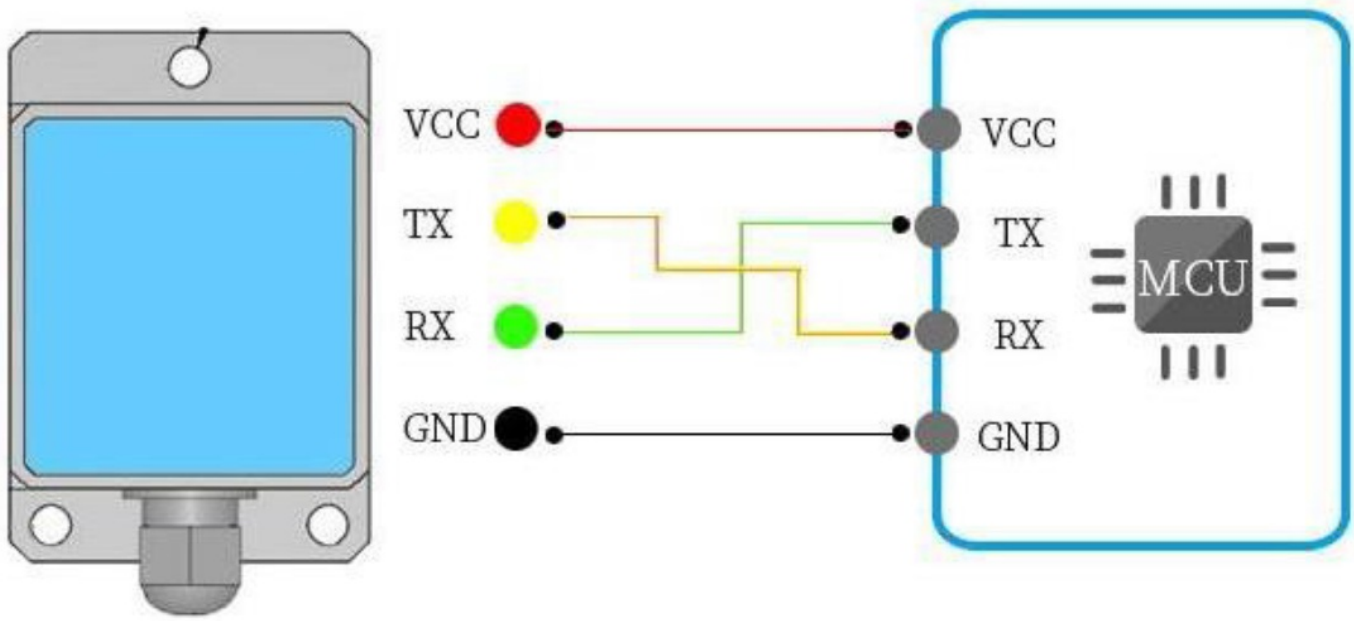
Software Introduction

Software function introduction (Ps. You can check the functions of the software menu from the link.)



MCU Connection



- www.wit-motion.com
- support@wit-motion.com

FAQ

Q: Can I connect VCC directly to GND?
A: No, connecting VCC directly to GND can lead to burning of the circuit board. Always use appropriate cables and accessories for proper instrument grounding.

Q: What should I do if I encounter technical problems?
A: If you encounter technical issues or need additional information not found in the documents, contact our support team at support@wit-motion.com for assistance.

Documents / Resources

	wit motion MPU6050 SINDT-TTL Digital Accelerometer [pdf] User Manual MPU6050, MPU6050 SINDT-TTL Digital Accelerometer, SINDT-TTL Digital Accelerometer, Digital Accelerometer, Accelerometer

References

- ____
- GitHub - WITMOTION/WitStandardProtocol_JY901: _____(c#)
- SDK | WITMOTION SDK
- User Manual