

Groundstudio ICM-20948 module



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Module Circuit Schematic

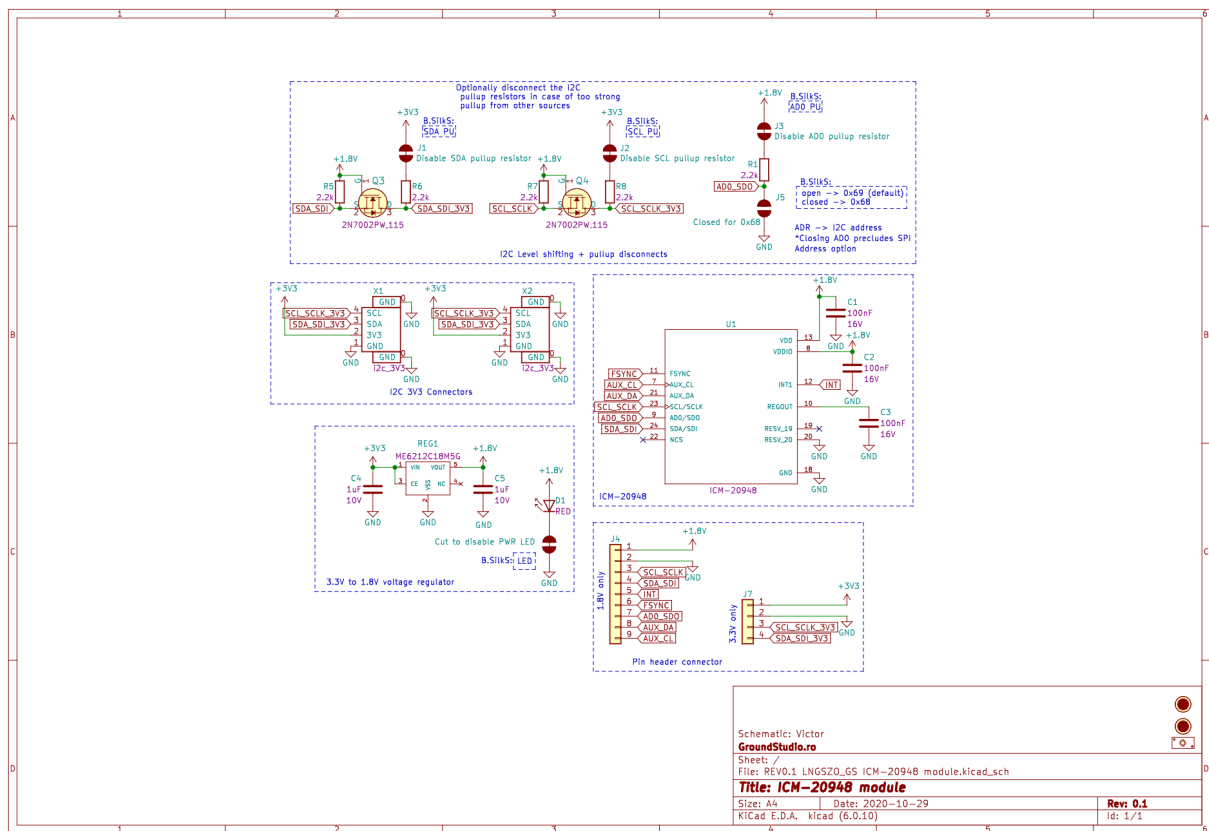


Figure 2: GroundStudio ICM-20948 module schematic circuit [Revision 0.0.1]

Open Source

This is an Open Source project, you can find all the technical documents online:

https://github.com/GroundStudio/GroundStudio_ICM-20948_module

License

All documentation for GroundStudio Marble Pico is released under the [Attribution-ShareAlike 4.0 International \(CC BY-SA 4.0\)](#) license. You are welcome to use this for commercial purposes.

Please consider contributing back to this project or others to help the open-source hardware community continue to thrive and grow!

Overview

The module based on the ICM-20948, can be used to detect movements using a gyroscope, an accelerometer and a compass each with 3 axes. It allows easy connection via I2C using the I2C_3V3 connectors or via the SPI port.

Technical specifications

Supply voltage: **1.8V or 3.3V**

3-axis gyroscope programmable scale: **±250 dps, ±500 dps, ±1000 dps, and ±2000 dps**

3-axis accelerometer with programmable scale: **±2g, ±4g, ±8g, and ±16g**

3-axis compass: **±4900 µT**

Dimensions mm: **24.6mm x 26.4mm**

Communication protocols: **I2C, SPI**

Legal disclaimer notice

This development board is considered a subassembly in accordance with FCC CFR Title 47 §15.101(e):

[https://www.ecfr.gov/current/title-47/chapter-I/subchapter-A/part-15/subpart-B/section-15.101#p-15.101\(e\)](https://www.ecfr.gov/current/title-47/chapter-I/subchapter-A/part-15/subpart-B/section-15.101#p-15.101(e))

The device does not have a standalone functionality and does not include an enclosure or power supply.

The device is mainly intended for development and prototyping but it can be integrated into a product. In this case it is the responsibility of the developer/manufacturer to obtain all the necessary certifications.

GroundStudio is a registered trademark of ARDUSHOP SRL:

<https://www.tmdn.org/tmview/#/tmview/detail/EM500000018364087>

Developer info

ARDUSHOP SRL

Addr: Str. Aleea Unirii, Nr. 8, Ap. 7, Loc. Selimbar, Jud. Sibiu, ROMANIA, 557260

e-mail: office@ardushop.ro

Datasheet Revision History

[Revision 1] - Initial version release