TLE4964-3M Hall Switch Shield2Go

Quick Start V1.0.0



Introduction



The TLE4964-3M is an integrated Hall effect switch designed specifically for highly accurate applications with superior supply voltage capability, operating temperature range and temperature stability of the magnetic thresholds.

Key features are a operating supply voltage from 3.0V to 32V, reverse polarity protection until -18V, overvoltage capability up to 42V without external resistor, output overcurrent and overtemperature protection and active error compensation. In addition the sensor has a high stability of magnetic thresholds, and high ESD performance in a small SMD package PG-SOT23-3-15.



Link to Datasheet and Product Page

Evaluation Board Notes



Breakable VDD 1101LE4964-3 TLE4964-3M Hall Shield2Go NC NC NC NC 🔘 NC 불 GPIO1 J2 NC GND **3V3** NC DINI J3 NC

Head

Link to **Board Page**

Information

- Supply voltage is typ. 3.3 V, please refer to <u>TLE4964-3M datasheet</u> for more details about operating ratings
- Pin out on top (head) is directly connected to the pins of the TLE4964-3M sensor
- If head is broken off, only two capacitors are connected to the TLE4964-3M sensor
- Software compatible with Arduino and library fully integrated into the Arduino IDE
- Sales Name S2GO_HALL_TLE4964-3M

Ensure that no voltage applied to any of the pins exceeds the absolute maximum rating of 32 V



Evaluation Board PCB Details

The

TLE4964-3M Hall Shield2Go (Infineon



Ground pins on board connected with each other.

Legend





The maximum voltage on any pin is 4 V.

- Solder Bridge J1 connects Q to GPIO1.
- Solder Bridge J2 connects Q to GPIO3.
- Solder Bridge J3 connects Q to GPIO4.



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Evaluation Board Schematic





Power Decoupling

- J1 Jumper If soldered, connects Q1 signal to -GPIO1 pin.
- J2 Jumper If soldered, connects Q1 signal to -PWM1/GPIO4 pin





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Arduino: The Arduino IDE

Arduino IDE



Arduino is a hardware-software prototyping environment IDE developed by <u>arduino.cc</u>:

- Installation Details for Windows: Click <u>here</u>
- Installation Details for Linux: Click <u>here</u>
- Installation Details for Mac OS: Click <u>here</u>
- Installation Details for Portable IDE: Click <u>here</u>

Arduino Quick Start

- What is Arduino? Click <u>here</u>
- Extended information about the Arduino environment. Click <u>here</u>
- How to import libraries? Click <u>here</u>
- How to install additional boards? Click <u>here</u>
- Problems related to Arduino? Click <u>here</u> for troubleshooting



How to download the library for Arduino - 1

Notes

- Open the Arduino IDE
- Navigate to Sketch – Include Library – Manage Libraries
- The Arduino library manager will be opened (see next slide for further instructions)
- Additional notes for installation can be found in the GitHub repository, e.g. if the library manager is not used

ketch void	Verify/Compile Upload Upload Using Programmer Export compiled Binary	Ctrl+R Ctrl+U Ctrl+Shift+U Ctrl+Alt+S	Manage Libraries Add .ZIP Library Arduino libraries
	Show Sketch Folder	Ctrl+K	Bridge
}	Include Library	1	Esplora
waid	Add File		Ethernet
}	put your main code here,	to run repe	Keyboard Mouse Robot Control Robot IR Remote Robot Motor SD Servo SpacebrewYun Temboo

()

https://github.com/Infineon/hall-switch



How to download the library for Arduino - 2



Notes

- The Arduino library manager is a comprehensive tool to install external libraries for Arduino
- Search for *Hall-Switch* in the *Filter your search...* field
- Select as Type: All and Topic: All when searching for Hall-Switch
- As shown in the picture, please choose the respective library and install it
- Regularly check your installed libraries for updates
- In case of problems, please visit also our <u>GitHub repository</u> and open an issue to get further help





Example with XMC[™] 2Go

Notes

- The Shield2Go form factor of the Shield2Go evaluation board is directly compatible with the <u>XMC[™] 2Go</u> board
- Stack the TLE4964-3M Hall Shield2Go board on top of the XMC[™] 2Go as shown in the picture
- The additional pin on the left-top side (designated with NC) is left floating
- Using the <u>XMC-for-Arduino</u> Arduino integration, the <u>Arduino library</u> for the TLE4964-3M can be directly used



Steps

- Open one of the examples for the Hall-Switch from File Examples and select as board XMC1100 XMC2Go
- Connect the stacked boards to the PC and press the Upload button
- Select the related COM port from *Tools Port* and open the serial monitor with the set baud rate (see sketch/code with Serial.begin(<BAUDRATE>);)



<u>https://github.com/Infineon/XMC-for-Arduino</u> <u>https://github.com/Infineon/hall-switch</u>

File Edit Sketch

Sketch



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