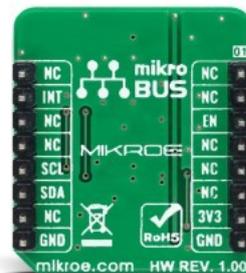# 3D Hall 9 Click

PID: MIKROE-4948

3D Hall 9 Click is a compact add-on board used to detect the strength of a magnetic field in all three dimensions. This board features the ALS31300, a 3D linear Hall-effect sensor with digital output and advanced low power management from Allegro Microsystems. The ALS31300 features an I2C interface, enabling it to be easily configured by MCU with the measurement data provided in digital format of 12-bits corresponding to the magnetic field measured in each X, Y, and Z axes. It also provides the ability to set different I2C slave addresses (16 unique addresses) by populating the appropriate resistors desired by the user. Power management of the ALS31300 is highly configurable, allowing for system-level optimization of supply current and performance. This Click board™ is suitable for various applications, such as 3D sensing for head-on linear motion, slide-by position sensing, and rotation angle measurements.

3D Hall 9 Click is supported by a mikroSDK compliant library, which includes functions that simplify software development. This Click board™ comes as a fully tested product, ready to be used on a system equipped with the mikroBUS™ socket.

Specifications

Type	Magnetic
Applications	Can be used for various applications, such as 3D sensing for head-on linear motion, slide-by position sensing, and rotation angle measurements
On-board modules	ALS31300 - 3D linear Hall-effect sensor used to detect the strength of a magnetic field in all three dimensions (X, Y, and Z axes) from Allegro Microsystems
Key Features	Low power consumption, 1% accurate factory-trimmed sensitivity ±500 G, integrated temperature sensor, I2C interface with selectable slave addresses, and more
Interface	I2C
Compatibility	mikroBUS
Click board size	S (28.6 x 25.4 mm)
Input Voltage	3.3V

Resources

mikroBUS™

mikroSDK

Click board™ Catalog

Click Boards™

Downloads

ALS31300 datasheet

NCP170 datasheet

3D Hall 9 click 2D and 3D files

3D Hall 9 click schematic

3D Hall 9 click example on Libstock