

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.

Mikroe produces entire development toolchains for all major microcontroller architectures.

Committed to excellency, we are dedicated to helping engineers bring the project development up to speed and achieve outstanding results.



ISO 27001: 2013 certification of informational security management system.
ISO 14001: 2015 certification of environmental management system.
OHSAS 18001: 2008 certification of occupational health and safety management system.



ISO 9001: 2015 certification of quality management system (QMS).

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](#)

Mikroe produces entire development toolchains for all major microcontroller architectures.

Committed to excellency, we are dedicated to helping engineers bring the project development up to speed and achieve outstanding results.



ISO 27001: 2013 certification of informational security management system.
ISO 14001: 2015 certification of environmental management system.
OHSAS 18001: 2008 certification of occupational health and safety management system.



ISO 9001: 2015 certification of quality management system (QMS).