

Time-saving embedded tools

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3D Hall 10 Click





PID: MIKROE-5125

3D Hall 10 Click is a compact add-on board used to detect the strength of a magnetic field in all three dimensions. This board features the <u>TMAG5170</u>, a high-precision linear 3D Hall effect sensor from <u>Texas Instruments</u>. The TMAG5170 features an SPI interface for configuration by MCU. The measurement data is provided in digital format of 12-bits corresponding to the magnetic field measured in each X, Y, and Z axes. It can achieve ultra-high precision at speeds up to 20kSPS for faster and more accurate real-time control and offers multiple diagnostics features to detect and report both system and device-level failures. This Click board[™] is designed for a wide range of industrial and personal electronics applications.

3D Hall 10 Click is supported by a <u>mikroSDK</u> compliant library, which includes functions that simplify software development. This <u>Click board</u> comes as a fully tested product, ready to be used on a system equipped with the <u>mikroBUS</u> 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).



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Specifications

Туре	Magnetic
Applications	Can be used for a wide range of industrial and personal electronics applications such as automation, motor-drive applications, and more
On-board modules	TMAG5170 - linear 3D Hall effect sensor from Texas Instruments
Key Features	High precision, optimizes position sensing speed and accuracy, autonomous wake-up and sleep mode, alert feature, integrated diagnostics for fault detection, integrated angle CORDIC calculation with gain and offset adjustment, low power consumption, and more
Interface	SPI
ClickID	No
Compatibility	mikroBUS
Click board size	S (28.6 x 25.4 mm)
Input Voltage	3.3V or 5V

Resources

<u>mikroBUS</u>™

<u>mikroSDK</u>

Click board[™] Catalog

Click Boards™

Downloads

3D Hall 10 click example on Libstock

3D Hall 10 click schematic

TMAG5170 datasheet

3D Hall 10 click 2D and 3D files

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