MIKROELEKTRONIKA D.O.O, Batajnički drum 23, 11000 Belgrade, Serbia
VAT: SR105917343 Registration No. 20490918
Phone: + 381 11 78 57 600 Fax: + 381 11 63 09 644 E-mail: office@mikroe.com
www.mikroe.com

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 TMAG5170, a high-precision linear 3D Hall effect sensor from Texas Instruments. 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 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.

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Specifications

Type	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

mikroBUS™

mikroSDK

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