

Pressure 10 Click



PID: MIKROE-4142

Pressure 10 Click features a digital interface barometric pressure sensor, labeled as HSPPAD042A. Barometric pressure is detected by the MEMS sensor that is placed on this Click board™ using the piezoresistive bridge circuit formed on the silicon diaphragm. This sensor element is connected to ASIC (Application-Specific Integrated Circuit) for signal conditioning with 17-bit ADC and temperature compensation capability. The ASIC output compensated pressure values. In addition to the compensation, this product supports averaging and filtering for lower noise, and FIFO function. The HSPPAD042A digital pressure sensor can use both SPI and I2C communication protocols, allowing it to be interfaced with a broad range of MCUs. Besides the pressure readings, this Click board™ also offers very accurate temperature reading, which is required for the pressure readings compensation and can be used in a wide range of battery-powered and portable applications thanks to its very low power consumption. All these features make the Pressure 10 Click an ideal solution for the development of portable weather station applications, indoor navigation, altitude control for drones, and similar applications that rely on barometric pressure measurements.

Pressure 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.

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	Pressure
Applications	An ideal solution for the development of portable weather station applications, indoor navigation, altitude control for drones, and similar applications that rely on barometric pressure measurements.
On-board modules	Pressure 10 Click uses the HSPPAD042A IC, a digital pressure sensor, from ALPS ELECTRIC.
Key Features	Industry-lowest current consumption, 300 hPa to 1100 hPa range, temperature reading, averaging, noise filtering, FIFO function.
Interface	I2C,SPI,GPIO
Compatibility	mikroBUS
Click board size	S (28.6 x 25.4 mm)
Input Voltage	3.3V

Resources

[mikroBUS™ Standard specification](#)

[LibStock: mikroSDK](#)

[Click board catalog](#)

[Click boards™ Standard Page](#)

Downloads

[Pressure 10 click example on Libstock](#)

[Pressure 10 click 2D and 3D files](#)

[HSPPAD042A datasheet](#)

[Pressure 10 click schematic](#)

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).