

Waveform 4 Click



PID: MIKROE-4908

Waveform 4 Click is a compact add-on board that represents a high-performance signal generator. This board features the [AD9106](#), a quad-channel, 12-bit, 180MSPS waveform generator, integrating on-chip static random access memory (SRAM) and direct digital synthesis (DDS) for complex waveform generation from [Analog Devices](#). The DDS is up to a 180 MHz master clock sinewave generator with a 24-bit tuning word allowing 10.8 Hz/LSB frequency resolution. It has a single frequency output and independent programmable phase shift outputs for each of the four integrated DACs. Besides, the integrated SRAM data can include directly generated stored waveforms, accessed using the serial peripheral interface, amplitude modulation patterns applied to DDS outputs, or DDS frequency tuning words. This Click board™ generates the high-speed, high-dynamic-range, multichannel complex waveforms required in applications such as ultrasound transducer excitation, medical instrumentation, portable instrumentation, signal generators, and arbitrary waveform generators.

Waveform 4 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	Clock generator
Applications	Can be used as ultrasound transducer excitation, medical instrumentation, portable instrumentation, signal generators, and arbitrary waveform generators
On-board modules	AD9106 - high-performance, quad digital-to-analog converter (DAC) integrating on-chip pattern memory for complex waveform generation with a direct digital synthesizer (DDS) from Analog Devices
Key Features	Highly integrated quad DAC for complex waveform generation, on-chip 4096 × 12-bit pattern memory, 12-bit output DDS, low power consumption, high performance, and more
Interface	SPI
Compatibility	mikroBUS
Click board size	L (57.15 x 25.4 mm)
Input Voltage	3.3V

Resources

[mikroBUS™](#)

[mikroSDK](#)

[Click board™ Catalog](#)

[Click Boards™](#)

Downloads

[Waveform 4 click 2D and 3D files](#)

[Waveform 4 click schematic](#)

[Waveform 4 click example on Libstock](#)

[ADM8829 datasheet](#)

[ADA4817-2 datasheet](#)

[AD9106 datasheet](#)

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