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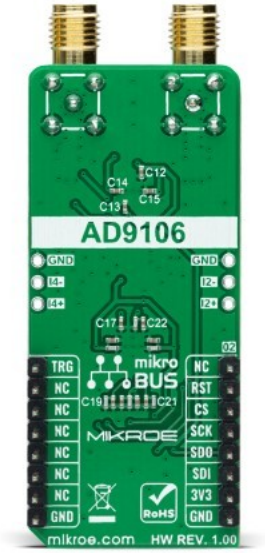
Waveform 4 Click



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.

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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