AWG3420 Dual Channel
AWG3410 Single Channel

UltraFast 34GS/s Arbitrary Waveform Generators

Designed for advanced modulation format generation, the Micram Instruments family of UltraFast arbitrary waveform generators are powered by the world record-setting Micram VEGA DAC II digital-to-analog signal converter. With sampling performance up to a blistering 34GS/s, MI's AWG family enables researchers and engineers to generate very high speed serial data signals and high order complex modulation formats, such as 16QAM, 32QAM and OFDM, at speeds of up to 136Gb/s.

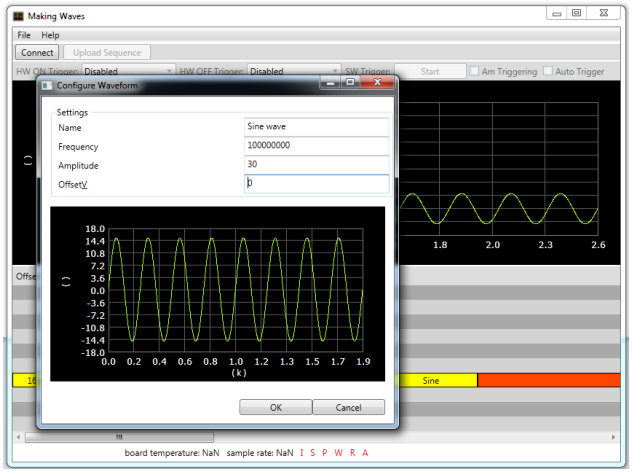
AWG3420 Dual Channel AWG

Superior Output Performance

- Single or dual analog channels
- 34GS/s maximum sample rate per channel (not interleaved)
- 20GHz analog bandwidth
- Very fast (<18ps) rise/fall time
- 1.6V maximum differential output voltage
- Very low intrinsic jitter
- Pristine signal integrity

Powerful System Features

- Integrated half-rate, low phase noise clock synthesizer
- Built-in high speed clock divider
- Deep memory: 9M points per channel
- 6 bit physical resolution with extremely fast rise/fall performance
- Remote control of each channel through a single USB connection



Making Waves™ Graphical User Interface with MATLAB Integration

Point-and-click programming ease, with a built-in library of patterns enabling quick generation of many useful waveforms. Any waveform can be modified to achieve very complex operations, such as precompensation for channel dispersion, multi-level PAM signals or RF modulations in OFDM applications, with controllable jitter, noise and other impairments.

A native MATLAB programming interface enables easy integration with other tools.

Micram Instruments

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Model AWG3420 – Dual channel
Model AWG3410 – Single channel

Applications

- 16 QAM and 32 QAM
- OFDM
- High speed serial data
- Wideband (RF/MW)

Key Specifications

- Maximum sampling rate: 34GS/s per channel
- Memory depth: 9M points
- Vertical resolution: 6 bits
- Bandwidth (3db): 20GHz (typical)
- Internal clock: 100MHz to 17GHz (supports full 34GS/s sample rate), edge trigger configurable between rising or falling edge
- RF connector type: 2.92 mm

Data Output Specifications

- Maximum data rate: 34Gbps
- Rise/fall time: <18ps
- Output type: Single-ended* or differential, DC coupled
- Impedance: 50Ω
- Intrinsic skew (N to P): <3ps
- Time resolution: 29.41ps @ 34GS/s
- Vertical resolution (volts): 10.94mV @ 0.7V peak to peak (single-ended)
- Differential output: 1.6V peak to peak
- Single-ended output: >0.7V peak to peak

*Unused output must be terminated 50Ω to GND

Making Waves™ GUI Specifications

- Built-in pattern library: PRBS binary (7,9,11,15) and multi-level (4,8,16), sine, triangle/sawtooth, square, DC and noise
- User waveforms import: Via CSV file or MATLAB programming interface
- Predefined operations: Addition, subtraction, multiplication, division, filter and modulation, built-in pre-emphasis
- PC operating system: Windows XP or later Windows OS