

Combines the flexibility of AWG with the accuracy and the agility of DDS

The Signal at its purest

- + Spurious & Harmonics -80dBc up to 40GHz
- + < 100ns agility up to 40GHz with < 1Hz resolution
- + Phase Noise -100dBc/Hz @ 1kHz offset 40GHz carrier
- + Noise floor -150dBc/Hz up to 20GHz

Description

The AWAACS™ product family combines the flexibility of an Arbitrary Waveform Generator (AWG) with the accuracy and the agility of a Direct Digital Synthesizer (DDS), in a real-time controlled and standalone system.

This unique design provides unusual flexibility, broadband frequency coverage and RF parameters with incomparable frequency and phase and amplitude resolutions.

With the exclusive combination of FPGA, DSP, I/Q vector modulators, AWG and DDS, the AWAACS is well suited to generate extremely complex waveforms with a high degree of resolution and accuracy.

The AWG and the DDS assemblies can also be used separately. AWAACS uses a modular architecture.

Part of the EW laboratory suite, the TSS (Threat Signal Simulator) is based on AWAACS™ technology to generate threats for Radar & EW & ECCM waveforms using building blocks in a modular and plug-in approach.

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Multi-channels
40GHz
(Σ , Δ_{az} , Δ_{el})

Features

- From 1MHz to 40GHz, ultra-broadband synthesized frequency coverage
- Resolution: < 1Hz up to 40GHz
- < 100ns agility up to 40GHz
- Phase coherent or phase continuous switching modes
- Excellent Phase Noise (-100dBc/Hz @ 1kHz offset for 40GHz carrier)
- Noise floor -150dBc/Hz up to 20GHz
- Harmonics & spurious up to -80dBc
- Extensive Signal Synthesis capability: Pulse, hopping, interleaved pulses, chirp, Barker codes, FMOP, PMOP, AMOP
- High stability 5/125MHz build-in reference and external reference capability
- Compact system 19" rack 8U with ventilation
- Compatible with EW simulator family
- Fully software controlled and configured
- Options:
 - ✓ Arbitrary Waveform Generator
 - ✓ Antenna Beam Forming Unit
 - ✓ ADOA, PDOA, APDOA, TDOA, DDOA, I/Q modulators, External parallel interface

Applications

- Frequency Agile Coherent Signal Generator
- Pulse to pulse full phase coherent generation
- Multi-emitters interleaved Radar pulse trains
- Threat Signal Simulator (TSS)
- Multi-emitters, Multi-threats Simulation
- Arbitrary Waveform Generator (AWG),
- Radar Exciter - Radar Instrumentation
- Multi-modes exotic threat Simulation
- Multiple channels Telecom simulator
- RWR, ECM, ESM systems Test
- Frequency Conversion of Arbitrary Waveforms
- Agile Local oscillator for EW systems
- EW laboratory microwave source
- Radar Target Simulator (RTS)
- Military and Commercial Communications
- Digital Noise Source
- Test of Component

AWAACS: Hopping frequency 100ns

