

TABLE 1 WAVEFORM-GENERATOR ARCHITECTURES

Parameter	DDS-based synthesized-function generator	Arbitrary-waveform generator (ARB, AWG)	Tabor Wonder Wave series*
Sampling rate	Fixed	Variable	Variable to 1.2G samples/sec
Waveform type	Standard plus limited arbitrary	Arbitrary	All standard, arbitrary, and captured waveforms
Vertical resolution	Typically 14 bits	To 16 bits	To 16 bits
Memory depth	To 14k points	To 4M points	To 16M points
Memory management (sequencer)	No	Yes	Yes, as many as 16,000 segments, four advance modes
Signal integrity	Can skip or add points	Precise	Precise
Jitter and phase noise	High	Low	Low
Modulation	All frequency modulation	Amplitude modulation or none	All frequency, amplitude, and phase modulation, including digital
Frequency sweep	Yes	Limited	Yes
Trigger modes	Some	Yes	Continuous, trigger, burst, gated, retrigger
Amplitude range	10V p-p into 50Ω maximum	10V p-p into 50Ω maximum	To 32V p-p into open circuit
Digital outputs	No	Some	Yes
Ability to synchronize multiple instruments	No	Yes	Yes with extended facilities
Cost	Affordable	Can be expensive	Affordable

*True AWG with DDS clock and additional proprietary features (courtesy Tabor)