

# T3AWG2K-series Fact Sheet

## Affordable 16-bit Dual Channel Arbitrary Waveform Generator



### Key Specifications

Model	T3AWG2152	T3AWG2152-D
Frequency Range (sinewave waveform)	1 $\mu$ H to 150 MHz	
Vertical Resolution	16 Bits	
Number of Analog Channels	2	2
Number of Digital Channels	n.a.	8
Output Voltage Range (50 $\Omega$ into 50 $\Omega$ )	6 V <sub>pp</sub> @150 MHz	
Waveform Memory	128 Mpts/Ch.	
Sample Rate (not interpolated)	600 MS/s (1,2 GS/s mit 2x Interpolation)	
Output Source Impedance	Low Impedance (0 $\Omega$ ) and 50 $\Omega$	
Load Impedance @scaling output amplitude	1 $\Omega$ to 1 M $\Omega$	
Output Voltage Load Protection	High Voltage and Low Voltage Limits setting	

### High-performance Affordable Waveform Generation

- 16-bit vertical resolution
  - ✓ Exceptional detailed waveform generation with high-performance fidelity
- Output voltage and spectral purity
  - ✓ 6 V<sub>pp</sub> at full frequency range and excellent Harmonic Distortion
- Mixed signal generation
  - ✓ Combine two analog channels with 8 synchronized digital channels, ideal for debugging and validating digital design
- Waveform Memory 128 Mpts@Ch
  - ✓ Deep memory for downloading and generating complex pseudo-random both analog and digital waveforms
- Advanced Arbitrary Waveform Generator
  - ✓ 128 Mpts arbitrary waveform depth on each channel
  - ✓ Up to 16.384 waveform sequencing entries and single point granularity with conditional/unconditional jump, loop, event also remotely programmable.
  - ✓ Simple and intuitive waveform editor utility for complex analog and digital waveform creation
- Advanced Function Generator
  - ✓ Built-in waveforms include sine, square, pulse, double pulse, ramp, noise, sin(x)/x, gaussian, Lorentz, exponential rise, exponential decay and others
- Specialized for key applications
  - ✓ Transmitter Distortion Test for Automotive Ethernet 100Base-T1 and 1000-Base-T1
  - ✓ Power and semiconductor dynamic behavior test enabled by the flexible double pulse test capability

Standard warranty is one year.

For more information, please contact:

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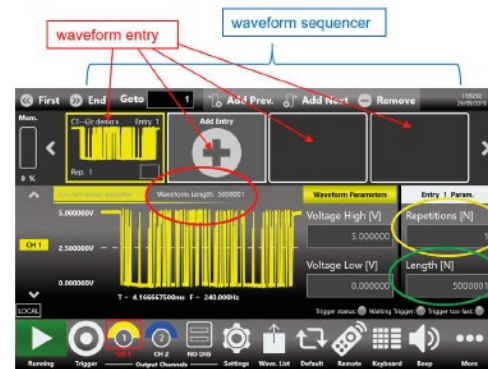
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### Arbitrary Waveform Generator – AWG Operating Mode

Generate complex and long signals with multiple waveforms in the sequencer. AWG operating mode uses variable and synchronized sample rate 'True-Arb' technology for applications requiring extremely high signal fidelity. The platform's deep memory enables the capability to store numerous long waveforms.

- 16-bit vertical resolution
- Up to 16,384 waveform entries in the sequencer with loop, conditional/unconditional jump and specified triggered events
- Up to 4G or infinite waveform repeat count
- 128 Mpts arbitrary waveform memory on each channel (standard)
- Waveform granularity is 1 for waveform length >384
- Output impedance 50 Ω and 0 Ω selectable
- Variable load impedance selectable



### Ordering information

T3AWG2K Series Platforms	Product Code
Function/Arbitrary Waveform Generator, 2 Ch, 150 MHz, 128 Mpts/Ch, 6 V <sub>pp</sub> output, Wave Sequencing	T3AWG2152
Function/Arbitrary Waveform Generator, 2 Ch, 8 Ch Digital, 150 MHz, 128 Mpts/Ch, 6 V <sub>pp</sub> output, Wave Sequencing	T3AWG2152-D
T3AWG2K Series Accessories	Product Code
Mini-SAS HD to 16x SMA cable (8 LVDS output) only for T3AWG2152-D (Accessories to be order separately for the T3AWG2152-D, not included)	T3AWG3-8DIG-SMA



Standard warranty is one year.

### Arbitrary Function Generator – AFG Operating Mode

Generate a large variety of functions including the traditional ones and more. Change parameters and apply modulations on-the-fly for the output signal. AFG operating mode uses an improved Direct Digital Synthesis (DSS) technology. The Double Pulse function is a standard feature, simplifying the testing of dynamic behavior of power devices.

- 150 MHz sine waveform
- 16-bit vertical resolution
- Built-in waveforms include sine, square, pulse, double pulse, ramp, noise, DC, sin(x)/x, gaussian, lorentz, exponential rise, exponential decay, haversine and others
- Run modes includes continuous, modulation, sweep and burst
- Modulation modes include AM, FM, PM, PSK, FSK and PWM
- Output impedance 50 Ω and 0 Ω selectable
- Variable load impedance selectable



### Emulation of real-world signals

Quickly generate and replicate real-world waveforms captured with an oscilloscope.

