TEKTRONIX

AWG710

The Tektronix AWG710 is a high-performance single-channel arbitrary waveform generator designed for generating high-speed, wideband digital and analog signals. Featuring a sample rate up to 4.0 GS/s, 8-bit vertical resolution, and a memory depth of 16.2 Mpoints, it is suitable for advanced communications, radar, and semiconductor testing.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE 488.2), LAN (10BASE-T), RS-232, Parallel, PS/2 Keyboard/Mouse
Display	10.4-inch color TFT LCD, 640 × 480 pixels

Physical

Power Supply	100 V to 240 V AC, 47 Hz to 63 Hz, max. 360 W
Operating Temperature	10 °C to 40 °C °C
Dimensions (W×H×D)	422 mm × 266 mm × 541 mm mm
Weight	22.0 kg

Channel Configuration & Core Architecture

Number of Channels	1
DAC Resolution	8-bit
Maximum Sample Rate	4.0 GS/s
Sample Rate Range	10.0 MS/s to 4.0 GS/s
Run Modes	Continuous, Triggered, Gated, Enhanced

Arbitrary Waveform Performance

Waveform Memory Depth	16,200,000 points
Minimum Segment Length	960 points
Waveform Granularity	4 points
Analog Bandwidth (Direct Out)	1.0 GHz (typical, 3 dB)
Analog Bandwidth (DC Out)	500 MHz (typical, 3 dB)
Rise/Fall Time (Direct Out)	≤ 280 ps (10% to 90%)
Rise/Fall Time (DC Out)	≤ 480 ps (10% to 90%)

Output Characteristics

Output Impedance	50 Ω
Amplitude Range (Direct Out)	20 mVp-p to 1.0 Vp-p into 50 Ω
Amplitude Range (DC Out)	20 mVp-p to 2.0 Vp-p into 50 Ω
DC Offset Range (DC Out)	-1.0 V to +1.0 V into 50 Ω
Marker Outputs	2 channels (Marker 1, Marker 2)
Marker Output Amplitude	Hi: 1.0 V into 50 Ω, Lo: 0 V into 50 Ω

Trigger & Synchronization

External Trigger Input Impedance	50 Ω or 1 kΩ
External Reference Input Frequency	10 MHz
External Reference Input Range	0.2 Vp-p to 3.0 Vp-p
Internal Reference Frequency Accuracy	±1 ppm
External Clock Input Impedance	50 Ω
External Clock Input Level	0.4 Vp-p to 2.0 Vp-p

System Connectivity & Control

Floppy Disk Drive	3.5-inch, 1.44 MB
Internal Storage	SCSI Hard Disk Drive

Power & Environmental Specifications

Storage Temperature Range	-20 °C to +60 °C
Operating Humidity Range	20% to 80% RH (non-condensing)
Operating Altitude	Up to 3,000 m

Physical Characteristics & Compliance

Form Factor	Benchtop

Spectral Purity

Spurious Free Dynamic Range (SFDR)	Direct Out (at 4 GS/s): -55 dBc @ 1 MHz, -55 dBc @ 10 MHz, -50 dBc @ 100 MHz, -40 dBc @ 500 MHz, -35 dBc @ 1 GHz; DC Out (at 4 GS/s, 1 Vp-p): -45 dBc @ 100 MHz
Non-Harmonic Spurious	-55 dBc (DC to 2 GHz, typical)
Phase Noise	-90 dBc/Hz @ 10 kHz offset (100 MHz output, typical)
Random Jitter	4 ps rms (typical)

Trigger Parameters

Trigger Input Level Range	-5.0 V to +5.0 V
Trigger Resolution	0.1 V
Trigger Threshold Accuracy	±(5% of setting + 0.1 V)
Trigger Minimum Pulse Width	5 ns
Trigger Delay to Output	380 ns (typical)
Trigger Jitter	150 ps (typical)

Auxiliary Inputs & Outputs

Add Input Impedance	50 Ω
Add Input Range	±1.0 V (DC to 100 MHz)
Reference Out Amplitude	1.2 Vp-p into 50 Ω
Clock Out Amplitude	0.5 Vp-p into 50 Ω

Marker Outputs

Marker Delay (Direct Out)	3.5 ns (typical)
Marker Delay (DC Out)	6.0 ns (typical)
Marker Output Impedance	50 Ω
Marker Output Rise/Fall Time	< 150 ps (20% to 80%)
Marker Output Level Range (High)	-1.0 V to 2.4 V (into 50 Ω)
Marker Output Level Range (Low)	-1.2 V to 2.2 V (into 50 Ω)

Compliance & Safety

Safety Standards	UL 3111-1, CAN/CSA-C22.2 No. 1010.1, EN 61010-1
EMC Compliance	EN 55011 Class A, EN 50082-1, FCC Part 15 Subpart B Class A

Auxiliary Outputs

Clock Output Impedance	50 Ω
Reference Output Impedance	50 Ω
Reference Output Frequency	10 MHz

Inputs & Outputs

ADD Input Bandwidth	DC to > 100 MHz (-3 dB)
ADD Input Gain	0.1 (±10%) into 50 Ω
Analog Output Connector	SMA, female
Marker Output Connector	SMA, female
Clock Output Connector	SMA, female
External Clock Input Connector	SMA, female
Trigger Input Connector	BNC, female
ADD Input Connector	BNC, female

Sequencer

Sequence Length	1 to 8,000 steps
Sequence Loop Count	1 to 65,536 or infinite

Performance

DC Out Amplitude Accuracy	±(2.0% of amplitude + 2 mV) at 0 V offset
DC Out Offset Accuracy	±(2.0% of offset + 10 mV) at 50 mV amplitude

Environmental

Vibration (Operating)	0.27 g RMS (3 Hz to 500 Hz)
Shock (Non-operating)	30 G (half-sine, 11 ms)

Power

Maximum Power Consumption	380 VA

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.