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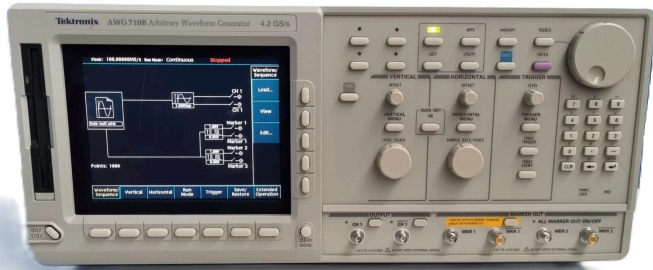
Data Sheet

August 12, 2026

TEKTRONIX

Tektronix AWG710B Arbitrary Waveform Generator

The AWG710B combines world-class signal fidelity with ultra high-speed mixed signal simulation, a powerful sequencing capability and graphical user interface with flexible waveform editor, to solve the toughest measurement challenges in the disk drive, communications and semiconductor design/test industries. The built-in signal applications enable you to easily create standard waveforms for disk drive read channels, communications up to 4.2 Gb/s. Also included is AXW100 ArbExpress™ waveform creation and editing software. This software allows for easy waveform import from oscilloscopes or basic, advanced, and math waveform creation and edit capabilities. Strategy Signal Test Waveform Quick Editor with 300 fs Edge Timing Resolution Delivers Output Edge Control with Near Real-time Precision Allows Two-signal Mix Function Digitally to Support Disk Drive Noise Performance Test and Pre/De-emphasis Serial Data Communication Test Real-time Sequencing Creates Infinite Waveform Loops, Jumps, Patterns and Conditional Branches Applications Disk Drive Read/Write Design and Test Communications Design and Test Arbitrary IF and IQ Base-band Signals Standard Waveforms for Communications Pulse Generation High-speed, Low-jitter Data and Clock Source Mixed Signal Design and Test Real-world Simulations Corruption and Enhancement of Ideal Waveforms Timing and Amplitude Signal Impairments Wavefo



MODEL

**Tektronix
AWG710B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

AWG710B

LISTING

<https://aumictechlabs.com/products/awg710b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Tektronix AWG710B is a arbitrary waveform generator delivering 4.2 GS/s sample rate and up to 2 GHz analog bandwidth for complex signal generation across disk drive design, communications testing, and semiconductor applications. The instrument combines 8-bit vertical resolution with record lengths up to 64.8M points (Option 01), ultra-low jitter performance, and dual-marker outputs with 300 fs timing resolution. Real-time sequencing supports up to 8,000 steps with conditional branching, while the graphical waveform editor and signal mixing capability - including two-signal digital mixing for noise and pre/de-emphasis testing - enable rapid prototyping of demanding test scenarios. Direct external clock input accommodates jittered and non-jittered signals for high-speed data stream timing margin analysis up to 4.2 Gb/s. Technical Specifications Sample Rate: 4.2 GS/s Analog Bandwidth: Up to 2 GHz (Option 02) Vertical Resolution: 8-bit Record Length: 32.4M points standard; 64.8M points with Option 01 Period Jitter: 2.6 psRMS typical (AWG710 at 4.2 GS/s) Cycle-to-Cycle Jitter: 4.8 psRMS typical (AWG710 at 4.2 GS/s) Marker Jitter: 2.0 psRMS typical (at 4.2 GS/s) Marker Timing Resolution: 300 fs Markers: 2 outputs with adjustable pulse widths and levels Standard Waveforms: Sine, Triangle, Square, Ramp, Pulse, DC Frequency Range (Standard Waveforms): 1.000 Hz to 400.0 MHz Amplitude (50 Ω): 0.020 Vp-p to 2 Vp-p (1 mV resolution) Offset (50 Ω): ± 0.500 V (1 mV resolution); rails ± 1.5 V Marker Output (50 Ω to GND): -1.1 V to 3.0 V; 1.2 Vp-p nominal (2.5 Vp-p open) Key Features Real-time sequencing with 1-8,000 steps and conditional branching Sequence event memory up to 65,536 or infinite steps Two-signal digital mixing for disk drive noise and serial data pre/de-emphasis testing Direct external clock input supporting jittered and non-jittered timing signals Dual markers with independent pulse width control Typical Applications Disk drive read channel design and validation High-speed communications (up to 4.2 Gb/s) signal generation and testing Semiconductor device characterization Timing margin analysis via external clock injection Compatibility & Integration Synchronous operation mode and external clock input enable

integration into multi-instrument test systems requiring phase-coherent signal generation and timing correlation.

AWG710B Characteristics / Specifications

PARAMETER	VALUE
Sequence Length	One to 8,000 steps. Sequence Repeat Counter – One to 65,536 or infinite. Run Modes Gated mode, Event Jump, and Software Jump are disabled in the synchronous operation Continuous – Waveform is iteratively output. If a sequence is defined, the sequence order and repeat functions are applied.
Triggered	Waveform is output only once when an external, internal, GPIB, LAN, or manual trigger is received.
Gated	Waveform begins output when gate is true and resets to beginning when false.
Enhanced	Waveform is output as defined by the sequence.
Extended Operation Function Generator Waveform Shape	Sine, Triangle, Square, Ramp, Pulse or DC.
Frequency	48 to 63 Hz. Physical Characteristics Dimensionsmm. Height1937.6 With option 112329.1 Width43417.1 Depth50820 Weightkglb. Without package14.131.1 With option 1116.135.7 With package24.554 With option 1127.561.1 Interfaces – GPIB, Ethernet: 10/100Base-T, RJ-45.
Offset	No function. DC Offset Accuracy – 0 V $\pm$ 10 mV at 500 mV Amplitude (waveform data = 0).
DC Level	DC waveform only. Range: –0.500 V to +0.500 V into 50 Ω Resolution: 1 mV.
Polarity	Normal, Invert. Duty Cycle – Range: 0.1% to 99.9%, Pulse waveform only.
Resolution	1.000 Hz to 4.000 MHz: 0.1% step. 4.001 MHz to 20.00 MHz: 0.5% step. 20.01 MHz to 40.00 MHz: 1% step. 40.01 MHz to 80.00 MHz: 2% step. 80.01 MHz to 100.0 MHz: 2.5% step. 100.1 MHz to 160.00 MHz: 4% step. 160.1 MHz to 200.0 MHz: 5% step. 200.1 MHz to 400.0 MHz: 10% step.
Marker Out	Marker1 Pulse Width: Hi Lo: 20%/80% of Period.
Marker2 Pulse Width	Hi/Lo: 50%/50% of Period, except 100.1 MHz to 160.0 MHz.
Hi/Lo	52%/48% of Period, at 100.1 MHz to 160.0 MHz.
Marker Level	Hi Level: 1 V into 50 Ω . Lo Level: 0 V into 50 Ω .
Waveform mixing operation	Supports two-signals mixed output digitally. Synchronous operation – Supports synchronization of two AWGxxx boxes allowing two synchronized signal outputs.

PARAMETER	VALUE
Sync master operation	Set one AWG710B as master box. Sync slave operation – Set another AWG710B as slave box.
Clock Generator Sampling Frequency	50.000000 kS/s to 4.2000000 GS/s.
Phase Noise	≤−85 dBc/Hz at 10 kHz offset. Filter *1 Type – 20, 50, 100, 200 MHz Bessel low-pass.
Digital to Analog Converter	Resolution: 8-bits. Differential Non-linearity: ±1/2-LSB.
Amplitude Range	20 mV to 2.0 V peak-to-peak. Resolution: 1 mV.
DC Accuracy	±(2.0% of Amplitude + 2 mV) at offset = 0 V.
Pulse response	(−1 and 1 waveform data, 0 V offset, through filter at 1 V p-p, clock 1 GS/s) using 20 GHz BW oscilloscope.
Rise time	(10% to 90%): ≤175 ps. Fall Time – (10% to 90%): ≤175 ps.
Aberrations	±10% (at 1.0 V p-p amplitude). Flatness: ±5% (after 20 ns from rise/fall edge).
Sine Wave Characteristics	(4.2 GS/s clock, 32 waveform points, 131.25 MHz signal frequency, 1.0 V amplitude, 0 V offset, through filter). Harmonics: ≤−40 dBc, DC to 1000 MHz. Noise: ≤−50 dBc, DC to 1000 MHz.
Rise Time (10% to 90%)	20 MHz, 17 ns; 50 MHz, 7.0 ns; 100 MHz, 3.7 ns; 200 MHz, 2.0 ns.
Group Delay	20 MHz, 18 ns; 50 MHz, 8 ns; 100 MHz, 4.7 ns; 200 MHz, 3 ns.
Pulse Response (	1 and 1 waveform data, at 0.5 V p-p) – Rise Time (10% to 90%): ≤280 ps.
Fall Time (10% to 90%)	≤280 ps. Output Impedance – 50 Ω.
Extended Bandwidth Output (Option 02) Amplitude	500 mV p-p to 1.0 V p-p into 50 Ω.
Output Impedance	50 Ω. Auxiliary Outputs Marker Number – 2 (complementary).
Level	High level: −1.00 V to 2.45 V into 50 Ω to GND.
Low level	−2.00 V to 2.40 V into 50 Ω to GND.
Amplitude	0.05 V p-p to 1.25 V p-p max. into 50 Ω to GND.
Maximum Output Current	±80 mA. Rise/Fall Time (20% to 80%) – <130 ps into 50 Ω to GND (1.0 V p-p, Hi +1.0 V, Lo 0 V).
Period Jitter (Typical)	by 1010 clock pattern At 4.2 GS/s 2.0 ps RMS, 15 ps peak to peak. At 2.1 GS/s 2.0 ps RMS, 15 ps peak to peak. At 1.05 GS/s 2.0 ps RMS, 15 ps peak to peak.

PARAMETER	VALUE
Marker Skew	< 20 ps (typical). Delay (between analog output and marker output) – (Marker Level: 1 V p-p (Hi + 1V/Lo 0V), Analog Output: At 1 V p-p).
Normal Output	2.4 ns (Offset 0 V, Filter = “Through”).
Direct Output	–1 ns. Connector – Front-panel SMA. VCO Out Amplitude – CML, AC coupling, 0.4 V p-p into 50 Ω to GND.
Impedance	50 Ω , AC coupling. Connector – Rear-panel BNC. * 1 Option 02 eliminates the ability to switch between normal and direct D/A out, as well as filter and offset control. Arbitrary Waveform Generator AWG710B Signal Sources • www.tektronix.com/signal_sources 3 C Out 1 and 2 For 2 boxes synchronous usage.
Connector	SMA, Rear. Output signal style: Complementary. Auxiliary Inputs Trigger In Trigger Mode – Minimum Pulse Width: 10 ns, 0.2 V amplitude.
Input Voltage Range	1k Ω : $\pm$ 10V. 50 Ω : $\pm$ 5V. Threshold – Level: –5.0 V to 5.0 V.
Two boxes synchronous operation	$\leq$ 109.5 clocks + 700 ns. Delay to Analog Out: 275.5 clocks + 17 ns (Normal Output, Filter “Through”).
Gate Mode	(for one box operation). Minimum Pulse Width (0.2 V amplitude): 1152 clocks + 10 ns.
Gate Hold Off	$\leq$ 1920 clocks + 20 ns. Delay to Analog Out: 1355 to 1563.5 clocks + 9 ns (Normal Output, Filter “Through”).
Event Input	(for one box operation). Number of Events: 7-bits.
Input Signals	7 event bits, strobe. Threshold: TTL level. Maximum Input: 0 V to +5 V (DC + peak AC).
Enhanced Mode	Minimum Pulse Width: 320 clocks + 10 ns.
Event Hold Off	$\leq$ 896 clocks + 20 ns. Delay to Analog Out (Jump timing: Async, Output Norm, Filter Through): Strobe: ON, 1691.5 clocks + 10 ns.
Strobe	OFF, 1947.5 clocks + 6 ns. Event Input to Strobe Input: Setup Time: 192 clocks + 10 ns.
Hold Time	192 clocks + 10 ns. External Clock IN Input Voltage Range – 0.4 V p-p to 2.0 V p-p .
Reference 10 MHz Clock IN Input Voltage Range	0.2 V p-p to 3.0 V p-p , $\pm$ 10 V maximum.
Display Area	Horizontal: 13.06 cm (5.14 in.), Vertical: 9.70 cm (3.81 in.).
Flash Disk	256 MB (Option 10). Floppy Disk – 3.5 inch, 1.44 MB.

PARAMETER	VALUE
Environment Temperature	Operating: +10 °C to +40 °C. Nonoperating: –20 °C to +60 °C.
Humidity	Operating: 20% to 80%. Nonoperating: 5% to 90%.
Altitude (Hard Disk Restriction)	Operating: Up to 3,000 m (10,000 ft).
Nonoperating	up to 12,000 m (40,000 ft). Random Vibration – Operating: 2.65 m/s ² RMS (0.27 Grms, 5 Hz to 500 Hz, 10 minutes.
Shock	Nonoperating: 294 m/s ² (30 G), half-sine, 11 ms duration (three times each axis, in each direction, 18 total).
EMC Compliance	EC Council Directive 89/336/EEC (EC-92), AS/NZS2064-1/ 2.
Safety	UL 61010B-1, CSA C22.2 No. 1010.1, EN61010-1 second edition.
Power Supply Rating	100 to 240 VAC. Range – 90 to 250 VAC.
Maximum Power and Current	240 VA and 5 A.
PC Keyboard	6-Pin mini-DIN, rear. Arbitrary Waveform Generator AWG710B Our most up-to-date product information is available at: www.tektronix.com
Bandwidth	Output (Option 02) Amplitude – 500 mV p-p to 1.0 V p-p into 50 Ω.

AWG710B Specifications

PARAMETER	VALUE
Up To 2.1 GHz	Two Markers With 2.0 ps
RMS	(at 4.2 GS/s Typical) Jitter
Streams	Analog Bandwidth to 2 GHz
Data Stream Timing Margin	Test Up To 4.2 Gb/s
Mode Supports Two	AWG710B Outputs (2: Analog,
Waveform Quick Editor with	300 fs Edge Timing
Pulse Generation	High-speed, Low-jitter
of Ideal Waveforms	Timing and Amplitude Signal
Arbitrary Waveform Generator	AWG710B
The AWG710B Arbitrary Waveform Generator	Delivers World-class Signal Fidelity at 4.2 GS/s
function supports 2 ch 4.2 GS/s solution.	The AWG710B combines world-class signal
Disk drive read channel application.	AXW100 ArbExpress Software.
Arbitrary Waveforms	Waveform Length – 960 to 32,400,000 points (or
to 160.0 MHz.	Hi/Lo: 52%/48% of Period, at 100.1 MHz
Internal Trigger Generator	Internal Trigger Rate – Range: 1.0 μ s to 10.0 s.
Normal Out	*1
amplitude).	Flatness: $\pm$ 5% (after 20 ns from rise/fall edge).
Filter	*1
Direct D/A Out	*1
Extended Bandwidth Output	(Option 02)
Marker	Number – 2 (complementary).
max. into	50 Ω to GND.
by1010 clock pattern.	At 4.2 GS/s 3.4 ps
Delay (between analog output and marker	output) – (Marker Level: 1 V

PARAMETER	VALUE
VCO Out	Amplitude – CML, AC coupling, 0.4 V
to GND.	Impedance: 50 Ω, AC coupling.
open.	Impedance – 50 Ω, AC coupling.
C Out 1 and 2	For 2 boxes synchronous usage.
T Out 1 and 2	For 2 boxes synchronous usage.
External Clock IN	Input Voltage Range – 0.4 V
C IN	For 2 boxes synchronous usage.
T IN	For 2 boxes synchronous usage.
Data Storage	Internal Hard Disk – ≥20.0 GB.
Environment	Temperature – Operating: +10 °C to +40 °C.
Power Supply	Rating – 100 to 240 VAC.
Physical Characteristics	Dimensionsmmmin.
Height1937.6	With option 112329.1
Width43417.1	Depth50820
Weightkglb.	Without package14.131.1
With option 1116.135.7	With package24.554
With option 1127.561.1	Interfaces – GPIB, Ethernet: 10/100Base-T, RJ-45.
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tered trademarks of their respective companies.	06/04 HB/WOW76W-14865-4
Ordering Information	AWG710B
Software Utility CD	(063-3763-00), Certificate of Calibration,
Options	Opt. 01 –64 M points waveform memory.
Opt. 10	*2
power on/off by rear panel main switch.	Opt. 11
Service	Opt. C3 –Calibration service 3 years.
option C3).	Opt. D5 –Calibration data report 5 years (with

PARAMETER	VALUE
option C5).	Opt. R3 –Repair service 3 years.
Recommended Accessories	Service Manual –071-1417-xx.
Power Plug Options	Opt. A0 –North America Power.
Language Option	Opt. L0 –English (User, Programmer).
One year parts and labor.	*2
ASEAN / Australasia / Pakistan (65) 6356 3900	Austria +43 2236 8092 262
Sequence Repeat Counter	One to 65,536 or infinite.
Waveform Shape	Sine, Triangle, Square, Ramp, Pulse or DC.
Marker Out	Marker1 Pulse Width:
Waveform mixing operation	Supports two-signals mixed output digitally.
Sync master operation	Set one AWG710B as a master box.
Sync slave operation	Set another AWG710B as a slave box.
Sampling Frequency	50.000000 kS/s to 4.2000000 GS/s.
Output Signal	Complementary; CH1 and channel inverse.
Level	High level: –1.00 V to 2.45 V into 50 Ω to GND.
DC Accuracy	Within ± 0.1 V $\pm 5\%$ of setting into 50 Ω .
Trigger Mode	Minimum Pulse Width: 10 ns, 0.2 V amplitude.
Event Input	(for one box operation).
Enhanced Mode	Minimum Pulse Width: 320 clocks + 10 ns.
Event Input to Strobe Input	Setup Time: 192 clocks + 10 ns.
Input Voltage Range	0.2 V
Altitude (Hard Disk Restriction)	Operating: Up to 3,000 m (10,000 ft).
Contact Tektronix	ASEAN / Australasia / Pakistan (65) 6356 3900

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Performance Test and Pre/De-emphasis Serial Data Communication Test Real-time Sequencing Creates Infinite Waveform Loops, Jumps, Patterns and Conditional Branches Applications Disk Drive Read/Write Design and Test Communications Design and Test Arbitrary IF and IQ Base-band Signals Standard Waveforms for Communications Pulse Generation High-speed, Low-jitter Data and Clock Source Mixed Signal Design and Test Real-world Simulations Corruption and Enhancement of Ideal Waveforms Timing and Amplitude Signal Impairments Waveforms Imported from MathCad, MATLAB, Excel and Others Arbitrary Waveform Generator AWG710B The AWG710B Arbitrary Waveform Generator

Delivers World-class Signal Fidelity at 4.2 GS/s to Solve Ever-increasing Measurement Challenges Signal Sources • www.tektronix.com/signal_sources 1 New two-box synchronous operation function supports 2 ch 4.2 GS/s solution.

The AWG710B combines world-class signal fidelity with ultra high-speed mixed signal simulation, a powerful sequencing capability and graphical user interface with flexible waveform editor, to solve the toughest measurement challenges in the disk drive, communications and semiconductor design/test industries. The built-in signal applications enable you to easily create standard waveforms for disk drive read channels, communications up to 4.2 Gb/s. Also included is AXW100 ArbExpress™ waveform creation and editing software. This software allows for easy waveform import from oscilloscopes or basic, advanced, and math waveform creation and edit capabilities.

Disk drive read channel application. AXW100 ArbExpress Software.

Signal Sources • www.tektronix.com/signal_sources 2 Arbitrary Waveform Generator AWG710B Characteristics Arbitrary Waveforms Waveform Length – 960 to 32,400,000 points (or 64,800,000 points, option 01) in multiples of four.

Sequence Length – One to 8,000 steps. Sequence Repeat Counter – One to 65,536 or infinite.

Run Modes Gated mode, Event Jump, and Software Jump are disabled in the synchronous operation Continuous – Waveform is iteratively output. If a sequence is defined, the sequence order and repeat functions are applied.

Specifications

PARAMETER	VALUE
Triggered	Waveform is output only once when an external, internal, GPIB, LAN, or manual trigger is received.
Gated	Waveform begins output when gate is true and resets to beginning when false.
Enhanced	Waveform is output as defined by the sequence.
Extended Operation Function Generator Waveform Shape	Sine, Triangle, Square, Ramp, Pulse or DC.
Frequency	1.000 Hz to 400.0 MHz. Amplitude – Range: 0.020 V p-p to 2 V p-p into 50 Ω Resolution: 1 mV.
Offset	Range: -0.500 V to +0.500 V into 50 Ω Resolution: 1 mV.
DC Level	DC waveform only. Range: -0.500 V to +0.500 V into 50 Ω Resolution: 1 mV.
Polarity	Normal, Invert. Duty Cycle – Range: 0.1% to 99.9%, Pulse waveform only.
Resolution	1.000 Hz to 4.000 MHz: 0.1% step. 4.001 MHz to 20.00 MHz: 0.5% step.

20.01 MHz to 40.00 MHz: 1% step. 40.01 MHz to 80.00 MHz: 2% step.

80.01 MHz to 100.0 MHz: 2.5% step. 100.1 MHz to 160.00 MHz: 4% step.

160.1 MHz to 200.0 MHz: 5% step. 200.1 MHz to 400.0 MHz: 10% step.

Specifications

PARAMETER	VALUE
Marker Out	Marker1 Pulse Width: Hi Lo: 20%/80% of Period.
Marker2 Pulse Width	Hi/Lo: 50%/50% of Period, except 100.1 MHz to 160.0 MHz.
Hi/Lo	52%/48% of Period, at 100.1 MHz to 160.0 MHz.
Marker Level	Hi Level: 1 V into 50 Ω . Lo Level: 0 V into 50 Ω .
Waveform mixing operation	Supports two-signals mixed output digitally. Synchronous operation - Supports synchronization of two AWGxxx boxes allowing two synchronized signal outputs.

Note: This operation is executed by Sync master and Sync slave operation combination.

Specifications

PARAMETER	VALUE
Sync master operation	Set one AWG710B as a master box. Sync slave operation - Set another AWG710B as a slave box.
Clock Generator Sampling Frequency	50.000000 kS/s to 4.2000000 GS/s.
Resolution	8 digits. Internal Clock - Accuracy: ± 1 ppm.
Phase Noise	(VCO out) At 4.2GS/s, 10 kHz offset: -65 dBc/Hz.

At 4.2GS/s, 100 kHz offset: -96 dBc/Hz. Internal Trigger Generator Internal Trigger Rate - Range: 1.0 μ s to 10.0 s.

Resolution: 3 digits, 0.1 μ s minimum. Accuracy: $\pm 0.1\%$. Main Output Output Signal - Complementary; CH1 and channel inverse.

Digital to Analog Converter - Resolution: 8-bits. Differential Non-linearity: $\pm 1/2$ -LSB.

Integral Non-linearity: ± 1 -LSB. Output Connector - Front Panel SMA. Normal Out *1 Amplitude - Into 50 Ω .

Specifications

PARAMETER	VALUE
Amplitude Range	20 mV to 2.0 V peak-to-peak. Resolution: 1 mV.
DC Accuracy	$\pm (2.0\% \text{ of Amplitude} + 2 \text{ mV})$ at offset = 0 V.
Offset	Into 50 Ω . Range of Signal Center: ± 0.500 V (Rails of -1.5V, +1.5V).
Resolution	1 mV. Accuracy: $\pm 1.5\%$ of offset ± 10 mV at 20 mV amplitude.
Pulse response	(-1 and 1 waveform data, 0 V offset, through filter at 1 V p-p, clock 1 GS/s) using 20 GHz BW oscilloscope.
Rise time	(10 to 90%): ≤ 480 ps. Fall time: (10 to 90%): ≤ 480 ps.
Aberrations	$\pm 10\%$ (at 1.0 V p-p amplitude). Flatness: $\pm 5\%$ (after 20 ns from rise/fall edge).
Sine Wave Characteristics	(4.2 GS/s clock, 32 waveform points, 131.25 MHz signal frequency, 1.0 V amplitude, 0 V offset, through filter).

Harmonics: ≤ -40 dBc, DC to 1000 MHz. Noise: ≤ -50 dBc, DC to 1000 MHz.

Phase noise: ≤ -85 dBc/Hz at 10 kHz offset. Filter *1 Type - 20, 50, 100, 200 MHz Bessel low-pass.

Rise Time (10% to 90%) - 20 MHz, 17 ns; 50 MHz, 7.0 ns; 100 MHz, 3.7 ns; 200 MHz, 2.0 ns.

Group Delay – 20 MHz, 18 ns; 50 MHz, 8 ns; 100 MHz, 4.7 ns; 200 MHz, 3 ns.
 Direct D/A Out *1 Amplitude – 20 mV p-p to 1.0 V p-p into 50 Ω.
 Resolution – 1mV. DC Accuracy – ±(2% of Amplitude + 2 mV).
 Offset – No function. DC Offset Accuracy – 0 V ±10 mV at 20 mV amplitude (waveform data = 0).
 Pulse Response (–1 and 1 waveform data, at 0.5 V p-p) – Rise Time (10% to 90%): ≤280 ps.
 Fall Time (10% to 90%): ≤280 ps. Output Impedance – 50 Ω.

Specifications

PARAMETER	VALUE
Extended Bandwidth Output (Option 02) Amplitude	500 mV p-p to 1.0 V p-p into 50 Ω.
Resolution	1mV. DC Accuracy – ±(2.0% of amplitude + 2 mV).
Offset	No function. DC Offset Accuracy – 0 V ±10 mV at 500 mV Amplitude (waveform data = 0).
Pulse Response	(–1 and 1 waveform data, at 1.0 V p-p).
Rise Time	(10% to 90%): ≤175 ps. Fall Time – (10% to 90%): ≤175 ps.
Output Impedance	50 Ω. Auxiliary Outputs Marker Number – 2 (complementary).
Level	High level: –1.00 V to 2.45 V into 50 Ω to GND.
Low level	–2.00 V to 2.40 V into 50 Ω to GND.
Amplitude	0.05 V p-p to 1.25 V p-p max. into 50 Ω to GND.
Resolution	0.05 V. DC Accuracy – Within ±0.1 V ±5% of setting into 50 Ω.
Maximum Output Current	±80 mA. Rise/Fall Time (20% to 80%) – <130 ps into 50 Ω to GND (1.0 V p-p, Hi +1.0 V, Lo 0 V).
Period Jitter (Typical)	by1010 clock pattern At 4.2 GS/s 2.0 ps RMS, 15 ps peak to peak.

At 2.1 GS/s 2.0 ps RMS, 15 ps peak to peak.
 At 1.05 GS/s 2.0 ps RMS, 15 ps peak to peak.
 Cycle-to-cycle Jitter (Typical) – by1010 clock pattern. At 4.2 GS/s 3.4 ps RMS, 25 ps peak to peak.
 At 2.1 GS/s 3.4 ps RMS, 25 ps peak to peak.
 At 1.05 GS/s 3.7 ps RMS, 26 ps peak to peak.

Specifications

PARAMETER	VALUE
Marker Skew	< 20 ps (typical). Delay (between analog output and marker output) – (Marker Level: 1 V p-p (Hi + 1V/Lo 0V), Analog Output: At 1 V p-p).
Normal Output	2.4 ns (Offset 0 V, Filter = “Through”).
Direct Output	–1 ns. Connector – Front-panel SMA. VCO Out Amplitude – CML, AC coupling, 0.4 V p-p into 50 Ω to GND.
Impedance	50 Ω, AC coupling. Connector – Rear-panel SMA. 10 MHz Reference Clock Out Amplitude – 1.2 V p-p into 50 Ω. Max 2.5 V p-p open.
Impedance	50 Ω, AC coupling. Connector – Rear-panel BNC.

* 1 Option 02 eliminates the ability to switch between normal and direct D/A out, as well as filter and offset control.

Arbitrary Waveform Generator AWG710B Signal Sources • www.tektronix.com/signal_sources 3 C Out 1 and 2 For 2 boxes synchronous usage.

Specifications

PARAMETER	VALUE
Connector	SMA, Rear . Output signal style: Complementary. T Out 1 and 2 For 2 boxes synchronous usage.
Connector	SMA, Rear. Output signal style: Complementary. Auxiliary Inputs Trigger In Trigger Mode - Minimum Pulse Width: 10 ns, 0.2 V amplitude.
Impedance	1k Ω or 50 Ω . Polarity - POS or NEG. Connector - Rear-panel BNC.
Input Voltage Range	1k Ω : $\pm$ 10V. 50 Ω : $\pm$ 5V. Threshold - Level: -5.0 V to 5.0 V.
Resolution	0.1 V. Trigger Mode - Minimum Pulse Width: 10 ns, 0.2 V amplitude.

Trigger Hold-off - One box operation: $\leq$ 109.5 clocks + 500 ns.
Two boxes synchronous operation: $\leq$ 109.5 clocks + 700 ns. Delay to Analog Out: 275.5 clocks + 17 ns (Normal Output, Filter "Through").
Gate Mode - (for one box operation). Minimum Pulse Width (0.2 V amplitude): 1152 clocks + 10 ns.
Gate Hold Off: $\leq$ 1920 clocks + 20 ns. Delay to Analog Out: 1355 to 1563.5 clocks + 9 ns (Normal Output, Filter "Through").
Event Input - (for one box operation). Number of Events: 7-bits.
Input Signals: 7 event bits, strobe. Threshold: TTL level. Maximum Input: 0 V to +5 V (DC + peak AC).
Impedance 1 k Ω , pull-up to +3.3 V. Connector: Rear-panel 9-Pin D-sub.
Enhanced Mode - Minimum Pulse Width: 320 clocks + 10 ns.
Event Hold Off: $\leq$ 896 clocks + 20 ns. Delay to Analog Out (Jump timing: Async, Output Norm, Filter Through):
Strobe: ON, 1691.5 clocks + 10 ns.

Specifications

PARAMETER	VALUE
Strobe	OFF, 1947.5 clocks + 6 ns. Event Input to Strobe Input: Setup Time: 192 clocks + 10 ns.
Hold Time	192 clocks + 10 ns. External Clock IN Input Voltage Range - 0.4 V p-p to 2.0 V p-p .
Impedance	50 Ω , AC coupled. Frequency Range - 125 MHz to 4.2 GHz

Note:need >10 mV/ns signal slew rate Connector - Rear-panel SMA.
Reference 10 MHz Clock IN Input Voltage Range - 0.2 V p-p to 3.0 V p-p , $\pm$ 10 V maximum.

Specifications

PARAMETER	VALUE
Impedance	50 Ω , AC coupled. Frequency Range - 10 MHz $\pm$ 0.1 MHz.
Connector	Rear-panel BNC. C IN For 2 boxes synchronous usage.
Connector	SMA, Rear. Input signal style: Complementary. T IN For 2 boxes synchronous usage.
Connector	SMA, Rear. Input signal style: Complementary. General Characteristics Display - Color TFT LCD.
Display Area	Horizontal: 13.06 cm (5.14 in.), Vertical: 9.70 cm (3.81 in.).
Resolution	640x480. Data Storage Internal Hard Disk - $\geq$ 20.0 GB.
Flash Disk	256 MB (Option 10). Floppy Disk - 3.5 inch, 1.44 MB.

PARAMETER	VALUE
Environment Temperature	Operating: +10 °C to +40 °C. Nonoperating: -20 °C to +60 °C.
Humidity	Operating: 20% to 80%. Nonoperating: 5% to 90%.
Altitude (Hard Disk Restriction)	Operating: Up to 3,000 m (10,000 ft).
Nonoperating	up to 12,000 m (40,000 ft). Random Vibration - Operating: 2.65 m/s ² RMS (0.27 Grms, 5 Hz to 500 Hz, 10 minutes.
Nonoperating	22.36 m/s ² RMS (2.28 Grms, 5 Hz to 500 Hz, 10 minutes.
Shock	Nonoperating: 294 m/s ² (30 G), half-sine, 11 ms duration (three times each axis, in each direction, 18 total).
EMC Compliance	EC Council Directive 89/336/EEC (EC-92), AS/NZS2064-1/ 2.
Safety	UL 61010B-1, CSA C22.2 No. 1010.1, EN61010-1 second edition.
Power Supply Rating	100 to 240 VAC. Range - 90 to 250 VAC.
Maximum Power and Current	240 VA and 5 A.
Frequency	48 to 63 Hz. Physical Characteristics Dimensionsmmmin. Height1937.6 With option 112329.1 Width43417.1 Depth50820 Weightkg1b.

Without package14.131.1 With option 1116.135.7 With package24.554 With option 1127.561.1 Interfaces - GPIB, Ethernet: 10/100Base-T, RJ-45.
PC Keyboard - 6-Pin mini-DIN, rear.

Arbitrary Waveform Generator AWG710B Our most up-to-date product information is available at:
www.tektronix.com

Ordering Information

OPTION	DESCRIPTION
Opt. 01	64 M points waveform memory.
Opt. 02	Extends analog bandwidth to 2 GHz (calculated based on rise time).
Opt. 1R	Rack Mount Kit.
Opt. C3	Calibration service 3 years. Opt. C5 –Calibration service 5 years.
Opt. D1	Calibration data report. Opt. D3 –Calibration data report 3 years (with option C3).
Opt. D5	Calibration data report 5 years (with option C5).
Opt. R3	Repair service 3 years. Opt. R5 –Repair service 5 years.
Opt. A0	North America Power. Opt. A1 –Universal EURO Power.
Opt. A2	United Kingdom Power. Opt. A3 –Australia Power. Opt. A5 –Switzerland Power.
Opt. A6	Japan Power. Opt. A10 –China Power. Opt. A99 –No Power Cord or AC Adapter.
Opt. L0	English (User, Programmer). Opt. L5 –Japanese (User, Programmer).
Includes	User manual, Programmer's manual, Floppy disk: sample waveform library (063-A3740-00), performance verification (063-3721-00), Sample Program (062-A258-50), AXW100 ArbExpress TM Software Utility CD (063-3763-00), Certificate of Calibration, power cable. 50ΩSMA Terminator two each (015-1022-01).

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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