



ACTIVE
TECHNOLOGIES

RIDER

Time to **Reinvent** advance signal generation

ARB Rider 2104/2182/2184 Technical Datasheet



2–4 CHANNELS / 180 MHz ALL-IN-ONE: Function Generator, Arb Generator and Digital Pattern Generator

- 2 or 4 Analog Channels
- 600 MS/s (1.2 GS/s with x2 interpolation)
- 16-bit Vertical Resolution
- Up to 180 MHz Bandwidth
- Up to 12V_{p-p} into 50Ω load
- Up to 512Mpts Waveform Memory per Channel
- 8 Digital Channels in synchronous with analog Generation
- Simple Rider™ UI: designed for touch AWG/AFG user interfaces.

Key performance specifications

- AFG Mode
 - Up to 180 MHz Sine Waveforms
 - 16-bit vertical resolution
 - Amplitude up to 12V_{p-p} into 50Ω load
 - Improved DDS based technology
- AWG Mode
 - 600 MS/s Variable Clock (1.2 GS/s with x2 Interpolation)
 - 16-bit vertical resolution
 - 8-bit digital channels
 - Up to 512 Mpts Waveform Memory per Channel
 - Up to 160 MHz Calculated Bandwidth
 - Amplitude up to 12V_{p-p} into 50Ω load

Features & Benefits

- Sample rate can be programmed in from 1 S/s to 600 MS/s (1 S/s to 1.2 GS/s with 2x interpolation), with 16-bit vertical resolution, ensuring exceptional signal integrity
- Arbitrary waveform memory up to 512 Mpts for each analog channel
- Mixed Signal Generation – 2 or 4 Analog channels with 8 synchronized Digital Channels for debugging and validating digital design
- Two operation modes – Simple Rider AFG (DDS AFG mode) and True Arb (variable clock Arbitrary AWG mode)
- Digital outputs provide up to 600Mb/s data rate in LVDS format. LVDS to LVTTTL adapter is available
- Advance sequencer with up to 16384 user defined waveforms provides the possibility of generating complex signal scenarios with the most efficient memory usage
- Windows based platform with 7" touch screen, front panel buttons and knob
- Compact form factor, convenient for bench top and fully fit with 3U – 10" rackmount standard
- LAN interfaces for remote control



Applications areas

Automotive



Today's cars are including a lot of highly sophisticated electronic control unit with very sensitive electronic components. The Arb Rider 2104 / 2182 / 2184 combining 600 MS/s (1.2 GS/s with 2x interpolation) with 16 bit vertical resolution, represents an ideal tool for successfully addressing the new testing challenges in automotive.

- CAN, CAN-FD, LIN, Flexray, SENT emulation
- EMI debugging, troubleshooting and testing
- Electrical standards emulation up to 12Vp-p
- Power MOSFET circuitry in automotive electronics optimization

IoT and Ind 4.0 perfect RF Modulator



Arb and Function Riders will be the iconic instrument for this application. The possibility to emulate complex RF I/Q modulation for simulation and Test vs wireless devices or working on Internet of things of industry 4.0 applications. Each engineer may use the possibility to import waveform to emulate devices under test, impose distortion on waveform (such noise) to test the ability of devices to be compliant to the standards.

Research Applications

Research centers and Universities, are key users of Arb Rider generator's series.

Complex waveform and/or sophisticated Pulses emulation based on variable edges or multilevel could be perfectly created. The combination of fast edge generation, excellent dynamic range and easy to use user interface meet perfectly scientists and engineers working on large experiments such Accelerators, Tokamak or synchrotrons to emulate signals without creating specific test boards.

- Emulation of detectors
- Emulation of signal sources adding noise
- Generation/playback of real-world signals
- Emulation of long PRBS sequences
- Modulating and driving laser diode

Aerospace and Defense applications

Electronic warfare signals driven by Radar or Sonar systems perfectly match with these generators. Large BW Riders can be used on digital modulation systems for Radio Applications or others I/Q signal modulation.

Pulses may be easily generated for applications such Pulse Electron Beam or X Ray Sources, Flash X-ray Radiography, Lighting pulse simulators, high Power Microwave modulators.

- Frequency response, intermodulation distortion and noise-figure measurements
- Phase Locked Loop (PLL) pull-in and hold range characterization
- Radar base-band signals emulation

Semiconductors Test

Emulation of complex signals generated with inclusion of noise or distortions may become an excellent way to provide Compliance Components Test to help semiconductor engineers. The fast edges and pulse generation can be used to provide characterization in fast power devices.

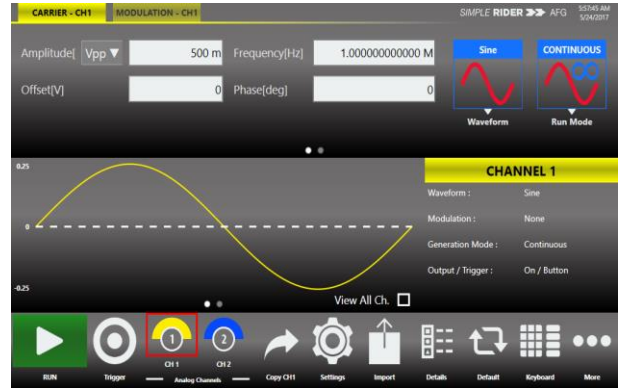
- Clock and Sensor signals generation
- MOSFET gate drive amplitude signal emulation
- Power up sequences of IC using the low (0Ω) output impedance feature



Simple Rider AFG: Function Generator Mode Interface

Simple Rider AFG UI is designed for touch and it has been developed to put all the capabilities of modern Waveform Generators right at your fingertips. All instrument controls and parameters are accessed through an intuitive UI that recalls the simplicity of Tablets and modern smart phones: touch features and gestures are available to engineers and scientists to create advanced waveforms or digital patterns in few touches.

- The swipe gesture gives easy access to the output waveform parameters
- A touch-friendly virtual numeric keypad has been designed to improve the user experience on entering the data
- Time saving shortcuts and intuitive icons simplify the instrument setup



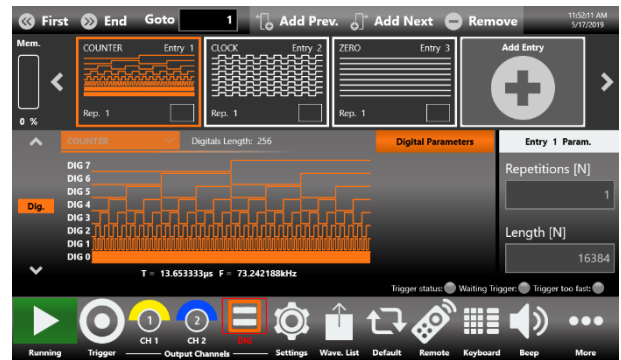
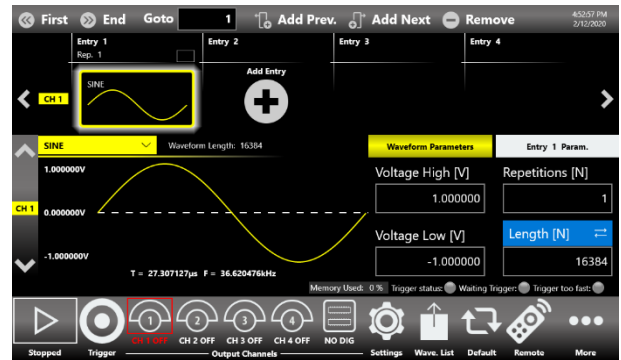
Simple Rider TrueArb: AWG and DPG Mode Interface

In **Simple Rider True-Arb** interface, the users can define complex waveforms with up to 16,384 sequence entries of analog waveforms and digital patterns, define their execution flow by means of loops, jumps and conditional branches.

Digital output combined and synchronized with analog output signals represent an ideal tool to troubleshoot and validate digital design.

The waveform memory length of up to 512 Mpoints on each channel combined with up to 16,384 and up to 4,294,967,294 repetitions, make the Arb-Rider 2104 / 2182 / 2184 the ideal generator for the most demanding technical applications.

Thanks to the intuitive and easy waveform sequencer user interface, the most complex waveform scenarios can be created with just few screen touches.



Arb Rider supports the standard Ethernet interface for remote control and easy customized instrument programming.



Document name **AWG – 2104 / 2182 / 2184 - Technical Specifications** Last Date Update: 16/01/2025

All specifications are typical unless noted otherwise. The guaranteed performances are referred to a calibrated instrument that has been stored for a minimum of 2 hours within the operating temperature range of 5°C to 40°C and after a 45-minute warm up period. Within $\pm 10^\circ\text{C}$ after auto-calibration.

Some specifications on this document refer to the available options and accessories that can be found in the table at the end of this document.

General Specifications		
	AWG-2182	AWG-2184 / 2104
Number of Channels		
Analog out	2	4
Digital out	0/8 – optional	0/8 – optional
Marker out	1	1
Operating Mode	AFG Mode True Arb Mode	
	AWG-2182 / 2184	AWG-2104
Amplitude		
Range (50 Ω into 50 Ω) ¹	0 to 6Vp-p (12Vp-p optional)	0 to 12Vp-p
Accuracy (1kHz sine wave, 0V offset, >5mV _{p-p} amplitude, 50 Ω load) (guaranteed)	$\pm(1\%$ of setting [Vp-p] + 5mV)	
Resolution	<0.5mVp-p or 5 digits	
Output impedance	Single-ended: 50 Ω , Low Impedance: 0 Ω	
DC		
Amplitude range (50 Ω into 50 Ω) ¹	-3V to 3V (-6V to 6V optional)	-6V to 6V
Amplitude accuracy (guaranteed)	$\pm(1\%$ of setting + 10mV)	
Output attenuator	0dB or 20dB selectable	
AFG Mode Specifications		
Output Channels		
Connectors	BNC on front panel	

¹ Amplitude doubles into HiZ load



Output type Output Impedance	Single-ended 50Ω or 0Ω (low impedance) programmable	
General Specifications Operating mode Standard Waveforms Run Modes Arbitrary Waveforms Internal Trigger Timer Range Resolution Accuracy	<p>DDS mode</p> <p>Sine, Square, Pulse, Ramp, more (Noise, DC, Sin(x)/x, Gaussian, Lorentz, Exponential Rise, Exponential Decay, Haversine</p> <p>Continuous, modulation, sweep, burst</p> <p>Vertical resolution: 16-bit Waveform length: 16,384 points</p> <p>13.4ns to 100s 104ps ±(0.1% setting + 5ps)</p>	
	AWG-2182 / 2184	AWG-2104
Sine Waves Frequency Range (50Ω into 50Ω) Max Frequency Value Flatness (1Vp-p, relative to 1 kHz)	<p>1 μHz to ≤ 150 MHz: 6 V_{p-p} >150 MHz to ≤ 180 MHz: 5 V_{p-p}</p> <p><u>HV option:</u> 1 μHz to ≤ 50 MHz: 12 V_{p-p} >50 MHz to ≤ 60 MHz: 10 V_{p-p} >60 MHz to ≤ 100 MHz: 8 V_{p-p} >100 MHz to ≤ 150 MHz: 6 V_{p-p} >150 MHz to ≤ 180 MHz: 5 V_{p-p}</p> <p>180 MHz</p> <p>DC to 180 MHz: ±0.5dB</p>	<p>1 μHz to ≤ 50 MHz: 12 V_{p-p} >50 MHz to ≤ 60 MHz: 10 V_{p-p} >60 MHz to ≤ 100 MHz: 8 V_{p-p}</p> <p>100 MHz</p> <p>DC to 100 MHz: ±0.5dB</p>



Harmonic Distortion (1Vp-p)	<p>1 μHz to ≤ 20 kHz: <-75dBc >20 kHz to ≤ 1 MHz: <-70dBc >1 MHz to ≤ 10 MHz: <-65dBc >10 MHz to ≤ 50 MHz: <-55dBc >50 MHz to ≤ 120 MHz: <-45dBc >120 MHz to ≤ 180 MHz: <-40dBc</p>	<p>1 μHz to ≤ 20 kHz: <-75dBc >20 kHz to ≤ 1 MHz: <-70dBc >1 MHz to ≤ 10 MHz: <-65dBc >10 MHz to ≤ 50 MHz: <-55dBc >50 MHz to ≤ 100 MHz: <-45dBc</p>
Total Harmonic Distortion (1Vp-p)	10 Hz to 20 kHz: <0.04%	
Spurious (1Vp-p) (excluding f _{sa} -f _{out} , f _{sa} -2*f _{out})	<p>1 μHz to ≤ 10 MHz: <-80dBc >10 MHz to ≤ 180 MHz: <-80dBc + 6dBc/octave</p>	<p>1 μHz to ≤ 10 MHz: <-80dBc >10 MHz to ≤ 100 MHz: <-80dBc + 6dBc/octave</p>
Phase Noise (1Vp-p, 10kHz offset)	<p>10 MHz: < -127dBc/Hz typ 100 MHz: < -115dBc/Hz typ</p>	
Square Waves		
Frequency Range	<p>1 μHz to 80 MHz: 6V_{p-p} <u>HV option:</u> 1 μHz to ≤ 30 MHz: 12V_{p-p} >30 MHz to ≤ 50 MHz: 11V_{p-p} >50 MHz to ≤ 70 MHz: 10V_{p-p} >70 MHz to ≤ 80 MHz: 9V_{p-p}</p>	<p>1 μHz to ≤ 30 MHz: 12V_{p-p} >30 MHz to ≤ 50 MHz: 11V_{p-p}</p>
Rise/fall time	4ns	5ns
Overshoot (1V _{p-p})	<1%	<1%
Jitter (rms)	<2ps	<2ps
Pulse Waves		
Frequency Range	<p>1 μHz to 80 MHz: 6V_{p-p} <u>HV option:</u> 1 μHz to ≤ 3 MHz: 12V_{p-p} >3 MHz to ≤ 10 MHz: 11V_{p-p} >10 MHz to ≤ 70 MHz: 10V_{p-p} >70 MHz to ≤ 80 MHz: 9V_{p-p}</p>	<p>1 μHz to ≤ 3 MHz: 12V_{p-p} >3 MHz to ≤ 10 MHz: 11V_{p-p} >10 MHz to ≤ 50 MHz: 10V_{p-p}</p>
Leading/trailing edge transition time	4ns to 1000s	5ns to 1000s
Pulse width	5ns to (Period – 5ns)	7ns to (Period – 7ns)



Pulse width Resolution	20ps or 15 digits	
Transition time Resolution	2ps or 15 digits	
Pulse duty	0% to 100% 14 digits (limitations of pulse width apply)	
Overshoot ($1V_{p-p}$)	<1%	
Jitter (rms, with rise and fall time $\geq 4ns$)	<2ps	
Double Pulse Waves		
Frequency Range	<p>1 μHz to \leq 3 MHz: $12V_{p-p}$ >3 MHz to \leq 50 MHz: $6V_{p-p}$ where $V_{p-p} = V_{p-p1} + V_{p-p2}$ <u>HV option:</u> 1 μHz to \leq 3 MHz: $24V_{p-p}$ >3 MHz to \leq 10 MHz: $11V_{p-p}$ >10 MHz to \leq 50 MHz: $10V_{p-p}$ where $V_{p-p} = V_{p-p1} + V_{p-p2}$</p>	<p>1 μHz to \leq 3 MHz: $24V_{p-p}$ >3 MHz to \leq 10 MHz: $11V_{p-p}$ >10 MHz to \leq 50 MHz: $10V_{p-p}$ where $V_{p-p} = V_{p-p1} + V_{p-p2}$</p>
Other Pulse Parameters	Same as Pulse Waves	
Ramp Waves		
Frequency Range	1 μ Hz to 5 MHz	
Linearity (<10 kHz, $1V_{p-p}$, 100%)	$\leq 0.1\%$	
Symmetry	0% to 100%	
Other Waves		
Frequency Range		
Exponential Rise, Exponential Decay	1 μ Hz to 5 MHz	
Sin(x)/x, Gaussian, Lorentz, Haversine	1 μ Hz to 10 MHz	
Additive Noise		
Bandwidth (-3dB)	>200 MHz	>100 MHz
Level	0V to 6V – carrier max value [V_{pk}]	
Resolution	1mV	



Arbitrary Number of Samples Jitter (rms)	2 to 16,384 <2ps	
Frequency range Analog Bandwidth (-3 dB) Rise/fall time	1 μ Hz to \leq 80 MHz 87.5 MHz 4ns	1 μ Hz to \leq 50 MHz 70 MHz 5ns
Frequency Resolution Sine, Square, Pulse, Arbitrary, Sin(x)/s Gaussian, Lorentz, Exponential Rise, Exponential Decay, Haversine	1 μ Hz or 15 digits 1 μ Hz or 14 digits	
Frequency Accuracy Non-ARB ARB	$\pm 2.0 \times 10^{-6}$ of setting $\pm 2.0 \times 10^{-6}$ of setting $\pm 1 \mu$ Hz	
Modulations		
Amplitude Modulation (AM) Carrier waveforms Modulation source Internal modulating waveforms Modulating frequency Depth	Standard waveforms (except Pulse, DC and Noise), ARB Internal Sine, Square, Ramp, Noise, ARB 500 μ Hz to 48 MHz 0.00% to 120.00%	
Frequency Modulation (FM) Carrier waveforms Modulation source Internal modulating waveforms Modulating frequency	Standard waveforms (except Pulse, DC and Noise), ARB Internal Sine, Square, Ramp, Noise, ARB 500 μ Hz to 48 MHz	
Peak deviation	DC to 180 MHz	DC to 100 MHz
Phase Modulation (PM) Carrier waveforms Modulation source Internal modulating waveforms Modulating frequency Phase deviation range	Standard waveforms (except Pulse, DC and Noise), ARB Internal Sine, Square, Ramp, Noise, ARB 500 μ Hz to 48 MHz 0° to 360°	



<p>Frequency Shift Keying (FSK)</p> <p>Carrier waveforms Modulation source Internal modulating waveforms Key rate Number of keys</p>	<p>Standard waveforms (except Pulse, DC and Noise), ARB Internal Square 500 μHz to 48 MHz 2</p>	
<p>Hop frequency</p>	<p>1 μHz to 180 MHz</p>	<p>1 μHz to 100 MHz</p>
<p>Phase Shift Keying (PSK)</p> <p>Carrier waveforms Modulation source Internal modulating waveforms Key rate Hop phase Number of keys</p>	<p>Standard waveforms (except Pulse, DC and Noise), ARB Internal Square 500 μHz to 48 MHz 0° to +360° 2</p>	
<p>Pulse Width Modulation (PWM)</p> <p>Carrier waveforms Modulation source Internal modulating waveforms Modulating frequency Deviation range</p>	<p>Pulse Internal Sine, Square, Ramp, Noise, ARB 500 μHz to 48 MHz 0% to 50% of pulse period</p>	
<p>Sweep</p> <p>Type Waveforms Sweep time Hold/return times Sweep/hold/return time resolution Total sweep time accuracy Trigger source</p>	<p>Linear, Logarithmic, Staircase, and user defined Standard waveforms (except Pulse, DC and Noise), ARB 40ns to 2000s 0 to (2000s – 40ns) 20ns or 12digits \leq0.4% Internal / External / Manual</p>	
<p>Start/stop frequency range</p>	<p>Sine: 1 μHz to 180 MHz Square: 1 μHz to 80 MHz</p>	<p>Sine: 1 μHz to 100 MHz Square: 1 μHz to 50 MHz</p>





Burst Waveforms Type Burst count	Standard waveforms (except DC and Noise), ARB Triggered or Gated 1 to 4,294,967,295 cycles or Infinite	
True Arb mode specifications		
Output Channels Connectors Output type Output Impedance	BNC on front panel Single-ended DC coupled 50Ω or 0Ω (low impedance)	
	AWG-2182 / 2184	AWG-2104
General specifications Operating Mode Run Modes Vertical Resolution	Variable clock (True Arbitrary) Continuous, Triggered Continuous, Single/Burst, Stepped, Advanced 16 bit	
Waveform Length	16 to 2M samples per channel (up to 512M samples optional)	16 to 2M samples per channel (up to 128M samples optional)
Waveform Granularity Sequence Length Sequence Repeat Counter Timer Range Resolution	1 if the entry length is >384 samples 8 if entry length is ≥16 and ≤384 samples 1 to 16,384 1 to 4,294,967,295 or infinite 23.52ns to 7s ±1 sampling clock period	
Analog Channel to Channels skew Range	0 to 6.59 us (depending on internal sampling rate)	



Resolution	Channel 1/2 to Channel 3/4: $\leq 5\text{ps}$, Channel 1/3 to Channel 2/4: 1 DAC sampling period	
Accuracy	$\pm(1\% \text{ of setting} + 20\text{ps})$	
Initial skew	$<200\text{ ps}$	
Calculated bandwidth (0.35 / rise or fall time) ²	$\geq 160\text{ MHz}$	$\geq 100\text{ MHz}$
Harmonic distortion (Sine wave 32 pts, 1V _{p-p})	$< -62\text{dBc}$ (@ 600MS/s, 18.75 MHz)	
Spurious (Sine wave 32 pts, 1V _{p-p})	$< -80\text{dBc}$ (@ 600MS/s, 18.75 MHz)	
SFDR (Sine wave 32 pts, 1V _{p-p} , including Harmonics)	$< -62\text{dBc}$ (@ 600MS/s, 18.75 MHz)	
Rise/fall time (1V _{p-p} single-ended 10% to 90%) ²	$\leq 2.2\text{ns}$	$\leq 3.5\text{ns}$
Overshoot (1V _{p-p} single-ended) ²	$< 2\%$	
Timing and Clock		
Sampling Rate	1 S/s to 600 MS/s (1 S/s to 1.2 GS/s with x2 interpolation)	
Range	16 Hz	
Resolution	$\pm 2.0\text{ppm}$	
Accuracy	$< 2\text{ps}$	
Random jitter on clock pattern (rms)		
Digital outputs (Optional)		
Output Channels	Mini-SAS HD connector on rear panel (Non-standard pin-out)	
Connectors	1	
Number of connectors	8 bits	
Number of outputs		
Output impedance	100Ω differential	
Output type	LVDS	
Rise/fall time (10% to 90%)	$< 1\text{ns}$	
Jitter (rms)	20ps	

² 2x interpolation OFF



Maximum update rate	600 Mbps
Memory depth	2MSamples per digital channel (up to 512MSamples optional)
8 bit LVDS to LVTTTL Converter Probe (Optional AT-DTTL8)	
Output connector	20 position 2.54 mm 2 Row IDC Header
Output type	LVTTTL
Output impedance	50Ω nominal
Output voltage	0.8V to 3.8V programmable
Maximum Update Rate	125Mbps@0.8V and 400Mbps@3.6V
Dimensions	W 52mm – H 22mm – D 76mm
Input Connector	Proprietary standard
Cable Length	1 meter
Cable Type	Proprietary standard
Proprietary Mini SAS HD to SMA cable (Optional)	
Output connector	SMA
Output type	LVDS
Number of SMA	16 (8 bits)
Cable type	Proprietary standard
Cable Length	1 meter



Auxiliary input and output characteristics		
	AWG-2182	AWG-2104/2184
Marker Output		
Connector type	BNC on front panel	BNC on rear panel
Number of connectors	1	
Output impedance	50 Ω	
Output level (into 50 Ω)		
Amplitude	1V to 2.5V	
Resolution	10mV	
Accuracy	±(2% setting + 10mV)	
Rise/fall time (10% to 90%, 2.5V_{p-p})	<700ps	
Jitter (rms)	20ps	
Marker out to analog channel skew		
Range	True Arb Mode: 0 to 3μs AFG Mode: 0 to 14s in Continuous Mode 0 to 3μs in Triggered Mode	
Resolution	True Arb Mode: 78ps, AFG Mode: 39ps	
Accuracy	±(1% of setting + 140 ps)	
Initial skew	< 1 ns	
Trigger/Gate input		
Connector	BNC on front panel	BNC on rear panel
Input impedance	50Ω / 1kΩ programmable	
Slope/Polarity	Positive or negative or both	
Input damage level	<-15V or >+15V	
Threshold control level	-10V to 10V	
Resolution	10mv	
Threshold control accuracy	±(10% of setting + 0.2V)	
Input voltage swing	0.5V _{p-p} minimum	
Minimum pulse width (1V_{p-p})	3ns	



Initial trigger/gate delay to Analog Output	AFG mode: <400 ns (<460 ns in triggered sweep mode) True Arb mode: <131*DAC sampling period + 22.5 ns (<143*DAC sampling period+22.5 ns with 2x interpolation)
Trigger In to output jitter	AFG mode: <45ps True Arb mode: 0.29*DAC sampling period
Maximum Frequency	AFG mode: 55 MTps on Rising/Falling Edge, 80 MTps on Both Edges True Arb mode: 42.5 MTps on Rising/Falling Edge, 42.5 MTps on Both Edges where MTps = Mega Transitions per second
Reference clock input	
Connector type Input impedance Input voltage range Damage level Frequency range	SMA on rear panel 50Ω, AC coupled -4 dBm to 11dBm sine or square wave (rise time T ₁₀₋₉₀ <1ns and duty cycle from 40% to 60%) +14dBm 5 MHz to 100 MHz
Reference clock output	
Connector type Output impedance Frequency Accuracy Aging Amplitude Jitter (rms)	SMA on rear panel 50Ω, AC coupled 10 MHz ±2.0x10 ⁻⁶ ±1.0x10 ⁻⁶ /year 1.65V <20ps
Power	
Source Voltage and Frequency Max. power consumption	100 to 240VAC ±10% @ 45 Hz to 66 Hz 100W
Environmental characteristics	
Temperature (operating)	+5°C to +40°C (+41°F to 104°F)
Temperature (non-operating)	-20°C to +60°C (-4°F to 140°F)



Humidity (operating)	5% to 80% relative humidity with a maximum wet bulb temperature of 29°C at or below +40°C, (upper limit de-rates to 20.6% relative humidity at +40°C). Non-condensing.	
Humidity (non-operating)	5% to 95% relative humidity with a maximum wet bulb temperature of 40°C at or below +60°C, upper limit de-rates to 29.8% relative humidity at +60°C. Non-condensing.	
Altitude (operating)	3,000 meters (9,842 feet) maximum at or below 25°C	
Altitude (non-operating)	12,000 meters (39,370 feet) maximum	
EMC and safety		
Compliance	CE compliant	
Safety	EN61010-1	
Main Standards	EN 61326-1:2013 – Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements	
Immunity	EN 61326-1:2013	
System specifications		
	AWG-2182	AWG-2104/2184
Display	7", 1024x600, capacitive touch LCD	
Operative System	Windows 10	
External Dimensions	W 362 mm – H 143 mm – D 258 mm (3U 10" rackmount)	
Weight	6.25 kg	
Front panel connectors	CH1, CH2 OUTPUT (BNC) MARKER OUT (BNC) TRIGGER IN (BNC)	CH1, CH2 OUTPUT (BNC) CH3, CH4 OUTPUT (BNC)
Rear panel connectors	REF CLK IN (SMA) REF CLK OUT (SMA) External Monitor ports DIGITAL POD A[7..0] 1 USB 2.0 ports or more Ethernet port (10/100/1000BaseT Ethernet, RJ45 port)	REF CLK IN (SMA) REF CLK OUT (SMA) MARKER OUT (BNC) TRIGGER IN (BNC) External Monitor ports DIGITAL POD A[7..0] 1 USB 2.0 ports or more



Active Technologies

www.activetechnologies.it

SPECIFICATIONS

	2 PS/2 keyboard and mouse ports	Ethernet port (10/100/1000BaseT Ethernet, RJ45 port) 2 PS/2 keyboard and mouse ports
Hard Disk	240 GB SSD or better	
Processor	Intel® Celeron J1900, 2 GHz (or better)	
Processor Memory	4 GB or better	



Table of Available Models

Item	Description
AWG-2100-DIG8	8 channel Digital license
AWG2182-2M	2ch 600Ms/s AWG 2Ms memory - 180MHz AFG
AWG2182-64M	2ch 600Ms/s AWG 64Ms memory - 180MHz AFG
AWG2182-256M	2ch 600Ms/s AWG 256Ms memory - 180MHz AFG
AWG2182-512M	2ch 600Ms/s AWG 512Ms memory - 180MHz AFG
AWG2104-2M	4ch 600Ms/s AWG 2Ms memory - 100MHz AFG
AWG2104-128M	4ch 600Ms/s AWG 128Ms memory - 100MHz AFG
AWG2184-2M	4ch 600Ms/s AWG 2Ms memory - 180MHz AFG
AWG2184-64M	4ch 600Ms/s AWG 64Ms memory - 180MHz AFG
AWG2184-256M	4ch 600Ms/s AWG 256Ms memory - 180MHz AFG
AWG2184-512M	4ch 600Ms/s AWG 512Ms memory - 180MHz AFG



Table of Available Options and Accessories

Item	Description
Options	
AWG-2182-HV	High voltage output (12Vpp on 50ohm) for AWG2182
AWG-2184-HV	High voltage output (12Vpp on 50ohm) for AWG2184
AWG-2100-DIG8	8 channel Dig license for AWG2000
AWG2002-WAR	3 years warranty extension for AWG2182
AWG2004-WAR	3 years warranty extension for AWG2104 and AWG2184
Accessories	
AT-DTTL8	LVDS to LVTTTL digital adapter probe
AT-LVDS-SMA8	LVDS to SMA digital adapter cable
RIDER-C-RACK	Rackmount kit for Rider C series (AWG2000)
GPIB / USB-TMC	GPIB and USBTMC Ports for Remote Control
SSD-250	Additional 250GB Solid State Disk for RIDER series
SSD-500	Additional 500GB Solid State Disk for RIDER series
SSD-1000	Additional 1TB Solid State Disk for RIDER series