

# MODEL WXD1

1.15Gb/s, 14-Channels  
Digital Signal Amplifier/POD



## MODEL WXD1

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Digital Signal Amplifier/POD

- 14 Digital Data Channels
- Data Rate of 10Mb/s to 1.15Gb/s
- Dedicated pattern memory of up to 16MWord
- Programmable amplitude and offset control
- <100ps Initial skew between bits with  $\pm 2.5$ ns skew control and 5ps resolution
- Up to 4Vp-p into 50 $\Omega$ , double into open circuit
- Transition Times: <0.5ns: <2Vp-p; <1ns: 2Vp-p to 4Vp-p
- Auxiliary clock output

The WXD1 is a digital signal amplifier pod that operates in conjunction with any of the WaveXciter series generators equipped with the digital outputs option (Option D). Combined they offer the ultimate, analog, digital and mixed signal solution that provides engineers with the necessary tools for solving their everyday applications, performing characterization, validation, verification or debugging of circuits.

### Inter Channel Delay Control

Model WXD1 offers up to 14 channels of digital data and enables control of the delay between these channels with a range of  $\pm 2.5$ ns and a resolution of 5ps. So whether for extremely precise multiple trigger lines or for highly synchronized clock and pattern signal generation the WXD1 offers a high level of accuracy and control of skew between channels.

### Independent Level Control

Model WXD1 is equipped with 14 independent level and offset control circuits that converts the standard LVDS input that comes from the digital feed of the WX series, to any level within a 4Vp-p window. Having an independent level and offset control, simply means that one can create unique levels for a single or groups of data channels, without compromising on performance, extending the use of the standard digital feed to a vast array of digital design applications.

### Separate or Simultaneous Channels

The new digital option of the WX series comes with a dedicated memory of up to 16MWord for the generation of digital data. The digital data can be generated through the WXD1 and analog waveforms can be generated simultaneously from the front panel of the AWG. The dedicated digital data memory enables users to either generate analog waveforms and their digital representation, or independent digital and analog signals.

### Pattern Editing and Sequencing

The WXD1 transforms the WX high speed AWG to a versatile mixed signal generator. Using the ArbConnection software and its Pattern Composer tool any complex data pattern can be designed quickly and easily. Using the dedicated memory of up to 16M and the sequencer capabilities enables insertion of infrequent faults and glitches into the data patterns to verify device or circuit recovery.

### Target Applications

Target applications include parallel communication test between devices, characterize device timing, characterize and verify Asic, FPGA and DACs, D/A communication for cell phones and digital TV, create complex data patterns using the sequencer, test LCD display drivers, and more.

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## Specification

### BITS / OUTPUTS CHARACTERISTICS

<b>Channels:</b>	14
<b>Type:</b>	Single-ended
<b>Connectors:</b>	SMB
<b>Impedance:</b>	50Ω
<b>Amplitude:</b>	4Vp-p into 50Ω
<b>Levels:</b>	
50Ω	-2.0V to 2.0V (0.2Vp-p to 4Vp-p)
1MΩ	-4.0V to 4V(0.4Vp-p to 8Vp-p)
<b>Resolution:</b>	0.1V
<b>Accuracy:</b>	Within $\pm 0.1\text{ V} \pm 5\%$ of setting
<b>Rise/Fall Time (typ.):</b>	
<2Vp-p	<0.5ns
<4Vp-p	<1ns
<b>Skew Control Between bits:</b>	
Control	Independent for each bit
Initial Skew	<100ps, typical
Range	-2.5ns to +2.5ns
Resolution	5ps
Accuracy	$\pm(10\%$ of setting +20ps)
<b>Pattern Source:</b>	WX Series
<b>Max. Data Rate:</b>	SCLK/2
WX218x	1.15 Gbit/s
WX128x	625 Mbit/s
<b>Pattern Memory:</b>	
Dedicated	Up to 16MWord per channel
Parallel	Up to 16MWord per channel arbitrary memory

### SAMPLE CLOCK OUTPUT

<b>Connector:</b>	SMB
<b>Level:</b>	100k NECL
<b>Impedance:</b>	50Ω

### DIGITAL PATTERN INPUT

<b>Connector:</b>	High speed I/O receptacle, 68-pin VRDPC
<b>Level:</b>	LVDS
<b>Impedance:</b>	100Ω

### GENERAL

<b>Voltage Range:</b>	85 to 265V
<b>Frequency Range:</b>	48 to 63Hz
<b>Power Consumption:</b>	70W max.
<b>Dimensions:</b>	
With Feet	112 x 102 x 415mm (WxHxD)
Without Feet	112 x 88 x 415mm (WxHxD)
<b>Weight:</b>	
Without Package	1.5Kg
Shipping Weight	2Kg
<b>Temperature:</b>	
Operating	0°C - 40°C
Storage	-40°C to + 70°C.
<b>Humidity:</b>	
11°C - 30°C	85%
31°C - 40°C	75%
41°C - 50°C	45%
<b>Safety:</b>	EN61010-1, 2nd revision
<b>Calibration:</b>	2 year
<b>Warranty:</b>	3 years standard

### ORDERING INFORMATION

MODEL	DESCRIPTION
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(\*) Standard warranty in India is 1 year.