



40 Years  
Celebration

**PRELIMINARY**

## MODELS WX1284/ WX2184

### 1.25GS/s or 2.3GS/s Four Channel Arbitrary Waveform Generators

- 1.25GS/s or 2.3GS/s, Four Channel 14 Bit waveform generator
- Programmable inter-channel control with 5ps resolution
- Up to 1GHz sine and 500MHz square waves
- 16M waveform memory, 32M memory optional
- 2 selectable output paths:
  - 2Vp-p into 50Ω with 700MHz bandwidth, Differential DC output
  - 4Vp-p into 50Ω with 350MHz bandwidth, Differential DC output
- AM, FM, FSK, PSK, ASK, Amp. Hop, Freq. Hop, Sweep & Chirp
- Powerful pulse composer for analog, digital and mixed signals
- Eight programmable markers
- Advanced sequencer for step, loop, nest and jumps scenarios
- Smart trigger allows: trigger hold-off, detect  $\leftrightarrow$  pulse width, as well as wait-for-waveform-end or abort waveform and restart
- Two instrument synchronization to form a 8-channel system
- User friendly 4" color LCD display
- Remote control through LAN, USB and GPIB
- Store/recall capability on disk-on-key or 4GB internal memory
- LXI Class C compliant



The WX1284, (1.25GS/s) and the WX2184, (2.3GS/s) are four channel arbitrary waveform generators, which offer unrivaled performance, in unmatched case size and cost, without compromising bandwidth and signal integrity. Using the very same 12.5" width, 2U height box as the single and dual channel versions of the WX series, the four channel additions provide more channel density for high-speed AWG than ever revealed before in a benchtop, allowing customers to shrink, even further, their bench or system space.

#### Universal Waveform Source

Aside from its natural ability to generate arbitrary shapes with waveform granularity of 1 point, the WX series can also be used as a full-featured standard, modulation or pulse/ pattern generator to solve various applications. Equipped with up to 2.3GS/s, 14bit clock and up to 32Mpoints memory, the WX series can generate literally any waveform, short or long, at frequencies up

to 1GHz with 8 digits of resolution, resulting in the highest precision signal creation and regeneration without compromising signal fidelity or system integrity.

#### Signal Integrity and Purity

One of the most important requirement in today's testing and measurement applications is high signal quality. With a typical SSB phase noise of  $<-115\text{dBc}$  at 100MHz, and  $<-95\text{dBc}$  at 1GHz, at 10 kHz carrier offset and with exceptionally good SFDR of  $<-70\text{dBc}$  at 1GHz carrier, Tabor's WX series unique platform delivers one of the best quality signals available on the market today, answering the ever-growing demand for clear and precise signals.

#### Common or Separate Clocks

The new four channel architecture offers two SCLK sources, enabling users to choose between a common or separate SCLK feed. A common SCLK source allows for all outputs to be fully synchronized with 5ps

of skew control for accurate and controlled phase between channels, ideal for many X-Y modes, I&Q output and even 4 channel MIMO link applications. Alternatively, users can select to work with two separate SCLK sources resulting in two separate channel couples (1&2 and 3&4) with each having the ability to be programmed to output different function shapes, frequency, amplitude levels and/or to operate in different run modes, in effect having two separate dual channel instruments in one box.

#### DC or HV Output Amplifiers

Have a requirement for different output paths in your lab? Great! The new four channels additions to the WX series offer two single or differential ended DC coupled output amplifiers: 2Vp-p into 50Ω with 700MHz bandwidth, for applications demanding optimized transitions and aberrations or 4Vp-p into 50Ω with 350MHz bandwidth, for applications demanding high voltage.

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# MODELS WX1284/WX2184



## 1.25GS/s or 2.3GS/s Four Channel Arbitrary Waveform Generators

### **Powerful Segmentation and Sequencing**

Solving almost every complex application, powerful segmentation and sequencing produces a nearly endless variety of complex waveforms. The waveform memory can be divided into multiple waveform segments and sequenced in user-selectable fashion to create complex waveforms that have repeatable segments, jump and nest, saving you precious memory space. The WX series also allows you to generate up to 1000 sequence scenarios and sequence between them to generate an even higher level of flexibility in waveform creation.

### **Dynamic Segment / Sequence Control**

Working in the real-time world and need fast waveform switching? The WX series has a rear panel control designed specifically for that. Having the dynamic control feature, in effect, can serve as replacement of the sequence table where the real-time application can decide when and for how long a waveform will be generated. For much more complex applications, this same input may serve as a dynamic switch for complete sequences, creating real-life scenarios for real-time applications.

### **Pulse / Pattern Creation**

Generating complex pulse trains has never been easier. The Pulse Composer is a powerful built-in tool that converts the WX series to a very sophisticated Pulse/Pattern Generator, allowing to create literally any complex pulse train / pattern, whether it's a single pulse, multi-level, linear-points, initialization or preamble pattern definition, arbitrary bit design, user-defined or even standard random patterns with programmable resolution, so it doesn't matter if your application is radar communications, nanotechnology or serial bus testing, the pulse/pattern composer is the right tool for your application. Moreover, all the WX series' advanced trigger modes are applicable, hence one can choose to

use the "step" mode to advance every bit independently or the "once" mode to advance a complete data block in one trigger event, enabling even more applications, such as trigger, clock and data protocols.

### **Multi-Level and PAM(n) Signals**

The WX series pulse composer enables up to 2Gbit/s data rate generation, utilizing either NRZ and RZ modes (minimum transition times) which is ideal especially for multi level and PAM(n) applications such as, LED (light-emitting diodes), CAN, QPHY, FlexRay or simulating and testing Ethernet environment, whether it's 100Mbit/s (100BASE-T), the later gigabit Ethernet (1000BASE-T) or even the latest 802.3an standard (10GBASE-T), which utilizes PAM-16.

### **Smart Trigger**

Until now, you've been forced to trigger on a specific event. Tabor's all-new SmartTrigger feature was designed to enhance the trigger capability and facilitate wider flexibility of a specific pulse event. It allows triggering on either a pulse having a larger pulse width than a programmed time value (<time), a pulse having a smaller pulse width than a programmed time value (>time), or even on a pulse having a pulse width between two limits (<>time). In addition, the SmartTrigger has a hold-off function, in which the output is held idle after the first trigger and starts a waveform cycle only with the first valid trigger after a hold-off interval has lapsed, allowing you to solve endless «negotiation» scenarios.

### **Programmable Markers**

The new four channels WX are equipped with four programmable markers. Programmability allows you to set position, width, delay and amplitude for any required peripheral triggering need. While bench usage enables setting only one marker position, you can set multiple markers and program different marker properties for each transition instance remotely, allowing various triggering profiles.

### **8-Channel Capability**

Need more than four channels to drive your application? With two 4-Channel WX units you can reach 8 synchronized channels system using a Master-Slave arrangement, allowing users to benefit from the same high quality performance even for multi-channel needs.

### **Easy to Use**

Large and user-friendly 4" backlit color LCD display facilitates browsing through menus, updating parameters and displaying detailed and critical information for your waveform output. Combined with numeric keypad, ten quick-link function & run mode buttons, cursor position control and a dial, the front panel controls simplify the often complex operation of an arbitrary waveform generator.

### **Multiple Environments to Write Your Code**

The WX series comes with a complete set of drivers, allowing you to write your application in various environments such as: Labview, CVI, C++, VB, and MATLAB. You may also link the supplied dll to other Windows based API's or, use low-level SCPI commands (Standard Commands for Programmable Instruments) to program the instrument, regardless if your application is written for Windows, Linux or Macintosh operating systems.

### **ArbConnection**

ArbConnection is a graphical tool that provides an unlimited source of Arbitrary Waveforms. With the ArbConnection software you can control instruments functions, modes and features. You can also create a virtually infinite amount of test waveforms. Freehand sketch allows you to draw your own custom waveform for quick analysis of analog signals. You can use the built-in equation editor to create your own exotic functions. Add or subtract components of a Fourier series to characterize digital or analog filters or inject random noise into a signal to test immunity to auxiliary noise.

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## Specification

### CONFIGURATION

**Output Channels** 4, Synchronized/semi-separated

### STANDARD WAVEFORMS

**Type:** Sine, triangle, square, ramp, pulse, sin(x)/x, exponential rise, exponential decay, gaussian, noise and DC.

### Frequency Range:

Sine	
WX1284	10kHz to 500MHz
WX2184	10kHz to 1GHz
Square, Pulse	
WX1284	10kHz to 350MHz
WX2184	10kHz to 500MHz
All others	
WX1284	10kHz to 125MHz
WX2184	10kHz to 250MHz

### SINE

**Start Phase:** 0 to 360°

**Phase Resolution:** 0.1°

**Harmonics Distortion (typ.):**

	1Vpp <sup>DC</sup>	3Vpp <sup>HV</sup>
5MHz to 200MHz	<-44dBc	<-40dBc
200MHz to 325MHz	<-50dBc <sup>(1)</sup>	<-50dBc <sup>(1)</sup>
325MHz to 425MHz	<-60dBc <sup>(1)</sup>	<-60dBc <sup>(1)</sup>
425MHz to 500MHz	<-70dBc <sup>(1)</sup>	<-70dBc <sup>(1)</sup>
500MHz to 700MHz	<-32dBc <sup>(2)</sup>	<-32dBc <sup>(2)</sup>
700MHz to 1GHz	<-70dBc <sup>(2)</sup>	<-70dBc <sup>(2)</sup>

<sup>(1)</sup> Measured with 500MHz lowpass filter

<sup>(2)</sup> Measured with 1GHz lowpass filter

**Non-Harmonics Distortion (typ.):**

1MHz to 100MHz	<-80dBc
100MHz to 250MHz	<-75dBc
250MHz to 500MHz	<-70dBc
500MHz to 1GHz	<-65dBc

**SSB Phase Noise (10kHz offset):**

1MHz Carrier	<-120dBc/Hz
10MHz Carrier	<-118dBc/Hz
100MHz Carrier	<-115dBc/Hz
250MHz Carrier	<-108dBc/Hz
500MHz Carrier	<-100dBc/Hz
1GHz Carrier	<-95dBc/Hz

**Flatness (AC Path):**

Cross Range	±0.5dB
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### PULSE

**Pulse Mode:** Single or double, programmable

**Polarity:** Normal, inverted or complement

**Period:**

WX1284	4ns to 1.6s
WX2184	2ns to 1.6s

**Resolution:**

WX1284	1ns
WX2184	500ps

**Pulse Width:**

WX1284	2ns to 1.6s
WX2184	1ns to 1.6s

**Rise/Fall Time:**

Fast

DC Path 600ps (typical < 500ps)

HV Path 1ns (typical < 900ps)

Linear

WX1284 2ns to 1.6s

WX2184 1ns to 1.6s

**Delay, Double Pulse Delay:**

WX1284 2ns to 1.6s

WX2184 1ns to 1.6s

**Amplitude:**

Range

DC Path 50mVp-p to 2Vp-p into 50Ω

HV Path 100mVp-p to 4Vp-p into 50Ω

Levels

Low Level -2V to +1.95V

High Level -1.95V to +2V

**NOTES:**

1. All pulse parameters, except rise and fall times, may be freely programmed within the selected pulse period provided that the ratio between the period and the smallest incremental unit does not exceed the ratio of 16,000,000 to 1.
2. Rise and fall times, may be freely programmed provided that the ratio between the rise/fall time and the smallest incremental unit does not exceed the ratio of 1,000,000 to 1.
3. The sum of all pulse parameters must not exceed the pulse period setting.

### PULSE / PATTERN COMPOSER

#### MULTI-LEVEL / LINEAR-POINTS

**Number of Levels:** 1 to 1000

**Dwell Time:**

WX1284 1ns to 1s

WX2184 500ps to 1s

**Memory:** 100k

**Amp. Resolution:** 4 digits

**Time Resolution:**

WX1284	1ns
WX2184	500ps

### PATTERN

**Pattern Source:** PRBS or user-defined

**PRBS Type:** PRBS7, PRBS9, PRBS11, PRBS15, PRBS23, PRBS31, USER

**Data Rate:**

WX1284 10Bit/s to 250MBit/s

WX2184 10Bit/s to 500MBit/s

**Number of Levels:** 2, 3, 4, 5

**High/Low Levels:** ±2.5V

**Resolution:** 4 digits

**Loops:** 1 to 1e6

**Preamble:** 1 to 16e6

**Length:** 1 to 16e6

### PAM (PULSE AMPLITUDE MODULATION)

**Data Rate:**

WX1284 10Mbit/s to 1Gbit/s

WX2184 10Mbit/s to 2Gbit/s

**PAM Range:** 2 to 1000

**Pattern Memory:** 16Mbit

**Resolution:** 1 bit (TBD)

### ARBITRARY WAVEFORMS

**Sample Rate:**

WX1284 10MS/s to 1.25GS/s

WX2184 10MS/s to 2.3GS/s (2.5GS/s typ.)

**Vertical Resolution:** 14 bits

**Waveform Memory:** 16M points standard, 32M points optional

**Min. Segment Size:** 192 points

**Resolution:** 16 points

**No. of Segments:** 1 to 16k

**Waveform Granularity:** 1 point

**Dynamic control:** Software command or rear panel segment control port

**Jump Timing:** Coherent or asynchronous

### SEQUENCED WAVEFORMS

**Multi Sequence:** 1 to 1,000 unique scenarios

**Sequencer Steps:** 1 to 16k steps.

**Segment Duration:** 32ns, min.

**Segment Loops:** 1 to 1M cycles, each segment

**Sequence Loops:** 1 to 1M ("Once" mode only)

**Step Advance Modes:** Continuous, once (x "N") and stepped

### SEQUENCED SEQUENCES

**Sequence Scenarios:** 1 Scenario

**Dynamic Control:** Software command or rear panel sequence control port

**Table Length:** 1 to 1k steps

**Advance Control:** Continuous, once and stepped

**Sequence Loops:** 1 to 1,000,000 cycles

### MODULATION

#### COMMON CHARACTERISTICS

**Carrier Waveform:** Sine

**Carrier Frequency:**

WX1284 10kHz to 500MHz

WX2184 10kHz to 1GHz

**Modulation Source:** Internal

#### FM

**Modulation Shape:** Sine, square, triangle, ramp

**Modulation Freq.:** (CW/6) > (M.F) > (30e<sup>-6</sup>xCW)

**Deviation Range:** CW/2

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## Specification

### FSK / FREQUENCY HOPPING

<b>Hop Table Size:</b>	2 to 10,000 ( $<CW \times 10.24e^{-3}$ )
<b>Hop Type:</b>	Fast or Linear
<b>Dwell Time Mode:</b>	Fixed or programmable per step
<b>Dwell Time:</b>	2ns to 10s
<b>Dwell Time Res.:</b>	2ns

### SWEEP / CHIRP

<b>Sweep Type:</b>	Linear or log
<b>Sweep Direction:</b>	Up or down
<b>Sweep Time:</b>	$(9 \times \text{High Freq.}) > (S.T.) > (50e^3 / \text{High Freq.})$
<b>Modulation Shape:</b>	Pulse
<b>Pulse Repetition:</b>	
Range	100ns to 2s
Resolution	3 digits
Accuracy	100ppm

### AM

<b>Modulation Shape:</b>	Sine, square, triangle, ramp
<b>Modulation Freq.:</b>	$(CW/9) > (M.F.) > (CW/50e^3)$
<b>Modulation Depth:</b>	0.1 to 100%

### ASK / AMPLITUDE HOPPING

<b>Hop Table Size:</b>	2 to 10,000 ( $<CW \times 10.24e^{-3}$ )
Resolution	Maximum amplitude/4096
<b>Hop Type:</b>	Fast or Linear
<b>Dwell Time Mode:</b>	Fixed or programmable per step
<b>Dwell Time:</b>	2ns to 10s
Resolution	2ns

### (n)PSK and (n)QAM

<b>Modulation Type:</b>	PSK, BPSK, QPSK, OQPSK, PI/4 DQPSK, 8PSK, 16PSK, 16QAM, 64QAM, 256QAM and User Defined
<b>Carrier Control:</b>	On/Off
<b>Carrier Frequency:</b>	100kHz to 65MHz
<b>Symbol Rate Range:</b>	
Carrier On	100kHz to 65MHz
Carrier Off	100kHz to 500MHz
<b>Symbol Accuracy:</b>	1ppm
<b>Table Size:</b>	2 to 10,000

### COMMON CHARACTERISTICS

#### FREQUENCY

<b>Resolution:</b>	8 digits
<b>Accuracy/Stability:</b>	Same as reference

#### ACCURACY REFERENCE CLOCK

Internal	1 ppm from 19°C to 29°C; 1ppm/°C below 19°C or above 29°C; 1 ppm/year aging rate
External	Same as accuracy and stability of the external ref.

### OUTPUTS

#### MAIN OUTPUTS

<b>Coupling:</b>	DC-coupled
<b>Connectors:</b>	Front panel SMAs
<b>Impedance:</b>	50Ω nominal, each output
<b>Protection:</b>	Protected against temporary short to case ground

#### DC-COUPLED

<b>Type:</b>	Single-ended or differential
<b>Resolution:</b>	4 digits
<b>Accuracy:</b>	$\pm(3\% + 5 \text{ mV})$ , offset = 0V
<b>Overshoot:</b>	5%, typical

#### DC PATH

<b>Rise/Fall Time:</b>	$<600\text{ps}$ (typical $<500\text{ps}$ )
<b>Amplitude Range:</b>	
Single-ended	50mVp-p to 2Vp-p *
Differential	100mVp-p to 4Vp-p *

#### HV PATH

<b>Rise/Fall Time:</b>	1ns (typical $<900\text{ps}$ )
<b>Amplitude Range:</b>	
Single-ended	50mVp-p to 4Vp-p *
Differential	100mVp-p to 8Vp-p *

\* Double into high impedance

#### OFFSET

<b>Offset Range:</b>	-1.5V to + 1.5V into 50Ω
<b>Offset Resolution:</b>	4 digits
<b>Offset Accuracy:</b>	$\pm(5\% + 5\text{mV})$

#### MARKER OUTPUTS

<b>Number of Markers:</b>	Four markers
<b>Type:</b>	Single end
<b>Connectors:</b>	SMB
<b>Skew Between Markers:</b>	100ps, typical
<b>Impedance:</b>	50Ω
<b>Amplitude Voltage:</b>	
Window	0V to 1.25V, single-ended; 0V to 2.5V, differential
Low level	0V to 0.8V, single-ended; 0V to 1.6V, differential
High level	0.5V to 1.25V, single-ended; 0V to 2.5V, differential
<b>Resolution:</b>	10mV
<b>Accuracy:</b>	10% of setting
<b>Width control:</b>	2 SCLK to segment length
<b>Position control:</b>	
Range	0 to segment length
Resolution	2 points
<b>Initial delay:</b>	$4\text{ns} \pm 1/2$ clock (Output to marker)

#### Variable delay:

Control	Separate for each channel
Range	0 to 3ns
Resolution	10ps
Accuracy	$\pm(10\%$ of setting + 20ps)
<b>Rise/Fall Time:</b>	$<1\text{ns}$ , typical

### INPUTS

#### TRIGGER INPUT

<b>Connector:</b>	Rear panel SMA
<b>Input Impedance:</b>	10kΩ
<b>Polarity:</b>	Positive, negative, or both
<b>Damage Level:</b>	$\pm 20\text{Vdc}$
<b>Frequency Range:</b>	0 to 15MHz
<b>Trigger Level Control:</b>	
Range	-5V to 5V
Resolution	12 bit (2.5mV)
Accuracy	$\pm(5\%$ of setting + 2.5mV)
Sensitivity	0.2Vp-p
<b>Min. Pulse Width:</b>	10 ns

#### EVENT INPUT

<b>Connector:</b>	Rear panel BNC
<b>Input Impedance:</b>	10kΩ
<b>Polarity:</b>	Positive, negative or either
<b>Damage Level:</b>	$\pm 20\text{Vdc}$
<b>Frequency Range:</b>	0 to 15MHz
<b>Trigger Level Control:</b>	
Range	-5V to 5V
Resolution	12 bit (2.5mV)
Accuracy	$\pm(5\%$ of setting + 2.5mV)
Sensitivity	0.2 Vp-p minimum
<b>Min. Pulse Width:</b>	10 ns

#### SEQUENCE/SEGMENT CONTROL INPUT

<b>Connectors:</b>	Rear panel D-sub, 8 bit lines
<b>Input Impedance:</b>	10kΩ
<b>Input Level:</b>	TTL

#### EXTERNAL REFERENCE INPUT

<b>Connector:</b>	Rear panel BNC
<b>Input Frequency:</b>	10MHz to 100MHz
<b>Input Impedance:</b>	50Ω
<b>Voltage Swing:</b>	-5dBm to 5dBm
<b>Damage Level:</b>	10dBm

#### EXTERNAL SAMPLE CLOCK INPUT

<b>Connector:</b>	Rear panel SMA
<b>Input Impedance:</b>	50Ω
<b>Voltage Swing:</b>	0dBm to 10dBm
<b>Input Frequency:</b>	1GHz to 5GHz (Double the internal clock)
<b>Clock Divider:</b>	1/1, 1/2, 1/4, 1/256, separate for each channel
<b>Damage Level:</b>	15dBm

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## Specification

### RUN MODES

<b>Continuous:</b>	A selected output function shape is output continuously. No start commands are required to generate waveforms.
<b>Self Armed:</b>	The output dwells on a DC level and waits for an enable command and then the output waveform is output continuously; An abort command turns off the waveform.
<b>Armed:</b>	A trigger signal activates a single-shot or counted burst of output waveforms and then the instrument waits for the next trigger signal.
<b>Triggered:</b>	The first trigger signal activates the output; consecutive triggers are ignored for the duration of the output waveform.
<b>Normal Mode</b>	The first trigger signal activates the output; consecutive triggers restart the output waveform regardless if the current waveform has been completed or not.
<b>Override Mode:</b>	A waveform is output when a gate signal is asserted. The waveform is repeated until the gate signal is de-asserted. Last period is always completed.
<b>Gated:</b>	Upon trigger, outputs a Dual or multiple pre-programmed number of waveform cycles from 1 through 1M.
<b>Burst:</b>	

### TRIGGER CHARACTERISTICS

#### EXTERNAL

<b>Source:</b>	Channel 1, channel 2, or both
<b>Connector:</b>	SMA
<b>Input Impedance:</b>	10k $\Omega$
<b>Polarity:</b>	Positive, negative, or both
<b>Damage Level:</b>	$\pm 20$ Vdc
<b>Frequency Range:</b>	0 to 15MHz
<b>Trigger Level Control:</b>	
Range	-5V to 5V
Resolution	12 bit (2.5mV)
Accuracy	$\pm(5\%$ of setting + 2.5mV)
Sensitivity	0.2Vp-p
<b>Pulse Width:</b>	10 ns, minimum
<b>System Delay:</b>	200 SCLK periods + 50ns
<b>Trigger Delay:</b>	Separate for each channel
Range	0 to 8,000,000 SCLK periods
Resolution	4 points
Accuracy	Same as SCLK accuracy
<b>Smart Trigger:</b>	Detects a unique pulse width

<b>Conditioned Trigger:</b>	< pulse width, > pulse width or <>pulse width
Pulse Width Range	50ns to 2s
Resolution	2ns
Accuracy	$\pm(5\%$ of setting + 20ns)
<b>Trigger Hold-off:</b>	Ignores triggers for a hold-off
Hold-off range	100ns to 2s
Resolution	2ns
Accuracy	$\pm(5\%$ of setting + 20ns)
<b>Trigger jitter:</b>	4 SCLK periods;

#### INTERNAL

<b>Source:</b>	Common or separate
<b>Modes:</b>	
Timer	Waveform start to waveform start
Delayed	Waveform stop to waveform start
<b>Timer:</b>	
Range	400ns to 2s
Resolution	3 digits
Accuracy	100ppm
<b>Delay</b>	
Range	152 to 8,000,000 SCLK periods
Resolution	Even numbers, divisible by 4

#### MANUAL

<b>Source:</b>	Soft trigger command from the front panel or remote
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#### INTER-CHANNEL SKEW CONTROL

##### COURSE TUNING

<b>Initial skew:</b>	200ps
<b>Control:</b>	
Range	0 to waveform-length points
Resolution	4 points
<b>Accuracy:</b>	Same as SCLK accuracy

##### FINE TUNING

<b>Initial skew:</b>	200ps
<b>Control:</b>	
Range	-3ns to +3ns
Resolution	10ps
<b>Accuracy:</b>	(10% of setting + 20ps)

#### TWO INSTRUMENTS SYNCHRONIZATION

<b>Initial Skew:</b>	20ns + 0 to 8 SCLK
<b>Offset Control:</b>	0 to Waveform length
<b>Offset Resolution:</b>	4 SCLK increments
<b>Skew Control:</b>	-5ns to 5ns
<b>Skew Resolution:</b>	10ps

### GENERAL

<b>Voltage Range:</b>	100VAC to 240VAC
<b>Frequency Range:</b>	50Hz to 60Hz
<b>Power Consumption:</b>	150VA
<b>Display Type:</b>	TFT LCD, 4", 320 x 240 pixels
<b>Interfaces:</b>	
USB	1 x front, USB host, (A type); 1 x rear, USB device, (B type)
LAN	1000/100/10 BASE-T
GPIB	IEEE 488.2 standard interface
Segment control	2 x D-sub, 9 pin
<b>Dimensions:</b>	
With Feet	315 x 102 x 395 mm (WxHxD)
Without Feet	315 x 88 x 395 mm (WxHxD)
<b>Weight:</b>	
Without Package	4.5kg
Shipping Weight	6kg
<b>Temperature:</b>	
Operating	0°C to 40°C
Storage	-40°C to 70°C
<b>Humidity:</b>	85% RH, non condensing
<b>Safety:</b>	CE Marked, IEC61010-1
<b>EMC:</b>	IEC 61326-1:2006
<b>Calibration:</b>	2 years
<b>Warranty</b> <sup>(1)</sup> :	5 years standard

### ORDERING INFORMATION

MODEL	DESCRIPTION
WX1284	1.25GS/s Four Channel Arbitrary Waveform Generator
WX2184	2.3GS/s Four Channel Arbitrary Waveform Generator

### OPTIONS

<b>Option 1</b> <sup>(2)</sup> :	32M Memory (per channel)
<sup>(2)</sup> Improves timing characteristics as well	

### ACCESSORIES

<b>Sync Cable:</b>	Multi-instrument synchronization
<b>S-Rack Mount:</b>	19" Single Rack Mounting Kit
<b>Case Kit:</b>	Professional Carrying Bag

<b>Note:</b>	Options and Accessories must be specified at the time of your purchase.
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<sup>(1)</sup> Standard warranty in India is 1 year.



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