

## XDS4000 Series Oscilloscopes Technical Specifications

Model	Vertical Resolution (A/D)	Bandwidth	Rise Time	Horizontal Scale
XDS4354 XDS4352	8 bits	350 MHz	$\leq 1 \text{ ns}$	500ps/div - 1000s/div, step by 1 – 2 - 5
XDS4504 XDS4502		500 MHz	$\leq 0.7 \text{ ns}$	

Performance Characteristics	Instruction	
<b>Sample rate (real time)</b>	Four CH	1 GSa/s
	Dual CH*	2.5 GSa/s
	Single CH	5 GSa/s
<b>Waveform capture rate</b>	600,000 wfms/s	
<b>Display</b>	10.4" color LCD, TFT display , 800x600 pixels	
<b>Channel</b>	XDS4354 XDS4504	4
	XDS4352 XDS4502	2
<b>Max record length</b>	400M	
<b>Sampling rate / relay time accuracy</b>	$\pm 2.5 \text{ ppm max (Ta = +25}^\circ\text{C} \pm 5^\circ\text{C)}$	
<b>Input coupling</b>	DC, AC, Ground	
<b>Input impedance</b>	1M $\Omega$ $\pm 2\%$ , in parallel with 15pF $\pm 5\text{pF}$ , 50 $\Omega$ $\pm 2\%$	
<b>Max input voltage</b>	1 M $\Omega$ :300Vrms ,400 V (DC + AC Peak)	
	50 $\Omega$ :5Vrms	
<b>DC gain accuracy</b>	1 mV	$\pm 3\%$
	$\geq 2 \text{ mV}$	$\pm 2\%$
<b>Vertical sensitivity</b>	1 M $\Omega$ : 1 mV/div $\sim 10 \text{ V/div}$	
	50 $\Omega$ : 1 mV/div $\sim 1 \text{ V/div}$	
<b>Trigger type</b>	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I2C, SPI, UART/RS232, CAN (optional)	
<b>Decoding Type (optional)</b>	UART/RS232, I2C, SPI, CAN	
<b>Trigger mode</b>	Auto, Normal, Single	
<b>Line/field frequency (Video)</b>	Support standard NTSC, PAL and SECAM	
<b>Automatic measurement</b>	Period, Frequency, Mean, PK-PK, RMS, Max, Min, Top, Base, Amplitude, Overshoot, Preshoot, Rise Time, Fall Time, +Pulse Width, -Pulse Width, +Duty Cycle, -Duty Cycle, Delay A $\rightarrow$ B $\overleftrightarrow{\text{H}}$ , Delay A $\rightarrow$ B $\overleftrightarrow{\text{L}}$ , Cycle RMS, Cursor RMS, Screen Duty, FRR、FRF、FFR、FFF、LRR、LRF、LFR、LFF、Phase A $\rightarrow$ B $\overleftrightarrow{\text{H}}$ , Phase A $\rightarrow$ B $\overleftrightarrow{\text{L}}$ , +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edge Count, Area, and Cycle Area.	
<b>Waveform math</b>	+, -, *, / ,FFT, FFTrms, Intg, Diff, Sqrt, User Defined Function, digital filter (low pass, high pass, band pass, band reject)	
<b>Waveform storage</b>	100 waveforms	
<b>Communication interface</b>	USB Host, USB Device; Trig Out(Pass/Fail); LAN port; VGA port; EXT Trig In	
<b>Printer compatibility</b>	PictBridge	

<b>Fuse</b>	2 A, T class, 250 V
<b>Touch screen</b>	Multi-touch capacitive touch screen

\* (Only applicable to 4-channel models)

Max Sample rate (real time) for Dual CH should meet either following condition:

- CH1&CH3 on, CH2&CH4 off;
- CH2&CH4 on, CH1&CH3 off.

## Waveform Generator

<b>Max frequency output</b>	50 MHz
<b>Sample rate</b>	250 MSa/s
<b>Channel</b>	1
<b>Vertical resolution</b>	14 bits
<b>Amplitude range</b>	2mVpp - 5Vpp ( $\leq 50\text{MHz}$ ) 2mVpp - 20Vpp ( $\leq 25\text{MHz}$ )
<b>Waveform length</b>	16K
<b>Output DC and offset</b>	$V_{pp} \leq 5V \pm 2.5V$ (max) ; $V_{pp} > 5V \pm 10V$ (max)
<b>Standard waveforms</b>	Sine, Square, Ramp, and Pulse
<b>Arbitrary waveforms</b>	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, Noise, and others, total 46 built-in waveforms, and user-defined arbitrary waveform

## Multimeter (Optional)

<b>Full scale reading</b>	4½ digits (Max 20000 – count)
<b>Diode</b>	0 V - 2 V
<b>Input impedance</b>	$\geq 10\text{ M}\Omega$
<b>On/off measurement</b>	<50 beeping
<b>Capacitance</b>	2nF – 20mF: $\pm(4\% \pm 10\text{ digit})$
<b>Voltage</b>	DCV: 20mV, 200mV: $\pm(0.5\% \pm 10\text{ digit})$ , 2V, 20V, 200V: $\pm(0.3\% \pm 5\text{ digit})$ , 1000V: $\pm(0.5\% \pm 5\text{ digit})$ ACV: 200mV, 2V, 20V, 200V: $\pm(0.8\% \pm 10\text{ digit})$ 750V: $\pm(1\% \pm 10\text{ digit})$ Frequency: 40Hz - 400Hz
<b>Current</b>	DCA: 20A: $\pm(2\% \pm 10\text{ digit})$ ACA: 20A: $\pm(2.5\% \pm 10\text{ digit})$
<b>Impedance</b>	200 $\Omega$ ~2M $\Omega$ : $\pm(0.8\% \pm 10\text{ digit})$ , 20M $\Omega$ : $\pm(1\% \pm 10\text{ digit})$ 100M $\Omega$ : $\pm(5\% \pm 10\text{ digit})$

## Mechanical Specifications

<b>Dimension</b>	422 mm × 226 mm × 135 mm (L*H*W)
<b>Weight</b>	Approx. 5 kg (without accessories)

V1.0.0



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