

# XDS Series n-in-1 digital oscilloscope

*your powerful on-site measurement station)*



**14 bits**  
high resolution ADC



## Super Performance

- + 8-bit, 12-bit or 14-bit high resolution ADC, restoring the waveform detail fully
- + 40M record length, and 75,000 wfms/s waveform refresh rate
- + low background noise, vertical sensitivity in 1 mV/div - 10 V/div
- + multi-trigger, and bus decoding function
- + SCPI, and LabVIEW supported

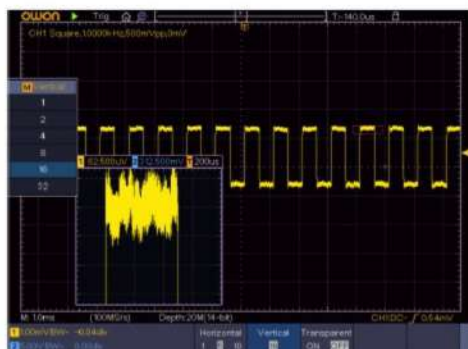
## Creative New Look

- + ultra-thin body-design, less space accommodation
- + multi-interface integration - USB host, USB device, USB port for PictBridge, LAN, AUX, and more
- + VGA port - better solution for video expansion, and teaching demonstration
- + 8 inch 800 x 600 high resolution LCD
- + optional multi-touch screen, more user-friendly operation experience

## n-in-1

functions as data logger, and multimeter with data logging function, and dual-channel 25MHz / 50MHz arbitrary waveform generator, furthermore, battery pack, and WiFi module supported

1. XDS series introduce 12 / 14 bits hardware ADC, the precision is 16/64 times against other oscilloscope on market. Equipping with OWON' s original magnifier function, it can observe the signal low down to 31.25 $\mu$ V/div.



## + Performance Specifications

Model	XDS3062A	XDS3102A	XDS3202A**	XDS3102	XDS3202E	XDS3202*	XDS3302*
Bandwidth	60MHz	100MHz	200MHz	100MHz	200MHz		300MHz
Sample Rate	1GS/s (8 bits) 500MS/s (12 bits) (** 100MS/s (14 bits))			1GS/s		2GS/s	2.5GS/s
Vertical Resolution (A/D)	12 bits		14 bits	8bits			
Record length	40M						
Waveform Refresh Rate	75,000 wfms/s						
Horizontal Scale (s/div)	2ns/div - 1000		1ns/div - 1000	2ns/div - 1000	1ns/div - 1000		
	step by 1 - 2 - 5						
Rise Time (at input, typical)	≤5.8ns	≤3.5ns	≤1.7ns	≤3.5ns	≤1.7ns		≤1.17ns
Channel	2 + 1 (external)						
Display	8" color LCD, 800 x 600 pixels (optional 1024 x 768 pixels IPS display)						
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF (*, ** 50Ω ± 2%)						
Channel Isolation	50Hz : 100 : 1, 10MHz : 40 : 1						
Max Input Voltage	1MΩ ≤ 300Vrms; 50Ω ≤ 5Vrms						
DC Gain Accuracy	±1.5%			±3%			
DC Accuracy	average ≥ 16: ±(3% reading + 0.05 div) for ΔV						
Probe Attenuation Factor	0.001X - 1000X, step by 1 - 2 - 5						
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)						
Sample Rate / Relay Time Accuracy	±1ppm						
Interpolation	sin(x) / x						
Interval (ΔT) Accuracy (full bandwidth)	Single: ±(1 interval time + 1ppm x reading + 0.6ns); Average > 16: ±(1 interval time + 1ppm x reading + 0.4ns)						
Input Coupling	DC, AC, and GND						
Vertical Sensitivity	1mV/div - 10V/div (at input)						
Trigger Type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I <sup>2</sup> C, SPI, RS232, and CAN (optional)						
Bus Decoding	I <sup>2</sup> C, SPI, RS232, and CAN (optional)						
Trigger Mode	Auto, Normal, and Single						
Vertical Range	±2V ( 1mv/div - 50mv/div), ±20V ( 100mv/div - 1V/div), ±200V (2V/div - 10V/div)						
Line / Field Frequency (video)	NTSC, PAL and SECAM standard						
Cursor Measurement	ΔV, and ΔT between cursors, ΔV and ΔT between cursors, and auto- cursors						
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Week RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, Duty Cycle, Delay A→B ↑, Delay A→B↓, +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edge Count						
Waveform Math	+, -, ×, ÷, FFT, FFTrms, Intg, Diff, Sqrt, User Defined Function, digital filter (low pass, high pass, band pass, band reject)						
Waveform Storage	100 waveforms						
Lissajou's Figure	Bandwidth	full bandwidth					
	Phase Difference	±3 degrees					
Communication Interface	USB host, USB device, USB port for PictBridge, Trig Out (P/F), LAN, and VGA (optional)						
Frequency Counter	available						
Power Supply	100V - 240V AC, 50/60Hz, CAT II						
Power Consumption	< 15W						
Fuse	2A, T class, 250V						

Battery (optional)	3.7V, 13200mAh
Dimension (W x H x D)	340 x 177 x 90 mm
Weight	2.60 kg±200g

### + Multimeter (optional) Specifications

Full Scale Reading	3¾ digits (max 4000 count)	Diode	0V -1.5V
Input Impedance	10MΩ	Continuity Test	<50 (±30) beeping
Capacitance	51.2nF - 100uF: ±(3% ± 3 digits)		
Voltage	VDC: 400mV, 4V, 400V: ±(1 ± 1 digit); max input: DC 1000V VAC: 4V, 40V, 400V: ±(1 ± 3 digits); frequency: 40Hz - 400Hz; max input: AC 400V (virtual value)		
Current	DC: 40mA, 400mA: ±(1.5% ± 1 digit); 10A: ±(3% ± 3 digits) AC: 40mA: ±(1.5% ± 3 digits), 400mA: ±(2% ± 1 digit), 10A: ±(3% ± 3 digits)		
Impedance	400Ω: ±(1% ± 3 digits), 4KΩ - 40MΩ: ±(1% ± 1 digit)		

### + Arb Waveform Generator (optional) Specifications

Max Frequency Output	25MHz
Sample Rate	125MS/s
Channel	available in 1-ch, or 2-ch
Vertical Resolution	14 bits
Amplitude Range	2mVpp - 6Vpp
Waveform Length	8K
Standard Waveform	Sine, Square, Pulse, Ramp

### + Optional Module / Function

VGA	VGA+AV
WIF	WiFi
AWG	arb waveform generator
DMM	digital multimeter
TOU	Touch screen(capacitor-type)

### + Optional Decoding Kit

RS232	RS232
SPI	SPI
I2C	I2C
CAN	CAN trigger / decoding

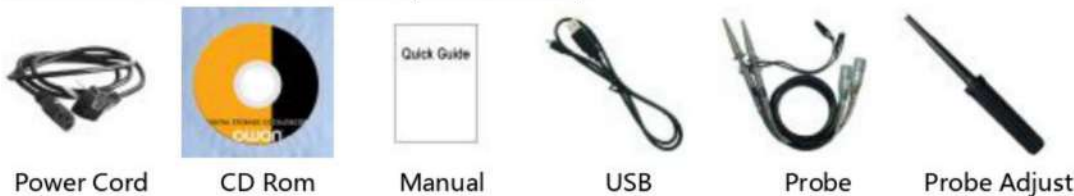
Specifications subject to change without prior notice.

### + Application

electronic circuit debugging      circuit testing      design and manufacture  
education and training      automobile maintenance and testing

### + Accessories

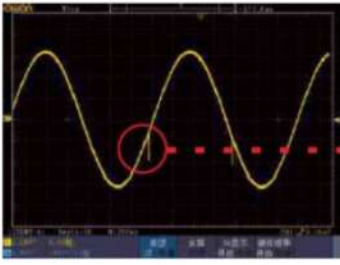
The accessories subject to final delivery.



#### optional accessories:



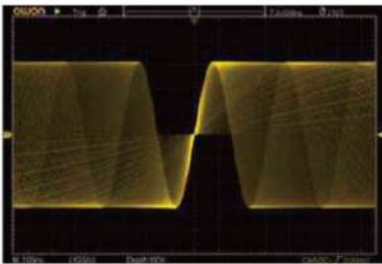
2. Xvisual platform - restore the waveform detail fully



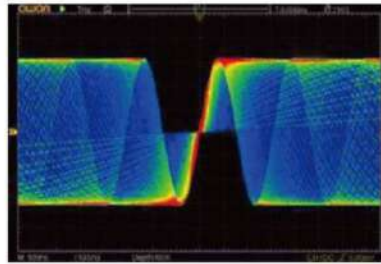
M Bus Type
RS232
I2C
SPI
CAN
UART

M TrigMode
Edge
Video
Pulse
Slope
Runt
Nth Edge
Windows
Logic

3. multi-level grayscale, and color temperature display



within certain unit time, more frequent one waveform pixel appears, more vivid it is



the frequency of waveform reflecting in color temperature value, larger the value is, more frequent the waveform appears

4. multi-trigger supported - Logic, Time-out, I<sup>2</sup>C, SPI, RS232, Runt, Windows, Nth Edge, and CAN

5. serial bus coding available in I2C, SPI, RS232, and CAN

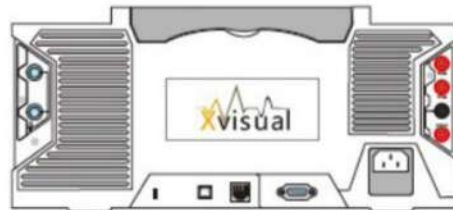
M Bus Type
RS232
I2C
SPI
CAN

M Single
Edge
Video
Pulse
Slope
Runt
Windows
Timeout
Nth Edge

8. its built-in WiFi module facilitates mobile device connecting with XDS series product, to get access to remote control, together with simultaneous measurement result display

6. built-in multimeter module, with auto-scale, and data logging function

7. built-in dual-channel 25MHz / 50MHz arbitrary waveform generator module, with sample rate of 125MS/s / 250MS/s



9. Its multi-point touch function improves operation efficiency considerably



10. optional battery makes floating measurement possible, advancing the operation convenience



via app s/w, waveform data-saving, checking, co-sharing is possible, co-analyzing hence realizes