

# XDS2102A High Resolution Digital Oscilloscope

*your powerful on-site measurement station)*



**12 bits**  
high resolution ADC



## Super Performance

- + 12-bit high resolution ADC, restoring the waveform detail fully
- + 20M record length, and 55,000 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
- + 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

## + Performance Specifications

Model	XDS2102A
Bandwidth	100MHz
Sample Rate	1GS/s (8 bits) 500MS/s (12 bits)
Vertical Resolution (A/D)	12 bits
Record length	20M
Waveform Refresh Rate	55,000 wfms/s
Horizontal Scale (s/div)	2ns/div - 1000s/div, step by 1~2~5
Rise Time (at input, typical)	≤3.5ns
Channel	2 + 1 (external)
Display	8" color LCD, 800 x 600 pixels
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF
Channel Isolation	50Hz : 100 : 1, 10MHz : 40 : 1
Max Input Voltage	1MΩ ≤ 300Vrms
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		±1 ppm ( TYP, Ta=+25°C )
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
Bus Decoding		I <sup>2</sup> C, SPI, RS232, and CAN
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, Peak 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		50 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
Dimension (W x H x D)		340 x 177 x 90 mm
Weight		2.40 kg

Specifications subject to change without prior notice.

## + Application

electronic circuit debugging  
education and training

circuit testing

design and manufacture

automobile maintenance and testing

## + Accessories

The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



USB



Probe



Probe Adjust

optional accessories



Soft Bag