DSO2000 Series

Cost-effective economy oscilloscope, 150MHz Bandwidth, 1GSa/s, 8M memory depth; with 1CH 25MHz waveform generator, support arbitrary waveform output; 14 kinds of trigger modes, standard with 5 kinds of serial protocol triggers and decodes; 32 kinds of auto measurements with statistics; 3-digit digital voltage meter and 6-digit hardware frequency indicator functions; 2 sets of DVM; Abundant SCPI remote command control. It is a useful commissioning instrument for various fields such as communication, aerospace, national defense, embedded systems, computers, research and education.

Model	DSO2D15	DSO2D10	DSO2C15	DSO2C10
Bandwidth	150MHz	100MHz	150MHz	100MHz
Oscilloscope channels	2CH	2CH	2CH	2CH
Waveform generator	1CH	1CH	-	-
Oscilloscope				
Sample rate	1GSa/s (single channel) 500MSa/s (two channels)			
Acquisition				
Normal	Sample data			
Peak-to-peak value	Display high frequency and random burr			
Average	Average waveform, times: 4, 8, 16, 32, 64, 128			
High resolution	Up to 12bit			
Input				
Input coupling	DC, AC, GND			
Input impedance	1MΩ±2% ||20pF±3pF			
Probe attenuation factor	1X, 10X, 100X, 1000X			
Voltage rating	300V CAT II			
Maximum input voltage	300VRMS (10X)			
Horizontal				
Waveform interpolation	(sin x)/x			
Maximum record length	Single channel maximum 8M Two channels maximum 4M			
Horizontal scale range	2ns/div~100s/div 1, 2, 5 step by step			
Time base mode	Y-T, X-Y, Roll			
Zero offset	±0.5 div×minimum time base gear			
Sample Rate and Delay Time Accuracy	±25ppm			
Delta Time Measurement Accuracy (Full Bandwidth)(Sample Rate and Delay Time Accuracy	single-shot, Normal mode ±（1 sample interval+100ppm×reading+0.6ns） > 16 times averages ±（1 sample interval+100ppm×reading+0.4ns）			
Sample Rate and Delay Time Accuracy	Sample interval=sec/div×200 ±50ppm（at any interval greater than 1ms）			
Vertical				
Model	DSO2D15	DSO2D10	DSO2C15	DSO2C10
Bandwidth	150MHz	100MHz	150MHz	100MHz
Rising time in BNC position (typical)	2.4ns	3.5ns	2.4ns	3.5ns
Vertical resolution	8 bits resolution, each channel samples simultaneously			
Vertical sensitivity	2mV/div to 10V/div			
Offset range	≥ 200mV/div, ±1V; ＜200mV/div ±50V			
Mathematical operation	+, -, ×, ÷, FFT			
FFT	Window: Rectangle, Hanning, Hamming, Blackman, Bartlett, Flattop			
Bandwidth Limit	20MHz			
Bass response（-3db）	In BNC position ≤ 10Hz			
Vertical gain accuracy	In "normal" or "average" acquisition mode, the accuracy of 10V/div to 10mV/div is ±3%; In "normal" or "average" acquisition mode, the accuracy of 5mV/div to 2mV/div is ±4%			
Note: Bandwidth reduced to 6MHz when using a 1X probe				
Trigger				
Trigger type	Edge, Pulse width, Video, Slope, Overtime, Window, Pattern, Interval, Under Amp, UART, LIN, CAN, SPI, IIC			
Trigger level range	±5 divisions from the center of the screen			
Trigger mode	Auto, Normal, single			
Level	CH1~CH2 EXT(Only With AWG Model)	±4 divisions from the center of the screen 0~3.3V		
Holdoff range	8ns~10s			
Trigger level accuracy	CH1~CH2 EXT(Only With AWG Model)	0.2 div×volts/div within ±4 divisions from the center of the screen ±（Set value× 6%+40mV）		
Edge trigger	Slope	Rising edge, falling edge, rising or falling edge		
	Signal source	CH1, CH2, EXT(Only With AWG Model)		
Pulse width trigger	Polarity	Positive polarity, negative polarity		
	Condition(When)	<, >, !=, =		
	Signal source	CH1~CH2,		
	Pulse width range	8ns ~ 10s		
	Accuracy	8ns		
Video trigger	Signal standard	NTSC, PAL		
	Signal source	CH1~CH2		
	Synchronization	Scanning line, line number, odd field, even field, all field		
Slope trigger	Slope	rising, falling		
	Condition(When)	<, >, !=, =		
	Signal source	CH1 ~ CH2		
	Time range	8ns ~ 10s		
	Accuracy	8ns		
Overtime trigger	Signal source	CH1~CH2,		
	Polarity	Positive polarity, negative polarity		
	Time range	8ns ~ 10s		
	Accuracy	8ns		
Window trigger	Signal source	CH1~CH2		
Pattern trigger	Pattern	0: low level; 1: high level; X: ignore		
	Level（signal source）	CH1~CH2		
Interval trigger	Slope	rising, falling		
	Condition(When)	<, >, !=, =		
	Signal source	CH1~CH2		
	Time range	8ns ~ 10s		
	Accuracy	8ns		
Under Amp trigger	Polarity	Positive polarity, negative polarity		
	Condition(When)	<, >, !=, =		
	Signal source	CH1~CH2		
	Time range	8ns ~ 10s		
	Accuracy	8ns		
UART trigger	Condition(When)	Start, Stop, data, Parity ERR, COM ERR		
	Signal source(RX/TX)	CH1~CH2		
	Data format	Hex (hexadecimal)		
	Data length	1 byte		
	Data bit width	5 bit, 6 bit, 7 bit, 8 bit		
	Odd-even check	none, odd, even		
	Idle level	high, low		
	Baud rate (optional)	110/300/600/1200/2400/4800/9600/14400/19200/38400/57600/115200/230400/380400/460400 bit/s		
	Baud rate(user-defined)	300bit/s~334000bit/s		
LIN trigger	Condition(When)	Interval field, synchronization field, ID field, synchronization error, identifier, ID and data		
	Signal source	CH1~CH2		
	Data format	Hex (hexadecimal)		
	Baud rate (optional)	110/300/600/1200/2400/4800/9600/14400/19200/38400/57600/115200/230400/380400/460400 bit/s		
	Baud rate(user-defined)	300bit/s~334000bit/s		
CAN trigger	Condition(When)	Start bit, remote frame ID, data frame ID, frame ID, data frame data, error frame, all errors, ACK Error, overload frame		
	Signal source	CH1~CH2		
	Data format	Hex (hexadecimal)		
	Baud rate (optional	10000, 20000, 33300, 500000, 62500, 83300, 100000, 125000, 250000, 500000, 800000, 1000000		
	Baud rate(user-defined)	5kbit/s~1Mbit/s		
SPI trigger	Signal source	CH1~CH2		
	Data format	Hex (hexadecimal)		
	Data bit width	4, 8, 16, 24, 32		
IIC trigger	Signal source (SDA/SCL)	CH1~CH2		
	Data format	Hex (hexadecimal)		
	Data index	0~7		
	When(condition)	Start bit, stop bit, No Ack, address, restart, address and data		
Measurement				
Cursor	Voltage difference between cursors ΔV Time difference between cursors ΔT Reciprocal of ΔT, in Hertz (1/ΔT)			
Auto measurement	frequency, period, mean, peak-to-peak, RMS, minimum, mixmum, rising time, falling time, + width, - width, base, top, middle, amplitude, overshoot, preshoot, rising edge phase difference, falling edge phase difference, + duty, - duty, period mean, PRMS, FOVshoot, ROVshoot, BWIDTH, FRF, FFR, LRR, LRF, LFR, LFF			
DVM	Data source	CH1, CH2		
	Measurement type	DC RMS AC RMS DC		
	Frequency meter	hardware 6 bits frequency meter		
Arbitrary waveform generator				
Channel	1			
Sample rate	200MSa/s			
Vertical resolution	12 bits			
Maximum frequency	25 MHz			
Standard waveforms	sine, square, ramp,Exp, noise, DC			
Arbitrary waveform	Arb1, Arb2, Arb3, Arb4			
Sin	Frequency range	0.1Hz~25MHz		
Square/pulse	Frequency range	0.1Hz~10MHz		
Triangular wave	Frequency range	0.1Hz~1MHz		
Sampling wave	Frequency range	0.1Hz~1MHz		
Index	Frequency range	0.1Hz~5MHz		
Noise				
Arb1	Frequency range	0.1 Hz to 10 MHz		
Arb2	Frequency range	0.1 Hz to 10 MHz		
Arb3	Frequency range	0.1 Hz to 10 MHz		
Arb4	Frequency range	0.1 Hz to 10 MHz		
Waveform length	4KSa			
Frequency	Accuracy	100 ppm (<10 kHz); 50 ppm (>10 kHz)		
	Resolution	0.1 Hz or 4 bits, take the greater one		
Amplitude	Output range	10mV~7Vp-p (high impedance) 5mV~3.5Vp-p (50Ω)		
DC offset	Range	±3.5 V, high impedance ±1.75 V, 50 Ω		
	Resolution	100 μV or 3 bits, take the greater one		
	Accuracy	2% (1 kHz)		
Output impedance	50 Ω			
General specifications				
Display	Display type	7" diagonal TFT liquid crystal		
	Display resolution	800 (horizontal)*480 (vertical) pixels		
	Display colour	16 million colours (24 bits true colour)		
	Persistence time	minimum, 1 s, 5 s, 10 s, 30 s, infinite		
	Display type	dot, vector		
	Display brightness	adjustable		
	Grid type	adjustable		
	Grid brightness	adjustable		
Interface	Standard interface	USB Host, USB Device		
General specifications	Probe compensator output			
	Output voltage, typical	about 2Vpp input ±1MΩ load		
	Frequency, typical	1kHz		
	Power supply	100-120VAC$_{RMS}$(±10%), 45Hzto 440Hz, CATII 120-240VAC$_{RMS}$(±10%), 45Hz to 66Hz, CATII		
	Power consumption	<30W		
	Fuse	T, 3.15A, 250V, 5x20mm		
	Operating temperature	0~50 °C (32~122 °F)		
	Storage temperature	-40~+71 °C (-40~159.8 °F)		
	Humidity	≤+104 °F(≤+40°C): ≤90% relative humidity 106 °F~122 °F (+41°C ~50°C): ≤60% relative humidity		
	Altitude	Operating and nonoperating	3, 000m (10, 000 feet)	
	Mechanical shock	Random vibration	0.31 g $_{RMS}$ from 50Hz to 500Hz, 10 minutes on each axis	
		Nonoperating	2.46g $_{RMS}$ from 5Hz to 500Hz, 10 minutes on each axis	
		Operating	50g, 11ms, half-sine wave	
	Mechanical	Size	318 x 110 x 150mm (length x width x height)	
		Weight	1900g	