

Wave Rambler Pen-type PC Oscilloscope



- + 25MHz bandwidth
- + 100MS/s sample rate
- + 5K record length
- + FFT function
- + human engineering design
- + multi- action mode via creative trackball
- + multi- trigger option : edge, slope, and pulse
- + 5mV micro signal supported
- + USB bus powering, and optional USB isolated function
- + easy portability, pocket accommodated

+ Performance Specifications

Model	RDS1021	RDS1021I
Bandwidth	25MHz	
Sample Rate	100MS/s	
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5	
Rise Time	≤14ns	
Record Length	5K	
Input Coupling	DC, AC, and GND	
Input Impedance	10MΩ±2% (X10), 1MΩ±2% (X1)	
Input Capacitance	25pF±5pF (X10), 45pF±5pF (X1)	
Max Input Voltage	50V (PK - PK) (DC + AC, PK - PK)	400V (PK - PK) (DC + AC, PK - PK)
DC Gain Accuracy	±3%	
DC Accuracy (average)	average≥16 : ±(3% reading + 0.05 div) for ΔV	
Analog Bandwidth	25MHz	
Probe Attenuation Factor	1X, 10X	
LF Respond (AC, -3dB)	≥10Hz	
Interpolation	sin(x)/x	
Displacement	±10 divisions	
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns), Average>16 : ±(1 interval time + 100ppm × reading + 0.4ns)	
Vertical Resolution (A/D)	8 bits	

Model	RDS1021	RDS1021I
Vertical Sensitivity	5mV/div - 5V/div	
Trigger Type	Edge, Pulse, Slope	
Trigger Mode	Auto, Normal, Single	
Trigger Level	±5 divisions from screen center	
Acquisition Mode	Sample, Peak Detect and Average	
Cursor Measurement	ΔV and ΔT between cursors	
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty	
Waveform Math	FFT	
Communication Interface	USB2.0	
Dimension (W×H×D)	150 × 20 × 18 (mm)	
Weight (without package)	0.27 kg	

Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



VDS Series PC Oscilloscope



- + Up to 100MHz bandwidth, and max 1GS/s real-time sample rate
- + 2 / 4 channels
- + Max 10M record length
- + Friendly UI : FFT, or X-Y, and waveform 2 views displayed on the same screen
- + Multi-trigger option : edge, video, slope, pulse, and alternate
- + USB isolation - less signal inference, more PC protection
- + USB bus powering, and LAN remote control (optional)
- + Ultra-thin body design, easy portability

+ Performance Specifications

Model	VDS1022I	VDS1022	VDS2062	VDS2064	VDS3102	VDS3104
Bandwidth	25MHz		60MHz		100MHz	
Channel	2+1 (multi)		4+1 (multi)	2+1 (multi)	4+1 (multi)	
Sample Rate	100MS/s		500MS/s		1GS/s	
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5				2ns/div - 100s/div, step by 1 - 2 - 5	
Rise Time	≤14ns		≤5.8ns		≤3.5ns	
Record Length	5K		10M	5M	10M	5M
Input Coupling	DC, AC, GND					
Input Impedance	1MΩ ± 2%, in parallel with 10pF ± 5pF					
Channels Isolation	50Hz : 100 : 1 ; 10MHz : 40 : 1					
Max Input Voltage	400V (PK - PK) (DC + AC, PK - PK)		40V (PK - PK) (DC + AC, PK - PK)			
DC Gain Accuracy	±3%					
DC Accuracy	Average ≥ 16 : ±(3% reading + 0.05 div) for ΔT					
Probe Attenuation Factor	1X, 10X, 100X, 1000X					
LF Respond (AC, -3dB)	≥5Hz (at input, AC coupling, -3dB)					
Sampling Rate / Relay Time Accuracy	150ps					
Interpolation	sin(x)/x					
Interval (ΔT) Accuracy (full bandwidth)	Single : ± (1 interval time + 100ppm × reading + 0.6ns), Average > 16 : ±(1 interval time + 100ppm × reading + 0.4ns)					
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)					

Model	VDS1022I	VDS1022	VDS2062	VDS3102	VDS2064	VDS3104
Vertical Sensitivity	5mV/div - 5V/div					
Trigger Type	Edge, Pulse, Video, Slope, Alternate					
Trigger Mode	Auto, Normal, Single					
Trigger Level	±5 divisions from screen center					
Acquisition Mode	Sample, Peak Detect, and Average					
Line / Field Frequency (video)	NTSC, PAL, and SECAM standard					
Cursor Measurement	ΔV, and ΔT between cursors					
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty					
Waveform Math	+, -, ×, ÷, invert, FFT					
Lissajous Figure	Bandwidth	full bandwidth				
	Phase Difference	±3 degrees				
Communication Interface	USB2.0 (isolation)	USB2.0	USB2.0, LAN (optional)			
Multi-function Interface	Signal Type	synchronized input / output, Pass / Fail, external trigger input				
	Level Standard	TTL				
Power Supply	5.0V/1A					
Power Consumption	≤1.5W		≤5W			
Dimensions (W × H × D)	170 × 120 × 18 (mm)			190 × 120 × 18 (mm)		
Weight (without package)	0.26 kg			0.30 kg		

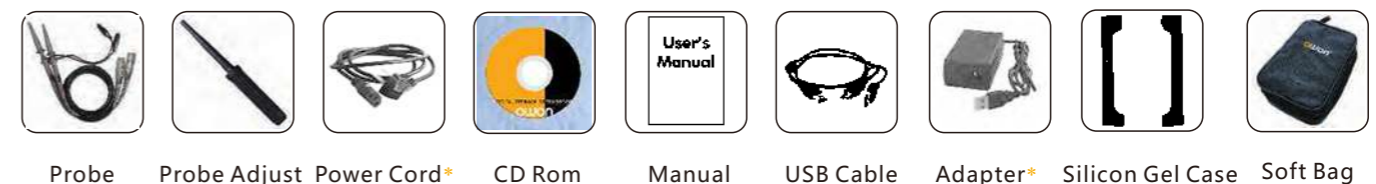
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+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



* Power cord and adapter only available for models with LAN port.



AG-S Series Single-channel Arbitrary Waveform Generator



- + Advanced DDS technology, max 150MHz frequency output
- + Up to 400MS/s sample rate, and 1µHz frequency resolution
- + Vertical Resolution : 14 bits, up to 1M arb waveform length
- + Comprehensive waveform output : 5 basic waveforms, and 45 built-in arbitrary waveforms
- + Comprehensive modulation functions : AM, FM, PM, FSK, PWM, Sweep, and Burst
- + Supported SCPI
- + 4 inch high resolution (480 × 320 pixels) TFT LCD display



+ Performance Specifications

Model	AG4081	AG4101	AG4121	AG4151
Channel	single + trigger			
Frequency Output	80MHz	100MHz	120MHz	150MHz
Sample Rate	400MS/s			
Vertical Resolution	14 bits			

Waveform

Standard Waveform	Sine, Square, Pulse, Ramp, and Noise
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, and others, total 45 built-in waveforms, user-defined arbitrary waveform

Frequency (resolution 1µHz)

Sine	1µHz - 80MHz	1µHz - 100MHz	1µHz - 120MHz	1µHz - 150MHz
Square	1µHz - 40MHz	1µHz - 50MHz		
Pulse	1µHz - 20MHz	1µHz - 25MHz		
Ramp	1µHz - 1MHz			
Noise	50MHz (-3dB) (typical)			
Arbitrary Waveform	1µHz - 10MHz			

Amplitude

Amplitude	10m Vpp - 10 Vpp (50Ω), 20m Vpp - 20 Vpp (high impedance)
Resolution	1m Vpp or 14 bits
DC Offset Range (AD+DC)	±5V (50Ω), ±10V (high impedance)
DC Offset Range Resolution	1mV
Load Impedance	50Ω (typical)

Model	AG4081	AG4101	AG4121	AG4151
Arbitrary Waveform				
Wave Length	2 pts to 1M pts			
Sample Rate	200MS/s			
Vertical Resolution	14 bits			
Non-volatile Memory	26 waveforms			
Modulation				
Modulation Waveform	AM, FM, PM, FSK, PWM, Sweep, and Burst			
Modulation Frequency	2mHz to 20.00KHz (FSK 1µHz - 100KHz)			
Input / Output				
Display	4 inch (480 × 320 pixels) TFT LCD			
Type	external modulation input / output, external trigger input / output, external reference clock input / output			
Communication Interface	USB host, USB device, RS232			
Mechanical				
Dimension (W×H×D)	235 × 110 × 295 (mm)			
Weight (without package)	3.00 kg			

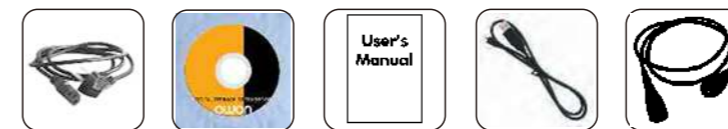
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+ Application

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+ Accessories

The accessories subject to final delivery.



Power Cord CD Rom Manual USB Cable Q9



AG Series Dual-channel Arbitrary Waveform Generator



- + Advanced DDS technology, max 60MHz frequency output
- + Up to 250MS/s sample rate, and 1μHz frequency resolution
- + Vertical Resolution : 14 bits, up to 1M arb waveform length
- + Comprehensive waveform output : 5 basic waveforms, and 45 built-in arbitrary waveforms
- + Comprehensive modulation functions : AM, FM, PM, FSK, PWM, Sweep, and Burst
- + High-accuracy frequency counter integrated, supported range 100mHz - 200MHz
- + Supported SCPI
- + 4 inch high resolution (480 × 320 pixels) TFT LCD display

+ Performance Specifications

Model	AG1012	AG1012F	AG1022	AG1022F	AG2052F <small>NEW!</small>	AG2062F <small>NEW!</small>
Channel	dual					
Frequency Output	10MHz		25MHz		50MHz	60MHz
Sample Rate	125MS/s			250MS/s		
Vertical Resolution	14 bits					

Waveform

Standard Waveform	Sine, Square, Pulse, Ramp, and Noise
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, and others, total 45 built-in waveforms, and user-defined arbitrary waveform

Frequency (resolution 1μHz)

Sine	1μHz - 10MHz	1μHz - 25MHz	1μHz - 50MHz	1μHz - 60MHz
Square	1μHz - 5MHz		1μHz - 25MHz	1μHz - 30MHz
Pulse	1μHz - 5MHz		1μHz - 10MHz	
Ramp	1μHz - 1MHz			
Noise	25MHz (-3dB) (typical)			
Arbitrary Waveform	1μHz - 10MHz			

Amplitude

Amplitude	1m Vpp - 10 Vpp (50Ω), 1m Vpp - 20 Vpp (high impedance)
Resolution	1m Vpp or 14 bits
DC Offset Range (AD+DC)	±5V (50Ω), ±10V (high impedance)
DC Offset Range Resolution	1mV
Load Impedance	50Ω (typical)

Model	AG1012	AG1022	AG1012F	AG1022F	AG2052F <small>NEW!</small>	AG2062F <small>NEW!</small>
Arbitrary Waveform						
Wave Length	2 pts to 8K pts			2 pts to 1M pts		
Sample Rate	125MS/s			250MS/s		
Vertical Resolution	14 bits					
Non-volatile Memory	26 waveforms					
Modulation						
Modulation Waveform	/		AM, FM, PM, FSK, Sweep, and Burst	AM, FM, PM, FSK, PWM, Sweep, and Burst		
Modulation Frequency	/		2mHz to 20.00KHz (FSK 1μHz - 100KHz)			
Counter						
Function	/		Frequency Period, +Width, -Width, +Duty, and -Duty			
Frequency Range	/		100mHz - 200MHz			
Frequency Resolution	/		6 digits			
Input / Output						
Display	4 inch (480 × 320 pixels) TFT LCD					
Type	external reference clock input / output		counter external modulation input / output, external trigger input / output, external reference clock input / output			
Communication Interface	USB host, USB device, RS232					
Mechanical						
Dimension (W×H×D)	235 × 110 × 295 (mm)					
Weight (without package)	3.00 kg					

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+ Application

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+ Accessories

The accessories subject to final delivery.



Power Cord CD Rom Manual USB Cable Q9



DP Series Programmable DC Power Supply



[ODP3031]



[ODP3032]



- + ODP3032 : two independent controllable channels; ODP3031 : one controllable channel
- + Max output resolution : 1mV / 1mA
- + Low ripples / low noise : <300 μ Vrms / 2 mVpp
- + Up to 100 group timers
- + Up to 10 group preset system configurations
- + Over-voltage / Over-current protection
- + Auto-cooling system
- + 3.9 inch high resolution (480 × 320 pixels) TFT LCD display
- + Multiple communication interface : USB, and RS232

+ Display

Model	ODP3031	ODP3032
Display Type	3.9 inch colored LCD	
Display Resolution	480 × 320 pixels	
Display Color	65536 colors, TFT screen	

+ Mechanical Specifications

Model	ODP3031	ODP3032
Dimension (W×H×D)	298 × 202 × 450 (mm)	
Weight (without package)	7.00 kg	9.80 kg

+ Performance Specifications

The specifications based upon the instrument having run for at least 30 minutes continuously, under the specified operating environment.

Model		ODP3031		ODP3032	
Channel		One controllable channel	Fixed 3.3V / 5V	Two controllable channels	Fixed 5V
DC Output Rating	Voltage	0 - 30V	3.3V / 5V	0- 30V (Independent / Parallel) 0 - 60V (Series) -30V - 30V (Plus-minus)	5V
	Current	0 - 3A	3A	0 - 3A (Independent / Series / Plus-minus), 0 - 6A (Parallel)	3A
Line Regulation	CV	$\leq 0.01\% + 3mV$	$\leq 3mV$	$\leq 0.01\% + 3mV$	$\leq 3mV$
	CC	$\leq 0.1\% + 3mA$	/	$\leq 0.1\% + 3mA$	/
Load Regulation	CV	$\leq 0.01\% + 3mV$	$\leq 0.1\% + 3mV$	$\leq 0.01\% + 3mV$	$\leq 0.1\% + 3mV$
	CC	$\leq 0.2\% + 3mA$	/	$\leq 0.2\% + 3mA$	/
Noise and Ripple (20Hz - 7MHz)	CV	$\leq 300 \mu Vrms / 2 mVpp$		$\leq 300 \mu Vrms / 2 mVpp$	
	CC	$\leq 3mArms$	/	$\leq 3mArms$	/
Settings Resolution	Voltage	1mV	/	1mV	/
	Current	1mA	/	1mA	/
Settings Accuracy (25°C ± 5°C)	Voltage	$\leq 0.05\% + 3mV$	/	$\leq 0.05\% + 3mV$	/
	Current	$\leq 0.1\% + 3mA$	/	$\leq 0.1\% + 3mA$	/
Read Back Resolution	Voltage	1mV (<10V), 10mV ($\geq 10V$)	/	1mV (<10V), 10mV ($\geq 10V$)	/
	Current	1mA	/	1mA	/
Read Back Accuracy (25°C ± 5°C)	Voltage	$\leq 0.05\% + 3$ digits	/	$\leq 0.05\% + 3$ digits	/
	Current	$\leq 0.1\% + 3$ digits	/	$\leq 0.1\% + 3$ digits	/

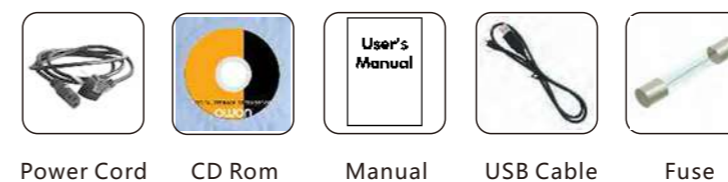
Specifications subject to change without prior notice.

+ Application

general detection in R&D laboratory QC test industrial production automation test
 automobile and electronic circuit test power-supplying education / teaching experimentation
 electronic components test, aging test to monitor the real-time status of power system via remote control
 to monitor battery charging curve

+ Accessories

The accessories subject to final delivery.



TOUCH TDS Series Touch Screen Digital Storage Oscilloscope



- + Max 200MHz bandwidth, up to 2GS/s realtime sample rate
- + 7.6M record length
- + 50,000 wfms/s waveform capture rate
- + waveform zooming (horizontal / vertical), and saving
- + FFT points (length, and resolution variable)
- + multi-window extension
- + user-friendly voice warning
- + 8 inch 800 x 600 pixels high def LCD
- + multi- communication interface : USB, VGA, and LAN

+ Performance Specifications

Model	TDS7104	TDS8104	TDS8204
Bandwidth	100MHz		200MHz
Channel	4		
Sample Rate	1GS/s	2GS/s	
Waveform Capture Rate	50,000 wfms/s		
Display	8" color LCD		
Input Coupling	DC, AC, and GND		
Input Impedance	1MΩ ± 2%, in parallel with 10pF ± 5pF ; 50Ω ± 1%		
Probe Attenuation Factor	1X, 10X, 100X, 1000X		
Max Input Voltage	1MΩ input impedance : 400V (PK - PK) (DC + AC, PK - PK) ; 50Ω input impedance : 5V (PK - PK) (DC + AC, PK - PK)		
Channel Isolation	50Hz : 100 : 1 ; 10MHz : 40 : 1		
Interpolation	sin(x)/x		
Record Length	7.6M		
Horizontal Scale (s/div)	2ns/div - 100s/div, step by 1 - 2 - 5		
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns), Average>16 : ±(1 interval time + 100ppm × reading + 0.4ns)		
Vertical Resolution (A/D)	8 bits (4 channels simultaneously)		
Vertical Sensitivity	2mV/div - 10V/div (at input)		
Analog Bandwidth	100MHz	200MHz	
LF Respond (AC, -3dB)	≥5Hz (at input, AC coupling, -3dB)		
Rise Time	≤3.5ns	≤1.7ns	

Model	TDS7104	TDS8104	TDS8204
DC Accuracy	±3%		
Trigger Type	Edge, Pulse, Video, Slope		
Trigger Mode	Auto, Normal, Single		
Trigger Level Range	±6 division from the screen center		
Trigger level Accuracy (typical)	±0.3 division		
Line / Field Frequency (video)	NTSC, PAL, and SECAM standard		
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty		
Waveform Math	+, -, ×, ÷, FFT		
Waveform Storage	4 reference waveforms		
Lissajous Figure	Bandwidth	full Bandwidth	
	Phase Difference	±3 degrees	
Cursor Measurement	ΔV, and ΔT between cursors		
Communication Port	USB host, USB device, VGA, LAN		
Power Supply	100 - 240 V AC, 50/60Hz, CAT II		
Dimension (W×H×D)	380 × 180 × 115 (mm)		
Weight (without package)	1.50 kg		

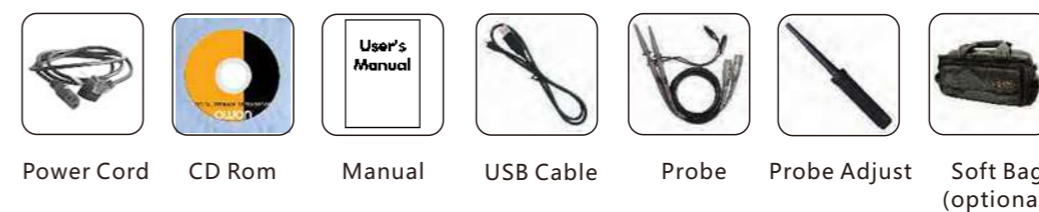
Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



Smart DS Series Deep Memory Digital Storage Oscilloscope



- + Bandwidth : 60MHz - 300MHz with dual-channel
- + Sample rate : 500MS/s - 3.2GS/s
- + 10M record length for each channel
- + Multi-function : auto-scale, Pass / Fail, and current-measuring
- + Supported SCPI
- + LAN remote control
- + Smart design with easy portability
- + Large 8 inch 800 x 600 pixels display
- + Optional battery available



+ Performance Specifications

Model	SDS6062	SDS7072	SDS7102	SDS8102	SDS8202	SDS8302	SDS9302
Bandwidth	60MHz	70MHz	100MHz	200MHz	300MHz		
Sample Rate	500MS/s	1GS/s	2GS/s	2.5GS/s	3.2GS/s		
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5	2ns/div - 100s/div, step by 1 - 2 - 5	1ns/div - 100s/div, step by 1 - 2 - 5				
Rise Time	≤5.8ns	≤5ns	≤3.5ns	≤1.7ns	≤1.17ns		
Display	8" color LCD, 800 x 600 pixels, 65535 colors						
Channel	2 + 1 (external)						
Record Length	10M						
Input Coupling	DC, AC, and GND						
Input Impedance	1MΩ ± 2%, in parallel with 10pF ± 5pF						
Channel Isolation	50MHz : 100 : 1, 10MHz : 40 : 1						
Max Input Voltage	400V (PK - PK) (DC + AC, PK - PK)						
DC Gain Accuracy	±3%						
DC Accuracy	average≥16 : ±(3% reading + 0.05 div) for ΔV						
Probe Attenuation Factor	1X, 10X, 100X, 1000X						
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)						
Sampling Rate / Relay Time Accuracy	±100ppm						
Interpolation	sin(x)/x						
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns); Average>16 : ±(1 interval time + 100ppm × reading + 0.4ns)						
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)						
Vertical Sensitivity	2mV/div - 10V/div						

Model	SDS6062	SDS7072	SDS7102	SDS8102	SDS8202	SDS8302	SDS9302
Trigger Type	Edge, Pulse, Video, Slope, Alternate						
Trigger Mode	Auto, Normal, Single						
Trigger Level	±6 divisions from screen center						
Acquisition mode	Sample, Peak Detect, and Average						
Line / Field Frequency (video)	NTSC, PAL and SECAM standard						
Cursor Measurement	ΔV, and ΔT between cursors						
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Peak rms, Cursor rms, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty, Duty cycle						
Waveform Math	+, -, ×, ÷, invert, FFT						
Waveform Storage	15 waveforms						
Lissajous Figure	Bandwidth						
	Phase Difference						
Communication Interface	USB host, USB device, Pass / Fail, LAN, VGA (optional), or RS232 (optional)						
Frequency Counter	available						
Power Supply	100V - 240V AC, 50/60Hz, CAT II						
Power Consumption	< 24W						
Fuse	2A, T class, 250V						
Battery (optional)	7.4V, 8000mA						
Dimension (W × H × D)	340 × 155 × 70 (mm)						
Weight (without package)	1.80 kg						

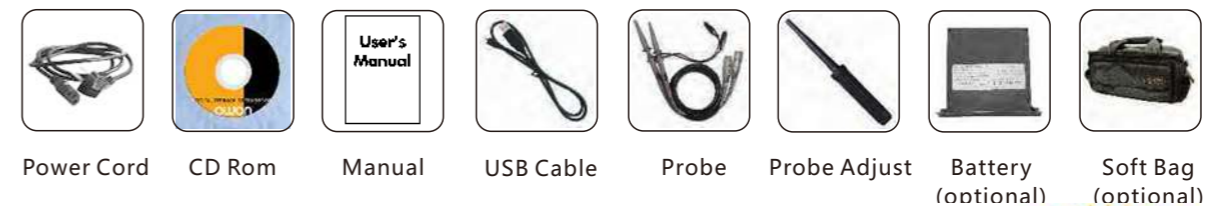
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+ Application

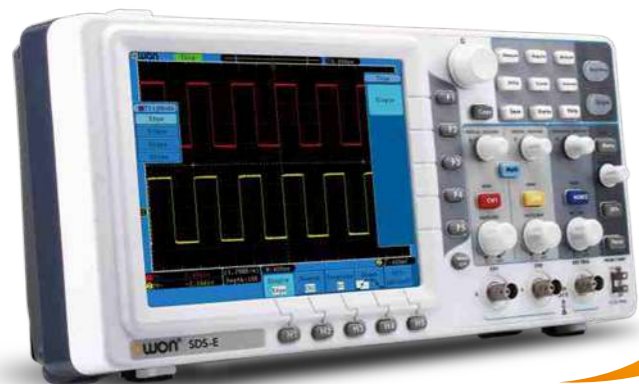
- electronic circuit debugging
- education and training
- circuit testing
- design and manufacture
- automobile maintenance and testing

+ Accessories

The accessories subject to final delivery.



SDS-E Series 2nd generation economical type digital storage oscilloscope



- + Bandwidth : 30MHz - 125MHz
- + Sample rate : 250MS/s - 1GS/s
- + 100K record length
(10M optional, excluding SDS5032E)
- + Ultra-thin body
- + 8 inch high def TFT display
- + Pass / Fail function
- + Add / Remove measure function,
and user-defined measurement menu



+ Performance Specifications

Model	SDS5032E	SDS6062E	SDS7072E	SDS7102E	SDS7122E
Bandwidth	30MHz	60MHz	70MHz	100MHz	125MHz
Sample Rate (real time)	250MS/s	500MS/s	1GS/s		
Horizontal Scale (s/div)	4ns/div - 100s/div, step by 1 - 2 - 4	5ns/div - 100s/div, step by 1 - 2 - 5	2ns/div - 100s/div, step by 1 - 2 - 5		
Rise Time (at input, typical)	≤11ns	≤5.8ns	≤5ns	≤3.5ns	≤2.8ns
Channel	2 + 1 (external)				
Display	8" color LCD, TFT display, 800 × 600 pixels, 65535 colors				
Input Impedance	1MΩ ± 2%, in parallel with 10pF ± 5pF		1MΩ ± 2%, in parallel with 15pF ± 3pF		
Channel Isolation	50Hz : 100 : 1, 10MHz : 40 : 1				
Max Input Voltage	400V (PK - PK) (DC+AC, PK - PK)				
DC Gain Accuracy	±3%				
Record Length	10K, 100K (optional 10M)				
DC Accuracy (average)	Average≥16 : ±(3% reading + 0.05 div) for ΔV				
Probe Attenuation Factor	1X, 10X, 100X, 1000X				
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)				
Sample Rate / Relay Time Accuracy	±100ppm				
Interpolation	sin(x)/x				
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns), Average>16 : ±(1 interval time + 100ppm × reading + 0.4ns)				
Input Coupling	DC, AC , and GND				
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)				
Vertical Sensitivity	5mV/div - 10V/div (at input)		2mV/div - 10V/div (at input)		

Model	SDS5032E	SDS6062E	SDS7072E	SDS7102E	SDS7122E
Trigger Type	Edge, Pulse, Video, Slope	Edge, Pulse, Video, Slope, Alternate			
Trigger Mode	Auto, Normal, Single				
Trigger Level	±6 divisions from screen center				
Line / Field Frequency (video)	NTSC, PAL, and SECAM standard				
Cursor Measurement	ΔV, and ΔT between cursors				
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty				
Waveform Math	+, -, ×, ÷, invert, FFT				
Waveform Storage	15 waveforms				
Lissajous Figure	Bandwidth	full bandwidth			
	Phase Difference	±3 degrees			
Communication Interface	USB host, USB device, Pass / Fail, LAN, VGA (optional)				
Frequency Counter	available				
Power Supply	100V - 240V AC, 50/60Hz, CAT II				
Power Consumption	<18W				
Fuse	2A, T class, 250V				
Battery	not supported				
Dimension (W×H×D)	348 × 170 × 78 (mm)				
Weight (without package)	1.50 kg				

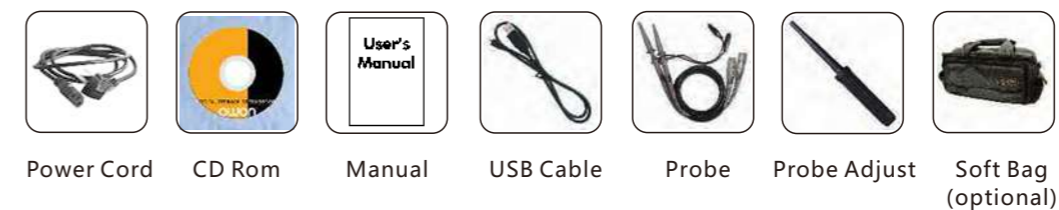
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+ Application

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

+ Accessories

The accessories subject to final delivery.



MSO Series Mixed LA - Oscilloscope



- + 2 in 1 (DSO + LA)
- + 8 inch color LCD
- + USB data transmission supported
- + 20 group automatic measurement options

Digital Storage Oscilloscope

- + Bandwidth : 60MHz - 200MHz
- + Sample rate : up to 2GS/s
- + Auto-scale function
- + FFT

Logic Analyzer

- + Bandwidth : 100MHz - 200MHz
- + Sample rate : max 1GS/s
- + 16 input channels

[Digital Storage Oscilloscope] Performance Specifications

Model	MSO7062TD	MSO7102TD	MSO8102T	MSO8202T
Bandwidth	60MHz	100MHz		200MHz
Sample Rate (real time)	1GS/s		2GS/s	
Rise Time	≤5.8ns	≤3.5ns		≤1.7ns
Display	8.0" color LCD , display, 640 × 480 pixels			
Channel	dual + external trigger			
Horizontal Scale (s/div)	2ns/div - 100s/div, step by 1 - 2 - 5		1ns/div - 100s/div, step by 1 - 2 - 5	
DC Accuracy (average)	average > 16 : ±(3% reading + 0.05div) for ΔV			
Vertical Sensitivity	2mV/div - 10V/div			
DC Gain Accuracy	±3%			
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)			
Interpolation	sin(x)/x			
Max Input Voltage	400V (DC + AC, PK - PK)			
Probe Attenuation Factor	1X , 10X , 100X , 1000X			
Trigger Mode	Edge, Video, Alternate, Pulse, Slope			
Acquisition Mode	Normal, Peak Detect, and Average			
Record Length	max 2M points			
Waveform Storage	4 waveforms			
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty			
Waveform Math	+, -, ×, ÷, invert, FFT			
Power Supply	100 - 240V AC, 50Hz / 60Hz, CAT II			

Model	MSO7062TD	MSO7102TD	MSO8102T	MSO8202T
Lissajous Figure	Bandwidth	60MHz	100MHz	200MHz
	Phase Difference	±3 degrees		
Communication Interface	USB host, and USB device			
Fuse	1A, T class, 250V			
Dimensions (W × H × D)	370 × 180 × 120 (mm)			
Weight (without package)	2.20 kg			

[Logic Analyzer] Performance Specifications

Model	MSO7062TD	MSO7102TD	MSO8102T	MSO8202T
Sample Rate (real time)	20S/s - 2GS/s			
Bandwidth	100MHz			200MHz
Channel	16			
Record Length	max 4M each channel			
Input Impedance	660KΩ ± 5%, in parallel with 15 ± 5pF			
Trigger Mode	Edge, Bus, State, Data Alignment, Data Width, Distributed Queue			
Trigger Position Setting	Pre-trigger, Mid-trigger, and Re-trigger			
Threshold Voltage	±6V (4 settings)			
Input Signal Range	±30V			
Data Search	available			
Data System	binary, decimal, hex			
Digital Filter	0, 1, 2 optional			
Setting Storage	10 settings			
USB Flash Disk Storage	available			

Specifications subject to change without prior notice.

+ Application

- design and debug
- education and training
- circuit function test
- mixed signal circuit test
- identified signals logic information

+ Accessories

The accessories subject to final delivery.



HDS-N Series Handheld Digital Storage Oscilloscope



- + 2 in 1 (DSO + Multimeter)
- + Auto-scale function
- + FFT function
- + 20 group automatic measurement options
- + Bandwidth : 20MHz - 100MHz
- + USB data transmission supported
- + Rechargeable Li-ion battery (6 hours' backup)
- + Waveform record and replay (equipped in HDS2062M-N, HDS3102M-N)
- + Multimeter newly supported SCPI

+ Performance Specifications

Model	HDS1022M-N	HDS2062M-N	HDS3102M-N
Bandwidth	20MHz	60MHz	100MHz
Sample Rate (real time)	100MS/s	500MS/s	1GS/s
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2.5 - 5		5ns/div - 100s/div, step by 1 - 2 - 5
Rise Time (at input, typical)	≤ 17.5ns	≤ 5.8ns	≤ 3.5ns
Display	3.7" inch color LCD, TFT display, 640 x 480 pixels, 65535 colors		
Channel	dual		
Input Impedance	1MΩ ± 2%, in parallel with 20pF ± 5pF	1MΩ ± 2%, in parallel with 15pF ± 5pF	
Record Length	max 6K points on each channel		
Interpolation	sin(x)/x		
Probe Attenuation Factor	1X, 10X, 100X, 1000X		
Input Coupling	DC, AC, and GND		
DC Accuracy (average)	average >16 : ±(5% reading + 0.05 div) for ΔV		
Vertical Sensitivity	5mV/div - 5V/div (at input)		
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)		
Max Input Voltage	400V (PK - PK) (DC + AC, PK - PK, 1MΩ input impedance, probe attenuation 10 : 1), CAT II		
Trigger Type	Edge, Video, Alternate		
Trigger Mode	Auto, Normal, Single		
Trigger Level	±6 divisions from screen center		
Acquisition Mode	Sample, Peak Detect, and Average		
DC Gain Accuracy	±3%		
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B _r , Delay A→B _f , +Width, -Width, +Duty, -Duty		

Model	HDS1022M-N	HDS2062M-N	HDS3102M-N
Waveform Math	+, -, ×, ÷, invert, FFT		
Waveform Storage	4 waveforms		
Lissajous Figure	Bandwidth	full bandwidth	
	Phase Difference	±3 degrees	
Communication Interface	USB		
Power Supply	100V-240V AC, 50/60Hz		
Li-ion Battery	7.4V, 6 hours' operation		
Dimensions (W × H × D)	115 × 180 × 40 (mm)		
Weight (without package)	645 g		

+ Multimeter Specifications

Full Scale Reading	3 ³ / ₄ digits (max 4000 count)	Diode	0V - 1.5V
Input Impedance	10 MΩ	On / Off Test	<50 (± 30) beeping
Voltage	VDC : 400mV, 4V, 40V, 400V, 1000V : ±(1% ± 1 digit); max input : DC 1000V VAC : 4V, 40V, 400V : ±(1% ± 3 digits), 750V : ±(2% ± 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), 20A : ±(5% ± 3 digits)		
Impedance	400Ω : ±(1% ± 3 digits), 40KΩ - 4MΩ : ±(1% ± 1 digit), 40MΩ : ±(1.5% ± 3 digits)		
Capacitance	51.2nF - 100uF : ±(3% ± 3 digits)		

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.



HDS Series Handheld Digital Storage Oscilloscope



- + 2 in 1 (DSO + Multimeter)
- + Auto-scale function
- + 20 automatic measurements
- + Bandwidth : 20MHz - 60MHz
- + USB data transmission supported
- + Rechargeable Li-ion battery (6 hours' backup)



+ Performance Specifications

Model	HDS1021M	HDS1022M	HDS2062M
Bandwidth	20MHz	20MHz	60MHz
Sample Rate (real time)	100MS/s	100MS/s	250MS/s
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2.5 - 5		5ns/div - 100s/div, step by 1 - 2 - 5
Rise Time (at input, typical)	≤17.5ns		≤5.8ns
Display	3.5" color LCD, 320 x 240 pixels		3.7" color LCD, 640 x 480 pixels
Channel	single		dual
Input Impedance	1MΩ ± 2%, in parallel with 18pF ± 5pF		1MΩ ± 2%, in parallel with 20pF ± 5pF
Record Length	max 6K points on each channel		
Interpolation	sin(x)/x		
Probe Attenuation Factor	1X, 10X, 100X, 1000X		
Input Coupling	DC, AC, and GND		
DC Accuracy (average)	average > 16 : ± (3% reading + 0.05div) for ΔV		average > 16 : ± (5% reading + 0.05div) for ΔV
Vertical Sensitivity	5mV/div - 5V/div (at input)		
Vertical Resolution (A/D)	8 bits		
Max Input Voltage	400V (PK - PK) (DC + AC, PK - PK, 1MΩ input impedance, probe attenuation 10 : 1), CAT II		
Trigger Type	Edge, Video		
Trigger Mode	Auto, Normal, Single		
Trigger Level	± 6 divisions from screen center		
Acquisition Mode	Sample, Peak Detect, and Average		
DC Gain Accuracy	± 3%		± 5%

Model	HDS1021M	HDS1022M	HDS2062M
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty		
Waveform Math	/	+, -, ×, ÷, invert	
Waveform Storage	4 waveforms		
Lissajous Figure	Bandwidth	/	full bandwidth
	Phase Difference	/	±3 degrees
Communication Interface	USB		
Power Supply	100V - 240V AC, 50/60Hz		
Li-ion Battery	7.4V, 6 hours' operation		
Dimensions (W × H × D)	115 × 180 × 40 (mm)		
Weight (without package)	645 g		

+ Multimeter Specifications

Full Scale Reading	3 3/4 digits (max 4000 count)	Diode	0V - 1.5V
Input Impedance	10 MΩ	On / Off Test	<50 (± 30) beeping
Voltage	VDC : 400mV, 4V, 40V, 400V, 1000V : ±(1% ± 1 digit); max input : DC 1000V VAC : 4V, 40V, 400V : ±(1% ± 3 digits), 750V : ±(2% ± 3 digits); Frequency : 40Hz - 400Hz; max input : AC 400V (virtual value)		
Current	DC : 40mA, 400mA : ±(1.5% ± 1 digit), 20A : ±(3% ± 3 digits) AC : 40mA : ±(1.5% ± 3 digits), 400mA : ±(2% ± 1 digit), 20A : ±(5% ± 3 digits)		
Impedance	400Ω : ±(1% ± 3 digits), 40KΩ - 4MΩ : ±(1% ± 1 digit), 40MΩ : ±(1.5% ± 3 digits)		
Capacitance	51.2nF - 100uF : ±(3% ± 3 digits)		

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.




Oscilloscope Probe Specification


Certificates




Model No	P6060	P6100	P6200
Attenuation Ratio	1X or 10X	1X or 10X	1X or 10X
Bandwidth	1X : DC-6MHz 10X : DC-60MHz	1X : DC-6MHz 10X : DC-100MHz	1X : DC-6MHz 10X : DC-200MHz
Input R	1MΩ/10MΩ	1MΩ/10MΩ	1MΩ/10MΩ
Input C	1X : 85pF - 120pF 10X : 18.5pF - 22.5pF	1X : 85pF - 120pF 10X : 18.5pF - 22.5pF	1X : 85pF - 120pF 10X : 18.5pF - 22.5pF
Max Input Voltage	1X : <300VDC + AC Vpp 10X : <600VDC + AC Vpp	1X : <300VDC + AC Vpp 10X : <600VDC + AC Vpp	1X : <300VDC + AC Vpp 10X : <600VDC + AC Vpp



Model No	P4060	P4100	P4200	P4250
Attenuation Ratio	100X	100X	100X	100X
Bandwidth	10X : DC-60MHz	10X : DC-100MHz	10X : DC-200MHz	10X : DC-250MHz
Input R	100MΩ	100MΩ	100MΩ	100MΩ
Input C	100X : 18.5pF - 22.5pF	100X : 18.5pF - 22.5pF	100X : 18.5pF - 22.5pF	100X : 18.5pF - 22.5pF
Max Input Voltage	2KV DC + AC Vpp	2KV DC + AC Vpp	2KV DC + AC Vpp	2KV DC + AC Vpp



Model No	P5101	P5102	P5104
Attenuation Ratio	1000X	1000X	1000X
Bandwidth	1000X : DC-20MHz	1000X : DC-20MHz	1000X : DC-20MHz
Input R	100MΩ	100MΩ	100MΩ
Input C	10X : 0.5pF - 1.5pF	10X : 0.5pF - 1.5pF	10X : 0.5pF - 1.5pF
Max Input Voltage	10KV DC + AC Vpp	20KV DC + AC Vpp	40KV DC + AC Vpp



Model No	P2300	P2500
Attenuation Ratio	100X	100X
Bandwidth	100X : DC-300MHz	100X : DC-500MHz
Input R	100MΩ	100MΩ
Input C	100X : 10pF - 20pF	100X : 10pF - 20pF
Max Input Voltage	5KV DC + AC Vpp	5KV DC + AC Vpp



MSO CE



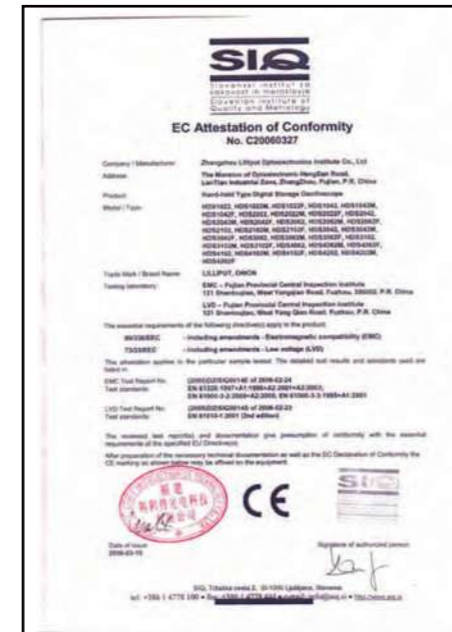
HDS-N CE



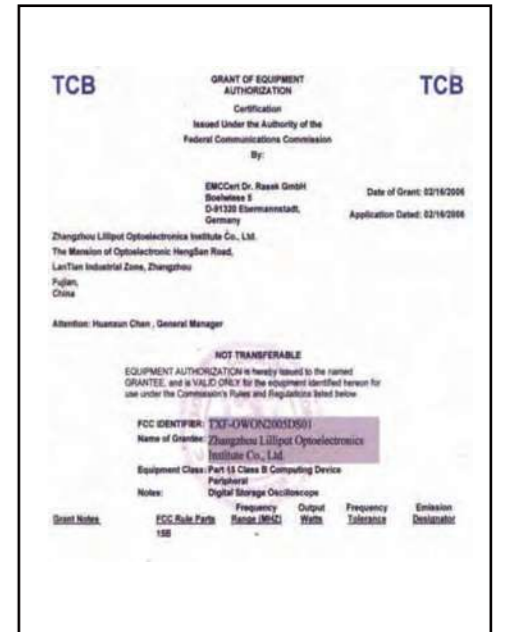
SDS CE



ISO9001



HDS CE



FCC