

Product Catalogue

- + **Spectrum Analyzers**
- + **Digital Storage Oscilloscopes**
- + **Arbitrary Waveform Generators**
- + **Programmable DC Power Supplies**
- + **Electronic Load**
- + **Digital Multimeter**



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About **OWON**[®]

Since 1990, Lilliput steps into the electronics product industry, its 1st product series is a mini color LCD.

Owned by Lilliput, OWON's product line was created to "Meet your best need" in the test and measurement equipment field.

Through 2 decades' of efforts, Lilliput gradually grew to be a group corporation, covering 3 product lines mini color LCD, test and measurement equipment, and home energy management system.

OWON's products can be found in Asia, North America, Europe, South America, Oceania, and Africa, with global partners established in more than 80 countries/regions.

Lilliput (OWON) spares no efforts to be one of top test and measurement equipment original equipment manufacturers in the world.



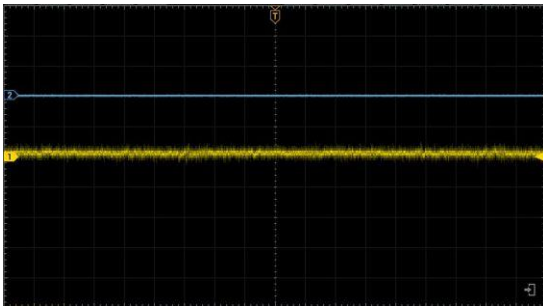
ADS3000(A) Multi-function Digital Storage Oscilloscope

- + Integrates oscilloscope, dual-channel 50MHzAFG (optional), Frequency counter, voltmeter,FFT spectrum analyzer, and protocol analyzer.
- + 100MHz-500MHz bandwidth, 2.5GS/s real-time sampling rate.
- + 100M Record Length, up to 500,000wfms/s waveform refresh rate.
- + 1M-point FFT analysis ensures accurate frequency component display.
- + Vertical accuracy is 500uV/div-10 V/div, time base range is 500ps/div-1000s/div
- + Multi triggering: edge, video, pulse width, slope, under-amplitude, over-amplitude, timeout, Nth edge, logic and RS232/UART,I2C, SPI, CAN, LIN; 2-channel hardware decoding: UART, I2C, SPI, CAN, LIN.
- + Comprehensive Features Waveform Cloning and Bode Plot Functions. (AFG models)
- + Up to 43 auto measurements, math operations, built-in enhanced FFT, and peak search. Enhanced FFT and ZOOM features provide clearer waveform display and cursor information
- + Built-in microphone and speaker, with support for external devices like mouse and keyboard, greatly enhancing efficiency.
- + Enhanced file management for easier viewing, editing, and exporting.
- + Equipped with USB device*1, USB Host*3, Trig Out(P/F), LAN, supporting Web Control and SCPI command tools.
- + Optional wireless module (Wi-Fi/Bluetooth) supports FTP, network printers, mobile hotspots.
- + 10.1-inch touchscreen with multi-touch support for an enhanced interactive experience.



Low noise, high sensitivity, and accurate small signal measurements.

Standard vertical resolution from 500 μ V/div to 10V/div.



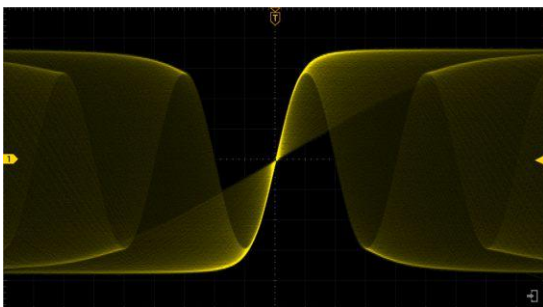
Deep storage balances overall view and details.

The new standard 100Mpts storage depth allows you to capture longer signal durations and zoom in on details, balancing overall view and details.



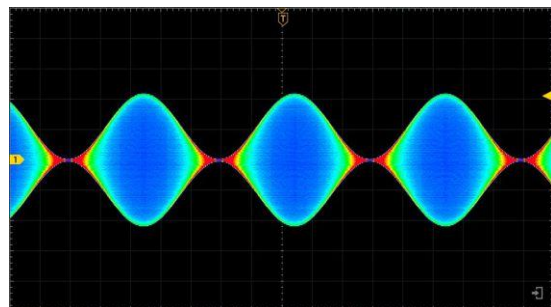
Capture anomalies and grasp every detail.

In high-speed mode, the oscilloscope's waveform refresh rate reaches up to 500,000wfms/s, ensuring clear capture of signal changes.



256 levels of grayscale display, color afterglow leaves long traces

Assists in observing the signal trends over time, especially when monitoring fast changes or transient phenomena.



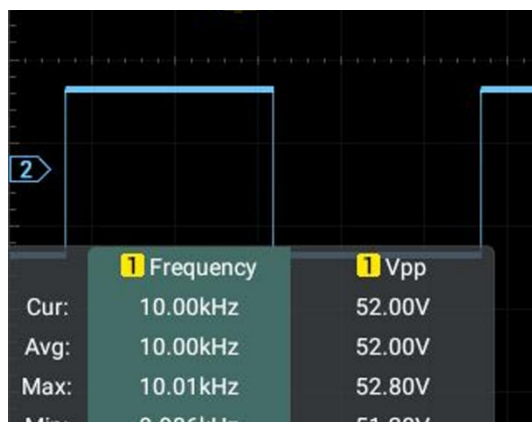
Multi triggering and hardware decoding

Supports edge trigger, video trigger, pulse width trigger, slope trigger, runt trigger, over amplitude trigger, timeout trigger, nth edge trigger, logic trigger, RS232/UART trigger, I2C trigger, SPI trigger, CAN trigger, and LIN trigger. Dual-channel hardware decoding includes UART, I2C, SPI, CAN, and LIN.



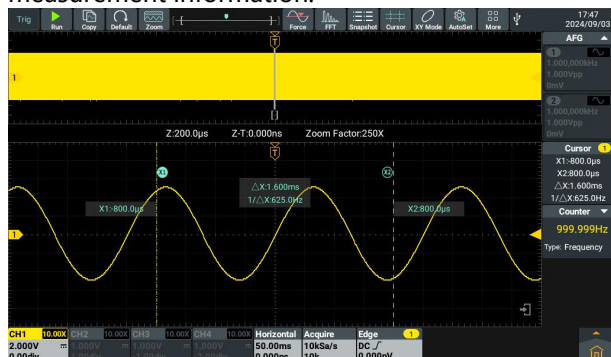
Measurement parameter statistics function

Supports measurement indicators, cursor gating, and more detailed measurement prompts.



Enhanced Cursor Measurement

Supports both FFT, XY mode and ZOOM windows, providing more intuitive waveform area cursor measurement information.



Multi multimedia and hardware expansion options

Built-in microphone and speakers; supports external devices like mouse and keyboard for better interaction. Optional USB (WiFi+Bluetooth) module supports FTP, network printers, and mobile hotspots.



Convenient for secondary development

The instrument supports Web Control for remote control and SCPI command send/receive tool.



Multi interface design

Standard USB device*1, USB Host*3, Trig Out (P/F), LAN, and other communication interfaces. Supports Type-C power supply and floating measurements, suitable for outdoor and variable applications.



* Need to support 12V handshake protocol, power meets 36W.

Model	ADS3102A	ADS3202A	ADS3352A	ADS3502A
Bandwidth (-3 dB)	100MHz	200MHz	350MHz	500MHz
Channel	2+EXT			
Sample Rate	2.5GSa/s (single channel) 1.25GSa/s (dual channel)			

Model	ADS3104A	ADS3204A	ADS3354A	ADS3504A
Bandwidth (-3 dB)	100MHz	200MHz	350MHz	500MHz
Channel	4+EXT			
Sample Rate	2.5GSa/s (single channel) 1.25GSa/s (dual channel) 1.25GSa/s (full channel)			

Acquire mode	Sample, Peak, High Res, Average	Record Length	100M
Waveform Refresh Rate	Max 500,000wfms/s	Vertical Resolution	12bits
Scanning speed (S/div)	500 μ V/div ~ 10 V/div	Relay time accuracy	± 1 ppm(typical)
Sampling rate range	500ps/div - 1000s/div, set by 1-2-5	DC Gain Accuracy	3%(≤ 1 mV) ; 2%(2mV); 1.5%(≥ 5 mV)
Input Impedance	1M Ω $\pm$ 2%, parallel with 15pF $\pm$ 5pF, 50 Ω $\pm$ 2%		
Probe attenuation coefficient	1 μ X-1MX, step by 1-2-5, support custom		
Trigger type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth, Logic, RS232/UART, I2C, SPI CAN, LIN		
Bus Decoding (optional)	UART, I2C, SPI, CAN, LIN		
Auto measurement	Period, Frequency, +Width, -Width, Rise Time, Fall Time, Scr Duty, +Duty,-Duty, Vavg, Vpp, VRMS, Overshoot, Vmax, Vmin, Vtop, CycRms, Vbase, Vamp, Preshoot, Std Dev, +Pulse Cnt, -Pulse Cnt, Rise Cnt, Fall Cnt, Area, Cyc Area, Delay($\overline{\text{F}}$ - $\overline{\text{H}}$), Delay($\overline{\text{H}}$ - $\overline{\text{F}}$), Phase($\overline{\text{F}}$ - $\overline{\text{H}}$), Phase($\overline{\text{H}}$ - $\overline{\text{F}}$), FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF		
Waveform Math	+, -, *, /, Intg, Diff, Sqrt, Function operation (Lg / Ln / Exp / Abs / Sine / Cosine / Tan), FFT, FFT rms, User Defined, digital filter (low pass, high pass, band pass, band reject)		
Frequency counter	6-digit frequency counter, Maximum frequency: maximum analog bandwidth of oscilloscope		
Voltmeter	Support DC, AC+DCrms, ACrms, Resolution: 4 digits (ACV/DCV)		

Arb Waveform Generator (optional) Specification

Max frequency output	50MHz (Dual)
Sample rate	160MSa/s
Vertical resolution	14 bits
Standard waveform	Sine, Square, Ramp, Pulse, Noise
Arbitrary waveform	Exponential Rise/Fall, Sin(x)/x, Step Wave, and others total 28 built-in waveform
Arbitrary waveform	1 μ Hz - 10 MHz
Arbitrary waveform length	2-16K points
Amplitude	2mVpp - 10Vpp (high impedance), 1mVpp - 5Vpp (50 Ω)
Modulation	AM, FM, PM, FSK, Sweep and Burst

Other

Communication Interface	HDMI, USB device x 1, USB Host x 3, Trig Out(P/F), Type-C power supply*, LAN
Display	10.1 inch (1024 $\times$ 600), LCD
Power	100V – 240 VACRMS, 50/60 Hz, CAT II
Dimension (W x H x D)	325mm x 209mm x 111.5mm
Device Weight	$\approx$ 3.2kg

*The external power bank must meet 12V/4A output.

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Probe



USB Cable



Quick Guide

Model	ADS3102	ADS3202	ADS3352	ADS3502
Bandwidth (-3 dB)	100MHz	200MHz	350MHz	500MHz
Channel	2+EXT			
Sample Rate	2.5GSa/s (single channel) 1.25GSa/s (dual channel)			

Model	ADS3104	ADS3204	ADS3354	ADS3504
Bandwidth (-3 dB)	100MHz	200MHz	350MHz	500MHz
Channel	4+EXT			
Sample Rate	2.5GSa/s (single channel) 1.25GSa/s (dual channel) 1.25GSa/s (full channel)			

Acquire mode	Sample, Peak, High Res, Average	Record Length	100M
Waveform Refresh Rate	Max 500,000wfms/s	Vertical Resolution	8bits
Scanning speed (S/div)	500μV/div ~ 10 V/div	Relay time accuracy	±1 ppm (typical)
Sampling rate range	500ps/div - 1000s/div, set by 1-2-5	DC Gain Accuracy	4%(≤1mV); 3%(≥2mV)
Input Impedance	1MΩ ± 2%, parallel with 15pF ± 5pF, 50Ω ± 2%		
Probe attenuation coefficient	1μX-1MX, step by 1-2-5, support custom		
Trigger type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth, Logic, RS232/UART, I2C, SPI CAN, LIN		
Bus Decoding (optional)	UART, I2C, SPI, CAN, LIN		
Auto measurement	Period, Frequency, +Width, -Width, Rise Time, Fall Time, Scr Duty, +Duty,-Duty, Vavg, Vpp, VRMS, Overshoot, Vmax, Vmin, Vtop, CycRms, Vbase, Vamp, Preshoot, Std Dev, +Pulse Cnt, -Pulse Cnt, Rise Cnt, Fall Cnt, Area, Cyc Area, Delay(T_{fall} - T_{rise}), Delay(T_{high} - T_{low}), Phase(ϕ_{high} - ϕ_{low}), Phase(ϕ_{fall} - ϕ_{rise}), FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF		
Waveform Math	+, -, *, /, Intg, Diff, Sqrt, Function operation (Lg / Ln / Exp / Abs / Sine / Cosine / Tan), FFT, FFT rms, User Defined, digital filter (low pass, high pass, band pass, band reject)		
Frequency counter	7-digit frequency counter, Maximum frequency: maximum analog bandwidth of oscilloscope		
Voltmeter	Support DC, AC+DCrms, ACrms, Resolution: 4 digits (ACV/DCV)		

Arb Waveform Generator (optional) Specification

Max frequency output	50MHz (Dual)
Sample rate	160MSa/s
Vertical resolution	14 bits
Standard waveform	Sine, Square, Ramp, Pulse, Noise
Arbitrary waveform	Exponential Rise/Fall, Sin(x)/x, Step Wave, and others total 28 built-in waveform
Arbitrary waveform	1μHz - 10 MHz
Arbitrary waveform length	2-16K points
Amplitude	2mVpp - 10Vpp (high impedance), 1mVpp - 5Vpp (50 Ω)
Modulation	AM, FM, PM, FSK, Sweep and Burst

Other

Communication Interface	HDMI, USB device x 1, USB Host x 3, Trig Out(P/F), Type-C power supply*, LAN
Display	10.1 inch (1024×600), LCD
Power	100V – 240 VACRMS, 50/60 Hz, CAT II
Dimension (W x H x D)	325mm x 209mm x 111.5mm
Device Weight	≈3.2kg

*The external power bank must meet 12V/4A output.

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



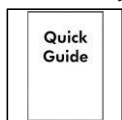
Power Cord



Probe



USB Cable



Quick Guide

ADS900A/800A 12bits Multi-function Digital Oscilloscope

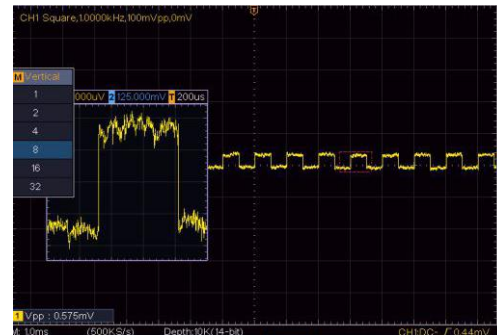
- + Integrated with oscilloscope, 30MHz AFG(optional), logic analyzer(optional), frequency counter, voltmeter, and FFT spectrum analyzer.
- + 70 - 250MHz bandwidth, Max 2GSa/S real-time sampling rate.
- + 100M storage depth, up to 700,000wfms/s waveform refresh rate.
- + 1M-point FFT analysis ensures accurate frequency component display.
- + Vertical accuracy is 200uV/div-10V/div.
- + Multi triggering: edge, video, pulse width, slope, under-amplitude, over-amplitude, timeout, Nth edge, logic and RS232/UART,I2C, SPI, CAN,LIN; 2-channel hardware decoding: UART, I2C, SPI, CAN, LIN.
- + Full memory hardware measurement function, math operations, built-in enhanced FFT, and peak search.
- + Bode plot functions (AFG models).
- + Supports external devices like mice and keyboards.
- + Equipped with HDMI, USB device, USB Host, Trig Out(P/F), LAN, supporting Web Control and SCPI command tools.
- + Screen video recording for easy documentation and sharing.
- + Optional wireless module (Wi-Fi/ Bluetooth) supports FTP, network printers, mobile hotspots.
- + Ultra-thin design, saving valuable workspace.
- + 7-inch touchscreen with multi-touch support for an enhanced interactive experience.



12-bit high-precision hardware oscilloscope

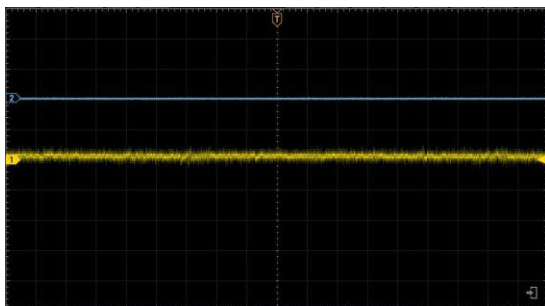
The ADS900A series provides 16 times the accuracy of regular oscilloscopes and includes a zoom feature* to magnify signal details in real-time for anomaly analysis.

*ADS800A without the zoom feature.



Low noise, high sensitivity, and accurate small signal measurements.

Standard vertical resolution from 200uV/div to 10V/div.



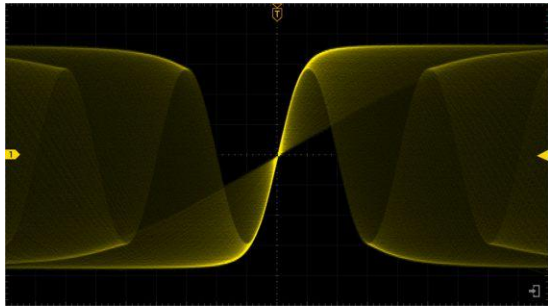
Deep storage balances overall view and details.

The new standard 100Mpts storage depth allows you to capture longer signal durations and zoom in on details, balancing overall view and details.



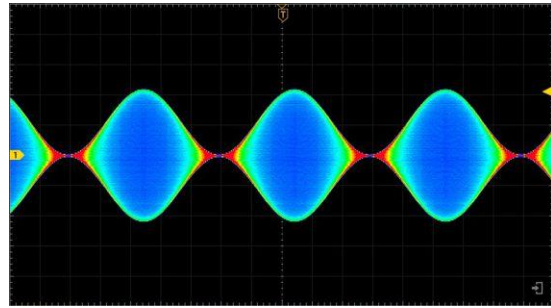
Capture anomalies and grasp every detail.

In high-speed mode, the oscilloscope's waveform refresh rate reaches up to 700,000wfms/s, ensuring clear capture of signal changes.



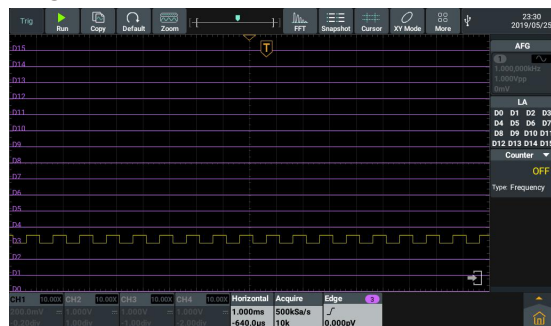
256 levels of grayscale display, color afterglow leaves long traces

Assists in observing the signal trends over time, especially when monitoring fast changes or transient phenomena.



Logic Analyzer (optional)

- + 16 digital channels, with a maximum sampling rate of 625MSa/s.
- + Storage depth of 25Mpts.
- + Supports mixed triggering and decoding of analog and digital channels.



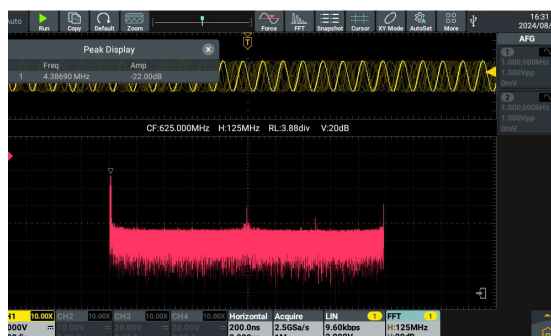
Frequency Characteristic Curve (optional waveform generator)

By controlling the built-in signal generation module, a sweep signal within a specified range is generated and output to the power supply circuit for loop analysis testing. The resulting Bode plot shows system gain and phase shifts at different frequencies. This Bode plot function intuitively provides data comparison, helping engineers quickly assess system stability by analyzing phase margin and gain margin.



Spectrum Analyzer

- + Standard Enhanced FFT with real-time waveform data processing up to 1Mpts.
- + Maximum frequency range: Oscilloscope analog bandwidth.
- + Supports independent FFT afterglow display.
- + Supports peak search function.
- + Supports ZOOM window in FFT mode for clearer cursor information display.



Waveform Generator (optional)

- + Up to 30MHz output frequency.
- + 160MSa/s sampling rate.
- + 8K arbitrary waveform length.
- + Supports arbitrary waveform editing and modulation signal output.
- + 2mVpp to 10Vpp output amplitude range.



Model	ADS802A	ADS812A	ADS822A	ADS804A	ADS814A	ADS824A
Bandwidth (-3 dB)	70MHz	100MHz	200MHz	70MHz	100MHz	200MHz
Channel	2			4		
Max. sample rate	1.25GSa/s(single-channel), 625MSa/s (dual-channel & full-channel)					
Acquire mode	Sample, Peak, High Res, Average, Segmentation			Max memory depth	40M	
Waveform capture rate	Max. 450,000wfms/s			Vertical resolution	12bits	
Vertical Sensitivity Range	500μV/div ~ 10 V/div			Relay time accuracy	±25 ppm (typical)	
Sampling rate range	1ns/div - 1000s/div, step by 1-2-5			DC Gain Accuracy	3% (≤1mV), 2% (≥2mV)	
Input Impedance	1MΩ±2%, parallel with20pF±5pF					
Probe Attenuation	1.00μX-1M.00X, step by 1-2-5, support custom					
Trigger type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth, Logic, RS232/UART, I2C, SPI CAN, LIN					
Bus decoding	RS232/UART, I2C, SPI, CAN, LIN					
Auto measurement	Period, Frequency, +Width, -Width, Rise Time, Fall Time, Scr Duty, +Duty,-Duty, Vavg, Vpp, VRMS, Overshoot, Vmax, Vmin, Vtop, CycRms, Vbase, Vamp, Preshoot, Std Dev, +Pulse Cnt, -Pulse Cnt, Rise Cnt, Fall Cnt, Area, Cyc Area, Delay(A↑-B↑), Delay(A↑-B↓), Delay(A↓-B↑), Delay(A↓-B↓), Phase(A↑-B↑), Phase(A↑-B↓), Phase(A↓-B↑), Phase(A↓-B↓),FRR(A↑-B↑), FRF(A↑-B↓), FFR(A↓-B↑), FFF(A↓-B↓), LRR(A↑-B↑), LRF(A↑-B↓), LFR(A↓-B↑),LFF(A↓-B↓)					
Waveform Math	+, -, *, /, &&, , ^, ! , Intg, Diff, Sqrt, Function operation (Lg / Ln / Exp / Abs / Sine / Cosine / Tan), FFT, FFT rms, User Defined, digital filter (low pass, high pass, band pass, band reject)					
Frequency counter	6-digit frequency counter; Maximum frequency: maximum analog bandwidth of oscilloscope					
Voltmeter	Support DC, AC+DCrms, ACrms, Resolution: 4 digits (ACV/DCV)					
Other						
Communication Interface	HDMI, USB device, USB Host, Trig Out(P/F), LAN					
Display	7 inch(1024×600), capacitive multi-touch screen					
Power supply interface	Type-C*					
Dimension (W x H x D)	260mm x 160mm x 78mm					
Device Weigh	≈1.5kg					

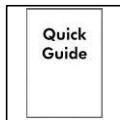
*The external power bank must meet 12V/4A output

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Probe



Power Adapter

Model	ADS912A	ADS922A	ADS914A	ADS924A
Bandwidth (-3 dB)	125MHz	250MHz	125MHz	250MHz
Channel	2		4	
Max. sample rate	2GSa/s (single-channel), 1GSa/s (dual-channel), 500MSa/s (full-channel)			
Acquire mode	Sample, Peak, High Res, Average, Segmentation		Max memory depth	100M
Waveform capture rate	Max. 700,000wfms/s		Vertical resolution	12bits
Vertical Sensitivity Range	200μV/div ~ 10 V/div		Relay time accuracy	±25 ppm (typical)
Sampling rate range	1ns/div - 1000s/div,step by 1-2-5		DC Gain Accuracy	3% (≤1mV), 2% (≥2mV)
Input Impedance	1MΩ±2%, parallel with20pF±5pF			
Probe Attenuation	1.00μX-1M.00X,step by 1-2-5, support custom			
Trigger type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth, Logic, RS232/UART, I2C, SPI CAN, LIN			
Bus decoding	RS232/UART, I2C, SPI, CAN, LIN			
Auto measurement	Period, Frequency, +Width, -Width, Rise Time, Fall Time, Scr Duty, +Duty,-Duty, Vavg, Vpp, VRMS, Overshoot, Vmax, Vmin, Vtop, CycRms, Vbase, Vamp, Preshoot, Std Dev, +Pulse Cnt, -Pulse Cnt, Rise Cnt, Fall Cnt, Area, Cyc Area, Delay(A↑-B↑), Delay(A↑-B↓), Delay(A↓-B↑), Delay(A↓-B↓), Phase(A↑-B↑), Phase(A↑-B↓), Phase(A↓-B↑), Phase(A↓-B↓),FRR(A↑-B↑), FRF(A↑-B↓), FFR(A↓-B↑), FFF(A↓-B↓), LRR(A↑-B↑), LRF(A↑-B↓), LFR(A↓-B↑),LFF(A↓-B↓)			
Waveform Math	+, -, *, /, &&, , ^, ! , Intg, Diff, Sqrt, Function operation (Lg / Ln / Exp / Abs / Sine / Cosine / Tan), FFT, FFT rms, User Defined, digital filter (low pass, high pass, band pass, band reject)			
Frequency counter	6-digit frequency counter; Maximum frequency: maximum analog bandwidth of oscilloscope			
Voltmeter	Support DC, AC+DCrms, ACrms, Resolution: 4 digits (ACV/DCV)			
Arb Waveform Generator (optional)Specification				
Max frequency output	30MHz single	Sample rate	160MSa/s	
Standard waveform	Sine, Square, Ramp, Pulse, Noise			
Arbitrary waveform	28 built-in waveform			
Vertical resolution	14 bits	Arb waveform	1μHz ~ 10MHz	
Arb waveform length	2-8K points	Amplitude	2mVpp ~ 10Vpp , 1mVpp ~ 5Vpp (50 Ω)	
Impedance	50Ω (type)	Modulation	AM, FM, PM, FSK	
Logical analyzer(optional)Specification				
Number of channels	16 input channels (D0-D15) (D0 to D7, D8 to D15)			
Threshold Range	±20.0 V, 10mV step	Max. input voltage	±40V peak CAT I, transient over voltage 800Vpk	
Minimum voltage swing	500mVpp	Input Impedance	100kΩ, 8pF	
Max. Input dynamic range	±30 V+ threshold	Vertical resolution	1 bit	
Other				
Communication Interface	HDMI,USB device,USB Host,Trig Out(P/F),LAN			
Display	7 inch(1024×600), capacitive multi-touch screen			
Power supply interface	Type-C*			
Dimension (W x H x D)	260mm x 160mm x 78mm			
Weight	≈1.5kg (package excluded)			

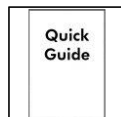
*The external power bank must meet 12V/4A output

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Probe



Power Adapter



Q9 Cable (optional)

FDS Android Multi-function Tester

Multifunctional Hardware All-in-One

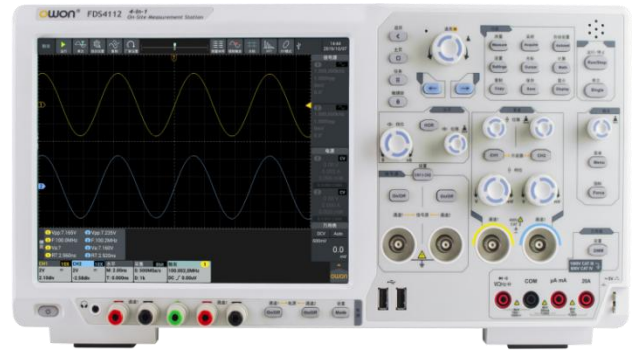
DSO: 100MHz-300MHz bandwidth, up to 2.5GS/s sample rate.

DMM: 4 1/2 digits automatic multimeter, supporting voltage, current, resistance, capacitance, duty cycle, diode.

AWG: 50MHz dual-channel arbitrary waveform generator, supporting modulation functions.

Power Supply: 15V/3A, 15W constant power dual-channel output, supports series and parallel connections, can be combined for 30W output.

Interfaces: USB Host x 4, USB 2.0 Device, LAN, HDMI, Audio, external trigger input, auxiliary output (TRIG OUT, PASS/FAIL).



Excellent performance, convenient testing

- + Supports edge, slope, pulse width, window, undershoot, interval, timeout, pattern, nth edge, video triggering and other serial bus trigger functions
- + Supports Bode plot (FAR) testing
- + Supports waveform cloning function, completely restores test signals
- + Supports digital filtering
- + Waveform calculation supports custom functions

Android-based, a new experience, more possibilities

- + Supports external monitors, mouse, and keyboard for easy completion of complex editing operations.
- + Configurable with camera, microphone, speaker, headphone jack multimedia devices.
- + Built-in Web server supports users to control instruments via web pages.
- + Quickly save instrument interface images and test process videos for viewing.
- + Perform document editing and Python secondary development.
- + 10.4-inch multi-touch LCD screen, new UI design, new touch experience.

Android based design, more application scheme

Supports external HDMI display, mouse and keyboard, In the teaching application, students can search the data via the instrument' s wireless internet. The instrument also supports variety of standard teaching documents and videos playing. Supports equipment expansion, such as camera, microphone, speaker and other multimedia equipment, convenient for cross-regional remote experimental guidance.



14bits ADC high resolution oscilloscope, meet higher precision of test demand

(only for FDS1102A)

The measuring accuracy is 16 times, 64 times of the ordinary oscilloscope. better presentation more waveform details.



Multi-function hardware integration

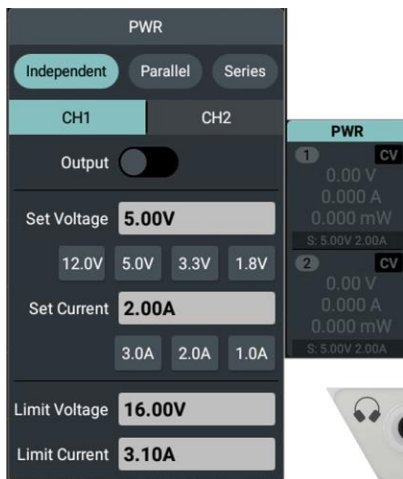
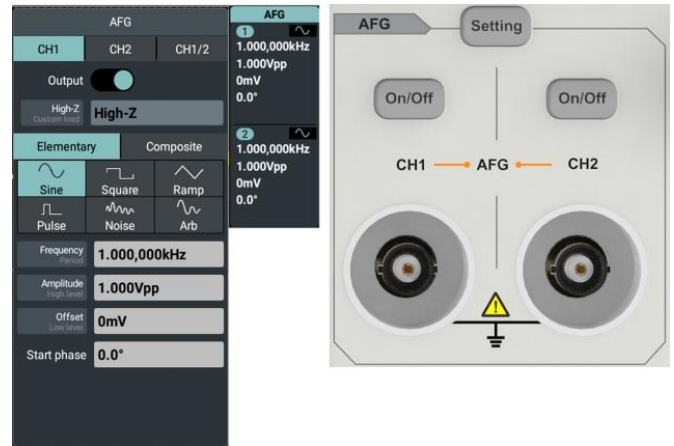
Digital Oscilloscope

- + Bandwidth:100MHz-300MHz
- + Sampling rate:1GS/s
- + 2 channels
- + 14-bits ADC (FDS1102A)



Waveform Generator

- + Dual channel
- + Output frequency: 50MHz
- + Sampling rate: 300MS/s
- + Arb waveform length: 8K
- + Vertical Resolution : 14 bits
- + Amplitude: 2mVpp - 10Vpp



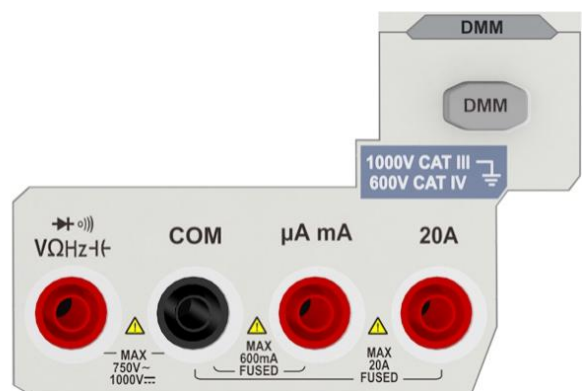
Power Supply

- + 15V/3A dual output power supply (Output Power:15W)
- + Setting accuracy: 10mV/10mA
- + Low ripples / low noise: $\leq 2\text{mVrms}$ / $\leq 5\text{mArms}$



4 1/2 digits Digital Multimeter

- + 20000 Count
- + Automatic range
- + Supports voltage, current, resistance, Diode Test, capacitance On/Off,



Frequency Response Analysis (FRA) function

The oscilloscope with built-in signal generator is equipped with FRA function, which can test the frequency response curve or loop stability of the device under test (DUT).



SCPI supported

Convenient for secondary development, the preload Python APP can be used for directly edit and run the development program on the machine.



Built-in Web Server

supports users to operate the instrument through the web page. Easy to get started from the complete virtual interface, respond fast.



Excellent user interface and user experience

Use a 10.4 inch capacitive touch screen, like touching a mobile phone. Supports variety of gestures to achieve waveform and menu common operations. Supports mouse and keyboard operations, greatly optimized the operation efficiency.



Rich trigger function

With edge, slope, pulse width, window, under amplitude, timeout, Nth edge, video trigger (HDTV supported) and other serial bus trigger functions.



Waveform cloning function

Completely retain the field test signal, and one key copy to the local waveform generator output for further analysis and testing.



Oscilloscope Specifications

Modle		FDS1102A	FDS1102	FDS3102	FDS3202	FDS3302
Bandwidth		100MHz	100MHz	100MHz	200MHz	300MHz
Sample Rate		1GS/s	1GS/s	2.5GS/s	2.5GS/s	2.5GS/s
Vertical resolution (A / D)		14bits	8 bits	8 bits	8 bits	8 bits
Channel		2				
Input Impedance		1MΩ ± 2%, in parallel with 15pF ± 5pF				
Input Coupling		DC, AC, and GND				
Record Length		10M				
Horizontal Scale (s/div)		2ns/div - 1000s/div, step by1 - 2 - 5		500ps/div - 1000s/div, step by1 - 2 - 5		
Max Input Voltage		1MΩ ≤ 300Vrms;				
Vertical Sensitivity		1mV/div - 10V/div (at input)				
Cursor Measurement		△V, and △T between cursors, △V and △T between cursors, and auto- cursors				
Automatic Measurement		Period, Frequency, +Pulse Width, -Pulse Width, Rise Time, Fall Time, Screen Duty, +Duty Cycle, -Duty Cycle, PK-PK, RMS, Overshoot, Max, Min, Top, Cycle RMS, Base, Amplitude, Preshoot, +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edge Count, Area, Cycle Area, Delay A→ B  , Delay A→ B  , Phase A→ B  , Phase A→ B  FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF				
Waveform Math		+, -, ×, ÷, FFT, User Defined Function, digital filter				
Waveform Storage		128MB,100 waveforms				
Lissajou's Figure	Bandwidth	full bandwidth				
	Phase Difference	±3 degrees				
Trigger Type		Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I ² C, SPI, RS232, LIN and CAN				
Trigger Mode		Auto, Normal, and Single				
Interface		HDMI; USB device *1, USB Host *4 ; Trig Out(P/F); LAN; earphone				
Frequency Counter		available				
WIFI (Optional)		available				
Display		10.4 inch (1024×768) touch LCD				
Dimension (WxHxD)		421 × 221 ×115 (mm)				
Device Weight		≈4.25kg				

Power Specifications

Channel	CH1/CH2	
Rated Output (0°C-40°C)	Max Voltage	0.1-15V
	Max Current	0.1-3A
	Max Power	15W
Setting	Voltage	10mV
Resolution	Current	10mA

Multimeter Specification

Full Scale Reading	4½ digits
Frequency Response	(40 - 1000) Hz
Auto Range	√
Ture rms	√
Measure	Voltage, Current, Capacitance, Resistance, Frequency, Duty cycle, Continue, Diode test

Waveform Generator Specification

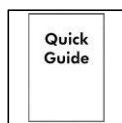
Max Frequency Output	50MHz (2 CH)
Sample Rate	300MS/s
Amplitude (HR)	2mVpp - 10Vpp
Waveform Length	8K
Standard Waveforms	Sine wave, square wave, ramp wave, pulse wave, noise
Arbitrary Waveforms	exponential rise, exponential decline, Sin(x)/x, step wave etc 28 build-in waveforms
Modulate type	AM, FM,PM, FSK,SWEEP,BURST

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Probe



Multimeter Leads



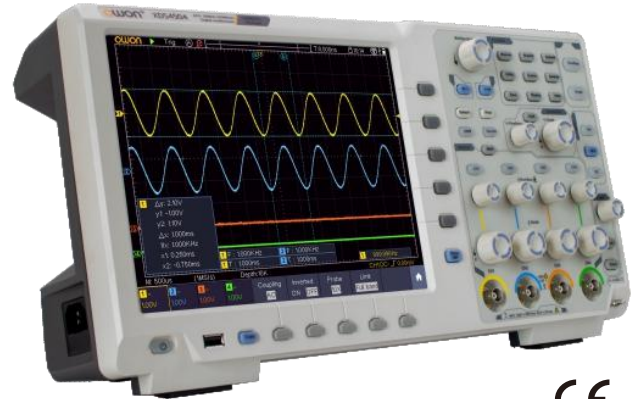
BNC plug to alligator clips cable



Test Leads

XDS4000 Multi-function test oscilloscope

- + Including 7 measurement functions in one: oscilloscope, waveform generator, multimeter, FFT spectrum analyzer, frequency counter, protocol analysis, amplitude-frequency curve analysis.
- + 350 MHz / 500 MHz oscilloscope bandwidth, 5 GSa/s sample rate.
- + Standard 400Mpts memory depth.
- + 600,000wfms/s refresh rate, easy to capture exceptional and low probability events.
- + Advanced function calculation function.
- + Standard 50MHz single-channel arbitrary waveform generator.
- + The oscilloscope captures the waveform, the waveform generator generates the waveform, help engineers to further analyze the circuit.
- + Waveform cloning function, quickly generate captured waveforms.
- + A variety of triggers and bus decodes.
- + Optional multimeter and multimeter data logger function
- + Standard Bode plot for loop test analysis
- + Multi-interface design: USB Host & Device, LAN, VGA; supports standard SCPI communication, USB Device supports USB TMC
- + 10.4-inch multi-touch screen



Modle	XDS4352	XDS4502	XDS4354	XDS4504
Bandwidth	350MHz	500MHz	350MHz	500MHz
Sample Rate	5GS/s			
Horizontal Scale (s/div)	500ps/div - 1000s/div, step by 1 - 2 - 5			
Channel	2		4	
Display	10.4 inch LCD touch screen			
Record Length	400M			
Waveform Refresh Rate	600, 000 wfms/s			
Vertical Sensitivit	1MΩ :1mV/div~ 10V/div, 50Ω : 1mV/div ~ 1V/div			
Vertical Resolution (A/D)	8bits			
Input Impedance	1MΩ±2%, in parallel with 15pF±5pF; 50Ω±2%			
Input Coupling	DC, AC, GND			
Trigger Type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I² C, SPI, RS232, CAN			
Decoding Type (optional)	I² C, SPI, RS232, CAN			
Automatic Measurement	Max, Min, PK-PK, Top, Base, Amplitude, Mean, RMS, Cycle RMS, Cursor RMS, Overshoot, Preshoot, Period, Frequency, Rise Time,Fall Time, +Pulse Width, -Pulse Width, +Duty Cycle, -Duty Cycle, Screen Duty, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF, Delay A→B $\int$, Delay A→B $\int$, Phase A→B $\int$, Phase A→B $\int$, +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edge Count, Area, Cycle Area			
Waveform Math	+, -, *, / ,FFT, FFTrms, Intg, Diff, Sqrt,, User Defined Function, digital filter (low pass, high pass, band pass, band reject)			
Waveform Storage	100 waveforms			
Communication Interface	USB host, USB device, LAN, VGA			
Printer Compatibility	PictBridge			
Dimension (WxHxD)	422 × 226 ×135 (mm)			
Device Weight	≈4.25kg			

Arb Waveform Generator Specifications

Max. Frequency Output	50MHz
Sample Rate	250MS/s
Channel	1 channel
Vertical Resolution	14bits
Amplitude Range	2mVpp - 5Vpp($\leq 50\text{MHz}$); 2mVpp - 20Vpp($\leq 25\text{MHz}$)
Waveform Length	16K
Output Waveforms	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, Noise, and others, total 64 built-in waveforms, and user-defined arbitrary waveform

Multimeter Specifications (optional)

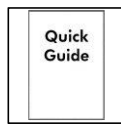
Full Scale	4½ digits	Auto Range	√
Measure	Voltage, Current, Capacitance, Resistance, Frequency, Duty cycle, Diode test		
Capacitance	2nF – 20mF: $\pm(4\% \pm 10\text{digit})$		
Voltage	DCV: 20mV, 200mV: $\pm(0.5\% \pm 10\text{digit})$, 2V, 20V, 200V: $\pm(0.3\% \pm 5\text{digit})$, 1000V: $\pm(0.5\% \pm 5\text{digit})$ ACV: 200mV, 2V, 20V, 200V: $\pm(0.8\% \pm 10\text{digit})$ 750V: $\pm(1\% \pm 10\text{digit})$. frequency: 40Hz-1000Hz		
Current	DCA: 20A: $\pm(2\% \pm 10\text{digit})$, ACA: 20A: $\pm(2.5\% \pm 10\text{digit})$		
Impedance	200Ω~2MΩ: $\pm(0.8\% \pm 10\text{digit})$, 20MΩ: $\pm(1\% \pm 10\text{digit})$, 100MΩ: $\pm(5\% \pm 10\text{digit})$		

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Probe



Q9 Cable

Options



Multimeter Leads



Current Ext Module

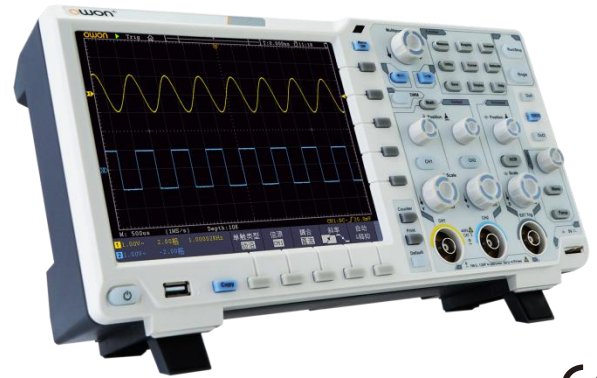
XDS3000 Multi-Function Oscilloscope

Super Performance

- + 8-bit, 12-bit or 14-bit high resolution ADC, restoring the waveform detail fully.
- + max 40M record length, and max 75,000wfms/s waveform refresh rate.
- + low background noise, vertical sensitivity in 1mV/div - 10V/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, LAN, AUX, and more.
- + VGA port - better solution for video expansion, and teaching demonstration.
- + 8 inch 800 x 600 high resolution LCD.
- + optional multi-point touch screen, more user-friendly operation experience.



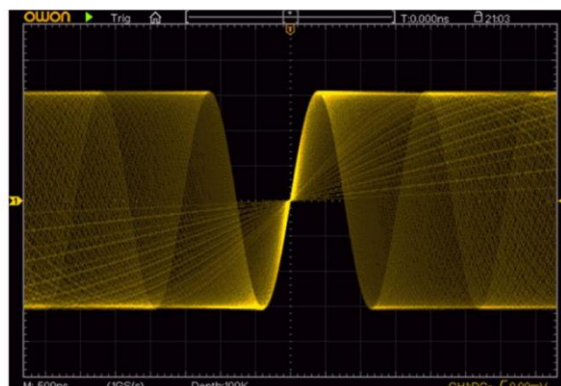
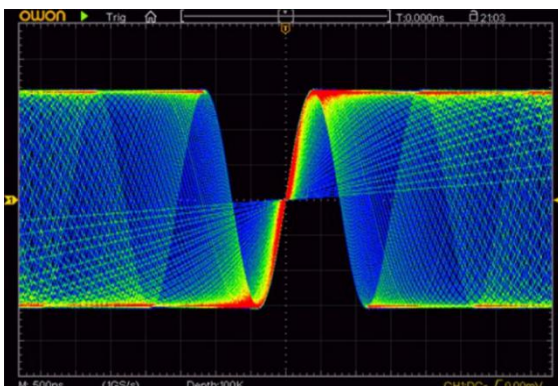
N-in-1

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

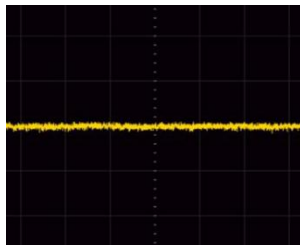
1. XDS series introduce 12 / 14 bits hardware ADC, the precision is 16/64 times against other oscilloscope on market. Equipping with OWON' s original magnifier function, it can observe the signal low down to 31.25 μ V/div (XDS3202A, XDS3102AP).



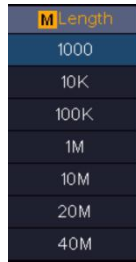
2. Multi-level grayscale, and color temperature display.



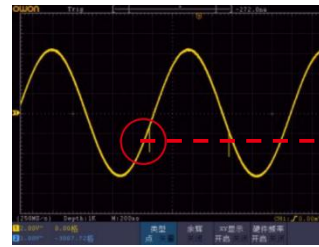
3. XVisual platform - restore the waveform detail fully.



low background noise

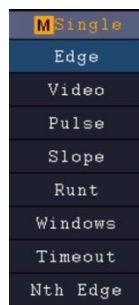
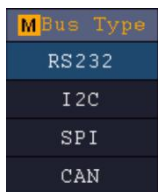


40M Record Length



70,000wfms/s Waveform Refresh Rate

4. multi-trigger supported - Logic, Time-out, I2C, SPI, RS232/UART, Runt, Windows, Nth Edge, and CAN
5. serial bus coding available in I2C, SPI, RS232/UART, CAN



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 touchscreen improves operation efficiency considerably.



9. Bode plot function

The oscilloscope with built-in signal generator is equipped with FRA (Frequency Response Analysis) function, which can test the frequency response curve or loop stability of the DUT (device under test).



Model	XDS3062A	XDS3102A	XDS3102AP*	XDS3202A*	XDS3102	XDS3202	XDS3202*	XDS3302*
Bandwidth	60MHz	100MHz	100MHz	200MHz	100MHz	200MHz		300MHz
Channel	2+1 (external)							
Sample Rate	1GS/s				1GS/s		2GS/s	2. 5GS/s
Vertical Resolution (A/D)	12 bits		14 bits		8 bits			
Record length	40M							
Waveform Refresh Rate	max 75,000 wfms/s							
Horizontal Scale (s/div)	2ns/div - 1000s/div		1ns/div - 1000s/div		2ns/div - 1000s/div	1ns/div - 1000s/div		
	step by 1 - 2 - 5							
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF (* 50Ω ± 2%)							
Vertical Sensitivity	1mV/div - 10V/div (at input)							
DC Gain Accuracy	±1. 5%				±3%			
Sample Rate /	±1 ppm (type, Ta = +25℃)							
Trigger Type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I2C, SPI, and RS232							
Trigger Type (optional)	CAN							
Bus Decoding(optional)	I2C, SPI, RS232/ UART, and CAN							
Waveform Math	+, -, ×, ÷, FFT, FFTrms, Intg, Diff, Sqrt, User Defined Function, digital filter (low pass, high pass, band pass, band reject)							
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							
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	< 15W		< 24W		< 15W	< 24W		
Fuse	2A, T class, 250V							
Dimension (W x H x D)	340 x 177 x 90 mm							
Device Weight	≈ 2.60 kg							

Optional Module / Function

VGA	VGA + AV port
WIF	Wi-Fi
AWG	Arb waveform generator
DMM	digital multimeter
TOU	Touch screen (capacitor-type)
BAT	3.7V, 13200mAh

RS232/UART	RS232/ UART
SPI	SPI
I2C	I2C
CAN	CAN decoding

Arb Waveform Generator (optional) Specifications

Max Frequency Output	25MHz
Sample Rate	125MS/s
Channel	1 channel(apply to XDS2104(A),XDS3204E(AE) 2 channels(only for XDS3000 series 2 channels model)
Vertical Resolution	14 bits
Amplitude Range	2mVpp - 6Vpp
Waveform Length	8K
Standard Waveform	Sine, Square, Pulse, Ramp
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, Noise, and others, total 46 built-in waveforms, and user-defined arbitrary waveform

Model	XDS3064E	XDS3104E	XDS3064AE	XDS3104AE	XDS3104A	XDS3104	XDS3204A	XDS3204E
Bandwidth	60MHz	100MHz	60MHz	100MHz			200MHz	
Channel	4							
Sample Rate	1GS/s							
Vertical Resolution (A/ D)	8 bits		14 bits			8 bits	14 bits	8 bits
Record length	40M							
Waveform Refresh Rate	max 45,000wfms/s				max 70,000wfms/s			
Horizontal Scale (s/div)	2ns/div - 1000s/div, step by 1 - 2 - 5				1ns/div - 1000s/div, step by 1 - 2 - 5			
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF							
Vertical Sensitivity	1mV/div - 10V/div (at input)							
DC Gain Accuracy	±3%							
Sample Rate / Relay Time	±2. 5ppm (type, Ta = +25°C)							
Trigger Type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I2C, SPI, and RS232/ UART							
Trigger Type (optional)	CAN							
Bus Decoding (optional)	I2C, SPI, RS232/ UART, and CAN							
Waveform Math	+, - , ×, ÷, FFT, FFTrms, Intg, Diff, Sqrt, User Defined Function, digital filter (low pass, high pass, band pass, band reject)							
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  , Phase A→ B  , Phase A→ B  , +Pulse Count, -Pulse Count, Rise Edge Count,Fall Edge Count, Area, Cycle Area							
Communication Interface	USB host, USB device, Trig Out (P/ F), LAN, and VGA (optional)							
Frequency Counter	available							
Power Supply	100V - 240V AC, 50/60Hz, CAT II							
Fuse	2A, T class, 250V							
Battery (optional)	3.7V, 13200mA							
Dimension (W x H x D)	340 x 177 x 90 mm							
Device Weight	≈2.60 kg							

Multimeter (optional) Specifications

Full Scale Reading	3¾ digits (max 4000 count)	Diode	0V -1V
Input Impedance	10MΩ	Continuity Test	<50 (±30) beeping
Capacitance	51.2nF - 100uF: ±(3% ± 3 digits)		
Voltage	DCV: 400mV, 4V, 400V: ±(1 ± 1digit); max input: DC 1000V ACV: 4V, 40V, 400V: ±(1 ± 3digits); frequency: 40Hz - 400Hz; max input: AC 750V (virtual value)		
Current	DCA: 40mA, 400mA: ±(1.5% ± 1digit); 10A: ±(3% ± 3digits) ACA: 40mA: ±(1.5% ± 3digits), 400mA: ±(2% ± 1digit), 10A: ±(3% ± 3digits)		
Impedance	400Ω: ±(1% ± 3digits), 4KΩ - 40MΩ: ±(1% ± 1digit)		

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide

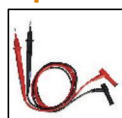


USB Cable



Probe

Options



Multimeter Leads



Q9 Cable



Capacitance Ext Module



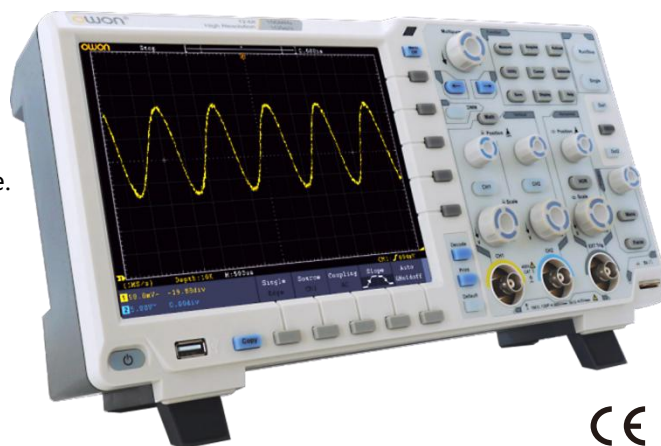
Battery



Soft Bag

XDS2000 Digital Oscilloscope

- + 100MHz / 200MHz bandwidth, 1GS/s Sample rate.
- + max 80M record length, and 75,000wfms/s waveform refresh rate.
- + multi- trigger, and bus decoding function.
- + SCPI, and LabVIEW supported.
- + ultra-thin body-design, less space accommodation.
- + VGA port - better solution for video expansion, and teaching demonstration.
- + 8 inch multi-touch screen LCD.



Model	XDS2102	XDS2202
Bandwidth (-3 dB)	100MHz	200MHz
Channel	2 + 1 (external)	
Max. sample rate	1GSa/s	
Max. memory depth	40M or 80M (optional)	
Waveform capture rate	Max. 75,000wfms/s	
Acquire mode	Sample, Peak, High Res, Average	
Vertical Sensitivity Range	500 μ V/div ~ 10 V/div	
Sampling rate range	2ns/div - 1000s/div, step by 1-2-5	
Input Impedance	1M Ω ±2%, parallel with 20pF±5pF	
Probe Attenuation	1.00 μ X-1M.00X, step by 1-2-5, support custom	
DC Gain Accuracy	4% (1mV) ; 3% ($\geq$ 2mV)	
Channel Isolation	50Hz: 100: 1, 10MHz: 40:1	
Trigger type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth, Logic, RS232/UART, I2C, SPI CAN	
Bus decoding	RS232, I2C, SPI, CAN,	
Auto 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)	
Cursor Measurement	Δ V, and Δ T between cursors, Δ V and Δ T between cursors, and auto- cursors	
Waveform Storage	100 waveform	
Lissajou's Figure	Bandwidth Phase Difference	full bandwidth ±3 degrees
Communication Interface	HDMI, USB device, USB Host, Trig Out(P/F), LAN	
Display	8 inch (800×600), capacitive multi-touch screen	
Power supply	100V - 240V AC, 50/60Hz, CAT II	
Dimension (W x H x D)	340 mm× 177 mm×90 mm	
Device Weight	≈2.6kg	

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



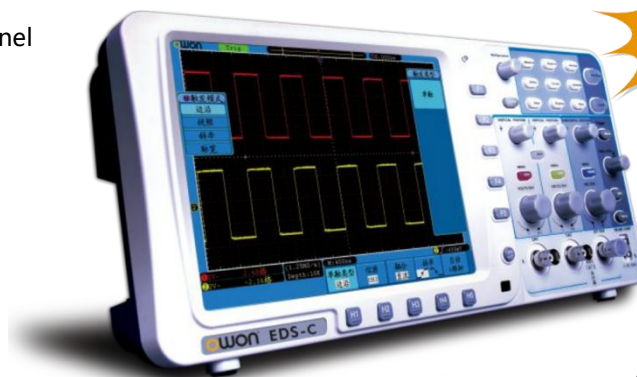
Probe



Bag

SDS Digital Oscilloscope

- + Bandwidth: 100MHz - 300MHz with dual- channel
- + Sample rate: 1GS/s - 3.2GS/s
- + 10M record length for each channel
- + Smart design with easy portability
- + Large 8 inch 800 x 600 pixels LCD
- + LAN remote control
- + Multi-function: auto-scale, Pass / Fail, current measurement, and **digital filtering**
- + SCPI, and LabVIEW supported
- + Optional **BATTERY** available



10M
Record
Length



CE

Model	SDS7102	SDS7202	SDS8102	SDS8202	SDS8302	SDS9302
Bandwidth	100MHz	200MHz	100MHz	200MHz	300MHz	
Channel	2+1 (external)					
Sample Rate	1GS/s		2GS/s		2. 5GS/s	3.2GS/s
Horizontal Scale (s/div)	2ns/div - 100s/div, step by 1 - 2 -		1ns/div - 100s/div, step by 1 - 2 - 5			
Rise Time	≤3. 5ns	≤1.7ns	≤3. 5ns	≤1.7ns	≤1. 17ns	
Record length	10M					
Display	8" color LCD, 800 x 600 pixels					
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF					
Vertical Sensitivity	2mV/div - 10V/div					
Vertical Resolution (A / D)	8 bits (2 channels simultaneously)					
Trigger Type	Edge, Pulse, Video, Slope, and Alternate					
Digital Filtering	low-pass, high-pass, band-pass, and band-reject					
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Week 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,					
Waveform Math	+, -, ×, ÷, invert, FFT					
Waveform Storage	15 waveforms					
Measuring Current Range	100kA/V - 1KA/V					
Communication Interface	USB host, USB device, Pass / Fail, LAN, VGA (optional), or RS232 (optional)					
Battery (optional)	7.4V, 8000mA					
Dimension (W x H x D)	340 x 155 x 70 mm					
Device Weight	≈1.80 kg					

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Probe



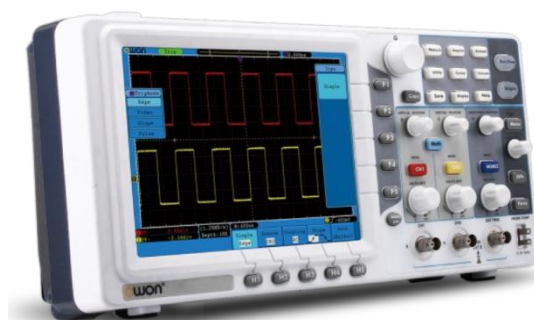
Battery (optional)



Bag (optional)

SDS-E Economical Type Digital Oscilloscope

- + Bandwidth: 30MHz - 125MHz
- + Sample rate: 500MS/s - 1GS/s
- + Ultra-thin body
- + 8 inch high resolution LCD
- + Pass / Fail function
- + SCPI, and LabVIEW supported
- + newly added function - digital filtering, and current measurement (excl. SDS5032E and SDS5052E)



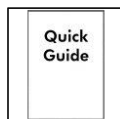
Model	SDS5032E	SDS5052E	SDS6062E	SDS7072E	SDS7102E	SDS7122E
Bandwidth	30MHz	50MHz	60MHz	70MHz	100MHz	125MHz
Channel	2+1 (external)					
Sample Rate	500MS/s			1GS/s		
Record Length	10K					
Display	8" color LCD, 800 x 600 pixels					
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF		1MΩ ± 2%, in parallel with 15pF±3pF			
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5			2ns/div - 100s/div, step by 1 - 2 - 5		
Vertical Sensitivity	5mV/div - 5V/div (at input)		2mV/div - 10V/div (at input)			
Vertical Resolution (A / D)	8 bits (2 channels simultaneously)					
Trigger Type	Edge, Pulse, Video, Slope, and Alternate					
Digital Filtering	/		low-pass, high-pass, band-pass, and band-reject			
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Week 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					
Communication Interface	USB host, USB device, Pass / Fail, LAN, VGA (optional), or RS232 (optional)					
Dimension (W x H x D)	348 x 170 x 78 mm					
Device Weight	≈1. 50 kg					

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Probe



Bag (optional)

SDS200 Digital Oscilloscope

- + Dual-channel Oscilloscope
- + 25MHz Signal Generator (SDS210S,215S,220S)
- + 100MHz / 150MHz / 200MHz bandwidth
- + Dual-channel independent 1GS/s real-time sampling rate
- + 20M memory depth
- + 6-digit High-precision Frequency Counter
- + FFT Spectrum Analysis
- + Communicate with PC via USB Device interface, support SCPI and LabVIEW functions
- + 7-inch TFT LCD display



Model	SDS210(S)	SDS215(S)	SDS220(S)
Bandwidth	100MHz	150MHz	200MHz
Channels	2 + 1 (external)		
Sample Rate	Max 1GS/s		
Acquisition Mode	Normal, Peak detect, Averaging		
Input Coupling	DC, AC , Ground		
Input Impedance	1MΩ±2%, in parallel with 20 pF±5 pF		
Probe Attenuation Factor	1X, 10X, 100X, 1000X		
Record length	20M		
Horizontal Scale (s/div)	2ns/div – 1000 s/div, step by 1 – 2 - 5		
Vertical Sensitivity	2mV/div ~ 10 V/div		
Automatic Measurement	Period, Frequency, Mean, PK-PK, RMS, Max, Min, Top, Base, Amplitude, Overshoot, Preshoot, Rise Time, Fall Time, +PulseWidth, -PulseWidth, +Duty Cycle, -Duty Cycle, Delay A→B, Delay A→B, Cycle RMS, Cursor RMS, Screen Duty, Phase, +PulseCount, -PulseCount, RiseEdgeCnt, FallEdgeCnt, Area, and Cycle Area.		
Waveform Math	+, -, ×, ÷, FFT		
Waveform Storage	16 waveforms		
Trigger Type	Edge, Video		
Communication Interface	USB Host and Device		
Frequency Counter	available		

Waveform Generator (Optional)

Standard Waveforms	Sine wave, square wave, ramp wave, pulse wave, arbitrary wave	Arbitrary Waveforms	more than 160 kinds
Max Frequency Output	25MHz	Arbitrary Waveform	0.1Hz ~ 5MHz
Sample rate	125MSa/s	Amplitude (50Ω)	0.005Vpp ~ 3Vpp
Channel	1	Waveform Length	8k
DC Offset Range	±(3V) (high resistance)	Load Impedance	50 Ω

Other

Dimension (L x H x D)	301mm × 152mm × 70 mm	Device Weight	≈1.1kg
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Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



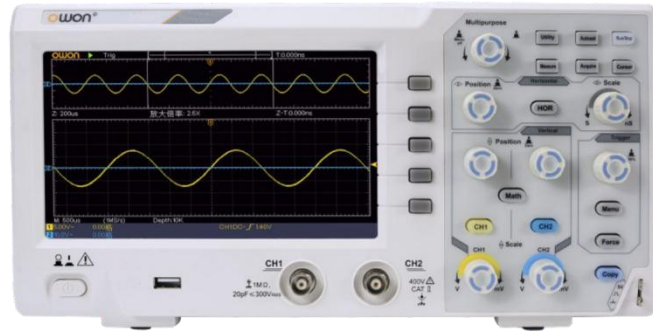
Probe



Bag (optional)

SDS1000 Digital Oscilloscope

- + Bandwidth: 20MHz - 200MHz
- + 2-Channel
- + Sample rate: 100MS/s - 1GS/s
- + Ultra-thin body
- + 7 inch high resolution LCD
- + SCPI and LabVIEW supported



Model	SDS1022	SDS1052	SDS1102	SDS1202
Bandwidth	20MHz	50MHz	100MHz	200MHz
Channel	2			
Sample Rate	100MS/s	500MS/s	1GS/s	
Horizontal Scale (s/div)	5ns/div - 1000s/div, step by 1 - 2 - 5	2ns/div - 1000s/div, step by 1 - 2 - 5		
Display	7 " color LCD, 800 x 480 pixels			
Input Impedance	1MΩ ± 2%, in parallel with 20pF±5pF			
Record Length	10K			
Sample Rate / Relay Time	±100ppm			
Vertical Resolution (A / D)	8 bits (2 channels simultaneously)			
Vertical Sensitivity	5mV/div - 5V/div (at input)			
Trigger Type	Edge, Video			
Automatic Measurement	Vpp, Vavg, RMS, Frequency, Period, Vmax, Vmin, Vtop, V base, Width, Overshoot, Pre-shoot, Rise time, Fall time, +Width, -Width, +Duty, -Duty, Delay A → B  , Delay A → B 			
Waveform Math	+, -, x, ÷, invert, FFT			
Waveform Storage	16 waveforms			
Communication Interface	USB host, USB device			
Frequency Counter	available			
Power Supply	100V - 240V AC, 50/60Hz, CAT II			
Dimension (W x H x D)	301 x 152 x 70 mm			
Device Weight	≈1.1kg			

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



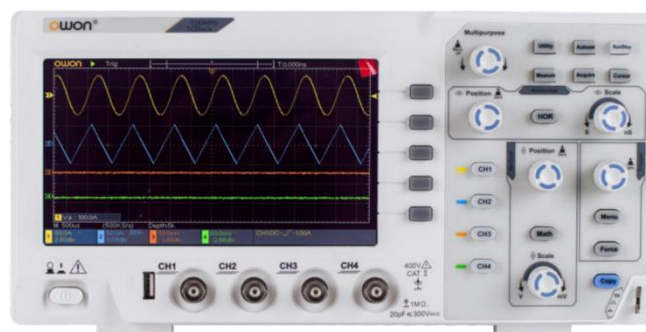
Probe



Bag (optional)

SDS1000 Digital Oscilloscope

- + Bandwidth: 100MHz
- + 4-Channel
- + Sample rate: 1GS/s
- + Ultra-thin body
- + 7 inch high resolution LCD
- + SCPI, and LabVIEW supported



Model	SDS1104
Bandwidth	100MHz
Channel	4
Sample Rate	1GSa/s
Horizontal Scale (s/div)	2ns/div - 1000s/div, step by 1 - 2 - 5
Display	7 " color LCD, 800 x 480 pixels
Input Impedance	1MΩ ± 2%, in parallel with 20pF±15pF
Record Length	20K
Sample Rate / Relay Time	±100ppm
Vertical Resolution (A / D)	8 bits (2 channels simultaneously)
Vertical Sensitivity	5mV/div - 5V/div (at input)
Trigger Type	Edge, Video
Automatic Measurement	Vpp, Vavg, RMS, Frequency, Period, Vmax, Vmin, Vtop, V base, Width, Overshoot, Pre-shoot, Rise time, Fall time, +Width, -Width, +Duty, -Duty, Delay A→ B ↗ , Delay A→ B ↘ , area, cycle area, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF
Waveform Math	+, -, x, ÷, invert, FFT
Waveform Storage	16 waveforms
Communication Interface	USB host, USB device
Frequency Counter	available
Power Supply	100V - 240V AC, 50/60Hz, CAT II
Dimension (W x H x D)	301 x 152 x 70 mm
Device Weight	≈1.1kg

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Probe



Bag (optional)

VDS6000 PC Oscilloscope

- + Dual-channel, ultra-thin body design
- + 200MHz bandwidth, and 1GSa/s real-time sampling rate
- + 8-bit, 12-bit, 14-bit vertical resolution, more accurate measurement
- + Friendly UI, X-Y and waveform can be displayed on the same screen
- + Standard SCPI protocol supported, LabVIEW supported
- + USB Type-C powered, faster data transmission, support 5-15V wide voltage power supply
- + WiFi wireless transmission, more convenient to use
(Need to choose Wi-Fi accessories)



Model	VDS6102-DMM	VDS6202	VDS6102	VDS6102P	VDS6102A
Bandwidth	100MHz	200MHz	100MHz		100MHz
Channels	2 + DMM	2	2 + Function		
Sample Rate	1GSa/s				
Horizontal Scale	2ns/div ~ 1000s/div , set by 1 ~ 2 ~ 5				
Acquisition Mode	Normal, Peak detect, Averaging				
Record length	10M	250M	10M	250M	10M
Input Coupling	DC, AC , Ground				
Input Impedance	1MΩ±2%, in parallel with 15pF±5 pF				
Vertical Sensitivity	2mv/div ~ 5v/div				
Vertical resolution	8bits			8bits, 12bits, 14bits	
Max Input Voltage	40 V (DC + AC Peak)				
Probe Attenuation Factor	1X, 10X, 100X, 1000X				
Trigger Type	edge, video, slope, pulse				
Trigger Mode	auto, normal, single				
Cursor Measurement	ΔV, and ΔT between cursors, ΔV and ΔT between cursors, and auto- cursors				
Automatic Measurement	Vpp, Vmax, Vmin, Vtop, Vbase, Vamp, Vavg, Vrms, Overshoot, Preshoot, Freq, Period, Rise Time, Fall Time, Delay A→B, Delay A←B, +Width, -Width, +Duty, -Duty				
Communication Interface	USB (Type-C); LAN, WiFi (optional)				
Power Consumption	≤8W	≤12W	≤8W		≤8W
Dimensions	190mm (L) × 18mm (H) ×120mm (W)				
Device Weight	≈0.4kg				

Function Generator (VDS6202,6102P,6102A)

Standard Waveform	Sine (0.1Hz - 5MHz), Square (0.1Hz-200kHz), Ramp (1Hz-10kHz), Pulse (1Hz-10kHz)			
Max. Frequency Output	5 MHz	Sampling Rate	25MSa/s	
Channel	1	Vertical Resolution	10bits	
Amplitude Range	10mVpp - 5Vpp	Output Impedance	50 Ω (typical)	

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



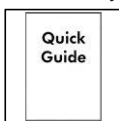
Probe



USB Cable



Silicon Gel
Case



Quick Guide



Adapter



Power Cord



Q9 Cable



Wi-Fi Modular Bag (optional)



VDS6000 PC Oscilloscope

- + 4 channels ultra thin design
- + 70MHz - 100MHz bandwidth, and 1GS/s real-time sample rate
- + Max 10M record length, max 14 bits high resolution ADC
- + SCPI、LABVIEW supported
- + Support the secondary development of windows / Linux/Android / iOS platform
- + USB type-C power supply, faster data transmission, support 5-15V wide voltage power supply
- + Wi-Fi unlimited transmission, more convenient to use.
(Wi-Fi accessories are required)
- + Support software for Windows and Mac OS



Model	VDS6074	VDS6104	VDS6074A	VDS6104A
Bandwidth	70MHz	100MHz	70MHz	100MHz
Channel	4 channel			
Sample Rate	1GS/s			
Horizontal Scale (s/div)	1ns/div - 100s/div, step by 1 - 2 - 5			
Record Length	10M			
Input Impedance	1 MΩ ± 2%, in parallel with 15pF±5pF			
Sample Rate / Relay Time	±25ppm			
Max Input Voltage	40V(DC + AC peak)			
Vertical Sensitivity	2mV/div - 5V/div			
Vertical Resolution	8 bits		8 bits / 12 bits / 14 bits	
Trigger Type	Edge, Pulse, Video, Slope			
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, Delay A→B  , Delay A→B 			
Secondary Development	Supported on Windows, Linux, Android, and iOS platform			
Built-in Signal Generator	Support			
Communication Interface	USB Device(Type-C), USB Host, LAN, Wi-Fi (optional)			
Power Supply	≤8W			
Dimension (W x H x D)	190 x 18 x 120 mm			
Device Weight	≈0.40 kg			

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



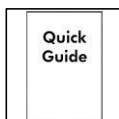
Probe



USB Cable



Silicon Ge



Quick Guide
Case



Adapter



Power Cord



Wi-Fi Modular (optional)

TAO3000 2CH / 4CH Tablet Digital Storage Oscilloscope

- + Oscilloscope + Multimeter (2CH type)
- + Max 120MHz Bandwidth, 1GS/s sample rate
- + 14-bit high resolution ADC
- + 40M record length; 45,000 wfms/s waveform refresh rate
- + low back ground noise
- + 8-inch 800 x 600 high resolution LCD, multi-touch screen, more user-friendly operation experience
- + SCPI and LabVIEW supported
- + multi- trigger, and bus decoding function
- + multi-interface integration - USB host, USB device, LAN, Wi-Fi



Model	TAO3074	TAO3104	TAO3074A	TAO3104A
Bandwidth	70MHz	100MHz	70MHz	100MHz
Sample Rate	1GS/s			
Vertical Resolution	8 bits		8 bits/ 12 bits/ 14 bits	
Record length	40M			
Waveform Refresh Rate	45,000wfms/s			
Horizontal Scale (s/div)	2ns/div - 1000s/div, step by 1 - 2 - 5			
Channel	4			
Display	8 " color LCD, 800 x 600 pixels display, multi-touch screen			
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF			
Max Input Voltage	1MΩ ≤ 300Vrms;			
Probe Attenuation Factor	0.001X - 1000X, step by 1 - 2 - 5			
Sample Rate / Relay Time Accuracy	±10 ppm max (Ta = +25℃)			
Input Coupling	DC, AC, GND			
Vertical Sensitivity	1mV/div - 10V/div (at input)			
Trigger Type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I2C, SPI, RS232/UART and CAN (optional)			
Bus Decoding(optional)	I2 C, SPI, RS232/ UART, CAN			
Trigger Mode	Auto, Normal, Single			
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Week RMS, Cursor RMS, Vmax, Vmin, Vtop, V base, Vamp, Overshoot, Phase A→ B ↑, Phase A→ B↓, 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 Edges Count, Area, Cycle Area, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF			
Waveform Math	+, -, ×, ÷, FFT, FFTrms, Intg, Diff, Sqrt, User Defined Function, Digital Filter			
Waveform Storage	100 waveforms			
Communication Interface	USB host, USB device, Trig Out(Pass/ Fail), LAN, and Wi-Fi (optional)			
Frequency Counter	available			
Battery	7.4V, 8000mAh, 5 hours operation			
Dimension (W x H x D)	270 x 191 x 48 (mm)			
Device Weight	≈1.7kg			

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



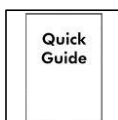
Power Cord



Adapter



Probe



Quick Guide



Micro USB



Stand Holder



BNC-SAM
Cable



Bag (optional)

Model	TAO3072	TAO3102	TAO3122	TAO3072A	TAO3102A	TAO3122A
Bandwidth	70MHz	100MHz	120MHz	70MHz	100MHz	120MHz
Sample Rate	1GSa/s					
Vertical Resolution (A/ D)	8 bits			8 bits/ 12 bits/ 14 bits		
Record length	40M					
Waveform Refresh Rate	45,000wfms/s					
Horizontal Scale (s/div)	2ns/div - 1000s/div, step by 1 - 2 - 5					
Channel	2					
Display	8 " color LCD, 800 x 600 pixels display, multi-touch screen					
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF					
Max Input Voltage	1MΩ ≤ 300Vrms;					
Probe Attenuation Factor	0.001X - 1000X, step by 1 - 2 - 5					
Sample Rate / Relay Time Accuracy	±10 ppm max (Ta = +25°C)					
Input Coupling	DC, AC, GND					
Vertical Sensitivity	1mV/div - 10V/div (at input)					
Trigger Type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I2C, SPI, RS232/UART, and CAN (optional)					
Bus Decoding(optional)	I2 C, SPI, RS232/ UART, CAN					
Trigger Mode	Auto, Normal, and Single					
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Week RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase A→ B ↑, Phase A→ B↓, 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 Edges Count, Area, Cycle Area, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF					
Waveform Math	+, -, ×, ÷, FFT, FFTrms, Intg, Diff, Sqrt, User Defined Function, Digital Filter					
Waveform Storage	100 waveforms					
Communication Interface	USB host, USB device, Trig Out(Pass/ Fail), LAN, and Wi-Fi (optional)					
Frequency Counter	available					
Battery	7.4V, 8000mAh, 5 hours operation					
Dimension(W x H x D)	270 x 191 x 48 (mm)					
Device Weight	≈1.7 kg					

Multimeter Specifications (only apply for 2 channels model)

Display	Voltage	Current	Impedance	Diode	Auto Ranging
4 1/2 digital s	mV:20.000mV-200.00mV DCV: 2.0000V – 1000.0V ACV: 2.0000V – 750.0V	ACD: 10.00A ACA: 10.00A	200.00Ω - 100.00MΩ	√	√

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



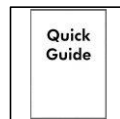
Adapter



Probe



Multimeter Lead



Quick Guide



Stand Holder



Current Ext Module



Micro USB Cable



BNC-SAM



Bag (optional)

HDS200 2-CH Handheld Oscilloscope

- + Oscilloscope + multimeter + waveform generator, multifunction in one
- + 3.5-inch high-resolution, high-contrast color LCD display, suitable for outdoor use
- + 18650 lithium battery power, providing up to 6 hours working time
- + USB Type-C interface, support power bank, support PC software connection
- + Self-calibration function
- + SCPI supported, facilitate secondary development



[Oscilloscope] Specifications

Model	HDS25(S)	HDS242(S)	HDS272(S)	HDS2102(S)	HDS2202S		
Bandwidth	25MHz	40MHz	70MHz	100MHz	200MHz		
Channels	2 or 2+1(signal generator)						
Sample Rate	250MS/s			500MS/s	1GS/s		
Acquisition Model	Sample, Peak detect						
Record Length	8K						
Display	3. 5-inch LCD						
Waveform Refresh Rate	Max 10,000wfms/s						
Input Coupling	DC, AC, and Ground						
Input Impedance	1MΩ±2%, in parallel with 16pF±10pF						
Probe Attenuation Factors	1X, 10X, 100X, 1000X, 10000X						
Max. input Voltage	400V (DC+AC, PK-PK, 1MΩ input impedance) (10:1 probe attenuation)						
Bandwidth Limit (typical)	20MHz						
Horizontal Scale	5ns/div - 1000s/div, step by 1 - 2 - 5			2ns/div - 1000s/div, step by 1 - 2 - 5			
Vertical Sensitivity	10mV/div - 10V/div						
Trigger Type	Edge						
Trigger Modes	Auto, Normal, single						
Automatic Measurement	Period, Frequency, Mean, PK-PK, Max, Min, Amplitude, RMS						
Cursor Measurement	ΔV, ΔT, ΔT&ΔV between cursors						
Communication Interface	USB Type-C						
Dimension (W x H x D)	198 x 96 x 38 mm						
Device Weight	≈0.60 kg						

Specifications subject to change without prior notice.

[Multimeter] Specifications

Max. Resolution	20,000 counts
Testing Mode	Voltage, Current, Resistance, Capacitance, Diode ,Continuity
Input Impedance	10MΩ
Max Input Voltage	AC 750V, DC 1000V
Max Input Current	DC : 10A AC : 10A
Diode	0 - 2V

[Waveform Generator] Specifications

(Only for HDS25S, 242S,272S, 2102S, 2202S)

Frequency Output	Sine	0.1Hz - 10MHz (HDS25S); 0.1Hz - 25MHz (other)		
	Square	0.1Hz - 2MHz (HDS25S); 0.1Hz - 5MHz (other)		
	Pulse	0.1Hz - 5MHz	Arbitrary	0.1Hz - 5MHz
	Ramp	0.1Hz - 1 MHz		
Sampling Rate	125MSa/s		Waveform Length	8K
Channel	1 -CH		Vertical Resolution	14bits
Amplitude Range	20 mVpp - 5 Vpp		Output Impedance	50Ω

+ **Accessories** The accessories subject to final delivery.



Probe



USB Cable



Multimeter Lead



Adapter



Quick Guide



BNC plug to alligator clips cable

HDS241/271 1-CH Handheld Oscilloscope

- + Oscilloscope + multimeter + waveform generator, multifunction in one
- + Maximum bandwidth of 70MHz and real-time sampling rate up to 250MSa/s
- + 24000counts display, supports voltage, current, resistance, capacitance, diode. and continuity testing
- + Maximum waveform output frequency: 100kHz
- + Supports sine wave, square wave, sawtooth wave, and pulse wave outputs
- + 3.5-inch high-resolution, high-contrast color LCD display, suitable for outdoor use
- + USB Type-C interface, support power bank, support PC software connection
- + SCPI supported, facilitate secondary development



[Oscilloscope] Specifications

Model	HDS241	HDS271
Bandwidth	40MHz	70MHz
Channel	1	
Sampling rate	250MSa/s	
Sampling method	Sampling, peak detection	
Record length	4K or 8K	
Display	3.5-inch LCD	
Waveform refresh rate	Max 10,000wfms/s	
Input coupling	DC, AC, GND	
Probe attenuation	1X, 10X, 100X, 1000X, 10000X	
Maximum input voltage	400V (DC+AC, PK-PK)	
Sweep speed range (s/div)	5ns/div-1000s/div, Step by 1-2-5	
Sensitivity (Volt/div) range	10mV/div~10V/div	
Trigger Type	Edge	
Automatic measurement	Period, Frequency, Mean, PK-PK, Max, Min, Amplitude, RMS	
Cursor measurement	ΔV , ΔT	
Interface	USB Type-C	
Dimension (W x H x D)	198 x 96 x 38 mm	
Device Weight	$\approx$ 0.60 kg	

[Multimeter] Specifications

Digital display	24000 counts		
Measurement type	Voltage, Current, Resistance, Capacitance, Continuity, Diode		
Maximum input voltage	AC:750V DC:1000V		
Maximum input current	AC:10A DC:10A		
Diode test	0-2V	Continuity	<50 Ω
Auto range	$\sqrt$	TRMS	$\sqrt$

[Waveform Generator] Specifications

Output Frequency	Sine, Square, Ramp	10Hz~100kHz, Step by 1-2-5
	Pulse	10Hz~10kHz, Step by 1-2-5
Amplitude	1Vpp or 2.5Vpp	

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Probe



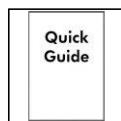
USB Cable



Multimeter Lead



Type-C Cable



Quick Guide

HDS300 2-CH Handheld Oscilloscope

- + Oscilloscope + multimeter + waveform generator, multifunction in one
- + 3.5-inch high-resolution, high-contrast color LCD display, suitable for outdoor use
- + 18650 lithium battery
- + USB Type-C interface, support power bank, support PC software connection
- + Self-calibration function
- + SCPI supported, facilitate secondary development



[Oscilloscope] Specifications

Model	HDS307S	HDS310S	HDS320S
Bandwidth	70MHz	100MHz	200MHz
Channels	2+1(signal generator)		
Sample Rate	250MS/s	500MS/s	1GS/s
Acquisition Model	Sample, Peak detect		
Record Length	8K		
Display	3.5-inch LCD		
Waveform Refresh Rate	Max 10,000wfms/s		
Input Coupling	DC, AC, and Ground		
Input Impedance	1MΩ±2%, in parallel with 16pF±10pF		
Probe Attenuation Factors	1X, 10X, 100X, 1000X, 10000X		
Max. input Voltage	400V (DC+AC, PK-PK, 1MΩ input impedance) (10:1 probe attenuation)		
Bandwidth Limit (typical)	20MHz		
Horizontal Scale	5ns/div - 1000s/div, step by 1 - 2 - 5		2ns/div - 1000s/div, step by 1 - 2 - 5
Vertical Sensitivity	10mV/div - 10V/div		
Vertical Resolution	5mV/div - 5V/div (at input)		
Trigger Type	Edge		
Trigger Modes	Auto, Normal, single		
Automatic Measurement	Period, Frequency, Mean, PK-PK, Max, Min, RMS, Rise Time, Fall Time, +Width, -Width		
Cursor Measurement	ΔV, ΔT, ΔT&ΔV between cursors		
Communication Interface	USB Type-C		
Dimension (W x H x D)	198 x 96 x 38 mm		
Device Weight	≈ 0.60 kg		

[Multimeter] Specifications

Max. Resolution	20,000 counts
Testing Mode	Voltage, Current, Resistance, Capacitance, Diode, and Continuity test
Input Impedance	10MΩ
Max Input Voltage	AC 750V, DC 1000V
Max Input Current	DC : 10A AC : 10A
Diode	0 - 2V

[Waveform Generator] Specifications

Frequency Output	Sine	0.1 Hz - 25MHz	Pulse	0.1 Hz - 5MHz
	Square	0.1 Hz - 5MHz	Arbitrary	0.1 Hz - 5MHz
	Ramp	0.1 Hz - 1 MHz		
Sampling Rate	125MSa/s		Waveform Length	8K
Channel	1 -CH		Vertical Resolution	14bits
Amplitude Range	20mVpp - 5Vpp		Output Impedance	50Ω

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Probe



USB Cable



Multimeter Lead



Adapter



Quick Guide



BNC plug to alligator clips cable

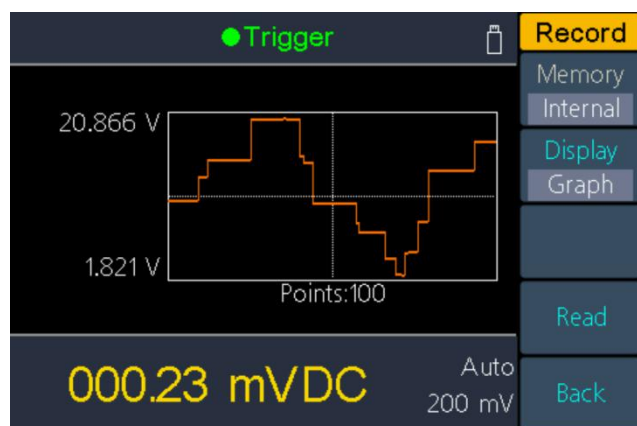
XDM3000 Bench-type Digital Multimeter

- + 4 inch (480x320) TFT LCD
- + 5(1/2) digits, 4(1/2) digits
- + Reading rates up to 150 readings/s
- + True RMS AC voltage / current measurement
- + Dual line display supported
- + SCPI supported - remote control, and data-sharing possible via LAN, USB, RS232 port
- + Multi-IO interface: USB Device / Host, RS232, LAN, and ext.trigger input



Data-logger Mode

during recording the measurement value, possible to set the logging duration (min. 5ms), and length, then get access to chart or table result.



No.	Function	Reading
63	DCV	6.966 V
64	DCV	6.966 V
65	DCV	6.966 V
66	DCV	3.747 V
67	DCV	3.747 V
68	DCV	3.747 V
69	DCV	1.822 V
70	DCV	1.821 V
71	DCV	1.821 V

-000.54 mVDC Auto 200 mV

Model	XDM3051		XDM3041	
Function	Measurement Range	Optimal Accuracy ± (% of reading + LSB)	Measurement Range	Optimal Accuracy ± (% of reading + LSB)
DC Voltage	200mV - 1000V	0.015 ± 0.004	600mV - 1000V	0.02 ± 0.01
True RMS AC Voltage	200mV - 750V	0.2 + 0.05	600mV - 750V	0.2 + 0.06
DC Current	200.000μA - 10.0000 A	0.055 + 0.005	600.000μA - 10.0000 A	0.06 + 0.02
True RMS AC Current	20.0000mA - 10.0000 A	0.50 + 0.10	60.000mA - 10.000 A	0.50 + 0.10
Resistance	200.000 Ω	0.030 + 0.005	600.000 Ω	0.040 + 0.01
	2.00000 k Ω	0.020 + 0.003	6.00000 k Ω	0.030 + 0.01
	20.0000 k Ω	0.020 + 0.003	60.0000 k Ω	0.030 + 0.01
	200.000 k Ω	0.020 + 0.003	600.000 k Ω	0.040 + 0.01
	2.00000 MΩ	0.040 + 0.004	6.00000 MΩ	0.120 + 0.03
	10.0000 MΩ	0.250 + 0.003	60.0000 MΩ	0.90 + 0.03
	100.000 MΩ	1.75 + 0.004	600.000 MΩ	1.75 + 0.03

Model	XDM3051		XDM3041	
Function	Measurement Range	optimal Accuracy ± (% of reading + LSB)	Measurement Range	optimal Accuracy ± (% of reading + LSB)
Diode Test	2.0000v	0.05 ± 0.01	3.0000v	0.5 ± 0.01
continuity	2000Ω	0.05 ± 0.01	1000Q	0.5 ± 0.01
Frequency period	20Hz - 1MHz (200mv - 750V)	0.01 + 0.003	20Hz - 1 MHz (600mv - 750V)	0.01 + 0.003
	20Hz - 10KHz (200mA - 10A)	0.01 + 0.003	20Hz - 10KHz (60mA - 10A)	0.01 + 0.003
Display	240000		66000	

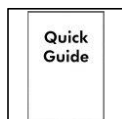
Test Current			
capacitance	Measurement Range	Test current	Accuracy: 1 year ± (% of reading +% of range)
	2.000nF	200nA	3 + 1.0
	20.00nF	200nA	1 + 0.5
	200.0nF	2μA	1 + 0.5
	2.000μF	10μA	1 + 0.5
	200.0μF	100μA	1 + 0.5
	10000μF	1mA	2 + 0.5
Temperature	temperature sensors under 2 categories supported - thermocouple (ITS- 90 conversion between B / E / J / K, N / R / s/T type), and thermal resistance (RTD Sensor conversion between pt100 and pt385 type)		
Miscellaneous	barmeter bar charts, trend chart vavg, vmax, vmin standard deviation DB/ DBm Pass / Fail		
Data-logger Function			
Logging Duration	5ms - 1 000S		
Logging Length	1M Points		
General			
communication Interface	USB Device/Host, RS232, LAN, and ext. trigger input		
Dimension (W X H X D)	235 x 1 10 x 295 (mm)		
Device weight	Approx. 3.00kg		

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



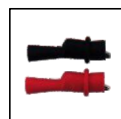
USB Cable



Fuse



Multimeter Lead



Alligator Clip

XDM2041 Bench-type Digital Multimeter

- + 4 inch (480 x 320) high resolution LCD
- + 55,000 counts
- + Up to 65 readings per second
- + True RMS AC voltage / current measurement
- + Dual line display supported
- + Trend analysis accessible in chart mode
- + SCPI supported



	Measurement Range	Accuracy: $\pm$ (of reading + LSB)
DC Voltage	50.000mV - 1000.0V	0.025% + 5
True RMS AC Voltage	500mv - 750v	0.5% + 30
AC Voltage	500uA / 5000uA / 50mA / 500mA	0.15% +20
	5A / 10A	0.5% +10
True RMS AC Current	500uA-500mA	0.5% +20
	5A-10A	1.5% +20
Resistance	500 Ω	0.1% +10
	5K Ω / 50K Ω / 500K Ω	0.1% +5
	5M Ω	0.25% +5
	50M Ω	0.1% +10
Four-wire resistance	500 Ω	0.1% +10
	5K Ω / 50K Ω	0.1% +5
Diode	3.0000 V	
Continuity	1000 Ω	
Frequency	10.000Hz-60MHz	$\pm$ (0.2% +8)
Capacitance	50nF-500uF	2.5% +5
	5mF-50mF	5% +8
Temperature	K-type, PT100	
Display	55,000	
Logging Duration	15ms - 9999.999s	
Logging Length	1,000pts	
General		
Communication Interface	RS232	
Dimensions (W×H×D)	235 x 110 x 295 (mm)	
Device Weight	Approx. 3.00kg	

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



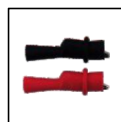
Quick Guide



Fuse



Multimeter Lead



Alligator Clip

XDM1141 Bench-type Digital Multimeter

- + 3.5 inch (480x320) high resolution LCD
- + 55000 counts, DC voltage accuracy up to 0.05%
- + Up to 65 readings per second
- + Dual line display supported
- + SCPI support
- + Data record function, you can record the measured data into internal memory, and then read and process the recorded data with your computer



	Measurement Range	Accuracy $\pm$ (of reading +LBS)
DC Voltage	50.000mV / 500.00mV / 5.0000V / 50.000V	0.05%+5
	500.00V / 1000.0V	0.1%+5
AC Voltage	500mV-750V	1%+30 (20Hz~45Hz)
		0.5%+30 (45Hz~65Hz)
		0.7%+30 (65Hz~1KHz)
DC Current	500.00UA / 5000.0UA / 50.000mA / 500.00mA	0.15%+10
	5.0000A / 10.000A	0.5%+10
AC Current	500UA-500mA	0.5%+20
	5A-10A	1.5%+20
Resistance	500.00 Ω / 5.0000K Ω / 50.000K Ω / 500.00K Ω	0.15%+5
	5.0000M Ω / 50.000M Ω	0.3%+5
Frequency	10.000Hz-60MHz	0.2%+10
Capacitance	50nF-500UF	2.5%+10
	5mF-50mF	5%+10
Diode	3.0000V	1%+10
Continuity	1000.0 Ω	Adjustable threshold
Temperature	K type,PT100	
Logging Duration	15ms-9999.999S	
Dimensions (W x H x D)	200 x 87 x 150 (mm)	
Max Display	55,000	
Logging Length	1,000 points	
Device Weight	$\approx$ 0.45kg	

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



Fuse



Multimeter Lead

XDM1000 Bench-type Digital Multimeter

- + 3.5 inch (480x320) high resolution LCD
- + 55000 counts, DC voltage accuracy up to 0.05%
- + Up to 65 readings per second
- + Dual line display supported
- + Trend analysis accessible in chart mode
- + SCPI support
- + Data record function, you can record the measured data into internal memory, and then read and process the recorded data with your computer
- + models available in AC powering (XDM1041) and lithium battery (XDM1241), suitable for different application scenario



XDM1041 & XDM1241	Measurement Range	Accuracy: $\pm$ (of reading + LSB)
DC Voltage	50.000mV	0.1% + 10
	500.00mV / 5.0000 V/ 50.000 V	0.05% + 5
	500.00 V	0.1% + 5
	1000.0 V	0.1% + 10
True RMS AC Voltage	500mV - 750V	1% + 30 (20Hz-45Hz)
		0.5% + 30 (45Hz-65Hz)
		0.7% + 30 (65Hz-1KHz)
DC Current	500uA	0.15% + 20
	5000uA	0.15% + 10
	50mA	0.15% + 20
	500mA	0.15% + 10
	5 A/ 10 A	0.5% + 10
True RMS AC Current	500uA - 500mA	0.5% + 20
	5 A - 10 A	1.5% + 20
Resistance	500 Ω	0.15% + 10
	5k Ω / 50k Ω / 500k Ω	0.15% + 5
	5M Ω	0.3% + 5
	50M Ω	1% + 10
Diode	3.0000V	1% + 10
Continuity	1000 Ω	Adjustable threshold
Frequency	10.000Hz - 60 MHz	$\pm$ (0.2% + 10)
Capacitance	50nF - 500uF	2.5% + 10
	5mF - 50mF	5% + 10
Temperature	K type, PT100	
Max Display	55,000 counts	
Logging Interval	15m S - 9999.999 S	
Logging Length	1,000 points	
Port	USB port o r RS232 port, choose one of the two	
Dimensions (W×H×D)	200 x 86. 5 x 64 (mm)	
Device Weight	Approx. 0.45 kg	

Specifications subject to change without prior notice.

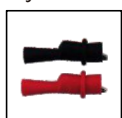
+ Accessories The accessories subject to final delivery.



Quick Guide



Multimeter Lead



Alligator Clip



USB to DC Cord
(XDM1241)



Power Cord
(XDM1041)

HDS100 Oscilloscope Multimeter

- + Max Display 60000 (HDS160), 20000 (HDS120)
- + Automatic Waveform Measurements:
Including Vmax, Vmin, Vp-p, Vavg, Vrms, and frequency
- + User-Friendly Experience: Full Key Design, Easy Operation, and Extends Device Lifespan
- + Intelligent Probe Detection: Automatically switches measurement values based on the probe's insertion position, effectively preventing damage to the instrument due to incorrect operation
- + Efficient Energy Management: Powered by 18650 lithium batteries, providing longer usage time, making your measurement tasks more enduring
- + High-Definition Display: Equipped with a 2.8-inch IPS screen, providing a wide viewing angle and excellent display quality, ensuring clear data reading from any angle
- + Environmentally adaptive display: High-brightness, high-contrast dual-theme mode display provides a clear view in both strong light and dark light environments, optimizing the user experience



Multimeter (HDS160) Specification

	Measurement Range	Optimal Accuracy ± (of reading + LSB)
DC Voltage	60.000mV / 600.00mV / 6.0000V / 60.000V / 600.00V / 1000.0V	±(0.05%+5 dig)
AC Voltage	600.00mV / 6.0000V / 60.000V / 600.00V / 750.00V	±(0.1%+30dig)
DC Current	600.00uA / 6000.0uA / 60.000mA / 600.00mA / 6.0000A / 10.000A	±(0.15%+10dig)
AC Current	600.00uA / 6000.0uA / 60.000mA / 600.00mA / 6.0000A / 10.000A	±(0.5%+20dig)
Resistance	600.00Ω / 6.0000kΩ / 60.000kΩ / 600.00kΩ / 6.0000MΩ / 60.000MΩ	±(0.15%+10dig)
Capacitance	6.000nF / 60.00nF / 600.0nF / 6.000μF / 60.00μF / 600.0μF / 6.000mF / 60.00mF	±(2.0%+20dig)
Frequency	60.00Hz / 600.00Hz / 6.0000kHz / 60.000kHz / 600.00kHz / 6.0000MHz / 60.000MHz	±(0.2%+10dig)
Duty Cycle	0.1%~99.9%(typical value: Vrms=1V,f=100Hz)	±(1.2%+3dig)
	0.1%~99.9%(≥1kHz)	±(2.5%+3dig)
Diode	3.0000V	±(1.0%+10dig)
Continuity	1000.0Ω	
Display	60000	

Other (HDS160, HDS120) Specification

Low battery indication	√	Sleep Mode	√	Relative Measurement	√
Backlight	√	Input Protection	√	Input Impedance	≥10MΩ
Safety Compliance	CATⅢ1000V	LCD Size	2.8" IPS LCD	Device Weight	≈0.4kg
Battery	18650 3.7V	Dimension (L x W x H)		93mm x 41.5mm x 188mm	

Multimeter (HDS120) Specification

	Measurement Range	Optimal Accuracy ± (of reading + LSB)
DC Voltage	20.000mV / 200.00mV / 2.0000V / 20.000V / 200.00V / 1000.0V	±(0.1%+5dig)
AC Voltage	20.000mV / 200.00mV / 6.0000V / 60.000V / 600.00V / 750.00V	±(0.6%+10dig)
DC Current	200.00uA / 2000.0uA / 20.000mA / 200.00mA / 2.0000A / 10.000A	±(0.5%+10dig)
AC Current	200.00uA / 2000.0uA / 20.000mA / 200.00mA / 2.0000A / 10.000A	±(0.8%+10dig)
Resistance	200.00Ω / 2.0000kΩ / 20.000kΩ / 200.00kΩ / 2.0000MΩ / 20.000MΩ / 100.00MΩ	±(0.3%+5dig)
Capacitance	2.000nF / 20.00nF / 200.0nF / 2.000μF / 20.00μF / 200.0μF / 2.000mF / 20.00mF	±(3.0%+10dig)
Frequency	200.00Hz / 2.0000kHz 20.000kHz / 200.00kHz / 2.0000MHz / 20.000MHz	±(0.1%+5dig)
Duty Cycle	0.1%~99.9%(typical value: Vrms=1V,f=100Hz)	±(1.2%+3dig)
	0.1%~99.9%(≥1kHz)	±(2.5%+3dig)
Diode	3.0000V	±(1.0%+10dig)
Continuity	1000.0Ω	
Display	20000	

Oscilloscope (HDS160, HDS120) Specification

Analog Bandwidth	1MHz (only ACV scale)	Max Sample Rate	5.0MSa/s
Channel	1	Input Impedance	≈10MΩ
Time Base Range	2.5uS - 10S/ div	Time Base Accuracy	± (0.01% + 0.1div)
Voltage Vertical Sensitivity Range	30mV - 500V/grid	Current Vertical Sensitivity Range	100μA - 5 A/grid
Vertical Amplitude Accuracy	± (5% + 0.2div)	Measurement Function	Vmax, Vmin, Vp-p, Vavg, Vrms, Hz
Maximum Voltage Limit	1000V DC+AC Peak value	Maximum Current Limit	15A DC+AC Peak value
Trigger Mode	Auto / Normal / Single	Trigger Edge	Rise edge / Fall edge
Auto Set	Time base / Vertical amplitude / Trigger value		

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Quick Guide



Multimeter Lead



USB Cable



Fuse



Bag

OW16/OW18 Smart Multimeter

- + 3 5/6 bit resolution
- + BLE 4.0 wireless transmission, more stable, less power consumption
- + Data Logger + Multimeter + Thermometer
- + Chart and Diagram mode helps to analyze the data tendency
- + Support NCV non-contact voltage sense
- + True RMS test supported
- + Build-in offline record function
- + Widely supported on Android, iOS and Windows



	OW16A / B Measurement Rang	OW18A / B Measurement Rang	Accuracy ± (of reading + LSB)
DC Voltage	600mV / 6.000V / 60.00V / 600.0V		± (0.5%+2dig)
	1000V		± (0.8%+2dig)
AC Voltage	600.0mV		± (2%+5dig)
	6.000V / 60.00V / 600.0V		± (0.8%+3dig)
	750V		± (1%+3dig)
DC Current	---	600.0μ / 6000μ	± (0.8%+2dig)
	60.00mA / 600.0mA		± (0.8%+2dig)
	10.00A / 20.00A		± (1.2%+3dig)
AC Current	---	600.0μ / 6000μ	± (1%+3dig)
	60.00mA / 600.0mA		± (1%+3dig)
	10.00A	20.00A	± (1.5%+3dig)
Resistance	600.0Ω / 6.000kΩ / 60.00kΩ / 600.0kΩ / 6.000MΩ		± (0.8%+2dig)
	60.00MΩ		± (2%+3dig)
Capacitance	60.00nF / 600.0nF / 6.000μ / 60.00μ		± (3%+3dig)
	600.0μ / 6.000mF / 60.00mF		± (3%+5dig)
Frequency	9.999Hz / 99.99Hz / 999.9Hz / 9.999kHz / 99.99kHz / 999.9 kHz / 9.999MHz		± (0.8%+2dig)
Duty Ratio	0. 1%-99.9% (typical value: RMS = 1V,f = 1 kHz)		± (1.2%+3dig)
	0. 1%-99.9% (≥1kHz)		± (2.5%+3dig)
Temperature	- 50 °C - 400°C		± (2.5%+3dig)
	-58 °F - 752 °F		± (4.5%+5dig)
Display	5999		
Frequency Response	(40 - 1000) Hz		
Shift Rate	3 times / second		

OW16 /OW18 Smart Multimeter

	OW18D/E Measurement Rang	Accuracy ± (of reading + LSB)
DC Voltage	2.0000V / 20.000V / 200.00V	±(0.1%+10dig)
	1000.0V	±(0.15%+5dig)
AC Voltage	20.000mV / 200.00mV	±(0.5%+10dig)
	2.0000V / 20.000V / 200.00V	
	750.00V	±(0.8%+10dig)
DC Current	200.00uA	±(0.5%+10dig)
	2.0000mA / 20.000mA/200.00mA	
	20.000A	±(2.0%+10dig)
AC Current	200.00uA	±(0.8%+10dig)
	2.0000mA / 20.000mA / 200.00mA	
	20.000A	±(2.5%+10dig)
Resistance	200.00Ω	±(0.5%+10dig)
	2.0000kΩ	±(0.3%+3dig)
	20.000kΩ / 200.00kΩ / 2.0000MΩ	±(0.3%+1dig)
	20.000MΩ	±(0.5%+1dig)
	200.00MΩ	±(5.0%+10dig)
Capacitance	2.0000nF / 20.000nF / 200.00nF / 2.0000μF / 20.000μF 200. 00μF / 2.0000mF / 20.000mF	±(3.0%+10dig)
Frequency	200. 00Hz / 2.0000kHz	±(0.1%+4dig)
	20. 000kHz / 200.00kHz / 2.0000MHz / 20.000MHz	
Duty Ratio	0. 1%~99.9% (typical value: Vrms= 1V,f= 1kHz)	±(1.2%+3dig)
	0. 1%~99.9% (≥1kHz)	±(2.5%+3dig)
Temperature	- 50 °C ~400°C (0.1°C)	±(1.0%+3°C)
	-58 °F ~ 752 °F(0.1°F)	±(1.2%+6°F)
Display	19999	
Frequency Response	(40 - 1000) Hz	
Shift Rate	3 times / second	

Special Function

Bluetooth Module	OW16B, OW18B, OW18E	Auto Ranging	√
True RMS	√	Automatic-manual Range Selection	√
Diode Test	√	Input Protection	√
LCD Backlight	√	Input Impedance	≥10MΩ
On-off Warning	√	Low-battery Indicator	√
Flashlight	OW18A, OW18B, OW18D, OW18E	NCV	√
Data Hold	√	Relative Measurement	√
Safety Compliance	600V CATⅢ (OW16A, OW16B) , 1000V CATⅢ (OW18A,OW18B, OW18D, OW18E)		
Dimension (W×H×D)	147mm x 74mm x 49mm (OW16A, OW16B) , 190mm x 90mm x56mm (OW18A, OW18B, OW18D, OW18E)		
Weight	0.29 kg(OW16A, OW16B) , 0.32 kg(OW18A, OW18B, OW18D, OW18E)		

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Multimeter Lead



Quick Guide



K-type
Thermocouple



Screw Driver



Alligator Clip
(optional)



9V battery
(optional)



mobile app accessible via
scanning QR code

B/D Series Smart Multimeter

- + function as 3 in 1 : data logger + multimeter + temperature meter
- + multi-connection (more than one device) supported via mobile app
- + the change trend analysis accessible via special chart mode
- + voice warning supported, which assures measurement safety
- + smart voice-reading accessible
- + 4000 / 6000 / 22000 - count full scale reading
- + larger display, easier data-reading; simulated bar chart
- + offline recording function (only in B33+, B35+, B35T+, and B41T+)
- + true RMS value available (only in D35T, B35T, B35T+, and B41T+)
- + Bluetooth 4.0 version - supports mobile device with Android 4.3 or above / iOS 7.0 or above os, and equipped with BLE 4.0 module



Modle: D35, D35T, B35T+, D33, B33 +

	35 Series Measurement Range	33 Series Measurement Range	Optimal Accuracy ± (of reading + LSB)
DC Voltage	60.00mV / 600.0mV / 6.000V / 60.00V / 600.0V / 1000V	400.0mV / 4.000V / 40.00V / 400.0V / 1000V	± (0.5%+2dig)
AC Voltage	60.00mV / 600.0mV / 6.000V / 60.00V / 600.0V / 750V	4.000V / 40.00V / 400.0V / 750V	± (0.8%+2dig)
DC Current	600.0A / 6.000mA / 60.00mA / 600.0mA / 6.000A / 20.00A	400.0μA / 4000μA / 40.00mA / 400.0mA / 4.000A / 10.00A	± (0.8%+2dig)
AC Current	600.0μA / 6.000mA / 60.00mA / 600.0mA / 6.000A / 20.00A	400.0μA / 4000μA / 40.00mA / 400.0mA / 4.000A / 10.00A	± (0.8%+2dig)
Resistance	600.0Ω / 6.000kΩ / 60.00kΩ / 600.0kΩ / 6.000MΩ / 10.00MΩ	400.0Ω / 4.000kΩ / 40.00kΩ / 400.0kΩ / 4.000MΩ	± (0.8%+2dig)
	60.00MΩ	40.00MΩ	± (2%+3dig)
Capacitance	40.00nF / 400.0nF / 4.000μF / 40.00μF	40.00nF / 400.0nF / 4.000μF / 40.00μF	± (2.5%+3dig)
	400.0μF / 4000μF	100.0μF	± (3%+5dig)
Frequency	9.999Hz / 99.99Hz / 999.9Hz / 9.999kHz / 99.99kHz / 999.9 kHz / 9.999MHz	4.999Hz / 49.99Hz / 499.9Hz / 4.999kHz / 49.99kHz / 49.9 kHz / 4.999MHz	± (0.8%+2dig)
Duty Ratio	0.1%-99.9% (typical value: Vrms = 1V, f = 1 kHz)		± (1.2%+3dig)
	0.1% -99.9% (≥1kHz)		± (2.5%+2dig)
Temperature	-50°C -+400°C		± (2.5%+3dig)
	-58°F -+752°F		± (4.5% +5dig)
Display	6000	3999	
Frequency Response	40Hz - 400Hz (D35); (40-1000) Hz (D35T B35T+)	(40-400) Hz	
Shift Rate	3 times / s		

	B41T+ Measurement Range	Optimal Accuracy ± (of reading + LSB)
DC Voltage	220mV, 2.2V, 22V, 220V, 1000V	± (0.1%+5dig)
AC Voltage	220mV, 2.2V, 22V, 220V, 750V	± (0.8%+10dig)
DC Current	220μA, 2200μA, 22mA, 220mA, 20.00A	± (0.5%+10dig)
AC Current	220μA, 2200μA, 22mA, 220mA, 20.00A	± (0.8%+10dig)
Resistance	220Ω, 2.2kΩ, 22kΩ, 220kΩ, 2.2MΩ, 22MΩ, 220MΩ	± (0.5%+10dig)
Capacitance	22nF, 220nF, 2.2μF, 22μF, 220μF, 2.2mF	± (3%+5dig)
	> 220mF	

	B41T+ Measurement Range	Optimal Accuracy ± (of reading + LSB)
Frequency	22.00Hz, 220.0Hz, 22.000kHz, 220.00kHz, 22.00Hz, 2.2000MHz, 22.000MHz	±(0.1%+4dig)
	>220MHz	
Duty Ratio	5.0%-94.9% (typical value: Vrms=1V,f=1kHz) (resolution 0.1%)	±(1.2%+3dig)
	0.1%-99.9% (≥1kHz) (resolution 0.1%)	±(2.5%+3dig)
Temperature	-50°C-400°C (resolution 0.1°C)	±(1.0%+5dig)
	-58 °F-752 °F (resolution 0.1°F)	±(1.2%+6dig)
Display	21999	
Frequency Response	(40-10000)Hz	
Shift Rate	3 times/s	

Special Function			
Auto Ranging	√	Max / Min Value	√
Offline Recording Function	B33+, B35T +, B41T +	Bluetooth Module	B33+, B35T + , B41T +
Record Length	10,000点	LCD Backlight	√
True RMS	B35T +, B41T +	Data Hold	√
Diode Test	√	Relative Measurement	√
Audion Test	35 Series, 41 Series	Input Protection	√
Auto Power-off	√	Input Impedance	10MΩ
On-off Warning	√	Dimension (W x H x D)	85mm x185mmx30mm
Low-battery Indicator	√	Device Weight	≈0. 32kg

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Multimeter Lead

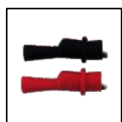


Quick Guide



K-type Thermocouple

Options



Alligator Clip



Multi-function
Test Bench

(excl. D33 / B33 / B33+)



Soft Bag



CMS Smart AC/DC Clamp Meter + Oscilloscope

- + AC/DC clamp meter + Recorder Function + Oscilloscope function 3 in 1
- + 20,000 count true RMS auto-ranging clamp meter
- + Oscilloscope: Capable of measuring both current and voltage waveforms simultaneously
- + Recorder Function: View, compare, analyze, and store measurement data via i-meter (app)
- + Inrush Current Measurement Function
- + support for Android/IOS dual systems
- + Full touch-key operation enables quick switching with one hand
- + 2.8-inch IPS LCD display with wide viewing range makes the values and waveforms clearer
- + Dual theme display adapts to different light environments
- + NCV function
- + 18650 lithium battery meeting the needs of extended operations



Multimeter Function	CMS101 Measurement Range	CMS061 Measurement Range	Optimal Accuracy ± (of reading + LSB)
DC Voltage	20.000mV / 200.00mV / 2.0000V / 20.000V / 200.00V / 1000.0V		± (0.1%+5dig)
AC Voltage	200.00mV / 2.0000V / 20.000V / 200.00V / 1000.0V		± (0.6%+10dig)
DC Current	20.00A / 200.0A / 1000A	20.00A / 200.0A / 600A	± (2.0%+5dig)
AC Current	20.00A / 200.0A / 1000A	20.00A / 200.0A / 600A	± (2.5%+5dig)
Inrush Current	20.00A / 200.0A / 1000A	20.00A / 200.0A / 600A	± (10.0%+10dig)
Resistance	200.0 Ω / 2.0000k Ω / 20.000k Ω / 200.00k Ω / 2.0000M Ω / 20.000M Ω / 100.00M Ω		± (0.3%+5dig)
Capacitance	2.000nF / 20.00nF / 200.0nF / 2.000uF / 20.00uF / 200.0uF / 2.000mF / 20.00mF		± (3.0%+10dig)
Frequency	200.00Hz / 2.0000kHz / 20.000kHz / 200.00kHz / 2.0000MHz / 20.000MHz		± (0.1%+5dig)
Duty Ratio	0.1%-99.9% (Typical: Vrms=1 V, f=100Hz)		± (1.2%+3dig)
	0.1%-99.9% (≥1kHz)		± (2.5%+10dig)

Oscilloscope Specification

Analog bandwidth	Voltage: 1MHz, Current: 1kHz	Channel	1
Sample Mode	Real-time sample	Sample Rate	5.0MSa/s
Input Impedance	10MΩ	Max Input Voltage	1000V
Max Sample Current	1000A	Sensitivity	30mV/div ~ 500V/div
Trigger Mode	Auto	Trigger Type	Rise, Fall
Automatic Measurement	RMS, Period, Freq, Max, Min, PK-PK, Avg	Sampling Depth	4K

Other Function

Bluetooth Module	√	Auto Power-off	√	True RMS	√	Return zero measurement	√
Input Protection	√	Data Hold	√	LCD Backlight	√	Low-battery Indicator	√

Other

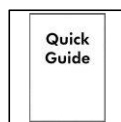
Battery	Single section 18650 3.7V	Display	2.8 inch LCD	Dimension (W x H x D)	248 x 94.5 x 37.8 mm
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Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Multimeter Lead



Quick Guide



USB Cable



Soft Bag

CM2100 & CM2100B Smart Clamp Meter

- + AC/ DC current, AC/ DC voltage
- + 20000 count true RMS automatic range clamp meter
- + Standard non-contact AC voltage sensing (NCV) function
- + VFC mode can filter high-frequency interference signals to ensure accurate measurement data.
- + AC frequency response up to 1000Hz
- + Small size, easy to carry
- + Bluetooth communication function, supporting Android and Apple phones, enabling remote data viewing and instrument control (2100B)
- + Support the recording function, record and analyze the measured values, share the recorded data, and work together (2100B)



	Range	Accuracy ± (of reading + LSB)
AC Current	2.000A	±(3% +10dig) in VFC ± (4%+10)
	20.00A / 100.0A	±(2.5% +5dig) in VFC ± (4%+10)
AC Voltage	2.0000V / 20.000V / 200.00V / 600.0V	±(0.8% +10dig) in VFC ± (4%+3)
DC Current	2.000A	±(2% +8dig)
	20.00A / 100.0A	±(2% +3dig)
DC Voltage	200.00mV	±(0.7% +10dig)
	2.0000V / 20.000V / 200.00V / 600.0V	±(0.5% +5dig)
Resistance	200.0Ω	±(0.8% +10dig)
	2.0000kΩ	±(0.5% +10dig)
	20.000kΩ / 200.00kΩ / 2.0000MΩ	±(0.5% +10dig)
	20.000MΩ	±(1% +10dig)
	200.00MΩ	±(5.0% +10dig)
Capacitance	2.000nF	±(4.0% +10dig)
	20.00nF/ 200.0nF/2.000uF/ 20.00uF / 200.0uF / 2.000mF/ 20.00mF	±(3.0% +10dig)
Frequency	200.00Hz / 20.000kHz / 200.00kHz / 2.0000MHz / 20.000MHz	±(0.1% +5dig)
Duty cycle	0.1% - 99.9% (typical: Vrms = 1 V, f = 1 kHz)	±(1.2% +3dig)
	0.1% - 99.9% (≥1kHz)	±(2.5% +3dig)

Other Special

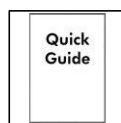
Auto Ranging	√	Zero	√	Display	20000 counts
Date Hold	√	Low-battery Indicator	√	Frequency Responses	40Hz - 1000Hz
Diode	√	Relative Measurement	√	Bluetooth Module	√ (only for CM2100B)
Continuity Buzzer	√	Input Protection	√	In put Impedance	≥10MΩ
VFC	√	Over range Alarm	√	Jaw Capacity	17mm
NCV	√	On-off Warning	√	Battery	2 x 1.5V AAA
Dimension (L x W x D)	182mm x 57mm x 32mm			Device Weight	Approx. 0.2kg

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Multimeter Lead



Quick Guide



Screw Driver



Soft Bag



Battery (1.5VAAA,optional)

HSA2000 Handheld Multifunction Spectrum Analyzer

- + All-in-One: Spectrum Analyzer + Oscilloscope + Multimeter
- + Spectrum Analyzer: 9kHz to 3GHz frequency range, 1Hz frequency resolution
- + Oscilloscope: 70MHz-200MHz bandwidth, 250MSa/s sampling rate, 8K memory depth
Up to 10,000wfms/s waveform refresh rate, supports auto measurements
- + Multimeter: 4 1/2 digits multimeter, supports standard measurements of voltage, current resistance, capacitance, diode, and continuity testing
- + Standard USB Type-C interface, supports PC communication



[Digital Oscilloscope] Specification

Model	HSA2307	HSA2310	HSA2320
Bandwidth	70MHz	100MHz	200MHz
Max Sample Rate	250MSa/s	500MSa/s	1GSa/s
Channel	Dual	Acquisition Model	Sample, Peak
Record Length	8K	Waveform Refresh Rate	10000wfms/s
Probe Attenuation	1X, 10X, 100X, 1000X, 10000X	Sampe Rate Range	5ns/div - 1000s/div, Step by 1-2-5
Vertical Resolution	10mV/div - 10V/div	Trigger Type	Edge
Trigger Model	Auto, Normal, Single	Cursor Measurement	ΔV , ΔT
Automatic Measurement	Period, Frequency, Mean, PK-PK, Max, Min, RMS, Rise Time, Fall Time, +Width, -Width		

[Spectrum Analyzer] Specification

Frequency Range	9 kHz to 3 GHz	Frequency Resolution	1 Hz
Frequency sweep range	0 Hz, 1 Hz to the maximum frequency of the instrument	Max input DC voltage	50V
SSB Phase Noise (20°C-30°C, fc=1GHz)	< -76dBc/Hz (type)@10kHz < -62dBc/Hz (type)@100KHz		
Resolution Bandwidth(-3 dB)	200 Hz to 850 kHz, steps by 200Hz-1-3-10-30-100-300-600-850KHz		
Displayed average noise level(DANL) Input attenuation 0 dB, 100kHz resolution bandwidth 20°C-30°C			
10MHz to 2GHz	-126dBm(type), <-116dBm	2 GHz to 3 GHz	-121dBm(type), <-111dBm

[Multimeter] Specification

Full scale reading	4 1/2 digits (max 20000 count)	Testing Modes	Voltage, Current, Resistance, Capacitance, Diode, Continuity
Input Resistance	10M Ω	Diode	0-2V
DC Voltage	200.00mV - 1000.0V	AC Voltage	200.00mV - 750.00V
DC Voltage	200.00mA-10.000A	AC Current	200.00mA -1 0.000A
Resistance	200.00 Ω - 100.00M Ω	Capacitance	20.000nF - 20.000mF

[Other] Specification

Display	3.5 inch LCD	Communication Interface	USB TYPE-C	Battery	Power adapter / Battery
Dimension (L x W x D)	198 × 96 × 38 mm		Device Weight	0.6 kg	

Specifications subject to change without prior notice.

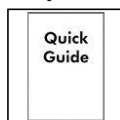
+ Accessories The accessories subject to final delivery.



Power Cord



Probe



Quick Guide



USB to Type-C Cable



Multimeter Lead

XSA3000-R Real-Time Spectrum + Network Analyzer

- + Frequency range 9 kHz-8 GHz
- + 40 MHz maximum real-time analysis bandwidth
- + Spectrum FFT acquisition capacity 200,000 frames with Fast Refresh Rate
- + -165dBm/Hz displayed average noise level(DANL)
- + Phase Noise <-106dBc/Hz@1GHz and offset at 10kHz
- + Vector network analysis VNA function (software optional)
- + EMI Pre-compliance Measurement Function
- + 10.4-inch multi-touch screen



Model	XSA3036-R	XSA3060-R	XSA3080-R
Frequency Range	9kHz-3.6 GHz	9kHz-6 GHz	9kHz-8 GHz
Resolution Bandwidth(RBW)	1Hz-3MHz		
DANL	-165dBm/Hz		
SSB Phase Noise	-98dBc/Hz		
Third-order Intercept Point(TOI)	+14dBm		
Amplitude Accuracy	< 0.7 dB		
Tracking generator (optional)	100kHz-3.6GHz	100 kHz-5GHz	100 kHz-8GHz
Real-time Analysis Bandwidth	25MHz, 40MHz		
Spurious-Free Dynamic Range (SFDR)	60dB		
100% Response Shortest Signal Duration	7.20uS		
Real-time Spectrum View	Probability Density Spectrum, Waterfall Chart, Time Power Spectrum, and 3D Spectrum		
Vector Network Analysis,(VNA)	Vector S11, Vector S21		
Network Analysis Dynamic Range	90dB		
Cable Fault Location	Distance to fault		
Advanced Measurement Functions	CHP, ACPR, OBW, CNR, Harmonic, TOI, Monitor		
Vector Signal Analysis	AM, FM, ASK, FSK, MSK, PSK, QAM		
Electromagnetic Compatibility Testing	EMI Filter and Quasi-Peak Detector, Log Scale and Limit Line		
Communication interfaces	LAN, USB Device, USB Host(USB - GPIB)		
Remote Control Capability	SCPI / Labview / IVI based on USB-TMC / VXI-11/Socket / Telnet		
Remote Controller	NI-MAX, Web Browser, Easy Spectrum software, File Explorer		
Dimension (W x H x D)	421mm x 221mm x 115mm		
Device Weight	≈5.0kg		

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



USB Cable



Quick Guide

XSA800 Spectrum Analyzer

- + Frequency range 9kHz - 1.5GHz
- + -160dBm Displayed Average Noise Level (DANL)
- + Phase noise -80dBc/Hz @1GHz and offset at 10 kHz
- + Total amplitude accuracy <0.7 dB
- + 1Hz minimum resolution bandwidth (RBW)
- + Optional EMI Pre-Test function, optional EMC test software
- + Optional tracking generator(standard tracking generator hardware, can be remotely upgraded according to needs)
- + Waterfall plot graphic, modulation signal quality analysis, audio demodulation ect. multiple general and extended test functions.
- + Standard Pass/Fail on-site test and alert function
- + Multiple interfaces: USB Host, USB Device, LAN, earphone interface, HDMI
- + 9-inch LCD, high resolution 1280×800 pixels



Model		XSA805	XSA810	XSA815
Frequency Range		9kHz to 500MHZ	9kHz to 1Ghz	9kHz to 1. 5GHz
Frequency Resolution		1 Hz		
Reference frequency aging rate		< 1 ppm/year		
SSB Phase Noise(20°C to 30°C , fc = 500 MHz)				
Carrier Offset	10 kHz	< -80dBc/ Hz		
	100 kHz	< -100dBc/ Hz		
	1 MHZ	< -115dBc/ Hz		
Resolution Bandwidth (-3 dB)		1 Hz to 1 MHz, in 1 -3-5-10 sequence		
Video Bandwidth (-3 dB)		10 Hz to 1 MHz, in 1 -3-5-10 sequence		
Display Average Noise Level (DANL)		Preamp on, Input attenuation = 0 dB, RBW =VBW = 100 Hz, sample detector, trace average ≥ 50, 20°C to 30°C , input impedance = 50 Ω)		
100 kHz to 1 MHz		-135 dB m (Typical), <-128 dB m		
1 MHz to 500MHZ		-160 dB m (Typical), <-150 dB m		
500 MHz to the upper		——	-158 dB m (Typical), <-148 dB m	
Trace detectors		positive-peak , negative-peak , normal, sample, RMS, voltage average, quasi-		
Units of level axis		dB m, dBμW, dBpW, dB mV, dBμV, W, V		
Tracking generator frequency (optional)				
Range		100 kHz to the upper frequency limit		
Output power level range		-40 dB m to 0 dB m		
Output level resolution		1 dB		
Interface		USB Host, USB Device, LAN, earphone interface, HDMI		
Display		9-inch TFT LCD, 1280 x 800 pixels		
Dimension (W x H x D)		375mm x 185mm x 120mm		
Device Weight		≈3.7kg		

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



N-BNC

XSA1000P Spectrum Analyzer

- + Frequency range 9kHz - 7.5GHz
- + -163dBm Displayed Average Noise Level (DANL)
- + Phase noise -106dBc/Hz @1GHz and offset at 10 kHz
- + Total amplitude accuracy <0.7 dB
- + 1 Hz minimum resolution bandwidth (RBW)
- + Optional EMI Pre-Test function, optional EMC test software
- + Waterfall plot graphic, modulation signal quality analysis, audio demodulation, ect. multiple general and extended test functions.
- + Standard Pass/Fail on-site test and alert function
- + Adopt all-digital intermediate frequency technology
- + Multiple interfaces: USB Host, USB Device, LAN, earphone interface, HDMI
- + 10.4-inch multi-touch screen



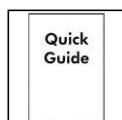
Model	XSA1015P	XSA1036P	XSA1075P
Frequency Range	9 kHz - 1.5 GHz	9 kHz - 3.6 GHz	9 kHz - 7.5 GHz
Frequency Resolution	1 Hz		
Aging rate	<1 ppm/Year		
Phase Noise (fc = 1GHz)	<-106dBc/ Hz @ 10 kHz offset		
Resolution Bandwidth (-3dB) (RBW)	1 Hz to 1 MHz (1 -10 steps by sequence)		
Video Bandwidth(-3dB)(VBW)	10 Hz to 3 MHz		
Display Average Noise Level (DANL)	(Preamp on, Input Attenuation = 0 dB, Sample Detector, Trace Average ≥20, 20°C to 30°C, Input Impedance = 50 Ω, RBW normalizes to 1 Hz)		
100 kHz - 1 MHz	-135 dB m (Typical)		
1 MHz - 500 MHz	-160 dB m (Typical)		
500 MHz - 1. 5 GHz	-158 dB m (Typical)		
1. 5 GHz - 3.6 GHz	——	-158dBm (Typical)	-158dBm (Typical)
3.6 GHz - 6 GHz	——	——	-154dBm (Typical)
6 GHz - 7. 5 GHz	——	——	-149dBm (Typical)
Detectors	Positive-peak, negative-peak, normal, sample, RMS avg, voltage avg, quasi-peak		
Trace functions	Clear write, Max Hold, Min Hold, View, Blank, Average		
level unit	dB m, dBuW, dBpW, dB mV, dBuV, W, V		
Tracking generator	100kHz - 1. 5GHz (Tracking generator)	100 kHz - 3.6GHz (Tracking generator) 35 MHz - 3.6 GHz (Signal generator)	100 kHz - 7. 5 GHz (Tracking generator, optional)
Output power level range	-30dBm - 0dBm	-40dBm - 0dBm	
Output power level resolution	1 dB		
Communication Port	USB HOST, USB DEVICE, LAN, earphone port, VGA, REF		
Display	10.4 inches TFT LCD		
Dimension (W x H x D)	421mm x 221mm x 115mm		
Device Weight	≈5.0kg		

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



N-BNC

HSA1000 Handheld Spectrum Analyzer

- + Frequency Range from 9 kHz up to 7.5 GHz
- + -160dBm Displayed Average Noise Level
- + Phase Noise -80dBc/Hz @1Gz and offset at 10kHz
- + Total Amplitude Accuracy <1.5dB
- + 10Hz Minimum Resolution Bandwidth (RBW)
- + Standard GPS receiver, optional antenna, the latitude/longitude information and test information can be recorded
- + Li-ion battery, operating life up to 4 hours, easy replacement, you can purchase extra batteries for longer test time.
- + 8-inch (1024*768) IPS LCD touchscreen, built-in light sensor to adjust the screen backlight according to the environmental light.



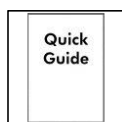
Model	HSA1016(TG)	HSA1036(TG)	HSA1075(TG)
Frequency Range	9 kHz - 1.6 GHz	9 kHz - 3.6 GHz	9 kHz-7. 5 GHz
Frequency Resolution	1 Hz		
Aging rate	<1ppm/Year		
Phase Noise (fc = 1GHz)	<-98dBc/ Hz @ 10 kHz offset		
Resolution Bandwidth (-3dB) (RBW)	10 Hz to 500 kHz (1 -10 steps by sequence), 1 MHz, 3 MHz		
Video Bandwidth(-3dB)(VBW)	10Hz to 3MHz		
Display Average Noise Level (DANL)	(Input Attenuation = 0 dB, Sample Detector, Trace Average ≥20, 20°C to 30°C, Input Impedance = 50 Ω, RBW normalizes to 1 Hz)		
100 kHz - 1 MHz	-135 dB m (Typical)		
1 MHz - 500MHz	-160 dB m (Typical)		
500MHz - 1. 5 GHz	-158 dB m (Typical)		
1. 5GHz - 3.6GHz	——	-158dBm (Typical)	
3.6GHz - 6GHz	——	——	-154dBm (Typical)
6GHz - 7. 5GHz	——	——	-149dBm (Typical)
Detectors	Positive-peak , negative-peak , sample, normal, RMS		
Trace functions	Clear write, Max Hold, Min Hold, View, Blank , Average		
level unit	dB m, dBuW, dBpW, dBmV, dBuV, W, V		
Tracking generator (optional)	100 kHz-1.6 GHz	100 kHz-3.6 GHz (Tracking generator) 35 MHz-3.6 GHz (Signal generator)	
Output power level range	-30 dB m-0 dB m		
Output power level resolution	1dB		
Communication Port	USB HOST, USB DEVICE, LAN, earphone port		
Display	8 inch touch LCD		
Dimension (W x H x D)	265mm x 190mm x 58mm		
Device Weight	≈2.5kg		

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Adapter



GPS antenna



Metal Case



Carrying Case
(optional)

ORF5060 Near-Field Electromagnetic Probe



Model	ORF5060
Frequency Range	9 kHz - 6 GHz
Port Type	
Port Type	SMA type
Adapter	N-SMA
RF Cables	SMA-J-SMA-J-1000mm Semi-flexible Cable
Port and Adapter Impedance	50Ω
General Specifications	
Operating Temperature	0°C-50°C
Storage Temperature	-20°C-70°C

Specifications subject to change without prior notice.

Options The accessories subject to final delivery.



N-N Cable



N-SMA Cable



SMA-SMA Cable



SMA-SMA Cable



N-BNC

XDG2000 Dual-channel Arbitrary Waveform Generator

- + Max 100MHz frequency output
- + 500MSa/s Sample rate, Vertical resolution 1 μ Hz
- + 14 bits Vertical Resolution, 10Mbit waveform length
- + Comprehensive waveform output : 6 basic waveforms, and 170 built-in arbitrary waveforms
- + Comprehensive modulation functions : AM, DSB-AM, FM, PM, ASK, FSK, PSK, BPSK, QPSK, 3FSK, 4FSK, OSK, PWM and SUM
- + High-accuracy frequency counter integrated, supported range 100mHz - 200MHz
- + SCPI, and LabVIEW supported
- + 7 inch (800 $\times$ 480 pixels) LCD



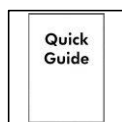
Model	XDG2100	XDG2080	XDG2060	XDG2035
Channel	2			
Frequency Output	100MHz	80MHz	60MHz	35MHz
Sample Rate	500MSa/s			
Waveform				
Standard Waveform	sine, square, pulse, ramp, noise, and harmonic			
Arbitrary Waveform	exponential rise, exponential fall, sin(x)/x, step wave, and others, total 170 built-in waveforms, and user-defined arbitrary waveform			
Frequency (resolution 1μHz)				
Sine	1μHz-100MHz	1μHz-80MHz	1μHz-60MHz	1μHz-35MHz
Square	1μHz - 30MHz	1μHz - 30MHz	1μHz - 30MHz	1μHz - 15MHz
Pulse	1μHz - 25MHz	1μHz - 25MHz	1μHz - 25MHz	1μHz - 15MHz
Ramp	1μHz - 3MHz	1μHz - 3MHz	1μHz - 3MHz	1μHz - 3MHz
Noise (-3 dB, typical)	60MHz	60MHz	60MHz	30MHz
Arbitrary Waveform	1μHz -15MHz	1μHz -15MHz	1μHz -15MHz	1μHz -15MHz
Harmonic	1μHz -50MHz	1μHz -40MHz	1μHz -30MHz	1μHz -17.5MHz
Waveform Length	2 points -10M points			
Amplitude				
into 50Ω load	1mVpp - 10Vpp (≤ 25MHz), 1mVpp - 5Vpp (≤60MHz), 1mVpp - 2.5Vpp (≤100MHz),			
Modulation				
Type	AM, DSB - AM, FM, PM, ASK, FSK, PSK, BPSK, QPSK, 3FSK, 4FSK, OSK, PWM, SUM			
Frequency Counter				
Function	Frequency, period, +width, -width, +duty, and -duty			
Frequency Range	100mHz - 200MHz			
Input / Output				
Input Mode	frequency counter, external modulation input, external trigger input, Internal clock output, external reference clock input / output			
Communication Interface	USB Host, USB Device,LAN, RS232 (optional)			
Mechanical specifications				
Dimension (W x H x D)	340 x 177 x 90 mm,			
Device Weight	Approx. 2.5kg			

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



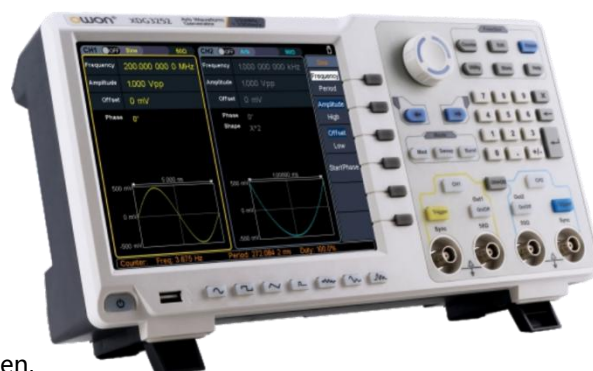
USB Cable



Q9 Cable

XDG Dual-channel Arbitrary Waveform Generator

- + Advanced DDS technology, Max 250MHz frequency output
- + Max 1.25GS/s sample rate, and 1μHz frequency resolution
- + Vertical Resolution :14 bits, max 1M arb waveform length
- + Comprehensive waveform output : 6 basic waveforms, and 152 built-in arbitrary waveforms
- + Comprehensive modulation functions : AM, FM, PM, FSK, 3FSK, 4FSK, PSK, OSK, ASK, BPSK, PWM, Sweep, and Burst
- + High-accuracy frequency counter integrated, supported range 100mHz - 200MHz
- + SCPI, and LabVIEW supported
- + 8 inch (800 x 600) high resolution LCD, multi-point touch screen, more user-friendly operation experience



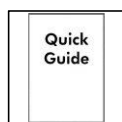
Model	NDG202	NDG162	NDG122	NDG102	NDG082
Channel	2				
Frequency Output	200MHz	160MHz	120MHz	100MHz	80MHz
Sample Rate	1.25GSa/s				
Waveform					
Standard Waveform	Sine, Square, Pulse, Ramp, Noise, and Harmonic				
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin (x)/x, Step Wave, and others, total 152 built-in waveforms, and user-defined arbitrary waveform				
Frequency (resolution 1μHz)					
Sine	1μHz - 200MHz	1μHz - 160MHz	1μHz - 120MHz	1μHz - 100MHz	1μHz - 80MHz
Square	1μHz - 50MHz	1μHz - 50MHz	1μHz - 50MHz	1μHz - 40MHz	1μHz - 30MHz
Pulse	1μHz - 25MHz				
Ramp	1μHz - 5MHz				
Noise (-3 dB, typical)	120MHz				
Wave Length	2 - 1 M pts				
Amplitude					
Amplitude (high resistance)	2mVpp - 20Vpp (≤40MHz), 2mVpp - 10Vpp (≤80MHz), 2mVpp - 5Vpp (≤120MHz), 2mVpp - 2Vpp (≤200MHz)				
Modulation					
Type	AM, FM, PM, PWM, FSK, 3FSK, 4FSK, PSK, OSK, ASK, BPSK, sweep, and burst				
Frequency Counter					
Function	Frequency, Period, +Width, -Width, +Duty, and -Duty				
Frequency Range	7 digits 100mHz - 200MHz				
Input / Output					
Input Mode	counter, external modulation input, external trigger input, external reference clock input / output				
Communication Interface	USB Host, USB Device, LAN				
Mechanical					
Dimension (W x H x D)	340 x 177 x 90 mm				
Device Weight	Approx. 2. 50 kg				

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Q9 Cable

AG-S Single-channel Arbitrary Waveform Generator

- + Advanced DDS technology, up to 10MHz frequency output
- + 125MS/s sample rate, and 1uHz frequency resolution
- + Vertical Resolution : 14 bits, and 8K Arb waveform length
- + Comprehensive waveform output :
5 basic waveforms, and 45 built-in arbitrary waveforms
- + Comprehensive modulation functions :
AM, FM, PM, FSK, Sweep, and Burst
- + SCPI, and LabVIEW supported
- + 4 inch high resolution (480 x 320 pixels) LCD



CE

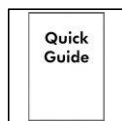
Model	AG051	AG051F	AG1011	AG1011F
Channel	single + trigger			
Frequency Output	5MHz		10MHz	
Sample Rate	125MSa/s			
Vertical Resolution	14bits			
Waveform				
Standard Waveform	Sine, Square, Pulse, Ramp, and Noise			
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin (x)/x, Step Wave, and others, total 45 built-in waveforms, and user-defined arbitrary waveform			
Frequency (resolution 1μHz)				
Sine	1μHz - 5MHz		1μHz - 10MHz	
Square	1μHz - 5MHz			
Pulse	1μHz - 5MHz			
Ramp	1μHz - 1MHz			
Noise (-3 dB, typical)	5MHz			
Wave Length	1μHz - 5MHz			
Amplitude Range	1mVpp - 12.5Vpp (50Ω), 1mVpp - 25Vpp (high impedance)			
Modulation (optional)				
Modulation Waveform	/	AM, FM, PM, FSK, Sweep, Burst	/	AM, FM, PM, FSK, Sweep, Burst
Modulation Frequency	/	2mHz - 20.00 kHz (FSK 2mHz - 100kHz)	/	2mHz - 20.00 kHz (FSK 2mHz - 100kHz)
Input / Output				
Display	4 inch (480 x 320 pixels) TFT LCD			
Input Mode	external reference clock input	external modulation input, external trigger input, and external reference clock input	external reference clock input	external modulation input, external trigger input, and external reference clock input
Communication Interface	USB Device			
Mechanical				
Dimension (W x H x D)	235 ×110× 295 mm			
Device Weight	Approx. 3.00 kg			

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Q9 Cable

AG Dual-channel Arbitrary Waveform Generator

- + Advanced DDS technology, max 60MHz frequency output
- + Up to 300MS/s sample rate, and 1uHz 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
- + SCPI, and LabVIEW supported
- + 4 inch high resolution (480 x 320 pixels)LCD
- + could work with OWON SDS Series DSO smoothly



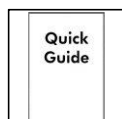
Model	AG1012	AG1012F	AG1022	AG1022F	AG2052F	AG2062F
Channel	2					
Frequency Output	10MHz		25MHz		50MHz	60MHz
Sample Rate	125MSa/s				300MSa/s	
Vertical Resolution	14bits					
Waveform						
Standard Waveform	Sine, Square, Pulse, Ramp, and Noise					
Arbitrary Waveform	Exponential Rise, Exponential Fall, 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 - 5MHz		1μHz - 25MHz	1μHz - 30MHz
Pulse	1μHz - 5MHz		1μHz - 5MHz		1μHz - 10MHz	1μHz - 15MHz
Ramp	1μHz - 1MHz					
Noise (- 3 dB, typical)	25MHz					
Wave Length	2 - 8Kpts				2 - 1 Mpts	
Amplitude						
Amplitude Range	1mVpp - 10Vpp (50Ω), 1mVpp - 20Vpp (high impedance)					
Modulation (excl. AG1012, AG1022)						
Modulation Waveform	AM, FM, PM, FSK,Sweep, Burst				AM, FM, PM, FSK, PWM, Sweep, Burst	
Modulation Frequency	2mHz to 20.00KHz (FSK 2mHz - 100KHz)					
Mechanical						
Dimension (W x H x D)	235mm ×110mm × 295mm					
Device Weight	Approx. 3.00 kg					
Power Amplifier Module (optional)						
Bandwidth (at full power)	DC - 100kHz	Max Output Power		10W	Max Input Voltage	22Vpp

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Q9 Cable

DGE3000 Arbitrary Waveform Generator

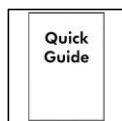
- + Up to 60MHz frequency output, Max 300MSa/s sample rate
- + Vertical Resolution :14 bits, max 100K Arb waveform length
- + Comprehensive waveform output: 5 basic waveforms, and 160 built-in arbitrary waveforms
- + Comprehensive modulation functions: AM, FM, PM, PWM, FSK, 3FSK, 4FSK, PSK, ASK, BPSK, OSK, DSB-AM and QPSK
- + SCPI and LabVIEW supported
- + 3.6 inch TFT LCD, all settings can be fully displayed



Model	DGE3032	DGE3062	DGE3031	DGE3061
Channel	2		1	
Frequency Output	30MHz	60MHz	30MHz	60MHz
Sample Rate	125MSa/s	300MSa/s	125MSa/s	300MSa/s
Standard Waveform	sine, square, pulse, ramp, noise			
Arbitrary Waveform	exponential rise, exponential fall, sin(x)/x, step wave, and others, total 160 built-in waveforms			
Frequency (resolution 1μHz)				
Sine	1μHz - 30MHz	1μHz - 60MHz	1μHz - 30MHz	1μHz - 60MHz
Square	1μHz - 15MHz	1μHz - 20MHz	1μHz - 15MHz	1μHz - 20MHz
Pulse	1μHz - 15MHz	1μHz - 20MHz	1μHz - 15MHz	1μHz - 20MHz
Ramp	1μHz - 1MHz	1μHz - 2MHz	1μHz - 1MHz	1μHz - 2MHz
Noise (- 3 dB, typical)	20MHz			
Arbitrary Waveform	1 μHz -10MHz, waveform length: 2-8k points			
Amplitude				
Amplitude Range	high resistance: 2mVpp - 20Vpp (≤10MHz), 2mVpp - 10Vpp (≤60MHz) 50Ω: 1mVpp - 10Vpp (≤10MHz), 1mVpp - 5Vpp (≤60MHz)			
DC Offset Range (AD+DC)	±(10Vpk - Amplitude Vpp/2) high resistance, ±(5Vpk -Amplitude Vpp/2) 50 Ω			
Modulation				
Type	AM, FM, PM, PWM, FSK, 3FSK, 4FSK, PSK, ASK, BPSK, OSK, DSB - AM, QPSK, SUM, Sweep, Burst			
Frequency Counter Function	frequency, period			
Frequency Range	100mHz - 200MHz, 7 digits			
Input / Output				
Input mode	external modulation input, external trigger input, external reference clock input / output			
Communication Interface	USB Host, USB Device			
Dimension (W x H x D)	200mm x 92mm x 157 mm			
Device Weight	Approx. 0.80 kg			

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Quick Guide



USB to DC Cord



Power Adapter



BNC to Alligator Clips



Q9 Cable
(only for DGE3032, DGE3062)

DGE2000 Arbitrary Waveform Generator

- + Up to 70MHz frequency output, Max 300MSa/s sample rate
- + Vertical Resolution :14 bits, max 8K Arb waveform length
- + Comprehensive waveform output :
5 basic waveforms, and 150 built-in arbitrary waveforms
- + Comprehensive modulation functions :
AM, FM, PM, FSK, Sweep, Burst
- + SCPI, and LabVIEW supported
- + 3.6 inch TFT LCD, all settings can be fully displayed



CE

Model	DGE2035	DGE2070
Channel	2	
Frequency Output	35MHz	70MHz
Sample Rate	125MSa/s	300MSa/s
Standard Waveform	sine, square, pulse, ramp, and noise	
Arbitrary Waveform	exponential rise, exponential fall, s in (x)/x, step wave, and others, total 150 built-in waveforms, and user-defined arbitrary waveform	
Frequency (resolution 1μHz)		
Sine	1μHz - 35MHz	1μHz - 70MHz
Square	1μHz - 15MHz	1μHz - 20MHz
Pulse	1μHz - 15MHz	1μHz - 20MHz
Ramp	1μHz - 1MHz	1μHz - 2MHz
Noise (-3 dB, typical)	20MHz	
Arbitrary Waveform	1 μHz -10MHz, waveform length: 2-8 k points	
Amplitude (Unless otherwise specified, the load is assumed to be 50Ω.)		
Amplitude Range	1mVpp - 8Vpp (≤10MHz), 1mVpp - 5Vpp (≤70MHz)	
DC Offset Range (AD+DC)	±(10 Vpk - Amplitude Vpp/2) high resistance; ±(5Vpk - Amplitude Vpp/2) 50 Ω	
Modulation		
Type	AM, FM, PM, FSK, Sweep, Burst	
Internal Modulation Frequency	2mHz-100kHz	
Input / Output		
Display	3.6-inch TFT LCD with resolution 480 x 272	
Communication Interface	USB Device	
Dimension (W×H×D)	200 x 68.5mm x 74 mm	
Device Weight	Approx. 0.50 kg	

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Quick Guide



USB to DC Cord



Power Adapter



Q9 Cable

BNC to
Alligator Clips

DGE1000 Single-channel Arbitrary Waveform Generator

- + Up to 60MHz frequency output, Max 300MSa/s sample rate
- + Vertical Resolution :14 bits, max 8K Arb waveform length
- + Comprehensive waveform output :
5 basic waveforms, and 150 built-in arbitrary waveforms
- + Comprehensive modulation functions :
AM, FM, PM, FSK, Sweep, Burst
- + SCPI, and LabVIEW supported
- + 3.6 inch TFT LCD, all settings can be fully displayed



Model	DGE1030	DGE1060
Channel	1	
Frequency Output	35MHz	60MHz
Sample Rate	125MSa/s	300MSa/s
Standard Waveform	sine, square, pulse, ramp, and noise	
Arbitrary Waveform	exponential rise, exponential fall, $\sin(x)/x$, step wave, and others, total 150 built-in waveforms, and user-defined arbitrary waveform	
Frequency (resolution 1μHz)		
Sine	1μHz - 35MHz	1μHz - 60MHz
Square	1μHz - 15MHz	1μHz - 20MHz
Pulse	1μHz - 15MHz	1μHz - 20MHz
Ramp	1μHz - 1MHz	1μHz - 2MHz
Noise (- 3 dB, typical)	20MHz	
Arbitrary Waveform	1 μHz -10MHz, waveform length: 2-8 k points	
Amplitude (Unless otherwise specified, the load is assumed to be 50Ω.)		
Amplitude Range	1mVpp - 8Vpp (≤10MHz), 1mVpp - 5Vpp (≤70MHz),	
DC Offset Range (AD+DC)	± (10Vpk – Amplitude Vpp/2) high resistance; ± (5Vpk – Amplitude Vpp/2) 50 Ω	
Modulation		
Type	AM, FM, PM, FSK, Sweep, Burst	
Internal Modulation Frequency	2mHz - 100kHz	
Input / Output		
Display	3.6-inch TFT LCD with resolution 480 x 272	
Communication Interface	USB Device	
Dimension (W×H×D)	200 x 68.5mm x 74 mm	
Device Weight	Approx. 0.50 kg	

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Quick Guide



USB to DC Cord



Power Adapter



BNC to
Alligator Clips

OWH67 High Power DC Power Supply

- + ½ 2U standard 19-inch rack
- + Supports wide voltage input (85V-265V)
- + High precision constant power output of 1200W/1500W/3000W, wider output voltage/current range
- + High output resolution 10mV / 1mA
- + Supports 100-step LIST waveform programmable output
- + CV / CC priority, with adjustable rise/fall time
- + Built-in discharge circuit for output
- + Supports photovoltaic simulator output function, embedded with EN50530, Sandia and other PV standard curves for direct evaluation of PV inverter MPPT efficiency.
- + Supports analog input and output as well as dry contact functionality
- + 3.9" TFT LCD, capable of real-time display of voltage/current/power curves and online recording of 1 -minute data



3.9" TFT LCD color screen displays real-time voltage/current curves, records 1-minute data online, and integrates source-meter capabilities for easy detection and capture of load anomalies.



Programmable LIST Waveform Output Function

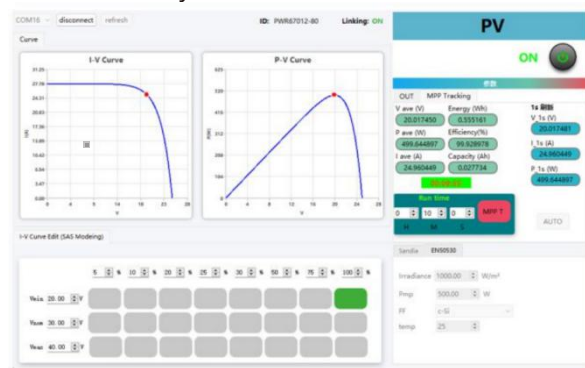
Power supply supports up to 100 sequence steps, with step durations from 1 ms to 28 hours. Users can customize each step for sequential constant voltage or constant current output, meeting specific testing requirements effectively.

LIST SETUP			
STEP	6	CYC	1000
MODE	EXT-TRI		
STEP	VOLTAGE (V)	CURRENT (A)	TIME (s)
1	10.00	00.500	1.000
2	12.00	00.500	1.000
3	14.00	00.500	1.000
4	16.00	00.500	1.000
5	18.00	00.500	1.000
6	20.00	00.500	1.000

Ver : 1.0.0

Capable of both Outputting and Testing (optional)

The power supply supports photovoltaic simulator output function, with built-in EN50530, Sandia, and other PV standard curves, allowing users to easily evaluate the MPPT efficiency of PV inverters.



Parallel Mode

The power supply supports multiple units in both parallel and series configurations, expanding the maximum power to 9 kW, with a maximum voltage output of 600V and maximum current output of 300A.



the parallel unit functions as individual unit

no calibration needed at parallel connection mode

For more units in series or parallel, please contact us.

The instrument must be operated continuously for more than 30minutes at the specified temperature to ensure the following parameters.

Model		OWH67012	OWH67020	OWH67030
Power		1200W	2000W	3000W
Power Supply		85Vac-265Vac, 45-65Hz		
Load Regulation ± (% of Output+Offset) (10%-90%)	CV	≤0.03%+10mV	≤0.03%+10mV	≤0.03%+10mV
	CC	≤0.05%+30mA	≤0.05%+30mA	≤0.05%+30mA
linear Regulation ± (% of Output+Offset)	CV	≤0.01%+10mV	≤0.01%+10mV	≤0.01%+10mV
	CC	≤0.05%+30mA	≤0.05%+30mA	≤0.05%+30mA
Settings Resolution		10mV/1mA		
Read Back Resolution		10mV/1mA		
Settings Accuracy (25°C±5°C, within 12 months)		≤0.05% ± 20mV ; ≤0.1% ± 30mA		
Read Back Accuracy (25°C±5°C)		≤0.05% ± 20mV ; ≤0.1% ± 30mA		
Noise and ripple (*)	Voltage	≤100mVp-p	≤150mVp-p	≤150mVp-p
	Current	≤50mArms	≤30mArms	≤50mArms
Temperature Coefficient (0°C - 40°C)		100ppm/°C (Voltage), 200ppm/°C (Current)		
Read Back Temperature Coefficient		100ppm/°C (Voltage), 200ppm/°C (Current)		
recovery time (0% ~ 100% load)		≤5ms		
Operation Temperature		0-40°C		
Communication Interface		USB, LAN (optional)		
Display		3.9 inch LCD		
Dimension (W x H x D)		214.6 x 8 x 453 (mm)		
Device Weight		6.40kg	6.80kg	6.80kg

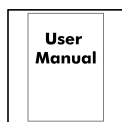
Order No.	Order Information
OWH67012-80L	0-80.000V/0-30.000A/1200.0W; 1ch
OWH67012-150L	0-150.000V/0-20.000A/1200.0W;1ch
OWH67012-300L	0-300.000V/0-10.000A/1200.0W;1ch
OWH67020-150L	0-150.000V/0-20.000A/2000.0W;1ch
OWH67020-300L	0-300.000V/0-10.000A/2000.0W;1ch
OWH67030-150L	0-150.000V/0-30.000A/3000.0W;1ch
OWH67030-300L	0-300.000V/0-15.000A/3000.0W;1ch
OWH67-S	solar panel simulator

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



User Manual



USB Cable



Handle

OWP-H High Power DC Power Supply

- + 2U/ 3U standard embedded height
- + High output resolution 1 mV / 0.1 mA
- + Constant power output, and wider output voltage, current range
- + SCOPE display mode to read voltage / current / power curve directly
- + CV / CC priority, with adjustable rise/fall time
- + List edit function for 50 group timed output
- + Function generating function to get access to rich dynamic waveform
- + Remote voltage compensation
- + Parallel by multi-device to expand power range up to 128KW
- + Support to save/ recall 128 group application data
- + 4.3 " TFT LCD
- + Standard RS485 communication interface, and optional dry node/analog interface
- + Smart temperature sensitive fan



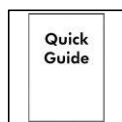
The instrument must be operated continuously for more than 30minutes at the specified temperature to ensure the following parameters.

	1KW	2KW	3KW	6KW	8KW
Power	1-phase, 220VAC±10%, 50 - 60Hz			3-phase, 380VAC±10%, 50 - 60Hz	
DC Voltage					
Output Voltage Accuracy	<0.1% of rated value				
Load Regulation	<0.05% of rated value				
Linear Regulation (±10% of Δ UAC)	<0.05% of rated value				
Adjustment Time (with 10 - 100% load)	< 5ms				
Slew Rate (10 - 90%)	<20ms-60s				
Voltage Compensation	< 5 % of rated voltage				
Ripple	<0.1% of rated value				
DC Current					
Output Current Accuracy	<0.15% of rated value				
Load Regulation (1 - 100%)	<0.1% of rated value				
Linear Regulation (±10% of Δ UAC)	<0.05% of rated value				
Power Accuracy	<0.3% of rated value				
Insulation					
AC Input to Enclosure	1500VDC				
AC Input to DC Output	1500VDC				
DC Output to Enclosure (PE)	2000VDC				
Other					
Protection	OVP, OCP, OLP, OTP				
Digital Interface	RS485, RS232 (optional)				
Dry Contact Input/Output	√				
Cooling	air				
Operating Temperature	-5°C-45°C				
Storage Temperature	-20°C-60°C				
Relative Humidity	< 80%				
Dimension (W x H x D)	325 x 88 x 450mm (1KW)	425 x 88 x 450mm (2KW,3KW)		425 x 132 x 551mm (6KW, 8KW)	
Device Weight	9.00kg (1KW)	11.00 kg (2KW)	14.00 kg (3KW)	25.00 kg (6KW.8KW)	

Specifications subject to change without prior notice.

Model	Voltage	Current	Power	Interface
OWP1006H	60.000V	30.000A	1000W	CAN, RS485, dry contact
OWP1010H	100.00V	15.000A	1000W	CAN, RS485, dry contact
OWP1020H	200.00V	8.0000A	1000W	CAN, RS485, dry contact
OWP1030H	300.00V	5.0000A	1000W	CAN, RS485, dry contact
OWP2004H	45.000V	100.00A	2000W	CAN, RS485, dry contact
OWP2006H	60.000V	80.000A	2000W	CAN, RS485, dry contact
OWP2008H	80.000V	60.000A	2000W	CAN, RS485, dry contact
OWP2010H	100.00V	45.000A	2000W	CAN, RS485, dry contact
OWP2015H	150.00V	30.000A	2000W	CAN, RS485, dry contact
OWP2020H	200.00V	23.000A	2000W	CAN, RS485, dry contact
OWP2030H	300.00V	15.000A	2000W	CAN, RS485, dry contact
OWP2040H	400.00V	12.000A	2000W	CAN, RS485, dry contact
OWP2050H	500.00V	9.0000A	2000W	CAN, RS485, dry contact
OWP2060H	600.00V	8.0000A	2000W	CAN, RS485, dry contact
OWP3004H	45.000V	100.00A	3000W	CAN, RS485, dry contact
OWP3006H	60.000V	80.000A	3000W	CAN, RS485, dry contact
OWP3008H	80.000V	60.000A	3000W	CAN, RS485, dry contact
OWP3010H	100.00V	45.000A	3000W	CAN, RS485, dry contact
OWP3015H	150.00V	30.000A	3000W	CAN, RS485, dry contact
OWP3020H	200.00V	23.000A	3000W	CAN, RS485, dry contact
OWP3030H	300.00V	15.000A	3000W	CAN, RS485, dry contact
OWP3040H	400.00V	12.000A	3000W	CAN, RS485, dry contact
OWP3050H	500.00V	9.0000A	3000W	CAN, RS485, dry contact
OWP3060H	600.00V	8.0000A	3000W	CAN, RS485, dry contact
OWP6010H	100.00V	100.00A	6000W	CAN, RS485, dry contact
OWP6015H	150.00V	67.000A	6000W	CAN, RS485, dry contact
OWP6020H	200.00V	50.000A	6000W	CAN, RS485, dry contact
OWP6025H	250.00V	40.000A	6000W	CAN, RS485, dry contact
OWP6030H	300.00V	34.000A	6000W	CAN, RS485, dry contact
OWP6040H	400.00V	25.000A	6000W	CAN, RS485, dry contact
OWP6050H	500.00V	20.000A	6000W	CAN, RS485, dry contact
OWP6060H	600.00V	17.000A	6000W	CAN, RS485, dry contact
OWP6100H	1000.0V	10.000A	6000W	CAN, RS485, dry contact
OWP6150H	1500.0V	4.0000A	6000W	CAN, RS485, dry contact
OWP8010H	100.00V	100.00A	8000W	CAN, RS485, dry contact
OWP8015H	150.00V	67.000A	8000W	CAN, RS485, dry contact
OWP8020H	200.00V	50.000A	8000W	CAN, RS485, dry contact
OWP8025H	250.00V	40.000A	8000W	CAN, RS485, dry contact
OWP8030H	300.00V	34.000A	8000W	CAN, RS485, dry contact
OWP8040H	400.00V	25.000A	8000W	CAN, RS485, dry contact
OWP8050H	500.00V	20.000A	8000W	CAN, RS485, dry contact
OWP8060H	600.00V	17.000A	8000W	CAN, RS485, dry contact
OWP8100H	1000.0V	10.000A	8000W	CAN, RS485, dry contact
OWP8150H	1500.0V	5.0000A	7500W	CAN, RS485, dry contact

+ Accessories The accessories subject to final delivery.



Quick Guide



Power Cord (1KW)



Power Cord (2/3KW)

SPM DC Power supply & Multimeter

- + DC power supply+multimeter
- + Small body for easy carry
- + 2.8 inch color LCD display
- + USB communication interface, support SCPI

Power Supply Specifications

- + 150W/ 300W output power
- + High resolution: 10mV / 1 mA
- + List waveform editing output, editable 10 groups of timing output function
- + Over voltage / over current protection
- + Output voltage and current curve monitoring function

Multimeter Specifications :

- + 4 1/2 digits multimeter
- + Support Voltage, Current, Capacitance, Resistance, Continuity, and Diode test



Model		SPM3051	SPM6053	SPM3103	SPM6103
Channel		1			
Interface		USB Device, USB Host (5V1A)			
Dimension (W x H x D) / Device Weight		82 x 142 x 226 mm, Approx. 2.5 kg			
DC Power Specifications		* Noise bandwidth 20MHz, ripple bandwidth 1 MHz, connect 10uF electrolytic capacitor in parallel with 0. 1uF ceramic capacitor to the output terminal for testing.			
Rated Output (0°C-40°C)	Voltage	0 - 30V	0 -60V	0 - 30V	0 -60V
	Current	5A	5A	10A	10A
	Power	150W	300W	300W	300W
Load Regulation		≤30mV (Voltage); ≤20mA (Current)			
Power Regulation		≤30mV (Voltage); ≤20mA (Current)			
Setting Resolution		10mV (Voltage); 1mA (Current)			
Readback Resolution		10mV (Voltage); 1mA			
Ripple/ Noise(*)		≤30mVp-p (Voltage)			≤50mVp-p (Voltage)
		≤3mVrms (Voltage)			≤5mVrms (Voltage)
		≤30mAp-p (Current)			
Response Time (50%-100% rated load)		≤1.0ms			
Storage		4 groups of data			

Multimeter Specifications

Full Scale Reading	4½ digits	Auto Range	√
Measure	Voltage, Current, Capacitance, Resistance, Continue, Diode (0-2V) test		
Voltage	DCV: 200.00mV: ±(0.3%±10digit), 2.0000V, 20.000V, 200.00V, 1000V: ±(0.3%±5digit) , ACV: 200.00mV, 2.0000V, 20.000V, 200.00V: ±(0.8%±10digit) 750V: ±(1%±10digit)		
Current	DCA: 200.00mA:±(0.8%±10digit) , 10.000A: ±(2.5%±10digit), ACA: 200.00mA:±(1%±10digit) , 10.000A: ±(2.8%±10digit)		
Impedance	00Ω, 2.0000kΩ, 20.000kΩ, 200.00kΩ, 2.0000MΩ: ±(0.8%±10digit) , 20.000MΩ: ±(1%±3digit), 100MΩ: ±(5%±10digit)		
Capacitance	20.000nF, 200.00nF, 2.0000uF, 20.000uF, 200.00uF, 2.0000mF: ±(3.0%±10digit)		

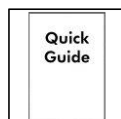
Noise bandwidth 20MHz,ripple bandwidth 1MHz, connect 10uF electrolytic capacitor in parallel with 0.1uF ceramic capacitor to eht output terminal for testing.

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Test Leads (optional)

SPS Programmable DC power supply

- + Fan less to achieve ultra-quiet design
- + Small body for easy carry
- + High resolution: 10mV / 1mA
- + List waveform editing output, editable 10 groups of timing output function
- + Low ripple / noise
- + Over voltage / over current protection
- + Output voltage and current curve monitoring function
- + 2.8-inch TFT LCD display
- + USB communication interface, support SCPI



The instrument must be operated continuously for more than 30 minutes at the specified temperature to ensure the following parameters.

Model		SPS6051	SPS3081
Input		85V-265V (45- 65Hz)	
Rated Output (0°C-40°C)	Voltage	0 - 60V	0 - 30V
	Current	0 - 5A	0 - 8A
	Power	150W	120W
Load Regulation	Voltage	≤30mV	
	Current	≤20mA	
Power Regulation	Voltage	≤30mV	
	Current	≤20mA	
Setting Resolution	Voltage	10mV	
	Current	1mA	
Readback Resolution	Voltage	10mV	
	Current	1mA	
Setting Accuracy (25°C±5°C)	Voltage	≤0.05% ± 20mV	≤0.1% ± 20mV
	Current	≤0.05% ± 20mA	≤0.2% ± 20mA
Readback Accuracy (25°C±5°C)	Voltage	≤0.05% ± 20mV	≤0.1% ± 20mV
	Current	≤0.05% ± 20mA	≤0.2% ± 20mA
Ripple/ Noise(*)	Voltage	≤30mVp-p	≤30mVp-p
	Voltage	≤4mVrms	≤5mVrms
	Current	≤10mA p-p	≤30mA p-p
Output temperature coefficient (0°C-40°C)	Voltage	100ppm/°C	
	Current	200ppm/°C	
Readback temperature coefficient	Voltage	100ppm/°C	
	Current	200ppm/°C	
Response Time (50%-100% rated load)		≤1.0ms	
Storage		4 groups of data	
Display		2.8 inch color LCD display	
Interface		USB Device	
Dimension (W x H x D)		82 × 142 × 226 (mm)	
Device Weight		Approx. 1.8kg	

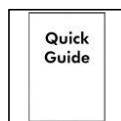
Noise bandwidth 20MHz, ripple bandwidth 1MHz, connect 10uF electrolytic capacitor in parallel with 0.1uF ceramic capacitor to the output terminal for testing.

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



Fuse



USB Cable



Test Leads (optional)

SPE Single Channel Digital DC Power Supply

- + Ultra-thin body, portable and easy to use
- + 150W -500W constant power design, wide application range
- + Over voltage / over current protection
- + Power-on automatic output setting function, suitable for nattended occasions
- + 4 groups of Memory shortcut parameters for quick output
- + USB Device communication port,support SCPI
- + Constant voltage cv/constant current CC mode, effectively protect the circuit



The instrument must be operated continuously for more than 30minutes at the specified temperature to ensure the following parameters.

Model	SPE3051	SPE3102	SPE6102	SPE6053	SPE3103	SPE6103	SPE6205	SPE8105	SPE8205
Rated Output (0°C-40°C)	0 - 30V	0 - 30V	0 - 60V	0 - 60V	0 - 30V	0 - 60V	0 - 60V	0 - 80V	0 - 80V
	5A	10A	10A	5A	10A	10A	20A	10A	20A
	150W	200W	200W	300W	300W	300W	500W	500W	500W
OVP	31V	31V	61V	61V	31V	61V	63V	85V	85V
OCP	5.1A	10.1A	10.1A	5.1A	10.1A	10.1A	21A	11A	21A
OTP	85°C								
USB Output	5V/ 1A (SPE series)						——		
Load Regulation	≤20mV (Voltage), ≤10mA (Current)								
Power Regulation	≤20mV (Voltage), ≤10mA (Current)								
Setting Resolution	10mV / 1mA								
Readback Resolution	10mV / 1mA								
Setting Accuracy (25°C±5°C)	≤0.1% ± 20mV (Voltage), ≤0.1% ± 20mA (Current)						≤0.05% ± 20mV (Voltage) ≤0.05% ± 20mA (Current)		
Readback Accuracy (25°C±5°C)	≤0.1% ±20mV (Voltage), ≤0.1% ± 20mA (Current)						≤0.05% ± 20mV (Voltage) ≤0.05% ± 20mA (Current)		
Ripple/ Noise (*)	≤50mVp-p, ≤15mAp-p								
Response Time (50%-100% rated load)	≤1.0ms						≤5.0ms		
Output temperature coefficient (0°C-40°C)	100ppm/°C (Voltage), 200ppm/°C (Current)		Readback temperature coefficient			100ppm/°C (Voltage), 200ppm/°C (Current)			
Storage	4 groups of data		Display			2.8 inch color LCD display			
Interface	USB Device		Dimension (W x H x D) / Weight			82 × 142 ×226 mm, Approx. 1.8kg			

*Noise bandwidth 20MHz,ripple bandwidth 1MHz, connect 10uF electrolytic capacitor in parallel with 0.1uF ceramic capacitor to eht output terminal for testing.

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Fuse



Test Leads (optional)

SP Single Channel Digital DC Power Supply



- + Small body for easy carry
- + 150W/ 300W maximum output power
- + Constant power design, providing a combination of multiple ranges of voltage and current settings
- + Low ripple/ noise
- + Over voltage/over current protection
- + Intelligent temperature control fan cooling
- + Support RS232 digital communication

The instrument must be operated continuously for more than 30minutes at the specified temperature to ensure the following parameters.

Model		SP3051	SP3101	SP6101	SP6053	SP3103	SP6103
Rated Output (0°C-40°C)	Voltage	0 - 30V	0 - 30V	0 -60V	0 -60V	0 - 30V	0 -60V
	Current	5A	10A	10A	5A	10A	10A
	Power	150W			300W		
Load Regulation	Voltage	≤30mV					
	Current	≤30mA					
Power Regulation	Voltage	≤20mV					
	Current	≤20mA					
Setting Resolution	Voltage	10mV					
	Current	1mA					
Readback Resolution	Voltage	10mV					
	Current	1mA					
Value Resolution (25°C±5°C)	Voltage	≤0.1% ± 20mV		≤0.1% ± 30mV	≤0.1% ± 20mV		≤0.1% ± 30mV
	Current	≤0.1% ± 10mA					
Readback Value Resolution (25°C±5°C)	Voltage	≤0.1% ±20mV		≤0.1% ± 30mV	≤0.1% ± 20mV		≤0.1% ± 30mV
	Current	≤0.1% ± 10mA					
Ripple/Noise (*) (20Hz-20MHz)	Voltage	≤30mVp-p		≤50mVp-p	≤30mVp-p		≤50mVp-p
	Voltage	≤3mVrms		≤5mVrms	≤3mVrms		≤5mVrms
	Current	≤30mA _{p-p}					
Output temperature coefficient (0°C-40°C)	Voltage	≤0 .3% ± 10mV		≤0 .3% ± 20mV	≤0 .3% ± 10mV		≤0 .3% ± 20mV
	Current	≤0 .3% ± 10mA	≤0 .3% ± 20mA				
Read Back Temperature Coefficient	Voltage	≤0 .3% ± 10mV		≤0 .3% ± 20mV	≤0 .3% ± 10mV		≤0 .3% ± 20mV
	Current	≤0 .3% ± 10mA	≤0 .3% ± 20mA				
Response Time	≤1.0ms						
Storage	5 groups of data						
Working Temperature	0-40°C						
Interface	RS232						
Display	4 inch color LCD display						
Dimension (W x H x D)	117 x 194 x 295 mm						
Device Weight	Approx. 3. 00kg						

*Noise bandwidth 20MHz,ripple bandwidth 1MHz, connect 10uF electrolytic capacitor in parallel with 0.1uF ceramic capacitor to eht output terminal for testing.

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



Fuse



Test Leads
(optional)



RS232 to USB Module
(optional)

P4000 Single Linear DC Power Supply

- + Small body for easy carry
- + 180W maximum output power
- + High resolution: 1mV / 1mA
- + Low ripple/noise
- + Over voltage/over current protection
- + Multi-directional cooling system with smart fan
- + 3.7 inch TFT LCD display
- + Support RS232 digital communication



The instrument must be operated continuously for more than 30minutes at the specified temperature to ensure the following parameters.

Model	P4305	P4603
Output Power	150W	180W
DC Output Rating	0 - 30V / 0 - 5A * 1-CH	0 - 60V / 0 - 3A * 1-CH
Load Regulation	$\leq 0.01\% + 3\text{mV}$, $\leq 0.01\% + 3\text{mA}$	
Power Regulation	$\leq 0.01\% + 3\text{mV}$, $\leq 0.01\% + 3\text{mA}$	
Setting Resolution	1mV, 1mA	
Readback Resolution	1mV, 1mA	
Settings Accuracy (25°C±5°C)	$\leq 0.03\% + 10\text{mV}$, $\leq 0.1\% + 5\text{mA}$	
Readback Value Resolution (25°C±5°C)	$\leq 0.03\% + 10\text{mV}$, $\leq 0.1\% + 5\text{mA}$	
Ripple/Noise (20Hz-20MHz) (*)	$\leq 4\text{mVp-p}$, $\leq 1\text{mVrms}$, $\leq 4\text{mA rms}$	
Output Temperature Coefficient (0°C-40°C)	$\leq 0.03\% + 10\text{mV}$, $\leq 0.1\% + 5\text{mA}$	
Read Back Temperature Coefficient	$\leq 0.03\% + 10\text{mV}$, $\leq 0.1\% + 5\text{mA}$	
Response Time	100 μs	
Storage	5 groups of data	
Working Temperature	0-40°C	
Interface	USB (optional), RS232	
Display	3.7 inch colored LCD	
Dimension (W x H x D)	117 x 194mm x 295 mm	
Device Weight	Approx. 5.8kg	

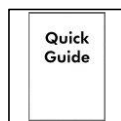
*Noise bandwidth 20MHz,ripple bandwidth 1MHz, connect 10uF electrolytic capacitor in parallel with 0.1uF ceramic capacitor to eht output terminal for testing.

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



Fuse



Test Leads
(optional)



RS232 to USB Module
(optional)

ODP Triple Channel Programmable DC Power Supply

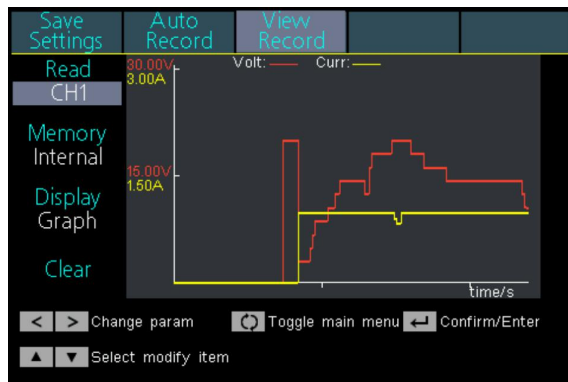
Max
378W
power output

- + Three independent controllable channels
- + Max output resolution : 1mV / 1mA
- + Low ripples / low noise
- + Up to 100 group timers
- + Multi- working mode : individual, parallel, and series
- + Over-voltage / Over-current protection
- + Data-logging function: could record the read back voltage and current, display recorded data in chart
- + 4 inch high resolution (480 x 320 pixels) LCD
- + Multi- CI: USB, RS232, and LAN
- + Auto-cooling system
- + SCPI, LabVIEW and USB TMC protocol supported



Creative Data Recording Function

to monitor the changing status of powering system, displaying recorded data in chart.



NO.	Volt	CH1 Curr	Power
61	8.708	1.998	17.395
62	8.708	1.998	17.395
63	10.605	1.998	21.184
64	10.605	1.998	21.185
65	10.605	1.998	21.185
66	12.510	1.998	24.990
67	12.512	1.998	24.993
68	14.406	1.998	28.776
69	14.406	1.998	28.776
70	14.405	1.998	28.774

Model	Channel	Max Output Power	Output Range
ODP3033	3 (independent controllable channel)	198W	30V / 3A 30V / 3A, 6V / 3A
ODP3053		318W	30V / 5A 30V / 5A, 6V / 3A
ODP3063		378W	30V / 6A 30V / 6A, 6V / 3A
ODP6033		378W	60V / 3A 60V / 3A, 6V / 3A

Model	ODP3033	ODP3053	ODP3063	ODP6033
Display	4 inch color LCD 480 x 320 pixels, 65536 colors			
Dimension (W x H x D)	250 × 158 × 358 mm			
Device Weight	Approx. 9.80kg	Approx. 12.00kg		

The instrument must be operated continuously for more than 30minutes at the specified temperature to ensure the following parameters.

Model		ODP3033		ODP3053		ODP3063		ODP6033		5V
Channel		CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2	CH3
Output Ratings (0°C - 40°C)	Voltage	0-30V		0-30V		0-30V		0-60V		0-6V
	Over Voltage Protection	31V		31V		31V		61V		7V
	Current	0-3A		0-5A		0-6A		0-3A		0-3A
	Over Current Protection	3.1A		5.1A		6.1A		3.1A		3.1A
Load Regulation	Voltage	≤0.01%+3mV								
	Current	≤0.01%+3mA								
Power Regulation	Voltage	≤0.01%+3mV								
	Current	≤0.01%+3mA								
Setting Resolution	Voltage	1mV								
	Current	1mA								
Readback Resolution	Voltage	1mV								
	Current	1mA								
Settings Accuracy (25°C ± 5°C)	Voltage	≤0.03%+10mV								
	Current	≤0.1%+8mA								≤0.1%+5mA
Readback Value Resolution (25°C±5°C)	Voltage	≤0.03%+10mV								
	Current	≤0.1%+8mA								≤0.1%+5mA
Ripple/Noise (20Hz-20MHz)	Voltage	≤2mVp-p								≤3mVp-p
	Voltage	≤300μVrms								
	Current	≤3mA _{rms}								≤4mA _{rms}
Output Temperature Coefficient (0°C-40°C)	Voltage	≤0.03%+10mV								
	Current	≤0.1%+5mA								
Read Back Temperature Coefficient	Voltage	≤0.03%+10mV								
	Current	≤0.1%+5mA								
Parallel Settings Accuracy	Voltage	≤0.02%+5mV								
	Current	≤0.1%+30mA								
Programmable Output	Storage	1Mpts								
		100 groups								
	Time Setting	second								
Data Recording		10K groups (of voltage, current and power data) recording capacity								
Working Temperature		0-40°C								
Interface		USB Host, USB Device, RS232, LAN, Support USB TMC protocol								

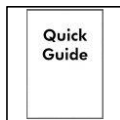
Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Fuse



Test Leads (optional)

ODP Dual Channel Programmable DC Power Supply

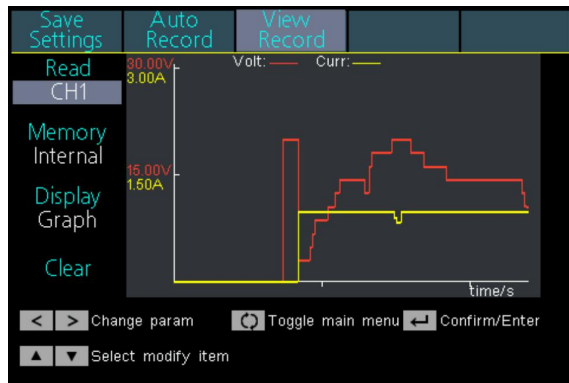


- + Two independent controllable channels + sense (ODP3122, ODP6062)
- + Two independent controllable channels + fixed (ODP3032)
- + Max output resolution : 1mV / 1mA
- + Low ripples / low noise
- + Up to 100 group timers
- + Over-voltage / Over-current protection
- + Data-logging function: could record the read back voltage and current, display recorded data in chart
- + 4 inch high resolution (480 x 320 pixels) LCD
- + Multi- CI: USB, RS232, and LAN
- + Auto-cooling system
- + SCPI, and LabVIEW supported



Creative Data Recording Function (ODP3122, ODP6062)

to monitor the changing status of powering system, displaying recorded data in chart.



Save Settings

Auto Record

View Record

Read CH1

Memory Internal

Display Table

Clear

NO.	CH1		
	Volt	Curr	Power
61	8.708	1.998	17.395
62	8.708	1.998	17.395
63	10.605	1.998	21.184
64	10.605	1.998	21.185
65	10.605	1.998	21.185
66	12.510	1.998	24.990
67	12.512	1.998	24.993
68	14.406	1.998	28.776
69	14.406	1.998	28.776
70	14.405	1.998	28.774

< > Change param

⏻ Toggle main menu

↵ Confirm/Enter

⬆

⬇ Select modify item

Model	ODP3032	ODP3122	ODP6062
Channel	2 (independent controllable channel) + fixed	2 (independent controllable channel) +sense	
Max Output Power	195W	378W	
Output Range	0 - 30V / 0 - 3A , 5V / 3A	0 - 30V / 0-12A , 0 - 6V / 0 - 3A	0 - 60V / 0 - 6A, 0 - 6V / 0 - 3A

Model	ODP3032	ODP3122	ODP6062
Display	4 inch color LCD 480 x 320 pixels, 65536 colors		
Dimension (W x H x D)	250 x 158 x 358 mm		
Device Weight	Approx. 10.5kg	Approx. 12.00kg	

The instrument must be operated continuously for more than 30minutes at the specified temperature to ensure the following parameters.

Model		ODP3032	ODP3122	ODP6062
Load Regulation	Voltage	≤0.01% + 3mV	≤0.01% + 3mV	
	Current	≤0. 1% + 3mA	≤0.01% + 3mA	
Line Regulation	Voltage	≤0.01% + 3mV	≤0.01% + 3mV	
	Current	≤0.2% + 3mA	≤0.01% + 3mA	
Setting Resolution	Voltage	1mV	1mV	
	Current	1mA	1mA	
Read Back Resolution	Voltage	1mV(<10V), 10mV(≥10V)	1mV	
	Current	1mA	1mA	
Settings Accuracy (25℃ ± 5℃)	Voltage	≤0.05% + 3mV	≤0.03% + 10mV	
	Current	≤0. 1% + 3mA	≤0. 1% + 8mA	
Read Back Accuracy (25℃ ± 5℃)	Voltage	≤0.05% + 3mV	≤0.03% + 10mV	
	Current	≤0. 1% + 3mA	≤0. 1% + 8mA	
Noise and Ripple (20Hz - 20MHz)	Voltage	≤2mVp-p		
	Voltage	≤300μVrms		
	Current	≤3mA _{rms}		
Programmable Output	Storage	100 groups		
	Time Setting	second		
Data Recording		/	10K groups (of voltage, current and power data) recording capacity	
Working Temperature		0 - 40℃		
Communication Interface		USB Device, RS232	USB Host& Device, RS232, and LAN	

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Fuse



Test Leads (optional)

ODP3031 Single Channel Programmable DC Power Supply

- + One controllable channel + fixed
- + Max output resolution : 1mV / 1mA
- + Low ripples / low noise : <300 μ Vrms / 2 mVpp
- + Over-voltage / Over-current protection
- + Up to 100 group timers
- + Up to 10 group preset system configurations
- + Auto-cooling system
- + 4 inch high resolution (480 x 320 pixels) LCD
- + USB2.0, and RS232 serial port digital communication supported



The instrument must be operated continuously for more than 30minutes at the specified temperature to ensure the following parameters.

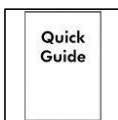
Model		ODP3031
Channel		Single Channel
Channel Output		105W
DC Output Rating		0 - 30V / 0 - 3A * 1 -CH 5V/ 3A fixed output
Load Regulation	Voltage	$\leq 0.01\% + 3\text{mV}$
	Current	$\leq 0.1\% + 3\text{mA}$
Power Regulation	Voltage	$\leq 0.01\% + 3\text{mV}$
	Current	$\leq 0.2\% + 3\text{mA}$
Setting Resolution	Voltage	1mV
	Current	1mA
Readback Resolution	Voltage	1mV(< 10V), 10mV($\geq 10\text{V}$)
	Current	1mA
Settings Accuracy (5°C $\pm$ 5°C)	Voltage	$\leq 0.05\% + 3\text{mV}$
	Current	$\leq 0.1\% + 3\text{mA}$
Readback Value Resolution (5°C $\pm$ 5°C)	Voltage	$\leq 0.05\% + 3\text{dig}$
	Current	$\leq 0.1\% + 3\text{dig}$
Ripple/Noise (20Hz - 20MHz)	Voltage	$\leq 2\text{mVp-p}$
	Voltage	$\leq 300\mu\text{Vrms}$
	Current	$\leq 3\text{mArms}$
Storage		100 groups
Display		4 inch colored LCD
Interface		USB Device, RS232
Dimension (W x H x D)		250 × 158 × 358 mm
Device Weight		Approx. 7.00kg

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Quick Guide



Fuse



Test Leads
(optional)



RS232 to USB Module
(optional)

OEL8500 Electronics Load

- + OEL8512 Series: DC 600V/40A, total power up to 400W
- + OEL8511 Series: DC 600V/20A, total power up to 200W
- + Dynamic mode: up to 5kHz
- + Readback resolution: 1mV/0.1mA
- + Over voltage/Over current/Overpower/Over temperature/Reverse Voltage protection
- + 4 static modes: CC, CV,CR,CP
- + Supports CC dynamic mode and short-circuit simulation
- + Adjustable current rise time range: 0.001A/μs~2A/μs
- + Supports multi-unit parallel operation (except CV mode), Communicates via RS485, and can be expanded to 10 units for a total of 4kW
- + Built-in RS232 and USB Device interfaces, supporting SCPI protocol and host computer communication
- + ½ 2U, standard rack mount size
- + 3.9-inch TFT LCD display



The instrument must be operated continuously for more than 30minutes at the specified temperature to ensure the following parameters.

Model		OEL8512	OEL8512B	OEL8512C	OEL8511	OEL8511B	OEL8511C
Rated Output	Voltage	0-150V	0-300V	0-600V	0-150V	0-300V	0-600V
	Current	0-40A			0-20A		
	Power	400W			200W		
Min. Operate Voltage		1.1V@40A			0.8V@20A		
CV Mode							
Range		0-150V	0-300V	0-600V	0-150V	0-300V	0-600V
Resolution		1mV			1mV		
Accuracy		0.05%+0.05%FS			0.05%+0.05%FS		
CC Mode							
Range		0-40A			0-20A		
Resolution		1mA			1mA		
Accuracy		0.03%+0.03%FS			0.03%+0.03%FS		
CR Mode							
Range		0.05Ω - 7.5kΩ			0.05Ω - 7.5kΩ		
Accuracy *1		0.1%+0.01%R			0.1%+0.01%R		
CP Mode							
Range		400W			200W		
Resolution		10mW			10mW		
Accuracy*1		0.1%+0.1%FS			0.1%+0.1%FS		
Dynamic Mode							
T1&T2		0.1ms-50s			0.1ms-50s		
Rise/Fall Slope		0.01A/ms-2000A/ms			0.01A/ms-2000A/ms		
Min. Rise Time		20us			20us		

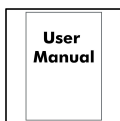
Model	OEL8512		OEL8512B		OEL8512C	
Voltage Readback						
Range	0-15V	0-150V	0-30V	0-300V	0-60V	0-600V
Resolution	1mV					
Accuracy	0.03%+7.5mV	0.03%+0.025%FS	0.03%+7.5mV	0.03%+0.025%FS	0.03%+7.5mV	0.03%+0.025%FS
Model	OEL8511		OEL8511B		OEL8511C	
Voltage Readback						
Range	0-15V	0-150V	0-30V	0-300V	0-60V	0-600V
Resolution	1mV					
Accuracy	0.03%+7.5mV	0.03%+0.025%FS	0.03%+7.5mV	0.03%+0.025%FS	0.03%+7.5mV	0.03%+0.025%FS
Model	OEL8512	OEL8512B	OEL8512C	OEL8511	OEL8511B	OEL8511C
Current Readback						
Range	0-40A			0-20A		
Resolution	0.1mA			0.1mA		
Accuracy	0.03%+0.03%FS			0.03%+0.03%FS		
Power Readback						
Range	0-400W			0-200W		
Resolution	10mW			10mW		
Accuracy	0.1%+0.1%FS			0.1%+0.1%FS		
Protection						
Overpower Protection	>OPP, 10ms delay protect					
Overvoltage Protection	>OVP, 0.1ms delay protect					
Overcurrent Protection	>OCP, 0.1ms delay protect					
Overtemperature	85°C					
Short						
CC Mode	>40A			>20A		
CV Mode	0V			0V		
CR Mode	50mΩ			50mΩ		
General						
Interface	RS-232 SCPI support					
Heat Dissipation	Internal intelligent fan with forced air cooling					
Safety	Complies with European EMC Directive 89/336/EEC for Class A testing and measurement products					
Withstand Voltage	500V/DC/1mA (output to ground); 1.5kVAC/5mA (Input to ground)					
Input Power	110V ±10% or 220V ±10%;50Hz/60Hz					
Dimension (W x H x D)	375 x 215 x 88 mm					
Device Weight	Approx. 4.00kg			Approx. 2.00kg		

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



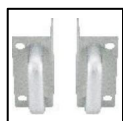
Power Cord



Manual



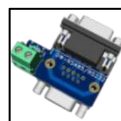
Fuse



Handle
(optional)



RS232
(optional)



Parallel Module
(optional)



Test Leads (20A)
(optional)

LCR2000 LCR Meter

- + Consecutive test frequency
- + Basic accuracy : 0.05%
- + Measuring speed up to 40 times per second
- + Use 9-range test, auto, lock and nominal
(the instrument automatically selects the best range based on nominal value)
- + DCR measurement and internal D.C. bias voltage ($\pm 2.5V$)
- + 3.5" color LCD
- + Interface : RS-232C, Handler, USB Host / Device
- + Support SCPI and ModbusRTU communication protocol



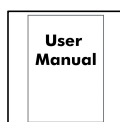
Model	LCR2300	LCR2200	LCR2100	LCR2020
Test Function	Cs-Rs, Cs-D, Cp-Rp, Cp-D, Lp-Rp, Lp-Q, Ls-Rs, Ls-Q, G-B, R-X, Z- θ r, Z- θ d, DCR			
Monitor Parameter	Z, D, Q, r, d, R, X, G, B, Y, Vac, Lac, Δ , $\Delta\%$			
Basic Accuracy	0.05%(Slow/Med), 0.1%(Fast)			
Test Frequency	10Hz - 300kHz	10Hz - 200kHz	10Hz - 100kHz	10Hz - 20kHz
Display Rang	L: 0.00001uH - 9999.99H C: 0.00001pF - 9999.99mF R,X,Z: 0.00001 Ω - 99.9999M Ω B, G: 0.01nS - 999.999S D: 0.00001 - 9.99999 Q: 0.00001 - 99999.9 θ d: -179.999° - 179.999° θ r: -3.14159 - 3.14159 %: -999.999% - 999.999%			
Output impedance	30 Ω , 50 Ω , 100 Ω			
Ranging	Auto, Hold and Nominal range. Total 9 Ranges			
DC Bias (Internal)	-2.50V - +2.50V			
Correction Function	OPEN/SHORT			
Beep Feature	OFF/PASS/FAIL and HIGH/LOW tone			
Storage	built-in 10 files			
Trigger Mode	Internal, Manual, External and Remote Trigger			
Interface	USB Host / Device, RS232, Handler			
Display	3.5 inch LCD			
Dimension (W x H x D)	264 x 107 x 350 mm			
Device Weight	Approx. 3.00kg			

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Manual



USB Cable



T10 Test
Fixture



Test Leads



Short-circuit
foil



F10 SMD
Test Clips



F11 SMD
Test Clips
(optional)



F12 SMD
Test Clips
(optional)

OWM5500 Smart Anemo Meter

- + 7 kinds of measurement: wind speed, air volume, temperature, humidity, etc., Supports Pufu wind rating
- + Charts display mode, can analyze trends, and perform statistics on data
- + Built-in 8000 sets of data storage, which can be stored automatically or manually, and supports data zero clearing with one click
- + Multi - gear setting, automatic power off, energy saving
- + Built-in lithium battery, can be connected to the charging bank through USB TYPE-C interface, providing longer use time
- + Support APP remote control
- + Supports the data graph mode, and can export the data for further analysis through PC software



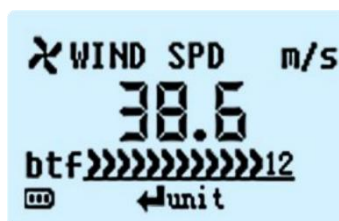
7 Blades airfoil fan design more accurate data collection

Replaceable airfoil wheel to ensure long-term data accuracy and improve measurement accuracy.



Full functional measurement

7 measurement values, supporting beaufort scale.



Data record analysis function

Equipped with PC software, which can monitor the anemometer through USB Type-C interface, and extract the recorded data of the anemometer for further analysis.



Lithium battery power supply

Built-in 1x 18650 lithium battery, which can be charged by the power bank, prolong the use of time.



Measurement Type	Icon	Name	Unit	Range	Resolution	Accuracy	Response Time
Wind speed		WIND SPD	m/s, km/h, ft/s, kt, mph	0.6 - 40 m/s	0.1m/s	±3%+0.1	0.5s
Temperature		TEMP	°C, °F	-10 - 50 °C	0.1°C	±1.0°C	0.5s
Humidity		HUMIDITY	%RH	5 - 95 %RH	0.1%RH	±5.0%RH	0.5s
Dew point		DEW POINT	°C, °F	-40 - 50°C	0.1°C	±2.0°C	0.5s
Wet bulb temperature		WET BULB	°C, °F	-40 - 50°C	0.1°C	±2.0°C	0.5s
Wind chill		WIND CHILL	°C, °F	-40 - 50°C	0.1°C	±2.0°C	0.5s
Air volume		AIR FLOW	CMS, CFS	0.001 - 300.0CMS	0.001CMS		0.5s
Dimension (W x H x D)/Device Weight			136.5 × 30 × 64.5 mm, Approx. 0.2kg				

Specifications subject to change without prior notice.

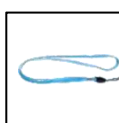
+ Accessories The accessories subject to final delivery.



Quick Guide



USB cable(Type-c)



Lanyard

Differential probe



Model	OD5140	OD5070	OD5015
Bandwidth(-3dB)	100MHz	50MHz	DC-100MHz (-3dB)
Attenuation Ratio	1:1000;1:100		
Accuracy	±1%		
Input Impedance	10MΩ//2PF		4MΩ//2PF
Output Voltage (50KΩ Load)	7V		
Offset	<±5mV		
Input Impedance	50Ω		
CMRR	-80dB@60Hz, -50dB@100KHz		
Input Differential Vp-p	14KV@1/1000 1.4KV@1/100	7000V@1/1000 700V@1/100	1500V@1/1000 150V@1/100
Power Requirements (options)	6VDC/300mA mains adaptor		
Length of BNC Cable	90cm		
Length of Input Leads	60cm		
Weight	Approx. 500g		
Dimension (WxHxD)	186x84x38mm		165x69x26mm

Current Probe



Model	CP024							
Test Range	1 mA - 400A	AC Current	Range	AC 4A	AC 40A	AC 200A	AC 200A - 400A	
Resolution	1 mA		Accuracy	±2.0% rdg±5d		±3.0% rdg±5d		
Bandwidth	DC~200KHz(±3dB)		Sensitivity	1 mV/ 10mA	1 mV/0. 1A	1 mV/ 1A		
Jaw Size	23mm (Max)	DC Current	Range	DC 4A	DC 40A	DC 200A	DC 200-400A	
Auto zero at Power- on	√		Accuracy	±1.5%rdg±5d				±3.0%rdg±5d
Power Supply	9V 6LR61 Battery		Sensitivity	1mV/10mA	1mV/0.1A	1mV/1A		
Operating Temperature	0°C to 40°C ≤70% RH	operating Humidity		--10°C to 60°C 70% RH				
Dimension (W x H x D)	180 x 68 x 32 mm							
Weight	Approx. 250g							

High Voltage Probe



Model	OH5040	OH5018
Max. Working Voltage	DC+AC (peak)40KVCATII AC(rms): 27KVCATII	DC+AC (peak)18KVCATII AC(rms): 12KVCATII
Thepulse	<27KVp-p	<12KVp-p
Max. Loading Current	43μA	90μA
Bandwidth(-3dB)	50MHz	100MHz
noise	>60dBat1KHz, >50dBat1MHz	
Attenuation Ratio	1000: 1	
Accuracy	DC:≤3%;AC:≤3%(1KHz)	
Impedance	900MΩ	200MΩ
Input Capacitor	2PF	1.5PF
Cable Length	2m±0.2m	
Temperature	≤200PPM/°C	
Operation Temp	-10 ~ 55°C	
Dimension	80(W) x 80(H) x 320(L) mm	
Device Weight	Approx. 460g	

Model	OH5007
Max. Working Voltage	DC: 0-10KV AC(rms): 0 ~ 7KV; Vpp: 0-20KV(Pulse)
Bandwidth(-3dB)	50MHz
noise	>60dB(1KHz), >50dB(1MHz)
Attenuation Ratio	1: 1000
Accuracy	DC:±3%(DCto10KV) AC:±3%(1KHz/1KV/1KHzRMS) -3dB:0 ~ 40MHz
Impedance	100MΩ±5%
Input Capacitor	3.0PF±0.5PF
Cable Length	2m±0.2m
Temperature	≤200PPM/°C
Operation Temp	0 ~ +50°C
Dimension	340mm x 80Φ (cylindrical)
Device Weight	Approx. 250g



Model	CP-07+				
Test Range	400mA - 4A		Range	DCA 400mA	DCA 4A
Resolution	0. 1 mA	DCCurrent	Accuracy	±1. 5% rdg±5d	
Bandwidth	DC ~ 1MHz (± 3dB)		Sensitivity	1 mV/ 1 mA	1 mV/ 10mA
Jaw Size	5mm (Max)		Range	ACA 400mA	ACA 4A
Auto Zero at Power-on	√	ACCurrent	Accuracy	±2.0% rdg±5d	
Power Supply	9V 6F22 Battery		Sensitivity	1 mV/ 1 mA	1 mV/ 10mA
Operating Temperature	0°C to 40°C ≤70% RH	Operating Humidity		-10°C to 60°C ≤70% RH	
Dimension (W x H x D)	215 x 36 x 58 mm				
Device Weight	Approx. 200g				

Current Probe



Model	OC5010
Measuring Range	0.05A-10A 10A-100A
Voltage	1V Peak
Conversion Ratio	100mA/V 10mA/V
Bandwidth	100KHz
Diameter mouth diameter	11.8mm
Operating temperature	0°C - 50°C
Battery	9V Alkaline battery
Accuracy	2%
Dimension (W x H x D)	231 × 67 × 36 (mm) , 2m
Weight	Approx. 330g (Containing batteries)

Oscilloscope Probe



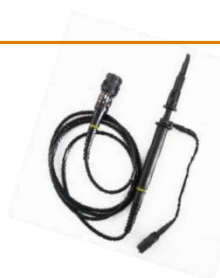
Model	OW3060	OW3100	OW3150	OW3200
Attenuation Ratio	1X or 10X	1X or 10X	1X or 10X	1X or 10X
Bandwidth	6MHz / 60MHz	6MHz / 100MHz	6MHz / 150MHz	6MHz / 200MHz
Input R	1MΩ or 10MΩ	1MΩ or 10MΩ	1MΩ or 10MΩ	1MΩ or 10MΩ
Input C	1X:85pF-115pF 10X:14.5pF-17.5pF	1X:85pF-115pF 10X:14.5pF-17.5pF	1X:85pF-115pF 10X:14.5pF-17.5pF	1X:85pF-115pF 10X:14.5pF-17.5pF
Max Input Voltage	1X: <200V 10X: <600V	1X: <200V 10X: <600V	1X: <200V 10X: <600V	1X: <200V 10X: <600V

Model	OW3300
Attenuation Ratio	1X or 10X
Bandwidth	6MHz/ 300MHz
Input R	1MΩ or 10MΩ
Input C	1X:85pF-115pF 10X:14.5pF-17.5pF
Max Input Voltage	1X: <200V 10X: <600V

Oscilloscope Probe



Model	P2060	P2100	P2250
Attenuation Ratio	1X or 10X	1X or 10X	1X or 10X
Bandwidth	60MHz	100MHz	200MHz
Input R	1M Ω or 10M Ω	1M Ω or 10M Ω	1M Ω or 10M Ω
Input C	1X: 70pF -120pF 10X: 14pF -18pF	1X: 70pF -120pF 10X: 14pF -18pF	1X: 70pF -120pF 10X: 14pF -18pF
Max Input Voltage	1X: <200V 10X: <600V	1X: <200V 10X: <600V	1X: <200V 10X: <600V



Model	P4060	P4100	P4250
Attenuation Ratio	100X	100X	100X
Bandwidth	60MHz	100MHz	250MHz
Input R	100M Ω	250MHz	250MHz
Input C	5pF	5pF	5pF
Max Input Voltage	<2KV	<2KV	<2KV



Model	TH3100A
Attenuation Ratio	100X
Bandwidth	100MHz
Input R	100M Ω
Input C	3. 5pF - 10. 5pF
Max Input Voltage	<5KV

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Fujian Lilliput Optoelectronics Technology Co., Ltd.

No.19,Heming Road,Lantian Industrial Zone Zhangzhou 363005 P.R.China

Tel: +86.596.2130430

Mail: info@owon.com.cn

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Please contact your local distributor for further information.

