

Product Catalogue

- + Spectrum Analyzers
- + Digital Storage Oscilloscopes
- + Arbitrary Waveform Generators
- + Programmable DC Power Supplies
- + PC Oscilloscopes
- + Digital Multimeters



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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.

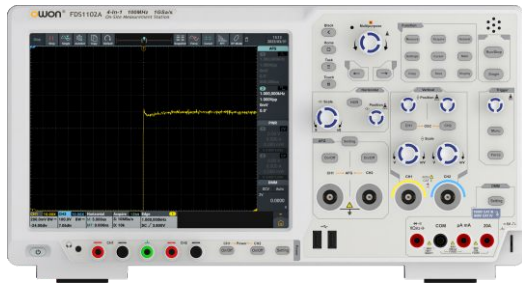
Through 2 decades' of efforts, Lilliput gradually grew to be a group corporation, covering 3 product lines - mini color LCD, test and measurement equipment, and home energy management system.

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.



Android Multi-function Tester - FDS Series



Multifunctional Hardware All-in-One

DSO: 100MHz-300MHz bandwidth, upto 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

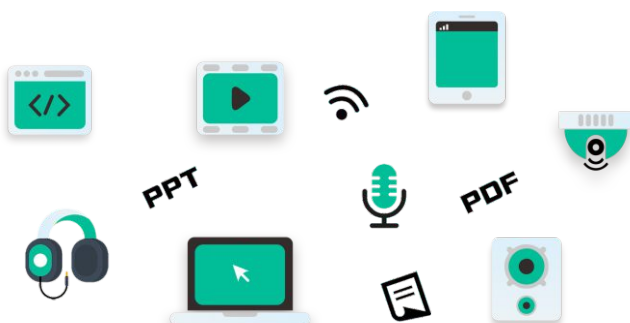
- + Supports edge, slope, pulse width, window, undershoot, interval, timeout, pattern, nth edge, video triggering and other serial bus trigger functions
- + Supports Bode plot (FAR) testing
- + Supports waveform cloning function, completely restores test signals
- + Supports digital filtering
- + Waveform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

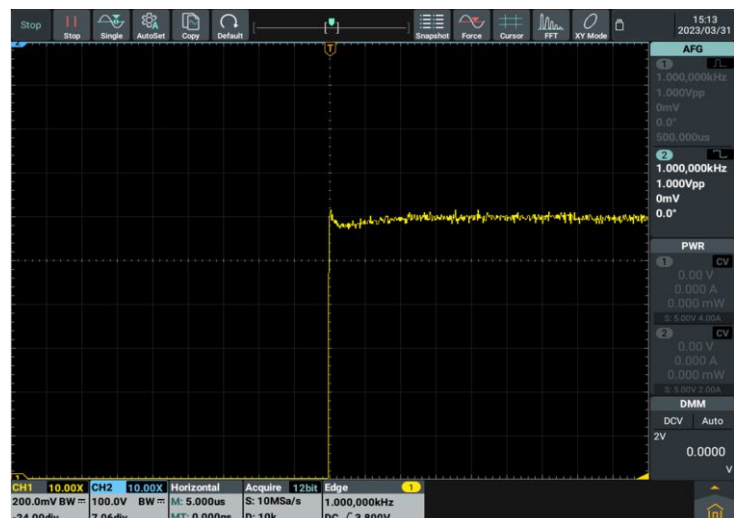
Android based design, more application scheme

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

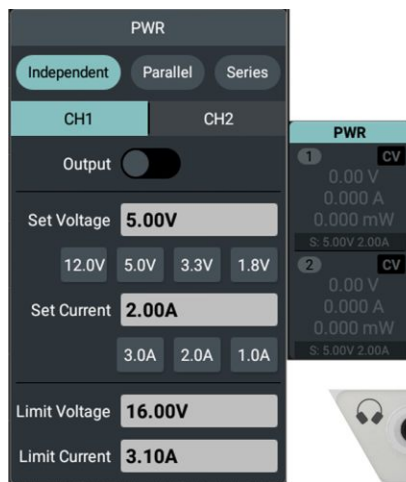
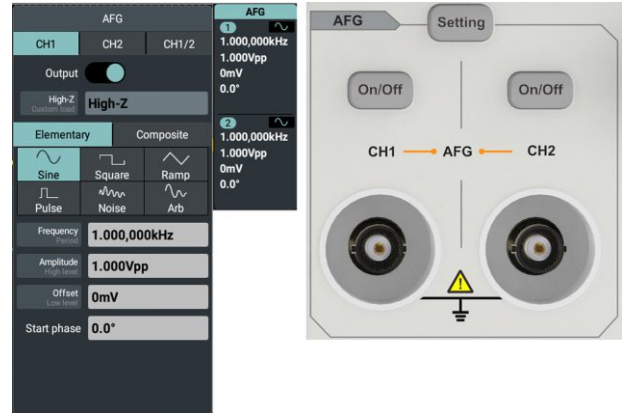
Digital Oscilloscope

- + Bandwidth:100MHz
- + 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



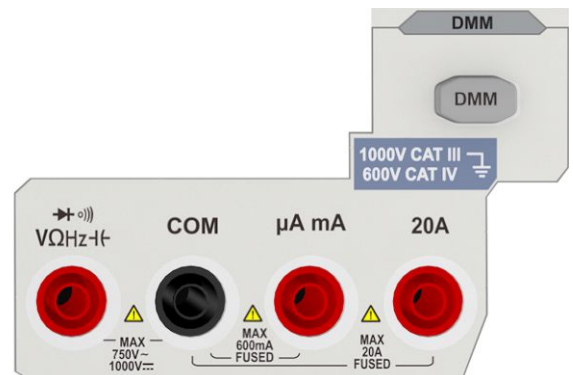
Power Supply

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



4 1/2 digits Digital Multimeter

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



Frequency Response Analysis (FRA) function SCPI supported

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).

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



```

osc_pyqt_demo.py
#oscilloscope simulated by Python/osc_pyqt_demo.py
def button1_ops(self):
    get_data_recv_data_buf = scpi_query(1, 'CH1:SCALE 100mV/V')
def button2_ops(self):
    get_data_recv_data_buf = scpi_query(1, 'CH1:SCALE 1V/V')
def updateValue(self, data_np):
    self._1_point_list.append(self._1_point_list[-1])
    self._1_point_list.insert(0, QPoint(0, data_np[0]))
    for i in range(0, len(self._1_point_list)):
        self._1_point_list[i].setX(i)
        self._1_point_list[i].setY(data_np[i])
        self.series.replace(self._1_point_list)
def __del__(self):
    self.thread.quit()
    self.thread.deleteLater()
    exit_all()
if __name__ == '__main__':
    import sys
    app = QApplication(sys.argv)
    mainWindow = MainWindow()
    mainWindow.setWindowTitle('OSC Python Demo')
    mainWindow.show()
    sys.exit(app.exec_())
    
```

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.

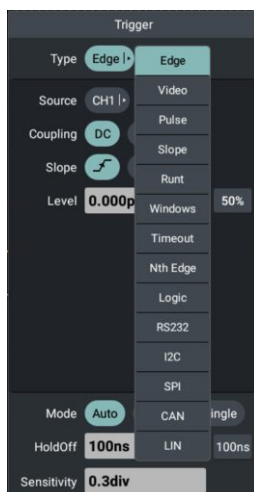


Rich trigger function

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.



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)		Max 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		ΔV, and ΔT between cursors, ΔV and ΔT 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, Phase, Delay A→B  , Delay 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, I2C, SPI, RS232, LIN and CAN				
Line / Field Frequency (video)		NTSC, PAL and SECAM standard				
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				

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 Resolution	Voltage	10mV
	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
Sample Rate	300MS/s
Channel	2
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



Probe Adjust



Multimeter Lead



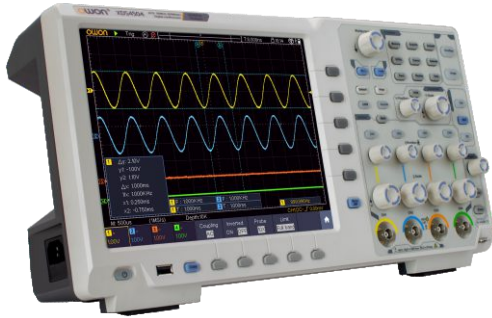
BNC plug to alligator clips cable



Test Leads

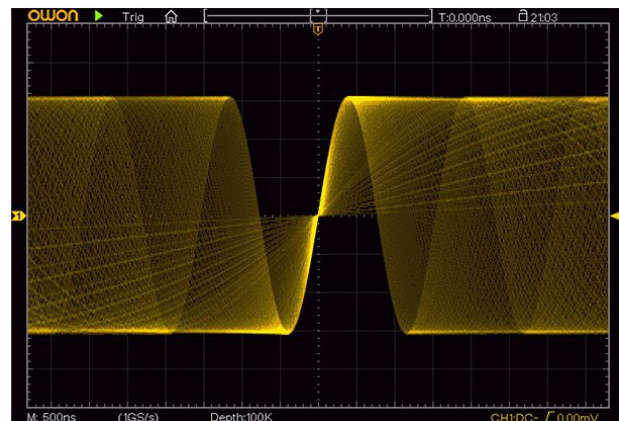
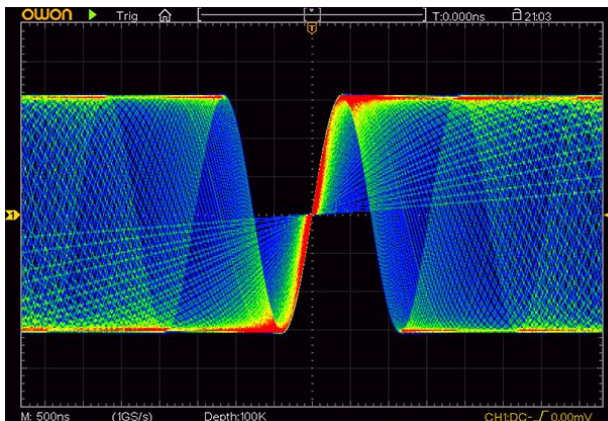
Multi-function test oscilloscope

- XDS4000 Series



- + 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 400 Mpts memory depth
- + 600,000 wfms/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

1. multi-level grayscale, and color temperature display



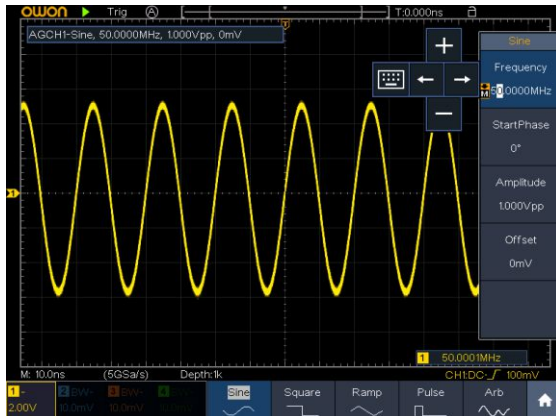
2. Standard 400 Mpts memory depth, observe more waveform details

M Length
1k
10k
100k
1M
10M
100M
200M
400M

3. Built-in 6-digit high-precision frequency counter, support the statistics on the max. and min. values

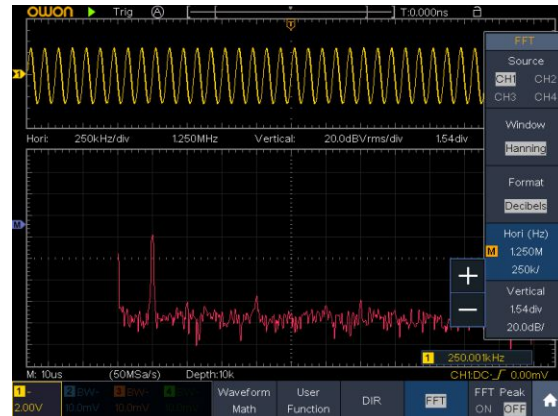
ScreenMeasure	Max	Min
1 F : 10.01MHz	10.20MHz	9.986MHz

4. Standard 50MHz single-channel waveform generator, 250 MSa/s sample rate, 16k arbitrary waveform length, built-in 64 pre-defined waveforms



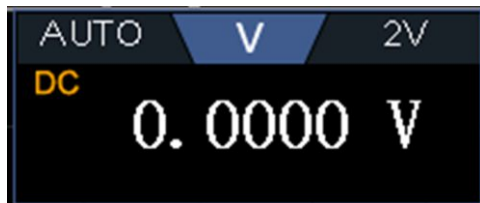
5. Standard FFT, real-time operation of waveform data

Support 4 FFT windows: Rectangular, Hamming, Hanning and Black-harris



6. 4 ½ Digits Multimeter with Data Logging Function

Support voltage, current, capacitance, resistance, frequency, duty cycle, continuity, diode test, and built-in data logging function, can analyze the change trend of the measured object for a long time.



7. A variety of triggers and decodes

A variety of triggers supported - Logic, Runt, Windows, Time-out, I2C, SPI, RS232/UART, Nth Edge, and CAN.

Support I2C, SPI, RS232/UART, CAN serial bus decoding function.

MBus Type
RS232
I2C
SPI
CAN

MSingle
Edge
Video
Pulse
Slope
Runt
Windows
Timeout
Nth Edge

8. Frequency Characteristic Curve

XDS4000 series can generate the sweep signal of the specified range by controlling the built-in signal generator module and output the signal to the switch power supply to carry out loop analysis test. The bode plot generated from the test can display the gain and phase variations of the system under different frequencies, enabling engineers to get a clear view about data from the bode plot. By analyzing the phase margin (PM) and gain margin (GM), they can judge whether the system is stable.



9. 10.4-inch LCD, clear waveform display, the multi-touch screen allows engineers to work more efficiently.



10. The data logger can record the data measured by the multimeter in the internal memory or external U disk, and can generate charts or CSV format for further analysis.



Model	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	max 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, Ground			
Trigger type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I2C, SPI, RS232, CAN			
Decoding Type	RS232, I²C, SPI, CAN			
Automatic measurement	Period, Frequency, Mean, PK-PK, RMS, Max, Min, Top, Base, Amplitude, Overshoot, Preshoot, Rise Time, Fall Time, +Pulse Width, -Pulse Width, +Duty Cycle, -Duty Cycle, Delay A→B  , Delay A→B  , Cycle RMS, Cursor RMS, Screen Duty, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF, Phase A→B  , Phase A→B  , +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edge Count, Area, and 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; Trig Out(Pass/Fail); LAN port; VGA port; EXT Trig In			
Printer compatibility	PictBridge			
Dimension (WxHxD)	422x226x135(mm)			
Weight	Approx. 4.25 kg (without accessories)			

Arb Waveform Generator Specifications

Max Frequency Output	50MHz
Sample Rate	250MS/s
Channel	1 channel
Vertical Resolution	14bits
Amplitude Range	2mVpp - 5Vpp ($\leq 25\text{MHz}$) ; 2mVpp - 20Vpp ($\leq 50\text{MHz}$)
Waveform Length	16K
Output Waveforms	Sine, Square, Pulse, Ramp, Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, Noise, and others, total 46 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



CD Rom



Quick Guide



USB Cable



Probe



Probe Adjust



Q9 Cable

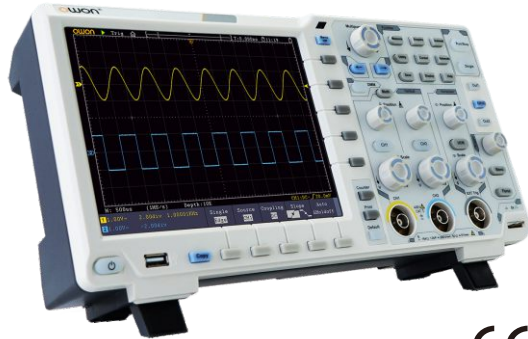
optional accessories:


Multimeter
Lead

Current Ext
Module

Multi-function test oscilloscope

- XDS3000 Series



14 / 12 bits

high resolution ADC

Super Performance

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

Creative New Look

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

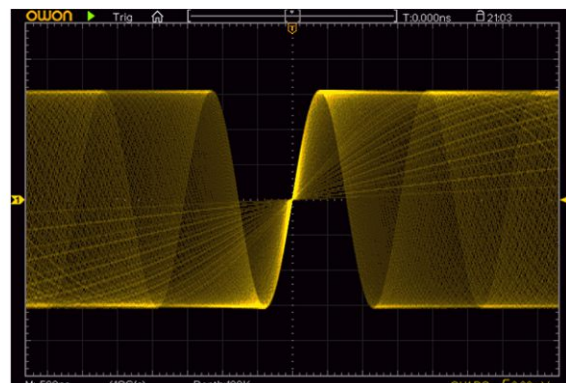
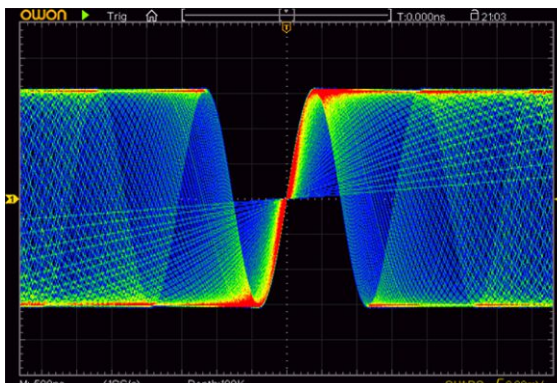
n-in-1

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

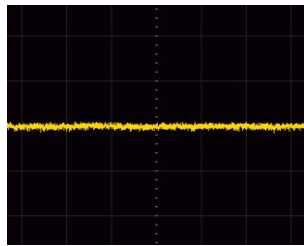
1. XDS series introduce 12 / 14 bits hardware ADC, the precision is 16/64 times against other oscilloscope on market. Equipping with OWON's original magnifier function, it can observe the signal low down to 31.25 μ V/div(XDS3202A, XDS3102AP).



2. multi-level grayscale, and color temperature display



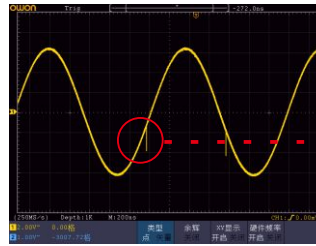
3. Xvisual platform - restore the waveform detail fully



low background noise

M.Length
1000
10K
100K
1M
10M
20M
40M

40M record length



and 75,000 wfms/s refresh rate, easily capturing exceptional, and low probability events

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

MBus Type
RS232
I2C
SPI
CAN

MSingle
Edge
Video
Pulse
Slope
Runt
Windows
Timeout
Nth Edge

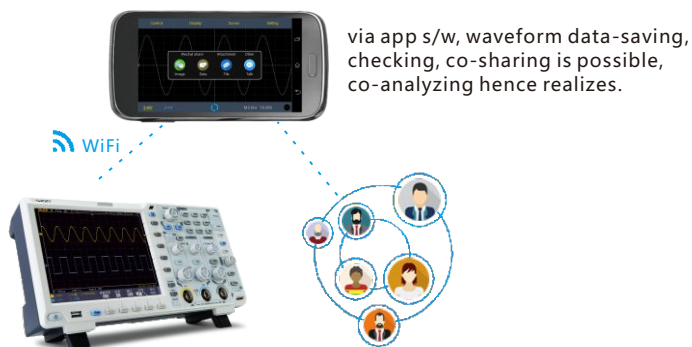
6. built-in multimeter module, with auto-scale, and data logging function.

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



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.

9. its multi-point touchscreen improves operation efficiency considerably.



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



10. 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		8bits			
Record length	40M							
Waveform Refresh Rate	max 75,000 wfms/s							
Horizontal Scale (s/div)	2ns/div - 1000		1ns/div - 1000		2ns/div - 1000		1ns/div - 1000	
	step by 1 - 2 - 5							
Input Impedance	1M Ω $\pm$ 2%, in parallel with 15pF $\pm$ 5pF (* 50 Ω $\pm$ 2%)							
Vertical Sensitivity	1mV/div - 10V/div (at input)							
DC Gain Accuracy	$\pm$ 1.5%				$\pm$ 3%			
Sample Rate /	$\pm$ 1ppm (type, Ta= +25°C)							
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	+, -, $\times$, $\div$, 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, Peak RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, Duty Cycle, Delay A $\rightarrow$ B  , Delay A $\rightarrow$ 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							
Weight	Approx. 2.60 kg							

+ Optional Module / Function

VGA	VGA + AV port	RS232/UART	RS232/UART
WIFI	Wi-Fi	SPI	SPI
AWG	arb waveform generator	I2C	I ² C
DMM	digital multimeter	CAN	CAN decoding
TOU	Touch screen (capacitor-type)		
BAT	3.7V, 13200mAh		

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			8bits	14 bits	8bits
Record length	40M							
Waveform Refresh Rate	max 45,000 wfms/s				max 70,000 wfms/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, Wave 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							
Weight	Approx. 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 ± 1 digit); max input: DC 1000V ACV: 4V, 40V, 400V: ±(1 ± 3 digits); frequency: 40Hz - 400Hz; max input: AC 750V (virtual value)		
Current	DCA: 40mA, 400mA: ±(1.5% ± 1 digit); 10A: ±(3% ± 3 digits) ACA: 40mA: ±(1.5% ± 3 digits), 400mA: ±(2% ± 1 digit), 10A: ±(3% ± 3 digits)		
Impedance	400Ω: ±(1% ± 3 digits), 4KΩ - 40MΩ: ±(1% ± 1 digit)		

+ Accessories The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



USB Cable



Probe



Probe Adjust

optional accessories:



Multimeter Lead



Q9



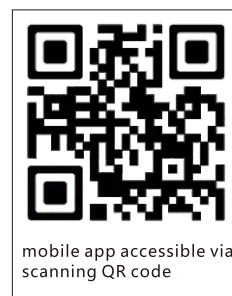
Capacitance Ext Module



Battery



Soft Bag



mobile app accessible via scanning QR code

Deep Memory Digital Storage Oscilloscope

- SDS Series



10M
Record Length



- + 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



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, Wave 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					
Weight	Approx. 1.80 kg					

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



USB Cable



Probe



Probe Adjust



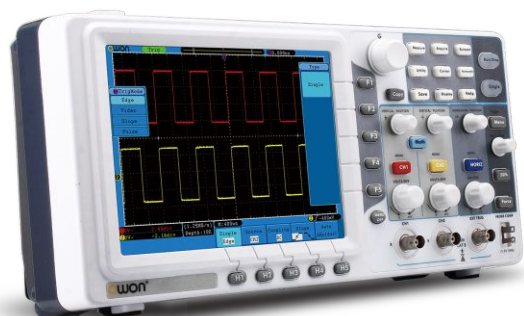
Battery (optional)



Soft Bag (optional)

Economical Type Digital Storage Oscilloscope

- SDS-E Series



- + 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, Peak RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty, Duty cycle					
Waveform Math	+, -, ×, ÷, invert, FFT					
Waveform Storage	15 waveforms					
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					
Weight	Approx. 1.50 kg					

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



USB Cable



Probe



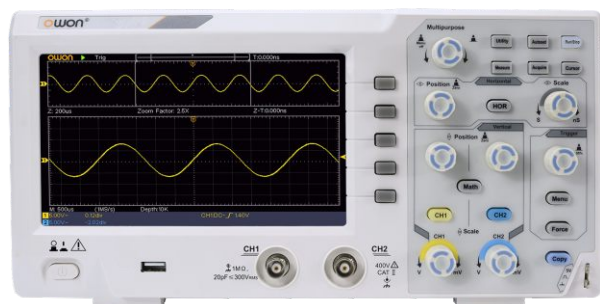
Probe Adjust



Soft Bag (optional)

Super-economical Type Digital Storage Oscilloscope

- SDS1000 Series



- + 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, Vbase, 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	Approx. 1.10 kg			

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



USB Cable



Probe



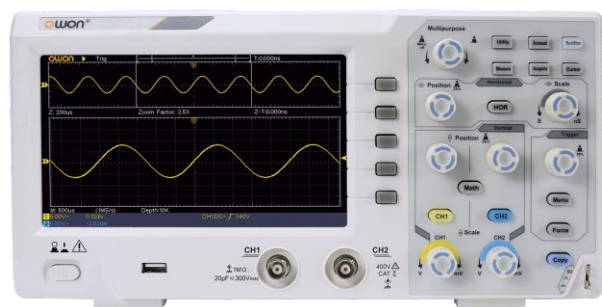
Probe Adjust



Soft Bag
(optional)

Super-economical Type Digital Storage Oscilloscope

- SDS1000 Series



- + 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	1GS/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, Vbase, 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	Approx. 1.10 kg

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



USB Cable



Probe



Probe Adjust



Soft Bag
(optional)

Oscilloscope

- AS Series



- The best choice to replace an analogue oscilloscope
- + The simple control panel is similar to an analogue oscilloscope
- + Bandwidth : 10MHz(AS101), 20MHz(AS201)
- + Sample rate : 100MS/s
- + 130,000 wfms/s waveform capture rate, easily capturing exceptional and low probability events
- + 3.7" Colored LCD
- + Compact case

Model		AS101	AS201
Bandwidth		DC:0 - 10MHz, AC: 10 Hz - 10MHz	DC:0 - 20MHz, AC: 10 Hz - 20MHz
Channel		1	
Input coupling		DC, AC, Ground	
Input impedance		1 MΩ±2%, in parallel with 20 pF±5 pF	
Max. input voltage		400V (DC+AC, PK - PK)	
Horizontal system	Sample Rate	100MS/s	
	Interpolation	(Sinx)/x	
	Scanning speed (S/DIV)	0.05us/DIV - 0.1s/DIV, step by 1 - 2 - 5	
	relay time accuracy	±100 ppm	
	Trimming Ratio	≥2.5:1	
Vertical system	Sensitivity	5 mV/DIV ~ 10 V/DIV	
	Displacement	±10DIV	
	Low Frequency	≥10 Hz (at input, AC coupling, -3 dB)	
	Rise time (at input, Typical)	≤ 30 ns	
	Trimming Ratio	≥2.5:1	
X-Y Model	Sensitivity	X:0.5V/DIV Y:0.1V/DIV - 1V/DIV	
	Bandwidth(-3dB)	DC: 0 - 1MHz AC: 10Hz - 1MHz	
Trigger	Trigger level range	±4 DIV from the screen center	
	Trigger level Accuracy (typical)	±0.3 DIV	
	Trigger Sources	Int, Line, Ext	
	Trigger Mode	Norm, AUTO, TV	
	Edge trigger	Rising, Falling	
	Video Trigger	Support standard NTSC, PAL and SECAM broadcast systems	
	Sample Rate / Relay Time	±100ppm	
	Trigger lock	support	
	Ext. Trigger Input Impedance	1 MΩ±2%, in parallel with 20 pF±5 pF	
	Ext. Trigger Max. Input Voltage	400Vpp	
Trigger Output of the probe compensator	Output Voltage (Typical)	Square, 0.5Vpp±2%	
	Frequency (Typical)	Square wave of 1 kHz(±1%)	
	Display	3.7" Colored LCD (Liquid Crystal Display)	
	Power Supply	100V - 240V AC, 50/60Hz, CAT II	
	Power Consumption	< 15W	
	Fuse	1A, T class, 250V	
	Dimension (W x H x D)	117 x 192 x 288 mm	
	Device Weight	Approx. 1.8 kg	

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



Quick Guide



Probe



Probe Adjust

PC Oscilloscope

- VDS Series



- + 20MHz bandwidth, 100MS/s sample rate
- + Friendly UI : FFT, or X-Y, and waveform 2 views displayed on the same screen
- + Multi-trigger option : edge, video, slope, and pulse
- + USB isolation - less signal interference, more PC protection
- + USB bus powering
- + Ultra-thin body design, easy portability



Model	VDS1022I	VDS1022
Bandwidth	25MHz	
Channel	2 channel + multi	
Sample Rate	100MS/s	
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5	
Record Length	5K	
Input Impedance	1MΩ ± 2%, in parallel with 10pF±5pF	
Max Input Voltage	400V(DC + AC peak)	40V(DC + AC peak)
Vertical Sensitivity	5mV/div - 5V/div	
Vertical Resolution	8 bits	
Trigger Type	Edge, Pulse, Video, Slope, and Alternate	
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, +Width, -Width, Delay A→B, Delay A→B	
Waveform Math	+, -, ×, ÷, FFT	
Communication Interface	USB2.0 (isolation)	USB2.0
Power Supply	≤2.5W	
Dimension (W x H x D)	170 x 18 x 120 mm	
Weight	Approx. 0.26 kg	

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Probe



Probe Adjust



USB Cable



Silicon Gel Case



CD Rom



Quick Guide

PC Oscilloscope

- VDS6000 Series



- + Dual/four channel, ultra-thin body design
- + 100MHz bandwidth, and max. 1GSa/s real-time sampling rate
- + Standard built-in 5MHz signal generator (for dual-CH)
- + 8-bit, 12-bit, 14-bit vertical resolution, more accurate measurement
- + Max. 10M record length
- + Standard SCPI protocol supported, LabVIEW supported
- + Secondary development supported on Windows, Linux, Android, and iOS platform
- + Support Wi-Fi Communication

Model	VDS6102	VDS6102A
Bandwidth	100MHz	
Channel	2 channel + signal generator	
Sample Rate	1GS/s	
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5	
Record Length	10M	
Input Impedance	1MΩ ± 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(Type-C), LAN, Wi-Fi (optional)	
Power Supply	≤8W	
Dimension (W x H x D)	190 x 18 x 120 mm	
Weight	Approx. 0.38 kg	

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Probe



Probe Adjust



USB Cable



Silicon Gel Case



Quick Guide



Adapter



Power Cord



Q9
(for dual-CH)



Wi-Fi
(optional)

PC Oscilloscope

- VDS6000 Series



- + 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	1MΩ ± 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			
Weight	Approx. 0.40 kg			

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Probe



Probe Adjust



USB Cable



Silicon Gel Case



Quick Guide



Adapter



Power Cord



Q9
(for dual-CH)



Wi-Fi
(optional)

2CH / 4CH Tablet Digital Storage Oscilloscope - TAO3000 Series



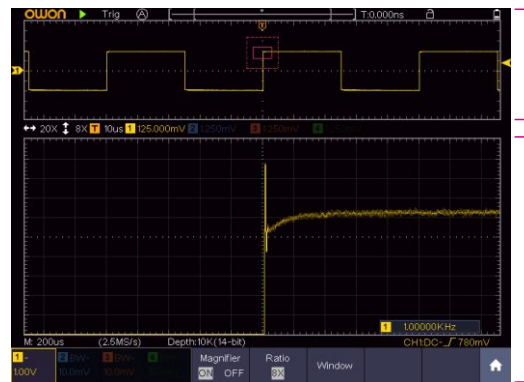
- + Oscilloscope + Multimeter (2CH type)
- + Max 120MHz Bandwidth, 1GS/s sample rate
- + 14-bit high resolution ADC
- + 40M record length; 45,000 wfms/s waveform refresh rate
- + low back ground noise
- + 8-inch 800 x 600 high resolution LCD, multi-touch screen, more user-friendly operation experience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

14-bit hardware ADC, high measurement accuracy

Equipped with 14-bit high-resolution hardware ADC, the precision is 64 times against other oscilloscope on market. You can observe the waveform details more clearly, and measure the changes of small voltage signals more accurately.



Magnifier view of 8 bits sampling



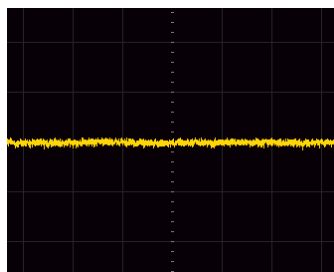
Magnifier view of 14 bits sampling

Original view

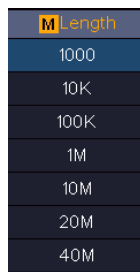
Magnifier view

Excellent oscilloscope performance, low background noise, high storage, high refresh

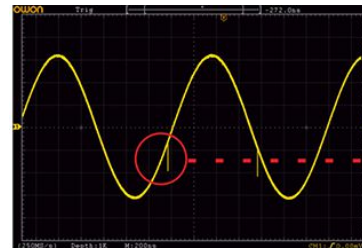
Low background noise allows the oscilloscope to have better small signal measurement capabilities. High storage allows the oscilloscope to acquire longer signals. High refresh rate allows the oscilloscope to capture waveform details and exceptional events.



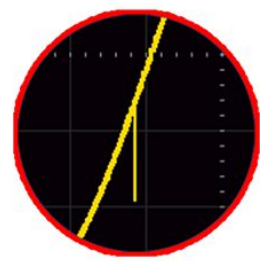
Low background noise



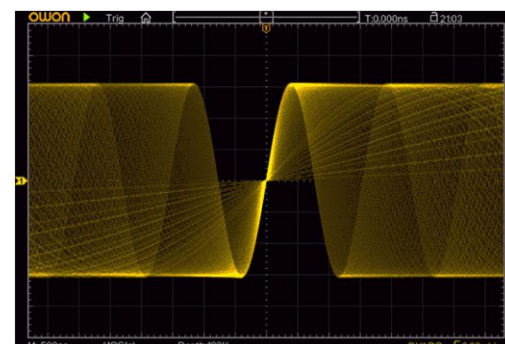
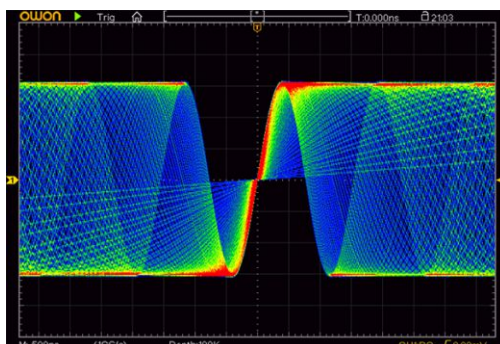
40M record length



45000 wfms/s refresh rate, easily capturing exceptional, and low probability events



Multi-level grayscale, and color temperature display



Multiple trigger and bus decoding function

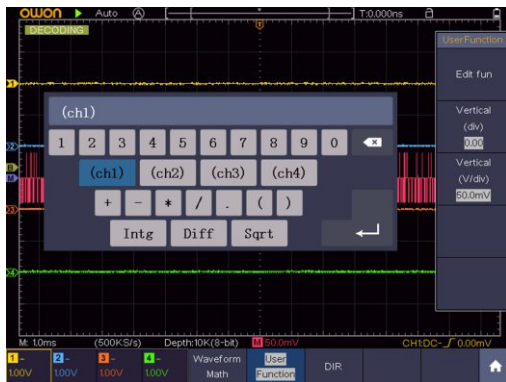
M Bus Type
RS232
I2C
SPI
CAN

Serial bus coding available in I2C, SPI, RS232/UART, and CAN.

M Single
Edge
Video
Pulse
Slope
Runt
Windows
Timeout
Nth Edge

Support multiple trigger modes, including Edge, Video, Pulse, Slope, Runt, Windows, Timeout, I2C, SPI, RS232/UART, CAN, and Nth Edge.

Multiple waveform math operations



Support +, -, *, /, FFT, FFTrms, Intg, Diff, Sqrt, User Defined Function, digital filter (low pass, high pass, band pass, band reject)

Built-in Wi-Fi module



Built in Wi-Fi module, the user can connect with TAO3000 through mobile device, realize the same screen display and control, store and view waveform data through app, share with friends, realize collaborative analysis and successfully complete the work.

Multiple operation methods, make field testing more convenient



Handheld Type

The back is equipped with anti falling elastic belt.



Bracket Type

With bracket, it can be placed on the table



Knapsack Type

Optional outdoor Backpack

Model	TAO3072	TAO3102	TAO3122	TAO3072A	TAO3102A	TAO3122A
Bandwidth	70MHz	100MHz	120MHz	70MHz	100MHz	120MHz
Sample Rate	1GS/s					
Vertical Resolution (A/D))	8 bits			8 bits/12 bits/14 bits		
Record length	40M					
Waveform Refresh Rate	45,000 wfms/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)	I²C, SPI, RS232/UART, CAN					
Trigger Mode	Auto, Normal, and Single					
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Peak 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(WxHxD)	270 x 191 x 48 (mm)					
Device Weight	Approx. 1.7kg					

Multimeter Specifications (only apply for 2 channels model)

Display	Voltage	Current	Impedance	Diode	Auto Ranging
4 1/2 digitals	mV:20.000mV-200.00mV DCV: 2.0000V – 1000.0V ACV: 2.0000V – 750.0V	ACD: 10.00A ACA: 10.00A	200.00 Ω - 100.00M Ω	$\checkmark$	$\checkmark$

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



Adapter



Probe



CD Rom



Quick Guide



Micro USB Cable



Probe Adjust



Stand Holder



BNC-SAM



Multimeter Lead



Current Ext Module



Bag (optional)

Model	TAO3074	TAO3104	TAO3074A	TAO3104A
Bandwidth	70MHz	100MHz	70MHz	100MHz
Sample Rate	1GS/s			
Vertical Resolution (A/D))	8 bits		8 bits/12 bits/14 bits	
Record length	40M			
Waveform Refresh Rate	45,000 wfms/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)	I²C, SPI, RS232/UART, CAN			
Trigger Mode	Auto, Normal, and Single			
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Peak 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(WxHxD)	270 x 191 x 48 (mm)			
Device Weight	Approx. 1.7kg			

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



Adapter



Probe



CD Rom



Quick Guide



Micro USB Cable



Probe Adjust



Stand Holder



BNC-SAM



Bag (optional)

Dual Channel Handheld Oscilloscope

- HDS-N Series



CE

- + 2 in 1 (DSO + Multimeter)
- + Bandwidth : 20MHz - 200MHz
- + Sample Rate : 100MS/s - 1GS/s
- + With good ISOLATIONG between channels (HDS1022M-I)
- + Auto-scale function
- + Waveform record and replay
- + Multimeter newly supported SCPI



Model	HDS1022M-N	HDS2062M-N	HDS3102M-N	HDS4202M-N
Bandwidth	20MHz	60MHz	100MHz	200MHz
Channel	2 Channel			
Sample Rate	500MS/s	1GS/s		
Horizontal Scale (s/div)	5ns/div - 100s/div			2ns/div - 100s/div
Display	3.7" color TFT LCD, 640 x 480 pixels			
Record Length	6K points			
Input Impedance	1MΩ ± 2%, , in parallel with 20pF ± 5pF			
Vertical Sensitivity	5mV/div - 5V/div(at input)			
Trigger Type	Edge, Video, and Alternate			
Automatic Measurement	Vpp, Vavg, Vrms, Frequency, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, DelayA→B $\downarrow$, DelayA→B $\uparrow$			
Waveform Math	+, -, x, ÷, FFT			
Communication Interface	USB			
Battery	7.4V, 6 hours' operation			
Dimension (W x H x D)	180 x 115 x 40 (mm)			
Device Weight	Approx. 685g			

+ Multimeter Specifications

Display	Voltage	Current	Impedance	Diode	On / Off Test
33/4 digits (max 4000 count)	DCV: 400mV - 1000V ACV: 4V - 750V	DCA: 40mA - 10A ACA: 40mV - 10A	400Ω 4KΩ - 40MΩ	√	√

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



USB Cable



Probe



Probe Adjust



Multimeter Lead



Adapter



5V, 1KHz Output



Capacitance Ext Module



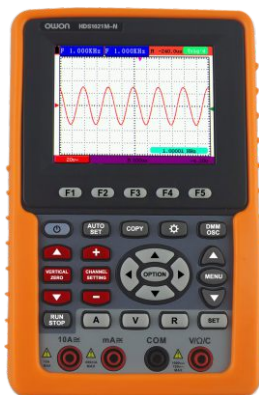
Soft Bag (optional)



Metal Case

Single Channel Handheld Oscilloscope

- HDS Series



- + 2 in 1 (DSO + Multimeter)
- + Bandwidth : 20MHz - 100MHz
- + Sample Rate : 500MS/s - 1GS/s
- + Auto-scale function
- + 20 group automatic measurement options
- + Waveform record and replay
- + Multimeter newly supported SCPI



Model	HDS1021M-N	HDS2061M-N	HDS3101M-N
Bandwidth	20MHz	60MHz	100MHz
Channel	1 Channel		
Sample Rate	500MS/s	500MS/s	1GS/s
Horizontal Scale (s/div)	5ns/div - 100s/div		
Display	3.7" color TFT LCD, 640 x 480 pixels		
Record Length	24K		
Input Impedance	1MΩ ± 2%, in parallel with 20pF ± 5pF	1MΩ ± 2%, in parallel with 15pF ± 5pF	
Vertical Sensitivity	5mV/div - 5V/div(at input)		
Trigger Type	Edge, Video		
Automatic Measurement	Vpp, Vavg, Vrms, Frequency, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, DelayA→B, DelayA→B		
Communication Interface	USB		
Li-ion Battery	7.4V, 6 hours' operation		
Dimension (W x H x D)	180 × 113 × 40 (mm)		
Device Weight	Approx. 645g		

+ Multimeter Specifications

Display	Voltage	Current	Impedance	Diode	On / Off Test
3 ³ / ₄ digits (max 4000 count)	DCV: 400mV - 1000V ACV: 4V - 750V	DCA: 40mA - 10A ACA: 40mV - 10A	400Ω 4KΩ - 40MΩ	√	√

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



USB Cable



Probe



Probe Adjust



Multimeter Lead



Adapter



5V, 1KHz Output



Capacitance Ext Module



Soft Bag



Metal Case (optional)

Dual Channel Handheld Oscilloscope

- HDS200 Series



- + 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	HDS242	HDS272	HDS2102	HDS2202	HDS242S	HDS272S	HDS2102S	HDS2202S
Bandwidth	40MHz	70MHz	100MHz	200MHz	40MHz	70MHz	100MHz	200MHz
Channels	2				2+1(signal generator)			
Sample Rate	250MS/s		500MS/s	1GS/s	250MS/s		500MS/s	1GS/s
Acquisition Model	Sample, Peak detect							
Record Length	8K							
Display	3.5-inch LCD							
Waveform Refresh Rate	Max 10,000 wfms/s							
Input Coupling	DC, AC, and Ground							
Input Impedance	1 MΩ±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		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	Frequency, Period, Amplitude, Max, Min, Mean, PK-PK							
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	Approx. 0.60 kg							

[Multimeter] Specifications

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

[Waveform Generator] Specifications (Only for HDS242S, HDS272S, HDS2102S, and HDS2202S)

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

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Quick Guide



USB Cable



Probe



Probe Adjust



Multimeter
Lead



BNC plug to
alligator clips
cable



Soft Bag

Spectrum Analyzer

- XSA800 Series



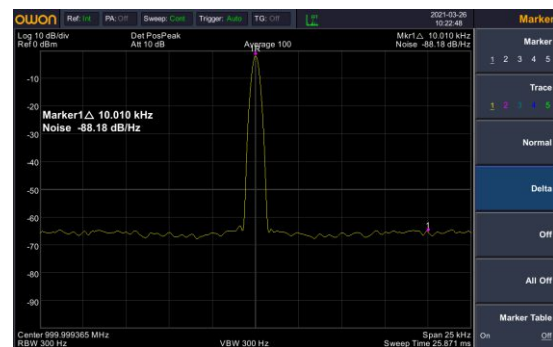
- + Frequency range 9kHz - 1.5GHz
- + -160 dBm Displayed Average Noise Level (DANL)
- + Phase noise -80 dBc/Hz @1GHz and offset at 10 kHz
- + Total amplitude accuracy <0.7 dB
- + 1 Hz minimum resolution bandwidth (RBW)
- + EMI pre-compliance test kit, optional EMC test software
- + Optional tracking 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

1. Excellent small signal measurement capability



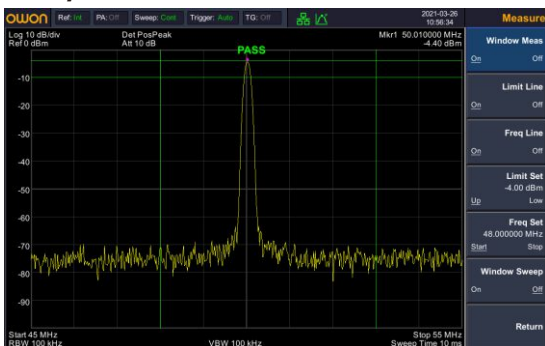
-160 dBm DANL (Displayed Average Noise Level), can observe weaker small signals.

2. More accurate low-noise measurements



Phase Noise < -80 dBc/Hz @1GHz at 10 kHz offset

3. Pass/Fail function



Quickly determine if the test results pass

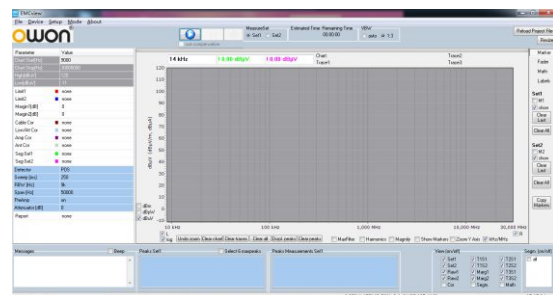
4. Provides EMI pre-compliance test function



Equipped with EMI filter (6dB) and quasi-peak detector as standard, it is more accurate for EMI pre-test and diagnosis, and complete testing and production report can be completed by using supporting software.

5. Provide EMC test function on PC (requires optional software)

Built-in more than 200 mainstream EMC test standards and regulations templates. The user selects the corresponding template, and the software automatically sets the spectrum analyzer and records the test data. The data and regulations can be compared on the same screen. Users can also customize regulations for comparative analysis.



Model		XSA805 (TG)	XSA810 (TG)	XSA815 (TG)
Frequency Range		9 kHz to 500 MHz	9 kHz to 1 GHz	9 kHz to 1.5 GHz
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	< -80 dBc/Hz		
	100 kHz	< -100 dBc/Hz		
	1 MHz	< -115 dBc/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 1MHz		-135 dBm (Typical), < -128 dBm		
1MHz to 500MHz		-160 dBm (Typical), < -150 dBm		
500 MHz to the upper		——	-158 dBm (Typical), < -148 dBm	
Trace detectors		positive-peak, negative-peak, normal, sample, RMS, voltage average, quasi-		
Units of level axis		dBm, dBμW, dBpW, dBmV, dBμV, W, V		
Tracking generator frequency range(-		100 kHz to the upper frequency limit		
Output power level range(-TG Model)		-40 dBm to 0 dBm		
Output level resolution (-TG Model)		1 dB		
Interface		USB Host, USB Device, LAN, earphone interface, HDMI		
Display		9-inch TFT LCD, 1280 x 800 pixels		

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



N-BNC

Optional Accessories



N-N Cable



N-SMA Cable



SMA-SMA Cable



SMA Adaptor

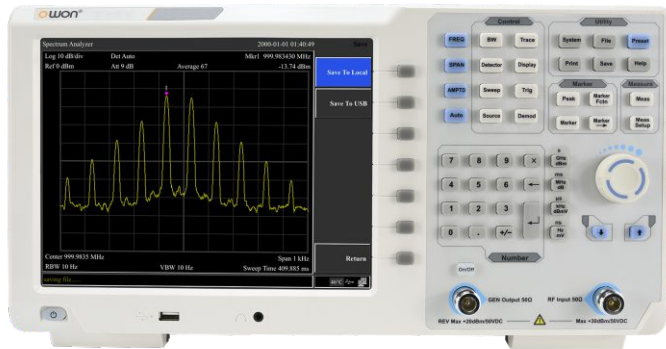


N-SMA Adaptor

 Near Field Probe includes:
 Four near-field probes,
 N-SMA adapter,
 SMA-SMA cable,
 (Frequency range: 30MHz - 3GHz)

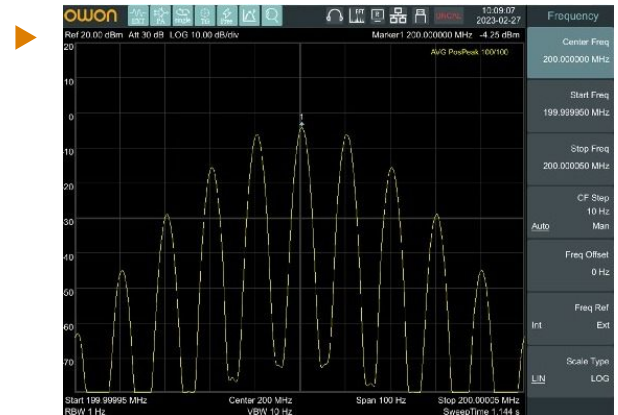
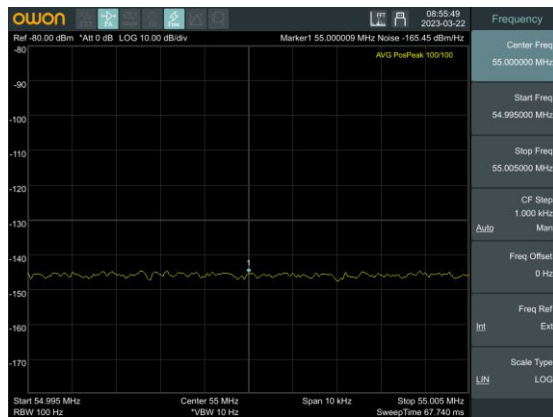
Spectrum Analyzer

- XSA1000P Series



- + Frequency range 9kHz - 7.5GHz
- + -163 dBm Displayed Average Noise Level (DANL)
- + Phase noise -106 dBc/Hz @1GHz and offset at 10 kHz
- + Total amplitude accuracy <0.7 dB
- + 1 Hz minimum resolution bandwidth (RBW)
- + EMI pre-compliance test kit, 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

1. 1Hz minimum resolution bandwidth (RBW), effectively distinguishing the nearby signal

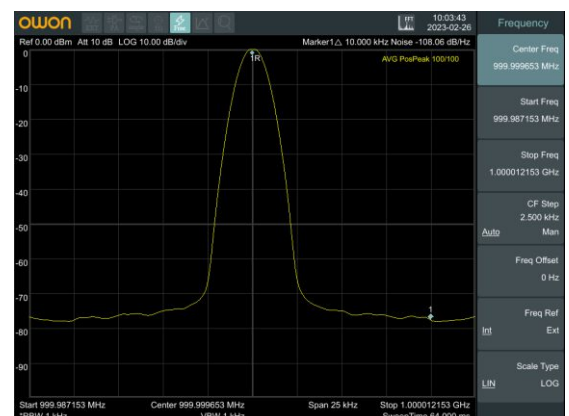
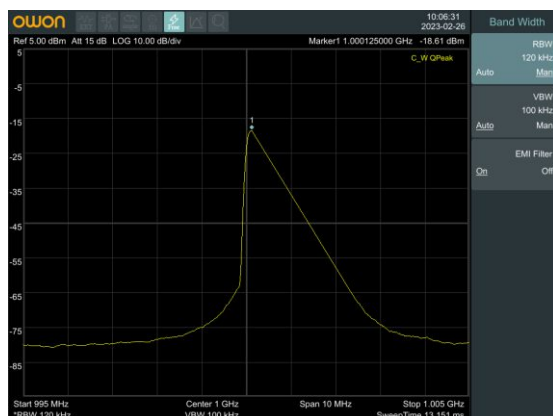


2. Extremely low DANL reduces the impact on small signal measurements

Offers a DANL (Displayed Average Noise Level) down to -163 dBm, effectively guarantee the ability to test small signals

3. Phase noise: <-106 dBc/Hz @1 GHz @ 10 kHz offset

Excellent phase noise performance - <-106 dBc/Hz @10kHz enables users to evaluate most synthesizers and signal generators.



4. EMI filter and peak detector kit

Offers an EMI filter and peak detector kit to help evaluating EMI levels for pre-compliance testing.

Model	XSA1015P(TG)	XSA1036P(TG)	XSA1075P(TG)
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)	<-106 dBc/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 1Hz)		
100 kHz - 1 MHz	-135 dBm (Typical)		
1 MHz - 500 MHz	-160 dBm (Typical)		
500 MHz - 1.5 GHz	-158 dBm (Typical)		
1.5 GHz - 3.6 GHz	---	-158 dBm (Typical)	-158 dBm (Typical)
3.6 GHz - 6 GHz	---	---	-154 dBm (Typical)
6 GHz - 7.5 GHz	---	---	-149 dBm (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	dBm, dBuW, dBpW, dBmV, dBuV, W, V		
Tracking generator (-TG Model)	100 kHz - 1.5 GHz (Tracking generator)	100 kHz - 3.6 GHz (Tracking generator) 35 MHz - 3.6 GHz (Signal generator)	100 kHz - 7.5 GHz (Tracking generator)
Output power level range (-TG Model)	-30 dBm - 0 dBm	-40 dBm - 0 dBm	
Output power level resolution (-TG Model)	1 dB		
Communication Port	USB HOST, USB DEVICE, LAN, earphone port, VGA, REF		
Display	10.4 inches TFT LCD		

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



USB Cable



CD-Rom



Quick Guide



N-BNC

Optional Accessories



N-N Cable



N-SMA Cable



SMA-SMA Cable



SMA-SMA Cable



Near Field Probe

Handheld Spectrum Analyzer

- HSA1000 Series



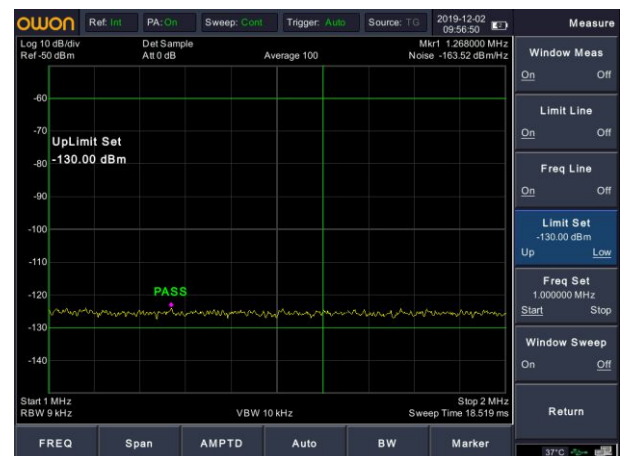
- + Frequency Range from 9 kHz up to 7.5 GHz
- + -160dBm Displayed Average Noise Level
- + Phase Noise -80dBc/Hz @1Gz and offset at 10kHz
- + Total Amplitude Accuracy <1.5dB
- + 10Hz Minimum Resolution Bandwidth (RBW)
- + Standard GPS receiver, optional antenna, the latitude/longitude information and 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.



With a Carrying case (optional), you can free your hands and make on-site work more convenient.

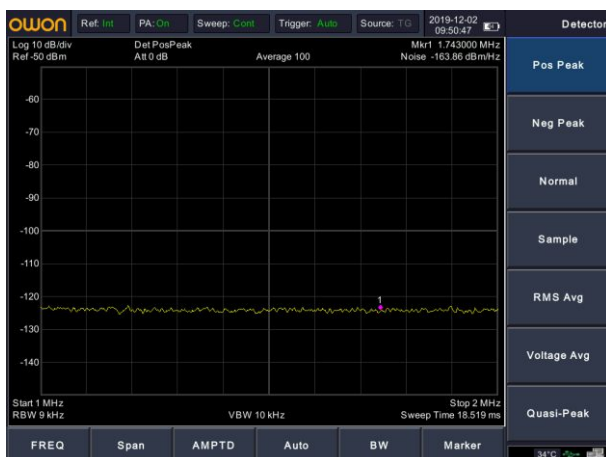
Pass/Fail function

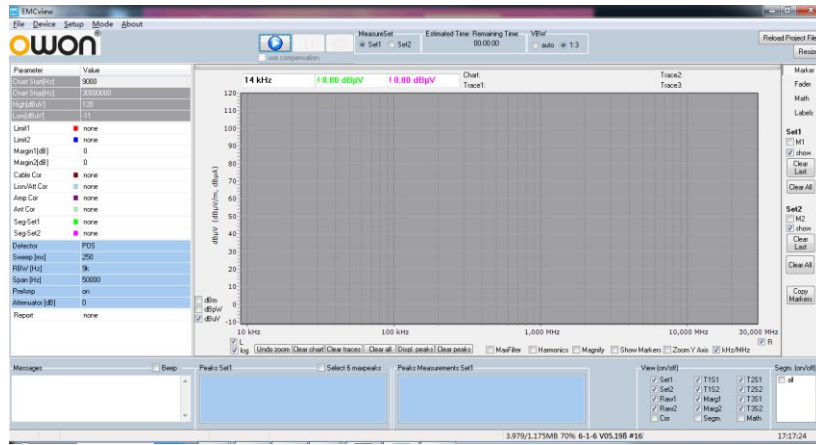
Quickly determine if the test results pass



Provides EMI pre-compliance test function

Equipped with EMI filter (6dB) and peak detector as standard, it is more accurate for EMI pre-test and diagnosis, and complete testing and production report can be completed by using supporting software.





Provide EMC test function on PC (requires optional software)

Built-in more than 200 mainstream EMC test standards and regulations templates. The user selects the corresponding template, and the software automatically sets the spectrum analyzer and records the test data. The data and regulations can be compared on the same screen. Users can also customize regulations for comparative analysis.

Model	HSA1016(TG)	HSA1036(TG)	HSA1075(TG)
Frequency Range	9kHz-1.6 GHz	9kHz-3.6 GHz	9kHz-7.5 GHz
Frequency Resolution	1Hz		
Aging rate	<1ppm/Year		
Phase Noise (fc=1GHz)	<-98 dBc/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 tp 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 1Hz)		
100 kHz - 1MHz	-135 dBm (Typical)		
1MHZ - 500MHz	-160 dBm (Typical)		
500MHz - 1.5 GHz	-158 dBm (Typical)		
1.5GHz - 3.6GHz	---	-158 dBm (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	dBm,dBuW,dBpW,dBmV,dBuV, W,V		
Tracking generator (-TG Model)	100 kHz-1.6 GHz	100 kHz-3.6 GHz (Tracking generator) 35 MHz-3.6 Ghz (signal generator)	
Output power level range (-TG Model)	-30 dBm-0 dBm		
Output power level resolution (-TG Model)	1dB		
Communication Port	USB HOST, USB DEVICE, LAN, earphone port		
Display	8 inch touch LCD		

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



USB Cable



Adapter



Quick Guide



CD Rom



Metal Case



GPS antenna



Soft Bag (optional)

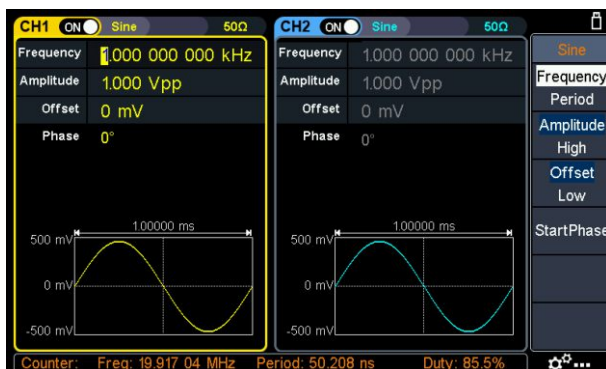
Dual-channel Arbitrary Waveform Generator

- XDG2000 Series

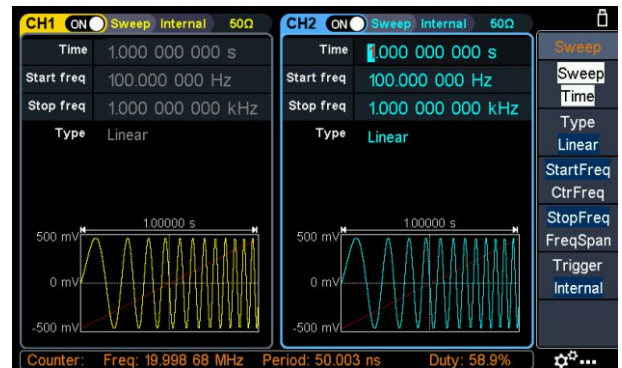


- + Max 100MHz frequency output
- + 500MSa/s Sample rate, Vertical resolution 1 μ H
- + 14 bits Vertical Resolution, 10Marb waveform length
- + Comprehensive waveform output : 6 basic waveforms, and 170 built-in arbitrary waveforms
- + Comprehensive modulation functions : AM, DSB-AM, FM, PM, ASK, FSK, 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

Equal performance dual channel output



Rich sweep function



Rich analog and digital modulation



Build-in 152 arbitrary waveforms



Model	XDG2100	XDG2080	XDG2060	XDG2035
Channel	2			
Frequency Output	100MHz	80MHz	60MHz	35MHz
Sample Rate	500MSa/s			
Vertical Resolution	14 bits			
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 (-3dB, typical)	100MHz	80MHz	60MHz	35MHz
Arbitrary Waveform	1μHz - 15MHz	1μHz - 15MHz	1μHz - 15MHz	1μHz - 15MHz
Harmonic	1μHz - 50MHz	1μHz - 40MHz	1μHz - 30MHz	1μHz - 17.5MHz
Accuracy	±2ppm, 25°C±5°C			
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			
Frequency Resolution	7 digits			
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				
Size	340mm x 177mm x 90mm			
Weight	Approx. 2.3kg			

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



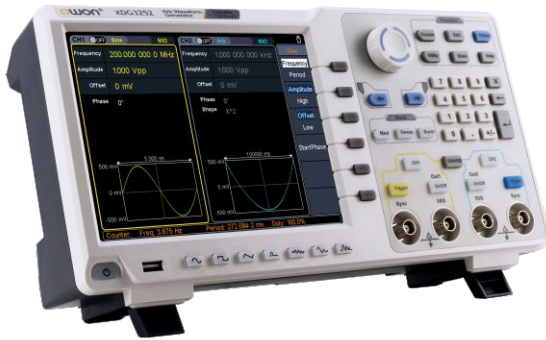
USB Cable



Q9 Cable

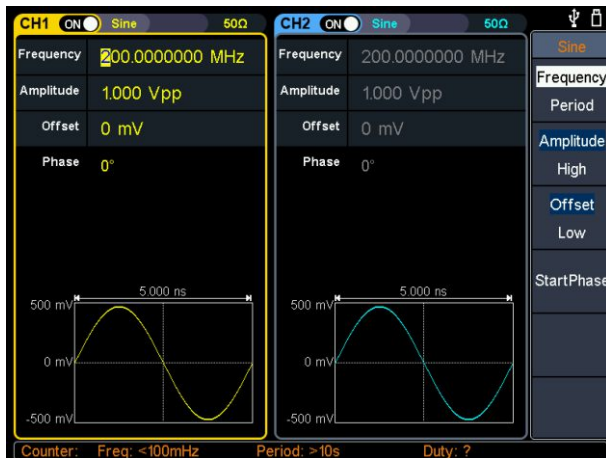
Dual-channel Arbitrary Waveform Generator

- XDG3000 Series

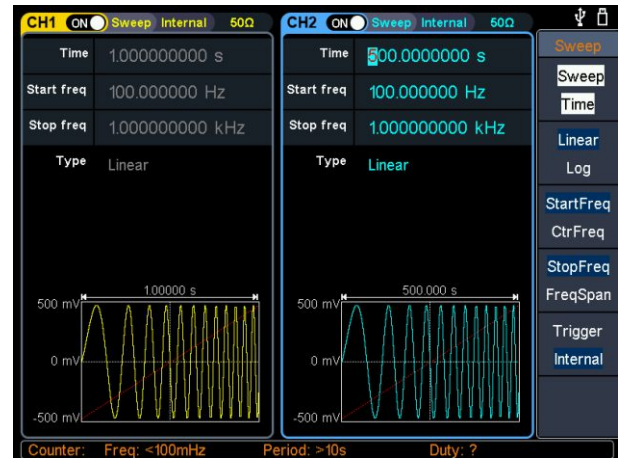


- + Advanced DDS technology, Max 250MHz frequency output
- + Max 1.25GS/s sample rate, and 1 μ Hz frequency resolution
- + Vertical Resolution :14 bits, max 1M arb waveform length
- + Comprehensive waveform output : 6 basic waveforms, and 152 built-in arbitrary waveforms
- + Comprehensive modulation 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

Equal performance dual channel output



Rich sweep function



Rich analog and digital modulation



Build-in 152 arbitrary waveforms



Model	XDG3252	XDG3202	XDG3162	XDG3102	XDG3082
Channel	dual				
Frequency Output	250MHz	200MHz	160MHz	100MHz	80MHz
Sample Rate	1.25GSa/s				
Vertical Resolution	14 bits				
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 - 250MHz	1μHz - 200MHz	1μHz - 160MHz	1μHz - 100MHz	1μHz - 80MHz
Square	1μHz - 50MHz			1μHz - 40MHz	1μHz - 30MHz
Pulse	1μHz - 25MHz				
Ramp	1μHz - 5MHz				
Harmonic	1μHz - 250MHz	1μHz - 200MHz	1μHz - 160MHz	1μHz - 50MHz	1μHz - 80MHz
Noise	120MHz (-3dB, type)				
Wave Length	2 - 1M 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	100mHz - 200MHz				
Frequency Resolution	7 digit				
Input / Output					
Type	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



CD Rom



Quick Guide



USB Cable



Q9 Cable

Single-channel Arbitrary Waveform Generator

- AG-S Series



- + Advanced DDS technology, upto 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
- + could work with OWON SDS Series DSO smoothly

Model	AG051	AG051F	AG1011	AG1011F
Channel	single + trigger			
Frequency Output	5MHz	10MHz		
Sample Rate	125MS/s			
Vertical Resolution	14 bits			
Waveform				
Standard Waveform	Sine, Square, Pulse, Ramp, and Noise			
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, and others, total 45 built-in waveforms, and user-defined arbitrary waveform			
Frequency (resolution 1μHz)				
Sine	1μHz - 5MHz	1μHz - 10MHz		
Square	1μHz - 5MHz			
Pulse	1μHz - 5MHz			
Ramp	1μHz - 1MHz			
Noise	5MHz (-3dB) (typical)			
Wave Length	2 - 8K pts			
Amplitude				
Amplitude	1m Vpp - 12.5 Vpp (50Ω),1m Vpp - 25 Vpp (high impedance)			
Modulation (optional)				
Modulation Waveform	/	AM, FM, PM, FSK, Sweep, and Burst	/	AM, FM, PM, FSK, Sweep, and Burst
Modulation Frequency	/	2mHz to 20.00KHz (FSK 2mHz - 100KHz)	/	2mHz to 20.00KHz (FSK 2mHz - 100KHz)
Counter Specification(optional)				
Function	Frequency, period, positive Pulse width, Duty cycle			
Frequency Range	Single channel: 100 mHz - 200MHz			
Input / Output				
Display	4 inch (480 x 320 pixels) LCD			
Type	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 x 110 x 295 (mm)			
Device Weight	3.00 kg			

Specifications subject to change without prior notice.

Dual-channel Arbitrary Waveform Generator

- AG Series



- + 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	dual					
Frequency Output	10MHz		25MHz		50MHz	60MHz
Sample Rate	125MS/s				300MS/s	
Vertical Resolution	14 bits					
Waveform						
Standard Waveform	Sine, Square, Pulse, Ramp, and Noise					
Arbitrary Waveform	Exponential Rise, Exponential Fall, Sin(x)/x, Step Wave, and others, total 45 built-in waveforms, and user-defined arbitrary waveform					
Frequency (resolution 1μHz)						
Sine	1μHz - 10MHz		1μHz - 25MHz		1μHz - 50MHz	1μHz - 60MHz
Square	1μHz - 5MHz		1μHz - 5MHz		1μHz - 25MHz	1μHz - 30MHz
Pulse	1μHz - 5MHz		1μHz - 5MHz		1μHz - 10MHz	1μHz - 15MHz
Ramp	1μHz - 1MHz					
Noise	25MHz (-3dB) (typical)					
Wave Length	2 - 8K pts				2 - 1M pts	
Amplitude						
Amplitude	1mVpp - 10Vpp (50Ω), 1mVpp - 20Vpp (high impedance)					
Modulation						
Modulation Waveform	/		AM, FM, PM, FSK, Sweep, and Burst		AM, FM, PM, FSK, Sweep, and Burst	
Modulation Frequency	/		2mHz to 20.00KHz (FSK 2mHz - 100KHz)			
Mechanical						
Dimension (W x H x D)	235 x 110 x 295 (mm)					
Device Weight	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



CD Rom



Quick Guide



USB Cable



Q9 Cable

Single-channel Arbitrary Waveform Generator

- DGE1000 Series



- + 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
- + Ultra-thin body, easy to operate

Model	DGE1030		DGE1060
Channel	1		
Frequency Output	30MHz	60MHz	
Sample Rate	125MSa/s	300MSa/s	
Vertical Resolution	14 bits		
Waveform			
Standard Waveform	sine, square, pulse, ramp, and noise		
Arbitrary Waveform	exponential rise, exponential fall, sin(x)/x, step wave, and others, total 160 built-in waveforms, and user-defined arbitrary waveform		
Frequency			
Sine	1μHz - 30MHz	1μHz - 60MHz	
Square	1μHz - 15MHz	1μHz - 20MHz	
Pulse	1μHz - 15MHz	1μHz - 20MHz	
Ramp	1μHz - 1MHz	1μHz - 2MHz	
Noise	20MHz (-3dB, typical)		
Arbitrary Waveform	1μHz - 10MHz, waveform length: 2-8k points		
Amplitude			
into 50Ω Load	1mVpp - 20Vpp (≤10MHz) ; 1mVpp - 4Vpp (≤60MHz)		
DC Offset Range (AD+DC)	±(10 Vpk – Amplitude Vpp/2) high resistance; ±(5 Vpk – Amplitude Vpp/2) 50 Ω		
Modulation			
Type	AM, FM, PM, FSK, sweep, Burst		
Internal Modulation Frequency	2 mHz to 100 kHz		
Input / Output			
Display	3.6-inch TFT LCD with resolution 480 x 272		
Communication Interface	USB Device		
Mechanical Specifications			
Dimension (W×H×D)	200mm x 68.5mm x 74.5mm		
Weight (without package)	0.5kg		

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 Clip

Dual-channel Arbitrary Waveform Generator

- DGE2000 Series



- + 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
- + Ultra-thin body, easy to operate

Model	DGE2035		DGE2070
Channel	2		
Frequency Output	35MHz	70MHz	
Sample Rate	125MSa/s	300MSa/s	
Vertical Resolution	14 bits		
Waveform			
Standard Waveform	sine, square, pulse, ramp, and noise		
Arbitrary Waveform	exponential rise, exponential fall, sin(x)/x, step wave, and others, total 150 built-in waveforms, and user-defined arbitrary waveform		
Frequency			
Sine	1μHz - 35MHz	1μHz - 70MHz	
Square	1μHz - 15MHz	1μHz - 20MHz	
Pulse	1μHz - 15MHz	1μHz - 20MHz	
Ramp	1μHz - 1MHz	1μHz - 2MHz	
Noise	20MHz (-3dB, typical)		
Arbitrary Waveform	1μHz - 10MHz, waveform length: 2-8k points		
Amplitude			
into 50Ω Load	1mVpp - 10Vpp (≤10MHz) ; 1mVpp - 5Vpp (≤70MHz)		
DC Offset Range (AD+DC)	±(10 Vpk – Amplitude Vpp/2) high resistance; ±(5 Vpk – Amplitude Vpp/2) 50 Ω		
Modulation			
Type	AM, FM, PM, FSK, sweep, Burst		
Internal Modulation Frequency	2 mHz to 100 kHz		
Input / Output			
Display	3.6-inch TFT LCD with resolution 480 x 272		
Communication Interface	USB Device		
Mechanical Specifications			
Dimension (W×H×D)	200mm x 68.5mm x 74.5mm		
Weight (without package)	0.5kg		

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 Clip

Arbitrary Waveform Generator - DGE3000 Series

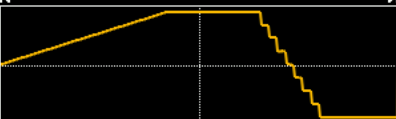


- + Up to 60MHz frequency output, Max 300MSa/s sample rate
- + Vertical Resolution :14 bits, max 100K Arb waveform length
- + Comprehensive waveform output: 5 basic waveforms, and 160 built-in arbitrary waveforms
- + Comprehensive modulation functions: AM, FM, PM, PWM, FSK, 3FSK, 4FSK, PSK, ASK, BPSK,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

Standard equivalent performance dualchannels.
(DGE3032, DGE3062)

ch1	ch2
Freq 60.000,0 MHz	Freq 60.000,0 MHz
Ampl 10.000 Vpp	Ampl 10.000 Vpp
Offset 0 mV	Offset 0 mV
Phase 0°	Phase 0°

With more than 160 kinds of built-in arbitrary waveforms.

CH1	OFF	High Z		Arb
250.0 mV 0.0 mV -250.0 mV 1.00000 ms 				Ok
Butterworth	Combin	CPulse		
CWPulse	RoundsHalf	BandLimited		
BlaseiWave	Chebyshev1	Chebyshev2		
DampedOsc	DualTone	Gamma	Cancel	

Support AM, FM, PM, PWM, FSK, 3FSK, 4FSK, PSK, ASK, BPSK, OSK, DSBAM, QPSK modulation mode.

ch1	Mode
	Sweep
5.000 V	AM
0.0 mV	FM
-5.000 V	PM
Shape Sine	FSK
Frequency 1.000,000 kHz	
Depth 100 %	

Support PC remote control.



Model	DGE3032	DGE3062	DGE3031	DGE3061
Channel	2		1	
Frequency Output	30MHz	60MHz	30MHz	60MHz
Sample Rate	125MSa/s	300MSa/s	125MSa/s	300MSa/s
Vertical Resolution	14 bits			
Waveform				
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	1μz - 30MHz	1μz - 60MHz	1μz - 30MHz	1μz - 60MHz
Square	1μz - 15MHz	1μz - 20MHz	1μz - 15MHz	1μz - 20MHz
Pulse	1μz - 15MHz	1μz - 20MHz	1μz - 15MHz	1μz - 20MHz
Ramp	1μz - 1MHz	1μz - 2MHz	1μz - 1MHz	1μz - 2MHz
Noise	20MHz (-3dB, typical)			
Arbitrary Waveform	1μz - 10MHz			
Arbitrary				
Waveform Length	2 points - 100K points			
Sample Rate	125MSa/s	300MSa/s	125MSa/s	300MSa/s
Amplitude				
into 50Ω load	1mVpp - 10Vpp (≤10Hz) , 1mVpp - 5Vpp (≤60MHz)			
DC Offset Range	±(10 Vpk – Amplitude Vpp/2) high resistance, ±(5 Vpk –Amplitude Vpp/2) 50 Ω			
DC offset resolution	1mV or 4digits			
Load Impedance	50Ω (typical)			
DC offset Accuracy	±(1 % of setting + 1 mV + amplitude Vpp * 0.5%)			
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			
Frequency Resolution	7 digits			
Input / Output				
Display	3.6 inch (480 x 272 pixels) TFT LCD			
Input mode	external modulation input, external trigger input, external reference clock input / output			
Communication Interface	USB Host, USB Device			
Mechanical specifications				
Dimension (W×H×D)	200mm x 92mm x 157mm			
Weight (without package)	Approx. 0.8kg			

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 Clip



Q9 Cable
(only for DGE3032,DGE3062)

Bench-type Digital Multimeter

- XDM1000 Series



- + 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	50.000 mV	0.1% + 10
	500.00 mV/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	500 mV – 750 V	1% + 30 (20Hz-45Hz)
		0.5% + 30 (45Hz-65Hz)
		0.7% + 30 (65Hz-1KHz)
DC Current	500 μ A	0.15% + 20
	5000 μ A	0.15% + 10
	50 mA	0.15% + 20
	500 mA	0.15% + 10
	5 A/10 A	0.5% + 10
True RMS AC Current	500 μ A – 500 mA	0.5% + 20
	5 A – 10 A	1.5% + 20
Resistance	500 Ω	0.15% + 10
	5 k Ω /50 k Ω /500 k Ω	0.15% + 5
	5 M Ω	0.3% + 5
	50 M Ω	1% + 10
Diode	3.0000 V	1% + 10
Continuity	1000 Ω	Adjustable threshold
Frequency	10.000 Hz – 60 MHz	$\pm$ (0.2% + 10)
Capacitance	50 nF – 500 μ F	2.5% + 10
	5 mF – 50 mF	5% + 10
Temperature	K type, PT100	
Max Display	55,000 counts	
Logging Interval	15 mS – 9999.999 S	
Logging Length	1,000 points	
Port	USB port or 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.



Multimeter Lead



Alligator Clip



Quick Guide



USB Cable



Fuse
(XDM1041)



Power Cord
(XDM1041)



USB to DC Cord
(XDM1241)

Bench-type Digital Multimeter

- XDM2041



- + 4 inch (480x320) 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: ± (% 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	500Ω	0.1%+10
	5KΩ / 50KΩ / 500KΩ	0.1%+5
	5MΩ	0.25%+5
	50MΩ	0.1%+10
Four-wire resistance	500Ω	0.1%+10
	5KΩ / 50KΩ	0.1%+5
Diode	3.0000 V	
Continuity	1000 Ω	
Frequency	10.000Hz-60MHz	±(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

Bench-type Digital Multimeter

- XDM3000 Series



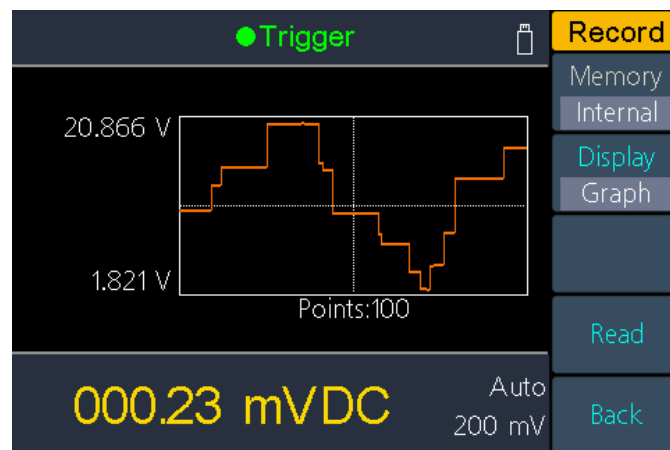
- + 4 inch 480 x 320 pixels high resolution LCD
- + 5 1/2 digits and 4 1/2 digits resolutions
- + reading rates up to 150 readings/s
- + true RMS AC voltage / current measurement
- + dual line display supported
- + the change trend analysis accessible via special chart mode
- + SCPI supported - remote control, and data-sharing possible via LAN, USB, RS232 port, and WiFi*
- * WiFi module is optional
- + 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

● Trigger			Record
No.	Function	Reading	Memory
63	DCV	6.966 V	Internal
64	DCV	6.966 V	Display
65	DCV	6.966 V	Table
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	Read
71	DCV	1.821 V	Back

-000.54 mVDC Auto 200 mV



Model	XDM3051		XDM3041	
Function	Measurement Range	Optimal Accuracy	Measurement Range	Optimal Accuracy
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	200.000 μA-10.0000 A	0.055 + 0.005	600.000 μA-10.0000 A	0.06 + 0.02
True RMS AC Current	20.0000 mA-10.0000 A	0.50 + 0.10	60.000 mA-10.000 A	0.50 + 0.10
Resistance	200.000 Ω	0.030 + 0.005	600.000 Ω	0.040 + 0.01
	2.00000 kΩ	0.020 + 0.003	6.00000 kΩ	0.030 + 0.01
	20.0000 kΩ	0.020 + 0.003	60.0000 kΩ	0.030 + 0.01
	200.000 kΩ	0.020 + 0.003	600.000 kΩ	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	Measurement Range	Optimal Accuracy
Diode Test	2.0000V	0.05 ± 0.01	3.0000V	0.5 ± 0.01
Continuity	2000Ω	0.05 ± 0.01	1000Ω	0.5 ± 0.01
Frequency Period	20Hz - 1MHz (200mV - 750V)	0.01 + 0.003	20Hz - 1MHz (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			
	Measurement Range	Test Current	Accuracy: 1 Year ± (% of reading + % of range)
Capacitance	2.000 nF	200 nA	3 + 1.0
	20.00 nF	200 nA	1 + 0.5
	200.0 nF	2 μA	1 + 0.5
	2.000 μF	10 μA	1 + 0.5
	200.0 μF	100 μA	1 + 0.5
	10000 μF	1 mA	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 -1000s
Logging Length	1M points
General	
Communication Interface	USB Device / Host, RS232, LAN, and ext. trigger input
Dimension (W x H x 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



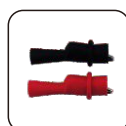
USB Cable



Fuse



Multimeter Lead



Alligator Clip

Multi in One Smart Multimeter - OW Series



- + 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

on-site temperature test



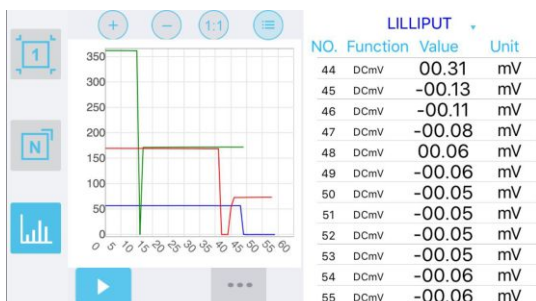
NCV (Non-Contact Voltage) Sensor

When the non-contact voltage sensor is placed near to a live conductor, the instrument will beep and flash the row of LEDs at the top of the display depending on the AC voltage strength.



functioning as multimeter + datalogger

the measured data always updated, and auto- recorded to mobile device, saving labor to do on-site records; the recoding duration, and sampling duration could be customized, accessible in chart mode, facilitating comparison analysis between several multimeters



offline recording function - your process analyzer

possible to record data into memory, but no need to leave mobile device on-site when data-processing, use mobile device to recall the saved data and offline recording.

Record interval: 2

Records count: 10000

Offline record will cost time about 5H33Min20Sec

Start to record will cover the content of last time made

Start to record

OW16 / OW18 Multi in one smart multimeter

		OW16A/B Measurement		OW18A/B Measurement	Accuracy
DC Voltage	mV	600.0mV/6.000V/60.00V/600.0V			±(0.5%+2 dig)
	V	1000V			±(0.8%+2 dig)
AC Voltage	mV	600.0mV			±(2%+5dig)
	mV	6.000V/60.00V/600.0V			±(0.8%+3dig)
	V	750V			±(1%+3dig)
DC Current	μA	/	600.0μA/6000μA		±(0.8%+2dig)
	mA	60.00mA/600.0mA			±(0.8%+2dig)
	A	10.00A/20.00A			±(1.2%+3dig)
AC Current	μA	/	600.0μA/6000μA		±(1%+3dig)
	mA	60.00mA/600.0mA			±(1%+3dig)
	A	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/6.000μF/60.00μF			±(3%+3dig)
		600.0μF/6.000mF/60.00mF			±(3%+5dig)
Frequency		9.999Hz/99.99Hz/999.9Hz/9.999kHz/99.99kHz/999.9kHz/9.999MHz			±(0.8%+2dig)
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			±(2.5%+3dig)
		-58 °F - 752 °F			±(4.5%+5dig)
Display		5999			
Frequency Response		(40 - 1000) Hz			
Shift Rate		3 times/second			

Special Function

Bluetooth Module	OW16B, OW18B	Auto Ranging	√
True RMS	√	Auto- / Manual Range Selection	√
Diode Test	√	Input Protection	√
LCD Backlight	√	Input Impedance	≥10MΩ
On-off Warning	√	Safety Compliance	600V CATⅢ (OW16A,OW16B) 1000V CATⅢ (OW18A,OW18B)
Flashlight	OW18A, OW18B		
Low-battery Indicator	√	NCV	√
Data Hold	√	Dimension (W / H / D)	154mm x 74mm x 49mm (OW16A, OW16B) 190mm x 90mm x 56mm (OW18A, OW18B)
Relative Measurement	√	Weight (without package)	Approx. 0.29 kg(OW16A, OW16B), Approx. 0.32kg(OW18A, OW18B)

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Multimeter Leads



K-type Thermocouple



Quick Guide



Screw Driver



Alligator Clip (optional)



mobile app accessible via scanning QR code

OW18D/E Multi in one multimeter

	OW18D/E Measurement Range	Accuracy
DC Voltage	20.000mV/200.00mV	±(0.05%+10 dig)
	2.0000V/20.000V/200.00V	±(0.1%+2 dig)
	1000.0V	±(0.15%+5 dig)
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/2.0000μ/20.000μ 200.00μ/2.0000mF/20.000mF	±(3.0%+10dig)
Frequency	200.00Hz/2.0000kHz 20.000kHz/200.00kHz/2.0000MHz/20.000MHz	±(0.1%+4dig)
Duty Ratio	0.1%~99.9%(typical value: Vrms=1V,f=1kHz)	±(1.2%+3dig)
	0.1%~99.9%(≥kHz)	±(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	
Sample rate	3 times/second	

Special Function

True RMS	√	Auto Ranging	√
Diode Test	√	LCD Backlight	√
Auto Power-off	√	Automatic-manual Range Selection	√
On-off Warning	√	Input Protection	√
Low-battery Indicator	√	Input Impedance	≥10MΩ
Data Hold	√	Safety Compliance	600V CATIV 1000V CATIII
Relative Measurement	√	NCV	√
Flashlight	√	Dimension (W×H×D)	190 x 90 x56 (mm)
		Weight (without package)	Approx. 0.32 kg

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Multimeter Leads



K-type
Thermocouple



Quick Guide



9V battery
(optional)



Alligator Clip
(optional)



mobile app accessible
via scanning QR code

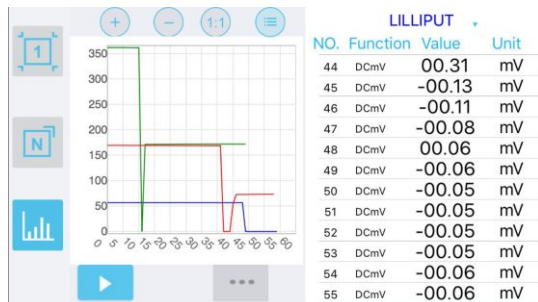
Bluetooth Digital Multimeter -B&D Series



- + function as 3 in 1 : datalogger + 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

functioning as multimeter + datalogger

the measured data always updated, and auto- recorded to mobile device, saving labor to do on-site records; the recoding duration, and sampling duration could be customized, accessible in chart mode, facilitating comparison analysis between several multimeters.



remote control supported

the function activated after TTS voice pack installed , which frees the eye-watch, making on-site measurement more comfortable.



- voice on
- voice off



data- saving, recalling, and comparatively analyzing

csvV format data export supported, the history data could be recalled for comparison analysis; with the assistance of chart mode, the measured result more visualized, easier for decision- making.

No.	Func	Value	Unit
19	DCmV	320.1	mV
20	DCmV	292.2	mV
21			
22			
23			
24			
25			
26			
27			



offline recording function - your process analyzer

B33+/B35+/B35T+/B41T+ possible to record data into memory, but no need to leave mobile device on-site
when data-processing, use mobile device to recall the saved data
offline data-recording could continue for max 7 days (168 hours).

Record interval:
Records count:
Offline record will cost time about 5H33Min20Sec
Start to record will cover the content of last time made

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

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

Capacitance	B41T+ MeasurementRange	Optimal Accuracy
DC Voltage	220mV,2.2V, 22V, 220V,1000V	$\pm(0.1\%+5\text{dig})$
AC Voltage	220mV,2.2V,22V,220V,750V	$\pm(0.8\%+10\text{dig})$
DC Current	220μA,2200μA,22mA,220mA,20.00A	$\pm(0.5\%+10\text{dig})$
AC Current	220μA,2200μA,22mA,220mA,20.00A	$\pm(0.8\%+10\text{dig})$
Resistance	220Ω,2.2kΩ,22kΩ,220kΩ,2.2MΩ,22MΩ,220MΩ	$\pm(0.5\%+10\text{dig})$
Capacitance	22nF,220nF,2.2μF,22μF,220μF,2.2mF	$\pm(3\%+5\text{dig})$
	> 220mF	

Capacitance	B41T+ Measurement Range	Optimal Accuracy
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 points	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	Approx. 0.32kg

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Multimeter Lead



K-type Thermocouple



Quick Guide



Alligator Clip



Multi-function Test Bench
(excl. D33 / B33 / B33+)



Soft Bag



mobile app accessible
via scanning QR code

Mini Clamp Meter

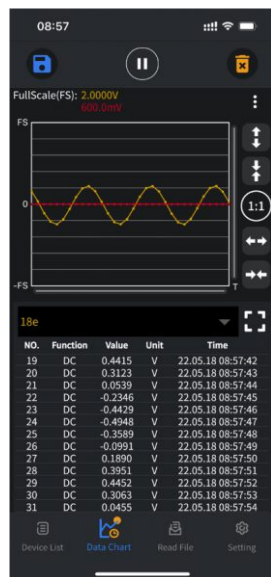
- CM2000 Series



- + 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)

Recorder Function

Automatically record the measured value of the monitoring object according to the user setting, and display it in icon mode to see the change trend at a glance. At the same time, the recorded data (CSV File) can be shared to the computer for further analysis.



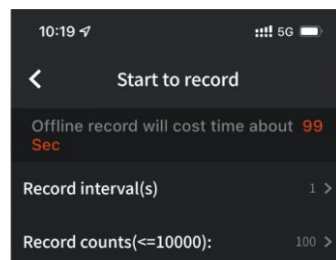
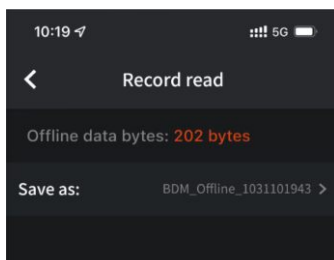
Comparative Analysis of Different Instruments

Use the same APP to connect different meters, except the clamp meter, ow Series & B Series multimeter are also available to be connected. You can comparative analysis these different instrument measurement parameters.



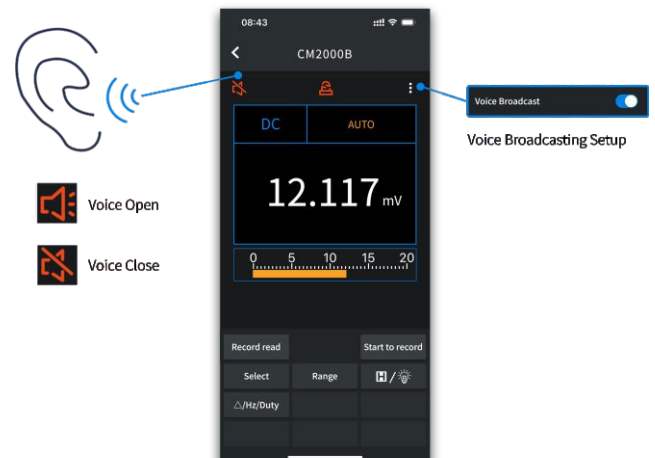
Offline Storage Function

1. Setup the sampling interval (1s to 42s) and the number of recorded points (0 to 100 points), when the clamp meter is disconnected from the phone, the internal chip-set will automatically save the data.
2. After recorded, to analyzing the data, just need to use the mobile APP to read the data in the table.



Voice Broadcasting Function

Instead of looking at the screen, focus on testing the correct connection of the wire to make the measurement safer.



Model: CM2100, CM2100B

	Range	Accuracy
AC Current (A)	2.000A	$\pm(3\%+10\text{dig})$ in VFC $\pm(4\%+10)$
	20.00A / 100.0A	$\pm(2.5\%+5\text{dig})$ in VFC $\pm(4\%+10)$
AC Voltage (V)	2.0000V / 20.000V / 200.00V / 600.0V	$\pm(0.8\%+10\text{dig})$ in VFC $\pm(4\%+3)$
DC Current (A)	2.000A	$\pm(2\%+8\text{dig})$
	20.00A / 100.0A	$\pm(2\%+3\text{dig})$
DC Voltage (V)	200.00mV	$\pm(0.7\%+10\text{dig})$
	2.0000V / 20.000V / 200.00V / 600.0V	$\pm(0.5\%+5\text{dig})$
Resistance (R)	200.0 Ω	$\pm(0.8\%+10\text{dig})$
	2.0000k Ω	$\pm(0.5\%+10\text{dig})$
	20.000k Ω / 200.00k Ω / 2.0000M Ω	$\pm(0.5\%+10\text{dig})$
	20.000M Ω	$\pm(1\%+10\text{dig})$
	200.00M Ω	$\pm(5.0\%+10\text{dig})$
Capacitance (F)	2.000nF	$\pm(4.0\%+10\text{dig})$
	20.00nF / 200.0nF / 2.000uF 20.00uF / 200.0uF / 2.000mF / 20.00mF	$\pm(3.0\%+10\text{dig})$
Frequency (Hz)	200.00Hz / 20.000kHz / 200.00kHz / 2.0000MHz / 20.000MHz	$\pm(0.1\%+5\text{dig})$
Duty cycle (%)	0.1% - 99.9% (typical: Vrms=1 V, f=1kHz)	$\pm(1.2\%+3\text{dig})$
	0.1% - 99.9% (≥ 1 kHz)	$\pm(2.5\%+3\text{dig})$

Special Function			
Display	20000 counts	Bluetooth Module	$\sqrt{}$ (only for CM2100B)
Frequency Responses	40Hz - 1000Hz	Zero	$\sqrt{}$
Auto Ranging	$\sqrt{}$	Low-battery Indicator	$\sqrt{}$
Date Hold	$\sqrt{}$	Relative Measurement	$\sqrt{}$
Diode	$\sqrt{}$	Input Protection	$\sqrt{}$
Continuity Buzzer	$\sqrt{}$	Input Impedance	$\geq 10\text{M}\Omega$
VFC	$\sqrt{}$	Overrange Alarm	$\sqrt{}$
NCV	$\sqrt{}$	On-off Warning	$\sqrt{}$

Other	
Jaw Capacity	17mm
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 Leads



Screw Driver



Quick Guide



Soft Bag



mobile app accessible
via scanning QR code

Smart Anemo Meter

- OWM5500



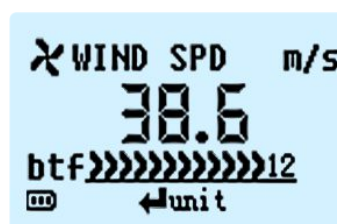
- + 7 kinds of measurement: wind speed, air volume, temperature, humidity, etc., Supports Pufu wind rating
- + Charts display mode, can analyze trends, and perform statistics on data
- + Built-in 8000 sets of data storage, which can be stored automatically or manually, and supports data zero clearing 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

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



7 kinds of measurement value



Data record analysis function

Equipped with PC software, which can monitor the anemometer 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.



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
Dimensions (L x H x W)			136.5mm×30mm×64.5mm				
Weight			Approx. 0.2kg				

+ Accessories

The accessories subject to final delivery.



Quick Guide



Lanyard



USB cable (Type-c)



mobile app accessible via scanning QR code

Specifications subject to change without prior notice.

Single Channel Digital DC Power Supply

- SPE Series

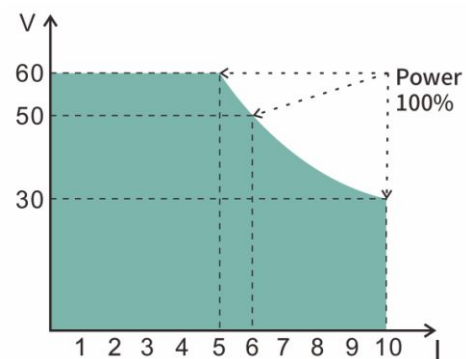


1. 2.8-inch LCD, display more information



- + Ultra-thin body, portable and easy to use
- + 150W / 200W / 300W constant power design, wide application range
- + Overvoltage/over current protection
- + Power-on automatic output setting function, suitable for natteded occasions
- + Intelligent temperature control fan cooling, reduce noise
- + 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

2. Constant power design, wide application range, provides flexible configuration of higher voltage and current within the rated power range. One device is equal to multiple.



Schematic diagram of power supply constant power (take SPE6103 for instance)

3. List waveform editing output, editable 10 groups of timing output.

ON	CV	T	00:00:31	06.80w	(A)
	U	I	T	Y/N	
6	05.00v	01.600A	00:00:10	☐	
7	04.00v	01.400A	00:00:10	☐	
8	03.00v	01.200A	00:00:10	☒	
9	03.00v	01.100A	00:00:10	☐	
Set		Limit			
30.00 v		10.065 A		32.00 v 10.200 A	

4. 4 groups of Memory shortcut parameters for quick output

ON	CV	T	00:00:16	06.80w	(A)
	U	I	OVP	OCP	
M1	05.12v	05.000A	32.00v	10.200A	
M2	14.97v	04.960A	16.00v	05.100A	
M3	07.00v	02.000A	08.00v	02.500A	
M4	15.00v	02.000A	32.00v	03.400A	
Set		Limit			
30.00 v		10.065 A		32.00 v 10.200 A	

5. Independent output On/Off button control, protect the circuit. Long press to set the automatic output voltage/current 5 seconds after booting.



6. Support programming output by PC software via USB host, SCPI digital communication function.



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

		SPE3051(U)	SPE3102(U)	SPE6102(U)	SPE6053(U)	SPE3103(U)	SPE6103(U)
Rated Output (0°C-40°C)	Voltage	0 - 30V	0 - 30V	0 -60V	0 -60V	0 - 30V	0 -60V
	Current	5A	10A	5A	10A		
	Output Power	150W	200W	300W			
USB Output		5V/1A(SPE series) or 18W output, for fast charging under QC 2.0, QC 30., BC 1.2, and mainstream quick charging protocols (SPE-U series)					
Load Regulation	Voltage	≤30mV					
	Current	≤20mA					
Power Regulation	Voltage	≤30mV					
	Current	≤20mA					
Setting Resolution	Voltage	10mV					
	Current	1mA					
Readback Resolution	Voltage	10mV					
	Current	1mA					
Ripple/Noise (*)	Voltage(Vp-p)	≤30mVp-p	≤50mVp-p	≤30mVp-p	≤50mVp-p		
	Voltage (rms)	≤3mVrms	≤5mVrms	≤3mVrms	≤5mVrms		
	Current (Ap-p)	≤30mA p-p					
Response Time (50%-100% rated load)		≤1.0ms					
Storage		4 groups of data					
Working Temperature		0-40°C					
Display		2.8 inch color LCD display					
Dimension		82 x 142 x 226 (mm)					
Weight		Approx. 2.00kg					
Interface		USB					

Specifications subject to change without prior notice.

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

+ Accessories

The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Fuse



Test Leads
(optional)

DC Power supply & Multimeter

- SPM Series



- + DC power supply+multimeter
- + Small body for easy carry
- + USB communication interface, support SCPI

Power Supply Specifications:

- + 150W/300W output power
- + High resolution: 10mV / 1mA
- + 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
Display	2.8 inch color LCD display			
Interface	USB Device, USB Host (5V1A)			
Dimension(W x H x D)	82 x 142 x 226 (mm)			
Weight	Approx. 1.5kg			

DC Power Specifications

* Noise bandwidth 20MHz, ripple bandwidth 1MHz, 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
	Output Power	150W	300W	300W	300W
Load Regulation	Voltage	≤30mV			
	Current	≤20mA			
Power Regulation	Voltage	≤30mV			
	Current	≤20mA			
Setting Resolution	Voltage	10mV			
	Current	1mA			
Readback Resolution	Voltage	10mV			
	Current	1mA			
Ripple/Noise(*)	Voltage(Vp-p)	≤30mVp-p	≤50mVp-p		
	Voltage (rms)	≤3mVrms	≤5mVrms		
	Current (rms)	≤30mA _{p-p}			
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	200.00Ω, 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)		

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



Test Leads
(optional)

Programmable DC power supply

- SPS Series



- + Fanless 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
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)	Current	≤0.05% ± 20mA	≤0.1% ± 20mA
	Voltage	≤0.05% ± 20mV	≤0.2% ± 20mA
Ripple/Noise(*)	Voltage	≤30mVp-p	≤30mVp-p
	Voltage	≤4mVrms	≤5mVrms
	Current	≤10mA p-p	≤30mA p-p
Response Time(50%-100% rated load)		≤1.0ms	
Storage		4 groups of data	
Working Temperature		0-40°C	
Display		2.8 inch color LCD display	
Interface		USB Device	
Dimension		82mm (W) × 142mm (H) × 226mm (D)	
Weight		Approx. 1.8 kg	

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



Quick Guide



Fuse



USB Cable



Test Leads(optional)

Single Channel Digital DC Power Supply

- SP Series



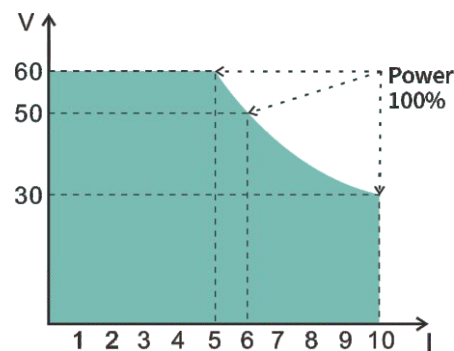
- + Small body for easy carry
- + 150W/300W maximum output power
- + Constant power design, providing a combination of multiple ranges of voltage and current settings
- + Low ripple/noise
- + Over voltage/over current protection
- + Intelligent temperature control fan cooling
- + Support RS232 digital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

1. Large LCD Display



Conventional display example

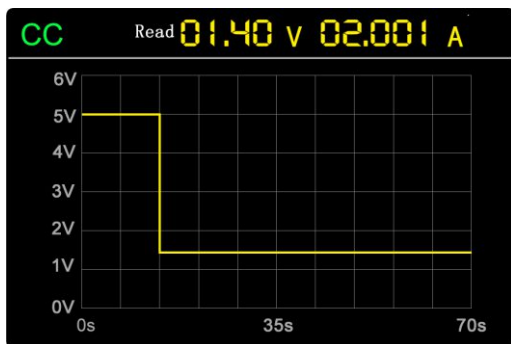
2. Constant power design provides a combination of multiple ranges of voltage and current settings, allowing flexible configurations of higher voltage and larger current for users within the rated power range.



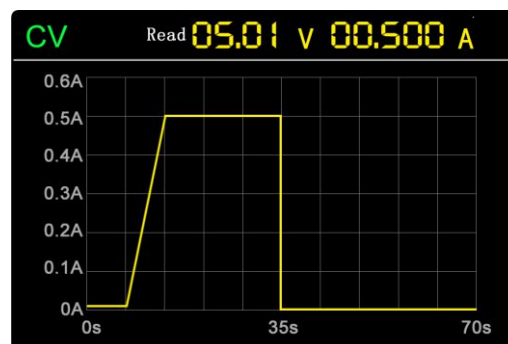
Schematic diagram of power supply constant power (take SP6103 for instance)

3. Original voltage/current curve monitoring function

Suitable for cell phone and notebook repair, PCB aging test, battery charging



Voltage curve



Current curve

4. Constant voltage/constant current mode to protect circuit devices

CV: Constant Voltage output
CC: Constant Current output



5. Support programming output by PC software via RS232, SCPI digital communication function



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

		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
	Output Power	150W	150W	150W	300W	300W	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 (within 12 months)(25°C±5°C)	Voltage	≤0.1% ± 20mV	≤0.1% ± 30mV	≤0.1% ± 20mV	≤0.1% ± 30mV		
	Current	≤0.05% ± 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, measured with external 10μF + 100nF capacitor)	Voltage (Vp-p)	≤30mVp-p	≤50mVp-p	≤30mVp-p	≤50mVp-p		
	Voltage (rms)	≤3mVrms	≤5mVrms	≤3mVrms	≤5mVrms		
	Current (rms)	≤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					
Display		4 inch color LCD display					
Dimension (W x H x D)		117 x 194 x 295 (mm)					
Device Weight		Approx. 3.00kg					
Communication Interface		RS232					

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)

Single Linear DC Power Supply

- P4000 Series



- + 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

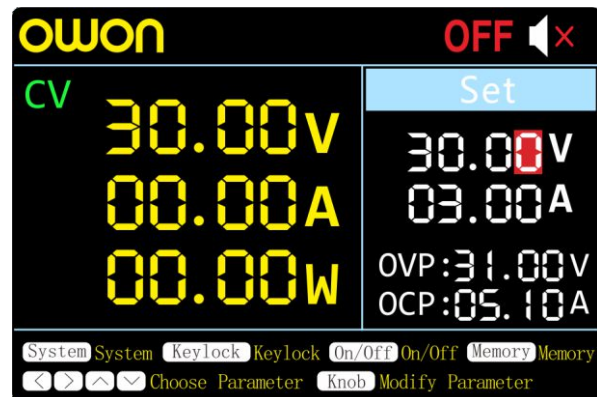
Large LCD Display



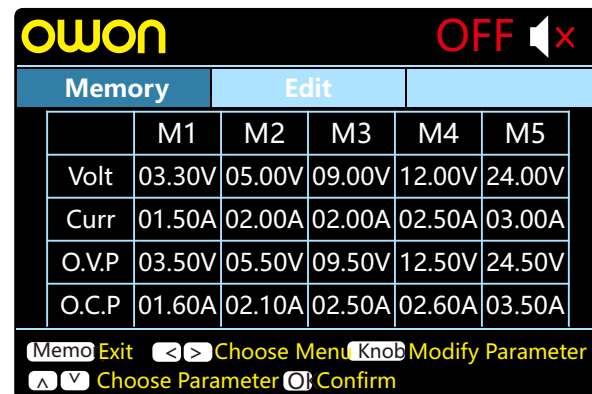
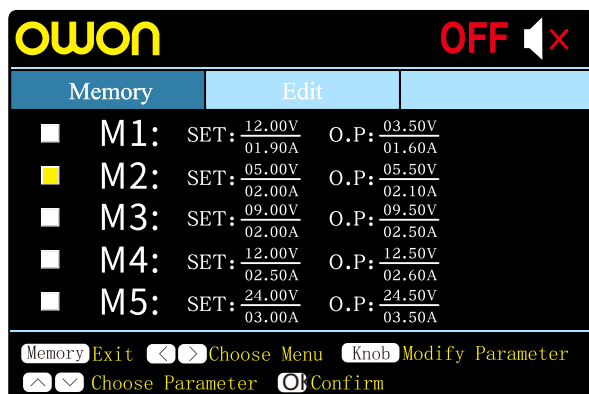
Conventional display example*



Supports 10mV/10mA Resolution up to Full Load.



Save up to 5 sets of parameters in memory for easy recall.



Single Channel Programmable DC Power Supply

- ODP3031



- + 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

Model	P4305	P4603	ODP3031
Channel	Single Channel		
DC Output Rating	150W	180W	105W
Channel Output	0 - 30V / 0 - 5A * 1-CH	0 - 60V / 0 - 3A * 1-CH	0 - 30V / 0 - 3A * 1-CH 5V/3A fixed output
Display Type	3.7 inch colored LCD		4 inch colored LCD
Dimension (W x H x D)	117x 194 x 295 (mm)		250 x 158 x 358 (mm)
Device Weight	Approx. 5.6 kg	Approx. 5.8 kg	Approx. 7 kg
Communication Interface	USB Device (optional), RS232		USB Device, RS232

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

Model		P4305	P4603	ODP3031
Load Regulation	Voltage	$\leq 0.04\% + 3\text{mV}$		$\leq 0.01\% + 3\text{mV}$
	Current	$\leq 0.04\% + 3\text{mA}$		$\leq 0.01\% + 3\text{mA}$
Line Regulation	Voltage	$\leq 0.01\% + 3\text{mV}$		$\leq 0.01\% + 3\text{mV}$
	Current	$\leq 0.01\% + 3\text{mA}$		$\leq 0.2\% + 3\text{mA}$
Settings Resolution	Voltage	1mV		1mV
	Current	1mA		1mA
Read Back Resolution	Voltage	1mV		1mV (< 10V), 10mV ($\geq 10\text{V}$)
	Current	1mA		1mA
Settings Accuracy (within 12 months)(25°C $\pm$ 5°C)	Voltage	$\leq 0.03\% + 10\text{mV}$		$\leq 0.05\% + 3\text{mV}$
	Current	$\leq 0.1\% + 5\text{mA}$		$\leq 0.1\% + 3\text{mA}$
Read Back Accuracy (25°C $\pm$ 5°C)	Voltage	$\leq 0.03\% + 10\text{mV}$		$\leq 0.05\% + 3\text{dig}$
	Current	$\leq 0.1\% + 5\text{mA}$		$\leq 0.1\% + 3\text{dig}$
Noise and Ripple (0Hz-20MHz)	Voltage	$\leq 4\text{mVp-p}$		$\leq 2\text{mVp-p}$
	Voltage	$\leq 1\text{mVrms}$		$\leq 300\mu\text{Vrms}$
	Current	$\leq 4\text{mA}_{\text{rms}}$		$\leq 3\text{mA}_{\text{rms}}$
Storage		5 groups		100 groups

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable
(ODP3031)



Fuse



Test Leads
(optional)



RS232 to USB Module
(optional)

Dual Channel Programmable DC Power Supply

- ODP Series

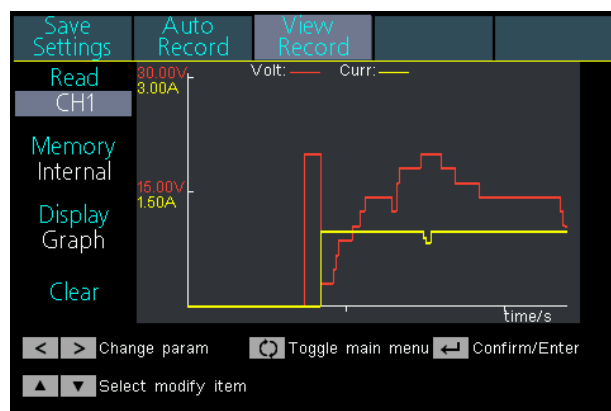
max
378W
power output



- + 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

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



Save Settings	Auto Record	View Record																																																		
Read CH1	<table><tr><th>NO.</th><th colspan="3">CH1</th></tr><tr><th></th><th>Volt</th><th>Curr</th><th>Power</th></tr><tr><td>61</td><td>8.708</td><td>1.998</td><td>17.395</td></tr><tr><td>62</td><td>8.708</td><td>1.998</td><td>17.395</td></tr><tr><td>63</td><td>10.605</td><td>1.998</td><td>21.184</td></tr><tr><td>64</td><td>10.605</td><td>1.998</td><td>21.185</td></tr><tr><td>65</td><td>10.605</td><td>1.998</td><td>21.185</td></tr><tr><td>66</td><td>12.510</td><td>1.998</td><td>24.990</td></tr><tr><td>67</td><td>12.512</td><td>1.998</td><td>24.993</td></tr><tr><td>68</td><td>14.406</td><td>1.998</td><td>28.776</td></tr><tr><td>69</td><td>14.406</td><td>1.998</td><td>28.776</td></tr><tr><td>70</td><td>14.406</td><td>1.998</td><td>28.774</td></tr></table>				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	14.406	1.998	28.774
NO.	CH1																																																			
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63	10.605	1.998	21.184																																																	
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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 - 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. 10.5 kg	Approx. 12.00 Kg	

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

Model		ODP3122		ODP6062	
Load Regulation	Voltage	≤0.01% + 3mV			
	Current	≤0.01% + 3mA			
Line Regulation	Voltage	≤0.01% + 3mV			
	Current	≤0.01% + 3mA			
Settings Resolution	Voltage	1mV			
	Current	1mA			
Read Back Resolution	Voltage	1mV			
	Current	1mA			
Settings Accuracy (25°C ± 5°C)(within 12 months)	Voltage	≤0.03% + 10mV			
	Current	≤0.1% + 8mA		≤0.1% + 5mA	
Read Back Accuracy (25°C ± 5°C)	Voltage	≤0.03% + 10mV			
	Current	≤0.1% + 8mA		≤0.1% + 5mA	
Noise and Ripple (20Hz - 20MHz)	Voltage (Vp-p)	≤4mVp-p		≤3mVp-p	
	Voltage (rms)	≤1mVrms		≤1mVrms	
	Current (rms)	≤5mA _{rms}		≤4mA _{rms}	
Programmable Output	Storage	100 groups			
	Time Setting	second			
Data Recording		10 K groups (of voltage, current and power data) recording capacity			
Working Temperature		0 - 40°C			
Communication Interface		USB Host&Divice, RS232, and LAN			

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



USB Cable



Fuse



Test Leads
(optional)

Triple Channel Programmable DC Power Supply

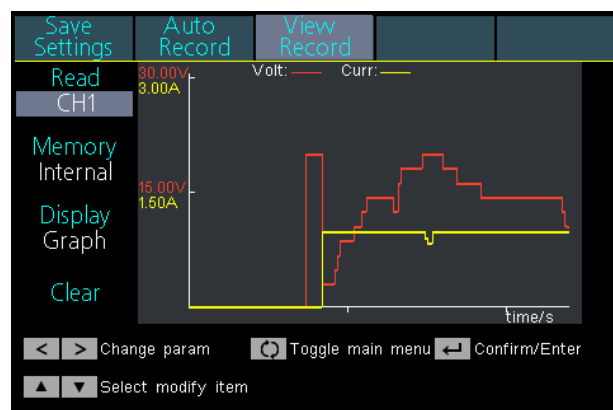
- ODP Series



- + 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.



Save Settings	Auto Record	View Record																																																		
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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 x 158 x 358 (mm)			
Device Weight	Approx. 9.80 kg	Approx. 12.00 kg		

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

Model		ODP3033		ODP3053		ODP3063		ODP6033		
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								
Line Regulation	Voltage	≤0.01%+3mV								
	Current	≤0.01%+3mA								
Settings Resolution	Voltage	1mV								
	Current	1mA								
Read Back Resolution	Voltage	1mV								
	Current	1mA								
Settings Accuracy (25°C ± 5°C) (within 12 months)	Voltage	≤0.03%+10mV								
	Current	≤0.1%+8mA								≤0.1%+5mA
Read Back Accuracy (25°C ± 5°C)	Voltage	≤0.03%+10mV								
	Current	≤0.1%+8mA								≤0.1%+5mA
NoiseandRipple (20Hz - 20MHz)	Voltage(Vp-p)	≤2mVp-p								≤3mVp-p
	Voltage(rms)	≤300μVrms								
	Current(rms)	≤3mArs								≤4mArs
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								
ProgrammableOutput	Storage	1Mpts								
		100 groups								
	Time Setting	second								
Data Recording		10K groups (of voltage, current and power data) recording capacity								
Working Temperature		0-40°C								
Communication Interface		USBHost, USBDevice, RS232, LAN, Support USB TMC protocol								

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



CD Rom



Quick Guide



USB Cable



Fuse



Test Leads
(optional)

High Power DC Power Supply

- OWP-H Series



- + 2U/3U standard embedded height
- + High output resolution 1mV / 0.1mA
- + 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

	1KW	2KW	3KW	6KW	8KW
Power	1-phase, 220VAC±10%, 50 - 60Hz			3-phase, 380VAC±10%, 50 - 60	
Dimension (W x H x D)	325 x 88 x 450 mm	425 x 88 x 450 mm		425 x 132 x 551 mm	
Weight	Approx. 9.00 kg	Approx. 11.00 kg	Approx. 14.00 kg	Approx. 25.00 kg	
Accessories	power cord, quick guide	quick guide			

[DC Voltage]

Output Voltage Accuracy	< 0.1% of rated value
Load Regulation	< 0.05% of rated value
Linear Regulation ($\pm$ 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 ($\pm$ 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)	500VDC

[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%

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

Specifications subject to change without prior notice.

High Power DC Power Supply

- OWH67 Series



- + 1/2 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

Model		OWH6712-80	OWH6720-150	OWH6730-150
Power		1200W	2000W	3000W
Power Supply		85Vac-265Vac; 5-65HZ		
Output voltage		0 -80V	0-150V	0-150V
Output current		0-31A	0-21A	0-31A
OVP		1-81V	1-151V	1-151V
OCP		1-31A	1-21A	1-31A
Load Regulation ± %of Output+Offset) (10%-90%)	CV	≤0.03%+10mV	≤0.03%+10mV	≤0.03%+10mV
	CC	≤0.1%+30mA	≤0.1%+30mA	≤0.1%+30mA
linear Regulation ± %of Output+Offset)	CV	≤.01%+10mV	≤.01%+10mV	≤.01%+10mV
	CC	≤0.1%+20mA	≤0.1%+20mA	≤0.1%+20mA
Settings Resolution		10mV/1mA		
Read Back Resolution		10mV/1mA		
Settings Accuracy(25°C±5°C (within 12 months)		≤0.05% ±20mV ; ≤.01% ±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)	Voltage	100ppm/°C		
	Current	200ppm/°C		
Read Back Temperature Coefficient	Voltage	100ppm/°C		
	Current	200ppm/°C		
recovery time (0%~100% load)		≤5ms		
Operation Temperature		0-40°C		
Display		3.9 inch LCD		
Communication Interface		USB, LAN (optional)		
Dimension (W x H x D)		214.6 x 8 x 453mm		
Weight		6.4kg	6.8kg	6.8kg

Specifications subject to change without prior notice.

+ Accessories The accessories subject to final delivery.



Power Cord



User Manual

LCR Meter

- LCR2000 Series



- + 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 NO.	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 , $\Delta\%$			
Test Frequency	10Hz - 300kHz	10Hz - 200kHz	10Hz - 100kHz	10Hz - 20kHz
Basic Accuracy	0.05%(Slow/Med), 0.1%(Fast)			
Measurement Speed	40 times/s, 10 times/s, 3 times/s			
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			
Memory	built-in 10 files			
Trigger Mode	Internal, Manual, External and Remote Trigger.			
Interface	USB Host / Device, RS232, Handler			
Display	3.5 inch LCD			

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Power Cord



Quick Guide



USB Cable



T10 Test Fixture



Test Leads



Short-circuit foil



F10 SMD Test Clips
only for LCR2200,LCR2300



F11 SMD Test Clips
(optional)



F12 SMD Test Clips
(optional)

Differential Probe



Model	OD5140	OD5070	OD5015
Bandwidth(-3dB)	100MHz	50MHz	100MHz
Attenuation Ratio	1:1000;1:100		
Accuracy	±1%		
Impedance	10MΩ//2PF		4MΩ//2PF
Output Voltage (into 50KΩ load)	7V		
Offset	< ±5mV		
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		
Device Weight	500g		
Dimension	186x84x38mm		165x69x26mm

Current Probe



Model	CP024						
Test Range	1mA - 400A	AC Current	Range	AC 4A	AC 40A	AC 200A	AC 200A - 400A
Resolution	1mA		Accuracy	±2.0%rdg±5d ±3.0%rdg±5d			
Bandwidth	DC ~200KHz(±3dB)		Sensitivity	1mV/10mA	1mV/0.1A	1mV/1A	
Jaw Size	23mm (max)		Range	DC 4A	DC 40A	DC 200A	DC 200-400A
Auto Zero at Power-on	√	DC Current	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)						
Device Weight	about 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 Coefficien	≤200PPM/°C	
Operation Temp	-10 ~ 55°C	
Dimension	80(W)x80(H)x320(L)mm	
Device Weight	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 Coefficien	≤200PPM/°C
Operation Temp	0 ~ +50°C
Dimension	340 x80Φ (cylindrical)
Device Weight	250g

Current Probe



Model	CP-07 ⁺				
Test Range	400mA - 4A	DC Current	Range	DCA 400mA	DCA 4A
Resolution	0.1mA		Accuracy	±1.5%rdg±5d	
Bandwidth	DC ~ 1MHz(±3dB)		Sensitivity	1mV/1mA	1mV/10mA
Jaw Size	5mm (max)		Range	ACA 400mA	ACA 4A
Auto Zero at Power-on	√	AC Current	Accuracy	±2.0%rdg±5d	
Power Supply	9V 6F22 Battery		Sensitivity	1mV/1mA	1mV/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	about 200g				

Current Probe



Model	C5010
Measuring Range	0.05A-10A 1A-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	231×67×36 (mm), 2m Cable length
Device Weight	about 330g (Containing batteries)

Oscilloscope Probe



Model	OW3060	OW3100	OW3200	OW3300
Attenuation Ratio	1X or 10X	1X or 10X	1X or 10X	1X or 10X
Bandwidth	6MHz/60MHz	6MHz/100MHz	6MHz/200MHz	6MHz/300MHz
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	P4060	P4100	P4250
Attenuation Ratio	100X	100X	100X
Bandwidth	60MHz	100MHz	250MHz
Input R	100MΩ	100MΩ	100MΩ
Input C	5pF	5pF	5pF
Max Input Voltage	<2KV	<2KV	<2KV

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