

Product Catalogue

- + Digital Storage Oscilloscope
- + Arbitrary Waveform Generator
- + Programmable DC Power Supply
- + PC Oscilloscope
- + Digital Multimeter



owon[®] product line - Created by LILLIPUT[®]

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Released in Jan 19, 2018

Please contact local distributor for further information.

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- 02 **About OWON**
- 03 **Development Milestone**
- 04 **Market Coverage**
- 05 **Spectrum Analyzer**
 - 05 XSA1000TG Series - Spectrum Analyzer
- 05 **Digital Storage Oscilloscope**
 - 05 XDS Series - your powerful n-in-1 on-site measurement station
 - 11 TDS Series - Touch Screen Digital Storage Oscilloscope
 - 13 SDS Series - Deep Memory Digital Storage Oscilloscope
 - 15 SDS-E Series - 2G economical type digital storage oscilloscope
 - 17 SDS1022 - super- economical type digital storage oscilloscope
 - 19 MSO Series - Mixed LA - Oscilloscope
- 21 **Handheld Digital Storage Oscilloscope**
 - 21 HDS-N Series - Handheld Digital Storage Oscilloscope
 - 23 HDS Series - 1-channel Handheld Digital Storage Oscilloscope
 - 25 HDS-I Series - Handheld Digital Storage Oscilloscope *w/ Channel Isolation*
- 27 **PC Oscilloscope**
 - 27 RDS Series - Pen-type PC Oscilloscope
 - 29 VDS Series - PC Oscilloscope
- 33 **Waveform Generator**
 - 33 Single-channel Arbitrary Waveform Generator - {5 - 10MHz}
 - 35 AG Series - Dual-channel Arbitrary Waveform Generator
 - 33 Single-channel Arbitrary Waveform Generator - {80 - 150MHz}
- 39 **Power Supply**
 - 39 ODP Series - Programmable DC Power Supply
- 45 **Digital Multimeter**
 - 45 XDM Series - Bench-type Digital Multimeter
 - 49 DM Series - Bluetooth Digital Multimeter
- 54 **Current Probe**

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.



Development Milestone

2016

Sep XDM series product - brand-new bench-type digital multimeter

2015

Jun 12-bit high resolution n-in-1 smart DSO - XDS series product created
Mar smart bluetooth digital multimeter launched

2014

Jun creative pen-type PC oscilloscope "Wave Rambler" released
Apr single-channel waveform generator AG-S series comes into being
Mar 4-channel PC oscilloscope VDS3104 added into VDS series

2013

Oct SDS-E Series - 2G economical digital storage oscilloscope
Jul new product TDS series touch screen digital storage oscilloscope
Apr new product VDS series PC oscilloscope

2012

Aug SDS5032E - 2G of PDS5022

2011

Nov AG4151 - DDS arbitrary waveform generator first debut in Shanghai Electronics Exhibition
Oct ISO9001 quality system certified
ODP3032 - programmable DC power supply unveiled in Hong Kong Electronics Exhibition

2010

Oct Smart DS series DSO with ultra-thin body, and 10M record length
Feb MSO8202T - 200MHz bandwidth mixed LA-supported DSO
Jan MSO8102T - 100MHz bandwidth mixed LA-supported DSO

2009

Oct HDS3102M-N - first 100MHz bandwidth handheld DSO made by China born
Apr innovative application of auto-measurement, and max 20 group measurement options equipped with full OWON product
Jan MSO7102T - mixed LA-supported DSO with 100MHz bandwidth, and 1GS/s real time sample rate, becomes new member of OWON product family

2008

Dec OWON receives the honor - "the highest cost performance product" from Wireless magazine
Apr PDS7102T - 100MHz bandwidth bench type DSO entering into product line

2007

Nov MSO5022S - mixed LA-supported DSO launched
Jun HDS-N series DSO - the upgraded version of HDS series

2006

Nov HDS2062M - 60MHz handheld DSO introduced
Sep PDS5022 - large 7.8" color LCD bench type DSO
Mar HDS1022M - first fine quality 2 in 1 handheld DSO created by China with high def color LCD

Market Coverage

With its headquarter located in Zhangzhou, Lilliput (OWON) establishes 4 offices in China, and 3 overseas offices, 2 of them in North America, 1 in Western Europe.

Lilliput (OWON) already successfully markets OWON product line into 80+ territories through its sales network.



Part of OWON product users - education field

Harvard University
The University of Iowa
The University of Western Ontario

Chiba University

Technische University Hamburg-Harburg
University degli Studi di Milano

University of Mosul

Sultan Qaboos University

Rabat Academy

XSA1000TG Series

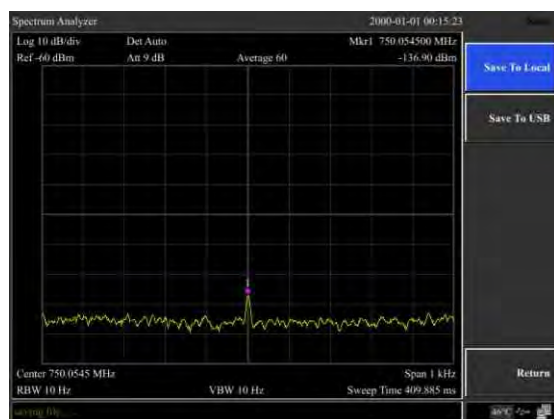
spectrum analyzer



- + Frequency Range from 9 kHz up to 3.6 GHz
- + 150dBm Displayed Average Noise Level
- + Phase Noise -82dBc/Hz @1Gz and offset at 10KHz
- + Total Amplitude Accuracy <1.5dB
- + 10Hz Minimum Resolution Bandwidth (RBW)
- + EMI Pre-compliance Test Kit
- + 1.5 GHz Tracking Generator Kit
- + 10.4 inches display

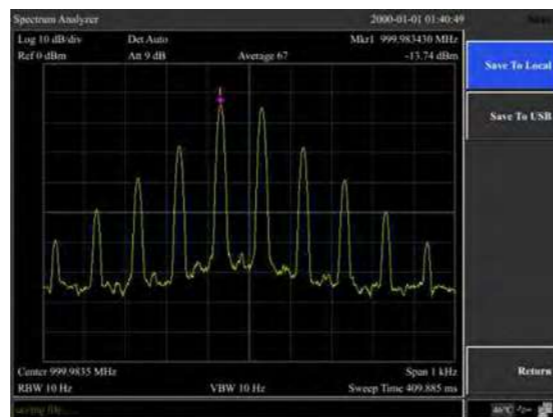
1. 10 Hz Minimum Resolution Bandwidth (RBW)

Digital IF technology offers a minimum bandwidth of 10Hz, allowing excellent signal resolution when separation of closely spaced signals is required.



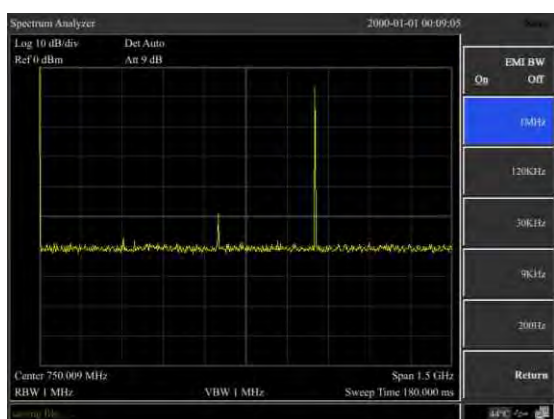
2. Measure -130dB small signal at 10Hz RBW

Offers a DANL (displayed average noise level) down to -130 dBm, which is able to measure smaller signals.



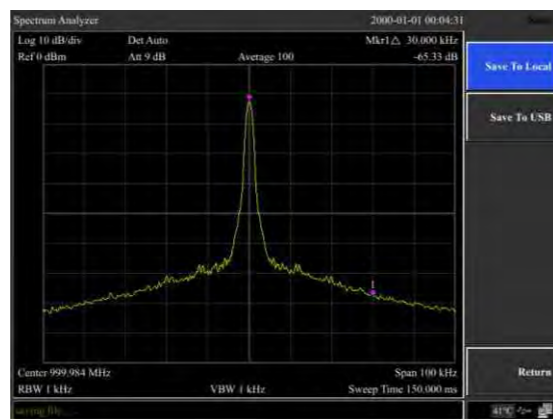
3. Phase noise: <-80 dBc/Hz @1 GHz @ 30 KHz offset

Excellent phase noise performance - <-80dBc/Hz @30KHz enables users to evaluate most synthesizers and signal generators.



4. EMI filter and quasi-peak detector kit

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



+ Performance Specifications

Model	XSA1015-TG	XSA1036-TG
Frequency		
Range	9kHz - 1.5 GHz	9kHz - 3.6 GHz
Resolution	1Hz	
Frequency span		
Range	0 Hz, 100 Hz to maximum frequency of device	
Accuracy	± span / (swept points -1)	
Internal reference		
Reference frequency	10.000000 MHz	
Reference frequency accuracy	±[(days from last calibrate x freq aging rate) + temperature stability + initial accuracy]	
Temperature stability	<2.5ppm	
Aging rate	<1ppm/year	
Readout		
Marker frequency resolution	span/(the number of sweep points -1)	
Uncertainty	±(freq indication x freq reference uncertainty + 1% x span + 10% x resolution bandwidth + Marker Frequency Resolution)	
Frequency counter		
Resolution	1 Hz, 10 Hz, 100 Hz, 1 kHz	
Accuracy	±(marker freq x freq reference uncertainty + counter resolution)	
Bandwidth		
Resolution bandwidth (-3 dB)	10Hz to 500kHz (in 1 to 10 sequence), 1MHz, 3MHz	
Resolution filter shape factor	<5 : 1 nominal (Digital implement, similar to Gauss Pattern)	
Accuracy	<5% nominal	
Video bandwidth (-3 dB)	10Hz to 3MHz	
Amplitude and electric level		
Amplitude measurement range	DANL to +20 dBm, close the preamplifier	
Reference electric level	-80 dBm to +30 dBm, 0.1dBm steps	
Preamplifier	20 dB, nominal, 9 kHz~1.5 GHz	
Input attenuator range	0~39 dB, 3 dB steps	
Max input DC voltage	50 VDC	
Max continuous power	30dBm, average continuous power	
Displayed average noise level (DANL)		
Preamp off	Input attenuation 0 dB, 1Hz resolution bandwidth, RBW=10 Hz Normalization to 1 Hz	
	1 MHz~10 MHz -130dBm (typical)	10 MHz~1GHz -130dBm (typical)
Preamp on	1MHz~1.5 GHz -128 dBm (typical)	1GHz~3.6 GHz -128 dBm (typical)
	1 MHz~10 MHz -150dBm (typical)	10 MHz~1GHz -150dBm (typical)
	1GHz~1.5 GHz -148 dBm (typical)	1GHz~3.6 GHz -148 dBm (typical)
Phase noise		
	20 °C ~ 30 °C, fc=1 GHz	
Phase noise	<-82 dBc/Hz @10 kHz offset	
	<-100 dBc/Hz @100 kHz offset	
	<-110 dBc/Hz @1 MHz offset	

Model	XSA1015-TG	XSA1036-TG
Level display range		
Log scale coordinate	1dB ~255dB	
Linear scale coordinate	0 to reference level	
level unit	dBm, dBuW, dBpW, dBmV, dBuV, W,V	
Points	201~1001	
Number of traces	5	
Detectors	Positive-peak, negative-peak, sample, normal, RMS	
Trace functions	Clear write, Max Hold, Min Hold, View, Blank, Average	
Frequency response		
	20°C ~30°C, 30%~70% relative humidity, 20 dB input attenuation, reference 50 MHz	
Preamp off	±0.8 dB	
Preamp on	±0.9 dB	
Accuracy		
Input Attenuation Switching Uncertainty	20°C ~30°C, fc=50 MHz, Preamplifier Off, 20dB RF attenuation, input signal 0~39 dB ±0.5 dB	
Absolute Amplitude uncertainty	20°C ~30°C, fc=50 MHz, RBW=1 kHz, VBW=1 kHz, peak detector, 20 dB RF attenuation, Preamplifier Off ±0.4 dB, input signal= -20dBm Preamplifier On ±0.5 dB, input signal= -40dBm	
Uncertainty	input signal range 0dbm~-50dbm ±1.5 dB	
VSWR	input 10 dB RF attenuation, 1 MHz~1.5GHz <1.5 , nominal	
Distortion and spurious response		
Second harmonic distortion	fc ≥ 50 MHz, Preamp off, signal input -30 dBm, 0 dB RF attenuation, 20 °C to 30 °C -60dbc	
Third-order intermodulation	fc ≥ 50 MHz +13 dBm	
1 dB Gain Compression	fc ≥ 50 MHz, 0 dB RF attenuation, Preamp off, 20 °C to 30 °C +7 dBm, nominal	
Residual response	connect 50 Ω load at input port, 0 dB input attenuation, 20 °C to 30 °C <-85dBm, nominated	
Input related spurious	-30 dBm signal at input mixer, 20 °C to 30 °C <-60 dBc	
Sweep time and triggering		
Span range	100Hz≤SPAN≤3GHz 10ms to 3000s zero sweep width 1ms to 3000s	
Mode	Continue, single	
Trigger	Free run, video, external	
Tracking generator		
Output frequency range	100 kHz~1.5 GHz	
Output power level range	-30 dBm~0 dBm	
Output power level resolution	1dB	
Output flatness	+/-3 dB	
Maximum safe reverse level	Average total power : 30 dBm, DC : ±50 VDC	

Model	XSA1015-TG	XSA1036-TG
Inputs and Outputs		
Front panel RF input connector	50 Ω, N-type female	
Front panel track generator output	50 Ω, N-type female	
10 M reference input	50 Ω, N-type female	
Communication port	USB HOST, USB DEVICE, LAN, earphone port, VGA	
General technical specification		
Display	TFT LCD, 10.4 inches	
Weight (without package)	4.96 kg	
Dimension (W × H × D)	421 × 221 × 115 (mm)	
Working temperature	0~40 °C	
Storage temperature	-20 °C to +60 °C	
Power	100V~240V 50/60Hz	

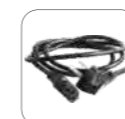
Specifications subject to change without prior notice.

+ Application

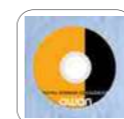
electronic circuit debugging circuit testing design and manufacture
education and training automobile maintenance and testing

+ Accessories

The accessories subject to final delivery.



Power Cord



CD-Rom



Manual

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)

XDS Series your powerful n-in-1 on-site measurement station



14 / 12 bits
high resolution ADC



Super Performance

- + 8-bit, 12-bit or 14-bit high resolution ADC, restoring the waveform detail fully
- + 40M record length, and 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

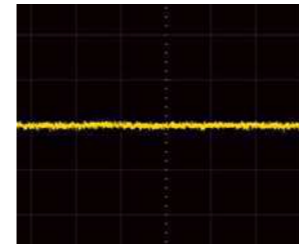
n-in-1

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 31.25μV/div.



2. **Xvisual** platform - restore the waveform detail fully



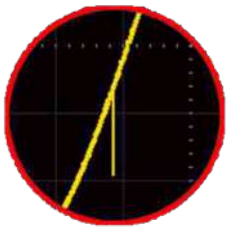
low background noise

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

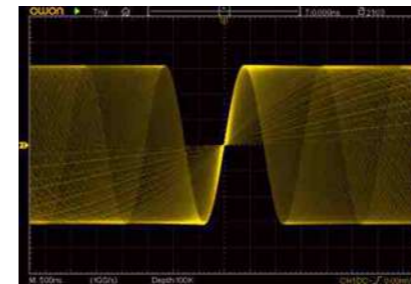
40M record length



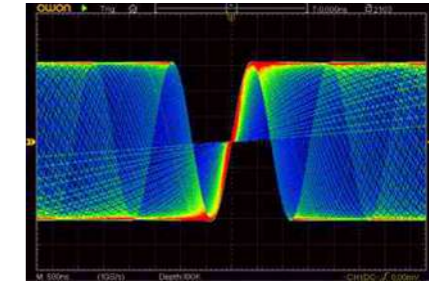
and 75,000 wfms/s refresh rate, easily capturing exceptional, and low probability events



3. multi-level grayscale, and color temperature display



within certain unit time, more frequent one waveform pixel appears, more vivid it is



the frequency of waveform reflecting in color temperature value, larger the value is, more frequent the waveform appears

4. multi-trigger supported - Logic, Time-out, I²C, SPI, RS232, Runt, Windows, Nth Edge, and CAN

5. serial bus coding available in I2C, SPI, RS232, and CAN

M Bus Type
RS232
I2C
SPI
CAN

M Single
Edge
Video
Pulse
Slope
Runt
Windows
Timeout
Nth Edge

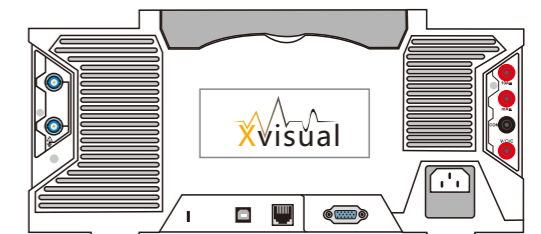
8. its built-in WiFi module facilitates mobile device connecting with XDS series product, to get access to remote control, together with simultaneous measurement result display



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

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

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



9. its multi-point touchscreen improves operation efficiency considerably



10. optional battery makes floating measurements possible, advancing the operation convenience



XDS Series

your powerful n-in-1 on-site measurement station

+ Performance Specifications

Model	XDS3062A	XDS3102A	XDS3202A*	XDS3102	XDS3202E	XDS3202*	XDS3302*
Bandwidth	60MHz	100MHz	200MHz	100MHz	200MHz		300MHz
Sample Rate	1GS/s			1GS/s		2GS/s	2.5GS/s
Vertical Resolution (A/D)	12 bits		14 bits		8 bits		
Record Length	40M						
Waveform Refresh Rate	75,000 wfms/s						
Horizontal Scale	2ns/div - 1000s/div	1ns/div - 1000s/div	2ns/div - 1000s/div	1ns/div - 1000s/div			
Rise Time (at input, typical)	≤5.8ns	≤3.5ns	≤1.7ns	≤3.5ns	≤1.7ns	≤1.17ns	
Channel	2+1 (external)						
Display	8" color LCD, 800 x 600 pixels						
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF; (*50Ω ± 2%)						
Channel Isolation	50Hz : 100 : 1, 10MHz : 40 : 1						
Max Input Voltage	1MΩ ≤ 300Vrms; 50Ω ≤ 5Vrms						
DC Gain Accuracy	±1.5%						±3%
DC Accuracy	average ≥ 16: ±(3% reading + 0.05 div) for ΔV						
Probe Attenuation Factor	0.001X - 1000X, step by 1 - 2 - 5						
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)						
Sample Rate / Relay Time Accuracy	±1ppm						
Interpolation	sin(x)/x, x						
Interval (ΔT) Accuracy (fullbandwidth)	Single: ±(1 interval time + 1ppm x reading + 0.6ns); Average > 16: ±(1 interval time + 1ppm x reading + 0.4ns)						
Input Coupling	DC, AC, and GND						
Vertical Sensitivity	1mV/div - 10V/div (at input)						
Trigger Type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I ² C, SPI, RS232, and CAN (optional)						
Bus Decoding (optional)	I ² C, SPI, RS232, and CAN						
Trigger Mode	Auto, Normal, and Single						
Vertical Range	±2V (1mv/div - 50mv/div), ±20V (100mv/div - 1V/div), ±200V (2V/div - 10V/div)						
Line / Field Frequency (video)	NTSC, PAL and SECAM standard						
Cursor Measurement	ΔV, and ΔT between cursors, ΔV and ΔT between cursors, and auto- cursors						
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Peak RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, Duty Cycle, Delay A→B, Delay A→B, +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edge Count						
Waveform Math	+, -, *, /, FFT						
Waveform Storage	100 waveforms						
Lissajou's Figure	Bandwidth	full bandwidth					
	Phase Difference	±3 degrees					
Communication Interface	USB host, USB device, USB port for PictBridge, Trig Out (P/F), LAN, and VGA (optional)						
Frequency Counter	available						
Power Supply	100 - 240 V AC, 50/60Hz, CAT II						
Power Consumption	< 15W						
Fuse	2A, T class, 250V						
Battery (optional)	3.7V, 13200mAh						
Dimension (W x H x D)	340 x 177 x 90 (mm)						
Device Weight	2.60 kg						

+ Multimeter (optional) Specifications

Full Scale Reading	3½ digits (max 4000 count)	Diode	0V - 1.5V
Input Impedance	10MΩ	Continuity Test	<50 (±30) beeping
Capacitance	51.2nF - 100uF: ±(3% ± 3 digits)		
Voltage	VDC: 400mV, 4V, 400V: ±(1 ± 1 digit); max input: DC 1000V VAC: 4V, 40V, 400V: ±(1 ± 3 digits); frequency: 40Hz - 400Hz; max input: AC 400V (virtual value)		
Current	DC: 40mA, 400mA: ±(1.5% ± 1 digit); 10A: ±(3% ± 3 digits) AC: 40mA: ±(1.5% ± 3 digits), 400mA: ±(2% ± 1 digit), 10A: ±(3% ± 3 digits)		
Impedance	400Ω: ±(1% ± 3 digits), 4KΩ - 40MΩ: ±(1% ± 1 digit)		

+ Arb Waveform Generator (optional) Specifications

Max Frequency Output	25MHz	50MHz
Sample Rate	125MS/s	250MS/s
Channel	available in 1-ch, or 2-ch	
Vertical Resolution	14 bits	
Amplitude Range	2mVpp - 6Vpp	
Waveform Length	8K	
Standard Waveform	Sine, Square, Pulse, and Ramp	

+ Optional Module / Function

VGA	VGA + AV port
WIF	WiFi
AWG	arbitrary waveform generator
DMM	digital multimeter
TOU*	touch screen (capacitor-type)

+ Optional Decoding Kit

RS232	RS232
SPI	SPI
I ² C	I ² C
CAN	CAN decoding

* TOU option could be equipped as standard option as per request.

Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



optional accessories:



mobile app accessible via scanning QR code

4-CH economical type

XDS Series your powerful n-in-1 on-site measurement station



- + 60MHz / 100MHz Bandwidth , 1GS/s sample rate
- + 8-bit or 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, optional 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, USB port for PictBridge, LAN, AUX, and VGA



+ Performance Specifications

Model	XDS3064E	XDS3104E	XDS3064AE	XDS3104AE
Bandwidth	60MHz	100MHz	60MHz	100MHz
Sample Rate	1GS/s			
Vertical Resolution (A/D)	8 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			
Rise Time (at input, typical)	≤5.8ns	≤3.5ns	≤5.8ns	≤3.5ns
Channel	4			
Display	8" color LCD, 800 x 600 pixels display			
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF			
Channel Isolation	50Hz : 100 : 1, 10MHz : 40 : 1			
Max Input Voltage	1MΩ ≤ 300Vrms;			
DC Gain Accuracy	±3%			
DC Accuracy	average ≥ 16 : ± (3% + 0.05div) for ΔV			
Probe Attenuation Factor	0.001X - 1000X, step by 1 - 2 - 5			
LF Respond (AC, -3dB)	≥5Hz			
Sample Rate / Relay Time Accuracy	±1ppm			
Interpolation	(sinx) / x , x			
Interval (ΔT) Accuracy (full bandwidth)	Single: ±(1 interval time + 1ppm x reading + 0.6ns); Average > 16: ±(1 interval time + 1ppm x reading + 0.4ns)			
Input Coupling	DC, AC, GND			
Vertical Sensitivity	1mV/div - 10V/div (at input)			
Trigger Type	Edge, Video, Pulse, Slope, Runt, Windows, Timeout, Nth Edge, Logic, I2C, SPI, RS232, and CAN (optional)			
Bus Decoding(optional)	I2C, SPI, RS232, CAN			
Trigger Mode	Auto, Normal, and Single			
Vertical Range	±2V(1mV/div ~ 50mV/div) ; ±20V(100mV/div ~ 1V/div) ; ±200V(2V/div ~ 10V/div)			
Line / Field Frequency (video)	NTSC, PAL and SECAM standard			
Cursor Measurement	ΔV, and ΔT between cursors, ΔV and ΔT between cursors, and auto- cursors			
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Week RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, Duty Cycle, Delay A→B, Delay A→B, Phase A→B, Phase A→B, +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edges Count, Area, Cycle Area			

Waveform Math	+, -, ×, ÷, FFT		
Waveform Storage	100 waveforms		
Lissajou's Figure	full bandwidth	Full bandwidth	
	±3 degrees	±3 degrees	
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)	340mmx177mmx90mm		

+ Multimeter (optional) Specifications

Full Scale Reading	3¾ digits (max 4000 count)	Diode	0V -1.5V
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)		

+ Arb Waveform Generator (optional) Specifications (only apply to XDS3064E, XDS3104E)

Max Frequency Output	25MHz
Sample Rate	125MS/s
Channel	2 channels
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

+ Optional Module / Function

VGA	VGA + AV port
WIF	WiFi
AWG	arbitrary waveform generator
DMM	digital multimeter
TOU*	touch screen (capacitor-type)

+ Optional Decoding Kit

RS232	RS232
SPI	SPI
I2C	I2C
CAN	CAN decoding

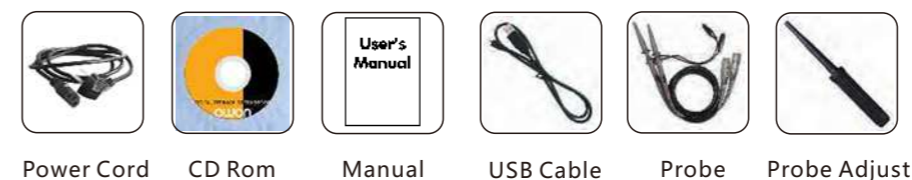
Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



optional accessories:



mobile app accessible via scanning QR code

TOUCH 4-CH TDS Series

Touch Screen Digital Storage Oscilloscope



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

+ Performance Specifications

Model	TDS7074	TDS7104	TDS8104	TDS8204
Bandwidth	70MHz		100MHz	200MHz
Channel	4			
Sample Rate	1GS/s		2GS/s	
Waveform Capture Rate	50,000 wfms/s			
Display	8" color LCD			
Input Coupling	DC, AC, and GND			
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF ; 50Ω ± 1%			
Probe Attenuation Factor	1X, 10X, 100X, 1000X			
Max Input Voltage	1MΩ input impedance : 400V (DC + AC peak) ; 50Ω input impedance : 5V (DC + AC peak)			
Channel Isolation	50Hz : 100 : 1 ; 10MHz : 40 : 1			
Interpolation	sin(x)/x			
Record Length	7.6M			
Horizontal Scale (s/div)	2ns/div - 100s/div, step by 1 - 2 - 5			
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns), Average>16 : ±(1 interval time + 100ppm × reading + 0.4ns)			
Vertical Resolution (A/D)	8 bits (4 channels simultaneously)			
Vertical Sensitivity	2mV/div - 10V/div (at input)			
Analog Bandwidth	70MHz		100MHz	200MHz
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)			
Rise Time	≤5ns		≤3.5ns	≤1.7ns

Model	TDS7074	TDS7104	TDS8104	TDS8204
DC Accuracy	±3%			
Trigger Type	Edge, Pulse, Video, and Slope			
Trigger Mode	Auto, Normal, and Single			
Trigger Level Range	±6 division from the screen center			
Trigger Level Accuracy (typical)	±0.3 division			
Line / Field Frequency (video)	NTSC, PAL, and SECAM standard			
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty			
Waveform Math	+, -, *, /, FFT			
Waveform Storage	4 reference waveforms			
Lissajous Figure	Bandwidth	full Bandwidth		
	Phase Difference	±3 degrees		
Cursor Measurement	ΔV, and ΔT between cursors			
Communication Port	USB host, USB device, VGA (optional), and LAN			
Power Supply	100 - 240 V AC, 50/60Hz, CAT II			
Dimension (W x H x D)	380 x 180 x 115 (mm)			
Device Weight	1.50 kg			

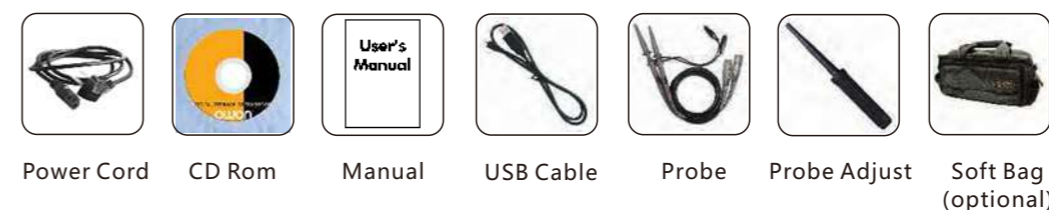
Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



Smart DS Series

Deep Memory Digital Storage Oscilloscope



- + Bandwidth : 60MHz - 300MHz with dual-channel
- + Sample rate : 500MS/s - 3.2GS/s
- + 10M record length for each channel
- + 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



+ Performance Specifications

Model	SDS6062	SDS7072	SDS7102	SDS7202	SDS8102	SDS8202	SDS8302	SDS9302
Bandwidth	60MHz	70MHz	100MHz	200MHz	100MHz	200MHz	300MHz	
Sample Rate	500MS/s	1GS/s		2GS/s		2.5GS/s	3.2GS/s	
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5	2ns/div - 100s/div, step by 1 - 2 - 5		1ns/div - 100s/div, step by 1 - 2 - 5				
Rise Time	≤5.8ns	≤5ns	≤3.5ns	≤1.7ns	≤3.5ns	≤1.7ns	≤1.17ns	
Display	8" color LCD, 800 x 600 pixels							
Channel	2 + 1 (external)							
Record Length	10M							
Input Coupling	DC, AC, and GND							
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF							
Channel Isolation	50MHz : 100 : 1, 10MHz : 40 : 1							
Max Input Voltage	400V (DC + AC Peak)							
DC Gain Accuracy	±3%							
DC Accuracy	average≥16 : ±(3% reading + 0.05 div) for ΔV							
Probe Attenuation Factor	1X, 10X, 100X, 1000X							
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)							
Sample Rate / Relay Time Accuracy	±100ppm							
Interpolation	sin(x)/x							
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns); Average>16 : ±(1 interval time + 100ppm × reading + 0.4ns)							
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)							
Vertical Sensitivity	2mV/div - 10V/div							
Digital Filtering	low-pass, high-pass, band-pass, and band-reject							

Model	SDS6062	SDS7072	SDS7102	SDS7202	SDS8102	SDS8202	SDS8302	SDS9302
Trigger Type	Edge, Pulse, Video, Slope, and Alternate							
Trigger Mode	Auto, Normal, and Single							
Trigger Level	±6 divisions from screen center							
Acquisition Mode	Sample, Peak Detect, and Average							
Line / Field Frequency (video)	NTSC, PAL and SECAM standard							
Cursor Measurement	ΔV, and ΔT between cursors							
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Peak RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty, Duty cycle							
Waveform Math	+, -, *, /, invert, FFT							
Waveform Storage	15 waveforms							
Lissajous Figure	Bandwidth	full bandwidth						
	Phase Difference	±3 degrees						
Communication Interface	USB host, USB device, Pass / Fail, LAN, VGA (optional), and RS232 (optional)							
Frequency Counter	available							
Power Supply	100V - 240V AC, 50/60Hz, CAT II							
Power Consumption	< 18W		< 24W					
Fuse	2A, T class, 250V							
Battery (optional)	7.4V, 8000mA							
Dimension (W x H x D)	340 x 155 x 70 (mm)							
Device Weight	1.80 kg							

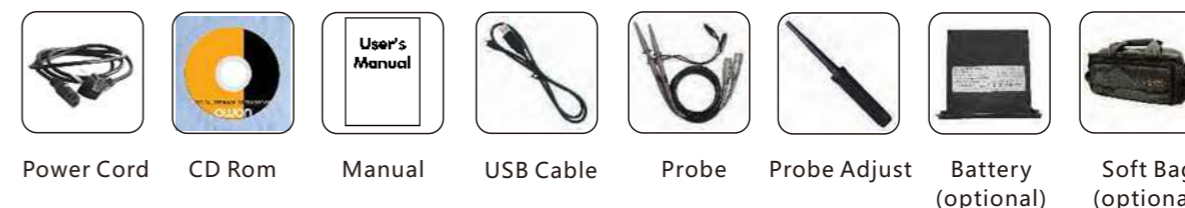
Specifications subject to change without prior notice.

+ Application

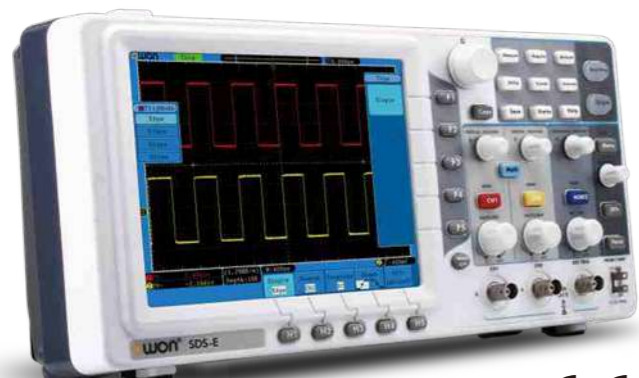
electronic circuit debugging circuit testing design and manufacture
education and training automobile maintenance and testing

+ Accessories

The accessories subject to final delivery.



SDS-E Series 2G economical type digital storage oscilloscope



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



+ Performance Specifications

Model	SDS5032E	SDS5052E	SDS6062E	SDS7072E	SDS7102E	SDS7122E
Bandwidth	30MHz	50MHz	60MHz	70MHz	100MHz	125MHz
Sample Rate	500MS/s			1GS/s		
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5			2ns/div - 100s/div, step by 1 - 2 - 5		
Rise Time (at input, typical)	≤11ns	≤7ns	≤5.8ns	≤5ns	≤3.5ns	≤2.8ns
Channel	2 + 1 (external)					
Display	8" color LCD, 800 x 600 pixels					
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF					
Channel Isolation	50Hz : 100 : 1, 10MHz : 40 : 1					
Max Input Voltage	400V (DC + AC peak)					
DC Gain Accuracy	±3%					
Record Length	10K		1M	1M (optional 10M)		
DC Accuracy (average)	average ≥ 16 : ±(3% reading + 0.05 div) for ΔV					
Probe Attenuation Factor	1X, 10X, 100X, 1000X					
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)					
Sample Rate / Relay Time Accuracy	±100ppm					
Interpolation	sin(x)/x					
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns), Average > 16 : ±(1 interval time + 100ppm × reading + 0.4ns)					
Input Coupling	DC, AC, and GND					
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)					
Vertical Sensitivity	5mV/div - 10V/div (at input)		2mV/div - 10V/div (at input)			
Digital Filtering	/		low-pass, high-pass, band-pass, and band-reject			

Model	SDS5032E	SDS052E	SDS6062E	SDS7072E	SDS7102E	SDS7122E
Trigger Type	Edge, Pulse, Video, Slope, and Alternate					
Trigger Mode	Auto, Normal, and Single					
Trigger Level	±6 divisions from screen center					
Line / Field Frequency (video)	NTSC, PAL, and SECAM standard					
Cursor Measurement	ΔV, and ΔT between cursors					
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Peak RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty, Duty cycle					
Waveform Math	+, -, *, /, invert, FFT					
Waveform Storage	15 waveforms					
Lissajous Figure	Bandwidth	full bandwidth				
	Phase Difference	±3 degrees				
Communication Interface	USB host, USB device, Pass / Fail, LAN, and VGA (optional)					
Frequency Counter	available					
Power Supply	100V - 240V AC, 50/60Hz, CAT II					
Power Consumption	<18W					
Fuse	2A, T class, 250V					
Battery	not supported					
Dimension (W x H x D)	348 x 170 x 78 (mm)					
Device Weight	1.50 kg					

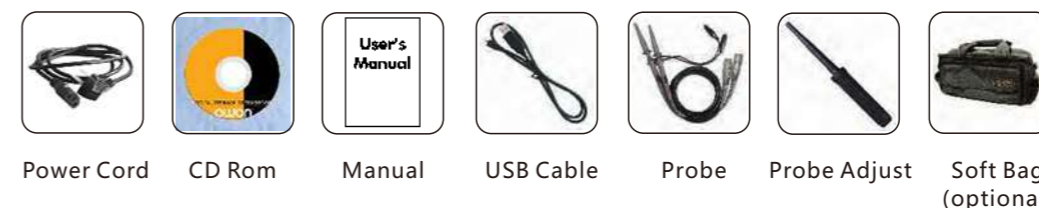
Specifications subject to change without prior notice.

+ Application

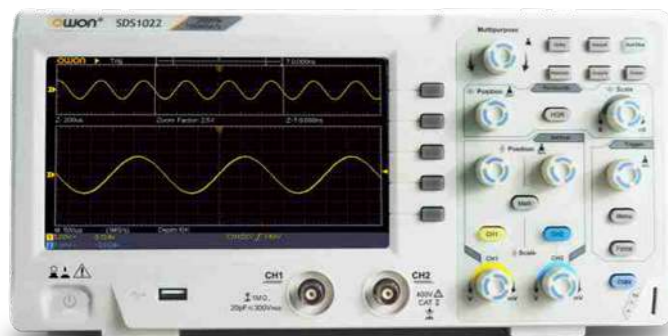
electronic circuit debugging circuit testing design and manufacture
education and training automobile maintenance and testing

+ Accessories

The accessories subject to final delivery.

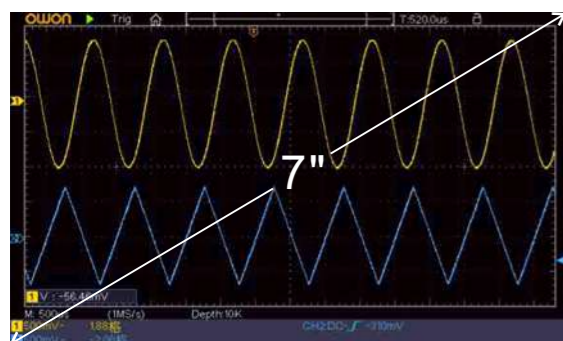


SDS1000 Series super- economical type digital storage oscilloscope



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

7" high resolution LCD

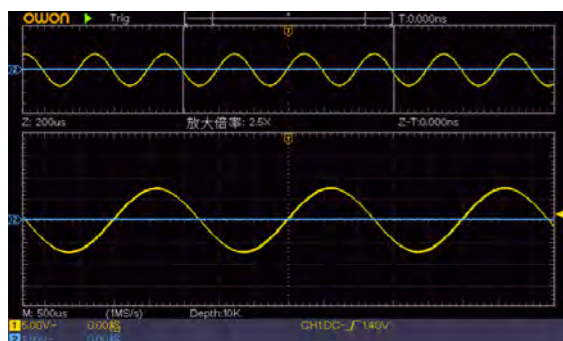


ultra-thin device body, assures super portability

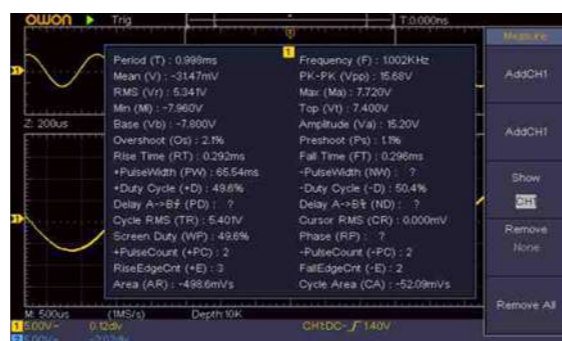
sided power socket better suit for industrial environment measurement



windows extension



snapshot



+ Performance Specifications

Model	SDS1022	SDS1052	SDS1102
Bandwidth	20MHz	50MHz	100MHz
Sample Rate	100MS/s	500MS/s	1GS/s
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5		
Rise Time (at input, typical)	≤17.5ns	≤7ns	≤3.5ns
Channel	2		
Display	7" color LCD, 800 x 480 pixels		
Input Impedance	1MΩ ± 2%, in parallel with 20pF ± 5pF		

Model	SDS1022	SDS1052	SDS1102
Channel Isolation	50Hz : 100 : 1, 10MHz : 40 : 1		
Max Input Voltage	400V (PK - PK) (DC+AC, PK - PK)		
DC Gain Accuracy	±3%		
Record Length	10K		
DC Accuracy (average)	Average ≥ 16 : ±(3% reading + 0.05 div) for ΔV		
Probe Attenuation Factor	1X, 10X, 100X, 1000X		
LF Respond (AC, -3dB)	≥10Hz (at input, AC coupling, -3dB)		
Sample Rate / Relay Time Accuracy	±100ppm		
Interpolation	sin (x) / x		
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm x reading + 0.6ns), Average > 16 : ±(1 interval time + 100ppm x reading + 0.4ns)		
Input Coupling	DC, AC, and GND		
Vertical Resolution (A/D)	8 bits (2 channels simultaneously)		
Vertical Sensitivity	5mV/div - 5V/div (at input)		
Trigger Type	Edge, Video		
Trigger Mode	Auto, Normal, and Single		
Trigger Level	±5 divisions from screen center		
Line / Field Frequency (video)	NTSC, PAL and SECAM standard		
Cursor Measurement	ΔV, and ΔT between cursors		
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		
Lissajous Figure	Bandwidth	full bandwidth	
	Phase Difference	±3 degrees	
Communication Interface	USB host, USB device		
Frequency Counter	available		
Power Supply	100V - 240V AC, 50/60Hz, CAT II		
Power Consumption	< 15W		
Fuse	2A, T class, 250V		
Dimension (W x H x D)	301 x 152 x 70 mm		
Device Weight	1.10 kg		

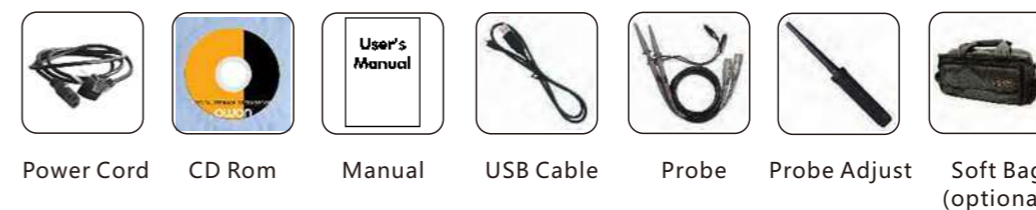
Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



MSO Series Mixed LA - Oscilloscope



- + 2 in 1 (DSO + LA)
- + 8 inch color LCD
- + USB data transmission supported
- + 20 automated measurements
- Digital Storage Oscilloscope**
- + Bandwidth : 60MHz - 200MHz
- + Sample rate : up to 2GS/s
- + Auto-scale function
- + FFT
- Logic Analyzer**
- + Bandwidth : 100MHz - 200MHz
- + Sample rate : max 1GS/s
- + 16 input channels

[Digital Storage Oscilloscope] Performance Specifications

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

Model	MSO7062TD	MSO7102TD	MSO8102T	MSO8202T
Lissajous Figure	Bandwidth	60MHz	100MHz	200MHz
	Phase Difference	±3 degrees		
Communication Interface	USB host, VGA (optional), and USB device			
Fuse	1A, T class, 250V			
Battery	7.4V 8000mAh (optional)			
Dimensions (W x H x D)	370 x 180 x 120 (mm)			
Device Weight	2.20 kg			

[Logic Analyzer] Performance Specifications

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

Specifications subject to change without prior notice.

+ Application

- design and debug
- circuit function test
- education and training
- mixed signal circuit test

+ Accessories

The accessories subject to final delivery.



HDS-N Series

Handheld Digital Storage Oscilloscope



- + 2 in 1 (DSO + Multimeter)
- + Auto-scale function
- + FFT function
- + 20 group automatic measurement options
- + Bandwidth : 20MHz - 200MHz
- + USB data transmission supported
- + Rechargeable Li-ion battery (6 hours' backup)
- + Waveform record and replay
- + Multimeter newly supported SCPI



+ Performance Specifications

Model	HDS1022M-N	HDS2062M-N	HDS3102M-N	HDS4202M-N
Bandwidth	20MHz	60MHz	100MHz	200MHz
Sample Rate	100MS/s	1GS/s		
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2.5 - 5		2ns/div - 100s/div, step by 1 - 2 - 5	
Rise Time (at input, typical)	≤ 17.5ns	≤ 5.8ns	≤ 3.5ns	≤ 1.7ns
Display	3.7" color TFT display (640 x 480 pixels)			
Channel	dual			
Input Impedance	1MΩ ± 2%, in parallel with 20pF ± 5pF		1MΩ ± 2%, in parallel with 15pF ± 5pF	
Record Length	6K points			
Interpolation	sin(x)/x			
Probe Attenuation Factor	1X, 10X, 100X, 1000X			
Input Coupling	DC, AC, and GND			
DC Accuracy (average)	average >16 : ±(5% reading + 0.05 div) for ΔV			
Vertical Sensitivity	5mV/div - 5V/div (at input)			
Vertical Resolution (A/D)	8 bits			
Max Input Voltage	400V (DC + AC peak, 1MΩ input impedance, probe attenuation 10 : 1), CAT II			
Trigger Type	Edge, Video, and Alternate			
Trigger Mode	Auto, Normal, and Single			
Trigger Level	±6 divisions from screen center			
Acquisition Mode	Sample, Peak Detect, and Average			
DC Gain Accuracy	±3%			
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B↓, Delay A→B↑, +Width, -Width, +Duty, -Duty			

Model	HDS1022M-N	HDS2062M-N	HDS3102M-N	HDS4202M-N
Waveform Math	+, -, *, /, invert, FFT			
Waveform Storage	4 waveforms			
Lissajous Figure	Bandwidth	full bandwidth		
	Phase Difference	± 3degrees		
Communication Interface	USB			
Power Supply	100V-240V AC, 50/60Hz			
Li-ion Battery	7.4V, 6 hours' operation			
Dimensions (W x H x D)	115 x 180 x 40 (mm)			
Device Weight	645.00 g			

+ Multimeter Specifications

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

Specifications subject to change without prior notice.

+ Application

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

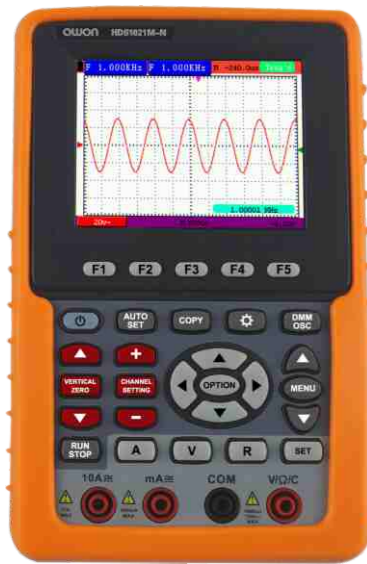
+ Accessories

The accessories subject to final delivery.



HDS Series

1-channel Handheld Digital Storage Oscilloscope



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



+ Performance Specifications

Model	HDS1021M-N	HDS2061M-N	HDS3101M-N
Bandwidth	20MHz	60MHz	100MHz
Sample Rate	500MS/s	500MS/s	1GS/s
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2.5 - 5		
Rise Time (at input, typical)	≤ 17.5ns	≤ 5.8ns	≤ 3.5ns
Display	3.7" color TFT display (640 x 480 pixels)		
Channel	single		
Input Impedance	1MΩ ± 2%, in parallel with 18pF ± 5pF	1MΩ ± 2%, in parallel with 15pF ± 5pF	
Record Length	6K points		
Interpolation	sin(x)/x		
Probe Attenuation Factor	1X, 10X, 100X, 1000X		
Input Coupling	DC, AC, and GND		
DC Accuracy (average)	average > 16 : ±(5% reading + 0.05 div) for ΔV		
Vertical Sensitivity	5mV/div - 5V/div (at input)		
Vertical Resolution (A/D)	8 bits		
Max Input Voltage	400V (DC + AC peak, 1MΩ input impedance, probe attenuation 10 : 1), CAT II		
Trigger Type	Edge, and Video		
Trigger Mode	Auto, Normal, and Single		
Trigger Level	±6 divisions from screen center		
Acquisition Mode	Sample, Peak Detect, and Average		
DC Gain Accuracy	±3%		
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty		
Waveform Storage	4 waveforms		
Communication Interface	mini-USB, mini-RS232		
Power Supply	100V-240V AC, 50/60Hz		
Li-ion Battery	7.4V, 6 hours' operation		
Dimensions (W x H x D)	115 x 180 x 40 (mm)		
Device Weight	645.00 g		

+ Multimeter Specifications

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

Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



HDS-I Series

Handheld DSO w/ Channel Isolation



- + 2 in 1 (DSO + Multimeter)
- + with good ISOLATION between channels
- + Auto-scale function
- + FFT function
- + 20 group automatic measurement options
- + Bandwidth : 20MHz
- + USB data transmission supported
- + Rechargeable Li-ion battery
- + Multimeter newly supported SCPI



+ Performance Specifications

Model	HDS1022M-I
Bandwidth	20MHz
Sample Rate	100MS/s
Rise Time (at input, typical)	≤ 17.5ns
Record Length	6K points
Channel	dual, insulated ground of 1000 : 1
Display	3.7" color TFT LCD, 640 x 480 pixels
Floating Meas. Channel	insulated input ground between multimeter / oscilloscope mode
Input Coupling	DC, AC, and GND
Input Impedance	1MΩ ± 2%, in parallel with 15pF ± 5pF
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5
Interval (ΔT) Accuracy	single: ±(1 interval time + 100ppm x reading + 0.6ns), average>16: ±(1 interval time + 100ppm x reading + 0.4ns)
Vertical Sensitivity	5mV/div - 5V/div (at input)
Vertical Resolution (A/D)	8 bits
Max Input Voltage	400V (DC + AC peak, 1MΩ input impedance, probe attenuation 10 : 1), CAT II
Trigger Type	Edge: rising edge, falling edge Video: line, field, randomline, odd / even fields
Trigger Mode	Auto, Normal, and Single
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty
DC Accuracy (average)	average > 16 : ±(5% reading + 0.05 div) for ΔV
Waveform Math	+, -, *, /, invert, FFT
Waveform Storage	4 waveforms
Lissajous Figure	Bandwidth: full bandwidth Phase Difference: ±3 degrees

Model	HDS1022M-I
Cursor Measurement	ΔV, and ΔT between cursors
Communication Interface	USB host, and USB device
Battery	built-in Li-ion battery, 7.4V / 3500mAh
Dimensions (W x H x D)	113 x 180 x 40 (mm)
Device Weight	645.00 g

+ Multimeter Specifications

Full Scale Reading	3 ³ / ₄ digits (max 4000 count)	Diode	0V - 1.5V
Input Impedance	10 MΩ	On / Off Test	<50 (± 30) beeping
Voltage	VDC : 400mV, 4V, 400V, 1000V : ±(1% ± 1 digit); max input : DC 1000V VAC : 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 digit); 400mA: ±(2 ± 1 digit); 10A: ±(3% ± 3 digits)		
Impedance	400Ω: ±(1% ± 3 digits); 4KΩ / 40KΩ / 400 KΩ / 4MΩ: ±(1% ± 1 digit); 40MΩ: ±(1.50% ± 3 digits)		
Capacitance	51.2nF - 100uF : ±(3% ± 3 digits)		

Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



Wave Rambler

Pen-type PC Oscilloscope



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



The full DSO in your pocket

Pen-type design with easy portability, the ideal solution for on-site measurement.

Designed to be easily- disassembled

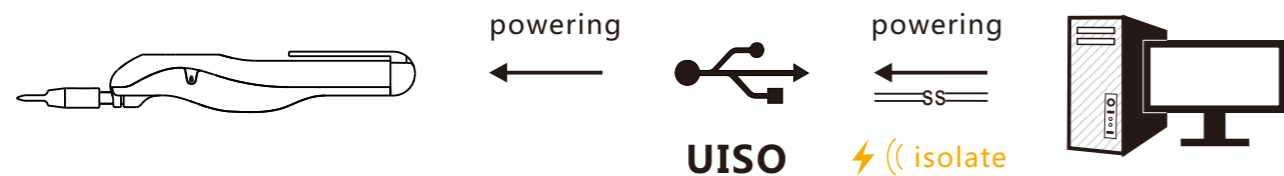
Special metal material made probe- tip assures durable lifetime.



	The running/ stopping of Wave Rambler, is under the control of trackball.
	The zero voltage position, horizontal trigger position, and voltage base / time base could be adjusted by rolling the trackball, which makes the device-operation more comfortable, and convenient.
	The waterdrop-shape button brings you into 4 control options - the setting of trackball function, single trigger, force trigger, and autoset.

UISO function

Creative USB isolation function fulfills direct device- powering via USB port, and supports floating measurement (isolation voltage upto 1000V), making the operation more user-friendly, assuring safer T&M environment, and decreasing the interference to micro signal- measuring to the minimum.



+ Performance Specifications

Model	RDS1021	RDS1021I
Bandwidth	25MHz	
Sample Rate	100MS/s	
Horizontal Scale (s/div)	5ns/div - 100s/div, step by 1 - 2 - 5	
Rise Time	≤14ns	
Record Length	5K	
Input Coupling	DC, AC, and GND	
Input Impedance	10MΩ±2% (X10), 1MΩ±2% (X1)	
Input Capacitance	20pF±5pF	
Max Input Voltage	50V (DC + AC peak)	400V (DC + AC peak)
DC Gain Accuracy	±3%	
DC Accuracy (average)	average≥16 : ±(3% reading + 0.05 div) for ΔV	
Analog Bandwidth	25MHz	
Probe Attenuation Factor	1X, 10X	
LF Respond (AC,-3dB)	≥10Hz	
Interpolation	sin(x)/x	
Displacement	±10 divisions	
Interval (ΔT) Accuracy (full bandwidth)	Single : ±(1 interval time + 100ppm × reading + 0.6ns), Average>16 : ±(1 interval time + 100ppm × reading + 0.4ns)	
Vertical Resolution (A/D)	8 bits	
Vertical Sensitivity	5mV/div - 5V/div	
Trigger Type	Edge, Pulse, and Slope	
Trigger Mode	Auto, Normal, and Single	
Trigger Level	±5 divisions from screen center	
Acquisition Mode	Sample, Peak Detect, and Average	
Cursor Measurement	ΔV and ΔT between cursors	
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty	
Waveform Math	FFT	
Communication Interface	USB2.0	
Dimension (W x H x D)	150 x 20 x 18 (mm)	
Device Weight	0.27 kg	

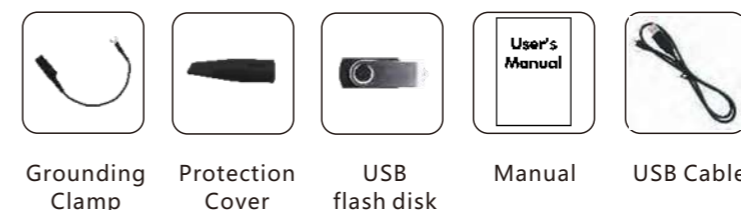
Specifications subject to change without prior notice.

+ Application

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+ Accessories

The accessories subject to final delivery.



VDS Series PC Oscilloscope



- + Up to 100MHz bandwidth, and max 1GS/s real-time sample rate
- + Max 10M record length
- + Friendly UI : FFT, or X-Y, and waveform 2 views displayed on the same screen
- + Multi-trigger option : edge, video, slope, pulse, and alternate
- + USB isolation - less signal interference, more PC protection
- + USB bus powering, and LAN remote control (optional)
- + Ultra-thin body design, easy portability
- + SCPI supported
- + LabVIEW supported (only in VDS3102)



+ Performance Specifications

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

Model	VDS1022I	VDS1022	VDS2062	VDS3102
Vertical Sensitivity	2mV/div - 5V/div			
Trigger Type	Edge, Pulse, Video, Slope, and Alternate			
Trigger Mode	Auto, Normal, and Single			
Trigger Level	±5 divisions from screen center			
Acquisition Mode	Sample, Peak Detect, and Average			
Line / Field Frequency (video)	NTSC, PAL, and SECAM standard			
Cursor Measurement	ΔV, and ΔT between cursors			
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty			
Waveform Math	+, -, *, /, invert, FFT			
Lissajous Figure	Bandwidth	full bandwidth		
	Phase Difference	±3 degrees		
Communication Interface	USB2.0 (isolation)	USB2.0	USB2.0, LAN (optional)	
Multi-function Interface	Signal Type	synchronized input / output, Pass / Fail, external trigger input		
	Level Standard	TTL		
Power Supply	5.0V/500mA		5.0V / 1.5A	
Power Consumption	≤2.5W		≤6.5W	
Dimensions (W x H x D)	170 x 120 x 18 (mm)		190 x 120 x 18 (mm)	
Device Weight	0.26 kg			

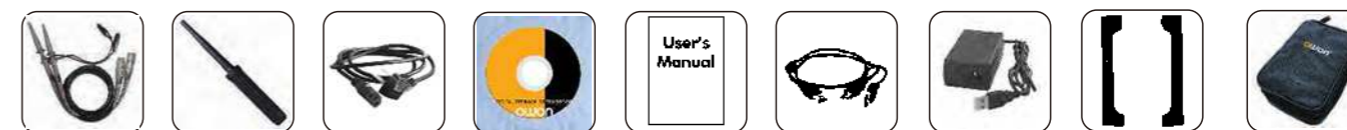
Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



Probe Probe Adjust Power Cord* CD Rom Manual USB Cable Adapter* Silicon Gel Case Soft Bag (optional)

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

4-CH

VDS Series

PC Oscilloscope



- + Up to 100MHz bandwidth, and max 1GS/s real-time sample rate
- + Max 5M record length
- + Friendly UI : FFT, or X-Y, and waveform 2 views displayed on the same screen
- + Multi-trigger option : edge, video, slope, pulse, and alternate
- + USB isolation - less signal interference, more PC protection
- + USB bus powering, and LAN remote control (optional)
- + Ultra-thin body design, easy portability
- + SCPI supported
- + LabVIEW supported (only in VDS3104)

+ Performance Specifications

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

Model	VDS2064	VDS3104
Vertical Sensitivity	2mV/div - 5V/div	
Trigger Type	Edge, Pulse, Video, Slope, and Alternate	
Trigger Mode	Auto, Normal, and Single	
Trigger Level	±5 divisions from screen center	
Acquisition Mode	Sample, Peak Detect, and Average	
Line / Field Frequency (video)	NTSC, PAL, and SECAM standard	
Cursor Measurement	ΔV, and ΔT between cursors	
Automatic Measurement	Vpp, Vavg, Vrms, Freq, Period, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Preshoot, Rise Time, Fall Time, Delay A→B, Delay A→B, +Width, -Width, +Duty, -Duty	
Waveform Math	+, -, *, /, invert, FFT	
Lissajous Figure	Bandwidth	full bandwidth
	Phase Difference	±3 degrees
Communication Interface	USB2.0, LAN (optional)	
Multi-function Interface	Signal Type	synchronized input / output, Pass / Fail, external trigger input
	Level Standard	TTL
Power Supply	5.0V / 1.5A	
Power Consumption	≤6.5W	
Dimensions (W x H x D)	190 x 120 x 18 (mm)	
Device Weight	0.30 kg	

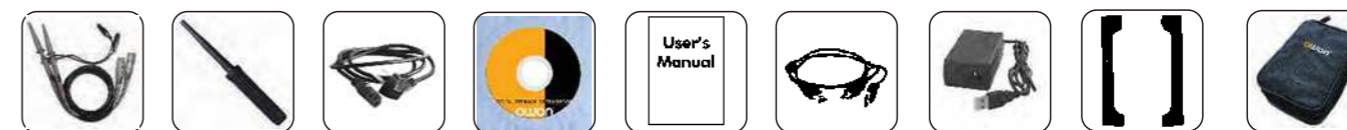
Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



Probe Probe Adjust Power Cord* CD Rom Manual USB Cable Adapter* Silicon Gel Case Soft Bag (optional)

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

AG-S Series Single-channel Arbitrary Waveform Generator - {5 - 10MHz}



- + Advanced DDS technology, upto 10MHz frequency output
- + 125MS/s sample rate, and 1μHz 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" high resolution (480 x 320 pixels) LCD

+ could work with OWON SDS Series DSO smoothly

+ Performance Specifications

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
Square	1μHz - 5MHz
Pulse	1μHz - 5MHz
Ramp	1μHz - 1MHz
Noise	5MHz (-3dB) (typical)
Arbitrary Waveform	1μHz - 5MHz

Amplitude	
Amplitude	1m Vpp - 12.5 Vpp (50Ω), 1m Vpp - 25 Vpp (high impedance)
Resolution	1m Vpp, or 4 digits
DC Offset Range (AD+DC)	±6.25V (50Ω), ±12.5V (high impedance)
DC Offset Range Resolution	1mV, or 4 digits
Load Impedance	50Ω (typical)

Model	AG051	AG051F	AG1011	AG1011F
Arbitrary Waveform				
Wave Length	2 pts to 8K pts			
Sample Rate	125MS/s			
Vertical Resolution	14 bits			
Non-volatile Memory	64M byte			

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)	/	2mHz to 20.00KHz (FSK 2mHz - 100KHz)

Power Amplifier Module (optional)				
Input Impedance	50 kΩ	Output Impedance	<2 Ω	
Max Input Voltage	2.2Vpp	Gain	X10	
Max Output Voltage	22Vpp	Offset	<7%	
Output Slew Rate	10V/us	Bandwidth (at full power)	DC 100kHz	
Max Output Power	10W			

Input / Output				
Display	4 inch (480 x 320 pixels) LCD			
Type	external reference clock input	external modulation input, external trigger input, external reference clock input	external reference clock input	external modulation input, external trigger input, 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

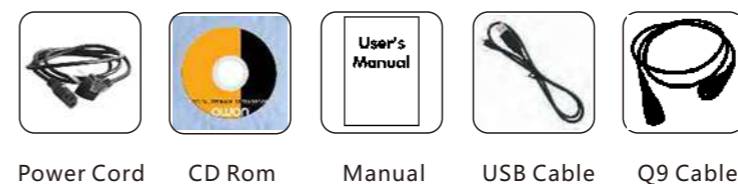
Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.





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

+ Performance Specifications

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

Waveform

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

Frequency (resolution 1μHz)

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

Amplitude

Amplitude	1m Vpp - 10 Vpp (50Ω), 1m Vpp - 20 Vpp (high impedance)
Resolution	1m Vpp or 4 digits
DC Offset Range (AD+DC)	±5V (50Ω), ±10V (high impedance)
DC Offset Range Resolution	1mV or 4 digits
Load Impedance	50Ω (typical)

Model	AG1012	AG1022	AG1012F	AG1022F	AG2052F	AG2062F
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Arbitrary Waveform

Wave Length	2 pts to 8K pts			2 pts to 1M pts		
Non-volatile Memory	64M byte					

Modulation

Modulation Waveform	/	AM, FM, PM, FSK, Sweep, and Burst	AM, FM, PM, FSK, PWM, Sweep, and Burst
Modulation Frequency	/	2mHz to 20.00KHz (FSK 1μHz - 100KHz)	

Counter

Function	/	Frequency Period, +Width, -Width, +Duty, and -Duty
Frequency Range	/	100mHz - 200MHz
Frequency Resolution	/	6 digits

Power Amplifier Module (optional)

Input Impedance	50 kΩ	Output Impedance	<2 Ω
Max Input Voltage	2.2Vpp	Gain	X10
Max Output Voltage	22Vpp	Offset	<7%
Output Slew Rate	10V/us	Bandwidth (at full power)	DC 100kHz
Max Output Power	10W		

Input / Output

Display	4 inch (480 x 320 pixels) LCD		
Type	external reference clock input / output	counter external modulation input, external trigger input, external reference clock input / output	
Communication Interface	USB host, and USB device, RS232 (option)		

Mechanical

Dimension (W x H x D)	235 x 110 x 295 (mm)
Device Weight	3.00 kg

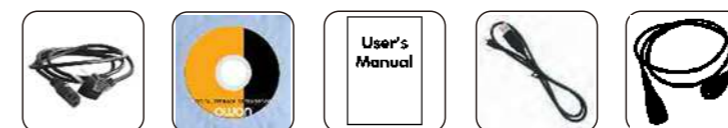
Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



Power Cord CD Rom Manual USB Cable Q9 Cable

AG-S Series

Single-channel Arbitrary Waveform Generator - {80 - 150MHz}



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

+ Performance Specifications

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

Waveform

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

Frequency (resolution 1μHz)

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

Amplitude

Amplitude	10m Vpp - 10 Vpp (50Ω), 20m Vpp - 20 Vpp (high impedance)
Resolution	1m Vpp or 4 digits
DC Offset Range (AD+DC)	±5V (50Ω), ±10V (high impedance)
DC Offset Range Resolution	1mV or 4 digits
Load Impedance	50Ω (typical)

Model	AG4081	AG4101	AG4121	AG4151
Arbitrary Waveform				
Wave Length	2 pts to 1M pts			
Sample Rate	200MS/s			
Vertical Resolution	14 bits			
Non-volatile Memory	64M byte			
Modulation				
Modulation Waveform	AM, FM, PM, FSK, PWM, Sweep, and Burst			
Modulation Frequency	2mHz to 20.00KHz (FSK 1μHz - 100KHz)			
Input / Output				
Display	4 inch (480 x 320 pixels) LCD			
Type	external modulation input, external trigger input / output, external reference clock input / output			
Communication Interface	USB host, USB device, RS232, and LAN			
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.

+ Application

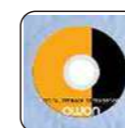
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+ Accessories

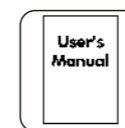
The accessories subject to final delivery.



Power Cord



CD Rom



Manual



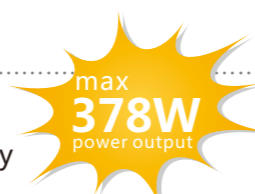
USB Cable



Q9 Cable

DP Series

Programmable DC Power Supply



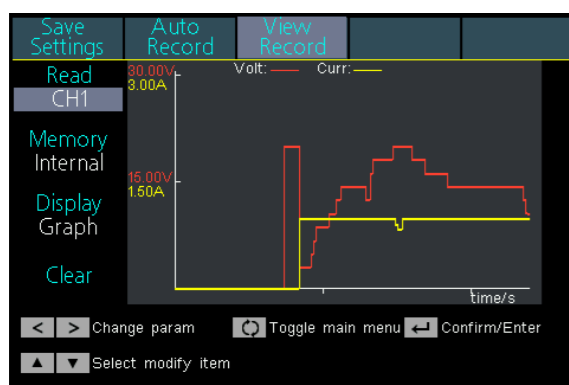
- + Three independent controllable channels
- + Max output resolution : 1mV / 1mA
- + Low ripples / low noise
- + Up to 100 group timers
- + Multi- working mode : individual, parallel, and series
- + Over-voltage / Over-current protection
- + Data-logging function: could record the output voltage, and current; and 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

Triple Output



Creative Data Recording Function

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



NO.	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	12.512	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

Model	ODP3033	ODP3063	ODP6033
Channel	3 (independent controllable channel)		
Max Output Power	198W	378W	378W
Output Range	0 - 30V / 3A x 2-CH, 0 - 6V / 3A	0 - 30V / 6A x 2-CH, 0 - 6V / 3A	0 - 60V / 3A x 2-CH, 0 - 6V / 3A

+ Display

Model	ODP3033	ODP3063	ODP6033
LCD Type	4 inch color LCD		
Display Resolution	480 x 320 pixels, 65536 colors		

+ Mechanical Specifications

Model	ODP3033	ODP3063	ODP6033
Dimension (W x H x D)	250 x 158 x 358 (mm)		
Device Weight	9.80 kg	12.00 kg	

+ Performance Specifications

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

Model	ODP3033		ODP3063		ODP6033		all 3 models	
	CH 1	CH 2	CH 1	CH 2	CH 1	CH 2	CH 3	
Channel								
Output Ratings (0°C - 40°C)	Voltage	0 - 30V		0 - 30V		0 - 60V		0 - 6V
	Current	3A		6A		3A		3A
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						
	Voltage (rms)	≤1mVrms						
	Current (rms)	≤5mArms						
Output Temperature Coefficient (0°C - 40°C)	Voltage	≤0.03% + 10mV						
	Current	≤0.1% + 5mA						
Read Back Temperature Coefficient	Voltage	≤0.03% + 10mV						
	Current	≤0.1% + 5mA						
Parallel Settings Accuracy	Voltage	≤0.02% + 5mV						
	Current	≤0.1% + 30mA						
Programmable Output	Storage	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, RS232, and LAN							

Specifications subject to change without prior notice.

+ Application

- R&D laboratory
- QC test
- industrial automation test
- automobile, and electronic circuit test
- education / teaching experimentation

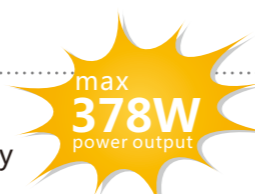
+ Accessories

The accessories subject to final delivery.



DP Series

Programmable DC Power Supply



- + Two independent controllable channels
- + 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 output voltage, and current; and display recorded data in chart

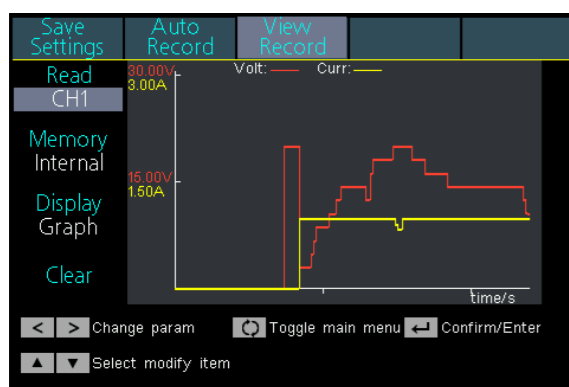
Dual Output



- + 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.



NO.	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	12.512	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

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

+ Display

Model	ODP3122	ODP6062
LCD Type	4 inch color LCD	
Display Resolution	480 x 320 pixels, 65536 colors	

+ Mechanical Specifications

Model	ODP3122	ODP6062
Dimension (W x H x D)	250 x 158 x 358 (mm)	
Device Weight	12.00 kg	

+ Performance Specifications

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

Model	ODP3122	ODP6062	all 2 models
Channel	CH 1	CH 1	CH 2
Output Ratings (0°C - 40°C)	Voltage	0 - 30V	0 - 60V
	Current	12A	3A
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)	≤2mVp-p	
	Voltage (rms)	≤300uVrms	
	Current (rms)	≤3mArms	
Output Temperature Coefficient (0°C - 40°C)	Voltage	≤0.03% + 10mV	
	Current	≤0.1% + 5mA	
Read Back Temperature Coefficient	Voltage	≤0.03% + 10mV	
	Current	≤0.1% + 5mA	
Parallel Settings Accuracy	Voltage	≤0.02% + 5mV	
	Current	≤0.1% + 30mA	
Programmable Output	Storage	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, RS232, and LAN		

Specifications subject to change without prior notice.

+ Application

- R&D laboratory
- QC test
- industrial automation test
- automobile, and electronic circuit test
- education / teaching experimentation

+ Accessories

The accessories subject to final delivery.



DP Series

Programmable DC Power Supply



[ODP3031]



[ODP3032]



- + ODP3032 : two independent controllable channels; ODP3031 : one controllable channel
- + Max output resolution : 1mV / 1mA
- + Low ripples / low noise : <300 μ Vrms / 2 mVpp
- + Up to 100 group timers
- + Up to 10 group preset system configurations
- + Over-voltage / Over-current protection
- + Auto-cooling system
- + 3.9 inch high resolution (480 x 320 pixels) LCD
- + USB2.0, and RS232 serial port digital communication supported
- + SCPI, and LabVIEW supported

+ Display

Model	ODP3031	ODP3032
Display Type	3.9 inch colored LCD	
Display Resolution	480 x 320 pixels	
Display Color	65536 colors	

+ Mechanical Specifications

Model	ODP3031	ODP3032
Dimension (W x H x D)	250 x 158 x 358 (mm)	
Device Weight	7.00 kg	10.50 kg

+ Performance Specifications

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

Model	Channel	ODP3031		ODP3032	
		1	Fixed 3.3V / 5V	2 (independent)	Fixed 5V
DC Output Rating	Voltage	0 - 30V	3.3V / 5V	0- 30V (Independent / Parallel) 0 - 60V (Series) -30V - 30V (Plus-minus)	5V
	Current	0 - 3A	3A	0 - 3A (Independent / Series / Plus-minus), 0 - 6A (Parallel)	3A
Line Regulation	CV	$\leq 0.01\% + 3mV$	$\leq 3mV$	$\leq 0.01\% + 3mV$	$\leq 3mV$
	CC	$\leq 0.1\% + 3mA$	/	$\leq 0.1\% + 3mA$	/
Load Regulation	CV	$\leq 0.01\% + 3mV$	$\leq 0.1\% + 3mV$	$\leq 0.01\% + 3mV$	$\leq 0.1\% + 3mV$
	CC	$\leq 0.2\% + 3mA$	/	$\leq 0.2\% + 3mA$	/
Noise and Ripple (20Hz - 7MHz)	CV	$\leq 300 \mu Vrms / 2 mVpp$		$\leq 300 \mu Vrms / 2 mVpp$	
	CC	$\leq 3mArms$	/	$\leq 3mArms$	/
Settings Resolution	Voltage	1mV	/	1mV	/
	Current	1mA	/	1mA	/
Settings Accuracy (25°C \pm 5°C)	Voltage	$\leq 0.05\% + 3mV$	/	$\leq 0.05\% + 3mV$	/
	Current	$\leq 0.1\% + 3mA$	/	$\leq 0.1\% + 3mA$	/
Read Back Resolution	Voltage	1mV (<10V), 10mV ($\geq 10V$)	/	1mV (<10V), 10mV ($\geq 10V$)	/
	Current	1mA	/	1mA	/
Read Back Accuracy (25°C \pm 5°C)	Voltage	$\leq 0.05\% + 3$ digits	/	$\leq 0.05\% + 3$ digits	/
	Current	$\leq 0.1\% + 3$ digits	/	$\leq 0.1\% + 3$ digits	/
Communication Interface	USB Host, USB Device and RS232				

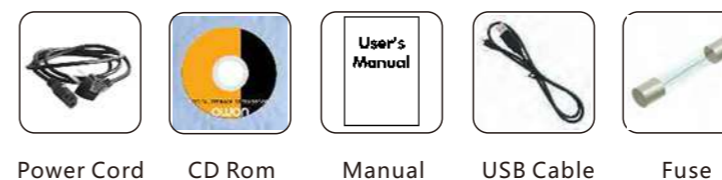
Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



XDM3041

Bench-type Digital Multimeter



- + 4 inch 480 x 320 pixels high resolution LCD
- + resolutions up to 4 1/2 digits
- + 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

No.	Function	Reading
0	ACV	019.18 mV
1	ACV	027.75 mV
2	ACV	019.22 mV
3	ACV	019.28 mV
4	ACV	025.39 mV
5	ACV	027.48 mV
6	ACV	027.33 mV
7	ACV	004.52 mV
8	ACV	003.62 mV

27.756mV
3.123mV
Points:25

005.48 mVAC

Manual 200 mV

005.40 mVAC

Manual 200 mV

+ Performance Specifications

XDM3041	Measurement Range	Frequency Range	Accuracy: 1 Year ± (% of reading + % of range)
DC Voltage	600mV, 6V, 60V, 600V, 1000V	/	0.02±0.01
True RMS AC Voltage	600mV, 6V, 60V, 600V, 750V	20Hz - 50Hz	2 + 0.10
		50Hz - 20kHz	0.2 + 0.06
		20kHz - 50kHz	1.0 + 0.05
		50kHz - 100 kHz	3.0 + 0.08
DC Current	600.00 µA, 6.0000 mA, 60.000 mA, 600.00 mA, 6.000 A, 10.0000 A	/	0.06 + 0.02
			0.06 + 0.02
			0.1 + 0.05
			0.2 + 0.02
			0.2 + 0.05
True RMS AC Current	60.000 mA, 600.00 mA, 6.0000 A, 10.000 A	20Hz - 45Hz	2 + 0.10
		45Hz - 2kHz	0.50 + 0.10
		2kHz - 10kHz	2.50 + 0.20

XDM3041	Measurement Range	Frequency Range	Accuracy: 1 Year ± (% of reading + % of range)
Resistance	600.00 Ω	/	0.040 + 0.01
	6.0000 kΩ		0.030 + 0.01
	60.000 kΩ		0.030 + 0.01
	600.00 kΩ		0.040 + 0.01
	6.0000 MΩ		0.120 + 0.03
	60.000 MΩ		0.90 + 0.03
	100.00 MΩ		1.75 + 0.03
Diode Test	3.0000 V	/	0.5 + 0.01
Continuity	1000Ω	/	0.5 + 0.01
Frequency Period	200 mV - 750 V	20 Hz - 2 kHz	0.01 + 0.003
		2 kHz - 20 kHz	0.01 + 0.003
		20 kHz - 200 kHz	0.01 + 0.003
		200 kHz - 1 MHz	0.01 + 0.006
	20 mA - 10 A	20Hz-2kHz	0.01 + 0.003
		2 kHz - 10 kHz	0.01 + 0.003
Test Current			
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 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		
Logging Length	1M points		
General			
Dimension (W x H x D)	235 x 110 x 295 (mm)		
Device Weight	3.00 kg		

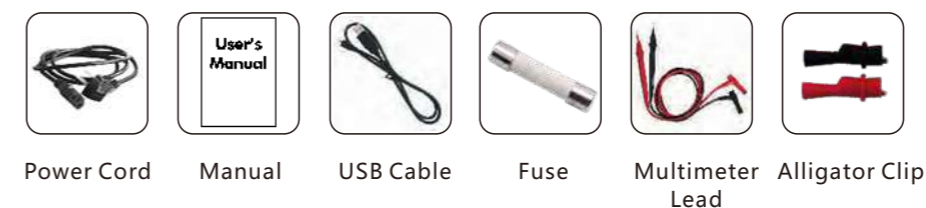
Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



XDM3051

Bench-type Digital Multimeter



- + 4 inch 480 x 320 pixels high resolution LCD
- + resolutions up to 5 1/2 digits
- + 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

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

-000.54 mVDC Auto 200 mV

● Trigger

000.23 mVDC Auto 200 mV

+ Performance Specifications

XDM3051	Measurement Range	Frequency Range	Accuracy: 1 Year ± (% of reading + % of range)
DC Voltage	200mV, 2V, 20V, 200V, 1000V	/	0.015 ± 0.004
True RMS AC Voltage	200mV, 2V, 20V, 200V, 750V	20Hz - 45Hz	1.5 + 0.10
		45Hz - 20kHz	0.2 + 0.05
		20kHz - 50kHz	1.0 + 0.05
		50kHz - 100 kHz	3.0 + 0.05
DC Current	200.000 μA, 2.00000 mA, 20.0000 mA, 200.000 mA, 2.00000 A, 10.0000 A	/	0.055 + 0.005
			0.055 + 0.005
			0.095 + 0.020
			0.070 + 0.008
			0.170 + 0.020
True RMS AC Current	20.0000 mA, 200.000 mA, 2.00000 A, 10.0000 A	20Hz - 45Hz, 45Hz - 2kHz, 2kHz - 10kHz	1.5 + 0.10
			0.50 + 0.10
			2.50 + 0.20
			0.250 + 0.010

XDM3051	Measurement Range	Frequency Range	Accuracy: 1 Year ± (% of reading + % of range)
Resistance	200.000 Ω	/	0.030 + 0.005
	2.00000 kΩ		0.020 + 0.003
	20.0000 kΩ		0.020 + 0.003
	200.000 kΩ		0.020 + 0.003
	2.00000 MΩ		0.040 + 0.004
	10.0000 MΩ		0.250 + 0.003
	100.000 MΩ		1.75 + 0.004
Diode Test	2.0000 V	/	0.05 + 0.01
Continuity	2000Ω	/	0.05+0.01
Frequency Period	200 mV - 750 V	20 Hz - 2 kHz	0.01 + 0.003
		2 kHz - 20 kHz	0.01 + 0.003
		20 kHz - 200 kHz	0.01 + 0.003
		200 kHz - 1 MHz	0.01 + 0.006
	20 mA - 10 A	20Hz-2kHz	0.01 + 0.003
		2 kHz - 10 kHz	0.01 + 0.003
Test Current			
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 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		
Logging Length	1M points		
General			
Dimension (W x H x D)	235 x 110 x 295 (mm)		
Device Weight	3.00 kg		

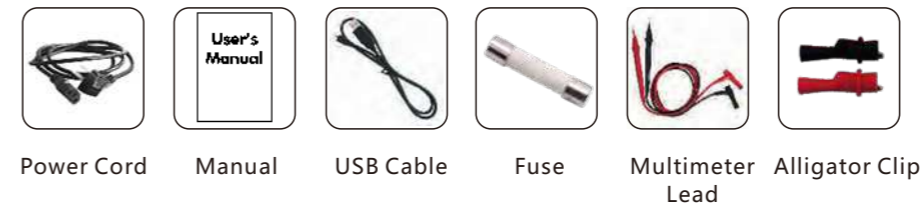
Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



DM Series Bluetooth Digital Multimeter



- + 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

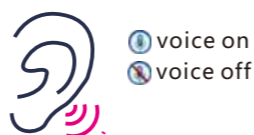
functioning as multimeter + datalogger

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



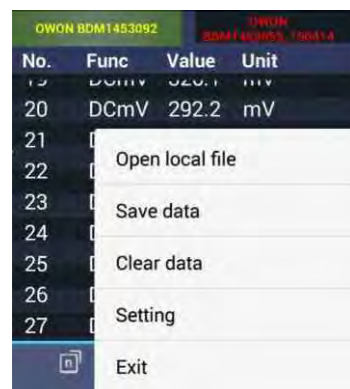
remote control supported

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



data- saving, recalling, and comparatively analyzing

CSV 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



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)



+ Performance Specifications

Model	D33	B33	B33+
Measurement Range			
DC Voltage	V	400.0mV / 4.000V / 40.00V / 400.0V	0.1mV 1V
AC Voltage	V	4.000V / 40.00V 400.0V / 750V	1mV 0.1V
DC Current	µA	400.0µA / 4000µA	0.1µA
	mA	40.00mA / 400.0mA	0.01mA
	A	4.000A / 10.00A	1mA
AC Current	µA	400.0µA / 4000µA	0.1µA
	mA	40.00mA / 400.0mA	0.01mA
	A	4.000A / 10.00A	1mA
Resistance		400.0Ω / 4.000kΩ / 40.00kΩ / 400.0kΩ / 4.000MΩ	0.1Ω
		40.00MΩ	0.01MΩ
Capacitance		40.00nF / 400.0nF / 4.000µF / 40.00µF	0.01nF
		100.0µF	0.1µF
Frequency		4.999Hz / 49.99Hz / 499.9Hz / 4.999kHz / 49.99kHz / 499.9kHz / 4.999MHz	1mHz
Duty Ratio		0.1% - 99.9% (typical value: Vrms = 1V, f = 1kHz)	0.1%
		0.1% - 99.9% (≥1kHz)	
Temperature		-50°C - 400°C	1°C
Display		3999 count	
Frequency Response		40Hz - 400Hz	
Shift Rate		3 times / s	

Auto-scale	√	Bluetooth Module	available in B33, and B33+
Offline Recording Function	available in B33+	LCD Backlight	√
Record Period	168 hours (7 days)	Input Protection	√
Record Length	10,000 points	Input Impedance	≥10MΩ
Diode Test	√	LCD Size	69mm x 52mm
Auto Power-off	√	Display Area	67 x 46 mm (effective area 66 x 45 mm)
On-off Warning	√	Battery	3V (1.5V x 2)
Low-battery Indicator	√	Dimension (W x H x D)	85 x 185 x 30 (mm)
Data Hold	√	Device Weight	0.32 kg
Relative Measurement	√		

Specifications subject to change without prior notice.

Model	D35	D35T	B35	B35T	B35+	B35T+
	Measurement Range				Resolution	Accuracy
DC Voltage	mV	60.00mV / 600.0mV			0.01mV	±(0.5%+2-digit)
	V	60.00mV / 600.0mV / 6.000V / 60.00V 600.0V / 1000V			0.1mV 0.1V	
AC Voltage	mV	60.00mV / 600.0mV			0.01mV	±(0.8%+2-digit)
	V	60.00mV / 600.0mV / 6.000V / 60.00V 600.0V / 750V			1mV 0.1V	±(0.8%+2-digit) ±(1%+3-digit)
DC Current	µA	600.0µA			0.1µA	±(0.8%+2-digit)
	mA	600.0µA / 6.000mA / 60.00mA / 600.0mA / 6.000A			0.01mA	±(0.8%+2-digit)
	A	20.00A			1mA	±(1.2%+3-digit)
AC Current	µA	600.0µA			0.1µA	±(1%+3-digit)
	mA	600.0µA / 6.000mA / 60.00mA / 600.0mA / 6.000A			0.01mA	±(0.8%+2-digit)
	A	20.00A			1mA	±(2%+3-digit)
Resistance	600.0Ω / 6.000kΩ / 60.00kΩ / 600.0kΩ / 6.000MΩ / 10.00MΩ				0.1Ω	±(0.8%+2-digit)
	60.00MΩ				0.01MΩ	±(2%+3-digit)
Capacitance	40.00nF				0.01nF	±(2.5%+3-digit)
	400.0nF / 4.000µF / 40.00µF				0.1nF	±(2.5%+3-digit)
	400.0µF / 4000µF				0.1µF	±(3%+5-digit)
Frequency	9.999Hz / 99.99Hz / 999.9Hz / 9.999kHz / 99.99kHz / 999.9kHz / 9.999MHz				1mHz	±(0.8%+2-digit)
Duty Ratio	0.1% - 99.9% (typical value: Vrms = 1V, f = 1kHz)				0.1%	±(1.2%+3-digit)
	0.1% - 99.9% (≥1kHz)					±(2.5%+2-digit)
Temperature	(-50°C) - (+400°C)				1°C	±(2.5%+3-digit)
	(-58°F) - (+752°F)				1°F	±(4.5%+5-digit)
Display	6000 count					
Frequency Response	40Hz - 400Hz					
Shift Rate	3 times / s					
Simulated Chart Shift Rate	30 times / s					

Auto-scale	√	Max / Min Value	√
Offline Recording Function	available in B35+, and B35T+	Bluetooth Module	available in B35, B35+, B35T, and B35T+
Record Period	168 hours (7 days)	LCD Backlight	√
Record Length	10,000 points	Simulated Chart	√
True RMS	available in D35T, B35T, and B35T+	Input Protection	√
Diode Test	√	Input Impedance	10MΩ
Audion Test	√	LCD Size	69mm x 52mm
Auto Power-off	√	Display Area	67 x 46 mm (effective area 66 x 45 mm)
On-off Warning	√	Battery	3V (1.5V x 2)
Low-battery Indicator	√	Dimension (W x H x D)	85 x 185 x 30 (mm)
Data Hold	√	Device Weight	0.32 kg
Relative Measurement	√		

Specifications subject to change without prior notice.

Model	B41T+			
DC Voltage	mV	220mV	0.01mV	±(0.05%+10-digit)
		2.2V	0.1mV	
	V	22V	1mV	
		220V	10mV	
AC Voltage	mV	220mV	0.01mV	±(0.1%+10-digit)
		2.2V	0.1mV	
	V	22V	1mV	
		220V	10mV	
DC Current	µA	220µA	0.01µA	±(0.5%+10-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
AC Current	µA	220µA	0.01µA	±(0.8%+10-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Resistance	µA	220µA	0.01µA	±(2.5%+35-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Capacitance	A	20.00A	1mA	±(2.5%+30-digit)
		220Ω	0.01MΩ	
	µA	220µA	0.1Ω	
		2200µA	1Ω	
Frequency	mV	220mV	0.01mV	±(0.4%+5-digit)
		2.2V	0.1mV	
	V	22V	1mV	
		220V	10mV	
Duty Ratio	µA	220µA	0.01µA	±(0.5%+25-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Temperature	µA	220µA	0.01µA	±(5%+10-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Display	µA	220µA	0.01µA	±(2.5%+15-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Frequency Response	µA	220µA	0.01µA	±(4.0%+10-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Shift Rate	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Simulated Chart Shift Rate	µA	220µA	0.01µA	±(0.1%+4-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Auto-scale	µA	220µA	0.01µA	±(1.2%+3-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Offline Recording Function	µA	220µA	0.01µA	±(2.5%+3-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Record Period	µA	220µA	0.01µA	±(1.0%+5-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Record Length	µA	220µA	0.01µA	±(1.2%+6-digit)
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
True RMS	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Diode Test	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Audion Test	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Auto Power-off	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
On-off Warning	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Low-battery Indicator	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Data Hold	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Relative Measurement	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Frequency	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Frequency Response	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Shift Rate	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Simulated Chart Shift Rate	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Auto-scale	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Offline Recording Function	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Record Period	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Record Length	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
True RMS	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Diode Test	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Audion Test	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Auto Power-off	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
On-off Warning	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Low-battery Indicator	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Data Hold	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Relative Measurement	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Frequency	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Frequency Response	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Shift Rate	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	
Simulated Chart Shift Rate	µA	220µA	0.01µA	/
		2200µA	0.1µA	
	mA	22mA	1µA	
		220mA	10µA	

Auto-scale	√	Max / Min Value	√
Offline Recording Function	√	Bluetooth Module	√
Record Period	168 hours (7 days)	LCD Backlight	√
Record Length	10,000 points	Simulated Chart	√
True RMS	√	Input Protection	√
Diode Test	√	Input Impedance	10MΩ
Audion Test	√	LCD Size	69mm x 52mm
Auto Power-off	√	Display Area	67 x 46 mm (effective area 66 x 45 mm)
On-off Warning	√	Battery	3V (1.5V x 2)
Low-battery Indicator	√	Dimension (W x H x D)	85 x 185 x 30 (mm)
Data Hold	√	Device Weight	0.32 kg
Relative Measurement	√		

Specifications subject to change without prior notice.

+ Application

electronic circuit debugging
education and training

circuit testing

design and manufacture
automobile maintenance and testing

+ Accessories

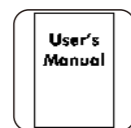
The accessories subject to final delivery.



Multimeter Lead



K-type Thermocouple



Manual



BT2.0

mobile app accessible via scanning QR code

optional accessories:



Alligator Clip



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



Soft Bag



BLE4.0

mobile app accessible via scanning QR code

Current Probe



Model		CP-05+			
Test Range		1mA - 400A			
Resolution		1mA			
Bandwidth		DC - 200KHz (±3dB)			
Jaw Size		23mm (max)			
Auto Zero at Power-on		√			
Power Supply		9V 6F22 Battery			
Operating Temperature		0°C to 50°C			
Operating Humidity		15% to 70% RH			
AC Current	Range	AC 4A	AC 40A	AC 200A	AC 200A - 400A
	Accuracy	±2.0%rdg±5-digit			±3.0%rdg±5-digit
DC Current	Range	DC 4A	DC 40A	DC 200A	DC 200 - 400A
	Accuracy	±1.5%rdg±5-digit			±3.0%rdg±5-digit
	Sensitivity	1mV/10mA	1mV/0.1A	1mV/1A	
	Dimension (W x H x D)	180 x 30 x 44 (mm)			
	Device Weight	about 200g			

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



Soft Bag



Model		CP-07+	
Test Range		400mA - 4A	
Resolution		0.1mA	
Bandwidth		DC - 1MHz (±3dB)	
Jaw Size		5mm (max)	
Auto Zero at Power-on		√	
Power Supply		9V 6F22 Battery	
Operating Temperature		0°C to 50°C	
Operating Humidity		15% to 70% RH	
DC Current	Range	DCA 400mA	DCA 4A
	Accuracy	±1.5%rdg±5-digit	
AC Current	Range	ACA 400mA	ACA 4A
	Accuracy	±2.0%rdg±5-digit	
	Sensitivity	1mV/1mA	1mV/10mA
	Dimension (W x H x D)	215 x 36 x 58 (mm)	
	Device Weight	about 200g	

Specifications subject to change without prior notice.

+ Accessories

The accessories subject to final delivery.



BNC cable



Extension cord



Soft Bag

Oscilloscope Probe Specification



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



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



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



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



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