

Product Catalogue

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



n-in-1 DSO with
12-bit ADC - XDS series



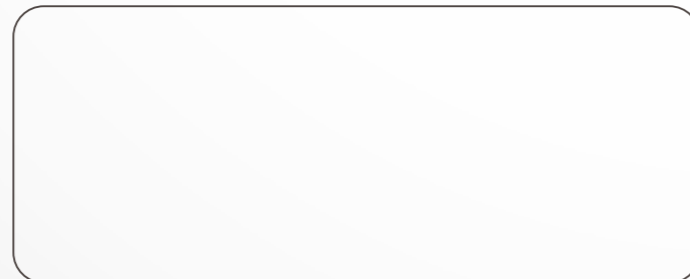
owon[®] product line - Created by LILLIPUT[®]

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About OWON®

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

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

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

OWON product could 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 worldwide range.



Development Milestone

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

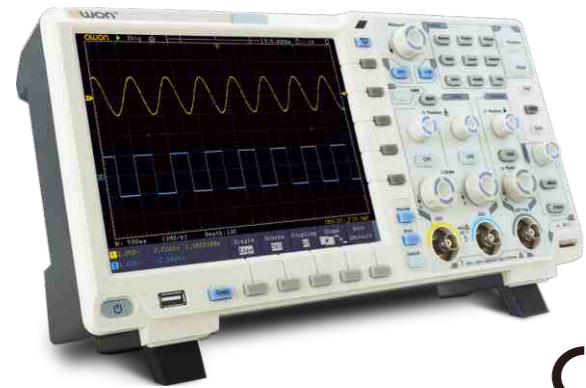
Technische University Hamburg-Harburg
University degli Studi di Milano

University of Mosul

Sultan Qaboos University

Rabat Academy

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



12 bits
high resolution ADC



Super Performance

- + 8-bit, or 12-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

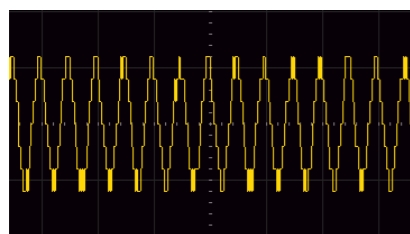
Creative New Look

- + 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. 12-bit high vertical resolution model - XDS-A series product achieves 16 times resolution, and definition more than its general 8-bit counterpart, which makes it the better solution provider for small signal measurement, and signal detail restoration from large signal

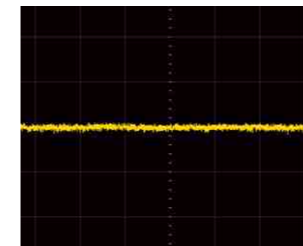


20mVpp signal measured by common 8-bit DSO, 10 times zoomed



20mVpp signal measured by 12-bit XDS series DSO, 10 times zoomed

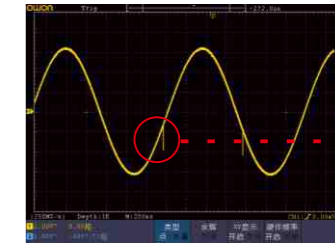
2. **Xvisual** platform - restore the waveform detail fully



low background noise

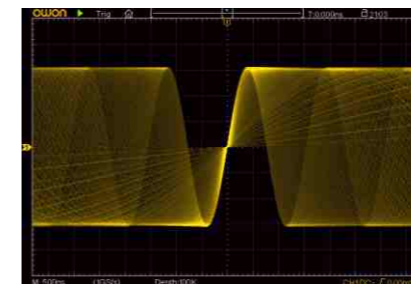
| MLength |
|---------|
| 1000 |
| 10K |
| 100K |
| 1M |
| 10M |
| 20M |

40M record length

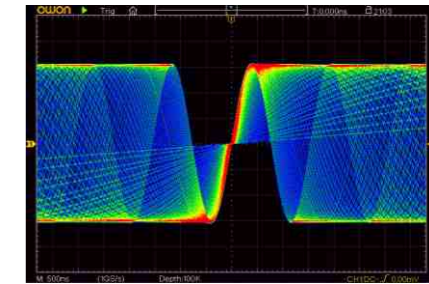


and 75,000 wfms/s refresh rate, easily capturing exceptional, and low probability events

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

| MBus Type |
|-----------|
| RS232 |
| I2C |
| SPI |
| CAN |

| MSingle |
|----------|
| Edge |
| Video |
| Pulse |
| Slope |
| Runt |
| Windows |
| Timeout |
| Nth Edge |

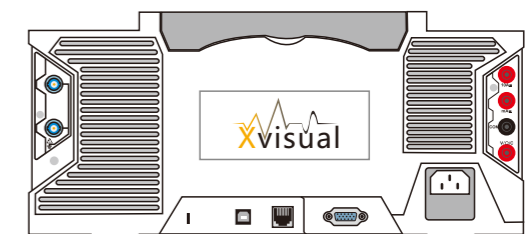
8. its built-in WiFi module facilitates mobile device connecting with XDS series product, to get access to remote control, together with simultaneous measurement result display



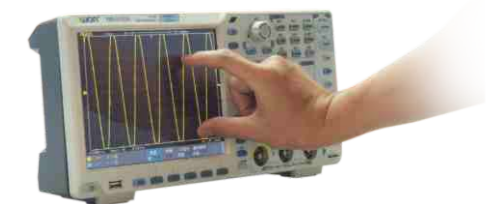
via app s/w, waveform data-saving, checking, co-sharing is possible, co-analyzing hence realizes

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 | XDS3102 | XDS3202A | XDS3202 | XDS3302 |
|--|--|----------------|---|--|---------|---------|
| Bandwidth | 60MHz | 100MHz | | 200MHz | | 300MHz |
| Sample Rate | 1GS/s | | | 2GS/s | | |
| Vertical Resolution (A/D) | 12 bits | | 8 bits | 12 bits | | 8 bits |
| Record Length | 40M | | | | | |
| Waveform Refresh Rate | 75,000 wfms/s | | | | | |
| Horizontal Scale (s/div) | 2ns/div - 1000s/div, step by 1 - 2 - 5 | | | 1ns/div - 1000s/div, step by 1 - 2 - 5 | | |
| Rise Time (at input, typical) | ≤5.8ns | ≤3.5ns | | ≤1.7ns | | ≤1.25ns |
| Channel | 2+1 (external) | | | | | |
| Display | 8" color LCD, 800 x 600 pixels | | | | | |
| Input Impedance | 1MΩ ± 2%, in parallel with 15pF ± 5pF | | 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% | ±3% | | ±1% | | ±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) | ≥5Hz (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 | | | | | |
| 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, Week RMS, Cursor RMS, Vmax, Vmin, Vtop, Vbase, Vamp, Overshoot, Phase, Preshoot, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, Duty Cycle, Delay A→B, Delay A→B, +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edge Count | | | | | |
| 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 | 10mVpp - 6Vpp | |
| Waveform Length | 8K | |
| Standard Waveform | Sine, Square, Pulse, and Ramp | |

+ Optional Module / Function

| | |
|-----|-------------------------------|
| VGA | VGA+AV port |
| WIF | WiFi |
| AWG | arb 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 |

* only available for XDS3102, and XDS3202

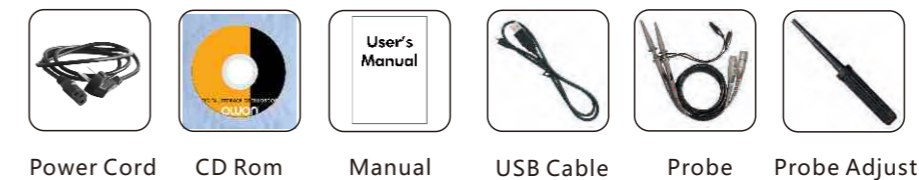
Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.

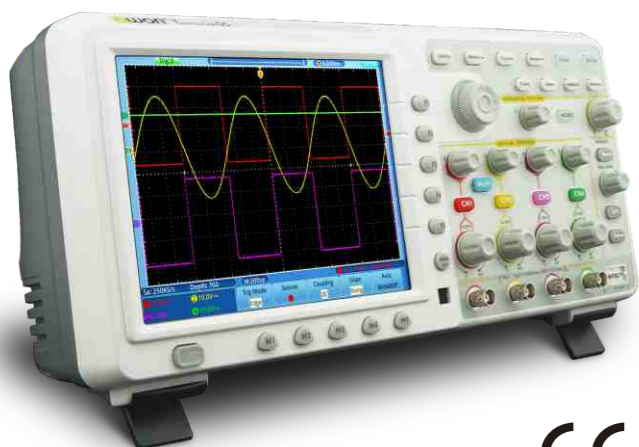


optional accessories:



mobile app accessible via scanning QR code

TOUCH TDS Series Touch Screen Digital Storage Oscilloscope



- + Max 200MHz bandwidth, up to 2GS/s realtime sample rate
- + 7.6M record length
- + 50,000 wfms/s waveform capture rate
- + waveform zooming (horizontal / vertical), and saving
- + FFT points (length, and resolution variable)
- + multi-window extension
- + 8 inch 800 x 600 pixels high resolution LCD
- + multi- communication interface : USB, VGA, and LAN
- + SCPI, and 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 10pF ± 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 | | | |

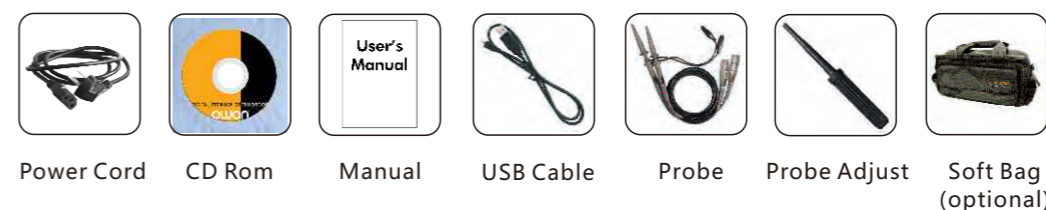
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+ Application

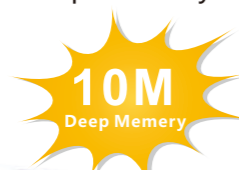
- electronic circuit debugging
- education and training
- circuit testing
- automobile maintenance and testing
- design and manufacture

+ 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
- + newly added function - PictBridge
- + *Optional BATTERY available*



+ Performance Specifications

| Model | SDS6062 | SDS7072 | SDS7102 | SDS8102 | SDS8202 | SDS8302 | SDS9302 |
|---|---|---------------------------------------|---------------------------------------|---------|---------|---------|---------|
| Bandwidth | 60MHz | 70MHz | 100MHz | 200MHz | 300MHz | | |
| Sample Rate | 500MS/s | 1GS/s | 2GS/s | 2.5GS/s | 3.2GS/s | | |
| Horizontal Scale (s/div) | 5ns/div - 100s/div, step by 1 - 2 - 5 | 2ns/div - 100s/div, step by 1 - 2 - 5 | 1ns/div - 100s/div, step by 1 - 2 - 5 | | | | |
| Rise Time | ≤5.8ns | ≤5ns | ≤3.5ns | ≤1.7ns | ≤1.17ns | | |
| Display | 8" color LCD, 800 x 600 pixels | | | | | | |
| Channel | 2 + 1 (external) | | | | | | |
| Record Length | 10M | | | | | | |
| Input Coupling | DC, AC, and GND | | | | | | |
| Input Impedance | 1MΩ ± 2%, in parallel with 10pF ± 5pF | | | | | | |
| Channel Isolation | 50MHz : 100 : 1, 10MHz : 40 : 1 | | | | | | |
| Max Input Voltage | 400V (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 | 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 | | | | | | |

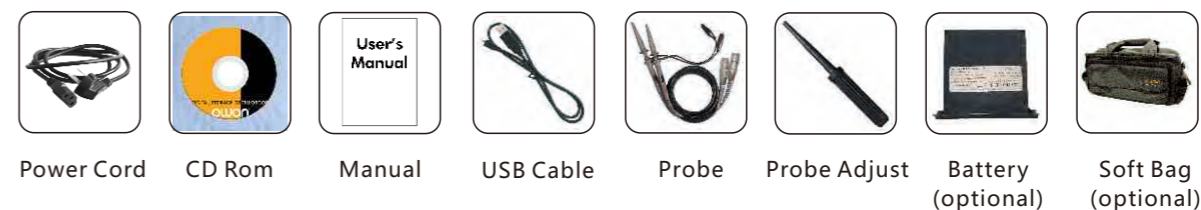
Specifications subject to change without prior notice.

+ Application

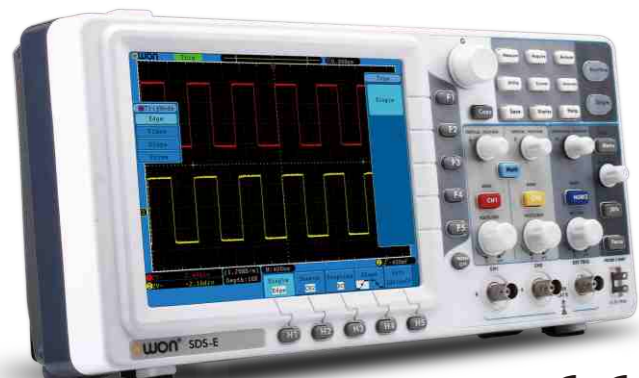
electronic circuit debugging circuit testing design and manufacture
education and training automobile maintenance and testing

+ 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 10pF ± 5pF | | 1MΩ ± 2%, in parallel with 15pF ± 3pF | | | |
| Channel Isolation | 50Hz : 100 : 1, 10MHz : 40 : 1 | | | | | |
| Max Input Voltage | 400V (DC + AC peak) | | | | | |
| DC Gain Accuracy | ±3% | | | | | |
| Record Length | 10K | | 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, | | | | | |
| 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 | | | | | |

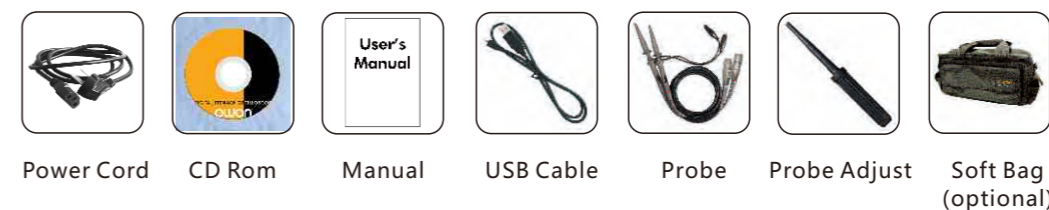
Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



MSO Series Mixed LA - Oscilloscope



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

Digital Storage Oscilloscope

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

Logic Analyzer

- + Bandwidth : 100MHz - 200MHz
- + Sample rate : max 2GS/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 - 2GS/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 | | | |

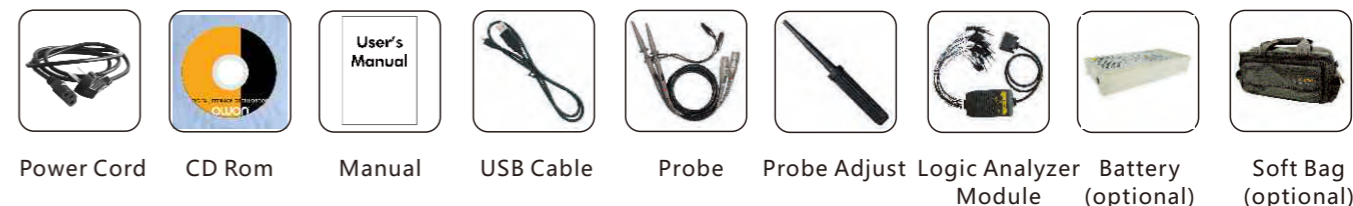
Specifications subject to change without prior notice.

+ 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 <small>NEW!</small> |
|-------------------------------|---|---------------------------------------|---------------------------------------|--------------------------------|
| 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 | 5ns/div - 100s/div, step by 1 - 2 - 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 <small>NEW!</small> |
|-------------------------|--------------------------|----------------|------------|--------------------------------|
| 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), 20A : ±(5% ± 3 digits) | | |
| Impedance | 400Ω : ±(1% ± 3 digits), 40KΩ - 4MΩ : ±(1% ± 1 digit), 40MΩ : ±(1.5% ± 3 digits) | | |
| Capacitance | 51.2nF - 100uF : ±(3% ± 3 digits) | | |

Specifications subject to change without prior notice.

+ Application

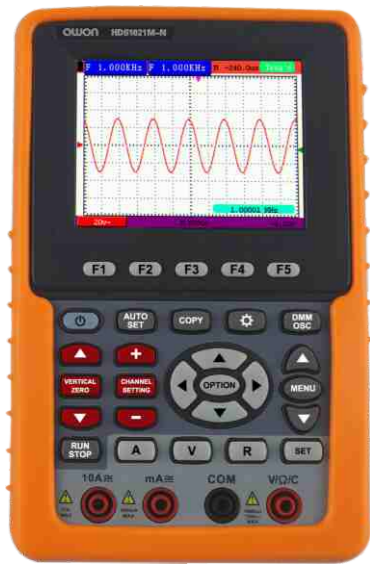
electronic circuit debugging circuit testing design and manufacture
education and training automobile maintenance and testing

+ Accessories

The accessories subject to final delivery.



HDS Series 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 | 1GS/s | |
| Horizontal Scale (s/div) | 5ns/div - 100s/div, step by 1 - 2.5 - 5 | | 5ns/div - 100s/div, step by 1 - 2 - 5 |
| Rise Time (at input, typical) | ≤ 17.5ns | ≤ 5.8ns | ≤ 3.5ns |
| Display | 3.7" 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 | 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 | | |
| Waveform Storage | 4 waveforms | | |
| 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), 20A : ±(5% ± 3 digits) | | |
| Impedance | 400Ω : ±(1% ± 3 digits), 40KΩ - 4MΩ : ±(1% ± 1 digit), 40MΩ : ±(1.5% ± 3 digits) | | |
| Capacitance | 51.2nF - 100uF : ±(3% ± 3 digits) | | |

Specifications subject to change without prior notice.

+ Application

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

+ Accessories

The accessories subject to final delivery.



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 |
| | Alternate | |
| 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

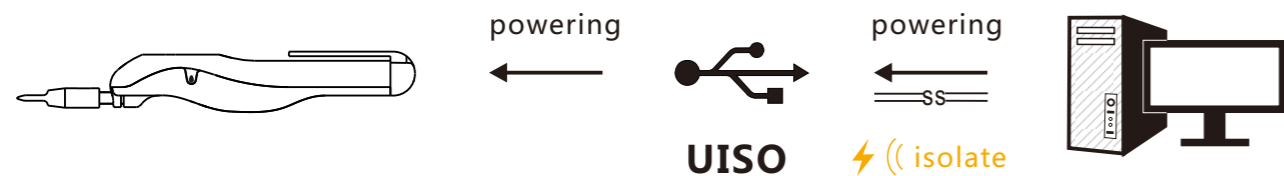
Special metal material made probe- tip assures durable lifetime.



| | |
|--|---|
| | 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 | |

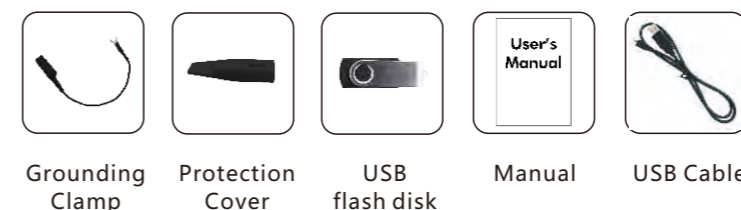
Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



VDS Series PC Oscilloscope



- + Up to 100MHz bandwidth, and max 1GS/s real-time sample rate
- + 2 / 4 channels
- + Max 10M record length
- + Friendly UI : FFT, or X-Y, and waveform 2 views displayed on the same screen
- + Multi-trigger option : edge, video, slope, pulse, and alternate
- + USB isolation - less signal inference, more PC protection
- + USB bus powering, and LAN remote control (optional)
- + Ultra-thin body design, easy portability
- + SCPI supported
- + LabVIEW supported (only in VDS3102, and VDS3104)



+ Performance Specifications

| Model | VDS1022I | VDS1022 | VDS2052 | VDS2062 | VDS2064 | VDS3102 | VDS3104 |
|---|--|---------|--------------------|-------------|-------------|---------------------------------------|---------|
| Bandwidth | 25MHz | | 50MHz | 60MHz | | 100MHz | |
| Channel | 2+1 (multi) | | | 4+1 (multi) | 2+1 (multi) | 4+1 (multi) | |
| Sample Rate | 100MS/s | | 250MS/s | 500MS/s | | 1GS/s | |
| Horizontal Scale (s/div) | 5ns/div - 100s/div, step by 1 - 2 - 5 | | | | | 2ns/div - 100s/div, step by 1 - 2 - 5 | |
| Rise Time | ≤14ns | | ≤5.8ns | | ≤3.5ns | | |
| Record Length | 5K | | 10M | 5M | 10M | 5M | |
| Input Coupling | DC, AC, 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 | VDS2052 | VDS2062 | VDS3102 | VDS2064 | VDS3104 |
|--------------------------------|---|--|------------------------|---------|---------------------|---------|---------|
| Vertical Sensitivity | 5mV/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/1A | | | | | | |
| Power Consumption | ≤1.5W | | | ≤5W | | | |
| Dimensions (W x H x D) | 170 x 120 x 18 (mm) | | | | 190 x 120 x 18 (mm) | | |
| Device Weight | 0.26 kg | | | | | 0.30 kg | |

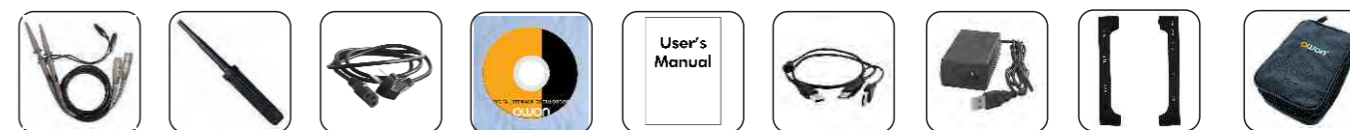
Specifications subject to change without prior notice.

+ 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 Series Dual-channel Arbitrary Waveform Generator



- + Advanced DDS technology, max 60MHz frequency output
- + Up to 250MS/s sample rate, and 1μHz frequency resolution
- + Vertical Resolution : 14 bits, up to 1M arb waveform length
- + Comprehensive waveform output : 5 basic waveforms, and 45 built-in arbitrary waveforms
- + Comprehensive modulation functions : AM, FM, PM, FSK, PWM, Sweep, and Burst
- + High-accuracy frequency counter integrated, supported range 100mHz - 200MHz
- + 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 <small>NEW!</small> | AG2062F <small>NEW!</small> |
|---------------------|---------|---------|--------|---------|-----------------------------|-----------------------------|
| Channel | dual | | | | | |
| Frequency Output | 10MHz | | 25MHz | | 50MHz | 60MHz |
| Sample Rate | 125MS/s | | | 250MS/s | | |
| Vertical Resolution | 14 bits | | | | | |

Waveform

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

Frequency (resolution 1μHz)

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

Amplitude

| | |
|----------------------------|--|
| Amplitude | 1m Vpp - 10 Vpp (50Ω), 1m Vpp - 20 Vpp (high impedance) |
| Resolution | 1m Vpp or 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 <small>NEW!</small> | AG2062F <small>NEW!</small> |
|-------|--------|--------|---------|---------|-----------------------------|-----------------------------|
|-------|--------|--------|---------|---------|-----------------------------|-----------------------------|

| | | | | | | |
|---------------------------|-----------------|--|--|-----------------|--|--|
| 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 / output, external trigger input / output, external reference clock input / output | | | | |
| Communication Interface | USB host, and USB device, LAN (surport remote control), RS232 (option) | | | | | |

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

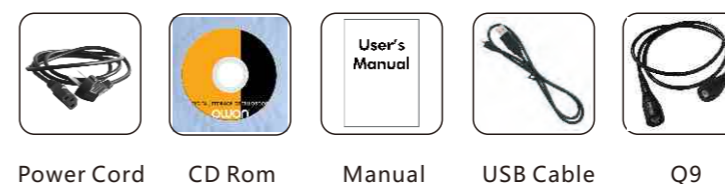
Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



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
- + could work with OWON SDS Series DSO smoothly

+ 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 (optional) | | | | |
| 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

design and debug circuit function test education and training

+ Accessories

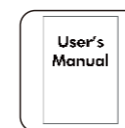
The accessories subject to final delivery.



Power Cord



CD Rom



Manual



USB Cable



Q9

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

+ 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 | 1μHz - 10MHz |
| 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 (optional) | | | | |
| Modulation Waveform | / | AM, FM, PM, FSK, Sweep, and Burst | / | AM, FM, PM, FSK, Sweep, and Burst |
| Modulation Frequency | / | 2mHz to 20.00KHz (FSK 2mHz - 100KHz) | / | 2mHz to 20.00KHz (FSK 2mHz - 100KHz) |
| 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 | | | |

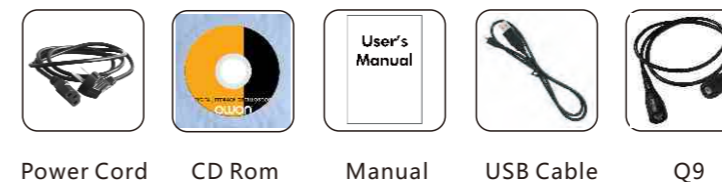
Specifications subject to change without prior notice.

+ Application

design and debug circuit function test education and training

+ Accessories

The accessories subject to final delivery.



Power Cord CD Rom Manual USB Cable Q9

DP Series Programmable DC Power Supply



[ODP3031]



[ODP3032]



- + ODP3032 : two independent controllable channels; ODP3031 : one controllable channel
- + Max output resolution : 1mV / 1mA
- + Low ripples / low noise : <300 μ Vrms / 2 mVpp
- + Up to 100 group timers
- + Up to 10 group preset system configurations
- + Over-voltage / Over-current protection
- + Auto-cooling system
- + 3.9 inch high resolution (480 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 | ODP3031 | | ODP3032 | | |
|-------------------------------------|---------|------------------------------------|--------------------|--|--------------------|
| | Channel | 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 | / |

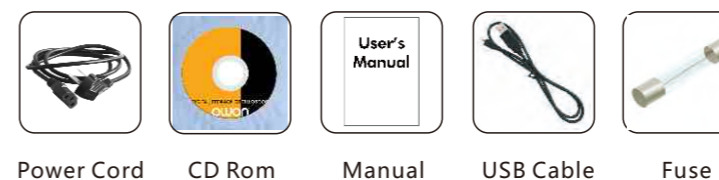
Specifications subject to change without prior notice.

+ 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 production automation test
- education / teaching experimentation

+ Accessories

The accessories subject to final delivery.



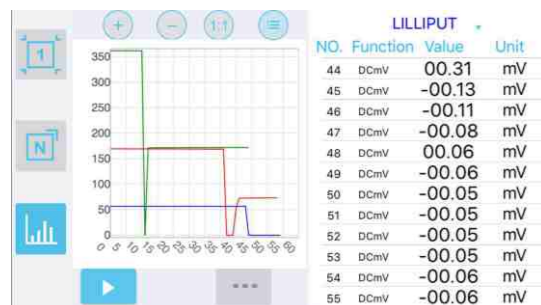
DM Series Bluetooth Digital Multimeter



- + 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 - count full scale reading
- + larger display, easier data-reading; simulated bar chart comes as an added option
- + offline recording function (only in B33+, B35+, and B35T+)
- + true RMS value available (only in B35T, and D35T)
- + Bluetooth 2.0 version - supports mobile device with Android 4.0 or above OS
- + 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 B35



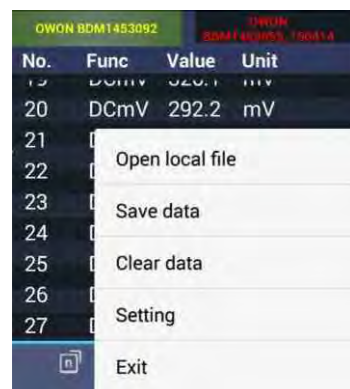
remote control supported

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



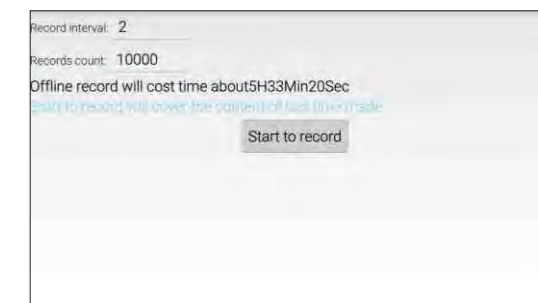
data- saving, recalling, and comparatively analyzing

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+ 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 | D35 | D35T | B35 | B35T | B35+ | B35T+ |
|--------------------------|---|---|-----|------|----------------|----------------------------------|
| Measurement Range | | | | | | |
| DC Voltage | mV | 60.00mV / 600.0mV | | | 0.01mV | |
| | V | 60.00mV / 600.0mV / 6.000V / 60.00V 600.0V / 1000V | | | 0.1mV 0.1V | ±(0.5%+2-digit) |
| 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 400.0µF / 4000µF | | | | 0.1nF 0.1µF | ±(2.5%+3-digit) ±(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 | 40Hz - 400Hz | | | | | |
| Shift Rate | 3 times / s | | | | | |
| Simulated Chart | 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 | D33 | B33 | B33+ |
|-------------|---|-----|-------------------|
| | Measurement Range | | Resolution |
| DC Voltage | 400.0mV / 4.000V / 40.00V / 400.0V | | 0.1mV |
| AC Voltage | 4.000V / 40.00V | | 1mV |
| DC Current | 400.0μA / 4000μA | | 0.1μA |
| AC Current | 400.0μA / 4000μA | | 0.1μA |
| Resistance | 400.0Ω / 4.000kΩ / 40.00kΩ / 400.0kΩ / 4.000MΩ | | 0.1Ω |
| Capacitance | 40.00nF / 400.0nF / 4.000μF / 40.00μF | | 0.01nF |
| 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% |
| Temperature | -50°C - 400°C | | 1°C |
| Display | 3999 count | | |
| Frequency | 40Hz - 400Hz | | |
| Shift Rate | 3 times / s | | |

| | | | |
|----------------------------|--------------------|-----------------------|--|
| Auto-scale | √ | Max / Min Value | √ |
| Offline Recording Function | available in B33+ | Bluetooth Module | available in B33, and B33+ |
| Record Period | 168 hours (7 days) | LCD Backlight | √ |
| Record Length | 10,000 points | Input Protection | √ |
| Diode Test | √ | Input Impedance | 10MΩ |
| Simulated Chart | √ | 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 | | | |
| DC Current | Range | AC 4A | AC 40A | AC 200A |
| | Accuracy | ±2.0%rdg±5 digit | | ±3.0%rdg±5 digit |
| DC Current | Range | DC 4A | DC 40A | DC 200A |
| | Accuracy | ±1.5%rdg±5 digit | | ±3.0%rdg±5 digit |
| DC Current | Range | DC 4A | DC 40A | DC 200A |
| | 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

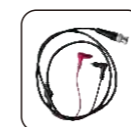


| Model | CP-07+ | |
|-----------------------|--------------------|------------------|
| Test Range | 400mA - 4A | |
| Resolution | 0.1mA | |
| Bandwidth | DC - 1MHz (±3dB) | |
| Jaw Size | 5mm (Max) | |
| Auto Zero at Power on | √ | |
| Power Supply | 9V 6F22 Battery | |
| Operating Temperature | 0°C to 50°C | |
| Operating Humidity | 15% to 70% RH | |
| DC Current | Range | DCA 400mA |
| | Accuracy | ±1.5%rdg±5 digit |
| AC Current | Range | ACA 400mA |
| | Accuracy | ±2.0%rdg±5 digit |
| AC Current | Range | ACA 400mA |
| | Sensitivity | 1mV/1mA |
| 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

General Probe

| | | | | |
|---|-------------------|---|---|---|
|  | 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 |

Certificates



MSO CE



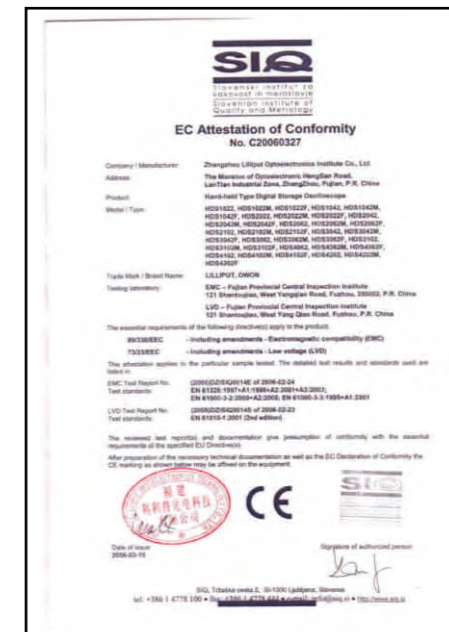
HDS-N CE



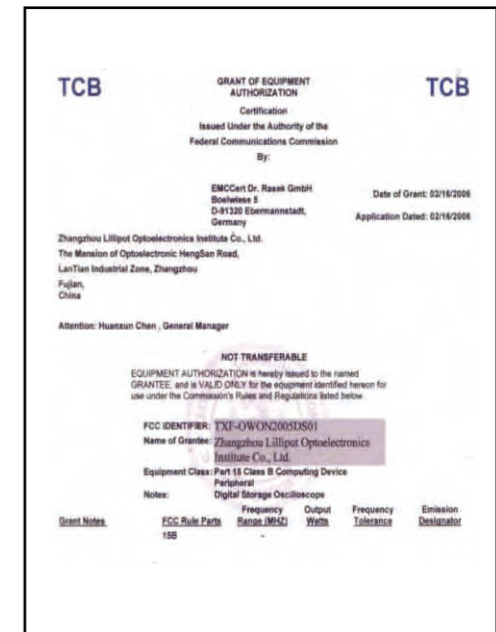
SDS CE



ISO9001



HDS CE



FCC