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## CATALOGUE

Xiamen Lilliput Technology Co.,Ltd



### LILLIPUT®

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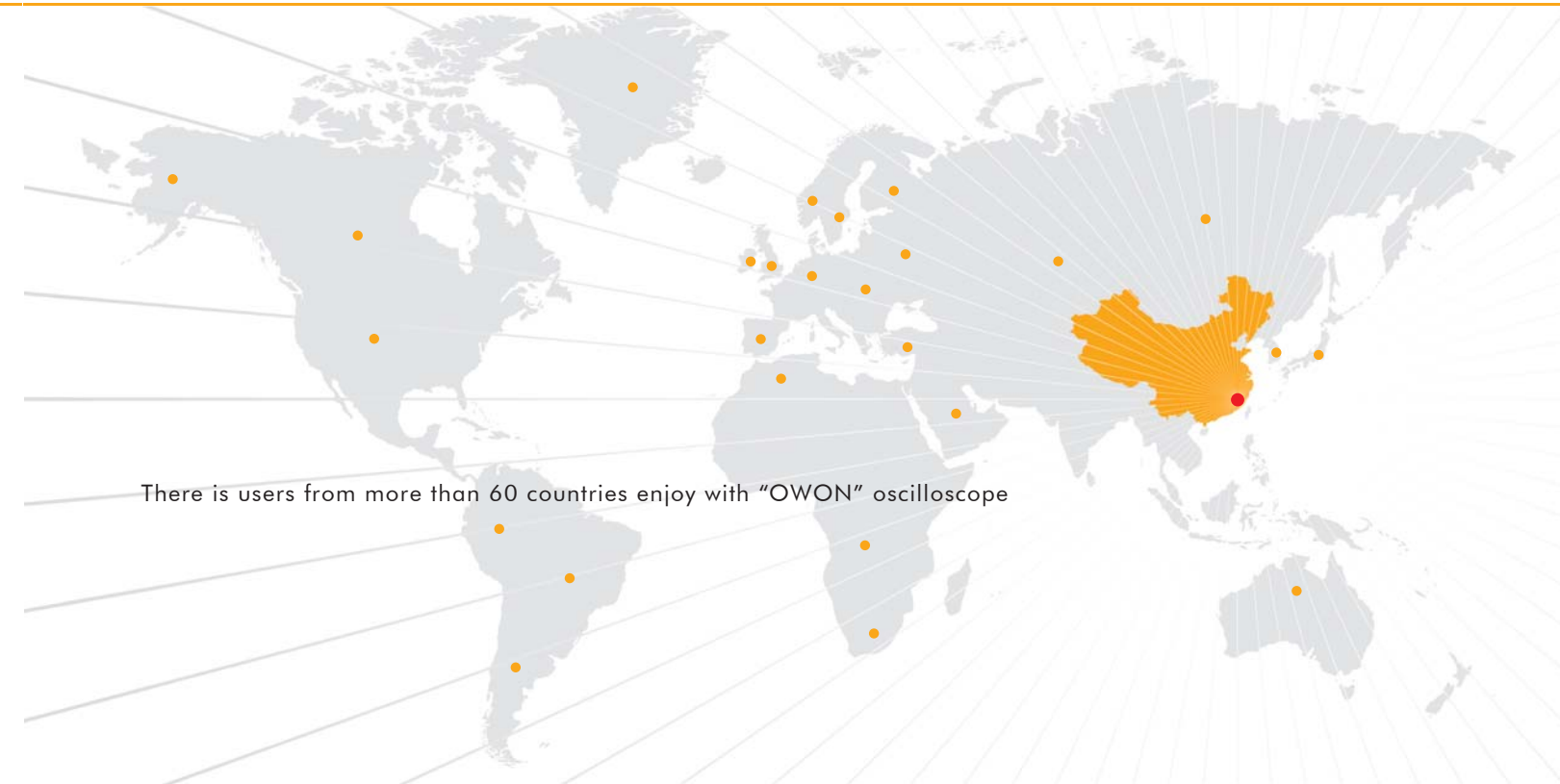
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### LILLIPUT®

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### **OWON --- We are on the road to approach you....**

- 2002 DSO project started.
- Dec 2005 "OWON" born for DSO project formally with the new company established as Xiamen Lilliput Technology Co., Ltd.
- Mar 2006 OWON launched the first color display handheld DSO of HDS1022M successfully.
- Sep 2006 OWON launched first 7.8 inch big color display of PDS5022 for education and institute field.
- Nov 2006 OWON launched the 60M color display handheld DSO of HDS2062M.
- Jun 2007 OWON launched the upgrade version for 20M handheld DSO as HDS1022M-N.
- Nov 2007 OWON launched the 2 in one instrument which combines DSO and LA as MSO5022.
- Apr 2008 OWON launched 100M bench DSO as PDS7102.



## R&D Psychology



### “Meet your best needs”—Offer what you need inside instead for show

“Some companies enjoy in establishing luxury showing hall to reveal the surprising function and specification for the pre-production sample during tryout period. We don’t act like that because we focus more in overcome all possible problems during mass production.” “OWON” chief project engineer said seriously and strictly.

“OWON” marketing dept processed a mass of markets survey and visits during the R&D preparing phase to ensure coming products 100% base on customer-orientation. “OWON” insist on taking customer true needs as the guidance and drop down some flaring functions.

Therefore “OWON” full range products target on different needs: HDS low-end series for personal electronics hobbyists; HDS high-end series for advanced electric engineers; PDS series match the needs of electric assembly and education application and repairing industries etc. The appearance of PDS series obtain hot applause and to be regard by basic mathematics system and repair detection purchase people as an excellent substitute for traditional analogy oscilloscope.

You can choose that one suit you from the whole series and it is exactly the core R&D psychology of “Meet your best needs.”

## Aspire the future

### Treat partner with utmost sincerity

In future we need more continuous supports from every partner. A true cooperation we are talking includes professional service like products maintenance, technique training, price policy, and marketing as we as distributes our products.

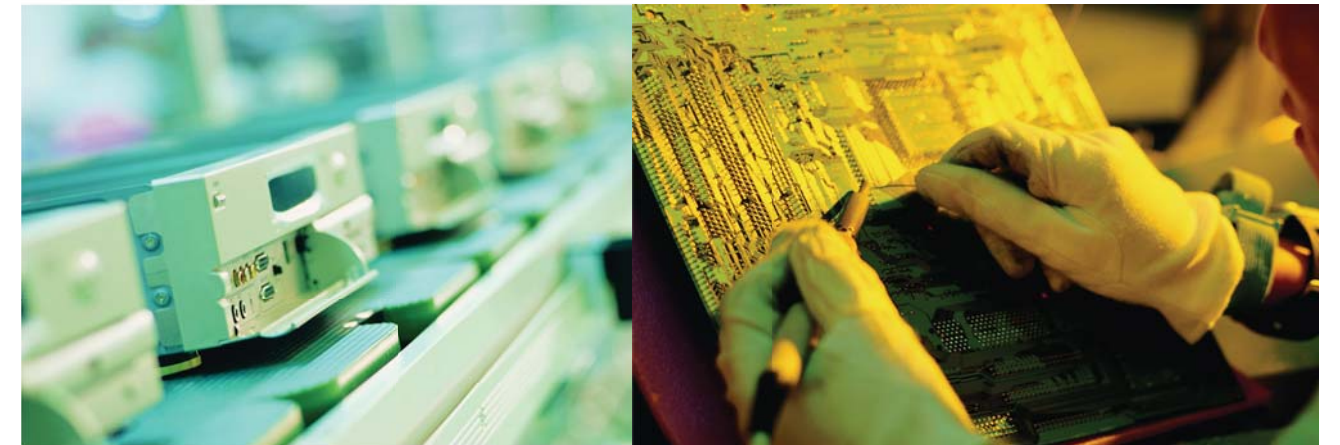
“OWON” would like to share the future with our partners sincerely.

## ABOUT OWON

OWON brand was born and developed by Fujian Lilliput Optoelectronics Technology and Xiamen Lilliput Technology Co., Ltd. OWON oscilloscope approved by various safety certificate as CE、FCC、CMC etc and guarantee every units are reliable and enable to work on-site with high efficiency and safety. OWON products now cover various series products of HDS for hand-held digital storage oscilloscope, PDS for bench digital storage oscilloscope, MSO for 2 in 1 combo (digital storage oscilloscope and logic analyzer).

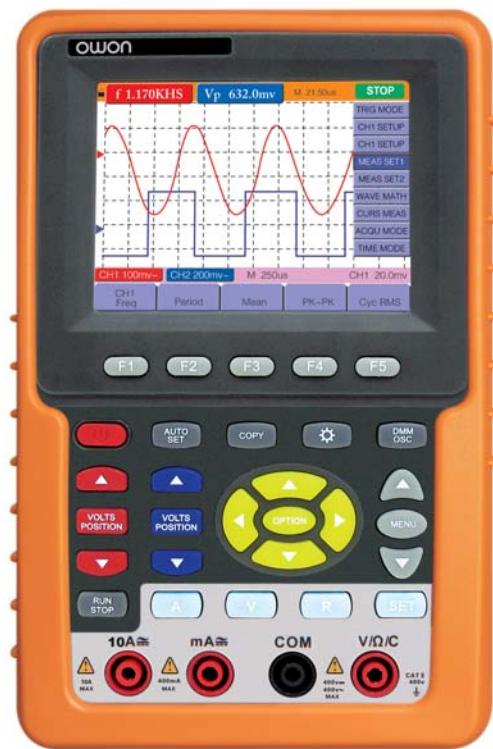
For domestic market OWON already set up a network which link southern, eastern, northern of China. OWON products serviced users from more than 60 countries.

Innovation is the core and soul of engineer design and listening is the power to push our growth. OWON aim to promote our reputation in the quality standard of stability, safety and friendly-operation and to be one of the leader in T&M world.



## New Handheld Series Digital Storage Oscilloscope

NEW



**Application:**  
Design and Debug  
Circuit function test  
Education and technical training

### Main Features:

- 20MHz~60MHz Bandwidth
- up to 250MS/s real time sample rate
- 2 in 1 (Multimeter function support)
- Dual Input Channels
- Advanced Trigger Functions
- Adjustable Trigger sensitivity
- USB Storage/Auto measurement
- Replaceable Li-ion Battery Back-up
- 3.8" TFT panel to read clearly even under hard light

### Oscilloscope Specification

Model Name	HDS1022M-N	HDS2062M-N
Bandwidth	20MHz	60MHz
Sample Rate (Real time)	100MS/s	250 MS/s
Rise time	≤17.5ns	≤5.8ns
Display	3.8 Inch color display with TFT panel (320 x240 pixels, 4096 colors)	
Channel	Dual	
Record length	Max. 6000 points on each channel	
GND reference	Oscilloscope and Multimeter independence	
Horizontal scale(s/div)	5ns/div~5s/div	
Interval( T)accuracy(full bandwidth)	Single: ±(1 interval time+100ppm×reading+0.6ns) Average>16: ±(1 interval time +100ppm×reading+0.4ns)	
Vertical Sensitivity	5mV/div~5V/div (at input)	
DC Gain Accuracy	±5%	
Vertical resolution(A/D)	8 bits resolution (2CH simultaneously)	
Max. Input Voltage	400V(PK-PK) CAT	
Trigger Type	Edge, Video	
Trigger Mode	Auto, Normal, Single	
Sampling Mode	Normal, Peak detect, Average	
Waveform Measurement	V and T between cursors; PK-PK, Average, RMS, Frequency, Cycle.	

Waveform storage	4 waveforms
USB storage	Support
Automatic Measurement	PK-PK, Average, RMS, Frequency, Cycle.
Waveform math	+,-,×,÷, Invert
Digital Multimeter Testing	Voltage, Current, Resistance, Capacitance, Diode, Continuity

### Multimeter specifications

Full scale reading	3 <sup>3</sup> / <sub>4</sub> digits (Max.4000-count)
Input Impedance	10 MΩ
Max input Voltage	AC: 400V, DC:400V
Max input Current	AC:10A, DC:10A

### General specifications

Interface	USB,RS232 ports
Power	Supply:100V~240V AC,50/60Hz DC input: 8.5VDC, 1500mA
Dimension	180mm x 113mm x 40mm
Weight	645g

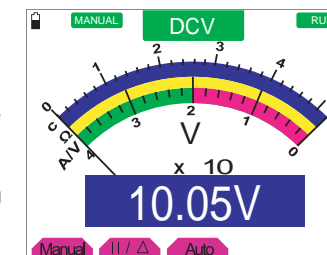
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### 2 in 1 T&M instrument

OWON HDS-N series instrument combine digital oscilloscope and multi-meter.

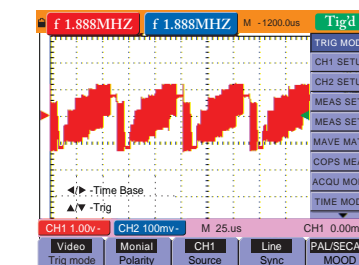
### High precision Multimeter function (3 <sup>3</sup>/<sub>4</sub> digits)

The HDS-N series handheld digital oscilloscope is equipped with Multimeter functions. It includes voltage, current, resistance, capacitance, diode test, continuity test. High resolution and precision design guarantee the accurate testing result. The user can choose the automatic or manual measurement according to different testing conditions.



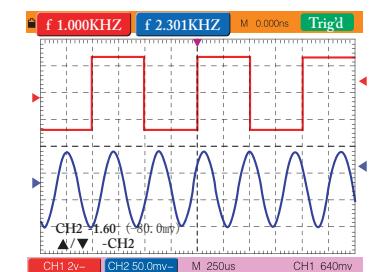
### Video Trigger

The HDS-N series handheld digital oscilloscope includes NTSC, PAL or SECAM standard video triggers which help to improve the efficiency obviously.



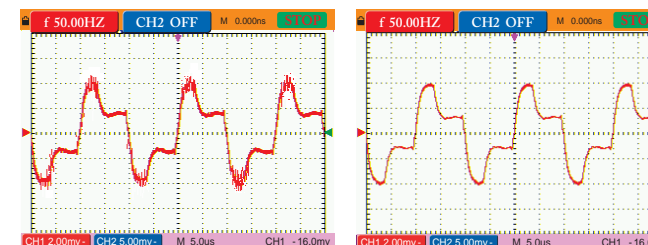
### Alternate trigger function

OWON HDS-N series added the alternate trigger function. You can test two different groups of signal simultaneously and help to improve work efficiency greatly.



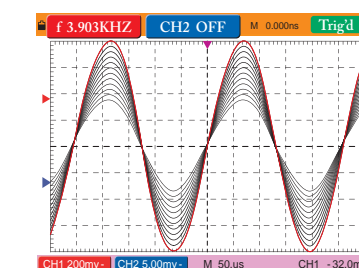
### Average Acquisition Mode

This function reduce random noisy in the signal effectively and quite convenient for the engineer to analyze the waveform by. Below figure is the waveform which achieved after averaging which to show how this function reduces the effect from noisy directly.



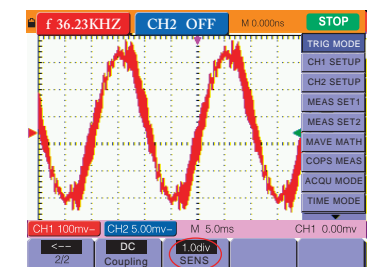
### Observation for instantaneous signal

Digital trace mode is a function of analog oscilloscope recurs to the digital one. The function can show the waveform value which base on the time. It will help the user to find the irregular waveform and analyze the complicated dynamic signal. All of our products have the function to refresh the signal and therefore, can observe the instantaneous signal. The function is very useful to make adjustment for the tested system.



### Adjustable trigger sensitivity

OWON HDS-N series oscilloscope added Adjustable function on the trigger sensitivity, therefore to distinguish the superimposed signal on the trigger signal and prevent from error trigger.



### USB Storage

This function could save on-site abnormal waveforms and data which can't be analyzed in time, back them to the laboratory for later analysis. It also can save the data into other formats for further development.



# HDS Series Digital Storage Oscilloscope



**Application:**  
Design and Debug  
Circuit function test  
Education and technical training

## Main Features:

- 20MHz~60MHz Bandwidth
- up to 250MS/s real time sample rate
- 2 in 1 (Multimeter function support)
- Dual Input Channels
- Advanced Trigger Functions
- Automatic Measurement Support
- Replaceable Li-ion Battery Back-up
- LCD back-light adjustment Support
- 3.8" TFT panel guarantee to read clearly even under hard light

## Oscilloscope Specification

Model Name	HDS1022M	HDS2062M
Bandwidth	20MHz	60MHz
Sample Rate ( Real time )	100MS/s	250 MS/s
Rise time	≤17.5ns	≤5.8ns
Display	3.8 Inch color display with TFT panel (320 x240 pixels, 4096 colors)	
Channel	Dual	
Record length	Max. 6000 points on each channel	
GND reference	Oscilloscope and Multimeter independence	
Horizontal scale(s/div)	5ns/div~5s/div	
Interval( T)accuracy(full bandwidth)	Single: ±(1 interval time+100ppm×reading+0.6ns) Average>16: ±(1 interval time +100ppm×reading+0.4ns)	
Vertical Sensitivity	5mV/div~5V/div (at input)	
DC Gain Accuracy	±5%	
Vertical resolution(A/D)	8 bits resolution (2CH simultaneously)	
Max. Input Voltage	400V(PK-PK) CAT	
Trigger Type	Edge, Video	
Trigger Mode	Auto, Normal, Single	
Sampling Mode	Normal, Peak detect, Average	
Waveform Measurement	V and T between cursors; PK-PK, Average, RMS, Frequency, Cycle.	

Waveform storage	4 waveforms
Automatic Measurement	PK-PK, Average, RMS, Frequency, Cycle.
Waveform math	+, -, ×, ÷, Invert
Digital Multimeter Testing	Voltage, Current, Resistance, Capacitance, Diode, Continuity

## Multimeter specifications

Full scale reading	3 $\frac{3}{4}$ digits (Max.4000-count)
Input Impedance	10 MΩ
Max input Voltage	AC: 400V, DC:400V
Max input Current	AC:20A, DC:20A

## General specifications

Interface	USB,RS232 ports
Power	Supply:100V~240V AC,50/60Hz DC input: 8.5VDC, 1500mA
Dimension	180mm x 113mm x 40mm
Weight	645g

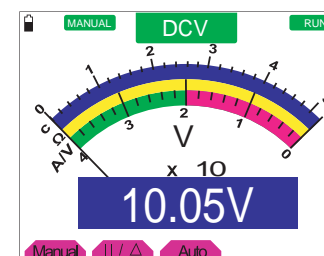
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## 2 in 1 T&M instrument

OWON HDS series instrument combine digital oscilloscope and multi-meter.

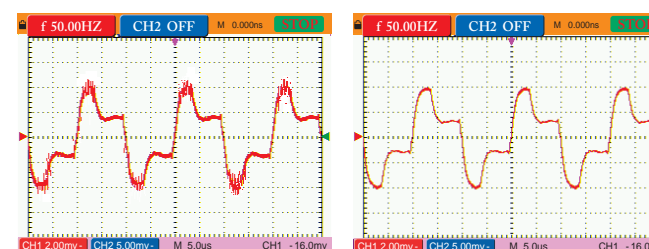
## High precision Multimeter function (3 $\frac{3}{4}$ digits)

The HDS series handheld digital oscilloscope is equipped with Multimeter functions. It includes voltage, current, resistance, capacitance, diode test, continuity test. High resolution and precision design guarantee the accurate testing result. The user can choose the automatic or manual measurement according to different testing conditions.



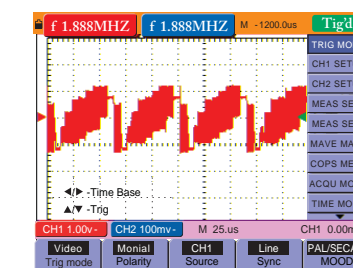
## Average Acquisition Mode

This function reduce random noisy in the signal effectively and quite convenient for the engineer to analyze the waveform by. Below figure is the waveform which achieved after averaging which to show how this function reduces the effect from noisy



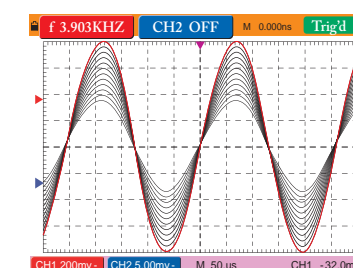
## Video Trigger

The HDS series handheld digital oscilloscope includes NTSC, PAL or SECAM standard video triggers which help to improve the efficiency obviously.



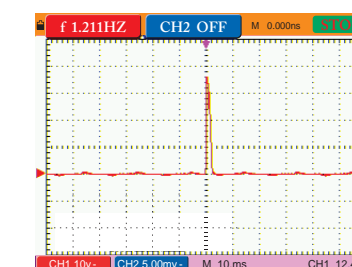
## Observation for instantaneous signal

Digital trace mode is a function of analog oscilloscope recurs to the digital one. The function can show the waveform value which base on the time. It will help the user to find the irregular waveform and analyze the complicated dynamic signal. All of our products have the function to refresh the signal and therefore, can observe the instantaneous signal. The function is very useful to make adjustment for the tested system.



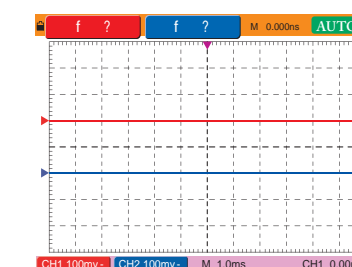
## Capture the pulse signals

The HDS series handheld digital oscilloscope provides single trigger function; it can capture the pulse signals once you set the instrument to trigger on a positive or negative pulse of a specified width.

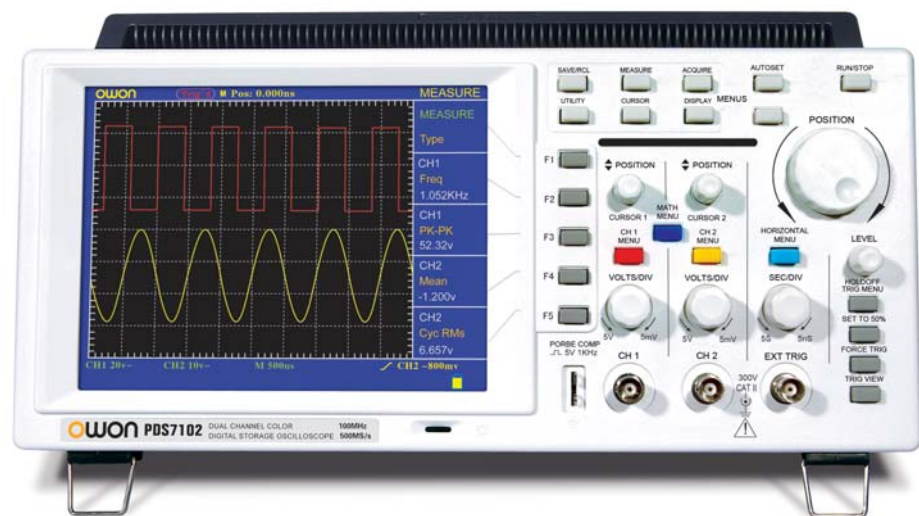


## Easy to distinguish the signal in any case

3.8" reflective TFT panel enables you to read the waveform clearly even single waveform under hard light. It's quite useful for observation and analysis.



# PDS Digital Storage Oscilloscope Series



## Main Features:

- 25 MHz~100 MHz bandwidth
- Up to 500MS/s real time sample rate
- Max.6000 points record length for each channel
- Dual channels plus External trigger
- Waveform mathematic function
- 7.8/8.0 inch LCD color display for large view
- PC communication through the USB or RS232 port for real-time data transmission
- Advanced trigger: Edge trigger, Video trigger and Alternate trigger

## Application:

- Electronic circuit debugging
- Circuit testing
- Design and manufacture
- Education and training
- Automobile maintenance and testing

1GS/s SAMPLE RATE WILL COME

## Oscilloscope Specification

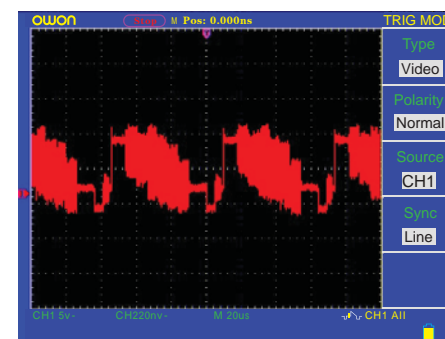
Model	PDS5022	PDS6042	PDS6062	PDS7102
Bandwidth	25MHz	40MHz	60MHz	100MHz
Sample rate (real time)	100MS/s	250MS/s	250MS/s	500 MS/s
Rising time	≤14ns	≤8.75ns	≤5.8ns	≤3.5ns
Display	7.8 inch color LCD, 256 colors for STN screen /65536 colors for TFT screen, 640×480 pixels			
Channel	Dual channels+ external trigger			
Sampling mode	Normal、Peak detect and Average			
Record length	Max.5000 points for each channel			
Sampling range	10S/s~100MS/s	10S/s~250MS/s		1S/s~500MS/s
Horizontal scale(s/div)	5ns/div~100s/div step by 1-2.5-5		5ns/div~100s/div step by 1-2-5	
Vertical sensitivity	5mV ~10V/div (at BNC input)			
DC Gain accuracy	±5%			±3%
Max. input voltage	300V(PK-PK)(DC + AC PK-PK)		400V(PK-PK) (DC + AC PK-PK)	
Input impedance	1MΩ±2% in parallel with 20pF±5pF			1MΩ±2% in parallel with 15pF±3pF
Input coupling	AC、DC			AC、DC、GND
Trigger type	Edge、Video			Edge、Video、Alternate

Model	PDS5022	PDS6042	PDS6062	PDS7102	
Vertical resolution(A/D)	8 bits (2CH simultaneously)				
Sampling rate / relay time accuracy	±100ppm				
Interval( T)accuracy(DC~100MHz)	Single: ±(1 interval time+ 100ppm×reading+0.6ns)				
	Average>16: ±(1 interval time + 100ppm×reading+0.4ns)				
Waveform storage	4 waveforms				
Automatic measurement	Peak-to-Peak, Average, Root mean square, Frequency, and Cycle				
Waveform math	+、-、Invert				
Lissajou's figure	Bandwidth	25MHz	40MHz	60MHz	100MHz
	Phase difference	±3 degrees			
Interface	USB, RS232				
Power supply	100-240 VACRMS, 50Hz, CAT II				
Dimension	350mm(L)x157mm(H)x103mm(W)				
Weight	1KG			1.75KG	

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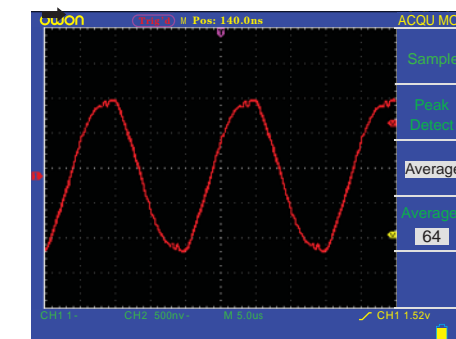
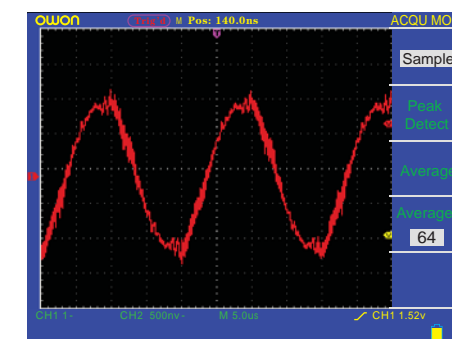
## Advanced trigger

With advance trigger, we could capture the waveform quickly and improve the efficiency greatly. The trigger functions include: Edge trigger, Video trigger and Alternate trigger.



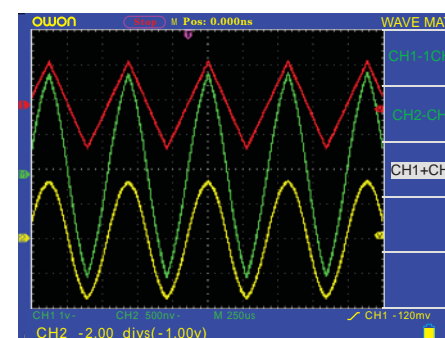
## Averaging

This function reduces random or noisy in the signal effectively and quite convenient for the engineer to analyze the waveform by. Below figure is the waveform which achieved after averaging which to show how this function reduces the effect from noisy directly.



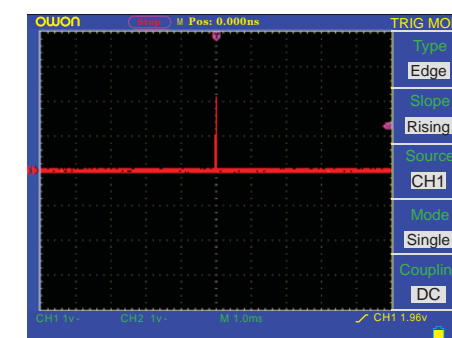
## Waveform math

Multi-math operations help to meet the test requirement of lab engineers.



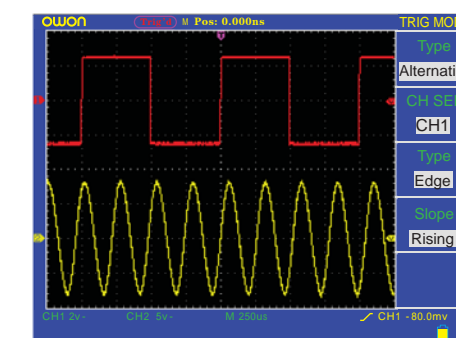
## Single trigger

To test pulse or single signal. After the oscilloscope detects a trigger, it completes acquisition and locks the waveform.



## Alternate trigger

To input two different signals simultaneously.



**Mixed LA-Oscilloscope**

**NEW**



**Application:**  
 Design and Debug  
 Circuit function test  
 Identified signals logic information  
 Mixed signal circuit test  
 Education & Training

**Main Features:**

- Support both DSO and LA
- 25MHz~100MHz Bandwidth, up to 1GS/s real time sample rate
- 16 optional logic input channels
- Max 6000 points record length for each channel
- Dual channels + External trigger + Logic Analyzer
- 7.8 or 8.0 inch LCD color display for large view
- Support USB data transmission, display by real-time
- Advanced trigger functions: Edge trigger, Bus trigger, Pattern trigger, Sequential queue trigger, Distributed queue trigger and Data width trigger

**Oscilloscope Specification**

Model Name	MSO5022	MSO7102
Bandwidth	25MHz	100MHz
Sample Rate ( real time )	100MS/s	1GS/s
Rise time	≤14ns	≤3.5ns
Display	7.8 or 8.0 inch color LCD, 256 colors, STN/TFT screen, 640×480 pixels	
Channels	Dual channels + external trigger + Logic Analyzer	
Horizontal scale(s/div)	5ns/div-100s/div (step by 1-2.5-5)	5ns/div-100s/div (step by 1-2-5)
Interval( T)accuracy(full bandwidth)	Single: ±(1 interval time+100ppm×reading+0.6ns) Average>16: ±(1 interval time +100ppm×reading+0.4ns)	
Vertical Sensitivity	5mV/div~10V/div (at input)	
DC Gain Accuracy	±3%	
Vertical resolution(A/D)	8 bits resolution (2CH simultaneously)	
Max. Input Voltage	300V(DC + AC Peak) (1MΩ input impedance, Probe Attenuation rate 10:1)	400V(DC + AC Peak)
Input impedance	1MΩ±2% in parallel with 20pF±5pF	1MΩ±2% in parallel with 15pF±3pF
Input coupling	DC,AC	DC,AC,GND

Model Name	MSO5022	MSO7102
Trigger mode	Edge、Video、Alternate、Mains supply	
Sampling Mode	Normal, Peak detect, Average	
Record length	Max. 5000 points on each channel	
Waveform storage	4 waveforms	
Automatic Measurement	PK-PK, Average, RMS, Frequency, Cycle.	
Waveform math	+, -, Invert	
Power supply	100-240VACRMS,50Hz,CAT	
Battery	7.4V, 8000mAh	
Dimension	370mm×180mm×120mm	
Weight	2.1KG	

**Logic Analyzer specification**

Sample rate (real time)	20S/s-200MS/s
Bandwidth	33MHz-166MHz
Channels	16 optional
Record length	4M/channel
Input impedance	1MΩ±2%
Trigger mode	Edge trigger, Bus trigger, Pattern trigger, Sequenital queue trigger, Data width trigger
Trigger position setting	Pre-trigger, mid-trigger, Post-trigger
Threshold Voltage	0~4V(4 settings)
Input Signal Range	0~5V
Data search	Support
Data system	Binary system, Decimal system, Hex
Digital filter	0,1,2 optional
Storage setting	Support 10 settings
USB storage	Support

OWON continues to improve products and reserves the rights to change specification without notice. Latest specification kindly refer to our website.

**Advantages:**

**Digital Storage Oscilloscope:**  
 25MHz~100MHz Bandwidth,  
 up to 1GS/s real time sample rate  
 Dual Channels  
 Max. Storage 5K points each channel  
 Adjustable trigger sensitivity  
 Advanced trigger functions: Edge trigger, Video trigger,  
 Alternate trigger and Mains supply trigger

**Logic Analyzer:**  
 20S/s~200MS/s Sample rate  
 32/16 optional logic input channels  
 Max.4M record length for each channel  
 Threshold voltage setting (0~4V)  
 4 BUS setting  
 Random trigger position setting  
 Digital filter function  
 Flexible data searching methods  
 Various advanced trigger functions  
 Support USB, RS232 data transmission and U-storage

The current electronic products become more complicated as the number of digital circuits and universal serial bus increase. It results in the edge become vague to choose a suitable testing instrument. The testing signal often mixed by analog and digital signal, so the engineer would like to get an instrument could test both of analog and digital signals. To meet their demand, our MSO series was launched.

MSO series combine digital storage oscilloscope & logic analyzer functions, the performance is remarkable, the functions are powerful. It enables user to analyze the analog signals and digital signals on the same instrument to save your cost.



# MSO Mixed LA-Oscilloscope

## 2 in 1 T&M instrument

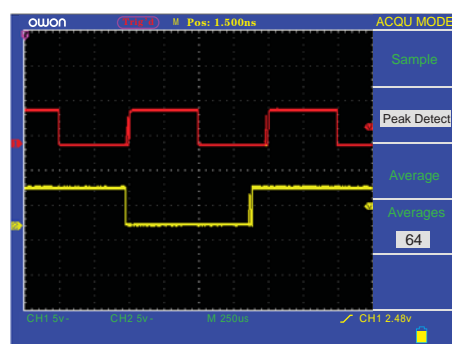
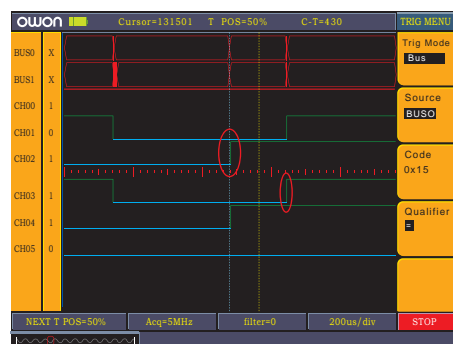
As an effective tool of analog circuit analysis, Digital storage oscilloscope is familiar to most of engineers. OWON Mixed-Signal Oscilloscope is different from other test instruments. The customers can obtain both high capability oscilloscope and Logical analyzer in one portable instrument. By integrating the analog and digital, we can show, trigger and analyze two types of signals in one instrument.

## Powerful test and measuring function

OWON MSO series have perfect test and powerful analyze function, which includes Multi-trigger function, Bus setting, Threshold Level adjustment setting, Data searching, Digital filter, Save and recall trigger setting, Auto bus measuring, Cursor measuring, Pre-trigger setting, Code Setting, USB storage and so on. The application cover basic digital circuit such as TTL and CMOS, through these functions, it can correct the digital products fast, and save the time for R&D development.

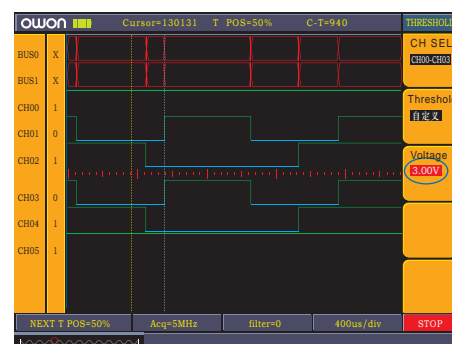
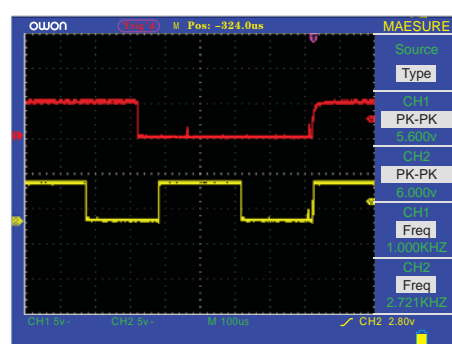
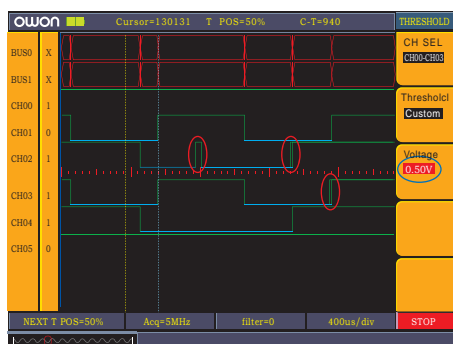
## Capture and analyze the burr signals

The time sequence waveform generated in the digital circuit always interfered by unexpected burrs. In this case, the logical analyzer can do nothing about the shape and measurement of the burr but only analyze high and low level. Therefore, the engineer needs an oscilloscope as an assistance to test the burr and take measurement to solve the problem accordingly.



## Complementary function to improve the measurement veracity

The waveform of Logical analyzer is got from comparison between test signal and Threshold Level. Incorrect Threshold level will lead to confusion for the whole testing time sequence. OWON MSO series can help you understand time sequence information exactly and set Threshold Level correctly.



The time sequence figure when the threshold level set to 0.50V

The waveform tested by oscilloscope

The time sequence figure when the threshold level set to 3.00V

## Intuitionistic operation panel

The operation panel of MSO series still use OWON consistent appearance which is familiar to many users, by this way, the users can save much time to know and operate our product.

## Application

- (1) Electronic circuit, communication, optoelectronics, etc.
- (2) R&D design and debug in the digital circuit.
- (3) Education and training in the digital circuit and signal.

## Widespread education tool

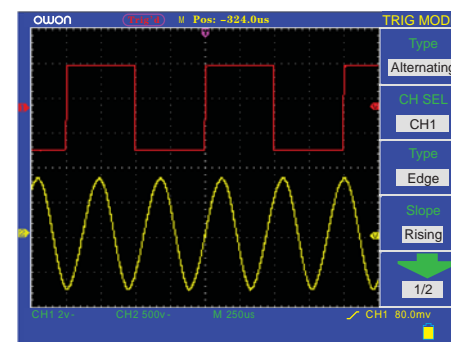
With our competitive price, MSO series can be widely used in many schools as a useful instrument for the education of digital circuit, just like our widespread oscilloscopes.

## Mainly occasions for Logical analyze

- (1) To test multi-signal at the same time
- (2) To test digital signal same as hardware test
- (3) To trigger the high and low level models on several wires simultaneously and examine the results.
- (4) To trace the execution of software in the system timely.

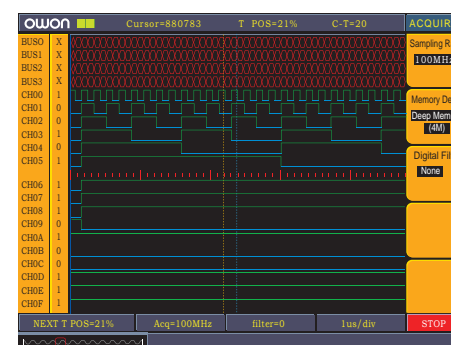
## Digital real-time sampling technology

With the advanced digital sampling technology enable to debug and detect signals for two channels simultaneously and efficiently. Capture unrepeatable signal with high frequency such as burrs or exceptional edge completely therefore engineers are able to control any signal changes.



## High precise sampling technology

MSO series adopts high precise sampling technology, collecting and testing time sequence graphics which input from 16 channels simultaneously to make every detail changes of graphics are under engineer's control.

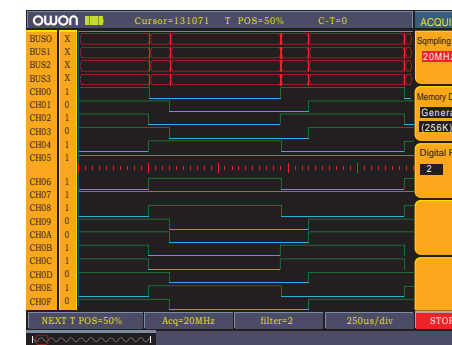


## Perfect trigger functions

The strong trigger functions enable to detect the time sequence reliability and accuracy by any methods. As a tool of logic analysis, how trigger function perform will decide the practicability for this instrument. The trigger functions include Edge trigger, Bus trigger, Pattern trigger, Sequential queue trigger, Distributed queue trigger and Data width trigger.

## Digital filter

The random of noise or glitch in the digital circuit can effect the analysis of the whole waveform or change the time sequence result. Our digital filter function is able to inhibit the burrs effectively when the signals change on the bus, and make the waveform clear to be analyzed.

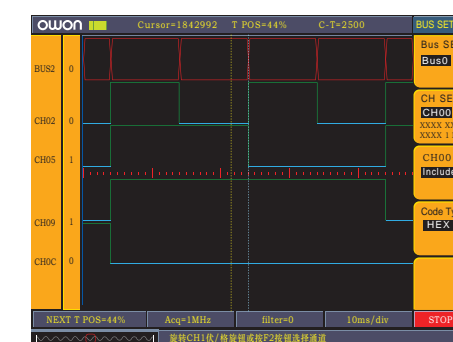


## Flexible setting for trigger position

The unexpected event or bug in the digital circuit often happen at certain moment, the analysis should base on the event changes before and after that moment. So it is a very important part for an engineer to observe the time sequence changes before and after that trigger point. The trigger point for MSO series is adjustable which support the engineer to analyze the specific data queue timely and effectively.

## Bus settings function-analyze the time sequence quickly and effectively

To analyze logical time sequence, we need signals collected from many channels, the result is there are too many channels and data are being shown on the screen, which is very hard to make analysis. For example, for those often used buses such as address bus or data bus are composed of multi-digit data, if we can single out part of them as one independent bus, the number of channels are reduced and is convenient for us to observe the change of this bus. Actually, it has been done by MSO series.



## Threshold setting

As a standard for high and low level of digital signal, whether the threshold setting is reasonable can determine the veracity of the whole measurement. Our MSO series supply threshold set which ranges as 0~4V and many sets of independent threshold settings to meet the strict testing condition.

## Search data quickly

Trigger position or the analysis for a certain pattern are the keys in debugging logical circuit, and how to lock the trigger position quickly or search the expected bus pattern are the foundation of improving debugging efficiency. Our MSO series supplies the search modes such as trigger position, bus pattern, state set, etc to locate the time sequence exactly.

## Storage setting

For a complicated logical circuit, it is essential to set different triggers to analyze time sequence, and the same trigger set usually be used repeatedly. If we reset the trigger condition, much time and energy will cost. That's not problem for our MSO series, because we could save the trigger set, the repeatable trigger is available only to recall the save one.



## ► Accessories specification



### Oscilloscope Probe

Part No	P6060	P6100	P3100	P4060	P5000
Bandwidth	60M	100M	100M	60M	100M
Attenuation	10: 1	10: 1	100: 1	100: 1	100: 1
Voltage	600V	600V	2000V	2000V	4000V
Length	120cm				
Max. hook length	7.5mm				

Secure handle and adjustable test hook  
For HDS, HDS-N, PDS, MSO series oscilloscope



### Multimeter leads

Part No : YTEK2.737.001  
Color: red & black  
Diameter of line: 3.0mm  
Jacketed connector for security  
Voltage: 1500V  
Length: 90cm  
For HDS & HDS-N series oscilloscope  
Passed SGS test & CE



### Logic Analyzer module

Part No : OL-16  
50P Logic Analyzer module  
CH00~CH0F, GND Test clips  
Input impedance: 1MΩ//20pF  
Input voltage: 0~5V  
Max tolerated voltage: ±20V  
For MSO series oscilloscope



### PDS Series Battery

Part No : PDS-BATTERY  
Li-ion battery  
7.4V, 8000mA  
Power backup 4 hours  
For PDS & MSO series oscilloscope



### HDS series soft bag

Part No: H-LB  
For HDS & HDS-N series oscilloscope



### RS-232 data cable

Part No : P-RS232  
RS-232 standard connection cable  
Length: 135cm  
For PDS & MSO series oscilloscope



### Test clips

Part No : OL-16A  
Input impedance: 1MΩ//20pF  
Input voltage: 0~5V  
Max tolerated voltage: ±20V  
For MSO series oscilloscope



### Extension module for large current measurement

Part No : O-A20  
Suit HDS series oscilloscope  
Max input current: 20A  
For HDS & HDS-N series oscilloscope



### PDS series bag

Part No: P-LB  
Size : 37cm×160cm×125cm  
For PDS series oscilloscope



### RS-232 data cable

Part No : H-RS232  
RS-232 standard connection cable  
Length: 130cm  
For HDS & HDS-N series oscilloscope



### Power Adapter

Part No : FJ-SW1210X  
Length: 180cm  
Input voltage: ~100-240VAC 50/60Hz  
Output voltage: 8.5V, 1500mA  
For HDS & HDS-N series oscilloscope



### USB data cable

Part No : P-USB  
USB standard connection cable  
Length: 70cm  
For PDS, MSO series oscilloscope

Part No : H-USB  
USB standard connection cable  
Length: 70cm  
For HDS & HDS-N series oscilloscope

# ► Certificates

# ► Fair show



HDS-N CE



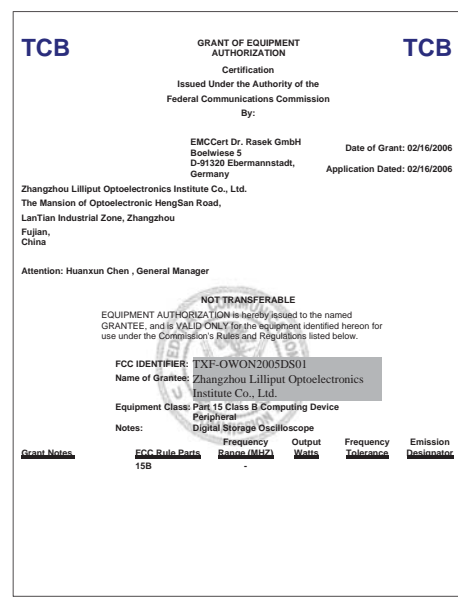
PDS CE



MSO CE



HDS CE



FCC



AUTHORIZED CERTIFICATE



Germany



Korea



Hongkong, China



Peking, China



Shenzhen, China



Shanghai, China

## Education Partners:

- Harvard University Cambridge, MA, USA
- Università degli Studi di Milano
- The University of Iowa
- The University of Western Ontario
- Technische Universität Hamburg-Harburg