

# owon

Meet your best need



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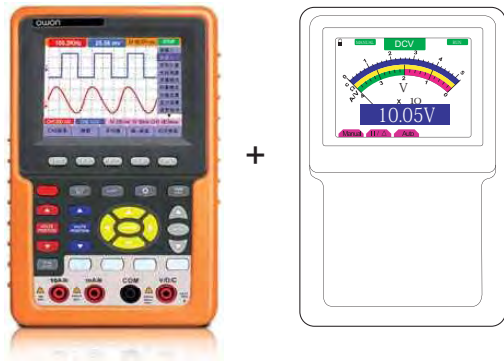
## HDS-N & HDS Series



## Feature & Benefits

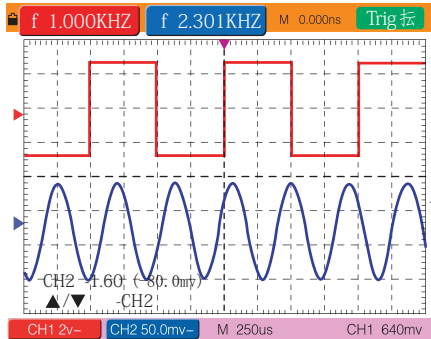
### 2 in 1 T&M instrument

owon Handheld Series instrument combine digital oscilloscope and multi-meter.



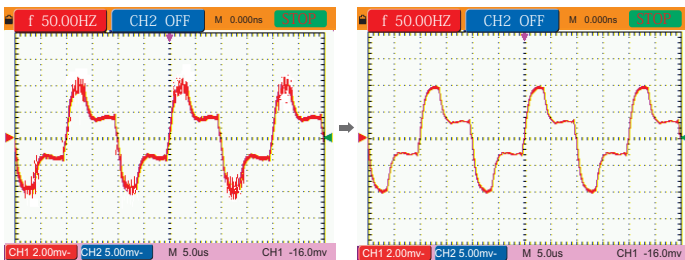
### Alternate trigger function

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.



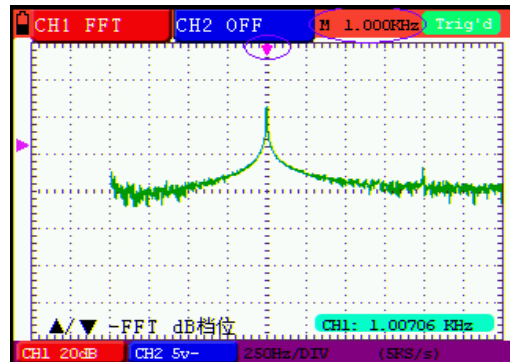
### Alternate trigger function

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.



### FFT Function

OWON HDS-N Series will be able to use FFT as a standard function to make it convenience for user.



### The Ultra-protable Oscilloscope

3.8 inch transfective LCD display and readable under sunlight. Host built-in battery without external power supply to ensure continuous operation under 4 hours.

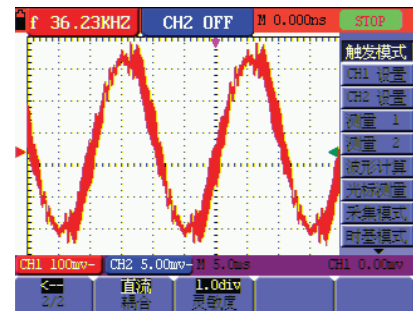


Mobile test scene ( 1 )

Mobile test scene(2)

### Adjustable trigger sensitivity

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







Creative design of Silica gel key offer easy touching and friendly operation  
 Creative design of separate shortcut key to simplify operation steps

1. 2 in 1(DSO+Multimeter)
2. Autoscale
3. FFT
4. 20 automatic measurements
5. Bandwidth: 20MHz-100MHz
6. Support USB for data transmission to PC
7. Replaceable li-ion battery back up (6 hours)
8. USB flash disk storage
9. Waveform record & replay(HDS2062M-N, HDS3102M-N)

Dimension: 180mm(L)×15mm(H)×40mm(W)  
 Weight: 645g



## Performance characteristics

Model	HDS1022M-N	HDS2062M-N	HDS3102M-N
Bandwidth	20MHz	60MHz	100MHz
Sample rate(Real time)	100MS/s	250MS/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	
Rise time (at input, typical)	≤ 17.5ns	≤ 5.8ns	≤ 3.5ns
Display	3.7 inch color display with TFT panel(640x480 pixels, 65535 colors)		
Channels	Dual		
Input impedance	1MΩ±2% , in parallel with 20pF±5pF	1MΩ±2% , in parallel with 15pF±5pF	
Probe attenuation factor	1X, 10X, 100X, 1000X		
Max. input voltage	400V (PK-PK) (DC + AC PK-PK, 1MΩ input impedance, Probe attenuation 10:1) CATII		
Record length	Max.6000 points on each channel		
Interpolation	(sin x)/x		
Input coupling	DC, AC, GND		
Acquisition modes	Sample, Peak Detect and Average		
Vertical resolution (A/D)	8 bit (2 channels simultaneously )		
Vertical sensitivity	5mV/div~5V/div(at input)		
DC gain accuracy	±3%		

## Performance characteristics

Model	HDS1022M-N	HDS2062M-N	HDS3102M-N <b>HOT!</b>
DC accuracy(Average)	Average>16:±(5% reading+0.05div) for $\Delta V$		
Trigger type	Edge, Video, Alternate		
Trigger mode	Auto, Normal, Single		
Trigger level	±6 divisions from screen center		
Automatic measurement	Vpp, Vavg, RMS, Frequency, Period, Vmax, Vmin, Vtop, Vbase, Width, Overshoot, Pre-shoot, Rise time, Fall time, +Width, -Width, +Duty, -Duty, Delay A→B <sub>f</sub> , Delay A→B <sub>r</sub>		
Waveform math	+, -, ×, ÷, FFT		
Waveform storage	4 waveforms		
Lissajou's figure	Bandwidth	20MHz	60MHz 100MHz
	Phase difference	±3 degrees	
Communication interface	USB		
Cymometer	Unavailable	Available	
Power supply	100V-240V AC, 50/60Hz		
Li-ion battery	7.4V, 3500mAh		

## Multimeter Specifications

Full scale reading	3 $\frac{3}{4}$ digits (Max.4000-count)	Diode	0V-1.5V
Input Impedance	10M $\Omega$	On/Off measurement	<50(±30) beeping
Capacitance	51.2nF-100uF:±(3% ±3digit)		
Voltage	VDC:400mV,4V, 400V: ±(1±1digit) Max.input:DC 1000V, VAC:4V,40V,400V:±(1±3digit) Frequency:40Hz-400Hz, Max:input:AC 750V(virtual value)		
Current	DCA:40mA, 400mA:±(1.5% ±1digit) 10A:±(3%± 3digit) DAA:40mA±(1.5%±3digit) 400mA:±(2±1digit) 10A:±(3%±3digit)		
Impedance	400 $\Omega$ :±(1%±3digit),4K $\Omega$ ~10M $\Omega$ (±1±1digit)		

OWON continues to improve products and reserves the rights to change specifications without advance notice. For latest ones, please refer to our website

## Application

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

## Accessories

The receipt of accessories should be taken as final.



Probe



Multimeter lead



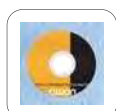
Adapter



Power line



5V 1KHz output



CD-Rom



Small capacitance module



Metal case



Probe adjust



Manual



Soft bag(optional)



USB



### Main Features:

1. 2 in 1(DSO+Multimeter)
2. Autoscale
3. 20 automatic measurements
4. Bandwidth: 20MHz-60MHz
5. Support USB for data transmission to PC
6. Replaceable li-ion battery back up (6 hours)

Weight: 645g



### Performance characteristics

Model	HDS1021M <b>HOT!</b>	HDS1022M	HDS2062M
Bandwidth	20MHz	20MHz	60MHz
Sample rate(Real time)	100MS/s	100MS/s	250MS/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
Channels	Single	Dual	
Display	3.5"color display with TFT panel (320x240 pixels)	3.7"color display with TFT panel(320x240 pixels)	
Input impedance	1MΩ±2% , in parallel with 18pF±5pF		1MΩ±2% , in parallel with 20pF±5pF
Probe attenuation factor	1X, 10X, 100X, 1000X		
Max. input voltage	400V (PK-PK) (DC + AC PK-PK, 1MΩ)input impedance, Probe attenuation 10:1) CATII		
Record length	Max.6000 points on each channel		
Interpolation	(sin x)/x		
Input coupling	DC, AC, GND	DC, AC	
Acquisition modes	Sample, Peak Detect and Average		
Vertical resolution (A/D)	8 bit		
Vertical sensitivity	5mV/div ~ 5V/div(at input)		
DC gain accuracy	±3%	±3%	

## Performance characteristics

Model	HDS1021M <b>HOT!</b>	HDS1022M	HDS2062M
DC accuracy(Average)	Average>16:±(3% reading+0.05div) for $\Delta V$	Average>16:±(5% reading+0.05div) for $\Delta V$	
Trigger type	Edge, Video		
Trigger mode	Auto, Normal, Single		
Trigger level	±3divisions from screen center		
Automatic measurement	Vpp, Vavg, RMS, Frequency, Period, Vmax, Vmin, Vtop, Vbase, Width, Overshoot, Pre-shoot, Rise time, Fall time, +Width, -Width, +Duty, -Duty, Delay A→B, Delay A→B		
Waveform math	Unavailable	+, -, ×, ÷	
Waveform storage	4 waveforms		
Lissajou's figure	Bandwidth	Unavailable	20MHz 60MHz
	Phase difference	Unavailable	±3degrees
Communication interface	USB		
Cymometer	Available	Unavailable	
Power supply	100V-240V AC, 50/60Hz		
Li-ion battery	7.4V, 3500mAh		

## Multimeter Specifications

Full scale reading	$3\frac{3}{4}$ digits (Max.4000-count)	Diode	0V-1.5V
Input Impedance	10M $\Omega$	On/Off measurement	<50(±30) beeping
Capacitance	51.2nF-100uF:±(3%±3 digit)		
Voltage	VDC:400mV,4V, 400V: ±(1±1digit) Max.input:DC 1000V, VAC:4V,40V,400V:±(1±3digit) Frequency:40Hz-400Hz, Max.input:AC 750V(virtual value)		
Current	DCA:40mA, 400mA:±(1.5%±1 digit) 20A:±(3%±3 digit) DAA:40mA±(1.5%±3digit) 400mA:±(2±1 digit) 20A:±(3%±3digit)		
Impedance	400 $\Omega$ :±(1%±3digit), 4K $\Omega$ ~10M $\Omega$ (±1±1digit)		

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Adapter



Power line



Current extend module



Small capacitance module



Soft bag



CD-Rom



Manual



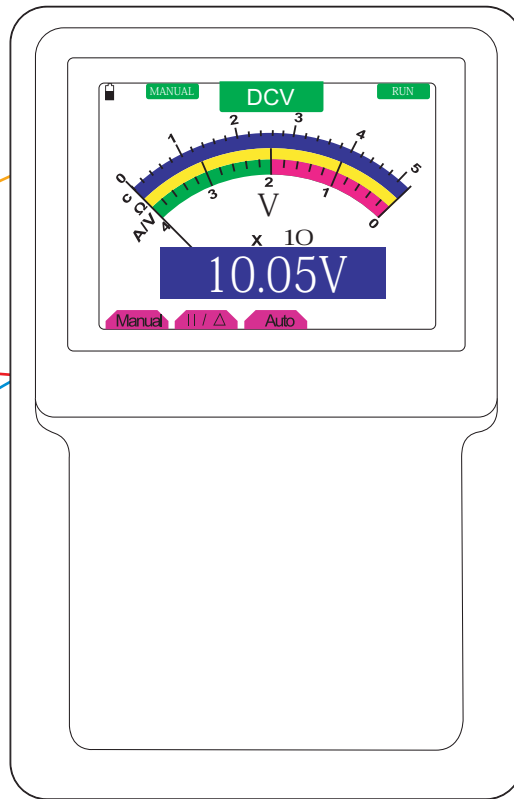
Probe adjust



USB



Metal case(optional)



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