

# 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 (PK - PK) (DC + AC, PK - PK, 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	+, -, *, /, FFT, invert	
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 <sup>3</sup> / <sub>4</sub> digits (max 4000 count)	Diode	0V - 1.5V
Input Impedance	10 MΩ	On / Off Test	<50 (± 30) beeping
Voltage	VDC : 400mV, 4V, 400V : ±(1% ± 1 digit); max input : DC 400V 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
- design and manufacture
- automobile maintenance and testing

## + Accessories

The accessories subject to final delivery.

