

Handheld Multifunctional Oscilloscope

MS200/MS300/MS500 Series

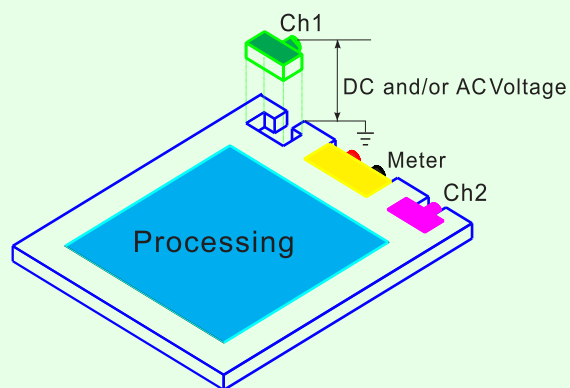


- 5.7 inch TFT LCD touch screen, 640*480 high resolution
- 70MHz~200MHz selectable bandwidth, up to 190,000wfms/s capture rate
- 1GS/s real time sample rate, 240Kpts memory depth
- 3 Operation modes: Touch, Button, Scroll wheel
- Optional electronically isolated-inputs channels
- Integrate the functions of oscilloscope, multi-meter and recorder in one unit
- Up to 4~5H Li-ion battery persistence working time
- Support Serial bus trigger, types: UART/RS232/RS422/RS485, LIN, CAN, SPI, I2C, ARINC429, MIL-STD-1553B
- Support Serial bus decode, types: UART/RS232/RS422/RS485, LIN, CAN, SPI, I2C, ARINC429, MIL-STD-1553B
- Support Video trigger, types: 625/PAL, SECAM, 525/NTSC, 720P, 1080I, 1080P
- Support I/O port: USB Host, USB Device

Overview



◇ This series of handheld oscilloscope fit comfortably in one hand, It's an ideal choice in the field on electrical measurement , test and maintenance tasks.

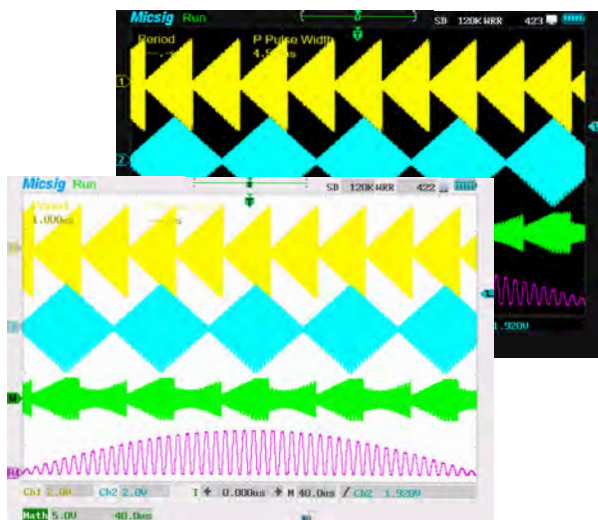


All isolated inputs allows independent floating measurements with each input.

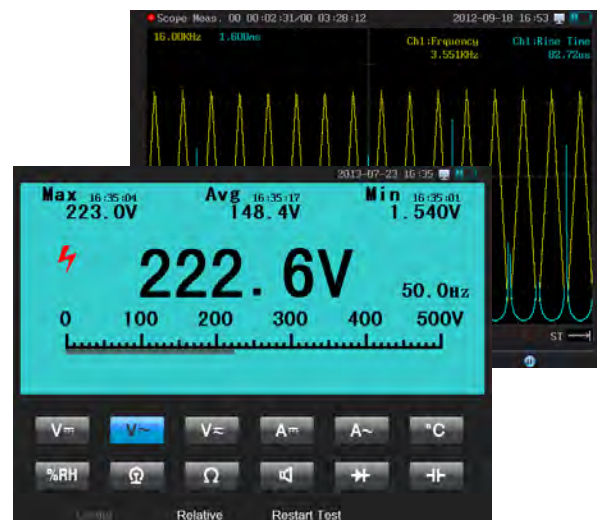


The functions of scopesuite include updating, real time control, measurement, storage, dynamic display, record, data analysis

Feature



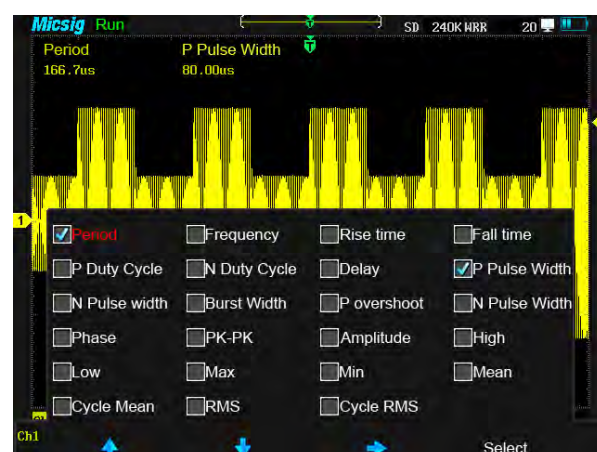
Indoor /Outdoor display mode



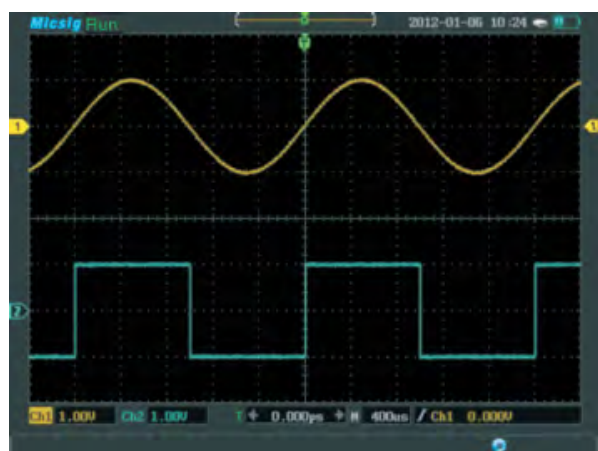
Multi-meter and recorder



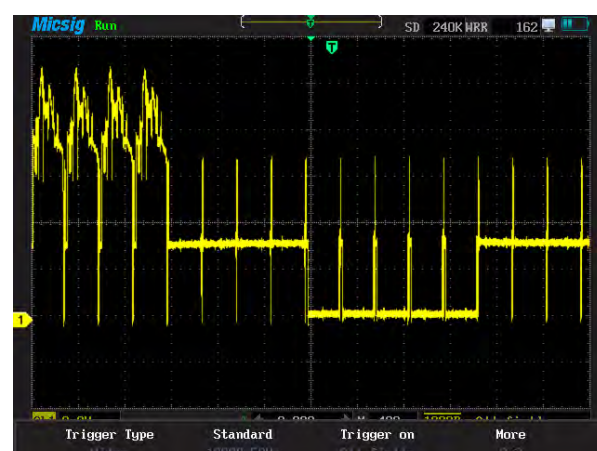
Users can choose 4 reference waveforms for comparison and analyze



31 types auto measurement, you can choose any four ones at one time just touch the marquee



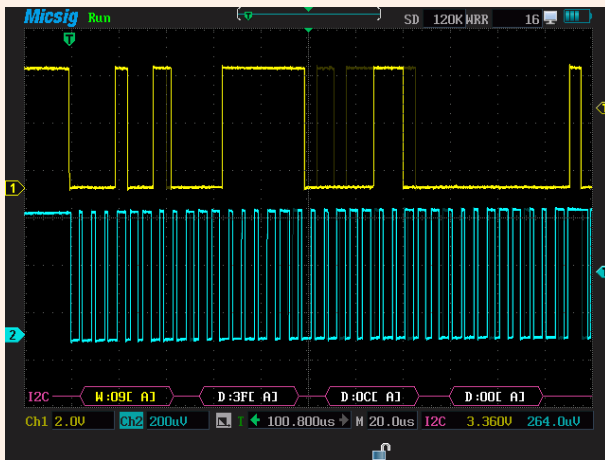
Connect to USB storage device to record waveforms dynamically



Support various video triggers
Types: 625/PAL, SECAM, 525/NTSC, 720P, 1080I, 1080P

Feature

Serial bus trigger and decode



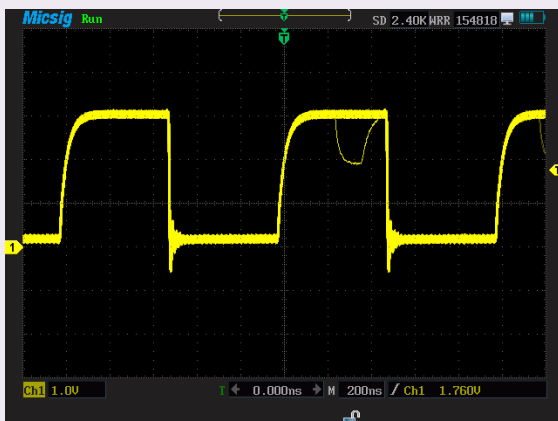
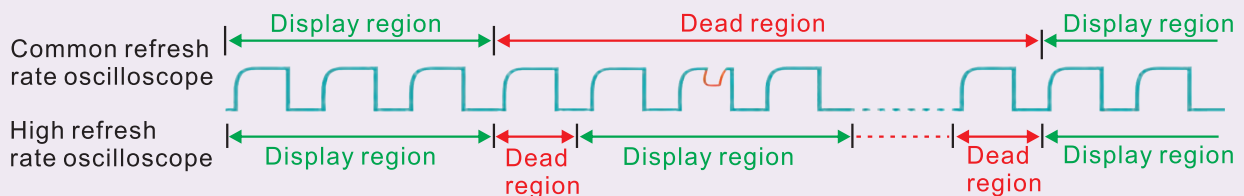
I2C serial bus decoding graphic mode

I2C										2012-09-18 15:44		
Time (ns)	Addr	Data	Ack	Trig	ReSet							
0.64	50R	2B 2C 2D 2E 2F 30 31 32 33 34 35	X	Yes	Yes							
14.21	09W	3F 36 00		Yes								
0.13	09W	3F		Yes								
0.13	09R	36 37	X	Yes								
0.13	50W	00 00		Yes								
0.64	50R	38 39 3A 3B 3C 3D 3E 3F 40 41 42	X	Yes	Yes							
14.21	09W	3F 43 00		Yes								
0.13	09W	3F		Yes								
0.13	09R	43 44	X	Yes								
0.13	50W	00 00		Yes								
0.64	50R	5F 60 61 62 63 64 65 66 67 68 69	X	Yes	Yes							
14.21	09W	3F 6A 00		Yes								
0.13	09W	3F		Yes								
0.13	09R	6A 6B	X	Yes								
0.26	50W	00 00		Yes								
0.64	50R	6C 6D 6E 6F 70 71 72 73 74 75 76	X	Yes	Yes							
14.21	09W	3F 77 00		Yes								
0.13	09W	3F		Yes								
0.13	09R	77 78	X	Yes								
0.13	50W	00 00		Yes								
0.64	50R	79 7A 7B 7C 7D 7E 7F 80 81 82 83	X	Yes	Yes							

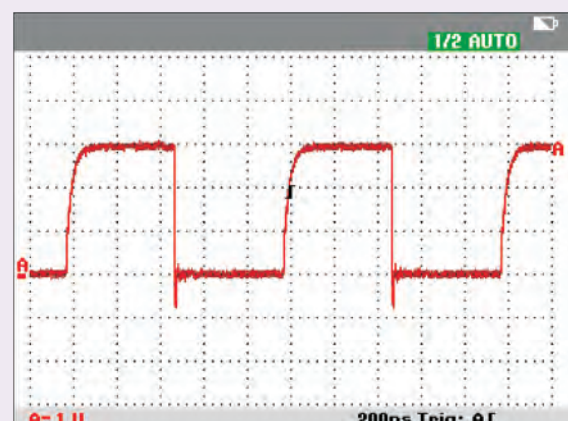
I2C serial bus decoding text mode

Waveform and data can be got in graphic mode: Address, ID, data, Calibration which makes up the frame are classified in text mode, and frame type and mistake can be satisfied, which can help users to debug and analyze the serial bus easier. What's more, the waveform and data can be transferred to a PC for your further analyze by a flash device

Up to 190,000 wfm/s capture rate



High refresh rate oscilloscope











Common refresh rate oscilloscope

Capture rate means how many waveforms acquisition per seconds your scope can acquire, process and display. Oscilloscope 'dead time' is the time it takes for scope to process and then display an acquired waveform before re-arming it's triggering for the next acquisition. The dead time of traditional oscilloscope is far more than 'display time', which results the signal occurred during dead time can't be captured. High capture rate product reduces dead time so that the abnormal signal could be caught fast and accurately.

Specification

Series	MS200 Series				MS300 Series		MS500 Series	
Model	MS207T	MS210T	MS215T	MS220T	MS310IT	MS320IT	MS510S	MS520S
Bandwidth	70MHz	100MHz	150MHz	200MHz	100MHz	200MHz	100MHz	200MHz
Rise time	≤5ns	≤3.5ns	≤2.3ns	≤1.75ns	≤3.5ns	≤1.75ns	≤3.5ns	≤1.75ns
Serial bus decode	Not support				Support 5 kinds		Supports 7 kinds	
Isolated channel	Not support				Support		Support	
Maximum waveform capture rate	50,000 wfm/s				50,000 wfm/s		190,000 wfm/s	
sample rate	1GS/s for single channel, 500MS/s for two channels							
Memory depth	240Kpts							
Display								
Screen	5.7 inches touch screen, 640* 480 pixels display resolution, 12* 8 display range							
Format	YT, Roll and XY							
Persistence	Auto, 100ms- 10s, or ∞							
Vertical system								
Input Channel	2 Oscilloscope channels, 1 Multi-meter channel							
Bandwidth limitation	20MHz							
Coupling	DC, AC, GND							
Input impedance	1MΩ ± 1% ≈ 15pF ± 3pF							
Vertical scale	2mv/div to 20V/div				5mv/div to 50V/div			
Vertical resolution	8 bit							
Max input voltage	500V				600V CAT II 300V CAT III			
Isolated channel voltage	-				1000V CAT II 600V CAT III			
Max channel floating voltage	-				1000V CAT II 600V CAT III			
DC vertical offset accuracy	5mV/div to 50V/div, ±2%							
Horizontal system								
Horizontal range	4ns/div to 10s/div							
Time base accuracy	20ppm							
Sampling modes	Normal, Average, Peak, Envelop							
Reference waveform	4 reference waveforms can be set(support external USB storage device)							
Trigger system								
Trigger types	Edge, Pulse, Logic, Serial bus trigger							
	Video trigger, types: 625/PAL, SECAM, 525/NTSC, 720P, 1080I, 1080P (MS300 series is optional, MS500 series is standard)							
Serial bus trigger types	UART/RS232/RS422/RS485, LIN, CAN, SPI, I2C, ARINC429, MIL-STD-1553B							
Serial bus decode types	MS300 series(5 types): UART/RS232/RS422/RS485, LIN, CAN, SPI, I2C MS500 series(7 types): UART/RS232/RS422/RS485, LIN, CAN, SPI, I2C, ARINC429, MIL-STD-1553B							
Coupling modes	DC, AC, HF Rej., LF Rej., Noise Rej.							
Trigger modes	Auto, Normal, Single							
Hold-off time	200ns to 10s							
Math funtion	Add, subtract, multiply and divide waveforms, FFT Window to Rectangular, Hamming, Hanning or Blackman-Harris							
Trigger source	CH1, CH2				CH1, CH2, Ext trigger			
Multi-meter								
Measurements type	10 types: AC voltage, AC/DC voltage, AC voltage frequency, AC Current*, DC voltage, DC Current*, Resistance, On-off function, Diode, Capacitance MS500 Series have more 3 types: Relative humidity*, Pressure*, Temperature* Note: items with * need additional accessory.							
Full scale reading	5,000 counts							
Other information								
Interface	USB Host, USB Slave(Connect to PC)							
Power adapter	Input: 100~240V AC, 50~60Hz, Output: 12V DC, 5A							
Battery	7.4V/6,000mAh capacity, continuous working time 4~5h							
Dimension, weight	Dimension: 254mm(Height)* 160mm(Width)* 60mm(Depth), net:1380g, battery: 276g							

Standard Accessories

Items	Description	Items	Description
	Probe		7.4V/6000mAh lithium battery
	Multimeter table pen line		USB cable : Mini USB2.0
	Banana jack		ScopeSuite software
	Power adapter: Input: 100-240V AC, 50-60Hz, Output: 12V DC, 5A		
	Documents: User Guide, Packing List, Calibration Certificate, Quick Start, ScopeSuit software registration key		

Optional Accessories

Accessories	Order No.	Description
Handbag 	MN-009	Dimension: 300mm(Height)*410mm(Width)*130mm(Depth)
Suitcase 	MN-008	WR-16 ABS anti-pressure seal suitcase
Li-ion battery 	HB-009	7.4V/9000mAh Li-ion battery
High frequency current probe 	MP-C040	DC-40MHz, 30Arms, 50Apeak
	MP-C012	DC-12MHz, 150Arms, 300Apeak
	MP-C006	DC-6MHz, 300Arms, 500Apeak
	MP-C050	DC-50MHz, 30Arms, 50Apeak
	MP-C100	DC-100MHz, 30Arms, 50Apeak
High frequency current probe 	MP-C370,+MP-C300A	DC-70MHz, 30Arms, 50Apeak
	MP-C315,+MP-C300A	DC-15MHz, 150Arms, 500Apeak
	MP-C405,+MP-C400A	DC-5MHz, 500Arms, 700Apeak
High voltage differential probe 	MP-D070	DC-70MHz, 700Vpk
	MP-D150	DC-70MHz, 1500Vpk
	MP-D150A	DC-100MHz, 1500Vpk
	MP-D700	DC-70MHz, 7000Vpk
	MP-D700A	DC-100MHz, 7000Vpk

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