

Micsig[®]

Leading Supplier of Handheld Oscilloscopes

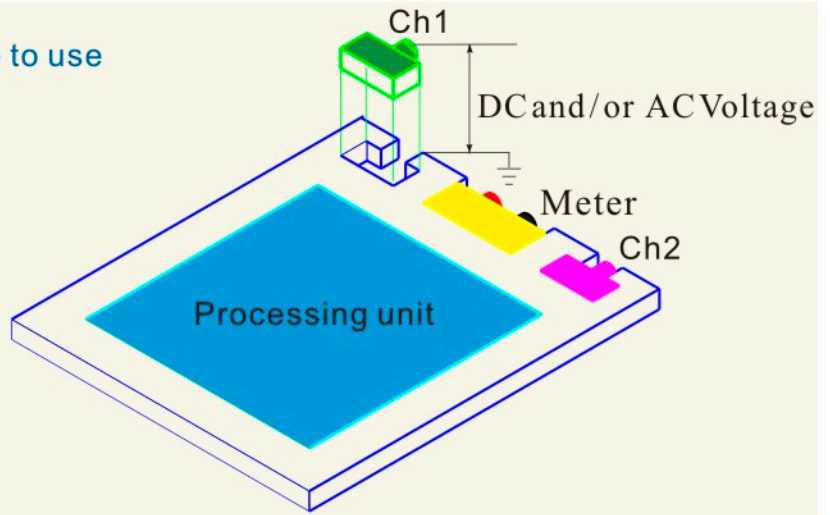


- 3-D waveform display
- Isolated and Floating Channels
- 300K wfrms/s waveform refresh rate
- Waveform dynamic recording
- 5.7 inch TFT LCD display, up to 640×480 resolution
- Operate by buttons, wheel or touch, Convenient, excellent operating performance
- Serial decode (optional), to analyze 7 serial buses of RS232/422/485, UART, LIN, CAN, SPI, I2C, 1553B, 429
- Built-in 4~32G memory storage
- WIFI wireless connection (optional)
- 2 viewing mode display: indoor, outdoor

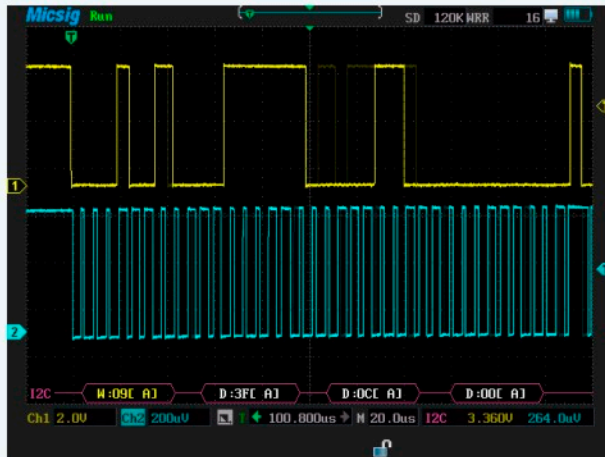
◆ Features

Isolated channels, more safe to use

Higher security classification and lower the risk dues to the complete isolation among CH1, CH2 and Multimeter. Three circuits can be connected simultaneously without considering the short-circuit risk causing by floating measurements.



Serial bus trigger and decode (support 1553B, 429 UART, 232 485, LIN, CAN, SPI, I2C)



◆ I2C serial bus decoding graphic mode

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; while in text mode, address, ID, data, examination which makes up the frame are classified. Also frame type and mistake can be satisfied, which helps users to debug and analyze the serial bus easier, and waveform data can be transfer to a PC by a flash device.

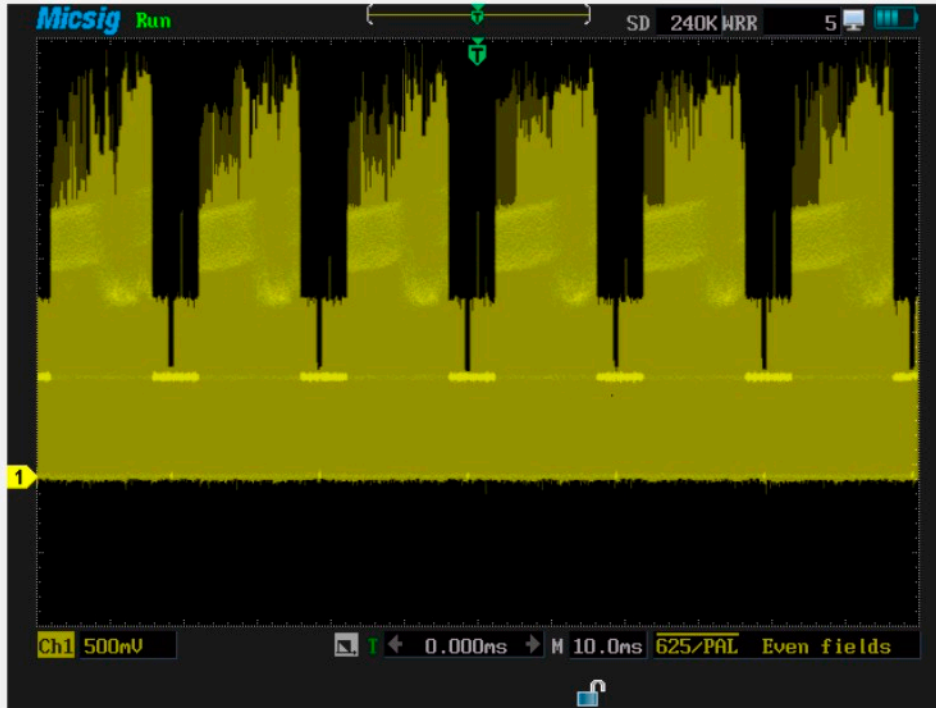
WIFI wireless connection (optional)



Free from the wired control, the WIFI function allows to check signals of Oscilloscopes. No need in scene, you can remote control the oscilloscopes, to ensure everything in hand.

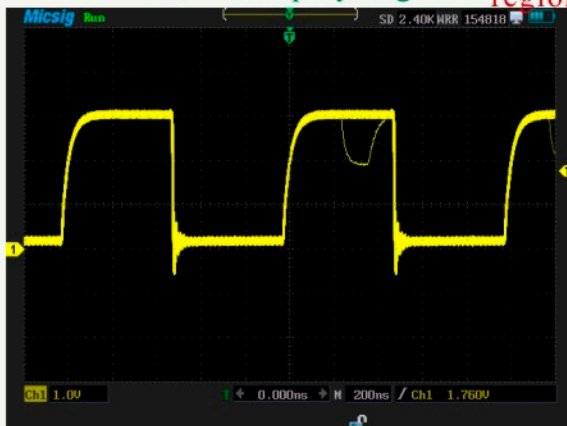
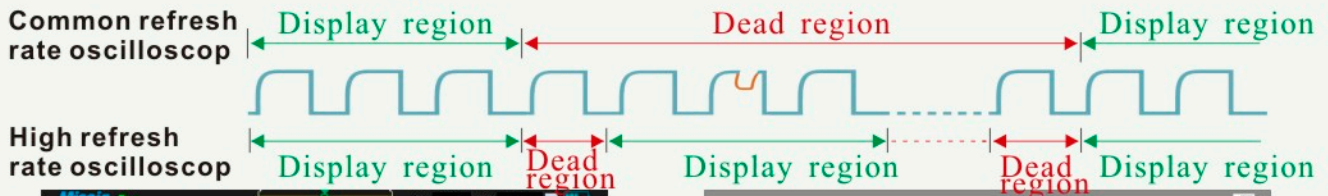
◆ Features

3-D Waveform Display

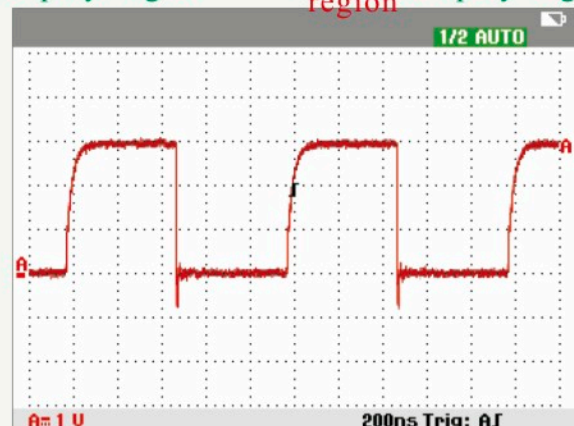


3-D display function redefines the waveform display, oscilloscope counts every data in order to display them with different colors or brightness, so that 2-D display(time and amplitude) turns into 3-D display(plus dimension of signal frequency), which becomes clear to distinguish the occasional signals from repeating signals, and provides an excellent visual effect.

Up to 300K wfms/s waveform refresh rate, see “invisible” part that common oscilloscope can not see.



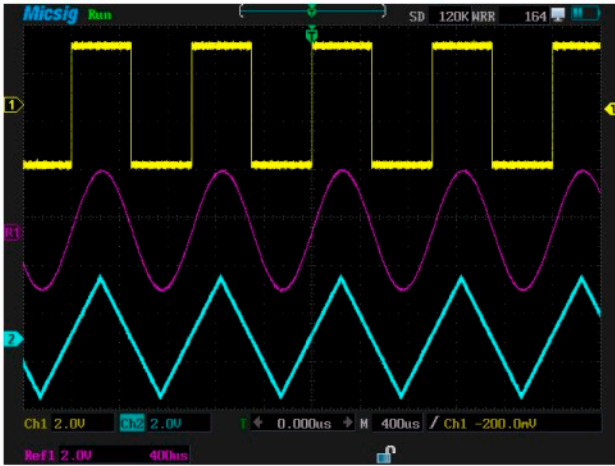
◆ High refresh rate oscilloscope



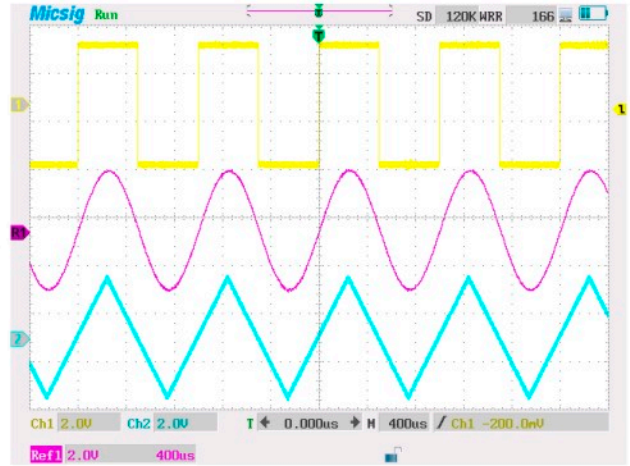
◆ Common refresh rate oscilloscope

Waveform refresh rate offers how many waveforms display in a minute. “Dead zone” of oscilloscope is the time of processing and displaying the waveform which have been captured, during the time oscilloscope sacrifices any waveforms. The time of “Dead zone” is far more than “display zone” for common oscilloscope, which results to signals can not be displayed in most time, so abnormal signals escaped. High refresh rate oscilloscope reduces the “dead zone” time, and abnormal signals can be caught fast and accurately.

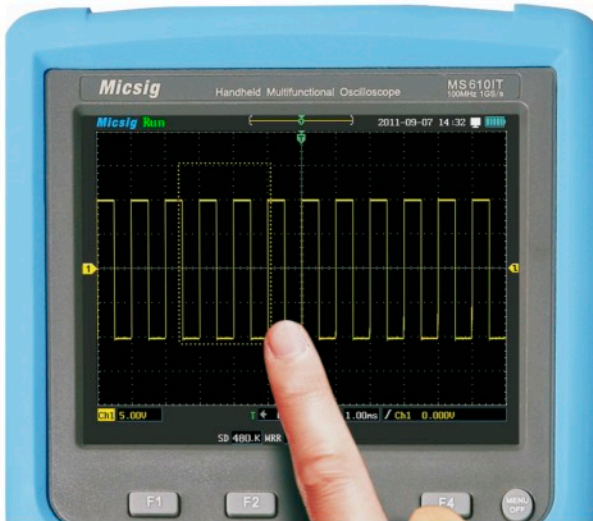
◆ Features



◆ Indoor display mode



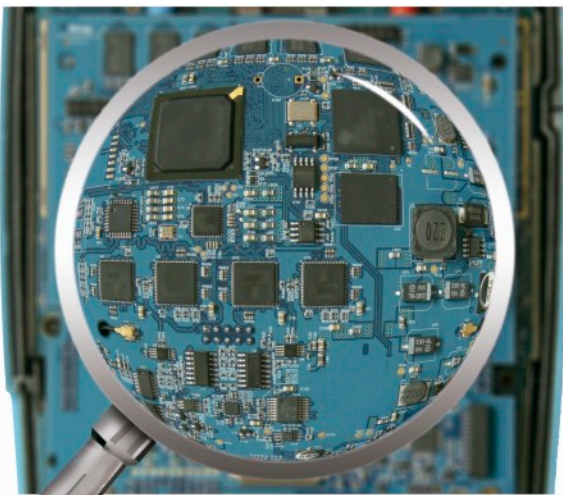
◆ Outdoor display mode



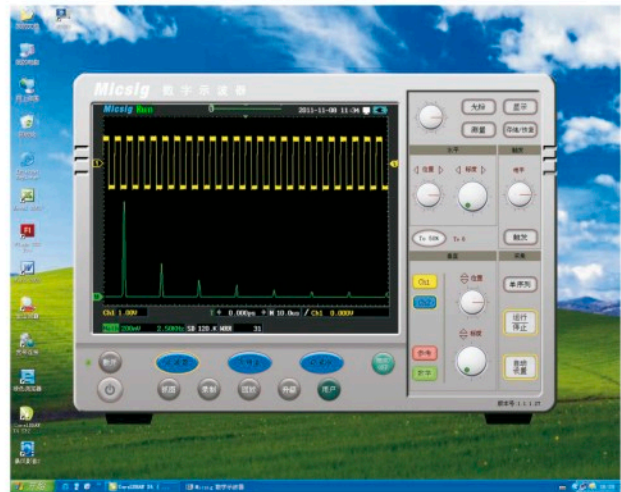
◆ Touch control, zoom out the designated zone



◆ Touch menu control

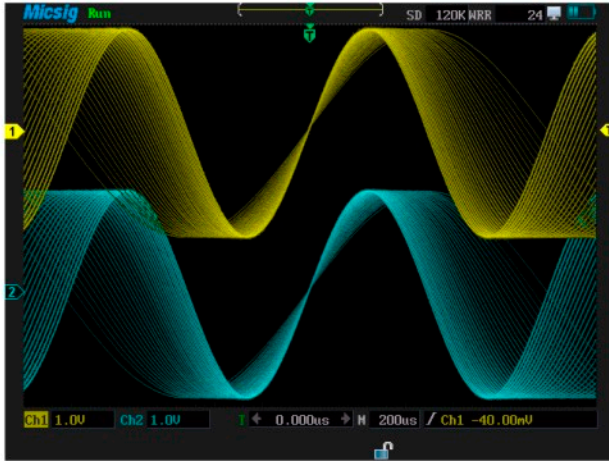


◆ Professional design and technology

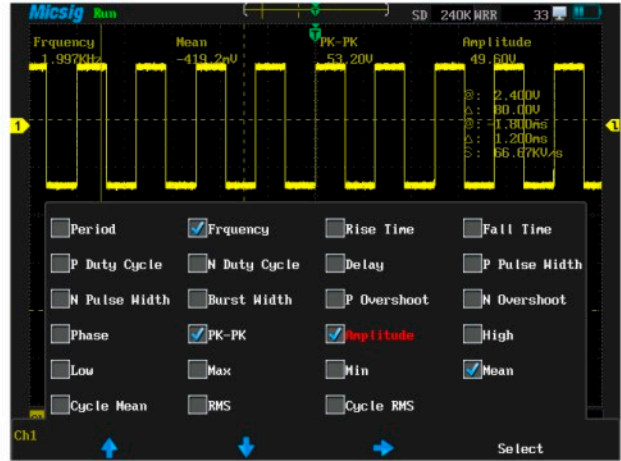


◆ PC software supports many functions: real-time control, measurements, storage, dynamic display, recording, and data.

◆ Features



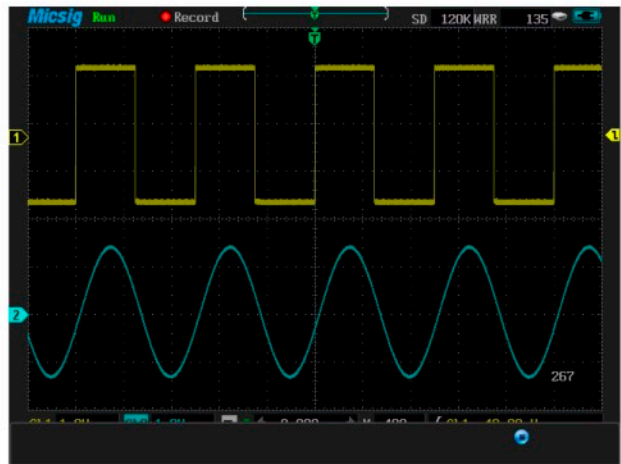
◆ 640×480 resolution



◆ Cursor measurement, and other automated measurements



◆ Support video trigger such as PAL, SECAM, NTSC, 720, 1080



◆ USB2.0 full speed IO interface. Allow users to easily record waveforms, and identify problem areas for more detailed analysis.



◆ 3 recording modes: Multimeter recording, oscilloscope measurement recording and oscilloscope waveform recording.



◆ 13 physical measurements: AC/DC voltage, current, resistance and so on.

Micsig Handheld Multifunctional Oscilloscope

Type	MS300 Series	MS400 Series
Bandwidth	100MHz/200MHz	100MHz/200MHz
Rise time	≤3.5ns/1.75ns	≤3.5ns/1.75ns
Max Sampling Rate	1GS/s Single Channel, 500MS/s Double Channels	1GS/s Single Channel, 500MS/s Double Channels
Memory depth	240Kpts Single Channel, 120Kpts Double Channels	240Kpts Single Channel, 120Kpts Double Channels
Max refresh rate	-(Can upgrade to 50,000waveforms/s)	50,000 waveforms/s(Can upgrade to 190,000 waveforms/s)
Room	-	-
Serial Bus Decode	-	UART、LIN、CAN、SPI、I2C、1553B、429
Vertical System		
Inputs	2 scope channels, 1 meter channel	2 scope channels, 1 meter channel
Bandwidth limit	20MHz	20MHz
Coupling	DC、AC、GND	DC、AC、GND
Input impedance	1MΩ ± 1% ≈ 15pF ± 3pF	1MΩ ± 1% ≈ 15pF ± 3pF
Vertical scale	5mV/div~50V/div	5mV/div~50V/div
Vertical Resolution	8 bit	8 bit
Maximun input	600V CAT II 300V CATIII	600V CAT II 300V CATIII
Channel-to-Channel and channels from earth ground references	1000V CAT II 600V CATIII	1000V CAT II 600V CATIII
DC vertical offset accuracy (typical)	5mV/div~50V/div, 2.0%	5mV/div~50V/div, 2.0%
Horizontal System		
Range	4ns/div~10s/div	4ns/div~10s/div
Timebase accuracy	20ppm	20ppm
Sampling cfg	Normal、Average、Peak、Envelope	Normal、Average、Peak、Envelope
Dynamic recording	-(Up to)	2 hours
Reference waveform	4 waveforms can be saved (Can upgrade to use USB)	4 waveforms can be saved,Can use USB device
Trigger System		
Types	Edge、Pulse、Logic、Serial Bus(UART、LIN、CAN、SPI、I2C、1553B、429)	Edge、Pulse、Logic、Serial Bus(UART、LIN、CAN、SPI、I2C、1553B、429)
Coupling modes	DC、AC、HF Rej.、LF Rej.、Noise Rej.	DC、AC、HF Rej.、LF Rej.、Noise Rej.
Modes	Auto、Normal、Single	Auto、Normal、Single
Sources	CH1、CH2	CH1、CH2 (Can upgrade External)
Holdoff time	200ns~10s	200ns~10s
Measurement System		
Auto Measurements	31Types	31Types
Cursors	Horizontal cursor, vertical cursor, cross cursor	Horizontal cursor, vertical cursor, cross cursor
Math		
Math Operation	+、-、*、÷	+、-、*、÷
FFT Window	Rectangular、Hamming、BlackmanHarris、Hanning	Rectangular、Hamming、BlackmanHarris、Hanning
Display System		
Display	5.7inch TFT LCD touch Screen	5.7inch TFT LCD touch Screen
Resolution	640×480	640×480
3D-wave display	-	-
Display Range	12div×8div	12div×8div
Format	YT mode (Can Upgrade XY mode)	YT mode / XY mode
Persist	Auto、100ms~10s or ∞	Auto、100ms~10s or ∞
I/O Port		
Mini USB2.0	Connect to PC	Connect to PC
USB2.0	Supports USB mass storage devices	Supports USB mass storage devices
WIFI	-	-
Meter		
Type	10 physical measurements,such as V、A、Ω、C,etc,	10 physical measurements,such as V、A、Ω、C,etc,
Precision	4bit	4bit
Display	Max、Avg、Min with timestamp;relative measurement	
Record		
Function	Meter、Scope measurements、Waveform	
Time Base range	Meter: 10s/div~20min/div Scope measurements: 10s/div~20min/div Waveform: 100us/div~2min/div	
Time	Max 17days (Can upgrade to unlimited)	49s ~ unlimited
Power Supply		
Power adapter	Input: 100-240VAC, 50-60Hz, 2A; Output: 12VDC, 5A	
Humidity	Capacity7.4V/6000mAh, Battery Charging Time 4~5 hours	
Work Environment		
Temperature/Humidity	-20℃~+50℃, < 85%RH	
Specification		
Size	254mm×160mm×60mm	
Weight	Scope: 1380g (without battery) accessories (standard): 691g battery (standard): 276g	

Type	MS500 Series	MS600 Series	MS700 Series
Bandwidth	100MHz/200MHz	100MHz/200MHz	
Rise time	≤3.5ns/1.75ns	≤3.5ns/1.75ns	
Max Sampling Rate	1GS/s Channel, 500MS/s Double Channels	2GS/s Single Channel, 1GS/s Double Channels	
Memory depth	240Kpts Single Channel, 120Kpts Double Channels	48Mpts Single Channel, 24Mpts Double Channels	
Max refresh rate	190,000 waveforms/s	–	300,000 waveforms/s
Room	–	4G/8G/16G/32G	
Serial Bus Decode	UART、LIN、CAN、SPI、I2C、1553B、429	UART、LIN、CAN、SPI、I2C、1553B、429	
Vertical System			
Inputs	2 scope channels, 1 meter channel	2 scope channels, 1 meter channel	
Bandwidth limit	20MHz	20MHz	
Coupling	DC、AC、GND	DC、AC、GND	
Input impedance	1MΩ ± 1% ≈ 15pF ± 3pF	1MΩ ± 1% ≈ 15pF ± 3pF	
Vertical scale	5mV/div ~ 50V/div	5mV/div ~ 50V/div	
Vertical Resolution	8 bit	8 bit	
Maximum input	600V CAT II 300V CAT III	600V CAT II 300V CAT III	
Channel-to-Channel and channels from earth ground references	1000V CAT II 600V CAT III	1000V CAT II 600V CAT III	
DC vertical offset accuracy (typical)	5mV/div ~ 50V/div, 2.0%	5mV/div ~ 50V/div, 2.0%	
Horizontal System			
Range	2ns/div ~ 10s/div		
Timebase accuracy	20ppm		
Sampling cfg	Normal、Average、Peak、Envelope		
Dynamic recording	2 hours		
Reference waveform	4 waveforms can be saved, Can use USB device		
Trigger System			
Types	Edge、Pulse、Logic、Video (PAL、NTSC、SECAM、720P、1080I、1080P)、Serial Bus (UART、LIN、CAN、SPI、I2C、1553B、429)		
Coupling modes	DC、AC、HF Rej.、LF Rej.、Noise Rej.		
Modes	Auto、Normal、Single		
Sources	CH1、CH2 (Can up External)		
Holdoff time	200ns ~ 10s		
Measurement System			
Auto Measurements	31 Types		
Cursors	Horizontal cursor, vertical cursor, cross cursor		
Math			
Math Operation	+、-、*、÷		
FFT Window	Rectangular、Hamming、BlackmanHarris、Hanning		
Display System			
Display	5.7inch TFT LCD touch Screen	5.7inch TFT LCD touch Screen	
Resolution	640×480	640×480	
3D-wave display	–	Supply	
Display Range	12div×8div	12div×8div	
Format	YT mode / XY mode	YT mode / XY mode	
Persist	Auto、100ms ~ 10s or ∞	Auto、100ms ~ 10s or ∞	
I/O Port			
Mini USB2.0	Connect to PC	Connect to PC	
USB2.0	Supports USB mass storage devices	Supports USB mass storage devices	
WIFI	–	Supply	
Meter			
Type	13 physical measurements, such as V、A、Ω、C, etc.		
Precision	4bit		
Display	Max、Avg、Min with timestamp; relative measurement		
Record			
Function	Meter、Scope measurements、Waveform		
Time Base range	Meter: 10s/div ~ 20min/div	Scope measurements: 10s/div ~ 20min/div	Waveform: 100us/div ~ 2min/div
Time	49s ~ unlimited		
Power Supply			
Power adapter	Input: 100-240VAC, 50-60Hz, 2A; Output: 12VDC, 5A		
Humidity	Capacity 7.4V/6000mAh, Battery Charging Time 4~5 hours		
Work Environment			
Temperature and Humidity	20°C ~ +50°C, < 85%RH		
Specification			
Size	254mm×160mm×60mm		
Weight	Scope: 1380g (without battery) accessories (standard): 691g battery (standard): 276g		

Accessories



◆ Power adapter



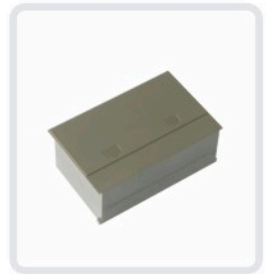
◆ 10X Probe



◆ Multimeter line



◆ USB cable



◆ 6000mAh Li-ion battery



◆ Serial bus decoding



◆ High-class handbag



◆ Instrument suitcase



◆ handheld high-temperature probe



◆ AC and DC forcipate current clamp

Accessories Table

Category	Item	Description
Standard Accessories	Power line	Standard power line
	Power adapter	MS-PA-1205 Mode: MS-60W120500 Input: 100-240V, 50-60Hz, 2A Output: DC12V/5A
	Probe	MS-PR-1050 10X
	Meter Probe	MS-MW-A010 1KV CATIII 10A
	Micsig ScopeSuite Software	MS-SS-A001 PC software demo version
	USB cable	MS-US-A001 Mini USB2.0 cable
	Li-ion battery	MS-BA-A600 7.4V, 6000mAh Li-ion battery
	Operating manual	MS-UM-B500 Users' guide enclosed with oscilloscope
Optional accessories	Oscilloscope active probe	MS-PR-2010 1GHz,
	AC and DC forcipate current clamp	MS-C502 AC/DC 200A/20A MS-C601 AC/DC 600A MS-C701 AC/DC 400mA-4A-30A
	Instrument suitcase	MS-SC-S001 WR-16 ABS hermetical suitcase
	High-class handbag	MS-HB-S001 Cloths handbag (300mm*410mm*130mm)
	Li-ion battery	MS-BA-S900 7.4V,9000mAh
	Temperature/Humidity sensor	MS-A130 economic temperature/humidity sensor probe MS-A230 cryophylactic and heating humidity sensor probe MS-A430 standard probe and handheld high-temperature probe
	Temperature sensor	Serial integrative temperature sensor Serial integrative and portable temperature sensor
	Pressure transducer	MS-P100 universal pressure transducer MS-P200S precise pressure transducer
	High-frequency current probe	MS-G105: DC-50MHZ; MS-G110: DC-100MHZ
	Micsig ScopeSuite Software	MS-UM-A002 PC software full-featured version
	UART Serial bus decoding module	Trigger and decode serial bus decode (such as RS232, RS422, RS485, UART and so on) 2 display modes: graphic and text
	LIN Serial bus decoding module	Trigger and decode LIN Serial bus, 2 display modes: graphic and text
	CAN Serial bus decoding module	Trigger and decode CAN Serial bus, 2 display modes: graphic and text
	SPI Serial bus decoding module	Trigger and decode SPI Serial bus, 2 display modes: graphic and text
	I2C Serial bus decoding module	Trigger and decode I2C Serial bus, 2 display modes: graphic and text
1553B Serial bus decoding module	Trigger and decode 1553B Serial bus, 2 display modes: graphic and text	
429 Serial bus decoding module	Trigger and decode 429 Serial bus, 2 display modes: graphic and text	

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