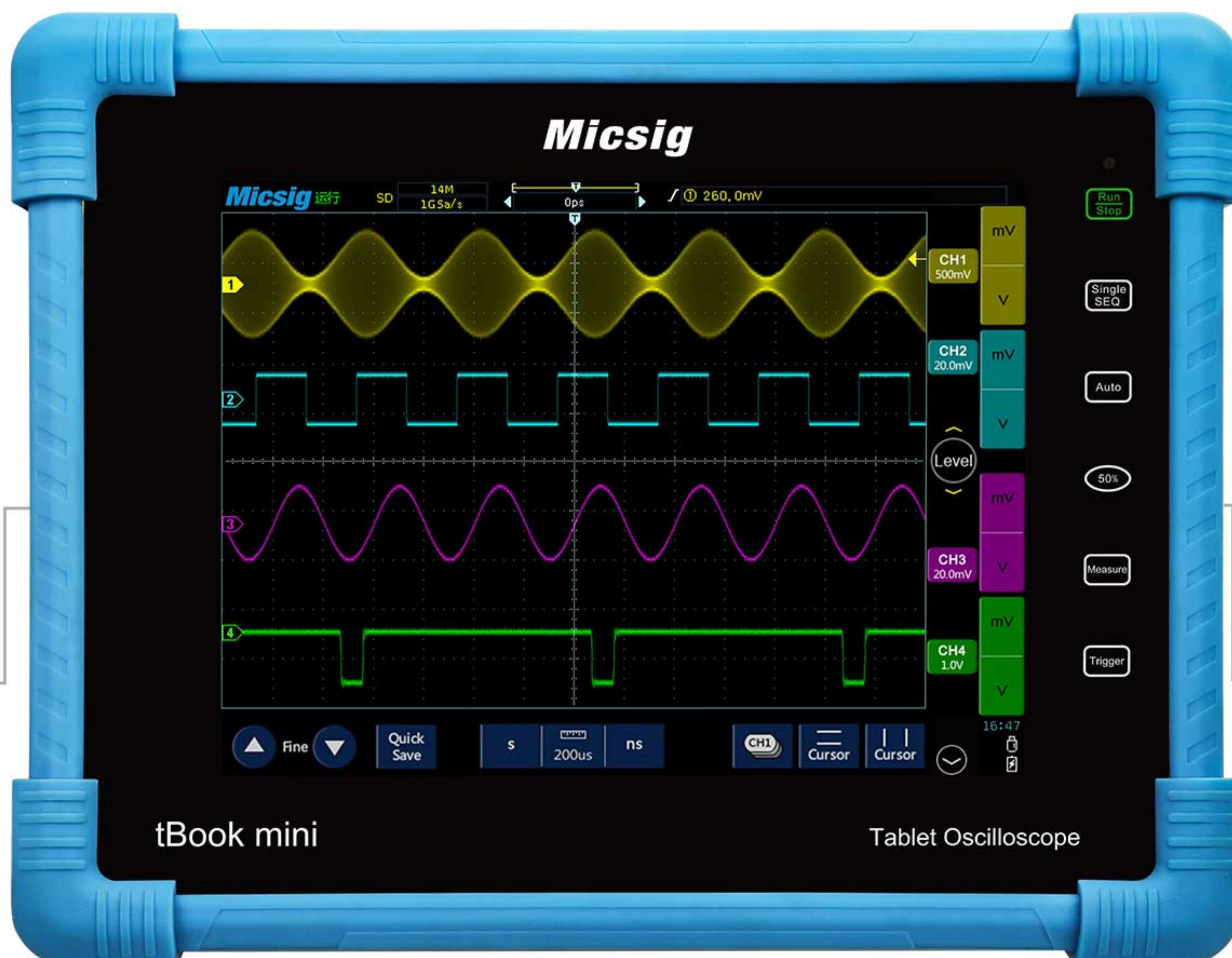# Micsig®

Tablet Oscilloscope tBook mini

Data Sheet

70MHz or 100MHz bandwidth, 2 or 4 analog channels

1 GSa/s real-time sample rate

14Mpts or 28Mpts memory depth

Up to 80,000wfm/s waveform capture rate

Up to 5 hours lithium battery (Options)

8''TFT LCD & 800*600 pixels high resolution Multi-touch capacitive screen

Gradient waveform display with 256 intensity levels

7 types of trigger function: Edge, Pulse, Logic, Time Out, Dwart PW, Slope, N Edge, and Video

Built-in 8G memory, waveforms and screenshots can be viewed and edited in scope

Various I/O port, LAN, Wifi, USB2.0, USB Device, HDMI, Trigger out, Pass/Fail

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250mm

200mm

8 inches TFT LCD
800*600 pixels

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12:08
20.9.2016

Oscilloscope

Micsig   Files   Setting

Guide   Photos

tBook mini   Tablet Oscilloscope

Run/stop
Single SEQ
Auto
50%
Measure
Trigger
Home

WiFi

Belt(optional)

2/4 BNC

55mm

Ch1   Ch2   Ch3   Ch4   Aux Out

ALL INPUTS 1MΩ/14pF 300Vrms CAT II

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Power

LAN

HDMI(Optional)

USB host

USB device

Charging

built-in Lithium battery(optional)

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Model		TO1072	TO1074	TO1102	TO1104
channels		2	4	2	4
Bandwidth		70M	70M	100M	100M
Risetime		5ns	5ns	3.5ns	3.5ns
Real time sampling rate(1 Ch)		1G Sa/s	1G Sa/s	1G Sa/s	1G Sa/s
Real time sampling rate (2 Ch)		500M Sa/s	500M Sa/s	500M Sa/s	500M Sa/s
Real time sampling rate (4 Ch)		-	250M Sa/s	-	250M Sa/s
Peak mode(1 Ch)		1ns	1ns	1ns	1ns
Peak mode (2 Ch)		2ns	2ns	2ns	2ns
Peak mode (4 Ch)		-	4ns	-	4ns
Standard	Memory depth (1 Ch)	14M	14M	28M	28M
	Memory depth (2 Ch)	7M	7M	14M	14M
	Memory depth (4 Ch)	-	3.5M	-	7M
	Memory depth (2 Ch)	14M	14M	14M	14M
	Memory depth (4 Ch)	-	7M	-	7M

Specifications

Vertical system

Bandwidth limitation	20MHz, high pass, low pass
Input coupling	DC, AC, GND
Input impedances	1MΩ ±1%||14.5pF±3pF
Vertical resolution	8bits
DC gain accuracy	＜±2% (1MΩ)
vertical scale	1mV/div to 5V/div (1MΩ)
Channel to channel	≥40dB (100:1)
Offset range	±6div
Maximum input voltage	CAT I 300V (1MΩ)

Horizontal system

Time base range	2ns/div ~ 1ks/div
Time base delay range	-14 divisions to 14ks
Time base accuracy	±20ppm

Sampling system

Sampling mode	Real time sample rate
Peak sampling	
Sample rate 1G Sa/s	All the sampling glitches in scanning rate are narrow to single channel 1 ns, dual channel 2 ns .four channel 4ns
Max duration in the max sampling rate	
Sample rate 1G Sa/s	28/14ms
Sample rate 500MSa/s	56/28ms
Sample rate 250MSa/s	56/28ms
Average	Average of sampling for N times N is chosen from 2, 4, 8, 16, 32, 64, 128, 256
Envelope	Envelope of sampling for N times N is chosen from 2, 4, 8, 16, 32, 64, 128, 256, ∞

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Trigger system

Trigger mode	Normal, Auto, and Single
Trigger coupling	DC, AC, HF reject, LF reject, noise reject
hold off range	200ns to 10s
Trigger type	
Edge	Positive, negative, or either slope on any channel input. Coupling includes DC, AC, HF reject, LF reject, and noise reject.
Pulse Width	Trigger on width of positive or negative pulses that are ＞, ＜, ＝, ≠, or inside/outside a specified period of time (8ns~10s).
Logic	Trigger when any logical pattern of channels goes false or stays true for specified period of time (8ns~10s). Any input can be used as a clock to look for the pattern on a clock edge. Pattern (AND, OR, NAND, NOR) specified for all input channels defined as High, Low, or Don't Care
Video trigger	Trigger on all lines or individual lines, odd/ even or all fields on PAL/625SECAM、NTSC/525、720P、1080I、1080P video signals.
Time out	Trigger on an event which remains high, low, oreither, for a specified time period. Selectable from
Slope	Positive slope (Great than, lower than, within specific interval) Negative slope (Great than, lower than, within specific interval)
Dwart PW	Trigger on a pulse that crosses one threshold but fails to cross a second threshold before crossing the first again. Event can be time- or logic qualified.
Nth edge	Edge type: Risingm Falling Idle time: 16ns to 4s Number of edges 1 to 65535

Waveform measurement

Cursor	Horizontal Cursor, Vertical Cursor, Cross Cursor
Auto measurements	23, Measurements include: Period, Frequency, Rise Time, Fall Time, Delay, Positive duty Cycle, Negative Duty Cycle, Positive Pulse Width, Negative Pulse Width, Burst Width, Positive Overshoot, Negative Overshoot, Phase, Peak to Peak, Amplitude, High, Low, Max, Min, Mean, Cycle Mean, RMS, Cycle RMS.
Waveform math	
Dual Waveform	Add, subtract, multiply, and divide waveforms
FFT	Spectral magnitude. Set FFT Vertical Scale to Linear RMS or dBV RMS, and FFT Window to Rectangular, Hamming, Hanning, or Blackman-Harris.

Display system

Display type	8″ TFT LCD
Display resolution	800*600
Max touch point on touch screen	5 points
Operation way	Full touch
Afterglow time	Auto, 10ms to 10s, ∞
Time Base format	YT, XY, Roll, Zoom
Expansion bench mark	Center, Trigger Position
Waveform display	Brightness is adjustable, point ,Line
Grid	14*10 div, Brightness of the grid is adjustable
Grey level	256 level
Time	YES
Language	English, Chinese, and customized

Data Sheet

Storage

Storage media	Local, U Disk
Built-in storage	8G
Storage format	csv , wav,bin
Waveform storage number	Unlimited
waveform storage name	Support
display the reference waveform quantity	4 piece
screenshot	Support
User setting number storage	Unlimited
User name setting	Support
Flash format	Comply with industry standards

Interface

USB2.0 interface	Support USB mass storage devices, can read and write
Micro USB2.0 interface	1, support read and write
DC interface	1, for charging
Probe calibration signal output frequency	1KHz, 2Vpp
LAN	Support
Micro HDMI	Optional
Wifi	Optional

Power source

Power source voltage	100 to 240V AC, 50/60Hz
Power consumption	＜60W
Fuse	12V DC, 5A
Built-in Battery(Optional)	7.4V, 8000mAh

Environment

Temperature		
	Operating	0℃ to 45℃
	Non-operating	-40℃ to 60℃
Humidity		
	Operating	5% to 85%, 25℃
	Non-operating	5% to 90%, 25℃
Altitude		
	Operating	＜3000m
	Non-operating	＜12000m

Physical characteristics

Dimensions		
	Height	200mm
	Width	250mm
	Depth	55mm
Weight		
	Net	
	2CH Bare	1040g
	4CH Bare	1125g

Data Sheet

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Ordering information

Step 1：Select tBook_mini series model

tBook_mini family	
TO1072	Tablet oscilloscope tBook mini, 70MHz 2 analog channels, Max sample Rate Analog channel up to1G Sa/s
TO1074	T Tablet oscilloscope tBook mini, 70MHz 4 analog channels, Max sample Rate Analog channel up to1G Sa/s
TO1102	Tablet oscilloscope tBook mini, 100MHz 2 analog channels, Max sample Rate Analog channel up to1G Sa/s
TO1104	Tablet oscilloscope tBook mini, 100MHz 4 analog channels, Max sample Rate Analog channel up to1G Sa/s

Standard accessories	
Tablet oscilloscope	1
Power plug	1
Power adapter	1
Probes	Probes spec depends on oscilloscope model. 2 pcs for 2 channel, 4 pcs for 4 channel 10X, Input capacitance: 1X: 85pF-120p, 10X, 16pF-20pF, Input Voltage: 1X: ＜300V DC +Peak AC, 10X: ＜600V DC +Peak AC
Warranty	Repair Service 3 Years (including warranty) Probes and accessories are not covered by the oscilloscope warranty and service offerings. Refer to the datasheet of each probe and accessory model for its unique warranty and calibration terms.

Optional accessories	
Battery	7.4V /8000mAh, Li-ion, recharging
High frequency current probe	30A/50MHz, 30A/100MHz , 150A/12MHz , 300A/6MHz 500A/5MHz
High voltage differential probe	700Vpk/70MHz, 1500Vpk/70MHz, 1500Vpk/100MHz, 2800Vpk/100MHz, 7000Vpk/70MHz, 7000Vpk/100MHz
Handbag	Black nylon dimension 300*410*130mm

Contact us

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