Chapter 7 Data sheet

Tablet Oscilloscope tBook mini TO1000 Data Sheet

Model		TO1072	TO1074	TO1102	TO1104	TO1152
channels		2	4	2	4	2
Bandwidth		70 M	70M	10 0M	10 0M	15 0M
Rise time		5ns	5 ns	3.5 ns	3.5 ns	2.3 ns
Real time sampling rate (1CH)		1G Sa/s	1G Sa/s	1G Sa/s	1G Sa/s	1G Sa/s
Real time sampling rate (2CH)		5 0 0M Sa/s	500M Sa/s	500M Sa/s	500M Sa/s	500M Sa/s
Real time sampling rate (4CH)		-	25 0M Sa/s	-	250M Sa/s	-
Peak mode (1CH)		1 ns	1ns	1n s	1n s	1n s
Peak mode (2CH)		2 ns	2ns	2 ns	2 ns	2 ns
Peak mode (4CH)		-	4 ns	-	4 ns	-
Standard	Memory depth (1CH)	1 4 M	1 4 M	28 M	28 M	28 M
	Memory depth (2CH)	7 M	7 M	14 M	14 M	14 M
	Memory depth (4CH)	-	3.5 M	-	-	
	Memory depth (2CH)	14 M	14 M	14 M	14 M	14 M
	Memory depth (4CH)	-	7 M	-	-	

Specifications

Vertical system	
Bandwidth limitation	20MHz, high pass, low pass
Input coupling	DC, AC, GND
Input impedance s	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, ∞

Trigger and decodingsystem	
Trigger mode	Normal, Auto, and Single
Trigger coupling	DC, AC, HF reject(>50KHz), LF reject(<50KHz), 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)
Runt	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
Serial bus trigger and decoding type	UART (optional), I2C (optional), SPI (optional),CAN(optional), LIN(optional)

Waveform measurement	
Cursor	Horizontal Cursor, Vertical Cursor, Cross Cursor
Auto measurements	23, of which up to five can be displayed on-screen at any one time. 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 LED Multi point touchable capacitive screen
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, customized

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, soft keyboard input
Flash format	Comply withindustry standards

Interface	
USB2.0interface	Support USB mass storage devices, can read and write
Micro USB2.0 interface	1, support read and write
DCinterface	1, for charging
Probe calibration port	1KHz, 2Vpp
LAN	Support
Micro HDMI	Optional
Wi-Fi	Optional

Power source	
Power source voltage	100 to 240V AC50/60Hz
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	210mm
Width	250mm
Depth	55mm
Weight	
Net	
2CH Bare	1040g
4CH Bare	1125g

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	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

TO1152	Tablet oscilloscope tBook mini, 150MHz 2 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, 2pcs 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.
BNC Cap	Quantity depends on oscilloscope channel. 2 or 4.

Optional accessories	
tBook mini Battery	7.4V /8000mAh, Li-ion, recharging
Screen protector film	Plastic, same size with screen.
Carry strap	Leather carry strap, Black
High voltage differential probe	1300Vpk/100MHz , DP10013
Handbag	Black nylon

This information is subject to change without notice.

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