Tablet Oscilloscope
tBook mini  TO1000series

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 optional Li-ion battery (Options)
8” TFT LCD & 800*600 pixels high resolution Multi-touch capacity screen
Gradient waveform display with 256 intensity levels
7 types of trigger function: Edge, Pulse, Logic, Time Out, Dwarf PW, Slope, N Edge, and Video
Built-in 8G storage capacity, 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

www.micsig.com
**Innovation, makes test simpler.**

Compared with traditional oscilloscope, Micsig tablet oscilloscope will bring you new operation experience and it will make your test and measurement worksimpler & easier.

Micsig tBook mini TO1000 series is an entry level digital oscilloscope that will meet your requirements for excellent performance at an ultra-low price point. A portable and sleek design saves previous space on your workbench. Using high resolution capacitive touch with intuitive menus, the TO1000 series is engineered to deliver a truly state-of-the-art experience.
### Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>TO1072</th>
<th>TO1074</th>
<th>TO1102</th>
<th>TO1104</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth</td>
<td>70MHz</td>
<td>70MHz</td>
<td>100MHz</td>
<td>100MHz</td>
</tr>
<tr>
<td>Input channel</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Sample rate</td>
<td>1G Sa/S</td>
<td>1G Sa/S</td>
<td>1G Sa/S</td>
<td>1G Sa/S</td>
</tr>
<tr>
<td>Memory depth</td>
<td>14Mpts</td>
<td>14Mpts</td>
<td>28Mpts</td>
<td>28Mpts</td>
</tr>
<tr>
<td>Max capture rate</td>
<td>80,000 wfm/s</td>
<td>80,000 wfm/s</td>
<td>80,000 wfm/s</td>
<td>80,000 wfm/s</td>
</tr>
<tr>
<td>Bandwidth limitation</td>
<td>20MHz</td>
<td>20MHz</td>
<td>20MHz, high pass, low pass</td>
<td>20MHz, high pass, low pass</td>
</tr>
<tr>
<td>Interface</td>
<td>Wifi, LAN, HDMI, USB Host, USBDevice, GND, DCPower, Pass/Fail out, Trigger out</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screen</td>
<td>8 inches TFT LCD</td>
<td>800<em>600 pixels display resolution, 14</em>10 display range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimension</td>
<td>250<em>210</em>55mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery(optional)</td>
<td>7,500mAh Li-Ion battery</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### WHY Micsig tBook mini?

**Up to 28Mpts memory depth**

With 28Mpts memory depth and ZOOM technology, waveforms will be presented with more accuracy and detail.

**Up to 80,000 wfm/s capture rate**

A high waveform capture rate allows for better detection of glitch and runt signals. The higher capture rate allows more signal waveforms to be captured. By increasing the waveform capture rate, you see a more complete picture of what is going on with the signal.
31 types of auto measurements

There are 31 auto measurements for the user to choose from on the Measure selection page. Tap to display all the measurement options on one screen. Tap the desired measurement you want to select. Tounselect a measurement, either tap the icon of the measurement to be unselected, or tap clear to remove all measurements.

Tap any other place on screen to exit the menu.

Gradient waveform display with 256 intensity levels

A digital fluorescence display allows the user to see the distribution of the signal probability on the display. As the occurrence of the signal increases in that location, its brightness increases. Similarly, in regions of low occurrence, the signal will display more dimly.

Lower noise floor

Lower noise floor is less than 1mV help you to get more accurate measurements.

Various trigger functions

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

Tap to open the trigger level slider, and then drag the trigger level marker.
**Quicksave**

Tap **Quick Save** to save waveform to memory. An internal 8GB storage capacity, expandable via USB, allows for a virtually unlimited number of waveforms to be saved.

**Screenshot**

Swiping down to take a screen shot quickly with four fingers. Waveforms can be viewed & edited in local.

**Channel quick setup**

Tap **CH1** icon to display or hide the desired channels. Sliding right on the “channel” icon will open the channel configuration menu.

**Zoom**

Swipe down with three fingers simultaneously to access the ZOOM function.
Waveform Positioning

Drag the waveform in the desired direction with the tip of your finger.

Vertical Divisions

Tapping \( M \) or \( V \) to set the desired vertical divisions. The Volts per division are displayed in the user interface.

Horizontal Divisions

Double tap the waveform to zoom in on the desired region.

Tap \( \square \) to open the time-base ruler to quickly modify the horizontal divisions.

Select/unselect current channel

Tap \( \text{ channel icon } \) once to select desired channel you want to use, then you can easily to find desired waveform when there are many waveforms on the screen.

Cursor

Tap \( \text{ enable cursor icon } \) to enable the cursor function.

Touch the screen with two fingers to simultaneously adjust (as a pair) cursor \( \bullet \) and \( \circ \) or cursor \( \bullet \) and \( \circ \) positions.
Math & reference channel setup

Tap to get math and reference channel icon, then tap to open. Swipe left/right to open/close math channel setting. Tap again to turn off math function.

Use the same method to set up the reference waveform.

Soft keyboard

The onscreen, soft keyboard allows for easy file naming and eliminates the need for using a knob to try and name files. This improves file naming efficiency up to 95%.

Mouse operation

Support remote operation through a standard or wireless mouse and fly mouse. This allows the Oscilloscope to be in a convenient place for reading, while still maintaining functionality through the mouse interface.
## Data sheet

### 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**: ±5div
- **Maximum input voltage**: CAT I 300V (1MΩ)

### Horizontal system
- **Time base range**: 2ns/div to 1ks/div
- **Time base delay range**: -14 divisions to 14ks
- **Clock skew**: ±2ppm/Year
- **Time based 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 level
- **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/625, SECAM, NTSC/525, 720P, 1080i, 1080P video signals.
  - **Time out**: Trigger on an event which remains high, low, or either, 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)
  - **Dwarf 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, 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 FFT, FFT. Add, subtract, multiply, and divide waveforms. 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, German, Russian

### 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:** 1KHz, 2Vpp
- **signal output frequency:** Support
- **LAN:** Support
- **Micro HDMI:** Support
- **Wifi:** Optional
- **Web screen:** Support Web screen
- **Pass/Fail out:** Support

### Environment

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

### Physical characteristics

- **Dimensions:**
  - Height: 210mm
  - Width: 250mm
  - Depth: 55mm
- **Weight:**
  - 2CH Bare: 1040g
  - 4CH Bare: 1125g
  - Shipping: 4CH Bare: 2445g
  - 2CH Bare: 2630g
- **Battery:** 7.4V 7500mAh

### Storage

- **Storage media:** Native, U Disk
- **Built-in storage:** 8G
- **Storage format:** csv, wav
- **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

### Power source

- **Power source voltage:** 100 to 240V AC, 50/60Hz
- **Power consumption:** < 60W
- **Fuse:** 12V DC, 5A
- **Built-In Battery(Optional):** 7.4V, 7500mAh
### Standard accessories

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tablet oscilloscope</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>USB data cable</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Power adapter</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CD</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Probes ---MP130</td>
<td>2 pcs for 2 channel; 4 pcs for 4 channel 300MHz bandwidth, 10X, Input capacitance: 1X: 85pF-120pF, 10X, 16pF-20pF, Input Voltage: 1X: &lt; 300V DC +Peak AC, 10X: &lt; 600V DC +Peak AC</td>
<td></td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery</td>
<td>7.4V 7500mAh, Li-ion, recharging</td>
<td></td>
</tr>
<tr>
<td>High frequency current probe</td>
<td>30A/50MHz, 30A/100MHz, 150A/12MHz, 300A/6MHz, 500A/5MHz</td>
<td></td>
</tr>
<tr>
<td>High voltage differential probe</td>
<td>700Vpk/70MHz, 1500Vpk/70MHz, 1500Vpk/100MHz, 2800Vpk/100MHz, 7000Vpk/70MHz, 7000Vpk/100MHz</td>
<td></td>
</tr>
<tr>
<td>Handbag</td>
<td>Black nylon dimension 300<em>410</em>130mm</td>
<td></td>
</tr>
</tbody>
</table>

### Contact us

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