Micsig

www.micsig.com

Tablet Oscilloscope Smart Series STO1000

- 4 Analog Channels
- 100 MHz Bandwidth
- 70 Mpts Memory Depth
- 1 GSa/s Sampling Rate
- 7500mAH Li-ion Battery
- 8" capacitive integrated touchscreen

Your Professional Oscilloscope for the Lab or in the Field

PRODUCT OVERVIEW

Micsig Tablet Oscilloscope Smart series STO1000 adopts the newest integrated touch screen technology and newly upgraded hardware and software system, it features 4 analog channels, available with 100MHz bandwidth, single channel has maximum 1G Sa/s sampling rate and 70Mpts of memory depth, waveform capture rate up to 130,000 wfms/s.
With a large 8-inch, 800x600 industrial capacitive touch screen, the STO1000 able to be used in 3 operation modes: Fulltouch operation, Physical button control panel, and the Mixture of both. The STO1000 equipped with highly sensitive digital trigger system, supports serial bus triggering and decoding; has rich measurements and math functions, comes standard with a digital filter module, 256-level intensity grading and color temperature display functions; also has WiFi, USB 3.0/2.0 Host, USB Type-C, HDMI, Trigger out connetions. Combined with Micsig's unique touch algorithm patented technology, the STO1000 presents unparalleled operating experience to users.

- Robust hardware design, intuitive Android operation system
- Excellent connectivity: Wi-Fi, HDMI, USB 3.0/2.0 Host, USB Type-C
- 8" capacitive integrated screen brings premium touch experience
- Up to 5H battery life & compact size, perfect for field work
- Special Power-off switch lock, safe to travel and store
- 32G internal storage to save large data / videos / screenshots
- Support various protocol decoding: UART, CAN, LIN, SPI, I²C
- Innovative PC & Smartphone App remote control
- Intelligent bi-directional probe interface-Micsig UPI

Key Specifications

Model	STO1004
Analog Channels	4
Bandwidth	100MHz
Sampling Rate (Max.)	1GSa/S (single channel)
Memory Depth	70Mpts (single channel)
Waveform Capture Rate (Max.)	130,000 wfms/s
Bandwidth Filter	20MHz, High Pass, Low Pass
Interfaces	Wi-Fi, USB 3.0/2.0 Host, USB Type-C, Grounding, HDMI, Trigger out
Display	Industrial 8" TFT-LCD (800*600), 14*10 grids
Dimension / Net Weight	265*192*50mm / 1.9kg (with battery)
Battery	7.4V, 7500mAh, Li-ion battery

CHARACTERISTICS & FEATURES

Strong
Soft TPU + ABS protective shell

Intuitive
8" Capacitive seamless touchscreen

Portable
Pre-installed side handle strap

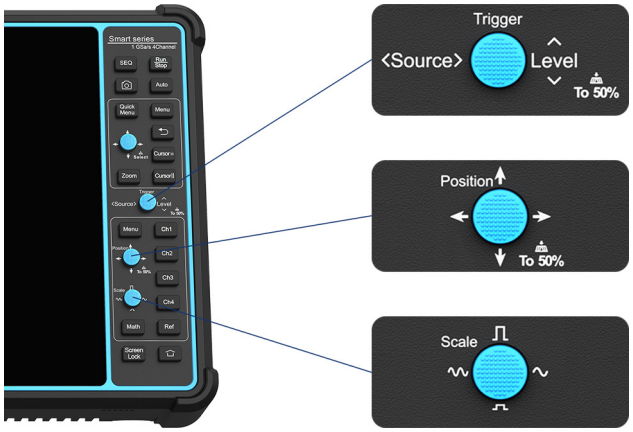
Stable
Triangle link bracket

Friendly
Excellent user interface

Fast Setup
Compact shortcut keys

Multifunctional
Innovative navigation button panel

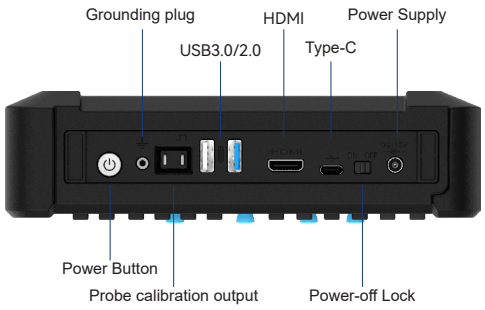
Smart
Slide-out menus, rich Android-based APPs



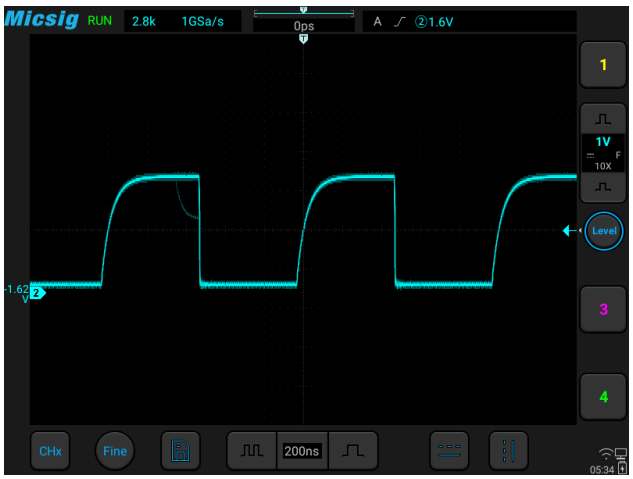
- Blue Caps: Highly integrated multifunction shortcut keys, deliver quick & accurate control to various operations.

- Built-in 7500mAh Li-ion battery, up to 5 hours battery life, Support Power-off lock, more secure to travel with.

- Micsig Universal Probe Interface (UPI), intelligent bi-directional oscilloscope to probe communication, easy to set up attenuation and calibration.

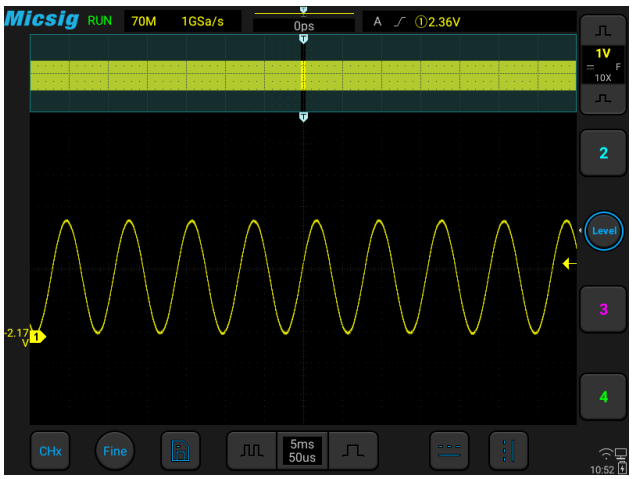


- Power button, Grounding plug, Probe Calibration Output, USB3.0/2.0, HDMI, Type-C, Power Supply, Power-off Lock (Note: switch to ON for first-time use)



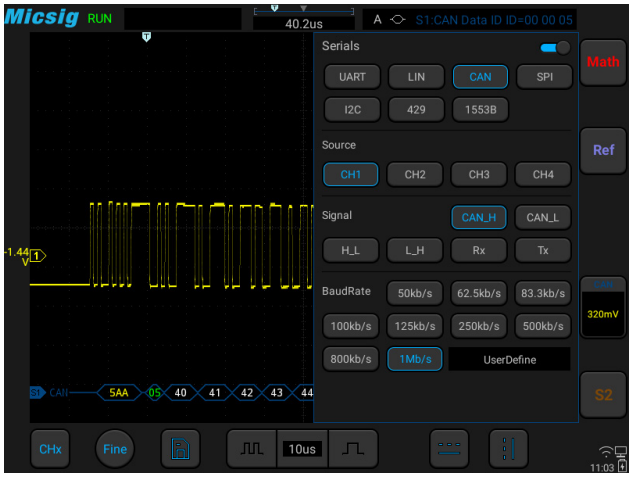
High Waveform Update Rate

With a waveform update rate of up to 130,000 wfms/s, the STO1000 series can easily capture unusual or low probability events.



Ultra-deep Memory

Using hardware-based Zoom technique and memory depth of up to 70Mpts, allow users to move and browse waveforms much easier and quickly zoom in to focus on the area of interest.

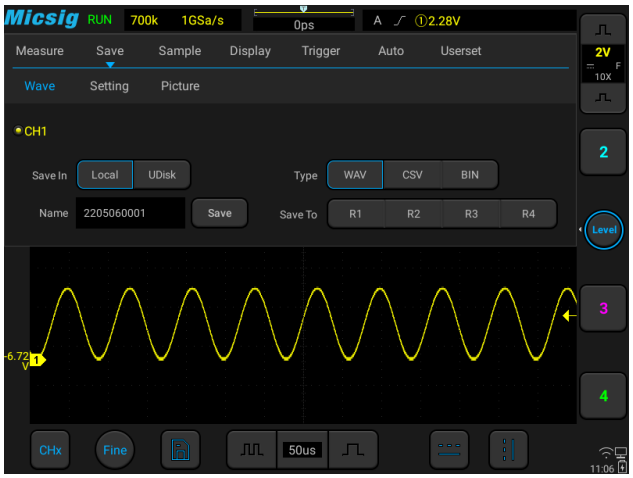


Serial Bus Decoding and Analysis

Support UART, LIN, CAN, I²C, SPI and other hardwarebased serial bus decoding and triggering, display waveform and data at the same time.

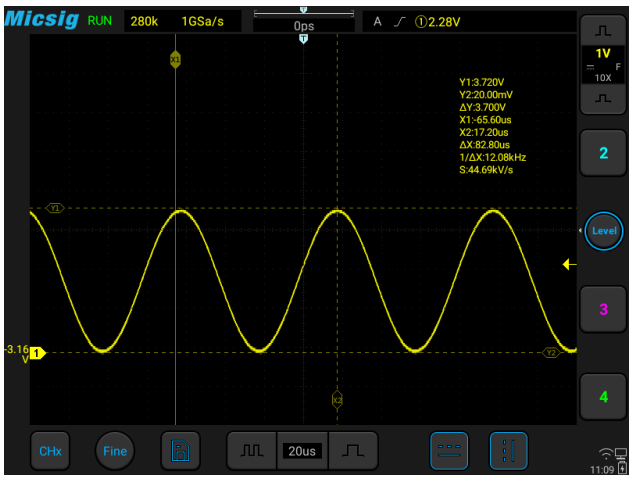
Powerful Trigger Functions

Support Edge, Pulse, Logic, N Edge, Runt, Slope, Timeout, Video and Serial trigger, most intuitive trigger settings, fast and easy trigger source switching.



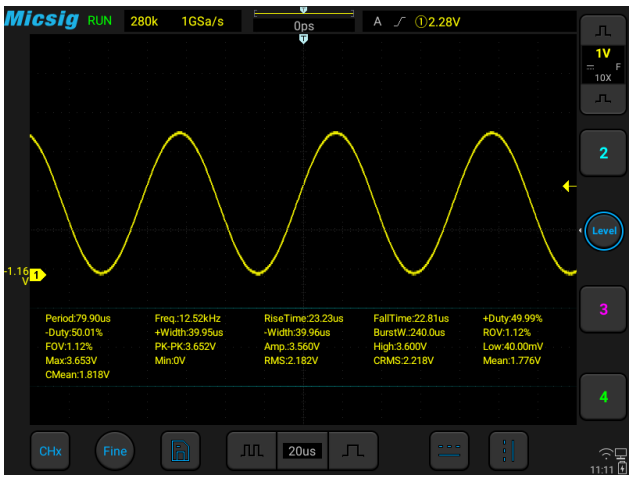
Fast Storage Function

Micsig's unique fast storage function allow users quickly save waveforms with one touch, a full screen of 70M waveform data can be completely saved in BIN format. More than 70% more efficient than traditional oscilloscopes.



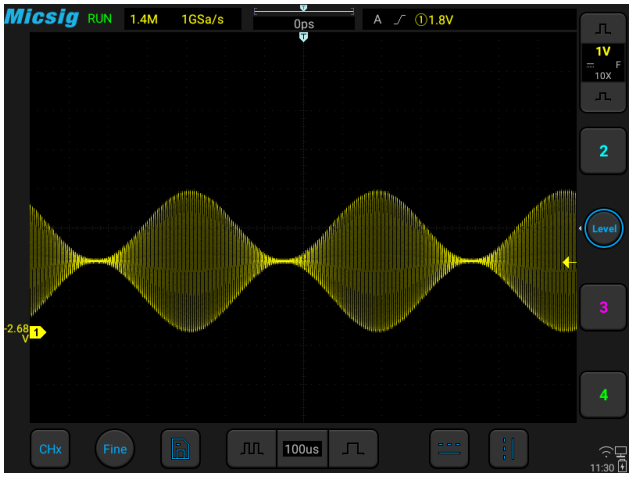
Convenient Cursor Measurement

One touch to open horizontal and vertical cursors, each cursor can be moved separately or simultaneously, brings unmatched user experience.



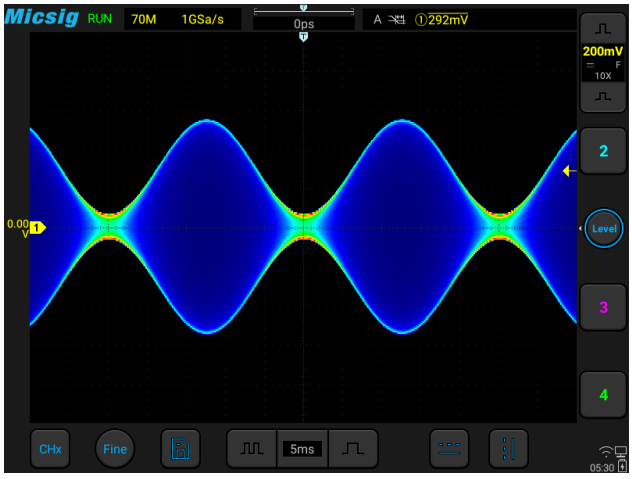
31 Auto Measurements

All 31 types of automatic measurements can be displayed on one screen, one touch to clear, the best auto measurement on the market.



256-Level Intensity Grading

The STO1000 has digital fluorescent display, the resulting intensity-graded trace is brighter for events that occur with more frequency and dims when the events occur with less frequency.

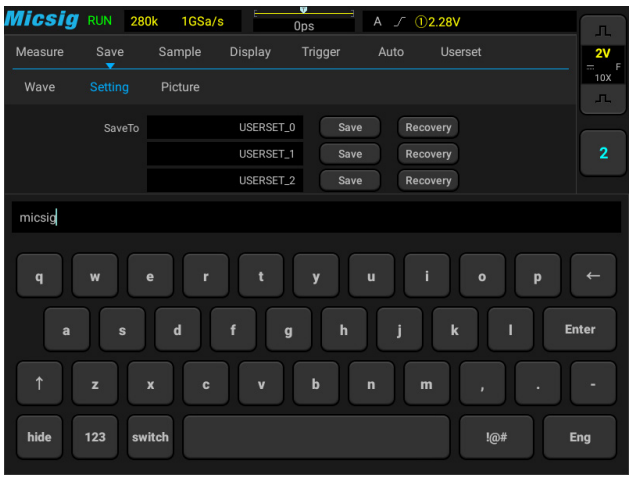


Color Temperature Display

The Color temperature display is similar to the intensity-graded trace function, but the trace occurrence is represented by different colors as opposed to changes in the intensity of one color. Red colors represent more frequently occurred events, while the bule represents less frequently ones.

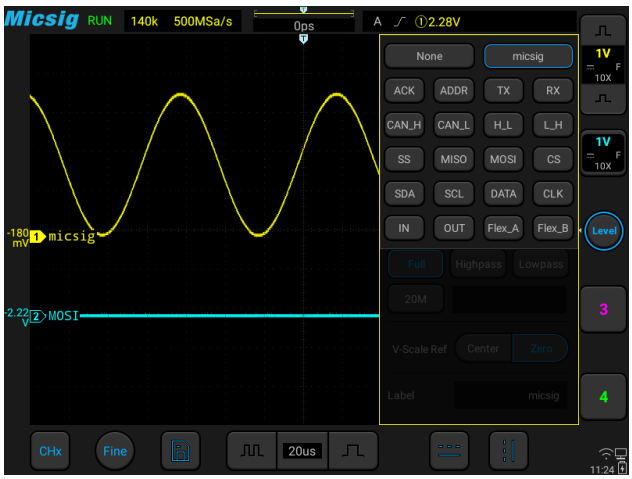
Hardware Digital Filter

The STO1000's high pass / low pass filter function helps engineers rule out insignificant frequency so to eliminate interference, and observe the true state of the signal.



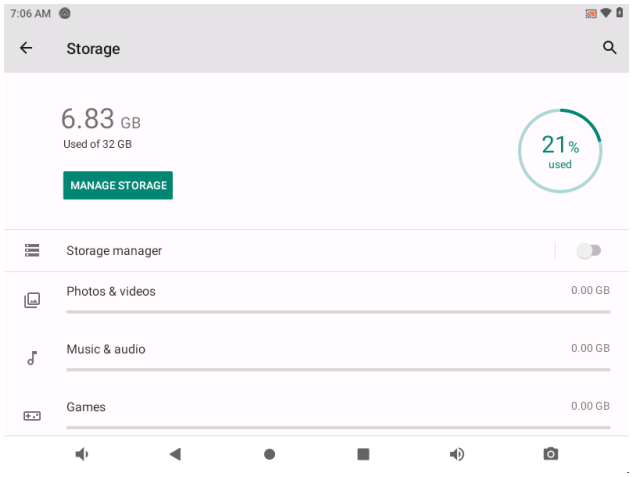
Soft Keyboard Input

When entering names, IPs, and characters, the STO1000 can easily click on the soft keyboard to input like a tablet PC, improving the efficiency by 90% than traditional benchtop oscilloscopes.



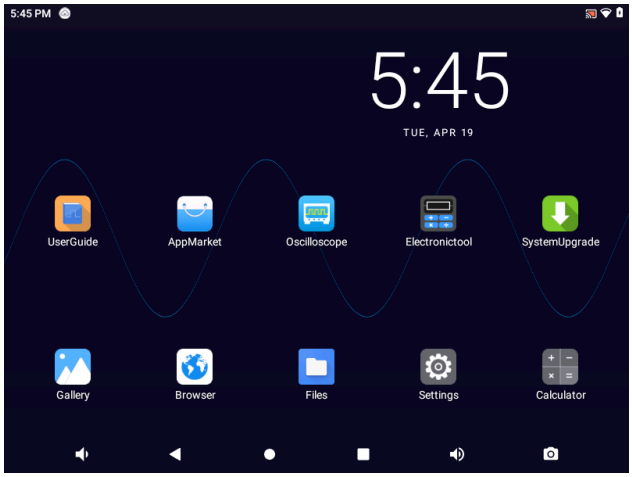
Channel Label

When measuring on multiple channels, users can set different labels for different sources to facilitate observation and reading.



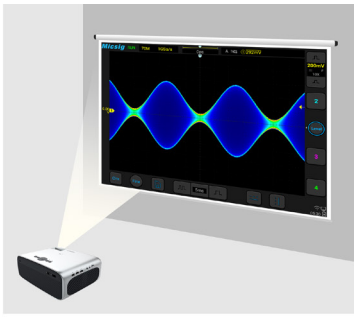
Large 32GB Internal Storage

Built-in 32G large storage, user can wirelessly access/view massive files like pictures, videos of the oscilloscope via PC and mobile phone.



Android Operation System

With industry-first Android based OS, the Smart STO1000 provides excellent user experience and promising applications.



Remote Control and Demonstration

The Smart series STO1000 support PC software + Mobile phone App (Android / iOS) remote control via connections of Wi-Fi, USB, able to access internet for online upgrade, it also can be projected through HDMI port for demonstrations for training and education purpose.

Specifications

Vertical System	
Input Coupling	DC, AC, GND
Rise Time	≤ 3.5ns
Input Impedance	1MΩ±1%||14.5pF±3pF
Vertical Resolution	8 bits
DC Gain Accuracy (Amplitude Accuracy)	<±2% (1MΩ Input)
Input Sensitivity Range	1mV/div~10V/div (1MΩ Input)
Ch-to-Ch Isolation DC to Maximum Bandwidth	≥40dB (100:1)
Offset Range	±2.5V (Probe attenuation X1, <500mV/div), ±120V (Probe attenuation X1, ≥500mV/div)
Maximum Input Voltage	CAT I 300Vrms (1MΩ Input)
Horizontal System	
Time Base	2ns/div~1ks/div
Time Base Delay Time Range	14 divisions ~ 14ks
Clock Drift	≤±5ppm / year
Time Base Accuracy	±20ppm
Sampling System	
Sampling Method	Real-Time
Peak Detect	Capture narrow glitches at all sweep speeds: CH – 1ns, dual CH – 2ns, four CH – 4ns
Maximum duration at highest sampling rate	70ms
Average	Selectable from 2, 4, 8, 16, 32, 64, 128, 256
Envelope	Selectable from 2, 4, 8, 16, 32, 64, 128, 256, ∞
Trigger System	
Trigger Mode	Auto, Normal, Single
Trigger Coupling	DC, AC, high frequency reject, low frequency reject, noise reject
Trigger Holdoff Range	200ns~10s
Trigger Types	
Edge	Positive or negative slope on any channel. Coupling includes DC, HF reject, LF reject, and noise reject.
Pulse Width	Trigger on width of positive or negative pulses that are >, <, =, ≠ or within a period of time of 8ns ~ 10s.
Logic	Trigger on any logic pattern of the channel changes to >, <, =, ≠, true value, false value within the set time range. Any input can be used as a clock to find patterns on clock edges. Defines the assigned mode (AND, OR, NAND, NOR) of all input channels as high, low or irrelevant
Video	Trigger on video signals varies according to different video formats, generally PAL/625, SECAM, NTSC/525, 720P, 1080I, 1080P, etc.
Time Out	Starting from the intersection of the signal and the trigger level, the trigger is generated when the duration above (or below) the trigger level reaches the set time
Slope	Trigger on the time of the waveform from one level to another level meets the set time condition
Runt Pulse (Runt)	Trigger on a pulse that crosses one threshold but fails to cross a second threshold before crossing the first again.
N Edge	Trigger on the Nth rising/falling edge of the waveform

Waveform Measurements	
Cursors	Horizontal, Vertical, Cross
Automated Measurements	31 types, of which up to 10 types can be displayed on-screen at any time. Including: 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, Maximum, Minimum, RMS, Cycle RMS, Mean, Cycle Mean
Hardware Frequency Meter	6 digits
Waveform Math	
Dual Waveform	Add, Subtract, Multiply, Divide
FFT	Spectral magnitude. Set FFT vertical scale to linear RMS or decibel dBV RMS, set FFT window to Rectangular, Hamming, Hanning or Blackman-Harris
Display System	
Display Type	8-inch TFT LCD multi-point capacitive touch screen
Display Resolution	800*600 pixels
Operation Method	Touch, Button, Touch + Button
Persistence Duration	Auto, 10ms~10s, ∞
Time Base Mode	YT, XY, Zoom, Roll (scroll waveforms right to left across the screen at sweep speeds slower than or equal to 200 ms/div)
Expand Benchmark	Center, Trigger position
Waveform Display	Vectors, Line, brightness adjustable
Graticules	14 x 10, brightness adjustable
Waveform Update Rate	130,000 wfms/s
Clock	Real time, user adjustable
Language	English, Chinese, German, French, Czech, Korean, Spanish, Italian, etc.
Storage	
Storage Medium	Local, USB drive
Internal Storage	32G
Waveform Storage Format	csv, wav, bin
Store Waveform Quantity	Unlimited
Stored Waveform Rename	Support
Reference Waveform Display	4 internal waveforms
Quick Screenshot	Support
User Setting Storage	10 internal setups
User Settings Rename	Support
USB Flash Drive	Support industry standard flash drives
Input / Output Ports	
USB3.0 Port	Support one USB mass storage device, read and edit
USB2.0 Port	One, read and edit
USB Type-C	One, read and edit
DC Port	One
Probe CompenSTOr	1KHz, 2Vpk-pk
HDMI	HDMI 1.4
Wi-Fi	Support
Android/iOS Remote Control Application	Support
SCPI	Support

Power Source	
Power Voltage Range	100~240VAC, 50/60Hz
Power Consumption	< 60W
Adapter Output	12V DC, 4A
Battery	7.4V, 7500mAh Li-ion battery

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

Physical Characteristics	
Dimensions (W x H x D)	265*192*50mm
Weight	Net: 1.9kg (with battery), Shipping: 4.5kg

Standard Accessories	
Passive Probe	Measuring voltage: 10X: < 600V AC pk, one per channel
Power Adapter	One (Localized)
Power Cord	One
Warranty	Three-year warranty for Base Unit only, probes, battery and related accessories are valid for 180 days

Instrument Options	
Customized Battery (Standard)	7.4V, 7500mAh Li-ion battery
Bus Decoding	**Standard**: UART, LIN, CAN, SPI, I²C; **Optional**: ARINC-429, MIL-STD-1553B
Recommended Accessory	Customized nylon handbag, hard shell suitcase, screen protective mask

Micsig

Shenzhen Micsig Technology Co., Ltd.
Phone: +86 755-88600880
Email: sales@micsig.com Web: www.micsig.com
Add: 1F, Huafeng International Robot Industrial Park, Hangcheng Rd, Bao'an District, Shenzhen, Guangdong, China