



ISDS210A  
ISDS210B

# ISDS210A(B) User Guide

InstruStar Electronic Technology

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## **PC SYSTEM REQUIREMENTS**

- Windows XP, Win7, Win8, Win10
- Pentium or higher processor
- USB2.0 High speed port.
- 512MB RAM
- 1GB hard disk space

## 1.Introduction

ISDS210A/ISDS210B dual-channel digital oscilloscope, with "low-cost, high-performance" as the design goals. well-designed bandwidth of 30M, 100M sampling rate, 2 channels, alternating support X-T and X-Y alternating pattern of two-channel virtual oscilloscope, spectrum analyzer. Meanwhile, ISDS210B has DDS function. DDS support 5 kinds of waveform output, Sine wave can output up to 20M. The device communicate with the PC via high speed USB2.0.

	Oscilloscope	Spectrum Analyzer	DDS	Sweeper
ISDS210A	√	√		
ISDS210B	√	√	√	√

## 2.Feature Description

Digital Oscilloscope	
Channels	2
Impedance	1MΩ 25pF
Coupling	AC/DC
Vertical Resolution	8Bit
Gain Range	-16V ~ 16V (probe X1) -160V ~ 160V (probe X10)
Vertical Accuracy	±3%
Time Base Range	10ns/div-10s/div
Input Protection	Diode, 50Vpk
Auto Set	Yes(10Hz to 40MHz)
Trigger Mode	Auto、 Normal and Signal
Trigger Type	No, Edge, Pulse
Trigger Level	Yes
Trigger Source	CH1, CH2
Buffer Size	256KB/CH
Bandwidth	30MHz
Max Sample	100MS/s
Vertical mode	CH1, CH2, ADD, SUB, MUL
Display Mode	X, Y-T 和 X-Y
Measurements	Yes
Wave Save	Osc(Private)、 Excel and Bmp

Spectrum Analyzer	
Channels	2
Bandwidth	30MHz
Algorithm	FFT(18 windows)、correlation
FFT Points	8-1048576/CHN
FFT Measure	Harmonic(1-7)、SNR、SINAD、ENOB、THD、SFDR
Filter Process	<p>FIR filter supports arbitrary range of frequency sampling method , and Rectangle, bartlett, triangular, cosine, hanning, bartlett_hanning, hamming, blackman, blackman_Harris, tukey, Nuttall, FlatTop, Bohman, Parzen, Lanczos, kaiser, gaussand dolph_chebyshev, window method design.</p> <p>IIR filter support "Butterworth", "Chebyshev I", "Chebyshev II", "Elliptic" type of filter design</p>

DDS(Only ISDS210B)	
Wave	Sine, Square(Duty circle variable),Triangle,Up Sawtooth,Down Sawtooth
Amplitude	$\geq 9V_{p-p}$ (no load)
Impedance	$200\Omega \pm 10\%$
Offset	$\pm 2.5V$
Frequency Range	1Hz ~ 20MHz(Sine), 1Hz ~ 2MHz(Others)
Frequency Resolution	1Hz
Frequency Steadiness	$\pm 1 \times 10^{-3}$
Frequency Precision	$\pm 5 \times 10^{-3}$
Triangular Wave Linearity	$\geq 98\%$ (1Hz~10kHz)
Sine Wave Distortion	$\leq 0.8\%$ (1kHz)
Square Wave Rising/Falling Time	$\leq 100ns$
Square Wave Duty Circle	1%~99%
SWEEP	
Sweep Range	F <sub>s</sub> 到 F <sub>e</sub>
Sweep Time Range	0.1 ~10 s
Amplitude	0.5V <sub>p-p</sub> ~ 10V <sub>p-p</sub>

Sweeper (Only ISDS210B)	
Sweep Range	1Hz~5MHz
Sweep Type	Gain, Phase

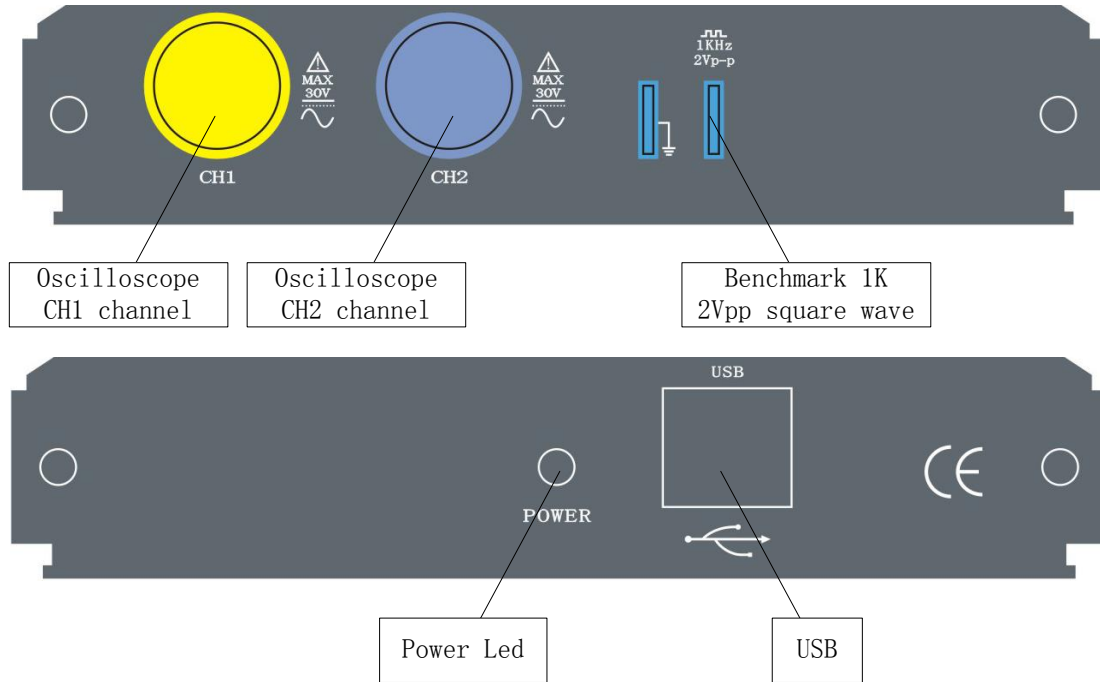
**Note: The oscilloscope factory calibration, if you are not satisfied with the measurements, can manual calibration, the specific reference oscilloscope**

### 3. Software Installation

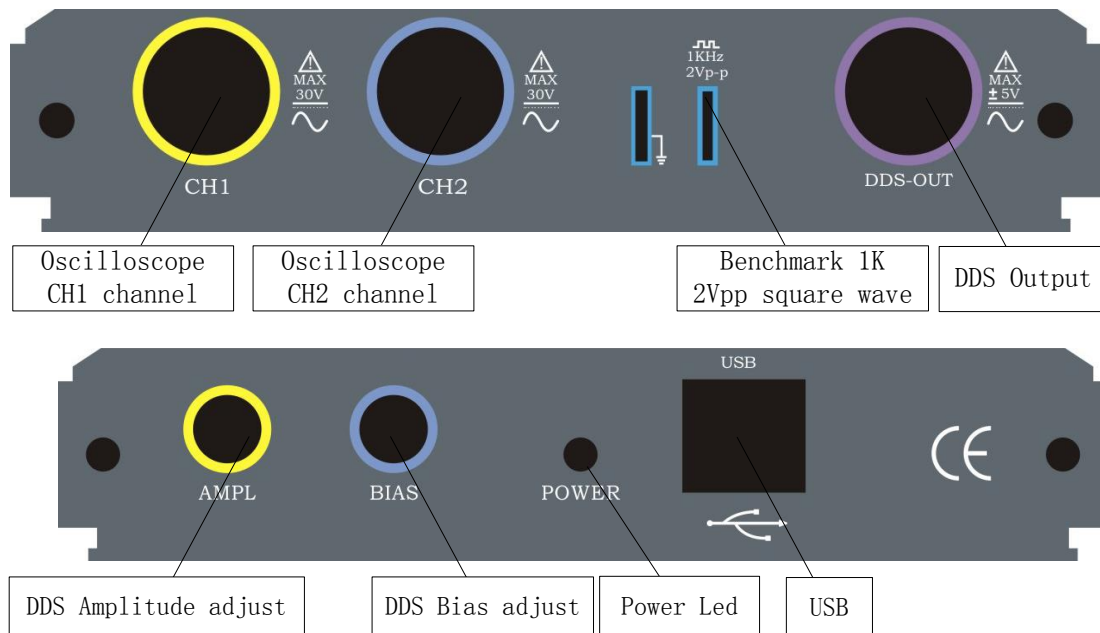
Please refer to the "Software and Driver Installation.pdf".

### 4. Interface

#### 4.1 ISDS210A



#### 4.2 ISDS210B



### 5. Oscilloscope / Spectrum analyzer / DDS

Please refer to the "Multi VirAnalyzer User Guide.pdf", "Digital storage oscilloscope (Professional Version).pdf" and "Digital storage oscilloscope (Simplified Version).pdf".