

USBscope50

1Gbps/75MHz USB pen-style DSO (Digital Storage Oscilloscope)

USBscope50 is a new concept in USB DSO (Digital Storage Oscilloscope) products. PC based oscilloscopes deliver many user benefits including flexibility, ease of use and economy.

The USB interface has developed into probably the best and most widely implemented PC peripheral connection method and is a natural choice for the DSO (Digital Storage Oscilloscope).



USBscope50 combines very small form factor with high performance normally associated with much larger bench type products. Power for the DSO (Digital Storage Oscilloscope) is provided via the USB interface connector, further simplifying the user experience.

Most USB DSO (Digital Storage Oscilloscopes) implement 2 channels but the USBscope50's modular design allows the user to choose to configure a single channel or up to 4 channels. Elan's proprietary synchronisation system ensures tight Oscilloscope channel to channel matching and concurrent triggering.

USBscope50 is small enough to be carried in a shirt pocket or laptop bag but uses standard BNC oscilloscope probes.

Technical Features



USB Interface



Comes with Windows USBscope50 software for 98SE/2K/XP



50Msps 8-bit single shot



1Gbps equivalent time sampling (repetitive input waveforms)



DC-75MHz analogue bandwidth



1Meg || 15pF input impedance



30V/3V/0.3V input ranges with x1 probe. 300V/30V/3V with x10 probe



AC or DC coupling



Programmable input offset



Programmable trigger threshold and edge modes



Input is galvanically isolated from USB port to 300V Cat II



3000 point sample depth with pre and post trigger



200mA host power consumption, with support for suspend



Probe compensation output signal



Stackable or use stand-alone



Body is approx. 75mm x 31mm x 17.5mm



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USBscope50 Technical Data

INPUT

Maximum Single Shot Sample Rate	50 Msamples/second										
Maximum Effective Sample Rate	1 GSample/second										
Channels	1 per USBScope50 Module										
Input Ranges 10 division full scale	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Probe</th> <th style="text-align: center;">Voltage per division</th> <th style="text-align: center;">Full scale voltage (+/-)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1x probe</td> <td style="text-align: center;">30mV to 3V per division</td> <td style="text-align: center;">300mV to 30V</td> </tr> <tr> <td style="text-align: center;">10x probe</td> <td style="text-align: center;">300mV to 30V per division</td> <td style="text-align: center;">3V to 300V</td> </tr> </tbody> </table>	Probe	Voltage per division	Full scale voltage (+/-)	1x probe	30mV to 3V per division	300mV to 30V	10x probe	300mV to 30V per division	3V to 300V	
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1x probe	30mV to 3V per division	300mV to 30V									
10x probe	300mV to 30V per division	3V to 300V									
Vertical Resolution	8 bits										
Bandwidth	75MHz 3dB										
Offset Range	+/- 100% of range										
Coupling	AC, DC and Ground										
Impedance	1M Ω // 16pF										
DC Accuracy	+/- 4% typ.										

TIMEBASE

Range	1ns/division to 4s/division in 1,2,4 steps	
Accuracy	+/- 0.02%	
Resolution	20ns single-shot, 1ns RIS mode	

BUFFER

Size	3000 points	
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CALIBRATION

Probe	Compensation output, 3V @ 1KHz	
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TRIGGER

Type	Rising Edge Falling Edge Greater Than Less Than	
Mode	Auto, Normal and Single	
Delay	Programmable in steps of sample period, 0 to 65535 steps	
Bandwidth	60MHz	
Range	100% of range	

SOFTWARE

Windows 98SE / ME	Yes	
Windows 2K / XP	Yes	
FFT	2048 point per channel	
Math	2 Math channels, with FFT	
Data Export	Via text file to Excel etc.	
Full Screen Plot	Yes for time window and FFT window	
Screen Stats	V _{avg} , V _{pk-pk} , Frequency per channel	
Cursors	3 time, 3 Voltage	

PHYSICAL

Interface	USB 12 MBits/sec	
Power Requirement	200mA from USB Bus	
Housing Size	75mm x 30mm x 18mm	
Mass	42g typ.	
Stacking	Up to 4 channels	

