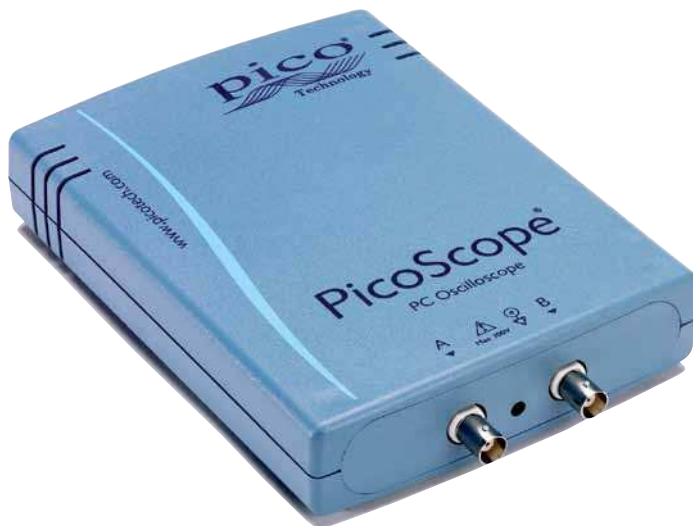


PicoScope[®] 4000 Series

HIGH-PRECISION USB OSCILLOSCOPES

Speed, Precision and Detailed Capture



32 MS buffer
12-bit resolution
80 to 250 MS/s sampling
20 to 100 MHz bandwidth
2 or 4 channels
2 channel IEPE model
USB powered



32 MS BUFFER
12-BIT
IEPE

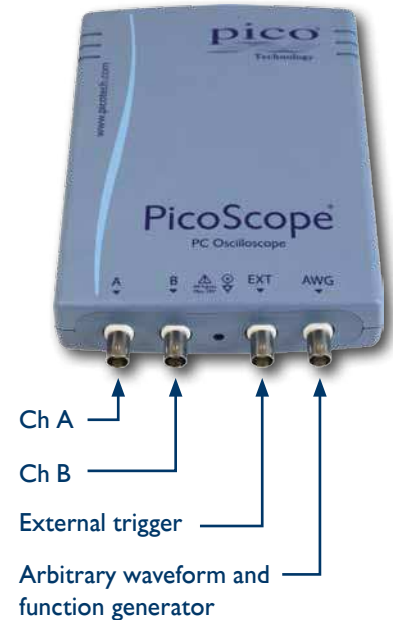


Supplied with a full SDK including example programs
• Software compatible with Windows XP, Windows Vista
and Windows 7 • Free Technical Support

MODEL	PicoScope 4424	PicoScope 4224	PicoScope 4224 IEPE	
INPUTS				
			Passive Probe Mode	IEPE Interface Mode
Number of channels	4 BNC inputs	2 BNC inputs	2 BNC inputs	2 BNC inputs
Analog bandwidth	20 MHz (10 MHz on ± 50 mV range)		DC to 20 MHz	1.6 Hz to 20 MHz (10 MHz on ± 50 mV range)
Voltage ranges	± 50 mV to ± 100 V		± 50 mV to ± 20 V	
Sensitivity	10 mV/div to 20 V/div		10 mV/div to 4 V/div	
Vertical resolution	12 bits (up to 16 bits with resolution enhancement)		12 bits (up to 16 bits with resolution enhancement)	
Input coupling	AC or DC, software-controlled		AC or DC, software-controlled	
Input impedance	1 M Ω 22 pF		1 M Ω 22 pF	1 M Ω 1 nF
Overvoltage protection	± 200 V		± 100 V	
SAMPLING				
Timebases	100 ns/div to 200 s/div		100 ns/div to 200 s/div	
Maximum sampling rate (real-time)	1/2 channels: 80 MS/s 3/4 channels: 20 MS/s	80 MS/s	80 MS/s	
Buffer size	32 M samples shared between active channels		32 M samples shared between active channels	
TRIGGERING				
Sources	Any input channel			
Ch A, Ch B trigger types	Edge with hysteresis, pulse width, runt pulse, dropout, windowed			
EXT trigger types	Rising edge, falling edge			
PERFORMANCE				
Timebase accuracy	50 ppm			
DC accuracy	1% of full scale			
Trigger resolution	1 LSB (Ch A, Ch B)			
Trigger re-arm time	2.5 μ s (fastest timebase)			
ENVIRONMENT				
Temperature range	Operating: 0 $^{\circ}$ C to 45 $^{\circ}$ C For stated accuracy: 20 $^{\circ}$ C to 30 $^{\circ}$ C Storage: -20 $^{\circ}$ C to 60 $^{\circ}$ C			
Humidity range	Operating: 5% to 80% RH, non-condensing Storage: 5% to 95% RH, non-condensing			
PC connection	USB 2.0. Compatible with USB 1.1			
PC operating system	Windows XP, Windows Vista or Windows 7			
Power supply	5 V @ 500 mA max. from USB port			
Dimensions	200 mm x 140 mm x 38 mm including connectors			
Weight	< 500 g			
Compliance	EU EMC and LVD Standards RoHS and WEEE, FCC Rules Part 15 Class A			



MODEL	PicoScope 4226	PicoScope 4227
INPUTS		
Number of channels	2 BNC inputs	
Analog bandwidth	50 MHz	100 MHz
Voltage ranges	± 50 mV to ± 20 V	
Sensitivity	10 mV/div to 4 V/div	
Vertical resolution	12 bits	
Input coupling	AC or DC, software-selectable	
Input impedance	1 M Ω 16 pF	
Overvoltage protection	± 100 V	
SAMPLING		
Timebases	100 ns/div to 200 s/div	50 ns/div to 200 s/div
Maximum sampling rate (real-time)	1 channel in use 125 MS/s	1 channel in use 250 MS/s
	2 channels in use 125 MS/s	2 channels in use 125 MS/s
Maximum sampling rate (ETS)	10 GS/s	
Buffer size	32 MS shared between active channels	
TRIGGERING		
Sources	Ch A, Ch B, Ext	
Ch A, Ch B trigger types	Edge, window, pulse, interval, dropout, runt, delayed	
EXT trigger types	Rising/falling edge	
EXT TRIGGER INPUT		
Connector	BNC	
Bandwidth	100 MHz	
Impedance	1 M Ω 20 pF	
Voltage range	± 20 V	
Threshold range	± 150 mV to ± 20 V	
Coupling	DC	
Overvoltage protection	± 100 V	
FUNCTION GENERATOR / ARBITRARY WAVEFORM GENERATOR		
Connector	BNC	
Function generator frequency range	DC to 100 kHz	
Function generator waveforms	Sine, square, triangle, ramp, sin(x)/x, Gaussian, half-sine, white noise, DC level	
Buffer size	8192 samples	
DAC update rate	20 MS/s	
DAC resolution	12 bits	
Bandwidth	100 kHz	
DC accuracy	1%	
Output range	± 250 mV to ± 2 V	
Output offset range	± 1 V	
Max. combined output	± 2.5 V	
Output resistance	600 Ω	
Overvoltage protection	± 10 V	
PERFORMANCE		
Timebase accuracy	50 ppm	
DC accuracy	1% of full scale	
Trigger resolution	1 LSB (Ch A, Ch B)	
Trigger re-arm time	1 μ s (fastest timebase, rapid trigger)	
ENVIRONMENT		
Temperature range	Operating: 0 $^{\circ}$ C to 45 $^{\circ}$ C For stated accuracy: 20 $^{\circ}$ C to 30 $^{\circ}$ C Storage: -20 $^{\circ}$ C to 60 $^{\circ}$ C	
Humidity range	Operating: 5% to 80% RH, non-condensing Storage: 5% to 95% RH, non-condensing	
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Compliance	EU EMC and LVD Standards RoHS and WEEE, FCC Rules Part 15 Class A	



Additional features:

- Mask limit testing with alarms
- Serial data decoding (CAN, I²C etc.)
- Per-channel low-pass filtering
- Math channels
- Reference waveforms
- Waveform buffer with up to 10,000 segments and visual navigator
- Digital Color and Analog Intensity persistence modes
- XY mode

