

# PicoScope<sup>®</sup> 4000 Series

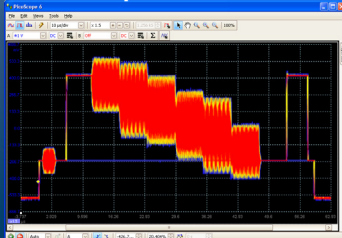
High-Precision PC Oscilloscopes



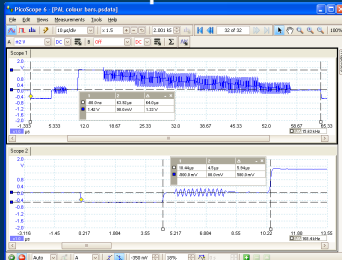
## Detailed waveform capture from Pico Technology

- 12-bit resolution
- 80 MS/s real-time sampling rate
- USB 2.0 interface for data and power
- 32 M sample buffer size
- Up to 4 channels
- 2-channel IEPE model available

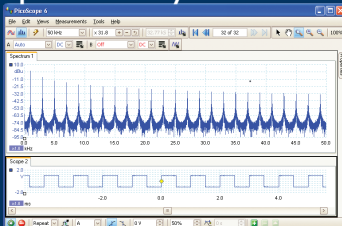
### Oscilloscope



### Zoomed scope views



### Spectrum analyzer



## All-in-one instruments

The PicoScope 4000 Series PC Oscilloscopes are extremely versatile, with an oscilloscope and spectrum analyzer included in every model.

## PicoScope 4224 IEPE

The 2-channel IEPE version is compatible with industry-standard IEPE accelerometers and microphones, making it suitable for a variety of measurement applications including noise and vibration analysis.

## Convenience and speed

The PicoScope 4000 Series scopes obtain their power from the USB 2.0 interface, so there's no need for an external power supply. The USB port also delivers high-speed data to your PC to give you a responsive, high-resolution display. With 80 MS/s sampling, the 4000 Series scopes are the fastest USB-powered 12-bit scopes around.

## Deep memory

The 32 M sample buffer is 'always on'. There is never a compromise between buffer size and waveform update rate, because the PicoScope 4000 Series always maximises both at the same time. Now you can capture every waveform with full detail without having to think about it.

## Advanced software

The scopes are bundled with the latest version of PicoScope for Windows. PicoScope is easy to use and can export data in a variety of graphical, text and binary formats. Also included are Windows drivers and example programs.

**Channels (vertical)**

Number of channels  
Bandwidth

Output

Sensitivity

Full-scale ranges

DC accuracy

Nominal input impedance

Overload protection

Input coupling

Input connectors

**Timebase (horizontal)**

Timebases

Timebase accuracy

Timebase jitter

**Trigger**

Trigger sources

Modes

Types

**Acquisition**

ADC resolution

Software filtering

Sampling rate

Buffer size

Number of waveform segments in buffer

**Display**

Display styles

**Measurements and analysis**

Rulers

Automatic measurements

Channel maths

FFT

**General**

Operating temperature range

Power

PC connection

PC requirements

Dimensions

Weight

Approvals

**PicoScope 4424****PicoScope 4224****PicoScope 4224 IEPE****Passive Probe Mode****IEPE Interface Mode**

4

2

20 MHz (10 MHz on  $\pm 50$  mV range)

N.A.

N.A.

10 mV/div to 20 V/div

$\pm 50$  mV to  $\pm 100$  V

1% of full scale

1 M $\Omega$  || 22 pF

$\pm 200$  V

AC or DC, software-controlled

4 x BNC

2 x BNC

2

DC to 20 MHz  
(10 MHz on  $\pm 50$  mV range)

1.6 Hz to 20 MHz  
(10 MHz on  $\pm 50$  mV range)

N.A.

4 mA up to 24 V  $\pm 5\%$

10 mV/div to 4 V/div

$\pm 50$  mV to  $\pm 20$  V

1% of full scale

1 M $\Omega$  || 22 pF

1 M $\Omega$  || 1 nF

$\pm 100$  V

AC or DC,  
software-controlled

AC

2 x BNC

100 ns/div to 200 s/div

50 ppm

$\leq 10$  ps

Any input channel

Auto, repeat, single, none

Rising edge, falling edge, edge with hysteresis, pulse width, runt pulse, dropout, windowed

12 bits (up to 16 bits with resolution enhancement)

User-adjustable cut-off frequency and on/off control

1/2 channels: 80 MS/s

3/4 channels: 20 MS/s

80 MS/s

32 M samples shared between active channels

Adjustable from 1 to 10,000

12 bits (up to 16 bits with resolution enhancement)

User-adjustable cut-off frequency and on/off control

80 MS/s

32 M samples shared between active channels

Adjustable from 1 to 10,000

Real-time, digital color, analog intensity

2 per channel on Y axis + 2 on X axis

15 automatic measurements in time domain and 11 in frequency domain

Invert, add, subtract, multiply, divide, advanced equations

Spectrum view with up to 1 M points

+0 °C to +45 °C

(+20 °C to +30 °C for quoted accuracy)

Powered from USB port: 5 V @ 500 mA max.

USB 2.0 (Compatible with USB 1.1)

Microsoft Windows XP (SP2), Vista, Windows 7

200 mm x 140 mm x 38 mm

< 500 g

FCC (EMC), CE (EMC, LVD), RoHS

**ORDER CODES and PRICES**

CODE	DESCRIPTION	PRICE
PP493	PicoScope 4424	£799 \$1318.35 €967.00
PP492	PicoScope 4224	£499 \$823.35 €604.00
PP695	PicoScope 4224 IEPE	£599 \$988.35 €725.00

US dollar and euro prices are subject to exchange rate variations. Contact Pico Technology or your distributor for up-to-date prices.

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