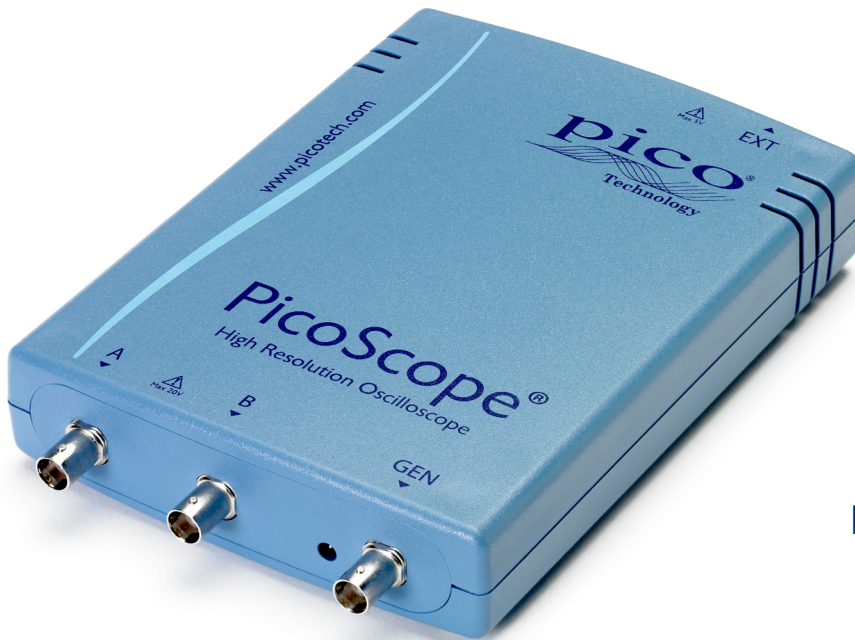


PicoScope[®] 4262

HIGH-RESOLUTION USB OSCILLOSCOPE

A digital oscilloscope for the analog world



Low noise

Two channels

16 MS buffer

16-bit resolution

10 MS/s sampling

5 MHz bandwidth

Advanced digital triggers

Low-distortion signal generator

Arbitrary waveform generator

USB powered



16 bit



Supplied with an SDK including example programs • Free Technical Support
• Software compatible with Windows 7, Windows 8 and Windows 10

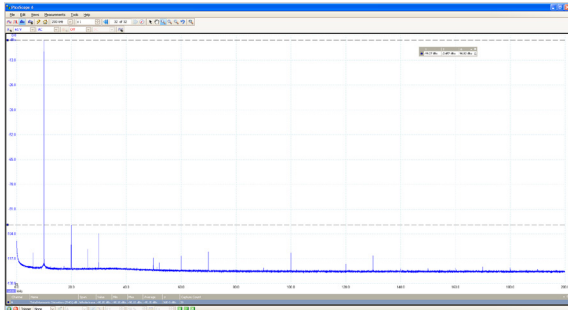
...from a name you can trust

PicoScope 4262 Oscilloscope

Introduction to the PicoScope 4262

Low distortion, low noise

The PicoScope 4262 from Pico Technology is a 2-channel, 16-bit high-resolution oscilloscope with a built-in low-distortion signal generator. With its 5 MHz bandwidth, it can easily analyze audio, ultrasonic and vibration signals, characterize noise in switched mode power supplies, measure distortion, and perform a wide range of precision measurement tasks.



Full-featured oscilloscope

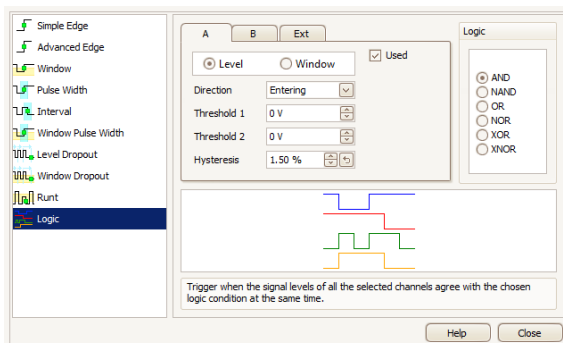
The PicoScope 4262 is a full-featured oscilloscope, with a function generator and arbitrary waveform generator that includes a sweep function to enable frequency response analysis. It also offers mask limit testing, math and reference channels, advanced digital triggering, serial decoding, automatic measurements and color persistence display.

Designed for the analog world

When used in spectrum analyzer mode, the scope provides a menu of eleven automatic frequency-domain measurements such as IMD, THD, SFDR and SNR. Its performance is so good that it rivals many dedicated audio analyzers and dynamic signal analyzers costing several times the price.

Most digital oscilloscopes have been designed for viewing fast digital signals. The trend has been to use new technology solely to increase sampling rate and bandwidth. With the PicoScope 4262 we have focused on what's important for measuring analogue signals: increasing the resolution, improving dynamic range, and reducing noise and distortion.

Advanced triggers



As well as the standard range of triggers found on all oscilloscopes, the PicoScope 4262 offers a comprehensive set of advanced digital triggers including pulse width, windowed and dropout triggers to help you capture the data you need.

Digital triggering

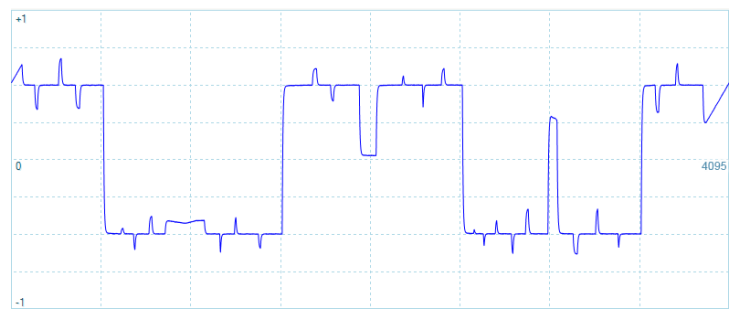
Digital triggering reduces trigger errors and allows our oscilloscopes to trigger on the smallest signals, even at the full bandwidth. Trigger levels and hysteresis can be set with great precision and resolution.

Digital triggering also reduces re-arm delay and this combined with the segmented memory allows the triggering and capture of events that happen in rapid sequence. At the fastest timebase you can use rapid triggering to capture a new waveform every microsecond. The mask limit testing function can then scan through these waveforms to highlight any failed waveforms for viewing in the waveform buffer.

Arbitrary waveform and function generator

The unit has a built-in signal generator (sine, square, triangle, DC level). As well as basic controls to set level, offset and frequency, more advanced controls allow you to sweep over a range of frequencies. Combined with the spectrum peak hold option, this makes a powerful tool for testing amplifier and filter responses.

Also included is a fully programmable arbitrary waveform generator with a 4 k-sample buffer.



High-end features as standard

To protect your investment, both the API and the firmware inside the unit can be updated. We have a long history of providing new features for free via software downloads. Other companies make vague promises about future enhancements but we deliver on our promises year after year. Users of our products reward us by becoming lifelong customers, frequently recommending us to their colleagues.

High signal integrity

Most oscilloscopes are built down to a price; ours are built up to a specification.

Careful front-end design and shielding reduces noise, crosstalk and harmonic distortion. Years of oscilloscope experience enable us to achieve improved pulse response and bandwidth flatness.

We are proud of the dynamic performance of our products and publish these specifications in detail. The result is simple: when you probe a circuit with a PicoScope, you can trust in the data you capture.

PicoScope 4262 Specifications

| | |
|---------------------------------------|--|
| VERTICAL | |
| Number of channels | 2 |
| Input connectors | BNC |
| Bandwidth (-3 dB) | 5 MHz (4 MHz on ± 20 mV range, 3 MHz on ± 10 mV range) |
| Bandwidth limiter | 200 kHz, switchable |
| Rise time (calculated) | 70 ns (88 ns on ± 20 mV range, 117 ns on ± 10 mV range) |
| Resolution | 16 bits (20 bits in enhanced resolution mode) |
| Input impedance | 1 M Ω $\pm 2\%$ 15 pF ± 2 pF |
| Input coupling | AC/DC |
| Input sensitivity | 2 mV/div to 4 V/div (10 vertical divisions) |
| Input ranges | ± 10 mV, ± 20 mV, ± 50 mV, ± 100 mV, ± 200 mV, ± 500 mV, ± 1 V, ± 2 V, ± 5 V, ± 10 V, ± 20 V |
| DC accuracy (% of full scale) | $\pm 0.25\%$ ($\pm 0.5\%$ on ± 50 mV range, $\pm 1\%$ on ± 20 mV range, $\pm 2\%$ on ± 10 mV range) |
| Overvoltage protection | ± 50 V (DC + AC Peak) |
| HORIZONTAL | |
| Maximum sampling rate (real-time) | 10 MS/s (1 or 2 channels in use) |
| Maximum sampling rate (USB streaming) | 10 MS/s using PicoScope 6 software. 10 MS/s (1 channel in use), 6.7 MS/s (2 channels in use) using supplied SDK. |
| Buffer memory | 16 MS |
| Waveform buffer (no. of segments) | 10 000 (with supplied software), 32 768 (in SDK) |
| Timebase ranges | 1 ns/div to 5000 s/div |
| Timebase accuracy | ± 50 ppm |
| Sample jitter | < 10 ps RMS |
| ADC sampling | Simultaneous sampling on all enabled channels |
| DYNAMIC PERFORMANCE (typical) | |
| Crosstalk | > 50 000:1 |
| Total harmonic distortion | -95 dB typical at 10 kHz, -1 dBfs input |
| SFDR | 96 dB typical at 10 kHz, -1 dBfs input |
| Pulse response | <1% overshoot all ranges |
| Bandwidth flatness | +0.25 dB to -3 dB, DC to full bandwidth |
| Noise | 8.5 μ V RMS (on most sensitive range) |
| TRIGGERS (CHANNELS A & B) | |
| Trigger modes | None, auto, repeat, single, rapid (segmented memory) |
| Basic trigger types | Rising, falling |
| Advanced digital trigger types | Edge, window, pulse width, window pulse width, dropout, window dropout, interval, runt pulse, logic |
| Trigger sensitivity (Ch A, Ch B) | Digital triggering provides 1 LSB accuracy up to full bandwidth of scope |
| Max. pre-trigger capture | Up to 100% of capture size |
| Max. post-trigger delay | Up to 4 billion samples |
| Trigger re-arm time | < 10 μ s on fastest timebase |
| EXT TRIGGER | |
| Trigger types | Edge, pulse width, dropout, interval, logic, delayed |
| Input characteristics | Rear panel BNC, 1 M Ω $\pm 2\%$ 15 pF ± 2 pF |
| Threshold range | ± 5 V and ± 500 mV, DC coupled |
| Sensitivity | 25 mV p-p at 1 MHz, typical |
| DC accuracy | $\pm 1\%$ |
| Bandwidth | 5 MHz |
| Overvoltage protection | ± 50 V |
| SPECTRUM ANALYZER | |
| Frequency range | DC to 5 MHz |
| Windowing functions | Rectangular, Gaussian, triangular, Blackman, Blackman-Harris, Hamming, Hann, flat-top |
| Display modes | Magnitude, peak hold, average |
| Number of FFT points | 128 to 1 million |
| MATH CHANNELS | |
| Functions | $-x$, $x+y$, $x-y$, $x*y$, x/y , \sqrt{x} , x^y , $\exp(x)$, $\ln(x)$, $\log(x)$, $\text{abs}(x)$, $\text{norm}(x)$, $\text{sign}(x)$, $\sin(x)$, $\cos(x)$, $\tan(x)$, $\arcsin(x)$, $\arccos(x)$, $\arctan(x)$, $\sinh(x)$, $\cosh(x)$, $\tanh(x)$ |
| Operands | Input channels A and B, time, reference waveforms, pi |

Specifications Continued...

| | |
|------------------------------------|--|
| SERIAL DECODING | |
| Protocols | I ² C, CAN Bus, SPI, RS232/UART, I ² S, LIN |
| MASK LIMIT TESTING | |
| Statistics | Pass/fail, failure count, total count |
| DISPLAY MODES | |
| Interpolation | Linear or sin (x)/x |
| Persistence modes | Digital color, analog intensity, custom, fast |
| SIGNAL GENERATOR | |
| Standard output signals | Sine, square, triangle, DC voltage, ramp, sinc, Gaussian, half-sine, white noise, PRBS |
| Bandwidth | 20 kHz |
| Output frequency accuracy | ±50 ppm |
| Output frequency resolution | < 0.01 Hz |
| Output voltage range | ±1 V (into high impedance load) |
| Offset voltage adjustment | 100 µV steps (within overall ±1 V range) |
| DC accuracy | ±0.5% of full scale |
| Amplitude flatness | < 0.1 dB to 20 kHz, typical |
| SFDR | 102 dB typical @ 10 kHz, -1 dBfs input |
| Connector type | Front panel BNC |
| Output characteristics | 600 Ω |
| Overvoltage protection | ±10 V |
| Sweep modes | Up, down, dual with selectable frequency and sweep time |
| AWG | |
| Update rate | 192 kS/s |
| Buffer size | 4096 samples |
| Resolution | 16 bits |
| Bandwidth | 20 kHz |
| Rise time (10% to 90%) | 11 µs, typical |
| AUTOMATIC MEASUREMENTS | |
| Scope mode | AC RMS, true RMS, frequency, cycle time, duty cycle, DC average, falling rate, rising rate, low pulse width, high pulse width, fall time, rise time, minimum, maximum, peak to peak |
| Spectrum mode | Frequency at peak, amplitude at peak, average amplitude at peak, total power, THD %, THD dB, THD+N, SFDR, SINAD, SNR, IMD |
| Statistics | Minimum, maximum, average, standard deviation |
| GENERAL | |
| PC connectivity | USB 2.0 (USB 1.1 compatible) |
| Power requirements | Powered from USB port |
| Dimensions | 210 x 135 x 40 mm (including connectors) |
| Weight | < 0.5 kg |
| Temperature range | Operating: 0 °C to 45 °C (20 °C to 30 °C for stated accuracy). Storage: -20 °C to +60 °C. |
| Humidity range | Operating: 5% to 80% RH, non-condensing. Storage: 5% to 95% RH, non-condensing. |
| Safety approvals | Designed to EN 61010-1:2010 |
| Compliance | RoHS and WEEE compliant. CE: Tested to EN61326-1:2006. FCC: Tested to part 15 subpart B. |
| Software included | PicoScope 6, SDK and example programs |
| PicoScope software PC requirements | Microsoft Windows 7, Windows 8 or Windows 10, 32-bit or 64-bit |
| Languages | Chinese (simplified & traditional), Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Swedish, Turkish |



Have you seen our PicoScope 4000 Series data sheet?

It shows the full range of features available with the PicoScope software, which turns your PicoScope 4262 into a powerful oscilloscope and spectrum analyzer. All of these capabilities are included in the price of your oscilloscope.

PicoScope 4262 Connections



The front panel of the PicoScope 4262 has two BNC input channels and a BNC output for the function generator and AWG.



The rear panel of the PicoScope 4262 has two connections: a USB port for connection to the PC, and a BNC for an external trigger to be connected.

Your PP799 PicoScope 4262 product pack contains the following items:

- 2 x MI007 probes
- PicoScope 4262
- USB cable
- Quick Start Guide
- Software and Reference CD



Ordering information

| ORDER CODE | PART DESCRIPTION |
|------------|--|
| PP799 | PicoScope 4262 16-bit oscilloscope with 2 probes |

UK headquarters:

Pico Technology
James House
Colmworth Business Park
St. Neots
Cambridgeshire
PE19 8YP

United Kingdom

+44 (0) 1480 396 395

+44 (0) 1480 396 296

sales@picotech.com

US headquarters:

Pico Technology
320 N Glenwood Blvd
Tyler
Texas 75702
United States

+1 800 591 2796

+1 620 272 0981

sales@picotech.com

台灣代理

■ 集研台北總公司

Tel : (02) 8792-6266 Fax : (02) 8792-6265
臺北市內湖區民權東路六段160號6樓之4

■ 集研台中業務處

Tel : (04) 2463-5648 Fax : (04) 2463-5537
臺中市西屯區台灣大道四段936號11樓之3

SystemAccess
...from sensor to report...
集研科技股份有限公司

Errors and omissions excepted. Pico Technology and PicoScope are internationally registered trade marks of Pico Technology Ltd.

MM030.en-10. Copyright © 2011–2017 Pico Technology Ltd. All rights reserved.

www.picotech.com

pico
Technology