

Cleverscope CS328 PC Oscilloscope

The Cleverscope CS328A is a USB connected PC based oscilloscope which brings benefits to the user that are unavailable from traditional stand alone oscilloscopes. This innovative approach delivers an unbeatable combination of affordability, ease of use and test results documentation with the simple "Cut and Paste" facility. Key features include:

- 2 by 10 or 12 or 14 bit analog channels - 100 MSa/s simultaneously
- 8 digital inputs - 100 MSa/s
- Huge 4 or 8M Samples storage per channel
- Highly flexible mixed signal triggering with dual mixed signal triggers offers triggering on level, duration, count and voltage slope.
- View small ac signals superimposed on large dc or ac offset
- Windows application software 2000, XP and Vista
- Simple Copy and Paste into other applications such as Word, Excel
- Oscilloscope and Spectrum analyzer displays
- Optional plug in signal generator module – 0-10 MHz, sine, square triangle, 0 - $\pm 5V$ Output, 0 - $\pm 4V$ offset.
- Self calibration
- Upgradeable firmware
- Includes all probes, cables, power supply, software and manuals on CD



CS328 Shortform Specification

Cleverscope Model CS328A is a USB connected, PC hosted oscilloscope and spectrum analyser with PC based application software.

CS328 Acquisition Unit

- Two 10 or 12 or 14 bit analog channels , 8 digital channels and an external trigger sampling simultaneously at 100 MSa/sec. AC or DC coupled.
- The analog channel range is automatically set from 20mV full scale to $\pm 200V$ full scale by choosing graph view and probe switch settings. Resolution varies from 20 μV to 400mV.
- Offset automatically set from -20 to $+20V$ in 10 mV increments by choosing graph view. As an example 20 mV signals may be viewed superimposed on a 5V DC level.
- One external trigger, threshold adjustable from $-6V$ to $+18V$ in 12 mV increments.
- Eight digital inputs sampling at 100 MSa/sec, threshold adjustable from 0 to 10 V in 10 mV increments.
- A hardware trigger system based on two mixed signal triggers. Each trigger is defined by a rising or falling edge on any input signal (including multiple ORed digital inputs), optionally qualified by a digital input combination. Offers edge, duration, count and voltage slope triggering. The duration maybe less than a minimum time length, in a time range, or greater than a maximum time length. The time length may be from 0 to 22 seconds, with 10ns resolution. The count may be 1 to 4.29 e9 counts.
- A rear panel link for stacking units to increase channel capacity.
- Storage capacity is 4 or 8M samples. Each sample is comprised of 2 Analog, 8 digital, 1 external trigger and 1 rear input signals.
- The sample storage may be allocated as between 2 to 3000 frames varying in size from 4M to 1300 samples. These may be used as a history store for reviewing previously captured signals, or carry out trigger referenced frame averaging in the acquisition unit (over 4, 16, 64 or 128 frames).
- 25 MHz 5th order Anti-alias filter for improved Spectrum Analysis performance
- Triggered LED and Power LED on the front panel.
- Input power range from 6 - 16V, 5W provided by a universal mains adaptor.
- Low jitter (1 ps rms) sampling clock for 70 dB spurious free dynamic range.
- Self calibration to ensure DC performance specifications are met.
- Optional 0-10 Mhz signal generator module. Can be swept for transfer function display (bode plots).
- Enclosure size: 153 x 195 x 35 mm



CS328A Application Software

- Separate, freely moveable and resizable windows to display the signal, a zoomed signal view, and the frequency spectrum of the signal, and control panel. Setup saved to disk.
- The zoomed signal view optionally tracks the signal view cursor.
- Spectrum analysis with a variety of conditioning windows and display in log or linear format.
- Each signal window includes a time/amplitude tracer, and two markers for comparison purposes.
- Colours are user definable.
- Signal averaging (exponential, block and peak hold) and low pass filtering.
- Signal measurement, including Peak to Peak, RMS, DC, pulse width, period and frequency.
- Copy and Paste to other applications.
- Save and Open binary and csv text files.
- User defined units, signal names and scaling (offset and gain).
- Maths module with up to 8 user defined equations including trig, filtering and integration functions.
- Text annotation of each graph.
- Swept signal generator controls.

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