ScanaQuad Logic Analyzer and Signal Generator

ScanaQuad series of logic analyzers and signals generators are 4 channel, USB powered devices that allow you to capture signals, visualize and analyze them on a host computer software, and generate signals. Generated signals may be arbitrarily created signals, or alternatively, user may play back previously captured signals.

ScanaQuad offers an intuitive way of analyzing logic signals, backed with exciting features like enhanced ±35V input protection, adjustable input threshold, direct connection to RS232/485, CAN and LIN buses, ability to trigger on specific protocols (like a UART word or an I2C address). The signal generator end was designed to be very versatile: Precise control over loop point can be achieved as well as the ability to generate arbitrary signals on any number of channels while recording the result on the others. ScanaQuad input/output stage is fully protected while offering flexible options like Open Drain outputs and configurable pull up/down resistors. Furthermore, the digital signal generator has an adjustable output voltage from 1.6V to 5V, which covers most TTL, CMOS and LVCMOS applications.



Hardware Features highlight
4 channels configurable as input or outputs
Up to 200MHz Sampling frequency
Up to 4M Points memory per channel
Adjustable input threshold from 0.5V → 3V
Input protection up to ±35V
2 configurable differential input pairs
Adjustable digital output voltage level 1.8V → 5V
Optional pull up/down resistors on all probes
Outputs can be configured as open-drain

Package content

- ScanaQuad device
- USB cable
- 5 pins gripper probes cables

System requirements

- A free USB port. (compatible with USB1 & USB2)
- Windows, Linux or Mac OS X operating system (check ScanaStudio software compatibility on www.ikalogic.com)

Getting Started

- Download and install last version of ScanaStudio software from www.ikalogic.com
- Connect the device to your host computer via the provided USB cable and wait until the driver is installed
- Connect the probes to the device (the black cable must coincide with the GND symbol).
- Start ScanaStudio software to start capturing and analyzing signals.

ScanaQuad family description

ScanaQuad SQ25	ScanaQuad SQ50	ScanaQuad SQ100	ScanaQuad SQ200
			
• **25 MSPS** @ 4 channels • **256K** points / channel • Digital Signal generator • **±12V** input protection • Trigger: Rising, falling, level, pulse width	• **50 MSPS** @ 4 channels • **1M** points / channel • Digital Signal generator • **±12V** input protection • Trigger: Rising, falling, level, pulse width, serial protocol • Variable output voltage • Threshold: 0.5V → 3V	• **100 MSPS** @ 4 channels • **2M** points / channel • Digital Signal generator • **±35V** input protection • Trigger: Rising, falling, level, pulse width, serial protocol • Variable output voltage • Threshold: 0.5V → 3V • Variable input resistance • Open Drain outputs • Optional pull up/down • Differential pairs: 1	• **200 MSPS** @ 4 channels • **4M** points / channel • Digital Signal generator • **±35V** input protection • Trigger: Rising, falling, level, pulse width, serial protocol • Variable output voltage • Threshold: 0.5V → 3V • Variable input resistance • Open Drain outputs • Optional pull up/down • Differential pairs: 2

Input stage characteristics

	SQ25	SQ50	SQ100	SQ200
Input resistance(Fixed)	100KΩ	1MΩ	1MΩ	1MΩ
Input resistance(optionnal)	✕	✕	10KΩ	10KΩ
Input Capacitance(Max.)	4pF	4pF	4pF	4pF
Input voltage range(continuous)	0V to 5.5V	±5V	±15V	±15V
Input voltage range(10ms pulse)	±12V	±12V	±50V	±50V
Pull-Up resistance(optionnal)	✕	✕	10KΩ	10KΩ
Low Level input voltage (VIL MAX)	0.8V	Adjustable	Adjustable	Adjustable
High Level input voltage (VIL MIN)	2V	Adjustable	Adjustable	Adjustable
Adjustable threshold range	✕	0V to 4.5V	0V to 4.5V	0V to 4.5V
Threshold hysteresis	100mV	350mV	350mV	350mV

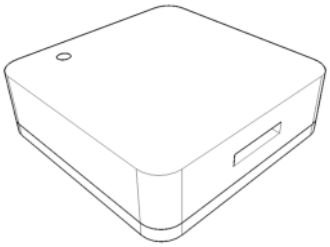
Output stage characteristics

	SQ25	SQ50	SQ100	SQ200
Output resistance	270Ω	270Ω	270Ω	270Ω
Output current(Max.)	10mA	20mA	20mA	20mA
Output High Level voltage (VOH)	3.3V	Adjustable	Adjustable	Adjustable
Adjustable output voltage range (VOH	3.3V	1.65V to 5.5V	1.65V to 5.5V	1.65V to 5.5V
Puh-Pull Driver	✔	✔	✔	✔
Open Drain Driver	✕	✕	✔	✔

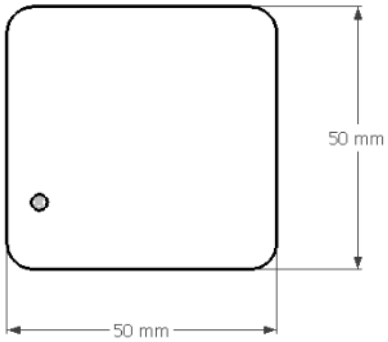
Timing characteristics

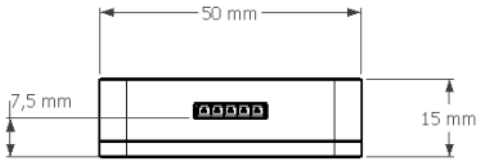
	SQ25	SQ50	SQ100	SQ200
Sampling Frequency(Max.)	25MHz	50MHz	100MHz	200MHz
Sampling resolution(Max.)	±40ns	±20ns	±10ns	±5ns
Input bandwidth (Max.)	6MHz	12.5MHz	25MHz	50MHz
Output frequency (Max.)	6MHz	12.5MHz	25MHz	50MHz
Sampling Frequency(Min.)	10KHz	10KHz	10KHz	10KHz
Embedded memory	1MB	4MB	8MB	16MB
Sampling Depth(Points/channel)	256K	1M	2M	4M
Sampling Period(Max. at FS = 1MHz)	256ms	1s	2s	4s
Sampling Period(Max. at FS = 25MHz)	10ms	40ms	80ms	160ms
Sampling Period Example (Max. number of 115200 BAUD UART words at FS = 1MHz)	2.5K Words	10K Words	20K Words	40K Words

Dimensions & weight



Weight (without probes or USB cable): **80gm (±10gm)**





Warranty & Certifications

3 Years
WARANTY

This device is sold with a warranty of 3 years starting from the selling date. In case of any malfunction, contact customer support at www.ikalogic.com immediately and provide the device serial number and/or purchase invoice.

RoHS Compliant 2011/65/EC. This device does not contain any of the substances in excess of the maximum concentration values ("MCVs") defined in the EU RoHS Directive.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3 (B) / NMB-3 (B)

This device complies with the following applicable European Directives: Electromagnetic Compatibility (EMC) Directive 2004/108/EC, Low-Voltage Directive 2006/95/EC, IEC61326-2.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct interference by one or more of the following measures:

- *Reorient or relocate the receiving antenna.*
- *Increase the separation between the equipment and receiver.*
- *Connect the equipment into an outlet on circuit different from that to which the receiver is connected.*
- *Consult the dealer or an experienced radio/TV technician for help.*

Changes or modifications not expressly approved by Ikalogic could void the user's authority to operate the equipment.