



# TrigBox SQTB01

Adds Trigger IN and Trigger OUT capability for ScanaQuad logic analyzers series

Product status: Active.

07.MAR.2018

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PRODUCT DATA SHEET

(PRELIMINARY DATA)



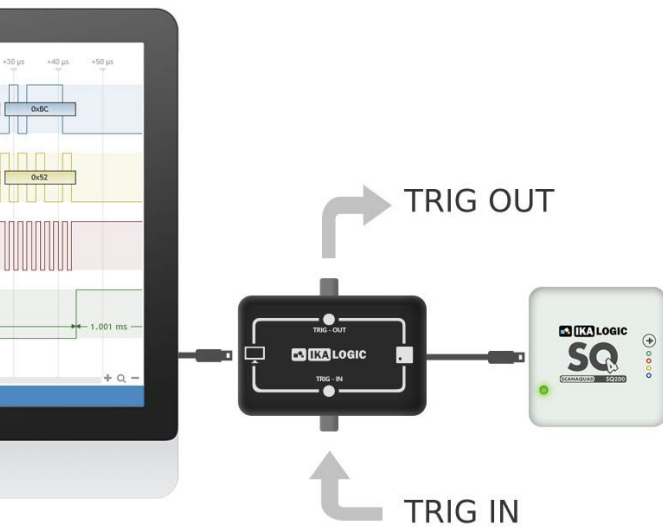
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## TrigBox SQTBO1 overview

TrigBox is an accessory for ScanaQuad logic analyzers that lets you easily connect and synchronize your logic analyzer to your favorite instrument that has an external trigger input or output: Oscilloscopes, Desktop Multimeters, Waveform generators, etc. TrigBox is used by connecting it in series between your computer and your ScanaQuad via a provided special USB cable, and exposes two SMA female connectors for trigger in and out signals. An SMA to BNC connector is also provided for your convenience.



## Typical applications

TrigBox extends the possibilities of what can be achieved with ScanaQuad series of logic analyzers. This includes, but not limited to:

- Use ScanaQuad's sophisticated trigger capability with other instruments.
- Measure analog waveforms with an oscilloscope alongside digital signals with ScanaQuad logic analyzer.
- Trigger logic signals capture on an external event (like an analog signal)

## Product highlights

- Compatible with 1.8V to 5V logic levels
- 22 ns typical propagation delay
- TRIG OUT can feed 50 OHM loads.



## Main characteristics

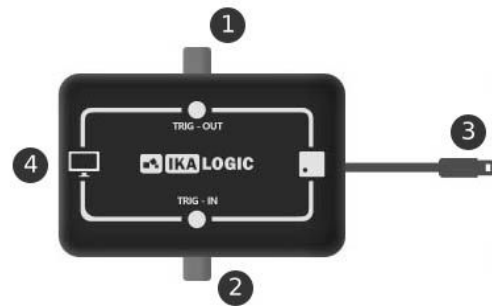
Absolute Maximum rating	
USB supply voltage	-0.3V to 6V
Voltage applied to TRIG-IN	-0.6V to 11V
Voltage applied to TRIG-OUT	-0.6 to 5.5V
Continuous output current	±100mA
Short circuit duration	Unlimited

Recommended Operating Conditions	
USB supply voltage	4.5V to 5.5V
Voltage applied to TRIG-IN	0V to 5.5V

Timing characteristics	
USB supply voltage	4.5V to 5.5V
TRIG-IN to TRIG-OUT propagation delay (TYP)	
0 to 1.8 V step	30 ns
0 to 2.5 V step	25 ns
0 to 3.3 V step	22 ns
0 to 5 V step	20 ns
Minimum input pulse slew rate	1.5 V/μs
Minimum input pulse duration	40 ns
Output rise time (50 Ω load)	2.5ns (Maximum)

General	
Input logic trigger polarity	Low to High
TRIG-IN threshold	15.4% of VUSB
TRIG-IN impedance	100kΩ    10 pF <sup>1</sup>
Output logic trigger polarity	Low to High
Output high level voltage (I <sub>out</sub> = +100μA)	VUSB - 0.1V (Minimum)
Output low level voltage (I <sub>out</sub> = -100μA)	0.1 V (Maximum)
Output Impedance	50 Ω

## TrigBox SQT B01 Interfaces



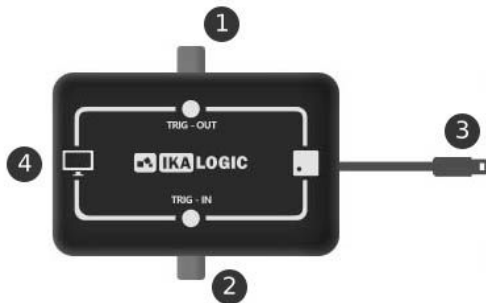
1. TRIG-OUT SMA Female port
2. TRIG-IN SMA Female port
3. Connection to ScanaQuad logic analyzer's USB port.
4. USB connection to computer running ScanaStudio.

<sup>1</sup> Preliminary data

## Principle of operation

All ScanaQuad logic analyzers are designed with a special USB connection. Normally, USB uses 4 wires, two for power and two for communication. ScanaQuad USB connectors has 5 connections, adding one additional line for trigger synchronization. TrigBox SQTb01 simply exposes this trigger synchronization line and amplifies its signal to allow it to be used with other instruments.

## First usage



To use TrigBox SQTb01, simply connect the micro USB cable [3] to ScanaQuad's USB port, and connect the computer to the TrigBox's USB connector [4] via the standard USB cable provided with ScanaQuad.

## Mechanical data

Weight: 55 grams

USB cable length: 19 mm

Box dimensions: 56x32x20 mm

## Safety information

Keep away from children's sight. Do not expose to water, heat or moisture. Use only with ScanaQuad logic analyzer. Do not use in a system in which the failure of the product might result in personal injury. Only connect to a USB port. Please read/refer to the knowledge base section on [ikalogic.com](http://ikalogic.com) for more information.

## Certifications and regulations

TrigBox SQTb01 complies with the following regulations

- FCC
- CE
- ROHS
- REACH
- WEEE

All test certificates can be provided upon request.

## What's in the box

TrigBox SQTb01 is shipped with the following accessories:

- TrigBox device with special USB cable attached to it.
- One SMA to BNC adaptor.

## Ordering information

For ordering information, please check for nearest distributor on [www.ikalogic.com](http://www.ikalogic.com) or contact us for any inquiry at [contact@ikalogic.com](mailto:contact@ikalogic.com).

## Document Revisions

- 07-March-2017: Initial release of this datasheet.

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