

KiNOVA SCA

Type 2645AK4

Source Contribution Analysis

KiNOVA SCA is a rugged and extendable solution for Source Contribution Analysis.

Special advantages of KiNOVA SCA

- Rugged device
- Suitable for stationary or mobile measurements
- Flexible and extendable
- Internal or external power supply
- Supports standalone mode
- Designed for Source Contribution Analysis
- Easy-to-use process

Description

The KiNOVA NVH Pro package consists of:

- KiNOVA Pro – the 16-channel, extendable data acquisition system;
- KiNOVA Acquisition – data acquisition software for KiNOVA Pro;
- KiSUITE SCA – the application software for Source Contribution Analysis.

The solution provides a complete system with advanced capabilities for understanding the noise contributions to vehicle NVH.

Applications

Understanding and separating the noise contributions to the passenger's perceived NVH is one of the most crucial and challenging tasks. KiNOVA SCA has been designed to make it simple and straight, with minimal number of measurements. In combination with the flexible KiNOVA Pro, the powerful KiSUITE SCA allows performing Source Contribution Analysis and supports NVH engineering decisions to be taken earlier in the development process, to solve problems quickly, with a data-driven approach.

KiNOVA Pro/Data Acquisition Hardware

KiNOVA Pro is a rugged 16-channel data acquisition system for NVH applications. The hardware is highly flexible and can be configured for many different applications. The channel count can be extended up to 32 channels per device. Additional optional input cards are also available. KiNOVA Pro is suitable for stationary or mobile use. Besides Kistler's acceleration sensors, KiNOVA Pro can also support other common sensors for NVH measurement.



The main KiNOVA Pro features are:

- 16 analogue channels of Voltage or IEPE inputs
- Extendable up to 32 channels per unit and stackable
- 24-bit resolution
- 100 kHz max sampling rate
- 2 dedicated tachometer channels
- USB and Ethernet communications
- Standalone operation: built-in processor and solid-state storage
- Internal battery
- OLED display

KiNOVA Acquisition/Data Acquisition Software

KiNOVA Acquisition is the software package comprehensive of data acquisition and signal processing tools for KiNOVA Pro. It is mainly conceived for sound and vibration measurement and analysis.

The KiNOVA Acquisition software is designed to perform:

- Data Capture
- A variety of operations on the data
- Viewing and visualization
- Data import/export for other formats

KiSUITE SCA/Application Software

KiSUITE SCA is an App specifically designed to perform Source Contribution Analysis in an efficient and effective way. Given the measured response and the measured sources, KiSUITE SCA allows identifying and isolating which sources contribute most to the response – enabling faster NVH troubleshooting, development and refinement, without the need for multiple intermediate frequency response function measurements.

KiSUITE SCA is designed to perform:

- Source Contribution Analysis (Fig. 1)
- Visualization of data and contributions
- Export of test results

Technical data

Hardware chassis

Inputs		16 x analogue (max 32 channels per device)
Tacho inputs		2 channels
Communications		USB or Ethernet (Gigabit)
Supply voltage		Internal battery, external ±10 V to ±36 V DC, AC mains (adapter supplied)
Dimensions (H x W x D)	mm	115 x 360 x 225
Weight	kg	~5 (depending on configuration)
Processor		Internal CPU
Storage	GB	128 (solid-state)
Battery		Up to 4 hours (depending on configurations)
Expansion		Stackable/ Distributed by Ethernet and USB
Optional cards		2 x device (see optional card list)

Analogue inputs

Input mode - analogue		DC, AC and IEPE
Input channels		16
Resolution	bit	24
Max sampling rate		100 k samples/sec per channel
Anti-alias protection	dB	>100
Dynamic range	dB	102
Noise floor	dB	-120
Non-linearity	LSB	<1
Input voltage range		±10 mV to ±10 V
Absolute maximum input	V	±24
Input impedance	MΩ	1 with power on (>10 with power off)
Connector		16 x BNC

Tachometer input

Input mode - tachometer		IEPE, Direct
Tacho channels		1 x built-in card
Tacho range	rpm	6,000,000 @ 1ppr
Tacho input range	V	±28

Environment and general

Shock and vibration		MIL-STD-810G, 514.7C-3
Operating temperature	°C	0 ... +45
IP rating		IP31
Humidity		95 % RH, non-condensing
Power consumption	W	<80 W (worst case)

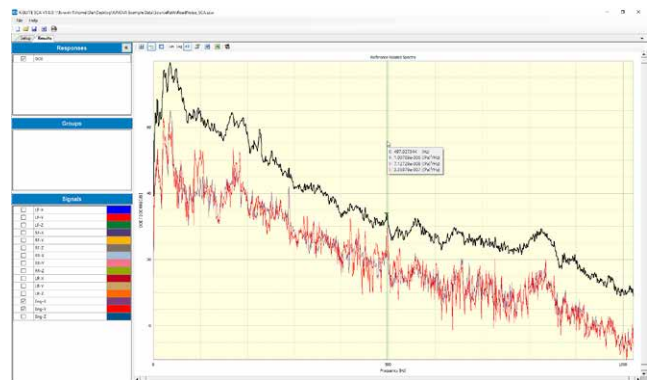


Fig. 1: Source contribution display

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This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

Included accessories

KiNOVA Pro

- Connecting cable – USB-A to USB-B
- Ground cable
- Power supply with IEC cable
- DC power lead
- System multi-link cable
- Ethernet crossover cable
- Carry case

KiNOVA Acquisition

- Installation USB memory stick and SB license dongle

KiSUITE SCA

- Installation USB memory stick and SB license dongle

Optional packages

KiNOVA Care

- Annual software maintainance for KiNOVA SCA

KiSUITE NVH

- For powertrain NVH testing (order analysis, waterfall diagrams, sound quality assessment)

Additional KiNOVA Pro unit (hardware only)

KiNOVA SCA training

KiNOVA Pro calibration

Optional cards (up to 2 additional cards per hardware unit)

- For general acquisition purpose. 4 channel high speed analogue card, with BNC connectors. 1 tachometer input
- For high resolution captures. 8 channel analogue card, with 6-pin Lemo connectors. 1 tachometer input
- For rotating applications. 4 channel precision tachometer measurement input card, with BNC connectors
- 2 channel CAN-BUS input card with multi-way connectors, including standard CAN Bus cable

Additional card configurations are available. For further information, contact us at kinova@kistler.com.

Optional accessories

Single-axis IEPE accelerometers

- PiezoStar miniature, through hole, high thermal stability 8715A...
- K-shear, general purpose 8702B... 8704B...

Triaxial IEPE accelerometers

- PiezoStar miniature, high thermal stability 8766A...
- PiezoStar, through hole, high thermal stability 8765A...
- Ceramic, ground isolated 8762A...

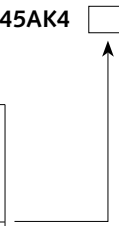
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For further information and questions on the KiNOVA product line and Kistler sensors, please visit our website or contact us at kinova@kistler.com.

Ordering key

KiNOVA SCA **Type 2645AK4**

Existing of
 16-channel data acquisition system
 KiNOVA Pro Type 5809A20
 incl. operating system
 KiNOVA Acquisition
 Application software
 KiSUITE SCA Type 2840A30



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