AVL COMBUSTION MEASUREMENT SYSTEMS

INDISET ADVANCED GIGABIT™

THE FASTER GENERATION

The IndiSet Advanced Gigabit™ is a powerful 8 or 16 channel acquisition system with special focus on real time combustion and injection analysis at the engine test bed or in vehicle testing. Despite of its compact size it supports the integration of extension cards for analog out, CAN out and crank angle preprocessing as well as medium speed recorder inputs. Together with its Gigabit Interface and the IndiCom™ software package it is the ideal choice for a wide range of applications.

Your benefits at a glance

- Compact 2 HU housing for up to 16 high speed analogue input channels and up to 32 digital I/O lines and extra space for three extension boards
- Synchronous crank angle and time based acquisition with flexible sampling rates
- Powerful real time processing of cylinder pressure, injection and other signal types
- Real time transfer of crank angle raw data (streaming) to PC memory or hard disc for all typical test bed acquisition tasks and engine types
- Continuous cycle by cycle calculation of streamed raw data with user definable algorithms
- Steady state or event triggered measurements including raw data storage without interruption of continuous result processing and result transfer to test bed or CAN bus
- Rich software package with graphically supported system setup and powerful display options

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Technical Data / Product Name	**IndiSet Advanced GigaBit™**
Product Description	Compact multi-channel indicating system for the acquisition and processing of fast crank-angle and time-based signals typical for combustion engines.
Analog Input channels	8 / 16
Cascading	3 units (max. 48 channels)
Sampling Rate per Channel	14 Bit/ 800kHz per channel
Resolution	0.025 / 0.05 / 0.1 / 0.2 / 0.5 / 1 °CA
On board memory	128 Mbyte (optional 256 Mbyte) for 8 channels
Analog Input Signal	+/- 10V
Digital In Channels	2 Input channels per acquisition module can be used as 8Bit Parallel or Delta-T port
Digital Out Channels	8 output channels for 8 channels can be used as TTL or relais contact
Wait Input	TTL-compatible input socket for synchronization with other devices
Control Inputs	3 Inputs for CDM and Trigger signal
Pick Up In	Crank angle signal from Hall or inductive pick up
Differential input interface	Converter for analog signals into TTL level signals
CA marks output	Output for CA marks and trigger signal on different signal levels (TTL, LVDS, RS422)
Interface	GigaBit Ethernet interface to PC/Notebook
Recorder Channels (optional)	8 channel voltage input, ±10V (2 channels alternativ ±20V), 12 Bit/ 10 kHz resolution
DAC (optional)	16 channel voltage output DAC, ± 10V, 12 Bit resolution, accuracy ± 1 LSB
Testbed Connection	RS232 or TCPIP (to the PC)
CAN Bus Output (optional)	CAN High Speed with Transceiver TJA1041, max. baud rate 1Mb/s
Special Measurement modes	Cold Start, Event Measurement, Event Sate, Continous Monitoring, Streaming Measurement, cumulative measurement, series measurement, snap shot
Real Time Results	Single value, edge detection, heat release, IMEP, Knock, max. rise, maximum, minimum, mean value, polytropic coefficient, timing, filtering
Plausibility	Plausibility monitoring for indicating hardware and data with error output as Bit or message
SW Package	IndiCom Find more information about IndiCom: www.avl.com/indicom2
Temperature monitoring	temperature sensor for each data acquisition module, which activates an alarm tone and a pilot lamp when the temperature is exceeded
Temperature Range	0 °C…50 °C (under warmed up condition until -10 °C)
Dimensions W x H x D in mm/ Weight in kg	439.8 x 87 x 412.5 / 8 (fully equipted)
Power Supply	9 – 40 V DC sockets for automotive battery ; 24 – 40 V DC socket for power supply
Application	The IndiSet Advanced GigaBit™ represents a flexible but compact solution for a wide range of high -end applications. The device covers the requirements of in vehicle testing as well as complex demands at the engine test bed. The number of analog inputs together with the operating system IndiCom offers a perfect application for background monitoring.

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