I0cab 8444opto

The new I0 interface cable for acquiring analog and digital signals.

A powerful user-friendly hardware interface is necessary to acquire analog and digital signals in automotive networks. In its well known compact CANcab package the I0cab 8444opto is the ideal product for use with notebooks or desktop computers.

Features and Advantages
With its powerful microcontroller and advanced hardware design the I0cab 8444opto is well suited for a large number of measurement and test applications.

An overview of product characteristics:
- Up to 8 digital inputs (4 Schmitt triggers)
- Up to 4 digital outputs (high-side and/or low-side)
- Up to 4 analog inputs
- Up to 4 analog outputs
- One analog comparator
- One PWM output or one CAPTURE input
- Opto decoupled

During the development of the I0cab, special emphasis was placed on precise time synchronization and on low latency times.

Functions
I0cab 8444opto functional features include:
- Measurement of digital and analog values
- Sending of digital signals*
- Output of analog signals*
- Time-correlated acquisition of signals and signal changes
- Precise time stamp
- Simultaneous and also mixed operation of multiple I0-/CAN-/LINcabs
- Firmware update possible at customer site

Application Areas
With the I0cab 8444opto Vector offers the user an extension of the CANcab product family. In connection with a CANoe or CANape the I0cab 8444opto is especially well suited for systems in which network messages are generated or acquired together with analog and digital signals.

The I0cab 8444opto covers all application areas, in which CANcardXL or CANcardXL is also used:
- Automobile technology
- Commercial vehicle technology
- Automation technology
- Air and space technology
- Marine technology

More Information: www.vector.com/contact
The XL-Driver-Library supports all IOcab functions, thus allowing the user to create his own applications. Due to the standardized XCP interface functions of already existing applications can be used without adaptations.

**Included with Delivery**

- IOcab 8444opto
- Documentation

A CANcardXLe or CANcardXL is needed to operate IOcab 8444opto. It is not included with delivery.

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### Technical Data

<table>
<thead>
<tr>
<th>Area of application</th>
<th>Mobile, stationary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital inputs</td>
<td>Up to 8 inputs; -36 V..36 V; 4 Schmitt trigger inputs; trigger function</td>
</tr>
<tr>
<td>Digital outputs*</td>
<td>Up to 4 outputs; -36 V..36 V; 200 mA; high-side and/ or low-side; readback capable</td>
</tr>
<tr>
<td>PWM</td>
<td>1 output; CMOS level</td>
</tr>
<tr>
<td></td>
<td>1. range: 2.4 kHz..100 kHz; min. pulse/pause period: 100 μs; max. pulse/pause period: 25.5 ms;</td>
</tr>
<tr>
<td>Capture input</td>
<td>1 input; min. pulse/pause period: 5 μs; max. pulse/pause period: 50 ms; ±1 % accuracy</td>
</tr>
<tr>
<td>Analog inputs</td>
<td>Up to 4 inputs; 0 V..32 V; ±1.5 % accuracy</td>
</tr>
<tr>
<td></td>
<td>2 measurement ranges; 10 bit resolution</td>
</tr>
<tr>
<td>Analog outputs*</td>
<td>Up to 4 outputs; 0 V .. 4.096 V; 12 bit resolution</td>
</tr>
<tr>
<td>Analog comparator</td>
<td>1 comparator; 0 V..32 V; 12 bit resolution of trigger threshold</td>
</tr>
<tr>
<td>Opto decoupling</td>
<td>Each digital output separately; Data bus to CANcardXLe or CANcardXL</td>
</tr>
<tr>
<td>Plug connector</td>
<td>DSUB15; Low density</td>
</tr>
<tr>
<td>PC interface</td>
<td>CANcardXLe, CANcardXL</td>
</tr>
<tr>
<td>Temperature range</td>
<td>Operation: -20 V..+55 °C; Storage: -40 ..+85 °C</td>
</tr>
<tr>
<td>Installation</td>
<td>Plug &amp; Play</td>
</tr>
<tr>
<td>Current consumption</td>
<td>Typ. 180 mA; max. 200 mA</td>
</tr>
<tr>
<td>Time stamp accuracy</td>
<td>2 μs</td>
</tr>
<tr>
<td>Sample rate</td>
<td>1 kHz; 3 kHz via CAN Driver Library</td>
</tr>
</tbody>
</table>

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* Maximum switching frequency 20Hz. See manual for further details.

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### Use Cases of the IOcab

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More Information: [www.vector.com/contact](http://www.vector.com/contact)