

# R360 SmartModule I/O module family (truck, off-highway, railway)

## 8/12-channel I/O-module for mobile applications



If a central controller cannot be used in a mobile machine, decentralized input/output modules are employed. A decentralized structure enables installation of the electronics at the requested machine positions. Due to module networking via the powerful CAN interface with CANopen protocol for mobile use the application can be quickly implemented. Moreover wiring complexity is considerably reduced using the network technology.

The SmartModules are fitted with a central plug which is used for connecting all sensors, actuators, the CAN network and voltage supply. Due to the high protection rating the modules can be directly used in areas with dirt and splashing water. They pick up the sensor signals where they occur and can be used in the field to trigger the actuators.

Parameter setting of the inputs and outputs enables use in different applications.

The SmartModules are designed specifically for the requirements of these applications and provide the following features:

- Mechanical resistance to extreme shock
- High protection rating IP67
- Power supply 10 V<sub>DC</sub> to 30 V<sub>DC</sub>
- The functions of inputs and outputs ( binary/analog) can be configured
- Hydraulic valves can be triggered directly
- Parameterizable PWM outputs with closed-loop control
- High noise immunity
- High mechanical stability due to aluminum housing
- Compact design, 132 mm x 43 mm x 153 mm
- CE, e1 type approval, approval for railway applications (EN 50155)

### SmartModule, CR2512

- 4 digital inputs
- 8 digital outputs can also be configured as:  
PWM output  
Output with current measurement

### SmartModule, CR2513

- 4 digital inputs
- 4 analog inputs, can be configured as:  
Analog input, voltage  
Analog input, current
- 4 digital outputs can also be configured as:  
PWM output

## Contact

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## Features

<b>NMT</b>	NMT slave
<b>Error control</b>	Node guarding Life guarding Heartbeat producer
<b>Boot-up</b>	Yes
<b>Node ID range</b>	From 1 to 127
<b>Node ID</b>	Software switch Proprietary
<b>CANopen bit-rates</b>	20 kbit/s 50 kbit/s 125 kbit/s 250 kbit/s 500 kbit/s 800 kbit/s 1 000 kbit/s
<b>Type of bit-rate adjustment</b>	None
<b>RPDOs</b>	2
<b>TPDOs</b>	2
<b>PDO modes</b>	Event-triggered Triggered by event-timer Synchronous (cyclic)
<b>PDO linking</b>	Yes
<b>PDO mapping</b>	Variable
<b>SDO server</b>	1
<b>SDO client</b>	No
<b>Emergency producer</b>	Yes
<b>Emergency consumer</b>	4 messages
<b>Sync producer</b>	No
<b>Sync counter</b>	No

<b>Time stamp</b>	No
<b>Additional functions</b>	Self-starting device Program download
<b>CANopen version</b>	CiA 301 V 4.0.2
<b>Frameworks</b>	CiA 302
<b>Device profiles</b>	CiA 401: CANopen device profile for generic I/O modules
<b>Certified</b>	No
<b>Availability</b>	In stock