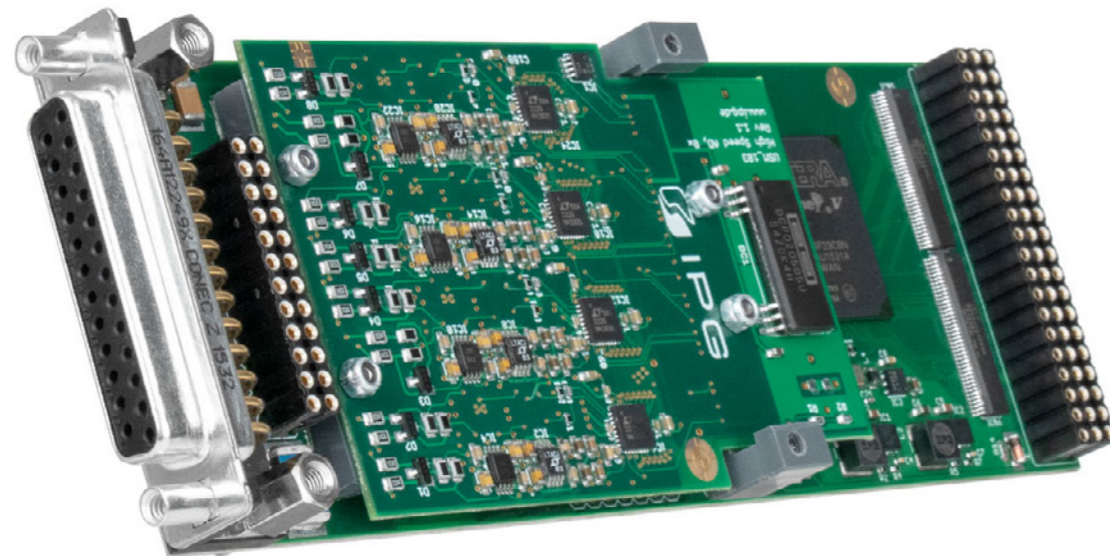


## M403 - Engine Signal Detection Unit



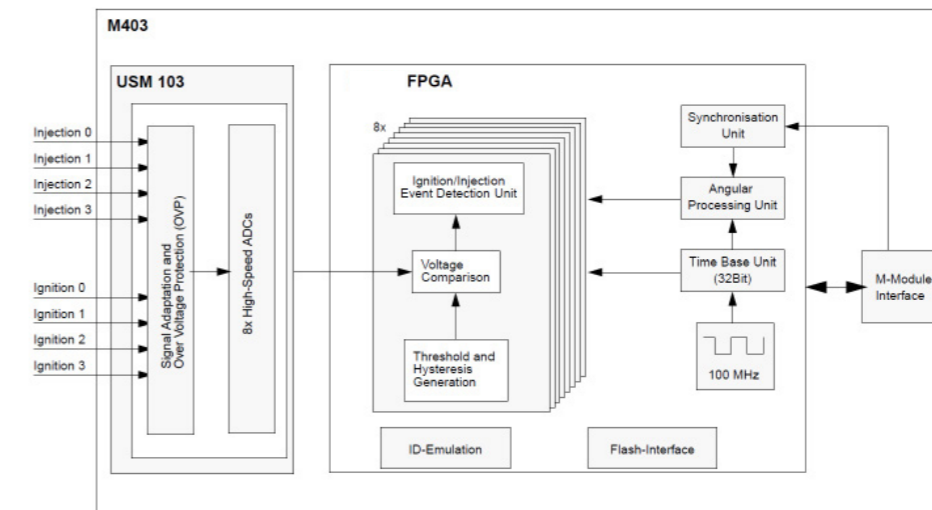
### Features

- 8 differential input channels usable as e.g.
  - 8 injection event detection ports usable for solenoid injectors or piezo injectors (diesel engines)
  - 4 ignition event detection ports and 4 injection event detection ports (gasoline engines)
- Maximum flexibility: defining events by 4 conditions
- Input voltage range: +/-30V
- Easy adaptation to each kind of injector due to the bipolar input voltage range
- Circular event buffer (crankshaft angle and duration) for each injection/ignition event
- Synchronization with M402 and M403 modules via M-Module bus
- In the field hardware upgrade by updating the FPGA

### Use Cases

- Detecting solenoid or piezo injector signals from ECUs in diesel engine test systems
- Detecting injection and ignition event signals in petrol engine test systems

### Block Diagram



### Technical Data

Input channels	8 identical differential input ports usable for detecting an arbitrary number of injection and/or ignition signals
Input signal types	Ignition, solenoid injection, piezo injection
Input voltage range	-30V .. +30V
Threshold voltage range	-24.5V .. +24.5V
Input voltage resolution	12.2mV
Common mode input voltage range	+/-80V
Over voltage protection	+/-100V
Input resistance	200kOhm
Sampling rate / update rate	6MHz / 166.67ns
Angle resolution	Up to 0,0055deg depending on rotation speed
Address space	<ul style="list-style-type: none"> <li>• A08D16</li> <li>• A24D32</li> </ul>
Buffer size per channel	256 events
Available connectors	25 Pin SubD connector, female

### Order Information

Order Number	IO-M403
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### Alternatives

M402	For generation of engine signals
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