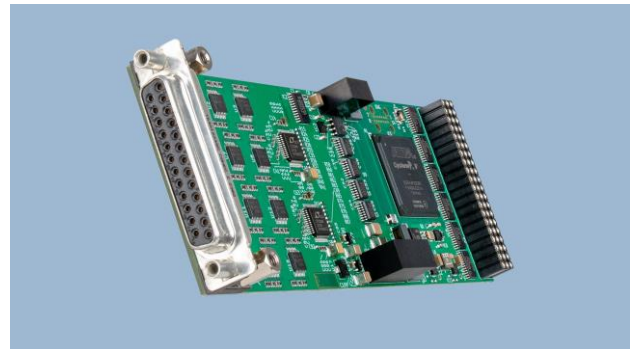
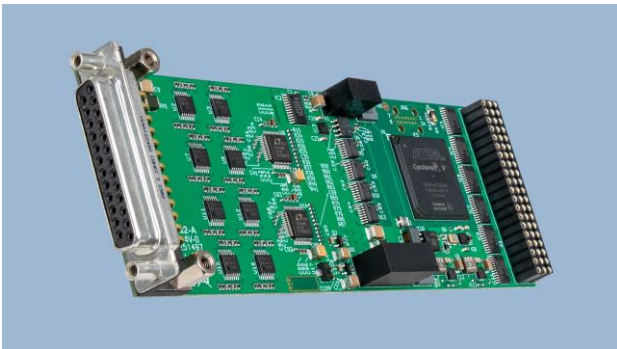


M418 – Analog Input



Description

The M418 is an analog input module with either 16 single-ended input channels (M418) or with 8 differential input channels (M418-01), realized as a module, which can be used on a cPCI carrier board.

All input channels are galvanically isolated from the module carrier/cPCI system.

Use cases

The module can be used to measure analog voltages, e.g. to read from a sensor which outputs a voltage to a HIL system.

The M418 uses a simultaneous sampling ADC architecture, which means that all 16/8 inputs are sampled at exactly the same time in parallel. Contrary to a multiplexed acquisition, this allows to correlate different input measurements without the uncertainty of timing skew between samples.

Benefits

- A24D32 interface for faster IO accesses compared to A08D16 interface
- 10 different software-configurable measurement ranges from 10 V to 0.625 V
- Simultaneous sampling of all input channels
- Galvanic isolation
- Fully supported by the CarMaker MIO library
- Compatibility mode for usage with MIO M36 API

M418

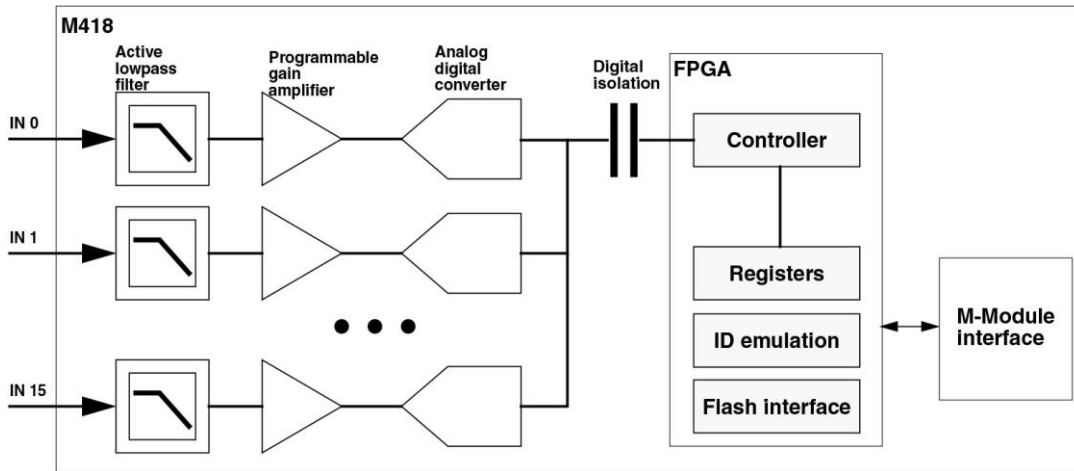
- 16 single-ended input channels
- Pin-compatible with M36N00

M418-01

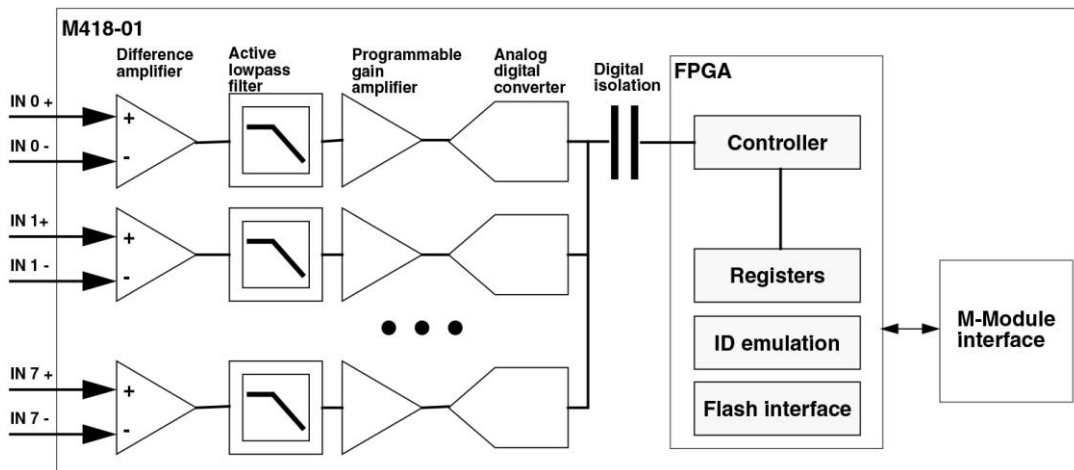
- 8 differential input channels
- Pin-compatible with M36N01

Block diagram

M418



M418-01



Configurable measurement ranges

Mode	Gain	Range
0 (unipolar)	"000" (Gain=1)	0 – 10 V
0 (unipolar)	"001" (Gain=2)	0 – 5 V
0 (unipolar)	"010" (Gain=4)	0 – 2.5 V
0 (unipolar)	"011" (Gain=8)	0 – 1.25 V
0 (unipolar)	"100" (Gain=16)	0 – 0.625 V
1 (bipolar)	"000" (Gain=1)	-10 – 10 V
1 (bipolar)	"001" (Gain=2)	-5 – 5 V
1 (bipolar)	"010" (Gain=4)	-2.5 – 2.5 V
1 (bipolar)	"011" (Gain=8)	-1.25 – 1.25 V
1 (bipolar)	"100" (Gain=16)	-0.625 – 0.625 V