

## Product brief

# KP276

## XENSIV™ – manifold pressure sensor – dTurboTMAP with SENT output and temperature sensor interface

With an improved accuracy of 0.77% FSS (Full Scale Span), KP276 is the most accurate digital Turbo MAP sensor which enables customers to achieve the targets of new CO<sub>2</sub> legislative requirements. Protected against aggressive media like Iodine, the KP276 guarantees high quality and long life time, even in harsh conditions. Using an improved SENT interface, the KP276 is easy to use and fast in communication. With an integrated NTC functionality the pressure sensor acts as a hub for an external NTC temperature sensor. So it's possible to have pressure and temperature signal on only one digital interface. In this context products of the developed MAP sensor family KP27x are the optimum solution for turbo diesel and gasoline engines management systems.

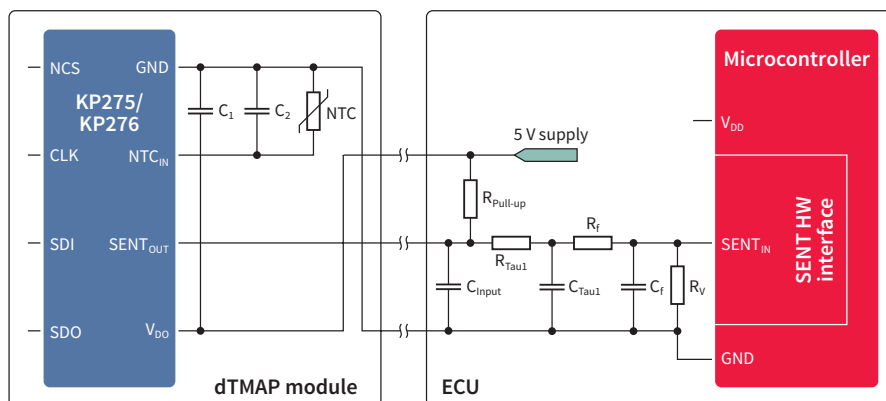
### Key features

- > **Increased media robustness** for current automotive requirements
- > **High pressure accuracy** over lifetime sensing up to  $\pm 0.77\%$  FSS (Full Scale Span)
- > Integrated signal processing for external temperature sensor
- > Improved **SENT** protocol interface (282 clock ticks)
- > Real **12-bit** pressure resolution
- > Real **12-bit** temperature resolution
- > **Self diagnostic** features
- > “Green” 8 pin SMD housing
- > Automotive qualified, AECQ-100
- > Improved NTC start-up time (typ. 10 ms)

### Typical applications

- > Automotive applications
  - EGR (Exhaust Gas Recirculation)
  - MAP/TMAP (Manifold Air Pressure)
  - ORVR (Onboard Refueling Vapor Recovery)
  - NGV (Natural Gas Vehicle)
  - DPF (Diesel Particulate Filter)
  - GPF (Gasoline Particulate Filter)
- > Industrial control
- > Consumer applications, medical applications

### Application circuit for the pressure sensor system



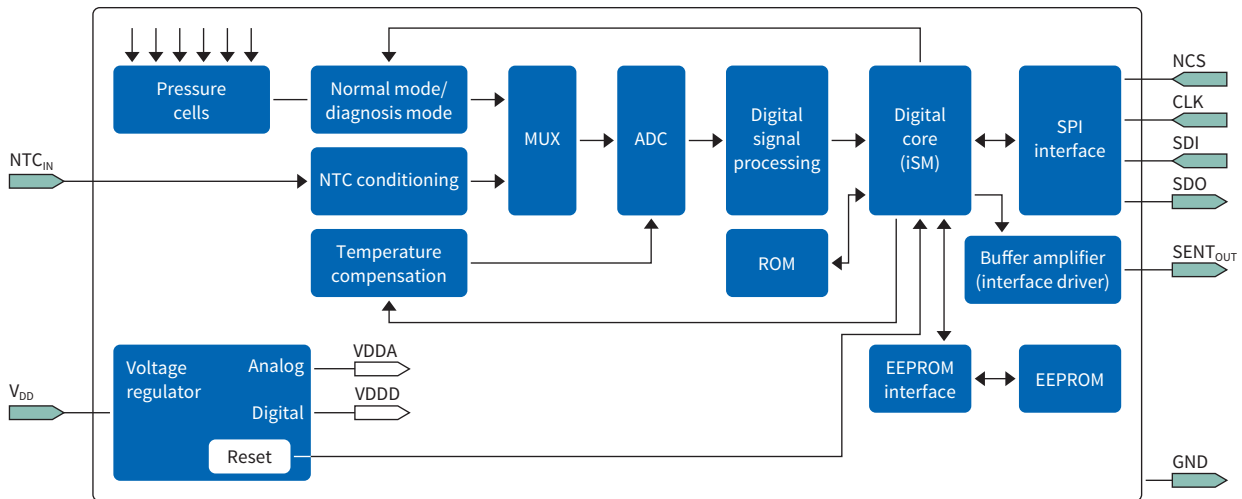
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### Highly integrated sensors – single chip

Infinion offers an extensive broad product portfolio for gasoline and diesel engine management systems from micro-machined sensors to smart power ICs and microcontrollers. The KP27x

pressure sensor as an integrated pressure sensor for manifold pressure measurement is a benchmark in terms of reliability, performance and integration level.



### Product summary

Parameter	Range			Unit
	Min.	Typ.	Max.	
Pressure accuracy			0.77	% FS
Pressure range	10		400	kPa
Supply voltage	4.5	5	5.5	V
Output current			10	mA
Output	1		4087	LSB
Operating temperature	-40		150, 170 peak	°C
<b>Programmable transfer functions</b>				
Transfer function pressure	10		400	kPa
Transfer function pressure output	193		3896	LSB
Transfer function temperature	-50		170	°C
Transfer function temperature output	185		1945	LSB
Clamping level	0		4088	LSB

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