



Product brief

XENSIV™ – KP264

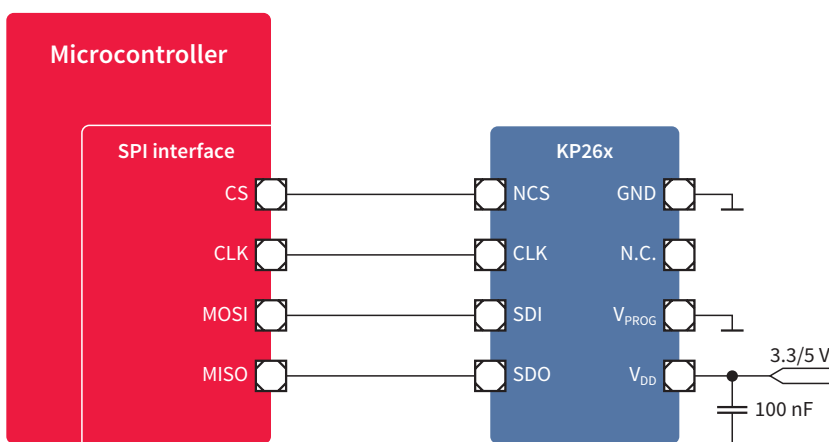
Digital Barometric Air Pressure Sensor (BAP) supporting safety applications

The Infineon KP264 integrated pressure sensor is a miniaturized Digital Barometric Air Pressure Sensor IC based on the capacitive principle. It is surface micro-machined with a monolithic integrated fully digital signal conditioning circuit, implemented in state-of-the-art 0.5 micron BiCMOS technology. The KP264 provides an SPI interface to enable direct microcontroller connections with a minimum bill of materials.

The sensor is individually calibrated and temperature compensated, reducing software complexity by providing a direct readout of pressure and temperature. KP264 provides a fast startup time of less than 10 ms, high accuracy of up to 1 kPa and different sensitivities. Combined with the wide operating temperature range of -40 to 125 C°, high ESD robustness, and excellent EMC performance, the KP264 is perfectly suited to the harsh environmental conditions prevalent in automotive and industrial applications. The “green” 8 pin SMD housing is protected by a 4-hole-lid with dedicated small 0.6 mm holes for best particle protection.

With its safety manual including safety mechanisms, use case description and safety analysis result it is ready to support safety critical ISO 26262 applications.

KP264 application circuit



Key features

- > High accuracy pressure sensing up to ± 1.5 kPa
- > Integrated temperature sensor
- > Pressure ranges 40-115 kPa
- > Wide operating temperature range -40 to 125 C°
- > Digital SPI interface
- > Up to 10 bit pressure and temperature resolution
- > Calibrated and compensated
- > Self-diagnosis features
- > Fast startup time of less than 10 ms
- > Green 8 pin SMD housing with 4-hole-lid (0.6 mm diameter)

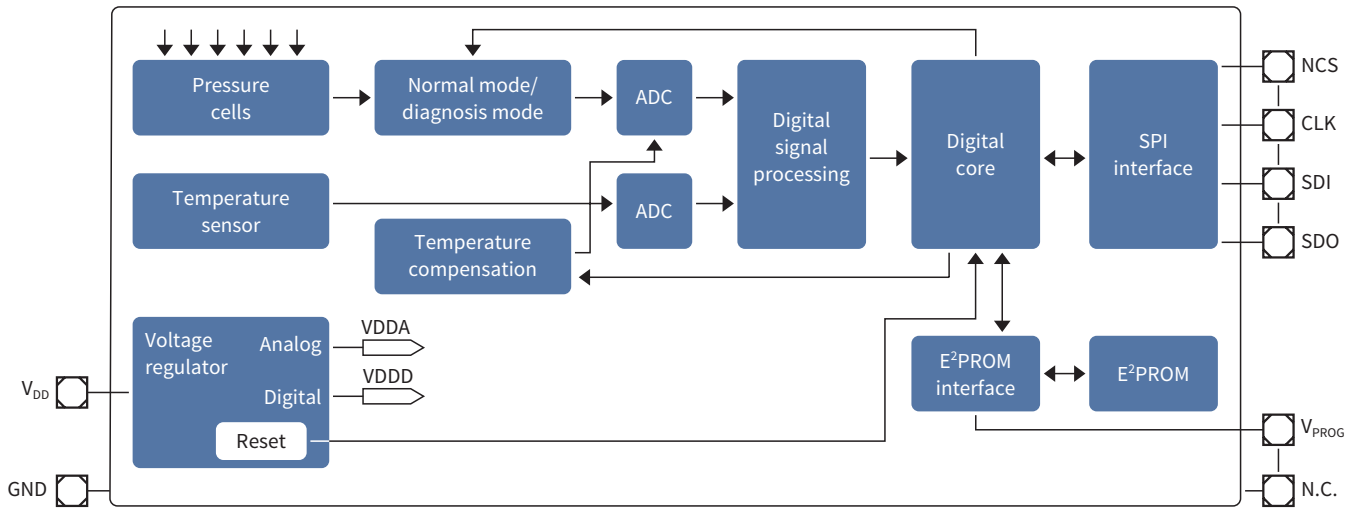
Typical applications

- > Automotive engine management
- > Battery management systems
- > Small engine management
- > Industrial control
- > Altimeter
- > Weather station
- > Medical

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KP264 block diagram



Infinion Technologies offers an extensive product portfolio for gasoline and diesel engine management systems and industrial control applications. Our products range from micromachined sensors, microcontrollers, and smart power ICs to voltage regula-

tors and other standard components. The KP264 is a digital integrated pressure sensor for barometric pressure management, and provides benchmark performance in terms of reliability, accuracy, and ease-of-use.

Parameter	KP264	Unit
Pressure range	40.0 - 115.0	kPa
Accuracy	±1.5	kPa
Output format	Digital SPI	
Resolution	10	bits
Sensitivity	13.6	LSB/kPa
Supply voltage	3.3 - 5.0	V
Order code	SP004854700	

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