



XENSIV™ pressure sensors

For automotive, industrial, and consumer applications

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XENSIV™ pressure sensors

For automotive, industrial, and consumer applications – ensure the perfect fit for all performance and integrity needs

Infineon XENSIV™ pressure sensors measure the pressure of air and gases across various industries and applications. As pressure transducer sensors, they convert physical pressure into an electric signal. Infineon XENSIV™ pressure sensors combine sensing functions (via a pressure sensor element) and conversion into an electrical signal (via an absolute pressure transducer and signal processing) in one integrated silicon device.

The sensor element and its integrated circuits (ICs) are the heart of pressure sensor technology. Infineon's small pressure sensor IC chips support various applications with best-in-class performance. Infineon is one of the world's largest semiconductor pressure sensor and transducer manufacturers, thanks to a varied portfolio of absolute air pressure sensor ICs. Our comprehensive family of XENSIV™ sensors includes a wide selection of pressure-sensitive sensors tailored specifically to the automotive, consumer, and industrial sectors. XENSIV™ sensors are compact, designed to save energy, and offer a rapid time-to-market – a perfect fit for any performance and integrity needs.



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Infineon XENSIV™ BAP sensors are calibrated for specific automotive applications, especially for BMS thermal runaway detection, pneumatic seats, and electronic engine control. The BMS sensors are ISO 26262-compliant and support the highest ASIL requirements on the system level.



Powertrain systems have to fulfill the constantly increasing stringent media requirements. Environmental legislation aims to deliver cleaner air by ensuring a steady global decrease in CO² emissions. Thanks to their accurate measurement capability, Infineon MAP and turbo MAP products with analog or digital interfaces enable engines to meet these requirements.



Typical safety-related automotive pressure sensing applications, such as side impact and pedestrian protection, call for the highest quality and accuracy standards with full ISO 26262 compliance. Every year, thousands of pedestrians are severely injured in traffic due to slow or failing sensing elements.

Our Infineon XENSIV™ safety pressure sensor family includes integrated pressure sensors that tick all these boxes with PSI5 peripheral sensor interfaces for safety-critical use cases. Our sensors support new safety systems, increasing the protection of pedestrians and car occupants in the event of a collision.



Infineon's tire pressure sensors perform all of the functions necessary to implement a state-of-the-art module for a tire pressure monitoring system (TPMS). As part of our XENSIV™ pressure sensors portfolio, our SP49 TPMS sensor ICs are easy to integrate and feature a microcontroller, sensors, wireless communication, and convenient peripherals. They only need a few passive components and a battery to complete a full automotive TPMS sensor assembly.



Our family of digital barometric pressure sensors also gives designers the best choice for smart home, drones, robotics, mobile, and wearable devices. Highlights include small form factors to facilitate system integration, the highest precision and relative accuracy over a wide temperature range, fast read-out speeds via the serial I²C/SPI interface, and low power consumption to ensure longer battery lifetimes.



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Barometric (BAP) and Manifold (MAP) pressure sensors

Highest accuracy and precision on the smallest footprint and energy bill

Infineon's pressure sensors offer the highest quality and accuracy for safety-relevant automotive, industrial, or consumer lifestyle applications. Typical safety-related automotive pressure sensing applications, such as side-impact and pedestrian protection, call for the highest quality and accuracy standards with full

ISO 26262 compliance. Our XENSIV™ family includes integrated pressure sensors that tick all these boxes with PSI5 peripheral sensor interfaces for a safety-critical use case.



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KP21x/KP22x

XENSIV™ analog manifold air pressure sensor family (MAP + turbo MAP)

Features

- Manifold air pressure measurement – MAP and turbo MAP
- Excellent accuracy of up to 1.0 kPa over a large temperature range
- Ratiometric analog voltage output proportional to the applied pressure
- Output signal fully compensated over pressure and temperature
- Pressure range from 10 to 400 kPa
- Temperature range from -40°C to +140°C
- Output clamping (optional)
- Complete product family available with multiple transfer function
- Available increased protective gel (IG) variants for improved media robustness, e.g., EGR (Exhaust Gas Recirculation), ORVR (Onboard Refueling Vapor Recovery)
- Reverse polarity protection
- Green SMD package



KP23x

XENSIV™ analog barometric air pressure (BAP) sensor family

Features

- Absolute air pressure measurement
- Excellent accuracy of 1.0 kPa over a large temperature range
- Ratiometric analog voltage output proportional to the applied pressure
- Output signal fully compensated across pressure and temperature range
- Pressure range from 15 to 165 kPa
- Temperature range from -40°C to +125°C
- Serial service interface
- Open bond detection (OBD) for supply and GND
- Reverse polarity protection
- Green SMD package

KP276

XENSIV™ media robust MAP sensor with digital interface

Features

- High media robustness by gold bond pads for automotive requirements in corrosive environment, e.g., EGR, ORVR
- Digital single edge nibble transmission (SENT) interface (282 clock ticks)
- Excellent accuracy of $\pm 0.77\%$ FSS
- Temperature range from -40°C to +170°C (170°C for 20 min. max., 150°C operating)
- Integrated NTC temperature sensor functionality with fast start up time (typ. 10 ms)
- Green SMD package

Product overview

Product	Max. accuracy [kPa]	Max. operating temperature [°C]	Automotive	Industrial	Classification	Pressure range [kPa]
KP21x	1.0	140	✓	✓	–	10 ... 150
KP21xIG x	1.0	140	✓	✓	–	10 ... 150
KP22x	2.5	140	✓	✓	–	10 ... 400
KP22xIG x	2.5	140	✓	✓	–	10 ... 400
KP23x	1.0	125	✓	✓	–	15 ... 115
KP236N6165	1.0	125	✓	✓	–	60 ... 165
KP276	3.0	150 (170 time limited)	✓	✓	–	10 ... 400



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KP46x

XENSIV™ digital barometric air pressure family in new DFN-8 package

Features

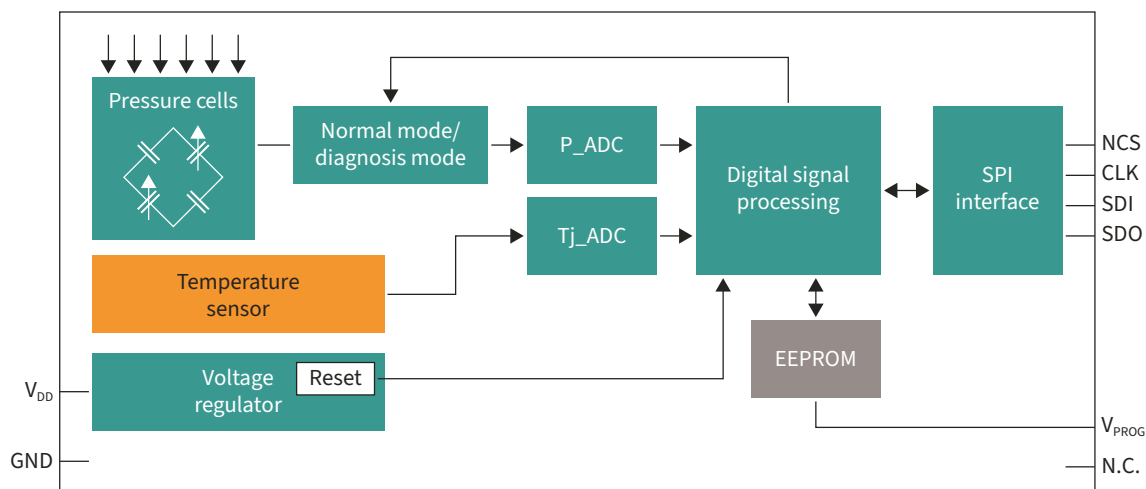
- High accuracy pressure sensing
- Pressure range according to different application needs:
 - ECU/MAF (40–115 kPa)
 - Pneumatic seats (60–165 kPa)
 - BMS thermal runaway (45–200 kPa)
- ISO 26262 compliance for KP467 (ASIL B)
- Operating ambient temperature range -40°C to +125°C, KP467 up to 105°C
- Best-in-class low power consumption with dedicated power-down mode for energy saving
- 10-, 12-, or 14-bit resolution pressure and temperature values via SPI interface and backward compatibility with legacy devices KP25x
- KP467 with autonomous low-power monitoring (LPM) feature for pressure event detection and host wake-up
- Integrated signal path diagnosis features
- Green, small 4.5 × 5.1 mm² 8-pin DFN package for all KP46x



Applications

- KP464/KP464E for ECU and mass airflow sensing to control fuel supply and injection, for air management and ignition
- KP465 for higher pressure levels e.g., within compressed air in fuel-cell applications
- KP466 for pneumatic seat comfort application
- KP466P for pneumatic seat comfort application and thermal runaway detection in battery management system for xEVs
- KP467 for thermal runaway detection in battery management system for xEVs

Block diagram



Product overview

Product	Operating pressure range [kPa]	P-accuracy -40°C [kPa]	P-accuracy 0 ... +85°C [kPa]	P-accuracy +125°C [kPa]	T-accuracy +25 ... +85 [°C]	Supply current I _{VDD} [mA]	Supply current power down I _{VDD_PD} [μA]	Classification
KP464, KP464E	40 to 115	±1.5	±1.0	±1.5	±3	3.5 (without SPI comm.)	10	AEC-Q103
KP465	60 to 320	±5.0	±3.0	±5.0	±3	3.5 (without SPI comm.)	10	AEC-Q103
KP466	60 to 165	±4.0	±1.0	±2.0	±3	5 (without SPI comm.)	10	AEC-Q103
KP466P	60 to 165	±1.5	±1.0	±1.5	±3	5 (without SPI comm.)	10	AEC-Q103
KP467	45 to 200	±3.0 kPa (lifetime) ±1.5 kPa (0h) ±4% of LPM threshold (±2 kPa max.)			±3	– 3.5 mA (on mode without SPI comm.) – typ. 50 μA (in LPM)	10	AEC-Q103 ISO 26262-compliant
KP467Q	50 to 140	±1.5	±1.0	±1.5	±3.0	– 3.5 mA (on mode without SPI comm.) – typ. 10 μA (in LPM)	10	AEC-Q103



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KP497

XENSIV™ advanced digital barometric air pressure and acceleration sensor

Features

- Pressure range for thermal runaway detection: 20–250 kPa
- Integrated acceleration sensor for battery shock monitoring
- ISO 26262-compliant (ASIL A)
- 3 kB flash memory available for storage of customer-specific data, e.g., battery passport relevant data
- High accuracy pressure sensing
- Operating ambient temperature range -40°C to +105°C
- Ultralow power consumption with dedicated power-down mode for energy saving
- Autonomous low-power monitoring (LPM) feature for event detection and host wake-up



Applications

- KP497 calibrated for thermal runaway detection in battery management systems for xEVs by sensing critical air pressure
- Determination of the economic value of the battery over the course of its life cycle in relation to mechanical influences and shocks; with that essential part of the information for battery passport for xEVs and for reprocessing and reuse of batteries

Product	Operating pressure range [kPa]	P-accuracy [kPa]	T-accuracy [°C]	Typ. supply current power down at 25°C I _{VDD_PD} [µA]	Classification
KP497	20 to 250	±2	±3	0.24	AEC-Q100 ISO 26262-compliant



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Pressure sensors for side crash detection (SAB)

PSI5 PRO-SIL™-ready pressure sensors for side impact detection and pedestrian protection

Passive safety vehicle systems have improved significantly over the last few years, especially in terms of front impact, side impact, and pedestrian impact detection. Legal regulations and consumer tests have been the main drivers (e.g., FMVSS 214, UN ECE R135, NCAP) for increased penetration. Infineon's next-generation PSI5 safety pressure sensor family enables very fast reaction times and will help you to fulfill existing and future tests.

In the side airbag application, the pressure sensor is assembled in a module within the car's side doors. When the door is compressed due to a side impact, the KP_{x0x} provides a signal pulse proportional to the pressure change inside the door. In the pedestrian protection application, the pressure-sensing system based on KP201/KP305/KP405 is mounted within the car's front bumper. In case of an impact, a pedestrian protection device is triggered. The KP201/KP305/KP405 extended pressure range allows common pedestrian protection systems to support front impact detection scenarios and also supports side crash systems.

Features and benefits

Key features	Key benefits
– PSI5 peripheral interfaces – Easy customization with end-of-line programming via PSI5 interface in the final customer module – Low design-in effort due to drop-in compatibility with previous safety pressure sensor family – Best-in-class cost performance	– Fully compliant to PSI5 and AK-LV29/38 and extended pressure range addendum – ISO 26262-compliant development to be used in ASIL B(D) systems – Patented built-in diagnosis for pressure cells and circuitry – SMD package: DFN-8-1

Product overview

Product	Application	Classification	Package
KP200	Side crash detection	ISO 26262-compliant	DSOF-8-16
KP201	Side crash detection Pedestrian impact detection Front crash detection	ISO 26262-compliant	DSOF-8-16
KP204	Side crash detection	ISO 26262-compliant	DSOF-8-164
KP300	Side crash detection	ISO 26262-compliant	DSOF-8-164
KP305	Side crash detection Pedestrian impact detection Front crash detection	ISO 26262-compliant	DSOF-8-164
KP400	Side crash detection	ISO 26262-compliant	DFN-8-1
KP405	Side crash detection Pedestrian impact detection Front crash detection	ISO 26262-compliant	DFN-8-1



ISO 26262
compliant



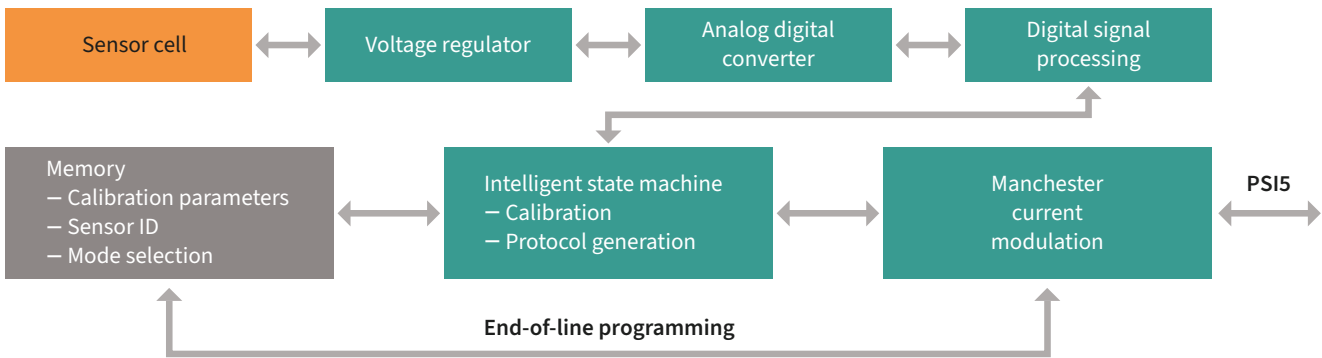
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KP30x
XENSIV™ ISO 26262-compliant pressure sensors for side crash, pedestrian impact, and front crash detection

Infineon’s KP30x is a monolithically integrated pressure sensor featuring a programmable PSi5 interface and compliance with AK-LV29/38. An intelligent state machine provides a pressure signal output enabling simple threshold detection algorithms. The amplitude of the signal pulse is independent of the ambient pressure but dependent on the relative pressure change. Several output formats are selectable to provide more design flexibility to the system. The KP30x family forms the next generation of safety pressure sensors and is application-compatible with Infineon’s previous generation. ISO 26262-compliant development and corresponding functional safety documentation support the use of the KP30x in ASIL B(D) systems.



Block diagram



Features and benefits

Key features	Key benefits
– Fully compliant to PSi5 and AK-LV29/38 and extended pressure range addendum – ISO 26262-compliant development to be used in ASIL B(D) systems – Patented built-in diagnosis for pressure cells and circuitry – SMD package: DSOF-8-164	– Easy customization with end of line programming via PSi5 interface in the final customer module – Low design-in effort due to drop-in compatibility to previous safety pressure sensor family – Best-in-class cost performance

Product overview

Product	Application	Classification	Package
KP300	Integrated pressure sensors	Side crash detection	DSOF-8-164
KP305	Integrated pressure sensors	Side crash detection Pedestrian impact and front crash detection	DSOF-8-164



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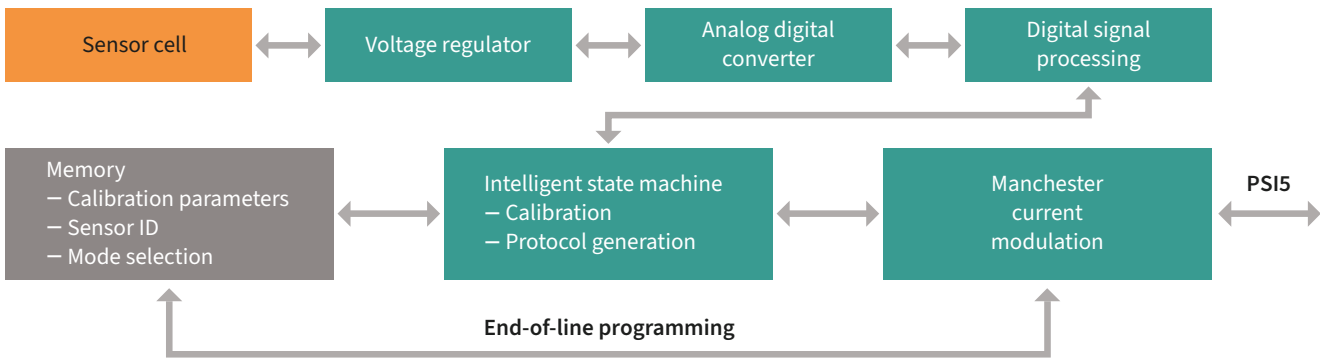
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KP40x
XENSIV™ ISO 26262-compliant pressure sensor for side crash, pedestrian impact, and front crash detection in small DFN package

Infineon’s KP40x is a monolithically integrated pressure sensor featuring a programmable PSI5 interface and compliance with AK-LV29/38. An intelligent state machine provides a pressure signal output, enabling simple threshold detection algorithms. The amplitude of the signal pulse is independent of the ambient pressure but dependent on the relative pressure change. Several output formats are selectable to provide more design flexibility to the system. The KP40x family forms the next generation of safety pressure sensors and is fully compatible with Infineon’s previous generation. ISO 26262-compliant development and corresponding functional safety documentation support the use of the KP40x in ASIL B(D) systems. Based on the proven chip technology, the KP40x offers best-in-class cost performance and is delivered fully calibrated.



Block diagram



Features and benefits

Key features	Key benefits
– Small holes for intrusion protection – Safe operation even with two blocked holes – Easy customization with end-of-line programming via PSI5 interface in the final customer module – Low design-in effort due to drop-in compatibility to previous safety pressure sensor family – Best-in-class cost performance	– Fully compliant to PSI5 and AK-LV29/38 and extended pressure range addendum – ISO 26262-compliant development to be used in ASIL B(D) systems – Patented built-in diagnosis for pressure cells and circuitry – SMD package: DFN-8-1

Product overview

Product	Application	Classification	Package
KP400	Integrated pressure sensors	Side crash detection	DFN-8-1
KP405	Integrated pressure sensors	Side crash detection Pedestrian impact and front crash detection	DFN-8-1



Tire pressure sensors (TPMS)

SP49 XENSIV™ tire pressure monitoring sensors

The Infineon SP49 product family provides highly integrated devices that perform all functions for a tire pressure monitoring system (TPMS) wheel module suited for high-volume applications. The devices measure pressure in the range from 100 kPa up to 920 kPa and acceleration between -600 g and 600 g, as well as temperature and supply voltage. Furthermore, they feature efficient power management and an integrated microcontroller. An integrated LF receiver and RF transmitter allow wireless communication. For wired data transfer, the hardware master/slave I²C interface can be used. Further wired interfaces, such as UART, SPI, or PWM can be realized in software. Infineon's technical leadership in MEMS technology and patented Glass-Silicon-Glass MEMS pressure sensors with best-in-class media compatibility ensure industry-leading performance in TPMS.

Features

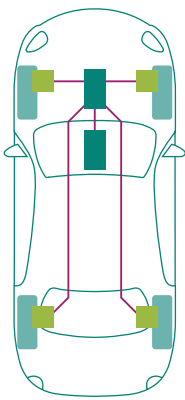
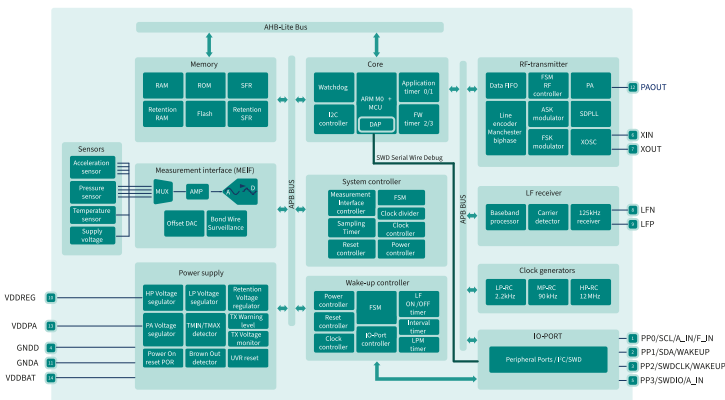
Patented Glass-Silicon-Glass MEMS pressure sensor with Best-in-class media compatibility

- Industry-standard power-efficient 32-bit Arm® Cortex®
- 19 kB of flash memory for the application code and/or user data storage; also usable for a bootloader
- 1 kB RAM plus 192 bytes of retention RAM
- Best-in-class lifetime charge consumption

1) Arm® and Cortex® are trademarks of ARM limited, UK

Benefits

- Optimized for battery-powered applications, the system controller's flexible wake-up and power management, ultralow power-down current, and wide range of supply voltages ensure a long battery lifetime (for typical TPMS applications, 10 years with a CR2032 battery).
- With the possibility of generating a wake-up from the integrated Interval timer, SP49 products are perfectly suited for standalone remote pressure sensing solutions demanding low charge consumption. For such applications, the LF receiver with wake-up capability and best-in-class sensitivity provides the possibility of on-demand measurements. SP49 has a tailored ASIC, which is optimized for the following new intelligent tire features.
- On-tire auto-position-sensing (APS)
 - Tire filling assist
 - Tire burst detection
 - Load detection



SP49 fully supports all necessary requirements for a tire pressure monitoring system (TPMS)

Product overview

Product variant	Product name	Pressure range [kPa]	Flash size for code [kB]	Package	Ordering code
SP490-01-11	SP49	920	19	DSOSP-14-84	SP005878909
SP490-01-12	SP49i	920	19	DSOSP-14-84	SP005825051
SP49T-05-12	SP49iTruck	1600	19	DSOSP-14-84	SP005957469



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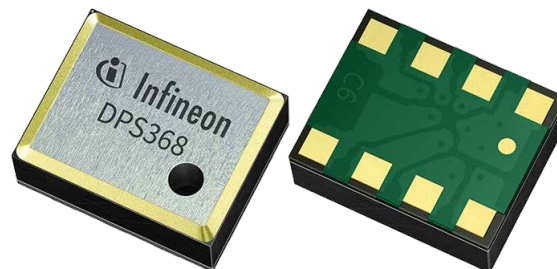
Pressure sensors for consumer and IoT

DPS368

XENSIV™ digital barometric pressure sensor for mobile and wearable devices

Infineon's digital barometric pressure sensor DPS368 is the best choice for mobile and wearable devices due to its small form factor, high precision, and low power consumption. Pressure sensing is based on capacitive technology, which guarantees ultrahigh precision (± 2 cm) and excellent relative accuracy (± 0.06 hPa) over a wide temperature range. The sensor's internal signal processor converts the output from the pressure and temperature sensor elements to 24-bit results. Each pressure sensor has been calibrated individually and contains calibration coefficients. The application uses the coefficients to convert the measurement results to true pressure and temperature values. The sensor has a FIFO that can store the last 32 measurements. Since the host processor can remain in sleep mode for longer between readouts, a FIFO can reduce the system's power consumption. Sensor measurements and calibration coefficients are available via the serial I²C/SPI interface.

DPS368 offers the best-in-class resolution (± 2 cm), a very fast readout speed, and low current consumption. The sensor can be used in harsh environments, as it is robust against water (IPx8 - 50 m underwater for 1 hour), dust and humidity. The small package size saves up to 80 percent of the space and makes the DPS368 ideal for mobile applications and wearable devices.



Applications

- Drones: altitude detection and height stability
- Health and fitness: accurate elevation gain and step counting (e.g., for smartwatches)
- Outdoor Navigation: GPS start-up time/accuracy improvement; dead reckoning (e.g., in tunnels)
- Indoor navigation: floor detection e.g., in shopping malls and parking garages
- Smart home: micro weather forecasting; room temperature control; intruder detection
- Airflow control: Smart filter replacement alarm (e.g., in home appliances); predictive maintenance
- Health care: fall detection; respiratory devices; smart inhalers

Key features

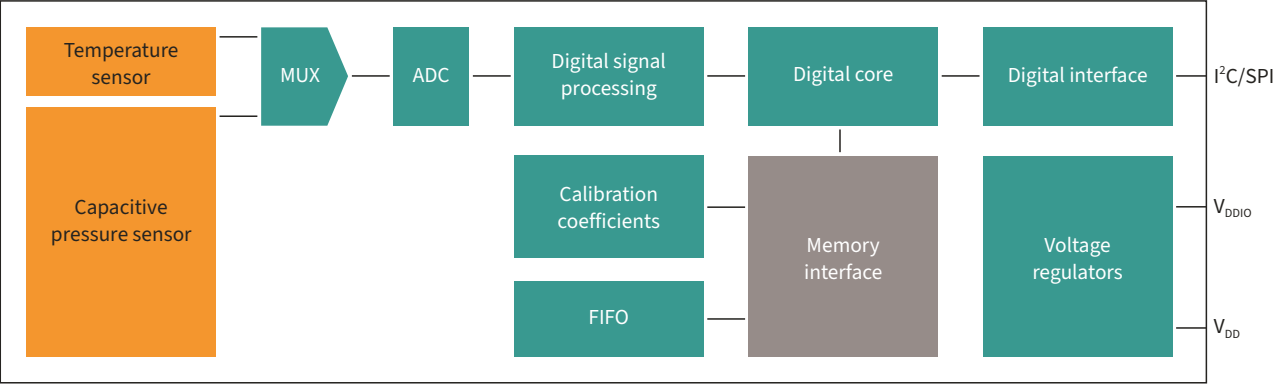
Package size	2.0 x 2.5 x 1.1 mm ³
Operating pressure range	300 hPa to 1200 hPa
Operating temperature range	-40°C to 85°C
Pressure level precision	± 0.002 hPa (or ± 0.02 m)
Relative accuracy	± 0.06 hPa (or ± 0.5 m)
Absolute accuracy	± 1 hPa (or ± 8 m)
Temperature accuracy	0.5°C
Pressure temperature sensitivity	0.5 Pa/K
Measurement time	3.6 ms (low precision); 27.6 ms (standard mode)
Average current consumption at 1 Hz sampling rate	1.7 μ A pressure measurement, 1.5 μ A temp. measurement, standby 0.5 μ A
Supply voltage	V _{DDIO} : 1.2–3.6 V; V _{DD} : 1.7–3.6 V
Operating modes	Command (manual), background (automatic), standby
Interface	I ² C and SPI, both with optional interrupt



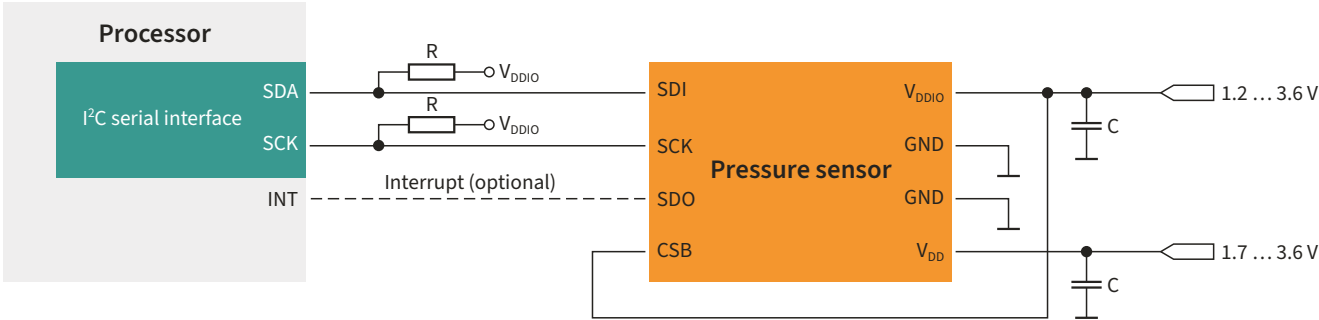
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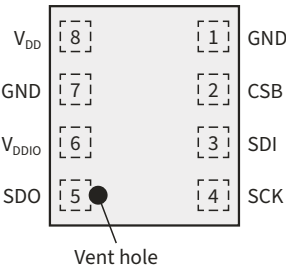
Functional block diagram



Application circuit example (in I²C configuration)



Pin configuration (top view)



Pin	Name	Function
1	GND	Ground
2	CSB	Chip select
3	SDI	Serial data in/out
4	SCK	Serial clock
5	SDO	Serial data out
6	VDDIO	Digital interface supply
7	GND	Ground
8	VDD	Analog supply

Infinite inside pressure sensor partners

Building upon its best-in-class technology, Infineon offers a full range of barometric pressure sensors as chipsets. Infineon's network of global partners offers customers a comprehensive portfolio of Infineon inside pressure sensors that will propel performance to the next level, even for the most demanding applications.



Learn more about our partner program and purchase our partner solutions [here](#).



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XENSIV™ connected sensor kit

Rapid IoT prototyping experience enabled by XENSIV™ sensors

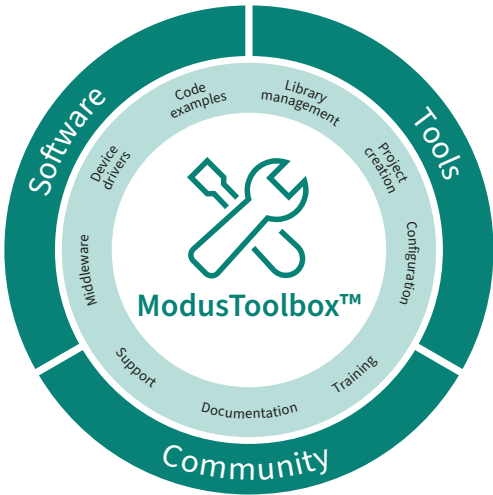
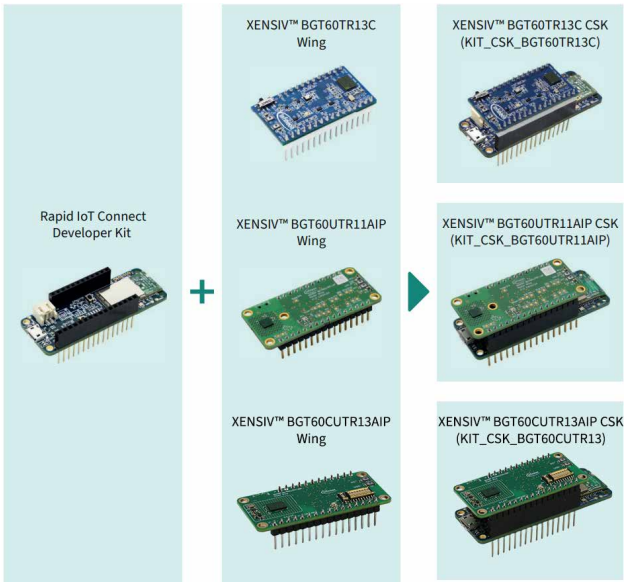
The XENSIV™ connected sensor kit enables rapid development of a custom solution built on Infineon products. The CSK supports customers in testing sensor-driven IoT products and use cases, as well as in prototyping. It offers a real-time sensor evaluation with custom configurations. The development kit supports use cases based on XENSIV™ sensors, e.g., BGT60CUTR13AIP, BGT60TR13C and BGT60UTR11AIP 60 GHz radars, and DPS368 pressure sensor (sense), PSOC™ 62 microcontroller embedded processing (compute), connectivity via Infineon AIROC™ CYW43012 dual-band 2.4 GHz and 5 GHz Wi-Fi 4 (802.11n) and Bluetooth® 5.4 combo radio module (connect), and hardware security with OPTIGA™ Trust M (secure). Code examples and sensor libraries are available in the ModusToolbox™ to help customers create use case-specific application codes for new product offerings.

Features

- Small form factor: 22.5 x 63 x 30 mm³ – Adafruit Feather compatible
- Wi-Fi and Bluetooth® 5.0-compliant combo radio module
- Power optimized design, deployable with battery
- Interchangeable sensor Wing boards stacked individually or combined
- Seamless integration into ModusToolbox™
- FCC and CE certified

Benefits

- Ideal for prototyping battery-powered IoT devices due to optimized power consumption. Suited for customer field trials.
- Rapid development and deployment via code examples in ModusToolbox™ for presence detection, entrance counter, air quality measurements. Enabler for multi-sensor data fusion.



Product	Description	OPN No.
KIT_CSK_BGT60TR13C	Connected sensor kit (CSK) featuring XENSIV™ BGT60TR13C 60 GHz radar sensor Wing board	KITCSKBGT60TR13CTOB01
KIT_CSK_BGT60UTR11AIP	Connected sensor kit (CSK) featuring XENSIV™ BGT60UTR11AIP 60 GHz radar sensor Wing board	KITCSKBGT60UTR11AIPTOB01
KIT_CSK_BGT60CUTR13	Connected sensor kit (CSK) featuring XENSIV™ BGT60CUTR13AIP 60 GHz CMOS radar sensor Wing board	KITCSKBGT60CUTR13TOB01



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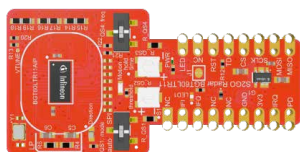
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Shield2Go

Infiniteon's Shield2Go boards offer a unique customer and evaluation experience

The boards are equipped with one Infineon IC and a ready-to-use Arduino library. Customers can now develop their own system solutions by combining

Sensor2Go boards together with Infineon MyIoT adapters. MyIoT adapters are gateways to external hardware solutions like Arduino and Raspberry Pi, popular IoT hardware platforms. All this enables the fastest evaluation and development of the IoT system.



Product name: BGT60LTR11AIP Radar Shield2Go
Sales name: S2GO RADAR BGT60LTR11
Ordering code: SP005594890

Product
information



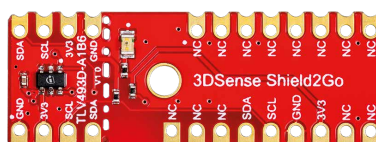
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Sales name: KIT_DPS368_2GO
Ordering code: SP005729572

Product
information



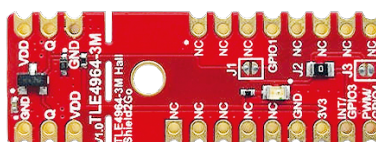
Product name: TLE493DW2B6 3D Sense Shield2Go
Sales name: S2GO_3D_TLE493DW2B6-A0
Ordering code: SP004308594

Product
information



Product name: TLV493D 3D Sense Shield2Go
Sales name: S2GO_3D-SENSE_TLV493D
Ordering code: SP001823678

Product
information



Product name: TLE4964-3M Hall Sense Shield2Go
Sales name: S2GO_HALL_TLE4964-3M
Ordering code: SP004308590

Product
information



Product name: TLE4966K Double Hall Sense Shield2Go
Sales name: S2GO_2_HALL_TLE4966K
Ordering code: SP004308598

Product
information



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www.infineon.com/pressure-sensors

www.infineon.com/current-sensors
www.infineon.com/mems-microphones

www.infineon.com/gas-sensors
www.infineon.com/radar-sensors

Shield2Go

Microcontroller



Product name: XMC1400 2Go kit

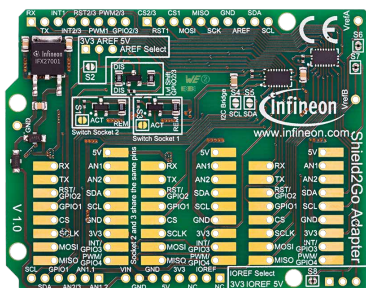
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Ordering code: SP006065576

Product
information



MyIoT Adapter



Product name: MyIoT Adapter

Sales name: MY IOT ADAPTER

Ordering code: SP002434972

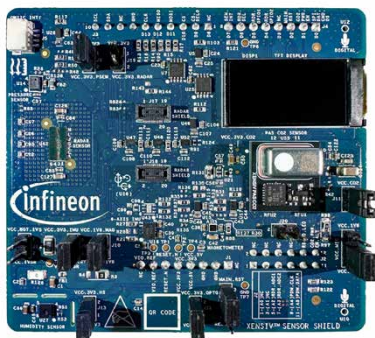
Infineon's Shield2Go boards offer a unique customer and evaluation experience – the boards are equipped with one Infineon IC and a ready-to-use Arduino library. Customers can now develop their own system solutions by combining Shield2Go boards with Infineon MyIoT adapters.

MyIoT adapters are gateways to external hardware solutions like Arduino and Raspberry Pi, popular IoT hardware platforms. This enables the fastest evaluation and development of IoT systems.

Product
information



XENSIV™ Sensor Shield



Product name: XENSIV™ Sensor Shield

Sales name: SHIELD_XENSIV_A

Ordering code: SP006018677

Infineon's XENSIV™ Sensor Shield provides seamless hardware compatibility between sensors, microcontrollers, and connectivity products. When paired with an MCU / Wi-Fi baseboard via the Arduino UNO interface, the board enables developers to quickly evaluate and develop with environmental sensors like:

- 60 GHz radars
- PDM microphones
- Pressure sensors
- Six-axis IMU
- Three-axis magnetometer
- Temperature and humidity

The shield also features a TFT display (80x160), and OPTIGA™ Trust-M secure element, and a QWIIC connector for additional peripheral expandability.

Product
information



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www.infineon.com/mems-microphones

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www.infineon.com/radar-sensors

Sensor2Go kits

Affordable plug-and-play development boards

Sensor2Go kits come equipped with advanced sensors and an integrated Arm® Cortex®-M0 CPU, making them the perfect choice for developers and hobbyists. These kits include a complete set of on-board devices, such as an on-board debugger, allowing you to quickly build and customize your own applications and gadgets.

Absolute Pressure (MAP and BAP) Sensor2Go kits Product name: Ordering code: KP215F1701-PS2GO-KIT SP002676652 KP229E3518-PS2GO-KIT SP002676656 KP236-PS2GO-KIT SP002676664 KP254-PS2GO-KIT SP002676664 KP276-PS2GO-KIT SP005910372	Product information
Magnetic 3D Sensor2Go kits Product name: Ordering code: TLE493D-W2B6 MS2GO SP001707578 TLV493D-A1B6 MS2GO SP001707574	Product information
Magnetic angle Sensor2Go kits Product name: Ordering code: TLE5012B_E1000_MS2GO SP002133956 TLI5012B_E1000_MS2GO SP002133960 TLE5012B_E5000_MS2GO SP002133964 TLE5012B_E9000_MS2GO SP002133968	Product information
Current Sensor2Go kits Product name: Ordering code: TLI4971_MS2GO SP005345474 TLE4973_MS2GO SP006039680	Product information
Magnetic speed Sensor2Go kits Product name: Ordering code: TLE4922 MS2GO SP003029974	Product information
Magnetic switches Sensor2Go kits Product name: Ordering code: TLE4966_MS2GO SP005406992	Product information



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Add ons for Sensor2Go kits and Shield2Go

	Joystick for all 3D magnetic Sensor2Go kits and Shield2Go Product name: JOYSTICK FOR 3D 2 GO KIT Ordering code: SP001491834	Product information 
	Rotate knob for all 3D magnetic Sensor2Go kits, angle Sensor2Go kits and 3D magnetic sensor Shield2Go Product name: ROTATE KNOB 3D 2 GO KIT Ordering code: SP001504602	Product information 
	Linear slider for all 3D magnetic Sensor2Go kits and Shield2Go Product name: LINEAR-SLIDER 2GO Ordering code: SP002043034	Product information 
	Out of shaft adapter for all 3D magnetic Sensor2Go kits and Shield2Go Product name: OUT OF SHAFT FOR 3D 2 GO Ordering code: SP003475178	Product information 
	Linear control trigger for all 3D magnetic Sensor2Go kits and Shield2Go Product name: POWER_DRILL2GO Ordering code: SP005350194	Product information 
	Human machine interface (HMI) direction indicator for all 3D magnetic Sensor2Go kits and Shield2Go Product name: DIR_INDICATOR2GO Ordering code: SP005350196	Product information 
	HMI mini control with 4 directions and 360° rotation for all 3D magnetic Sensor2Go kits and Shield2Go Product name: MINI_CONTROL2GO Ordering code: SP005350192	Product information 



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Add ons for Sensor2Go kits and Shield2Go

	OpenClose adapter for Hall switch Shield2Go Product name: OPENCLOSE2GOHS Ordering code: SP005544849	Product information 
	Play2Go for 3D magnetic sensor Product name: 3D PLAY2GO KIT Ordering code: SP005731811	Product information 
	Contactless switch array for all 3D magnetic Sensor2Go kits and Shield2Go Product name: Contactless switch array Ordering code: Simply use our 3D printing files, link to, and start your 3D print.	Product information 
	Spindle2Go for all 3D magnetic sensor Shield2Go Product name: SPINDLE2GO Ordering code: SP005989689	Product information 
	Drill Trigger V2 for all 3D magnetic Sensor2Go kits Product name: DRILL TRIGGER V2 Ordering code: SP006066136	Product information 



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ISO 26262 – Functional Safety (FuSa)

Dependable electronics based on Functional Safety

Automotive Functional Safety – we simplify the process of integrating safety features with our safety guidelines and services.

Infineon provides dependable electronics to support today’s safety-relevant systems and future fail-operational solutions, serving as essential components that allow customers to meet their safety requirements at the application level. Highly integrated systems equipped with reliable electronic semiconductors play a crucial role in key application areas like connectivity, electromobility, and advanced levels of automated driving. The ISO 26262 standard establishes requirements and provides guidance for integrating products into automotive safety applications.

Discover Infineon’s products with ISO 26262 classification

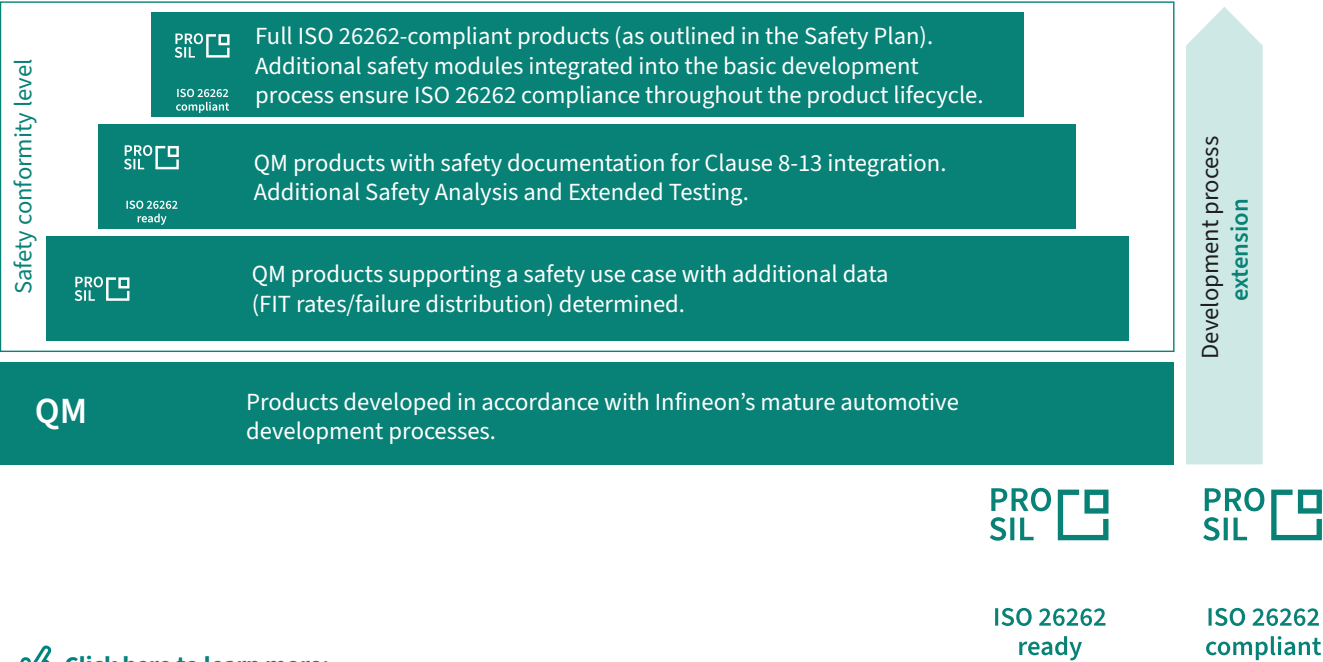
With our holistic approach to functional safety, Infineon is addressing the increased complexity and stringent requirements that make functional safety projects costly and time-consuming. We provide the necessary products, including documentation and supporting information, to ease integration and reduce efforts for system integrators.

Benefit from:

- Innovative solutions for automotive safety-related applications
- Improved time-to-market through comprehensive safety documentation for ISO 26262-compliant products
- Reduced integrators' efforts with ISO 26262-compliant and ready-to-use products
- A broad portfolio of ISO 26262-compliant products already available
- Newly developed automotive parts that will primarily follow an ISO 26262-compliant development flow

Safety conformity levels:

- PRO-SIL™ ISO 26262-compliant devices meet all relevant requirements for semiconductors as defined in the ISO 26262 series of standards for automotive functional safety
- The PRO-SIL™ ISO 26262-ready marking designates QM devices that can be integrated into a safety-related application by utilizing the ISO 26262:2018 Clause 8-13, Class II hardware evaluation framework
- The Infineon Automotive Ensured Compliance process framework was certified by SGS-TÜV Saar for compliance with ISO 26262:2018 as of April 2022. This certification reinforces our commitment to automotive functional safety



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Dependability is the key driver for the megatrend towards autonomous driving

The future car will be fully connected and always online. It will be all-electric and autonomous. At Infineon, we believe that realizing this vision requires both technology and trust.

The growing demand for safe electronic systems in vehicles that drivers and passengers can rely on lays the foundation for trust and drives progress toward higher levels of automated driving.

Earning the trust of tomorrow's passengers begins with dependable electronics that enable highly available, reliable, robust, safe, and secure systems, capable of operating in all conditions.

Infineon is your trusted partner, offering all the essential components for your dependable systems – automotive quality, functional safety, cybersecurity, innovative products, system expertise, and operational excellence.

Dependable electronics for safer, smarter vehicles

As vehicles become increasingly reliant on electronic components, demand for safe, reliable systems continues to grow. Rising levels of automated driving especially depend on drivers' and passengers' trust in the quality and reliability of each component. The complexity and requirements in the automotive industry are expected to increase further, particularly in terms of quality and dependability, to ensure vehicles operate safely and smoothly throughout their 15-year lifespan.

Infineon's commitment to delivering high-quality, dependable products has resulted in a portfolio that offers superior performance and unmatched durability, driven by our zero-defect mentality. We go beyond industry standards to meet the real-world requirements of applications.

Enhance your automotive systems and applications with our high-quality semiconductor components designed for your needs.

Dependable electronics based on quality

Automotive quality beyond the standards with a zero-defect mindset.

Vehicle complexity and functionality will continue to grow, driving the need for dependable electronics, with quality being one of its key ingredients. Our passion for quality creates a product portfolio that meets high standards and delivers highly reliable, robust products.

How Infineon differentiates as a quality leader:

1. Our goal is to go beyond standards to better meet real application requirements: from intensive screening methods to detect production defects, to advanced AEC Q100/101 tests (where required), to sub-1 dpm validation aimed at achieving ultralow defect rates.
2. Our track record of achievements, including multiple quality awards from customers such as Toyota (Honor Quality Award in 2020) and Continental (Supplier of the Year in 2019), demonstrates that we consistently meet and exceed outstanding quality targets in the automotive industry.
3. Infineon offers best-in-class customer service, supported by a regional network of failure analysis labs, strong localized expertise, technical training programs, and state-of-the-art regional quality analysis labs equipped for advanced failure analysis.
4. We meet customer needs through industry-leading product requirements, design, manufacturing, and testing practices. Quality is integrated into our development processes (e.g., RDDF), design rules (e.g., ADeGo), materials, manufacturing processes, process controls, proprietary testing, and screening methods.

Infineon's Zero Defect mentality is built upon:

- Producing 24/7/365 at sub-dpm levels: Translated into a year's timeline, this means we deliver zero defects for all but the last three seconds of the year.
- Delivering sub-ppm quality levels.
- Achieving Zero Defect status for 90 percent of our products.

We go beyond the standards to better meet real application requirements.



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Infineon support for sensors

Useful links and helpful information

Further information, datasheets, and documents

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Infineon customized solutions

Your specific needs, realized



A customized solution (commonly known in the industry as an ASIC — Application Specific IC, or CSP — Customer Specific Product) is designed, planned, developed, and used for a specific purpose. Its mission is to be optimized and efficient, with all the required functionalities and features for a specific application for a single customer.

Infineon as your one-stop-shop from design to delivery



Infineon, as a market leader in customized solutions, believes innovation comes through collaboration and exploring new paths. Working closely with our customers, understanding their needs, and combining their needs with our cutting-edge solutions, we know there is always a benefit for every customer and application. Whether the challenge is related to IP or BOM constraints or requires higher integration, an ASIC can be the solution. Furthermore, customers benefit from Infineon's trusted quality, supply guarantee, and experience, combined with additional advantages such as IP protection and a well-established partner network.



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A process streamlined through efficiency, expertise, and experience

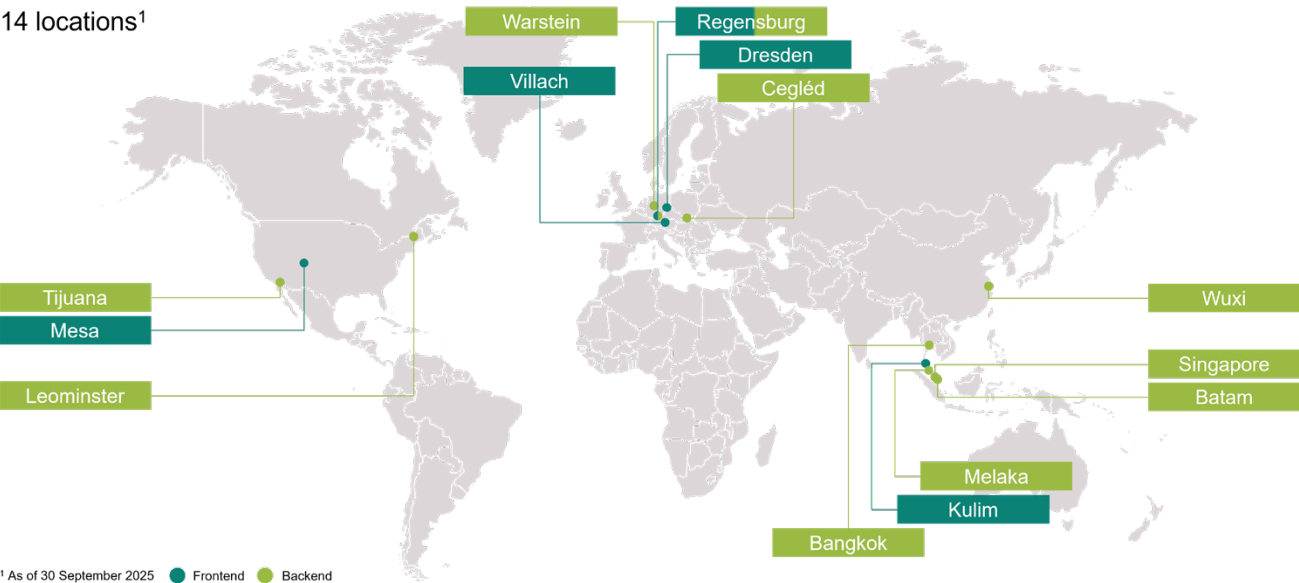
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From technology advantage to supply stability

Whether it is digital, analog, or mixed-signal devices, an embedded processor, or integrated sensors, we have the experience and product know-how. Being one of the largest semiconductor companies, we also have a vast array of IPs. We can integrate almost anything into your chip from our wide variety of sensors, discrete devices, drivers, and many more, including support for higher voltage levels. Our in-house fabrication facilities and design centers around the globe are known for the highest quality standards. We also have well-established partnerships with all major silicon foundries and assembly test fabs to complement our in-house technologies. At every step along the way, we take pride in the highest quality Infineon is known for.

If you are interested and would like to find out further information, visit www.infineon.com/asic

14 locations¹



¹ As of 30 September 2025 ● Frontend ● Backend



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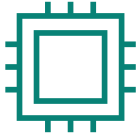
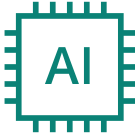
The Infineon Partner Program



Together we create and innovate for our customers' success

Find solutions from our partners to accelerate your next business opportunity. Infineon's global network of partners is an expert in designing products, solutions, and services leveraging Infineon components in 5 key domains: software, hardware, services, tools, and end applications.

The Infineon Partner Program is a global ecosystem of qualified companies, offering knowledge and experience to enable and implement Infineon products. Our associated, preferred, and premium partners help design your device and application based on our components. They have been carefully selected by us on the basis of their competence and ability to design and deliver strong and trustworthy solutions, especially for new technologies and use cases.

				
Hardware	Software	Tools	Services	End applications
Partners manufacturing electronic components, demo boards, and turnkey modules	Partners programming various types of software, algorithms, and operating systems	Partners designing computer programs for the development of embedded systems	Partners providing cloud and engineering services, application support or trainings	Partners creating end products and related applications
... jointly we create and commercialize value-added solutions, while reaching new buyers	... jointly we enhance our portfolio with complementary components and expand technology know-how	... jointly we enable a complete and immersive development experience for customers	... jointly we build up engineering capabilities and offer them to a world class customer network	... jointly we provide customers with state-of-the-art solutions and innovative use cases

Find out more about the Infineon Partner Program, the latest news and solutions from our partners, and much more on our [Partner ecosystems webpage](#).

Looking for a specific partner solution in your region? Our [partner finder](#) provides an overview of our partners and their offerings. Simply specify your search in the dropdown menu and browse through the companies and their solutions to navigate directly to the respective website for further information.

Additionally, use the "Partner solutions" tab on our product and application pages to find out more about Infineon's partner solutions.

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