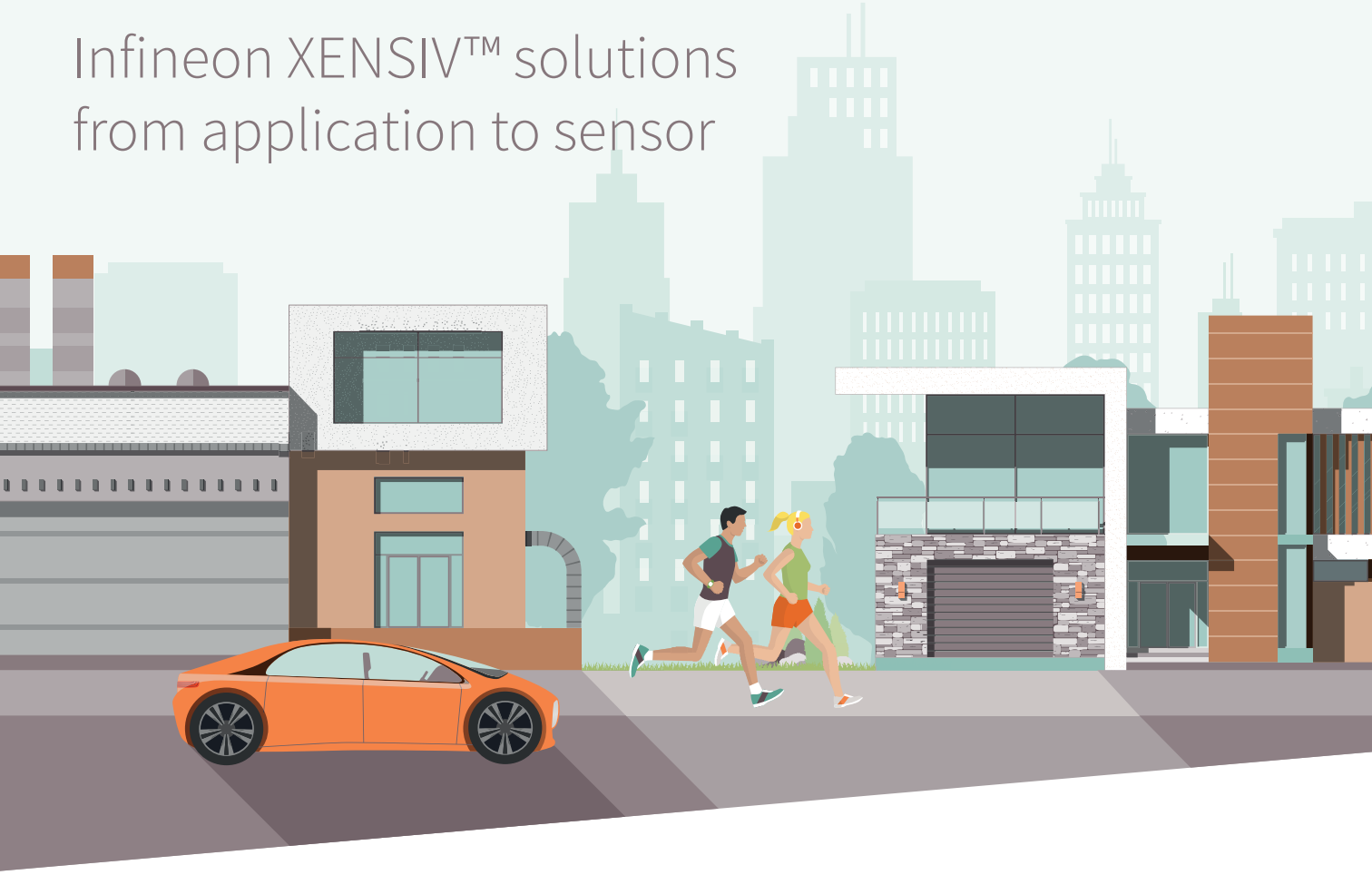
XENSIV™ – sensing the world

Sensor solutions for automotive, industrial and consumer applications

Pocket guide 2021

www.infineon.com/sensors
www.infineon.com/xensiv

Infineon XENSIV™ solutions from application to sensor



Find your sensor

Welcome to our new interactive sensor selection tool, designed to connect you with the best fit for your design as quickly and effortlessly as possible. Simply select the overarching industry (automotive or industrial/consumer) and drill down on the applications till you find your target use case. The selection tool will then tell you what Infineon XENSIV™ sensor is the best choice for your design. It couldn't be easier.

www.infineon.com/fastfinder

Current sensors

Current sensors for measurement up to 120 A

	Product	Max. error [1] [%]	Current range [A]	Bandwidth typ. [kHz]	Sensitivity [mV/A]	Certification	Industrial	Supply [V]	Package
NEW	TLI4971-A025T5-U-E0001	3.45	25	240	48	UL	●	3.3	TISON-8
NEW	TLI4971-A025T5-E0001	3.45	25	240	48	–	●	3.3	TISON-8
NEW	TLI4971-A050T5-U-E0001	3.45	50	240	24	UL	●	3.3	TISON-8
NEW	TLI4971-A050T5-E0001	3.45	50	240	24	–	●	3.3	TISON-8
NEW	TLI4971-A075T5-UE0001	3.45	75	240	16	UL	●	3.3	TISON-8
NEW	TLI4971-A075T5-E0001	3.45	75	240	16	–	●	3.3	TISON-8
NEW	TLI4971-A120T5-U-E0001	3.45	120	240	10	UL	●	3.3	TISON-8
NEW	TLI4971-A120T5-E0001	3.45	120	240	10	–	●	3.3	TISON-8

1) Total error over lifetime and temperature

Current sensors for measurement up to 2.000 A

	Product	Description	Meas. range [mT]	Error (25°C, 0 h) Total error (temperature & lifetime)	Bandwidth typ. [kHz]	Diagnosis	Interface	Automotive	Industrial	Supply [V]	Package (footprint)
NEW	TLE4972-AE35D5[1]	210 kHz differential Hall sensor with diagnosis, external current rail package	up to 31	±1.5% (25°C, 0h) ±2.0% (25…125°C)	210	OCD 1, OCD 2, OV, UV, diagnosis mode	analog	●	●	3.3	TDSO-16 (5×6 mm)
NEW	TLE4972-AE35S5[1]			±1.5% (25°C, 0h) ±2.0% (25…150°C)							VSON-6 (3.5×4.5 mm)

1) Planned end 2021

Hall switches

Energy-efficient Hall switch family for up to 32 V

Product	Type	Operating point B_{OP} [mT]	Release point B_{RP} [mT]	Hysteresis ΔB_{HY} [mT]	Automotive	Industrial	Consumer	Package
TLE4961-1M/L	Latch	2.0	-2.0	4.0	●	●	●	SOT23/SSO-3-2
TLE4961-2M	Latch	5.0	-5.0	10.0	●	●	●	SOT23
TLE4961-3M/L	Latch	7.5	-7.5	15.0	●	●	●	SOT23/SSO-3-2
TLE4961-4M	Latch	10.0	-10.0	20.0	●	●	●	SOT23
TLE4961-5M	Latch	15.0	-15.0	30.0	●	●	●	SOT23
TLE4964-1M	Switch	18.0	12.5	5.5	●	●	●	SOT23
TLE4964-2M	Switch	28.0	22.5	5.5	●	●	●	SOT23
TLE4964-3M	Switch	12.5	9.5	3.0	●	●	●	SOT23
TLE4964-4M	Switch	10.0	8.5	1.5	●	●	●	SOT23
TLE4964-6M	Switch	3.5	2.5	1.0	●	●	●	SOT23
TLE4964-5M	Switch	7.5	5.0	2.5	●	●	●	SOT23
TLE4968-1M/L	Bipolar	1.0	-1.0	2.0	●	●	●	SOT23/SSO-3-2
TLI4961-1M/L	Latch	2.0	-2.0	4.0	–	●	●	SOT23/SSO-3-2
TLV4961-1M	Latch	2.0	-2.0	4.0	–	–	●	SOT23
TLV4961-3M	Latch	7.5	-7.0	15.0	–	–	●	SOT23
TLV4964-1M	Switch	18.0	12.5	5.5	–	–	●	SOT23
TLV4964-2M	Switch	28.0	22.5	5.5	–	–	●	SOT23

5 V high-precision Hall-effect sensor

Product	Type	Operating point B_{OP} [mT]	Release point B_{RP} [mT]	Hysteresis ΔB_{HY} [mT]	Automotive	Industrial	Consumer	Package
TLE4963-1M	Latch	2.0	-2.0	4.0	●	●	●	SOT23
TLE4963-2M	Latch	5.0	-5.0	10.0	●	●	●	SOT23
TLE4965-5M	Unipolar switch	7.5	5.0	2.5	●	●	●	SOT23
TLI4963-1M	Latch	2.0	-2.0	4.0	–	●	●	SOT23
TLI4963-2M	Latch	5.0	-5.0	10.0	–	●	●	SOT23
TLI4965-5M	Unipolar switch	7.5	5.0	2.5	–	●	●	SOT23

Hall switches

Precision Hall-effect sensor in leaded package

Product	Type	Operating point B_{OP} [mT]	Release point B_{RP} [mT]	Hysteresis ΔB_{HY} [mT]	Consumer	Package
TLV4961-1TA	Latch	2.0	-2.0	4.0	●	TO92S-3-1
TLV4961-1TB	Latch	2.0	-2.0	4.0	●	TO92S-3-2
TLV4961-3TA	Latch	7.5	-7.5	15.0	●	TO92S-3-1
TLV4961-3TB	Latch	7.5	-7.5	15.0	●	TO92S-3-2
TLV4964-4TA	Unipolar switch	10.0	8.5	1.5	●	TO92S-3-1
TLV4964-4TB	Unipolar switch	10.0	8.5	1.5	●	TO92S-3-2
TLV4964-5TA	Unipolar switch	7.5	5.0	2.5	●	TO92S-3-1
TLV4964-5TB	Unipolar switch	7.5	5.0	2.5	●	TO92S-3-2
TLV4968-1TA	Bipolar switch	1.0	-1.0	2.0	●	TO92S-3-1
TLV4968-1TB	Bipolar switch	1.0	-1.0	2.0	●	TO92S-3-2

Vertical dual-Hall switch

Product	Type	Output	Operating point B_{OP} [mT]	Release point B_{RP} [mT]	Hysteresis ΔB_{HY} [mT]	Automotive	Industrial	Consumer	Package
TLE4966G/L	Double Hall, speed and direction output	Speed and direction	7.5	-7.5	15	●	●	●	TSOP6/ SSO-4-1
TLE4966-2G	Double Hall, two independent outputs	Speed and direction	7.5	-7.5	15	●	●	●	TSOP6
TLE4966-3G	Double Hall, speed and direction output	Speed and direction	2.5	-2.5	5	●	●	●	TSOP6
TLE4966V-1G	Vertical double Hall, speed and direction output	Speed and direction	2.5	-2.5	5	●	●	●	TSOP6
TLI4966G	Double Hall, speed and direction output	Speed and direction	7.5	-7.5	15	–	●	●	TSOP6

High-precision Hall switches

Product	Type	Operating point B_{OP} [mT]	Release point B_{RP} [mT]	Hysteresis ΔB_{HY} [mT]	Automotive	Industrial	Consumer	Package
TLE4906K/L	Unipolar switch	10.0	8.5	1.5	●	●	●	SC59/SSO-3-2
TLE4906-2K	Unipolar switch	18.0	12.5	5.5	●	●	●	SC59
TLE4906-3K	Unipolar switch	28.0	22.5	5.5	●	●	●	SC59
TLE4946K	Latch	14.0	-14.0	28.0	●	●	●	SC59
TLE4946-1L	Latch	15.0	-15.0	30.0	●	●	●	SSO-3-2
TLE4946-2K/L	Latch	2.0	-2.0	4.0	●	●	●	SC59/SSO-3-2
TLE4976L	Unipolar switch/ Current interface	6.0	4.0	2.0	●	●	●	SSO-3-2
TLE4976-1K	Unipolar switch/ Current interface	9.25	7.25	2.0	●	●	●	SC59
TLE4976-2K	Unipolar switch/ Current interface	4.5	2.7	1.8	●	●	●	SC59
TLV4946-2K	Unipolar switch	18.0	12.5	5.5	–	–	●	SC59
TLV4976-2K	Unipolar switch / Current interface	4.5	2.7	1.8	–	–	●	SC59


1 2 3 C
4 5 6 ▲
7 8 9 ▼
◄ 0 ► M/OK

3D magnetics

3D magnetic sensors for consumer and industrial market

Product	Tempera-ture range	Qualification	Linear magnetic range	Resolution	I_{DD}	Update rate	Package	Ordering code
TLI493D-A2B6	-40 … 105°C	JESD47	±160 mT (min) ±100 mT (min)	7.7 or 15.4 LSB12/mT	7 nA – 3.3 mA	10 Hz – 8.4 kHz	TSOP6	SP001689844
TLI493D-W2BW A0 TLI493D-W2BW A1 TLI493D-W2BW A2 TLI493D-W2BW A3	-40 … 125°C	JESD47	±50, ±100 or ±160 mT	7.7, 15.4 or 30.8 LSB12/mT	7 nA – 3.4 mA	0.05 Hz – 8.4 kHz	WLB	SP005409964 SP005409966 SP005409968 SP005409970
TLV493D-A1B6	-40 … 125°C	JESD47	±130 mT (typ)	10.2 LSB12/mT	7 nA – 3.7 mA	10 Hz – 3.3 kHz	TSOP6	SP001286056
TLV493D-A2BW	-20 … 85°C	JESD47	±50, ±100 or ±160 mT	7.7, 15.4 or 30.8 LSB12/mT	7 nA – 3.4 mA	6 Hz – 11.6 kHz	WLB	SP005542151

3D magnetic sensors for automotive low-power applications

Product	Temperature range	Qualification	Linear magnetic range	Resolution	I_{DD}	Update rate	Wake-up	Package	Ordering code
TLE493D-A2B6	-40 … 125°C	AEC-Q100	±160 mT (min)	130 µT/LSB (65 µT/LSB)[1)]	7 nA – 3.3 mA	10 Hz – 8.4 kHz	No	TSOP6	SP001689848
TLE493D-W2B6 A0 TLE493D-W2B6 A1 TLE493D-W2B6 A2 TLE493D-W2B6 A3	-40 … 125°C	AEC-Q100	±160 mT (min) ±100 mT (min)	130 µT/LSB (65 µT/LSB)[1)]	7 nA – 3.3 mA	0.05 Hz – 8.4 kHz	Yes	TSOP6	SP001655334 SP001655340 SP001655344 SP001655348
TLE493D-P2B6 A0 TLE493D-P2B6 A1 TLE493D-P2B6 A2 TLE493D-P2B6 A3	-40 … 125°C	AEC-Q100/ ISO 26262 ready	±160 mT (min) ±100 mT (min)	130 µT/LSB (65 µT/LSB)[1)]	7 nA – 3.3 mA	0.05 Hz – 8.4 kHz	Yes	TSOP6	SP005557415 SP005557413 SP005557411 SP005557408

1) Half range mode

www.infineon.com/3d-magnetics

Linear sensors

Programmable analog/digital linear Hall sensor family

Product	Programm.	Number of pins	Sensitivity (programmable range)	Magnetic offset	Supply voltage (extended range)	Automotive	ISO 26262	Interface	Package
TLE4997	EEPROM	3/Single die SMD 8	±12.5 to ±300 mV/mT	< ±400 µT	5 V ±10% (7 V)	●	–	Analog	SSO-3 TDSO-8
TLE4998P	EEPROM	3/4/Single die SMD 8	±0.2 to ±6%/mT	< ±400 µT	5 V ±10% (16 V)	●	Ready	PWM	SSO-3 SSO-4 SSO-3 (2 capacitors) TDSO- 8
TLE4998S	EEPROM	3/4/Single die SMD 8	±8.2 to ±245 LSB_{12}/mT	< ±400 µT	5 V ±10% (16 V)	●	Ready	SENT	SSO-3 SSO-4 SSO-3 (2 capacitors) TDSO-8
TLE4998C	EEPROM	3/4/Single die SMD 8	±8.2 to ±245 LSB_{12}/mT	< ±400 µT	5 V ±10% (16 V)	●	Ready	SPC	SSO-3 SSO-4 SSO-3 (2 capacitors) TDSO-8
TLE4999I3	EEPROM	3	±73.72 to ±147.44[2] LSB_{13}/mT	< ±300 µT	5.5–7 V ±10% (16 V)	●	Compliant	PSI5	SSO-3
TLE4999C8/4[1]	EEPROM	Single die SMD 8	±36.85 to ±73.7 LSB_{12}/mT	< ±300 µT	5 V ±10% (16 V)	●	Compliant	SPC	TDSO-8 TDSO-6/SSO-4

1) TLE4999C4 planned for 2022

2) 147.44 LSB13 converts to 294.88 LSB12

Dual linear sensors

Programmable dual channel linear Hall sensors

Sales name	Interface	Magnetic linear range [mT]	Sensitivity	Sensitivity drift [%]	Gain	Magnetic offset drift [µT][1]	ISO 26262	Ordering code	Package
TLE4997A8D	Analog ratiometric	50, 100, 200	±60 mV/mT default for 100 mT range, with gain 1.5	±3	±4	< ±400	Ready	SP000902760	TDSO-8
TLE4998P8D	Digital interface PWM	50, 100, 200	±48 LSB_{12}/mT default for 100 mT range, with gain 1.5	±2	±4	< ±400	Ready	SP000902776	TDSO-8
TLE4998S8D	Digital interface SENT	50, 100, 200	±48 LSB_{12}/mT default for 100 mT range, with gain 1.5	±2	±4	< ±400	Ready	SP000902784	TDSO-8
TLE4998C8D	Digital interface SPC	50, 100, 200	±48 LSB_{12}/mT default for 100 mT range, with gain 1.5	±2	±4	< ±400	Ready	SP000902768	TDSO-8
TLE4999I3	Digital interface PSI5	12.5, 25	±147.5 LSB_{13}/mT default for 25 mT range, with gain 1.5	±2	±5	< ±100/ < ±200[2]	Compliant	SP001689862	SSO-3
TLE4999C8/4[3]	Digital interface SPC	25, 50	±36.875 LSB_{12}/mT default for in 50 mT range, with gain 1.0	±2	±5	< ±100/ < ±200[2]	Compliant	SP002662500	TDSO-8 SSO-4

1) Maximum over drift overtemperature and life time
2) Main channel/sub channel
3) TLE4999C4 planned for 2022

Angle sensors

iGMR, iAMR and iTMR based angle sensors

Diverse redundant sensor with analog and digital interface

Product	Technology	Die configuration	Sin/cos output	Angle output	Second interface	Accuracy	ISO 26262	Package
TLE5009	GMR	Single die	Analog sin/cos	–	–	0.9°	Ready	DSO-8
TLE5009A16(D)	GMR	Dual die	Analog sin/cos	–	–	1.0°	Ready	TDSO-16
TLE5011	GMR	Single die	SSC (SPI)	–	–	1.6°	Ready	DSO-8
TLI5012B	GMR	Single die	SSC (SPI)	SSC (SPI)	PWM/IIF/SPC/HSM	1.9°	QM	DSO-8
TLE5012B(D)	GMR	Single & dual die	SSC (SPI)	SSC (SPI)	PWM/IIF/SPC/HSM	1.0°	Ready	DSO-8/ TDSO-16
TLE5014C16(D)	GMR	Single & dual die	–	SPC	–	1.0°	Compliant	TDSO-16
TLE5014P16(D)	GMR	Single & dual die	–	PWM	–	1.0°	Compliant	TDSO-16
TLE5014S16(D)	GMR	Single & dual die	–	SENT	–	1.0°	Compliant	TDSO-16
TLE5014SP16(D)	GMR	Single & dual die	–	SPI	–	1.0°	QM/Compliant	TDSO-16
TLE5109A16(D)	AMR	Single & dual die	Analog sin/cos	–	–	0.5°	Ready	TDSO-16
TLE5309D	AMR + GMR	Dual die	Analog sin/cos	SSC (SPI)	–	AMR 0.5°, GMR 1.0°	Ready	TDSO-16
TLE5501	TMR	Single die	Analog sin/cos	–	–	1.0°	Compliant	DSO-8

SPI = Serial peripheral interface
IIF = Incremental interface
PWM = Pulse width modulation

Magnetic speed sensors

Magnetic engine speed sensors

Product	Sensor technology	AEC-Q100 qualified	Automotive	Industrial	RoHS	HAL free
TLE4922	Mono-Hall	●	●	●	●	●
TLE4929	Differential Hall	●	●	●	●	●

Hall wheel speed sensors

Product	Sensor technology	Pole wheel	Steel wheel	ISO 26262	Direction detection	Protocol	iTPMS
TLE4941plusC	Hall differential	●	●	Compliant	–	Standard	–
TLE4942-1C	Hall differential	●	●	–	●	PWM	–
TLE4943C	Hall differential	●	●	–	●	AK	–

High end GMR wheel speed sensors

Product	Sensor technology	Pole wheel	Steel wheel	ISO 26262	Direction detection	Protocol	iTPMS
TLE5045iC	iGMR differential	●	–	Compliant	–	Standard	●
TLE5046iC-PWM	iGMR differential	●	–	Compliant	●	PWM	●
TLE5046iC-AK	iGMR differential	●	–	Compliant	●	AK	●

Magnetic speed sensors – overview

	Icon/Description	TLE4921	TLE4922	TLE4929	TLE4941plusC	TLE4942	TLE4943	TLE4953	TLE4955	TLE4959	TLE4988	TLE5028C	TLE5041plusC	TLE5045	TLE5046
Automotive	Wheelspeed	–	●	–	●	●	●	–	–	–	–	–	●	●	●
	Wheelspeed/ Transmission	–	–	–	●	●	–	–	–	–	–	–	–	–	–
	Transmission	●	●	–	●	●	–	●	●	●	–	–	–	–	–
	Transmission/ Engine	●	–	–	–	–	–	–	–	–	–	–	–	–	–
	Engine	●	●	●	–	–	–	–	–	–	●	●	–	–	–
Industrial		●	●	●	●	–	–	–	–	–	–	–	–	–	–
Sensor technology		Diff. Hall	Mono-Hall	Diff. Hall	Diff. Hall	Diff. Hall	Diff. Hall	Diff. Hall	Diff. Hall	Diff. Hall	Mono-Hall	iGMR	iGMR	iGMR	iGMR
Improved air-gap/jitter performance		–	–	●	–	–	–	–	–	●	●	●	●	●	●
Direction information available		–	–	●	–	●	●	●	●	– / ● [3]	–	●	–	–	●
True Power On (TPO)		–	–	–	–	–	–	–	–	–	●	–	–	–	–
Twist-Independent Mounting (TIM)		–	●	–	–	–	–	–	–	–	●	–	–	–	–
Vibration suppression algorithm included		–	–	●	–	–	–	●	●	●	–	–	–	–	–
Type of hysteresis [1]		V	H	H/V	H	H	H	V	V	V	V/H	H	H	H	H
		F	A	A/F	F	F	A	A	A	A	P/A	A	F	A	A
Interface [2]	# of pins	4	4	3	2	2	2	2	2	3/4	3	3	2	2	2
	Interface	V	V	V	C	C	C	C	C	V	V	V	C	C	C
	Protocol	S	S	S/P	S	P	AK	P	P	P	S	P	S	S	P/AK
Electrostatic Discharge (ESD)	Human Body Model (HBM)	2 kV	3 kV	6 kV	12 kV	12 kV	12 kV	12 kV	12 kV	6 kV	6 kV	6 kV	12 kV	12 kV	12 kV
Package without integrated capacitor		●	●	–	–	–	–	●	●	●	–	–	–	●	●
Package with integrated capacitor		–	–	●	●	●	●	●	●	●	●	●	●	–	–

1) H = Hidden; V = Visible; F = Fixed; A = Adaptive; P = Programmable
2) AK = AK protocol; C = Current; V = Voltage interface; S = Single pulse; P = PWM protocol
3) Depending on derivative

Pressure sensors

Integrated pressure sensor ICs for manifold and barometric air pressure

Product	Max. accuracy [kPa]	Max. operating temperature [°C]	Automotive	Industrial	ISO 26262	Pressure range [kPa]
KP21x[1)]	1.0	140	●	●	–	10 ... 150
KP22x[1)]	2.5	140	●	●	–	10 ... 400
KP23x[1)]	1.0	125	●	●	–	15 ... 115
KP236N6165	1.0	125	●	●	–	60 ... 165
KP253	1.0	125	●	●	Ready	60 ... 165
KP254	1.5	125	●	●	Ready	40 ... 115
KP255[1)]	1.4	140	●	●	Ready	10 ... 125
KP256	1.0	125	●	●	Ready	60 ... 165
KP264[2)]	1.5	125	●	●	Ready	40...115
KP276[1)]	3.0	170	●	●	Ready	10 ... 400

1) For more information on the product, contact our product support
2) Package with small 4-hole lid

PSI5 PRO-SIL™ ready pressure sensor ICs for Side Crash Detection (SAB) and pedestrian protection

Product	PRO-SIL™ support in line with IEC 61508 and ISO 26262	ISO 26262
KP200/KP201/KP204	› KP201 qualified for higher operating temperatures up to 125°C › KP204 with 4-hole lid supporting insect intrusion	Ready

More information on PRO-SIL™ can be found at www.infineon.com/prosil

Pressure sensors

Tire pressure sensor for Tire Pressure Monitoring Systems (TPMS)

Product	Pressure range [kPa]	On-chip flash memory [kB]	Key features
SP400-11-01	100–900	12	› Highest integration › Very low energy consumption › Robust g- and p- sensor › High LF sensitivity
SP400-11-11	100–900	12 + 2	
SP400-15-11	100–1400	12 + 2	

www.infineon.com/tpms-sensors

Digital barometric air pressure sensors for consumer and IoT applications

Key product features	DPS310	DPS368
Package size	2.0 x 2.5 x 1.0 mm	2.0 x 2.5 x 1.1 mm
Operating pressure range	300 … 1200 hPa	
Operating temperature range	-40 … 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 @ 1 Hz sampling rate	1.7 µA pressure measurement, 1.5 µA temp. measurement, standby 0.5 µA	
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^2C and SPI, both with optional interrupt	

www.infineon.com/pressure-sensors-iot

MEMS microphones

MEMS microphones for automotive applications

Typical applications for automotive MEMS microphones will revolutionize the in-cabin user experience

Parametrics	IM67D130A (NEW)	IM67D120A (NEW)
Acoustic overload point	130 dBSPL	120 dBSPL
Current consumption	980 µA	980 µA
Interfaces	PDM	PDM
Sensitivity	-36 dBFS	-26 dBFS
Signal to noise	> 67 dB(A)	> 67 dB(A)
Supply voltage	1.62–3.6 V	1.62–3.6 V
Package	LLGA-5-4	LLGA-5-4
Ordering code	SP005582032	SP005550431

www.infineon.com/mems-automotive

MEMS microphones for consumer applications

Low self-noise (SNR), wide dynamic range, low distortions, high acoustic overload point

	Product	OPN	Package	Current consumption	Sensitivity	Signal to noise [dB]	Supply voltage [V]
	IM69D130	IM69D130V01XTSA1	LLGA-5-1	980 µA	-36 dBFS	69	1.62–3.6
	IM69D120	IM69D120V01XTSA1	LLGA-5-1	980 µA	-26 dBFS	69	1.62–3.6
NEW	IM73A135	IM73A135V01XTSA1	LLGA-5-2	170 µA @ 2.75 V, 70 µA @ 1.6 V	-38 dBV	73	1.52–3.0

www.infineon.com/mems

Radar sensors ICs

RASIC™ automotive radar 77/79 GHz

Product	Configuration	Key benefits	Features
RXS816xPL	3Tx4Rx	RXS8161: single-chip versions RXS8162 and future products: multi-chip versions in 7 x 8.5 mm eWLB package	› Flexible FMCW waveform generation › Four receive channels featuring integrated filters + AD converters › 4 channel LVDS data interface
RXS8156PLA	2Tx4Rx	Cost efficient solution for corner radars in 7 x 7.5 mm eWLB package	

www.infineon.com/rasic

60 GHz radar sensor IC for industrial and consumer applications

Product	Package	SP Number
BGT60LTR11AIP DEMO BGT60LTR11AIP	UF2BGA-42-1	SP005537624 [Demo Kit: SP005422969]

www.infineon.com/60GHz

24 GHz radar sensor ICs for industrial and consumer applications

Product	Configuration	Features
BGT24MTR11	1Tx + 1Rx	› Measures, not just motion, but also speed, direction, and distance › Small form factor › Resistance to moisture, dirt, and temperature › Increased area coverage › Discrete design › Low power MMICs for energy saving › Privacy protection › Adaptable to different application requirements › Highly integrated chips eliminating costly external components
BGT24MR2	2Rx	
BGT24MTR12	1Tx + 2Rx	
BGT24LTR11	1Tx + 1Rx	
BGT24LTR22	2Tx + 2Rx	

www.infineon.com/24GHz

Environmental sensor

PAS CO2 – a disruptive CO_2 sensor based on photoacoustic spectroscopy (PAS)

Features and benefits

Features	Benefits
› Exceptionally small form factor (14 x 13.8 x 7.5 mm^3)	› Space savings in customers' end products
› High accuracy (±30 ppm ±3% of reading)	› High-quality data and compliance with smart building standards
› SMD package delivered in tape and reel	› Cost-effective high-volume assembly and easy system integration
› Advanced compensation and self-calibration algorithms	› Plug & play for fast design-to-market
› Various configuration options (e.g. sampling rate, baseline calibration) and interfaces (UART, I^2C, PWM)	› Customer flexibility thanks to configuration options

Product name: XENSIV™ PAS CO2 evaluation kit for CO_2 measurement
Sales name: EVAL_PASCO2_SENSOR2GO
Ordering code: SP005582413

More information

Product name: XENSIV™ PAS CO2 evaluation board for CO_2 measurement
Sales name: EVAL_PASCO2_MINIBOARD
Ordering code: SP005577475

More information

Smallest, fully featured, budget-priced evaluation boards

Shield2Go

Security

Product name: OPTIGA™ Trust E Security Shield2Go
Sales name: S2GO_Security_OPTIGA_E
Ordering code: SP001820138

More information

Product name: OPTIGA™ Trust X Security Shield2Go
Sales name: S2GO SECURITY OPTIGA X
Ordering code: SP002349576

More information

Sensors

Product name: IM69D130 Microphone Shield2Go
Sales name: S2GO MEMSMIC IM69D
Ordering code: SP002851544

More information

Product name: S2GO Pressure Sensor DPS310
Sales name: S2GO_PRESSURE_DPS310
Ordering code: SP001777630

More information

Product name: S2GO Pressure Sensor DPS368
Sales name: S2GO PRESSURE DPS368
Ordering code: SP005338022

More information

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

More information

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

More information

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

More information

Sensors

Product name: TLI493D W2BW 3D Sense Shield2Go in small WLB-5 package (1.13 mm x 0.93 mm x 0.59 mm)
Sales name: S2GO_3D_TLI493DW2BW-A0
Ordering code: SP005410385

More information

Product name: TLI4971 Current Sense Shield2Go
Sales name: S2GO_CUR-SENSE_TLI4971
Ordering code: SP005345472

More information

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

More information

Microcontroller

Product name: XMC 2Go Kit
Sales name: KIT_XMC_2GO_XMC1100_V1
Ordering code: SP001199544

More information

MyIoT – Adapter

Product name: MyIoT Adapter
Sales name: MYIOTADAPTERTOBO1
Ordering code: SP002434972

More information

Sensor 2GO kits

Automotive pressure sensor 2GO kit
Product name: KP215F1701-PS2GO-KIT/ KP229E3518-PS2GO-KIT/ KP236-PS2GO-KIT/KP254-PS2GO-KIT/ KP275-PS2GO-KIT
Ordering code: SP002676652/SP002676656/ SP002676664/SP002676664/ SP002676648

More information 

3D magnetic sensor 2GO kit
Product name: TLE493D-A2B6 MS2GO/ TLE493D-W2B6 MS2GO/ TLV493D-A1B6 MS2GO
Ordering code: SP001707582/ SP001707578/ SP001707574

More information 

TLI4971 current sensor 2GO kit
Product name: TLI4971_MS2GO
Ordering code: SP005345474

More information 

Speed sensor 2GO kit
Product name: TLE4922 MS2GO
Ordering code: SP003029974

More information 

Angle sensor 2GO kit
Product name: TLE5012B_E1000_MS2GO/ TLI5012B_E1000_MS2GO/ TLE5012B_E5000_MS2GO/ TLE5012B_E9000_MS2GO
Ordering code: SP002133956/ SP002133960/ SP002133964/ SP002133968

More information 

MEMS microphone
Product name: EVAL_IM69D130_FLEXKIT
Ordering code: SP002153022

More information 

Add ons for Sensor 2GO kits and Shield2Go

Joystick for all 3D magnetic sensor 2GO kits and Shield2Go
Product name: JOYSTICK FOR 3D 2 GO KIT
Ordering code: SP00149183

More information

Rotate knob for all 3D magnetic sensor 2GO kits/ Shield2Go, angle sensor 2GO kits
Product name: ROTATE KNOB 3D 2 GO KIT/ ROTATEKNOBANGLE2GOTOBO1
Ordering code: SP001504602/SP002441192

More information

Linear slider for all 3D magnetic sensor 2GO kits and Shield2Go
Product name: LINEAR-SLIDER 2GO
Ordering code: SP002043034

More information

Out of shaft adapter for all 3D magnetic sensor 2GO kits and Shield2Go
Product name: OUT OF SHAFT FOR 3D 2 GO
Ordering code: SP003475178

More information

Linear control trigger for all 3D magnetic sensor 2GO Kits and Shield2Go
Product name: POWER_DRILL2GO
Ordering code: SP005350194

More information

Human Machine Interface (HMI) direction indicator for all 3D magnetic sensor 2GO Kits and Shield2Go
Product name: DIR_INDICATOR2GO
Ordering code: SP005350196

More information

HMI mini control with 4 directions and 360° rotation for all 3D magnetic sensor 2GO Kits and Shield2Go
Product name: MINI_CONTROL2GO
Ordering code: SP005350192

More information

OpenClose Adapter for Hall switch Shield2Go
Product name: OPENCLOSE2GOHSTOBO1

More information

ISO 26262 – Functional Safety (FuSa)

Dependable electronics based on Functional Safety

The transformation in the automotive industry is being driven by megatrends such as automated driving and connectivity, all of which increases the need for safe electronic systems. These systems require highly integrated and safe electronic semiconductors. Today's standard for safe automated and safe autonomous systems is the ISO 26262 that is already implemented in the Infineon automotive products and well-established in the company's development processes and all product support activities.

Infineon is actively monitoring the trends in the automotive industry. We provide components and chipsets as well as system knowledge to support all safety-relevant automotive systems. Our broad product portfolio addresses a wide range of functionalities with sensors, computing and actuating chips complemented by power supply chips and communication ICs. For easy integration and minimum effort at the system integrator level, Infineon provides all of the necessary supporting information and documentation, as well as support from our team of experts. The required conformity evidence to ISO 26262 series of standards is available for all Infineon automotive safety products.

Functional safety is an inherent part of the proprietary development processes in Infineon. All products with assigned ASIL-classified safety requirements are subject to appropriate internal audits, assessments, and confirmations. With that, we ensure that these components fulfill the requirements for ISO 26262-compliant and ISO 26262-ready classifications – both are recognizable by our PRO-SIL™ trademark. With regard to ISO 26262-compliance, PRO-SIL™ indicates that assigned product safety requirements are fulfilled and conform to the ISO 26262 series of standards. With regard to ISO 26262-readyness, PRO-SIL™ indicates that the integrator gets the necessary information to integrate a non-ISO 26262 developed part into his safe system according to ISO 26262 clause 8-13.

All ISO 26262-compliant and ISO 26262-ready parts are produced according to Infineon's comprehensive automotive quality processes, resulting in the highest-possible product reliability. With our passion for quality and by taking a holistic functional safety approach, Infineon provides dependable electronics to support today's safety-relevant systems and future fail-operational systems essential for highly automated and autonomous driving.

ISO 26262 compliant

ISO 26262 ready

ProSIL™ products support a safety use case

Customer use case	System integration: Efforts	System integration: Documentation	Safety feature description	Infineon label
Design with safety product to develop its own safety system	 Use case specific	 Use case specific	Product with diagnostic or safety features	PRO SIL
Hardware integration using products developed with Infineon automotive processes	 Medium	 Safety app. note	Safety analyses and customer documentation supporting ISO 26262 system integrations	ISO 26262 ready
System designed around Infineon components developed specifically for safety relevant applications	 Low	 Safety manual	Product developed according to ISO 26262 process with required documentation	ISO 26262 compliant

Where to buy

Infineon distribution partners and sales offices:
www.infineon.com/WhereToBuy

Service hotline

Infineon offers its toll-free 0800/4001 service hotline as one central number, available 24/7 in English, Mandarin and German.

- Germany ..... 0800 951 951 951 (German/English)
- China, mainland ..... 4001 200 951 (Mandarin/English)
- India ..... 000 800 4402 951 (English)
- USA ..... 1-866 951 9519 (English/German)
- Other countries ..... 00* 800 951 951 951 (English/German)
- Direct access ..... +49 89 234-0 (interconnection fee, German/English)

* Please note: Some countries may require you to dial a code other than “00” to access this international number.
Please visit www.infineon.com/service for your country!

www.infineon.com

Published by
Infineon Technologies AG
81726 Munich, Germany

Date: 2021-10

Please note!
This Document is for information purposes only and any information given herein shall in no event be regarded as a warranty, guarantee or description of any functionality, conditions and/or quality of our products or any suitability for a particular purpose. With regard to the technical specifications of our products, we kindly ask you to refer to the relevant product data sheets provided by us. Our customers and their technical departments are required to evaluate the suitability of our products for the intended application.

We reserve the right to change this document and/or the information given herein at any time.

Additional information
For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings
Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.