



Product family overview

XENSIV™ manifold absolute pressure (MAP) sensors

January 2026



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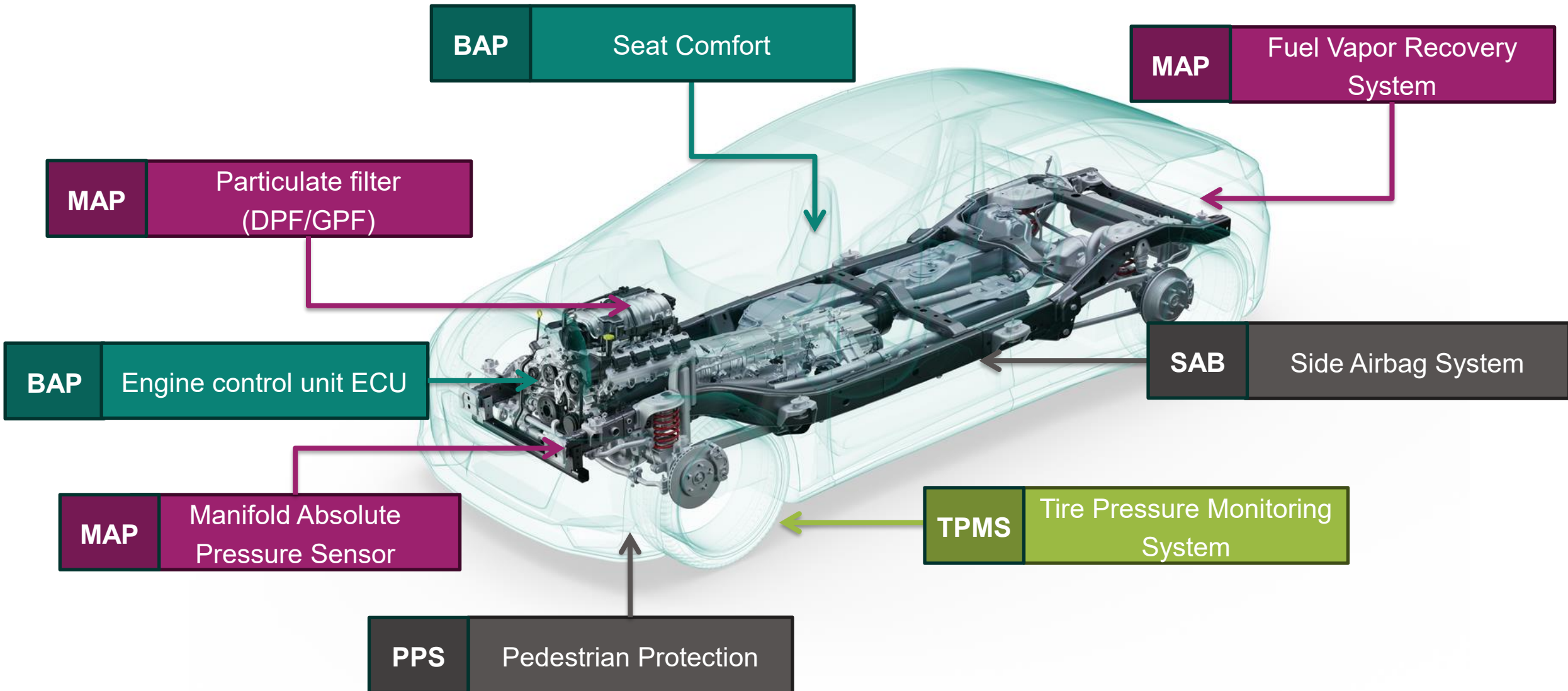
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Pressure Sensors Overview in Automotive Applications.

Powertrain – ICE



Pressure Sensors Overview in Automotive Applications.

Powertrain – PHEV

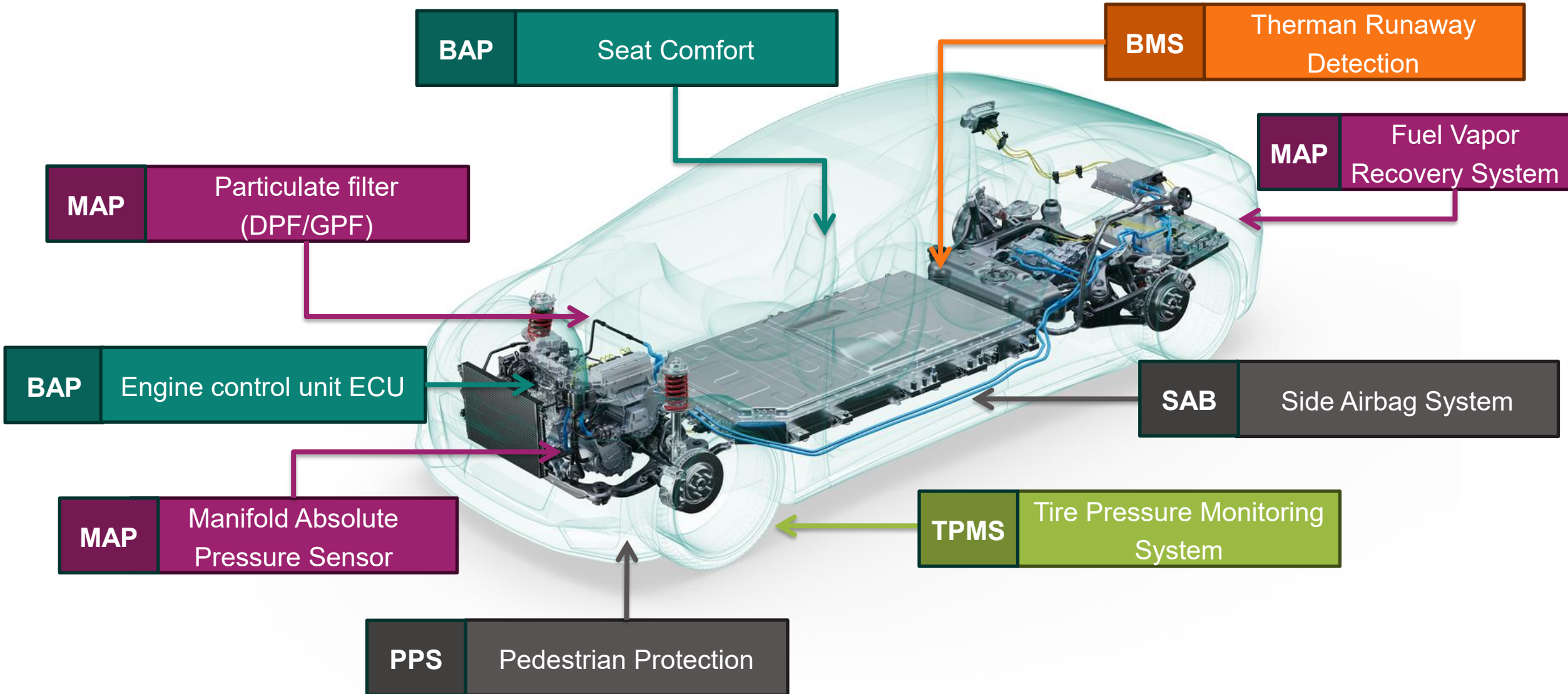
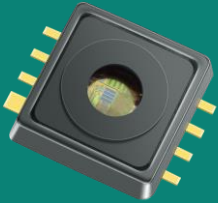


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Our sensors address key applications in the automotive, industrial, medical and consumer sectors



Manifold Pressure Sensors (MAP)

AUTOMOTIVE



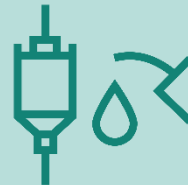
Internal combustion engines (MAP/TMAP)

[IFX Gasoline ICE webpage](#)

[IFX Diesel ICE webpage](#)



EGR (Exhaust Gas Recirculation)



ORVR (Onboard Refueling Vapor Recovery)

INDUSTRIAL / CONSUMER

Industrial control



Medical applications



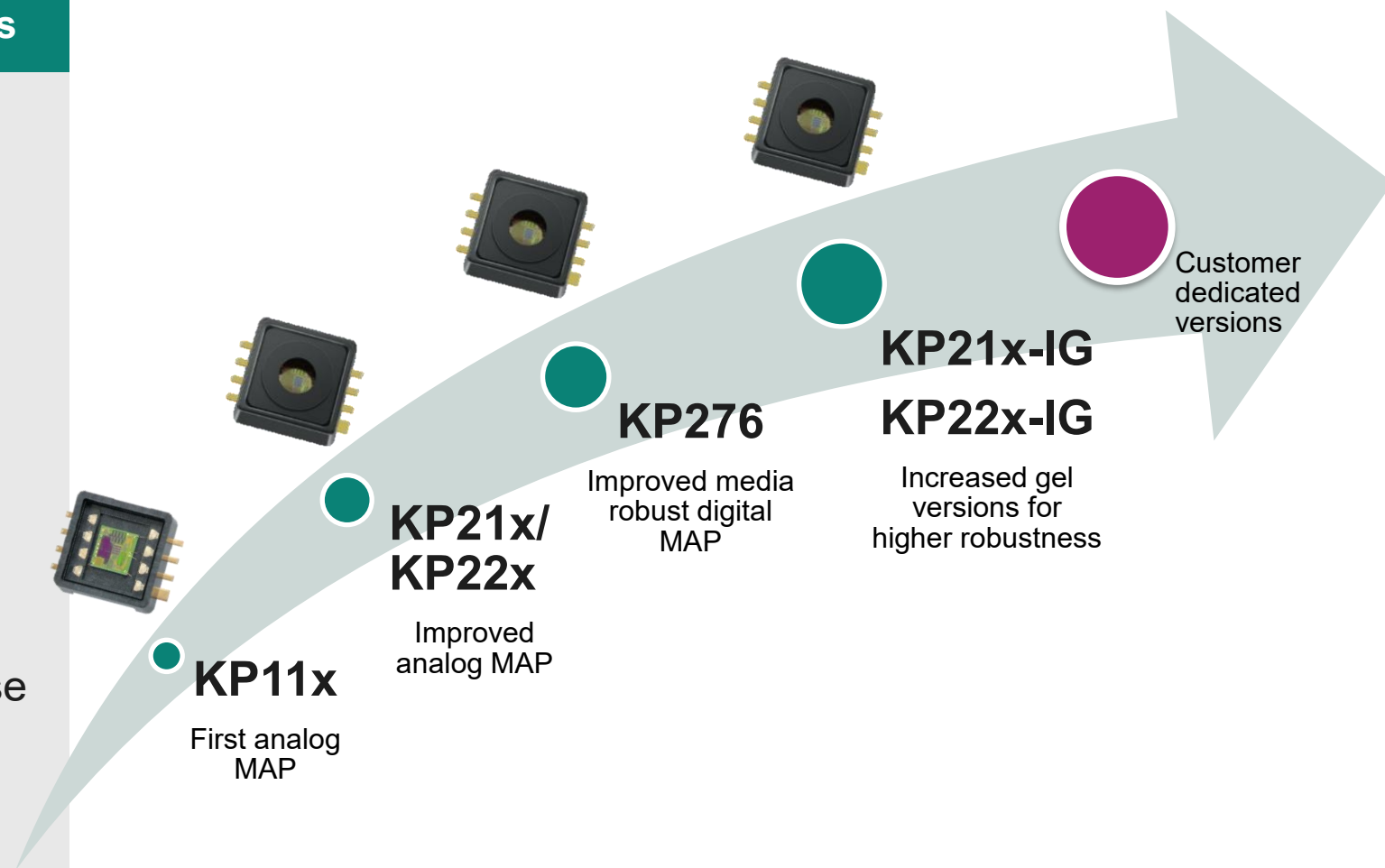
Consumer applications



Infineon has a proven track record in MAP

Infineon – best partner for MAP solutions

- › Proven MEMS technology
- › High technological expertise and market understanding
- › Worldwide support and supply network
- › Proven high quality in field
- › Leading Functional Safety expertise for integrated sensors



Making the World Cleaner Contributing to CO₂ Emissions Reduction

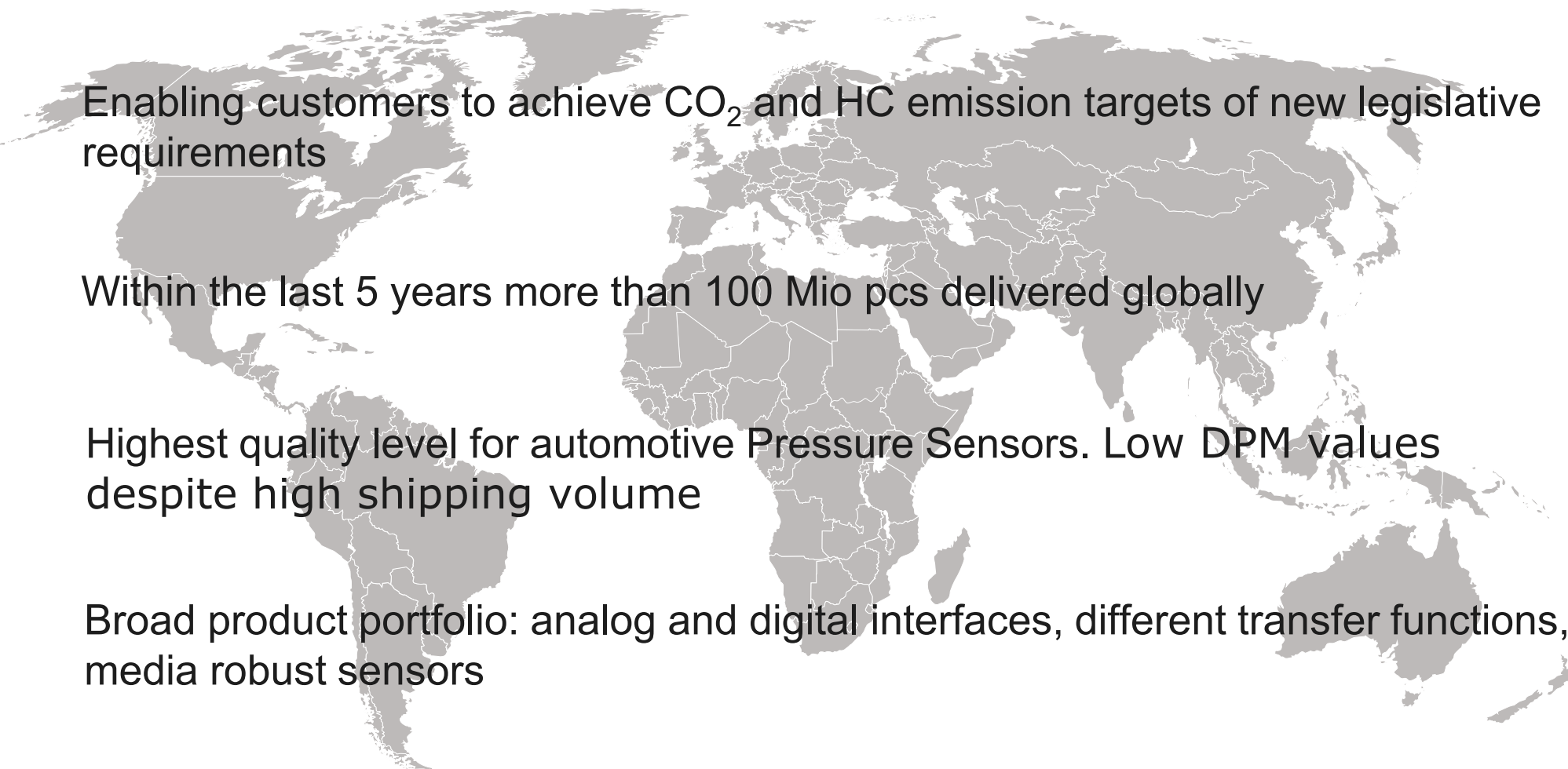
- 
- A light gray world map serves as the background for the list items.
- 1 Enabling customers to achieve CO₂ and HC emission targets of new legislative requirements
 - 2 Within the last 5 years more than 100 Mio pcs delivered globally
 - 3 Highest quality level for automotive Pressure Sensors. Low DPM values despite high shipping volume
 - 4 Broad product portfolio: analog and digital interfaces, different transfer functions, media robust sensors

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Infinion MAP portfolio

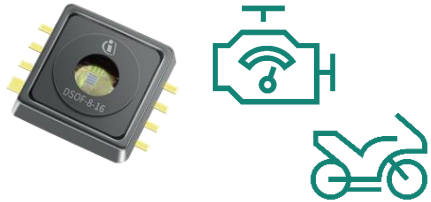
XENSIV™ KP21x, KP22x & KP276



XENSIV™ MAP and TMAP offering for automotive and industrial

Get to know our product offering

KP21x



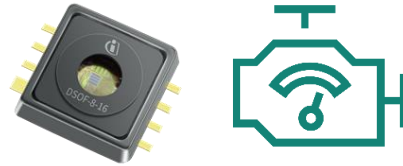
Analog

Smaller pressure range

ECU and 2-Wheeler
dedicated KP212x

Transfer functions
perfectly fitting
worldwide 2-wheeler
requirements

KP22x



Analog Turbo MAP

Wider pressure range

ECU and BMS

Transfer functions
fitting ECU and Battery
Management System
requirements

KP21x-IG / KP22x-IG



Analog with Increased Gel

Wider pressure range

Higher media robustness

ECU and EGR

Increased protective gel
variants of our KP21x and
KP22x MAP and Turbo MAP
family for higher media
robustness

KP276



Digital SENT interface

Smaller and wider pressure ranges

Highest media robustness

EGR

Highest media robustness
by gold bond pads

MAP Manifold Absolute Pressure

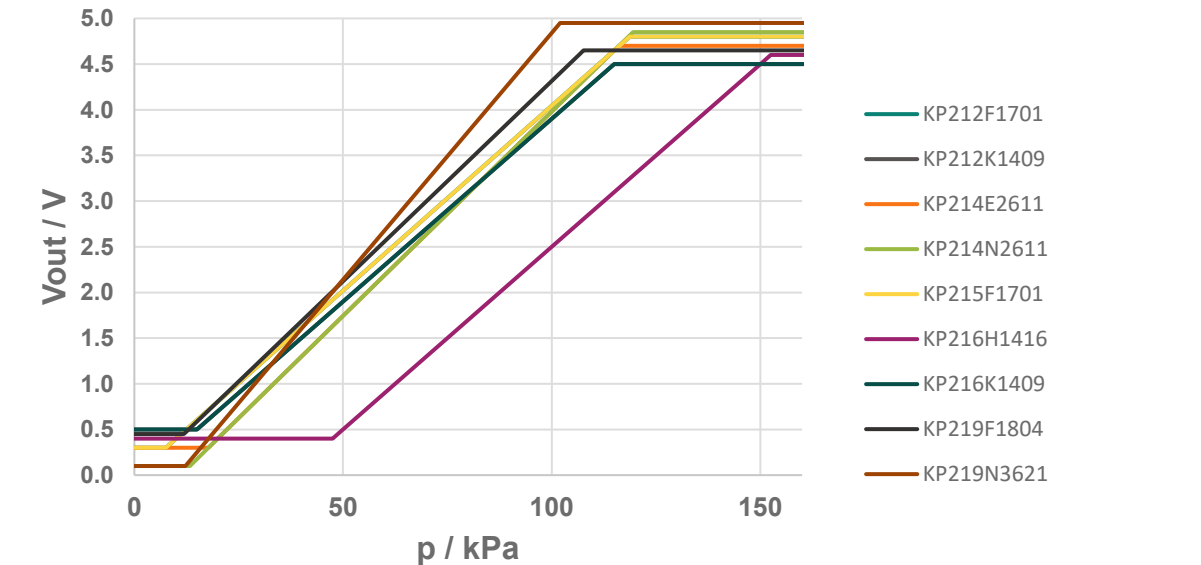
Analog interface



KP21x Analog MAP

Various transfer functions. Other characteristics on request

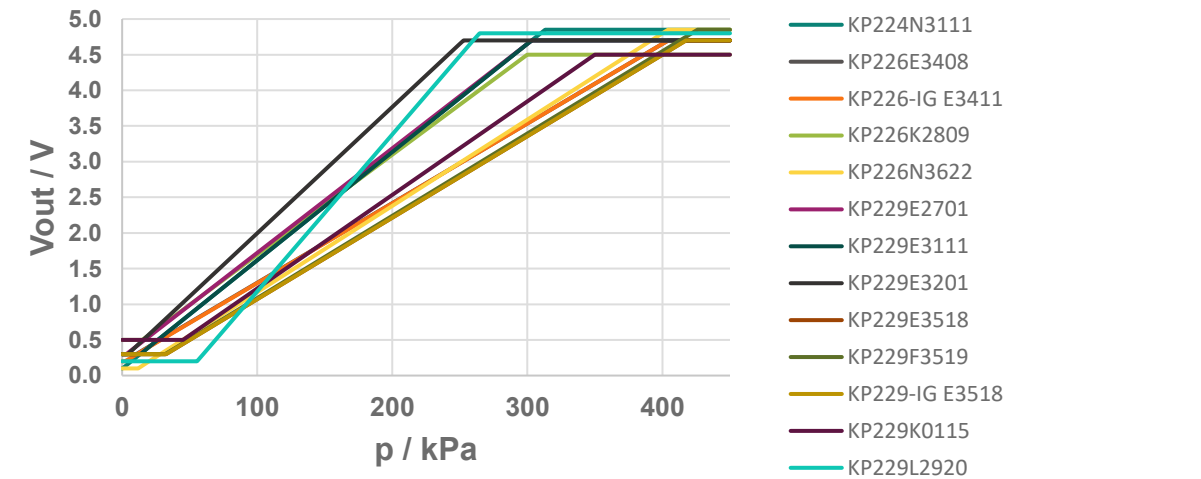
Type	Pmin [kPa]	Pmax [kPa]	Vmin [V]	Vmax [V]	Gain [V/kPa]	Offset [V]
KP214E2611	20	115	0.4	4.65	0.04474	-0.495
KP214N2611	20	115	0.4	4.65	0.04474	-0.495
KP215F1701	10	115	0.4	4.65	0.04048	-0.005
KP216H1416	50	150	0.5	4.5	0.04000	-1500
KP216K1409	15	115	0.5	4.5	0.04000	-0.100
KP219F1804	13.3	106.7	0.512	4.608	0.04385	-0.071
KP219M1203	12.5	115	0.5	4.5	0.03902	0.012
KP219N3621	15	102	0.25	4.95	0.05402	-0.560



KP22x Analog Turbo MAP

Various transfer functions. Other characteristics on request

Type	Pmin [kPa]	Pmax [kPa]	Vmin [V]	Vmax [V]	Gain [V/kPa]	Offset [V]
KP224N3111	20	300	0.4	4.65	0.01518	0.096
KP226E3408	15	400	0.35	4.65	0.01115	0.182
KP226-IG E3411	20	400	0.4	4.65	0.01118	0.176
KP226K2809	15	300	0.5	4.5	0.01404	0.289
KP226N3622	20	400	0.2	4.8	0.01211	-0.042
KP229E2701	10	300	0.4	4.65	0.01466	0.253
KP229E3111	20	300	0.4	4.65	0.01518	0.096
KP229E3201	10	250	0.4	4.65	0.01771	0.223
KP229E3518	50	400	0.5	4.5	0.01143	-0.071
KP229F3519	50	400	0.51	4.55	0.01154	-0.067
KP229-IG E3518	50	400	0.5	4.5	0.01145	-0.071
KP229K0115	45	350	0.5	4.5	0.01311	-0.090
KP229L2920	60	260	0.3	4.7	0.02200	-1.020



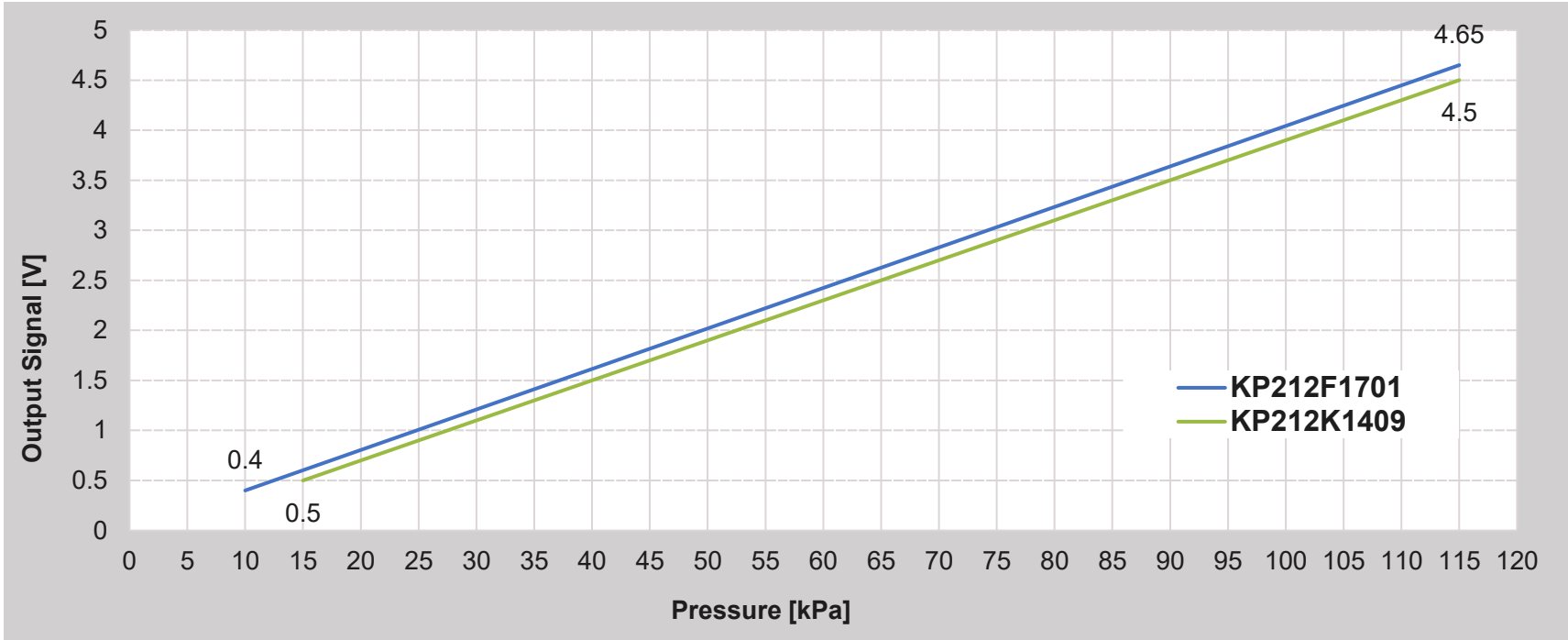
MAP Manifold Absolute Pressure

Analog interface



2-wheeler dedicated Analog MAP versions available

Type	Pmin [kPa]	Pmax [kPa]	Vmin [V]	Vmax [V]	Gain [V/kPa]	Offset [V]
KP212F1701	10	115	0.4	4.65	0.04048	-0.005
KP212K1409	15	115	0.5	4.50	0.04000	-0.100



2 wheeler temperature range:
-40 to 125°C

Samples available



MAP Manifold Absolute Pressure

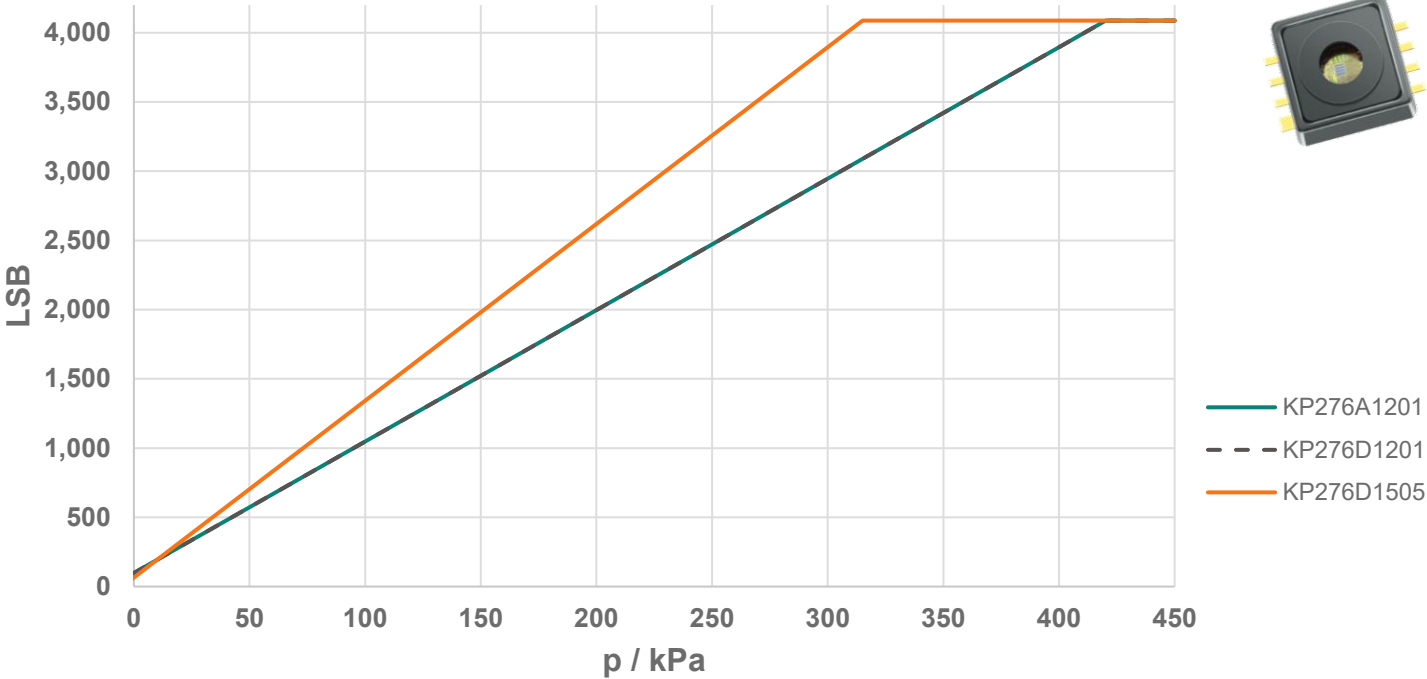
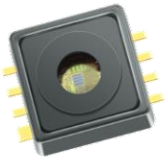
Digital interface



Overall Turbo MAP portfolio with digital SENT interface

Type	Pmin [kPa]	Pmax [kPa]	LSBmin [LSB]	LSBmax [LSB]	Sensitivity [LSB/kPa]	Offset [LSB]
KP276A1201 KP276D1201	10	400	193	3896	9.495	98.05
KP276D1505	10	300	193	3896	9.495	98.05

dTMAP



- Highlights:**
- Updated **SENT** protocol with 282 clock ticks
 - **Pressure range** from **10 to 400 kPa**
 - High **Accuracy over lifetime** sensing up to **±0.77% FSS** (Full Scale Span)
 - **Higher media robustness compared to analog MAPs**
 - **Readout of external NTC**
 - **Fast NTC/Pressure Start-up** (typ. 10ms)

KP21x, KP22x & KP276 sensors spec sheet – Existing portfolio (webpage)



Explanation spec summary for example sensor, for all see webpage

Device	KP212F1701	KP216H1416	KP229L2920	KP229E2701	KP226-IG E3411	KP276D1505	KP276A1201
Feature set							
Interface	Analog	Analog	Analog	Analog	Analog	SENT	SENT
Pressure Range	10 to 115 kPa	50 to 150 kPa	60 to 260 kPa	10 to 300 kPa	10 to 400 kPa	10 to 300 kPa	10 to 400 kPa
Pressure Accuracy	±1.4 kPa	±1.0 kPa	±3.5 kPa	±2.5 kPa	±3.0 kPa	±3 kPa	±3 kPa
External Temperature Sensor	-	-	-	-	-	External NTC	External NTC
Temperature Accuracy	-	-	-	-	-	±3°C	±3°C
Operating Temperature	-40 to 125°C	-40 to 140°C	-40 to 140°C	-40 to 140°C	-40 to 140°C	-40 to 150°C (170°C for 20 min)	-40 to 150°C
Supply Voltage	4.5 to 5.5 V	4.5 to 5.5 V	4.5 to 5.5 V	4.5 to 5.5 V	4.5 to 5.5 V	4.5 to 5.5 V	4.5 to 5.5 V
Supply Current	≤ 10 mA	≤ 10 mA	≤ 10 mA	≤ 10 mA	≤ 10 mA	≤ 15 mA	≤ 15 mA
Diagnostics	Open bond detection	Open bond detection	Open bond detection	Open bond detection	Open bond detection	Advanced diagnostics	Advanced diagnostics
Package	PG-DSOF-8-16	PG-DSOF-8-16	PG-DSOF-8-16	PG-DSOF-8-16	PG-DSOF-8-16	PG-DSOF-8-16	PG-DSOF-8-16
Media Robustness	Normal gel height on MEMS	Normal gel height on MEMS	Normal gel height on MEMS	Normal gel height on MEMS	Increased protective gel for higher media robustness	Highest media robustness by gold bond pads	Highest media robustness by gold bond pads

KP21x series
Smaller pressure range

KP22x series
Wider pressure range

KP276x series
Smaller and wider pressure ranges

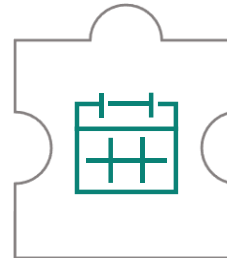
Infineon MAP global status



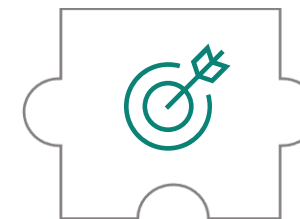
Local sales
= easy point of
contact



Supply
situation well
in control



18 Weeks
Lead time



Customer logistics
managers to assure
on-time deliveries



Infineon as your #1 partner
Fast and agile local customer support experts and highest quality products

