Inertial measurement unit premium

Stand-alone heterogeneous redundant 6DOF high-performance inertial measurement ECU, with compliant AUTOSAR base software, enabling highly available localization functionalities for automated driving from SAE Level 3

Automated driving requires reliable, highly available and redundant vehicle positioning information

- Dead reckoning/bridging for localization: perception sensor outages can be bridged (e.g., loss of GNSS under bridge or in tunnel, loss of camera)
- Highly scalable concept with broad range of safety and performance levels for an optimal customer fit
- Enhanced driving dynamics, safety including ABS, ESP, and airbag systems, plus comfort through precise inertial sensing, for an optimized driving and parking experience

Highly available

Heterogeneous redundancy enables the system to drive safely, even with random hardware issues

Robustness

for various automated driving features from SAE Level 3

End-to-end

technology

Dedicated proprietary high-performance sensor modules

Technical characteristics

Size	142 x 142 x 25 mm		
Supply range	8 V ... 17 V		
Current consumption	150 mA		
Signal offset over temp.	0.02 °/s	|	1 mg
Signal sensitivity	0.07%	|	0.05%
Angular random walk (ARW)	0.1 °/√h		
Velocity random walk (VRW)			0.036 m/s/√h
Bias instability (factor B acc. to IEEE)	2.3 °/h	|	1.4 m/s/h
Safety acc. to ISO 26262	Up to 2x ASIL D		

All values are typical values (confidence interval 1-sigma).

6DOF = angular rate and acceleration in all three dimensions