Inertial measurement unit light

Stand-alone 6DOF high-performance inertial measurement unit, enabling localization functionalities for assisted and automated driving from SAE Level 2

Assisted and automated driving requires reliable 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

High precision

Safe and highly reliable measurement of vehicle motion

Robustness

for various assisted and automated driving features from SAE Level 2

End-to-end

technology

Dedicated proprietary high-performance sensor modules

Technical characteristics

Size	56 x 80 x 25 mm		
Supply range	6.5 V ... 18 V		
Current consumption	50 mA		
Signal offset over temp.	0.04 °/s	|	1 mg
Signal sensitivity	0.1%	|	0.1%
Angular random walk (ARW)	0.18 °/√h		
Velocity random walk (VRW)			0.11 m/s/√h
Bias instability (factor B acc. to IEEE)	2.3 °/h	|	1.4 m/s/h
Safety acc. to ISO 26262	ASIL B		

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

6DOF = angular rate and acceleration in all three dimensions