



# SmartAutomotive™

## PRIMARY APPLICATIONS



### Navigation Systems Aids for Dead Reckoning

Low noise and superior stability for accurate positioning up to 105°C



### ADAS Vision Systems and Camera Stabilization

High sensor output data rate (up to 1kHz), F-sync pin for camera frame synchronization, small size fits into camera module



### Telematics and Car Alarm

Programmable Wake-on-Motion embedded interrupt, Low power feature to minimize application's current consumption

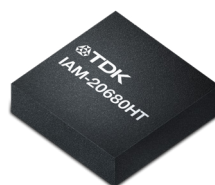


### Door Control

Integrated 6-axis for free mounting orientation, up to 4k byte embedded FIFO to underload host processor

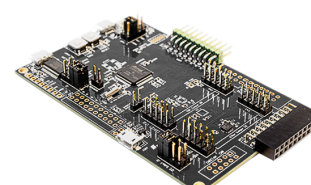
## FEATURED PRODUCTS

### IAM-20680HT



High temperature 6-axis MotionTracking device for Automotive non-safety applications with extended temperature range up to 105°C. IAM-20680HT provides best-in-class low noise performance, superior stability, on-chip 16-bit ADCs, and industry-leading sensitivity tolerance.

### DK-20680HT



Comprehensive development platform designed around Microchip G55 MCU to be used by developers for rapid evaluation and development of IAM-20680HT based solutions.

## PRODUCT CATEGORIES

### IAM-20680HT

Navigation Systems Aids, Vision Systems, Vehicle Location, Telematics

- High temperature MotionTracking device
- Operating temperature range (-40°C / 105°C)
- Embedded features: Wake-on-Motion, two interrupt lines
- Reliability testing performed according to AEC-Q100 Grade 2

### IAM-20680HP

High Performance IMU for Navigation Systems Aids, Vision Systems, Head-Up Display

- High performance MotionTracking device
- Operating temperature range (-40°C / 105°C)
- Enhanced factory calibration procedure, providing superior stability over temperature and lifetime
- Part-by-part temperature compensation up to 105°C
- Reliability testing performed according to AEC-Q100 Grade 2

### IAM-20685

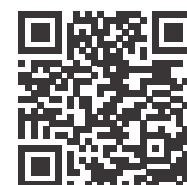
High Performance IMU for systems up to ASIL-B for ADAS & Autonomous drive Applications

- Smallest 6-axis ASIL-rated MotionTracking device
- Lowest current consumption failsafe Inertial Measurement Unit for Automotive Applications
- Developed according to ISO-26262

## PRODUCT DETAILS

Product Number	Package (mm)	Gyro FSR (dps)	Gyro offset variation over T (dps typ)	Accel FSR (g)	Accel offset variation over T (mg typ)	Digital Output	Output Data Rate	Operating Voltage (g)	ISO26262 Rating	Interrupt Lines
IAM-20680HT	3 × 3 × 0.75	±250 to ±2000	±1	±2 to ±16	±50	I <sup>2</sup> C or SPI	4Hz to 8kHz (gyro) 4Hz to 4kHz (accel)	1.7 to 3.6	n/a	2
IAM-20680HP	3 × 3 × 0.75	±250 to ±2000	±0.9 (**)	±2 to ±16	±15 (**)	I <sup>2</sup> C or SPI	4Hz to 8kHz (gyro) 4Hz to 4kHz (accel)	1.7 to 3.6	n/a	1
IAM-20685	4.5 × 4.5 × 1.1	±41 to ±1966	(*)	±2 to ±16	(*)	SPI w/ CRC	8kHz	3.0 to 5.5	Up to ASIL B	2

(\*) please contact your local TDK InvenSense Sales Office for full datasheet  
 (\*\*) min/max values are -2x better compared to IAM-20680HT



Scan Here for additional materials and information.