

VMSENS

Miniature Attitude and Heading Reference System (AHRS)



High Light

- Real-time computed attitude/heading and inertial data output
- Gyroscopes enable high-frequency orientation tracking
- High effective VMSENS EKF sensor fusion
- 360° orientation referenced by gravity and earth magnetic field
- MEMS base 3D gyroscopes, accelerometers and magnetometers integrated
- On board data processor with real-time sensor fusion algorithm
- Compact and lightweight design
- End to end software support

Degrees of Freedom	3 (Yaw, Pitch and Roll)
Angular Range	Full 360° - All Axes
Maximum Angular Rate	2000° per second
Accuracy (RMS)	0.5°pitch & roll, 1°in yaw at 25°C
Angular Resolution	0.05°
Dynamic accuracy	2° RMS
Update Rate	100 Hz
Interface	RS232
Size	50×35×16mm
Material	Aluminum Alloy
Cable Length	3 meter(max for 30meter)
Operating Temp.	0° to 50°
Output Model	3D orientation Quaternion/ Euler/ DCM 3D acceleration/ rate of turn/ magnetic field

Continuing the success that VMSENS inertial technologies provides motion tracking and analysis solution, now, the VM-i is a ideal multi-purpose sensor for real-time applications in stabilization and control of cameras and antenna, robots, vehicles and other (un)manned equipment, simulation & training, virtual & augmented reality, motion capture, and human movement analysis

The VM-i integrates 3D orientation MEMS elements, utilizing VMSENS Sensor Fusion algorithms to process full 360° orientation tracking to provides real-time and drift-free 3D orientation data

Additional Software Features

VMSENS Explorer provides an easy way to interactive with VM-i, let user set and go:

- 3D visually motion tracking
- Compass / Artificial Horizon
- Real-time data observe and logging
- Optimize sensor fusion filter settings for widely used
- Easy to use magnetometers compensation procedure for both soft and hard iron effects

Extensive SDK

The extensive SDK ensures full control of the VM-i and makes interfacing to the VM-i easy. The SDK provides interfaces at multiple levels: **VMSENS COM-Object and .DLL API for high level OS , Low Level Communication Lib for embedded system**, we provide all the demo source code for the developments With the VMSENS SDK, your preferred solution is easy and fast to realize.

