

# SENSOR FUSION

Flexible 9-axis 6 DOF Solution for Android Devices



SMALL SIZE MAKE A BIG DIFFERENCE. FOR A SAFER, MORE ENJOYABLE WORLD.

**VTI**   
TECHNOLOGIES

# SENSOR FUSION

Flexible 9-axis 6 DOF Solution for Android Devices

VTI's Sensor Fusion combines sensory data and the strengths of each sensor to obtain accurate and complete easy to integrate motion sensing information for intelligent devices.

Sensor fusion is implemented by using 3-axis gyro, 3-axis magnetometer and 3-axis accelerometer connected to application processor running Android OS.

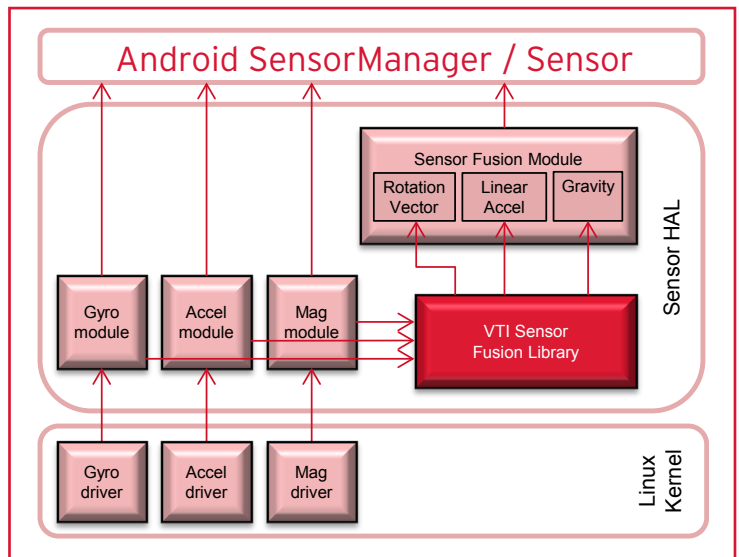
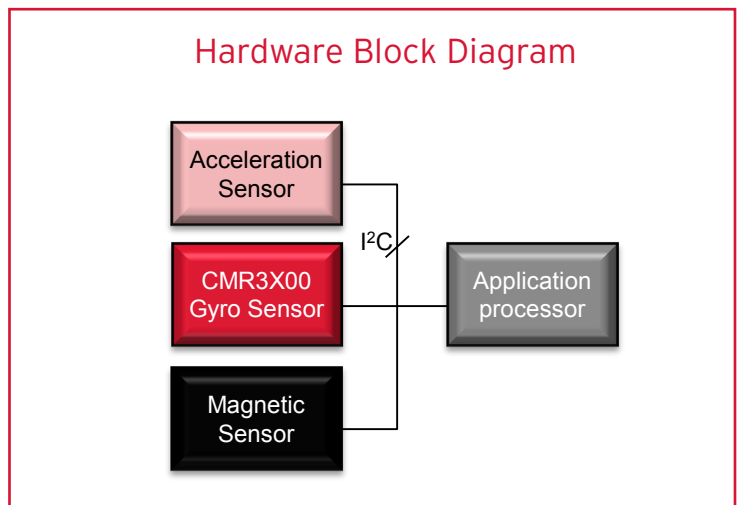
- Magnetic and gyro sensor are auto-calibrated
- Frequency response and noise performance can be optimized to meet application requirements
- Small memory footprint 12 kB and low <5% processor load (OMAP4430) for the fusion mathematics

Complies with Android SensorAPI

- Rotation matrix
- Orientation
- Linear acceleration
- Gravity

## Benefits

- Complete software solution
- Flexibility in sensor selection due to modular software structure and parameterized fusion algorithms
- Low cost due to integration with application processor
- Small solution size enabled by 3x3 mm<sup>2</sup> CMR3100



## Applications

- Augmented reality
- Pedestrian navigation
- Motion gaming
- Motion tracking

