

Inertial Sensors · Downhole · Software

Applications

- Platform Stabilization
- Camera/Antenna Pointing
- GPS-Aided Navigation
- Unmanned Vehicles
- Regime Monitoring
- Personnel Tracking
- Calibration Reference



Outputs

- Position
- Velocity
- Pitch/Roll/Yaw
- Atmospheric Pressure
- GPS
- Acceleration
- Angular Rate

Inertial Sensors

microstrain.com/inertial

Our line of advanced inertial sensors provides a range of measurement options including orientation (pitch/roll/yaw), inclination, linear acceleration, and angular rate. We offer a variety of options, including basic inclinometer, vertical gyro, VRU (vertical reference unit), IMU (inertial measurement unit), AHRS (attitude heading reference system), and GPS/INS (GPS-aided inertial navigation system).



3DM-CV5™ and CX5™ Family

AHRS, VR, IMU SENSORS

- Low-cost, board-level OEM solution
- 8°/hour gyro bias stability, AHRS/VR/IMU: 8 g, 38 x 24 x 9.7 mm
- 8°/hour in run bias, 75-900°/sec gyro, 2-40g Accel, OEM package



3DM-GX5™ Family

GNSS/INS, AHRS, IMU/VR SENSORS

- Dual on-board processors with Auto-Adaptive EKF, 8°/hour gyro bias stability
- GNSS/INS: 20 gram, 44.2 x 36.6 x 11 mm
- AHRS/IMU: 16.5 gram, 36 x 36.6 x 11.1 mm



3DM-GQ4-45™

TACTICAL-GRADE GNSS/INS SENSOR

- All-in-one navigation solution with extended Kalman filter
- 5°/hour gyro bias stability
- 101 grams, 76.2 x 62.2 x 18.9 mm



3DM-RQ1-45™

RUGGEDIZED TACTICAL-GRADE GPS/INS SENSOR

- Triaxial accelerometer/gyroscope/magnetometer
- Temperature sensors, GPS receiver
- 5°/hour gyro bias stability
- 206 grams, 88.3 x 76.2 x 22.2 mm



MV5-AR

COMPACT, RUGGEDIZED ATTITUDE REFERENCE AND IMU

- Full 360° 6-DOF Range, .2° inclination accuracy
- Ruggedized Package (IP67 / IP69K)
- AMP-SEAL Connector, CAN J1939m

Downhole

microstrain.com/inertial/3dm-dh3

The 3DM-DH3™ is a factory-calibrated downhole orientation sensor and datalogger for out-of-the-box, highly precise directional surveying, enabling oil, gas, mineral, and water drill operators to quickly receive accurate data. The included software allows the user to configure the sensor, view real-time measurements, and download data for post-processing.



3DM-DH3™

DOWNHOLE ORIENTATION SENSOR

- 24-bit accelerometer, 16-bit magnetometer
- RS-422 serial output (four-wire full duplex)
- Operating temperature: -40°C to 125°C
- Measures inclination, azimuth, GTF/MTF, dip angle, H-TOT/G-TOT, and more

MIP™ Monitor

microstrain.com/software

MIP™ Monitor is the standard communications protocol for all current and future LORD Sensing inertial sensing systems. Its data protocol and packet structure were designed to incorporate data from many sources, at many data rates, into an efficient stream.



MIP™ Monitor

SOFTWARE FOR INERTIAL SENSING

- Flexible, open-ended software
- Customizable parameters for highly accurate and relevant reporting
- User-friendly interface with dynamic graphics and data collection
- Hard and soft iron field calibration also available

The MIP Data Communications Protocol is available for users who want to develop customized software solutions tailored to their own application.

Also available from LORD Sensing-MicroStrain

Wireless Sensing Systems

microstrain.com/wireless

LXRS lossless protocol enables synchronized burst and continuous high-speed sampling from multiple inputs as part of a scalable network. Custom/OEM also available.



Displacement Sensors

microstrain.com/displacement

Contact sensors (sub/microminiature, gauging/ non-gauging), non-contact sensors, and signal conditioners for measuring highly precise data where not previously possible.

