



ANF-201M

MEMS Inertial Sensor

The ANF-201M is a highly reliable, cost-effective six-axis MEMS inertial sensor. The system is fully calibrated across the entire temperature range, enabling long-term maintenance of high measurement accuracy.



- High-temperature operation
- Supports zero-bias compensation to maintain heading accuracy over time
- Configurable homing time
- Supports installation misalignment angle compensation
- Adaptability and reliability in harsh dynamic environments

Application Scenarios



Mines



Oilfield
Inclination Survey



High-Precision
Underwater Navigation

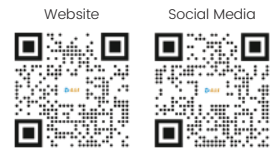


Pipeline Surveying



Soldier Orientation

ANF-201M



— Gyroscope

Measurement Range (°/s)	±200	Full Temperature Bias (°/h, 3 σ)	≤0.3
Bias Stability (°/h, 10 s smoothing)	≤0.1	Bias Instability (°/h, Allan, typ)	≤0.02
Bias Repeatability (°/h)	≤0.1	Angle Random Walk (°/√h)	≤0.01
Scale Factor Nonlinearity (ppm)	≤100	Cross Coupling (rad)	≤0.001
Bandwidth (Hz)	≥50		

— Accelerometer

Measurement Range (g)	±10	Full Temperature Bias (mg, 3 σ)	≤0.5
Bias Stability (μg, 10 s smoothing)	≤20	Bias Instability (μg, Allan, typ)	≤10
Bias Repeatability (μg)	≤20	Velocity Random Walk (m/s/√h)	≤0.02
Scale Factor Nonlinearity (ppm, ±1 g)	≤100	Cross Coupling (rad)	≤0.001
Bandwidth (Hz)	≥50		

— Navigation Accuracy

Self-alignment Accuracy (°, 1 σ)	≤0.5 sec L (L represents local latitude)
Attitude Accuracy (°, 1 σ)	≤0.05

— Physical Characteristics

Power Supply (V)	5~12	Steady-State Power Consumption (W)	≤2
Startup Time (s)	≤2	Update Rate (Hz, max)	200
Dimensions (mm × mm × mm)	47 × 47 × 35.5	Weight (g)	100 ± 10 g

— Environmental Conditions

Operating Temperature (°C)	-40 ~ +80	Storage Temperature (°C)	-55 ~ +85
Vibration (g, RMS)	20~2000 HZ, 6.06	Shock (g)	500 g / 1ms