MEMS Inertial Devices and Systems

MIMU302*

Advantages

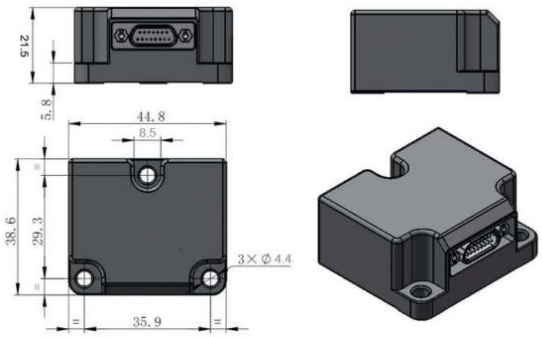
- Based on MEMS process
- Digital Gyros & Accelerometers
- High Speed Processor Embedded
- Compensation & Calibration
- Low power, Small Size
- High Tolerance

Applications

- Integrated Navigation Systems & Inertial Guidance Systems
- Flight Control & Guidance Systems
- Attitude Heading Reference Systems (AHRS)
- Stabilization of Antennas, Cameras & Platforms

Gyroscope		
Range	±450 (can be extended to ±4000)	˚/s
Bias in Full temperature(1σ,10s on average)	<100	˚/h
Bias Stability(Full Temp., 1σ,10s on average)	<10	˚/h
Bias Repeatability(Full Temp., 1σ)	<10	˚/h
Scale Factor Non-linearity	<50	ppm
Sensitive Axis Misalignment	10	'
Threshold/Resolution	0.005	˚/s
-3 dB Bandwidth	150 (10-250 Adjustable)	Hz
G-Sensitivity	0.005	˚/s/g
Accelerometer		
Range	±50 (Extendable to 150)	g
Bias in Full temperature	<10	mg
Bias Stability(Full Temp., 1σ, 10s on average)	< 1	mg
Bias Repeatability(Full Temp.,1 σ)	< 1	mg
Scale Factor Non-linearity(±1g)	< 3000	ppm
Threshold/Resolution	1	mg
Sensitive Axis Misalignment	10	'
-3 dB Bandwidth	150 (10-250 Adjustable)	Hz
System		
Data Rate	1000 Hz	
Weight	≤80 g	
Size	44.8mm x 38.6mm x 21.5 ± 0.5mm	
Supply Voltage	5±0.3 V	
Power Consumption	<1.5 W	
Interface / Connector	RS422/J30J-15ZKP	
Shock Resistance	>2000 g	
Vibration Level	>20 g rms	
Operating Temp	-45°C+85°C	
Storaging Temp	-55°C+105°C	

Structure (unit: mm)



ID	Definition	Note
1	Tx-	GND
2	Rx-	RS422 Transmit Negative
3~5	NC	RS422 Receive Negative
6~7	Reserved	Blank
8	VCC(+5V)	Reserved
9	Tx+	Power
10	Rx+	RS422 Transmit Positive
11	NC	RS422 Receive Positive
12~13	GND	Power Ground
14	NC	Blank
15	GND	RS422 Ground

Definition