HIGH PRECISION MEMS INERTIAL CHIP AND MODULE

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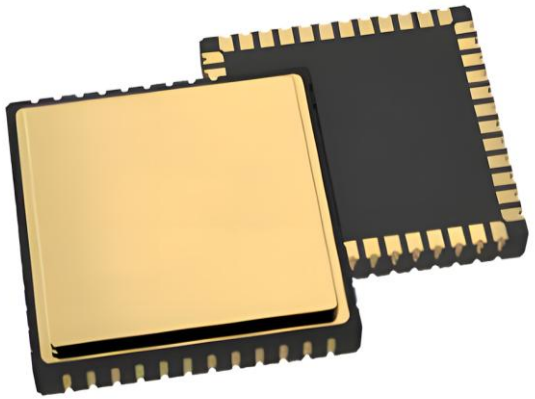


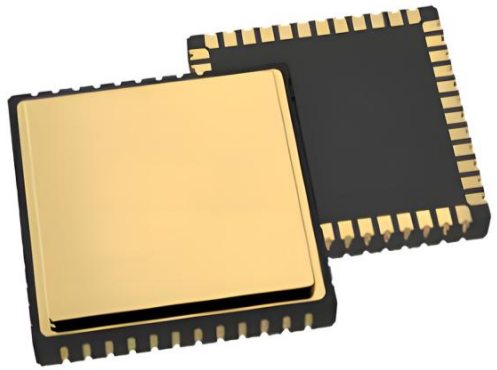
MG-101/102
TACTICAL GRADE

MEMS Gyroscope Chip

Dynamic Range	±100°/s
Measuring Axis	Z
Zero Bias Stability (10s, 1σ)	0.1°/hr
Zero Bias Repeatability (1σ)	0.1°/hr
Random Walk Coefficient	0.005°/√h
The Scale Factor of Nonlinearity	300ppm (1σ)
The Scale Factor of Repeatability	100ppm (1σ)
The Scale Factor of Temperature	300ppm (1σ)
Bandwidth	12/50Hz
Impact Resistance	10000g,10ms,1/2 sine
Vibration Conditions	18grms, 20~2000Hz
Communication Protocol	I^2C/SPI/UART
Output Signal	Digital
Pack and Size	Chip, 11*11*0.3mm
Weight	1.5g

MG-301
TACTICAL GRADE

MEMS Gyroscope Chip



Dynamic Range	±300°/s
Measuring Axis	Z
Zero Bias Stability (10s, 1σ)	0.3°/hr
Zero Bias Repeatability (1σ)	0.15°/hr
Random Walk Coefficient	0.015°/√h
The Scale Factor of Nonlinearity	100ppm (1σ)
The Scale Factor of Repeatability	30ppm (1σ)
The Scale Factor of Temperature	100ppm (1σ)
Resolution	24bits
Impact Resistance	10000g,10ms,1/2 sine
Vibration Conditions	18grms, 20~2000Hz
Communication Protocol	I^2C/SPI/UART
Output Signal	Digital
Pack and Size	Chip, 11*11*0.3mm
Weight	1.5g

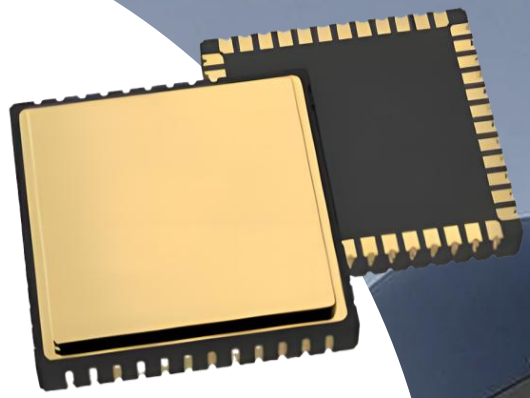
MG-401/403/404 TACTICAL GRADE

MEMS Gyroscope Chip

Dynamic Range	±400°/s
Measuring Axis	Z
Zero Bias Stability (10s, 1σ)	0.5/0.5/1°/hr
Zero Bias Repeatability (1σ)	0.5/0.3/0.3°/hr
Random Walk Coefficient	0.025/0.025/0.05°/√h
The Scale Factor of Nonlinearity	100/100/300ppm (1σ)
The Scale Factor of Repeatability	20/20/100ppm (1σ)
The Scale Factor of Temperature	100/100/300ppm (1σ)
Resolution	24bits
Impact Resistance	10000g,10ms,1/2 sine
Vibration Conditions	18grms, 20~2000Hz
Communication Protocol	I^2C/SPI/UART
Output Signal	Digital
Pack and Size	Chip, 11*11*0.3mm
Weight	1.5g

MG-501/502C/503
TACTICAL GRADE

MEMS Gyroscope Chip



Dynamic Range	±500°/s
Measuring Axis	Z
Zero Bias Stability (10s, 1σ)	2/5/1°/hr
Zero Bias Repeatability (1σ)	2/3/0.5°/hr
Random Walk Coefficient	0.1/0.25/0.05°/√h
The Scale Factor of Nonlinearity	150ppm (1σ)
The Scale Factor of Repeatability	20ppm (1σ)
The Scale Factor of Temperature	100ppm (1σ)
Resolution	24bits
Impact Resistance	10000g,10ms,1/2 sine
Vibration Conditions	18grms, 20~2000Hz
Communication Protocol	I^2C/SPI/UART
Output Signal	Digital
Pack and Size	Chip, 11*11*0.3mm
Weight	1.5g

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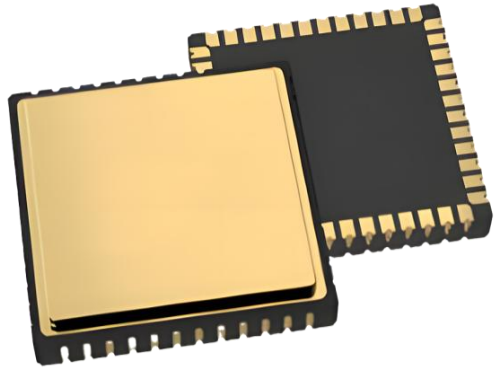
MG-1001/1002 TACTICAL GRADE

MEMS Gyroscope Chip

Dynamic Range	±1000°/s
Measuring Axis	Z
Zero Bias Stability (10s, 1σ)	1/5°/hr
Zero Bias Repeatability (1σ)	0.3/4°/hr
Random Walk Coefficient	0.05/0.25°/√h
The Scale Factor of Nonlinearity	100/150ppm (1σ)
The Scale Factor of Repeatability	20ppm (1σ)
The Scale Factor of Temperature	100ppm (1σ)
Resolution	24bits
Impact Resistance	10000g,10ms,1/2 sine
Vibration Conditions	18grms, 20~2000Hz
Communication Protocol	I^2C/SPI/UART
Output Signal	Digital
Pack and Size	Chip, 11*11*0.3mm
Weight	1.5g

MG-2001/2002
TACTICAL GRADE

MEMS Gyroscope Chip



Dynamic Range	±2000°/s
Measuring Axis	Z
Zero Bias Stability (10s, 1σ)	2.5/6°/hr
Zero Bias Repeatability (1σ)	1/5°/hr
Random Walk Coefficient	0.15/0.3°/√h
The Scale Factor of Nonlinearity	100/150ppm (1σ)
The Scale Factor of Repeatability	20/10ppm (1σ)
The Scale Factor of Temperature	100ppm (1σ)
Resolution	24bits
Impact Resistance	10000g,10ms,1/2 sine
Vibration Conditions	18grms, 20~2000Hz
Communication Protocol	I^2C/SPI/UART
Output Signal	Digital
Pack and Size	Chip, 11*11*0.3mm
Weight	1.5g

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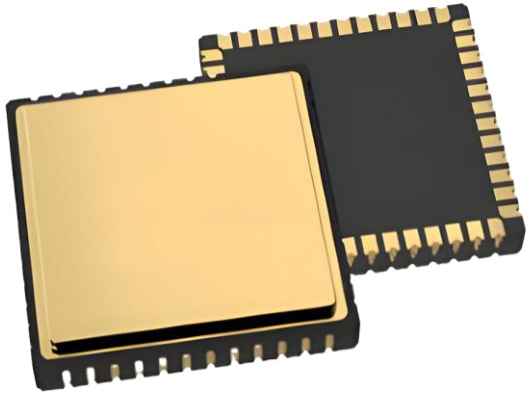


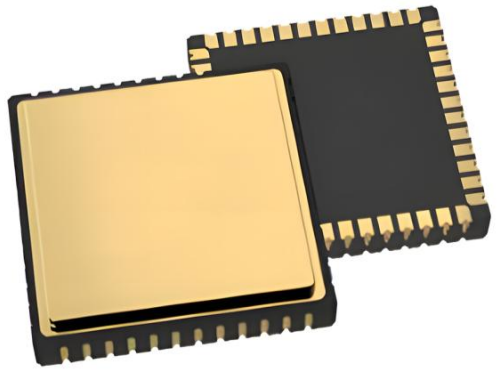
MG-4001/4002 TACTICAL GRADE

MEMS Gyroscope Chip

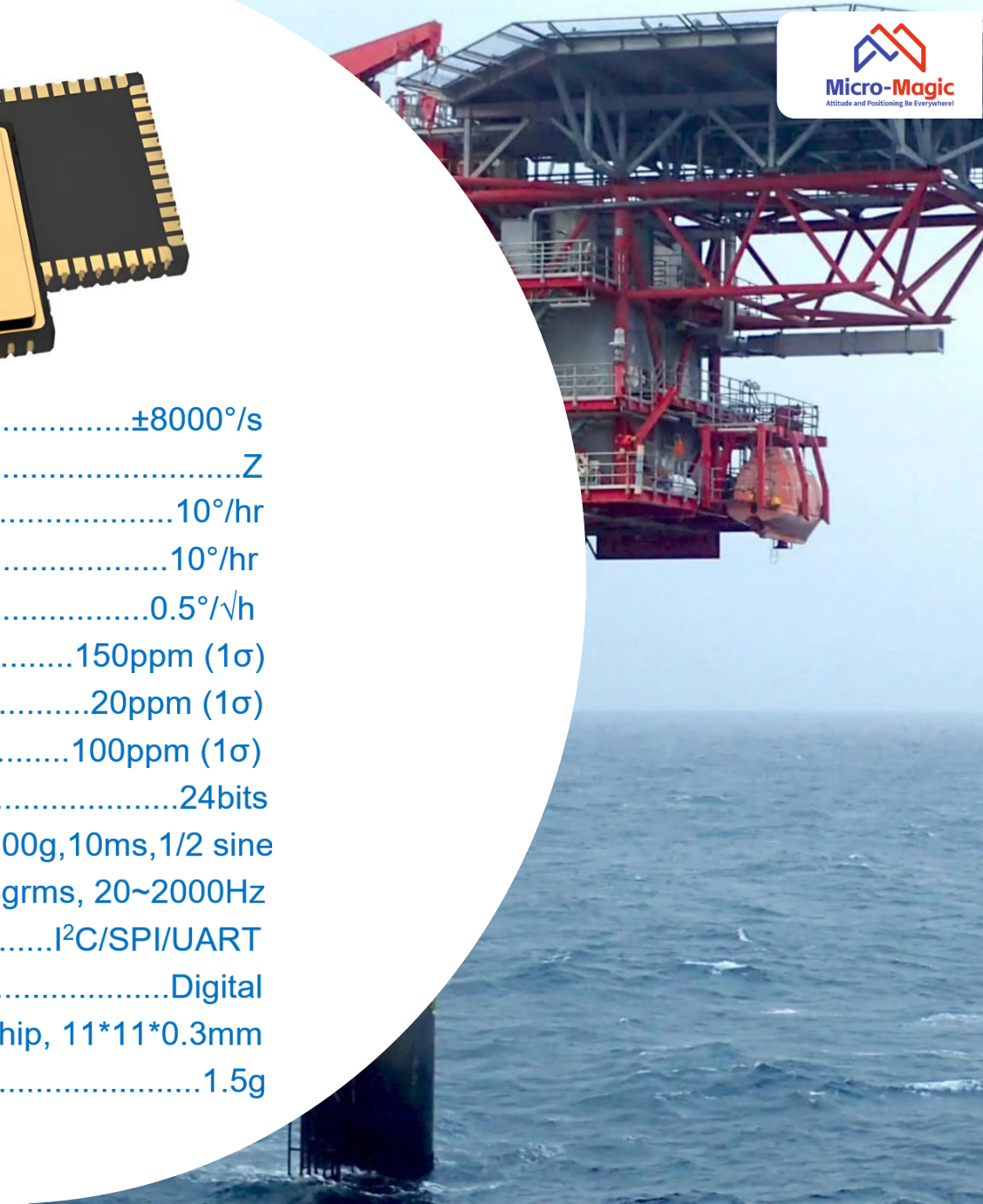
Dynamic Range	±4000°/s
Measuring Axis	Z
Zero Bias Stability (10s, 1σ)	5/10°/hr
Zero Bias Repeatability (1σ)	3/5°/hr
Random Walk Coefficient	0.25/0.5°/√h
The Scale Factor of Nonlinearity	100/150ppm (1σ)
The Scale Factor of Repeatability	10ppm (1σ)
The Scale Factor of Temperature	100ppm (1σ)
Resolution	24bits
Impact Resistance	10000g,10ms,1/2 sine
Vibration Conditions	18grms, 20~2000Hz
Communication Protocol	I^2C/SPI/UART
Output Signal	Digital
Pack and Size	Chip, 11*11*0.3mm
Weight	1.5g

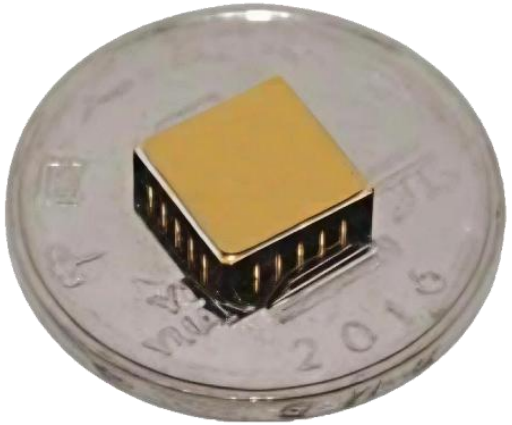
MG-8001
TACTICAL GRADE

MEMS Gyroscope Chip



Dynamic Range	±8000°/s
Measuring Axis	Z
Zero Bias Stability (10s, 1σ)	10°/hr
Zero Bias Repeatability (1σ)	10°/hr
Random Walk Coefficient	0.5°/√h
The Scale Factor of Nonlinearity	150ppm (1σ)
The Scale Factor of Repeatability	20ppm (1σ)
The Scale Factor of Temperature	100ppm (1σ)
Resolution	24bits
Impact Resistance	10000g,10ms,1/2 sine
Vibration Conditions	18grms, 20~2000Hz
Communication Protocol	I^2C/SPI/UART
Output Signal	Digital
Pack and Size	Chip, 11*11*0.3mm
Weight	1.5g





M-QMG07-XXX
TACTICAL GRADE

MEMS Gyroscope Chip

Dynamic Range	±500/±1000/±2000/±4000°/s
Measuring Axis	Z
Zero Bias Stability (10s, 1σ)	3°/hr
Zero Bias Repeatability (1σ)	5°/hr
Random Walk Coefficient	0.3°/√h
The Scale Factor of Nonlinearity	100ppm (1σ)
The Scale Factor of Repeatability	100ppm (1σ)
The Scale Factor of Temperature	500ppm (1σ)
Resolution	24bits
Impact Resistance	1500g,0.5ms,1/2 sine
Vibration Conditions	6.06grms, 20~2000Hz
Communication Protocol	I^2C/SPI/UART
Output Signal	Digital
Pack and Size	Chip, 8.9*8.9*2.7mm
Weight	1.3g

M3G-210
TACTICAL GRADE

MEMS Gyroscope Module

Dynamic Range	±500°/s
Measuring Axis	3 Axis
Full Temperature Zero Bias(3σ)	30°/hr
Zero Bias Stability (10s)	2°/hr
Zero Bias Repeatability (1σ)	1°/hr
Random Walk Coefficient	0.1°/√h
The Scale Factor of Nonlinearity	100ppm (1σ)
Cross-coupling (rad)	0.001ppm
Bandwidth	200Hz
Power Supply	5~12V
Power Consumption	1.5W
Impact Resistance	500g,1ms,1/2 sine
Vibration Conditions	6.06grms, 20~2000Hz
Communication Protocol	RS422
Operating Temperature	-40~+80℃
Pack and Size	44.8*38.6*21.5mm
Weight	50±5g

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M3G-220
TACTICAL GRADE

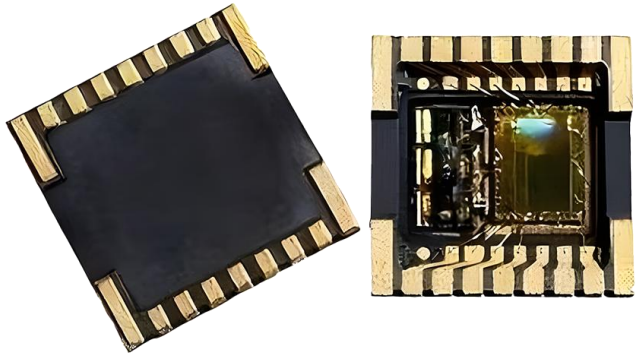
MEMS Gyroscope Module

Dynamic Range	±100°/s
Measuring Axis	3 Axis
Full Temperature Zero Bias(3σ)	10°/hr
Zero Bias Stability (10s)	0.2°/hr
Zero Bias Repeatability (1σ)	0.2°/hr
Random Walk Coefficient	0.01°/√h
The Scale Factor of Nonlinearity	100ppm (1σ)
Cross-coupling (rad)	0.001ppm
Bandwidth	⩾12Hz
Power Supply	5±0.5V
Power Consumption	1.5W
Impact Resistance	1000g,1ms,1/2 sine
Vibration Conditions	7.72grms
Communication Protocol	RS422
Operating Temperature	-40~+85℃
Pack and Size	44.8*38.6*21.5mm
Weight	60g

M3G-230
TACTICAL GRADE

MEMS Gyroscope Module

Dynamic Range	±50°/s
Measuring Axis	3 Axis
Full Temperature Zero Bias	5°/hr
Zero Bias Stability (10s)	0.1°/hr
Zero Bias Repeatability (1σ)	0.1°/hr
Random Walk Coefficient	0.005°/√h
The Scale Factor of Nonlinearity	150ppm
Cross-coupling (rad)	0.001ppm
Bandwidth	⩾12Hz
Power Supply	5±0.5V
Power Consumption	1.5W
Impact Resistance	1000g,1ms,1/2 sine
Vibration Conditions	7.72grms
Communication Protocol	RS422
Operating Temperature	-40~+85℃
Pack and Size	44.8*38.6*21.5mm
Weight	60g



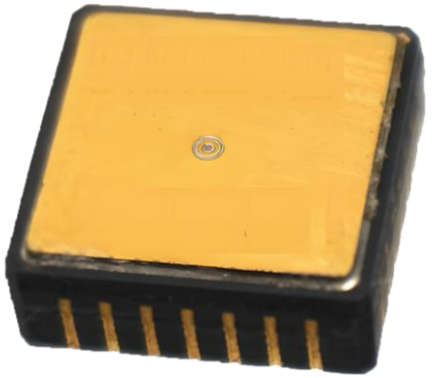
ACM-1900-XXX TACTICAL GRADE

MEMS Accelerometer Chip

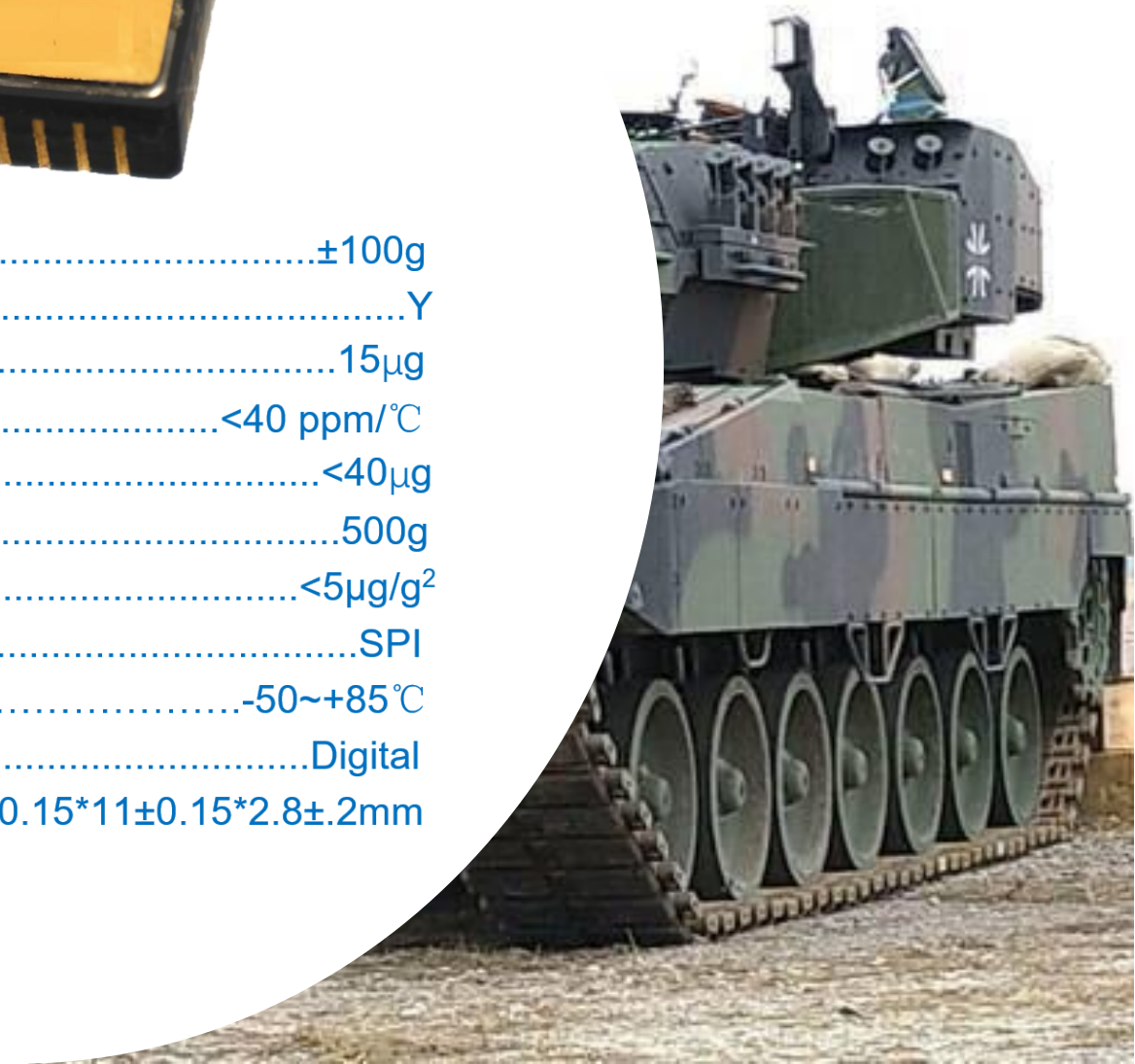
Measuring Range	±2~10/±30~50/±70~100/±150~200g
Measuring Axis	X
Zero Bias Stability (10s, 1σ)	20/50/150/250μg
Zero Bias Temperature Coefficient (full temperature)	10/50/100/200μg/℃
Resolution	5/10/25/50μg
Impact Resistance	20000g,2ms,1/2 sine
Vibration Rectification Error (6grms)	0.4/0.15/0.05mg
Communication Protocol	I^2C/SPI/UART
Output Signal	Digital
Pack and Size	Chip, 9*9*2.8mm
Weight	1.5g

AC-MAF599
TACTICAL GRADE

MEMS Accelerometer Chip



Measuring Range	±100g
Measuring Axis	Y
Zero Bias Stability (10s, 1σ)	15μg
Scale Temperature Coefficient	<40 ppm/℃
Threshold	<40μg
Shock in power	500g
Vibration Rectification Error	<5μg/g^2
Communication Protocol	SPI
Working Temperature	-50~+85℃
Output Signal	Digital
Pack and Size	CLCC48, 11±0.15*11±0.15*2.8±.2mm



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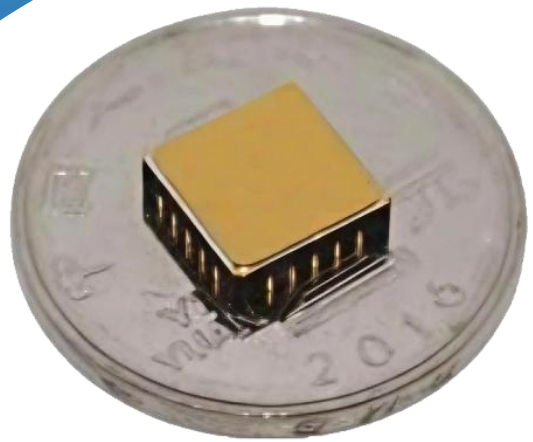


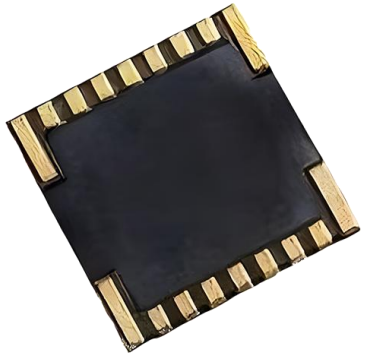
AC-SMA-XXD
TACTICAL GRADE

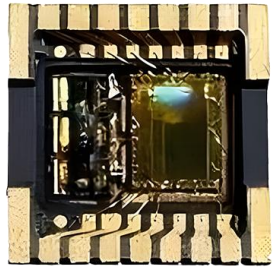
MEMS Accelerometer Chip

Measuring Range	±2/±5/±10/±15/±20/±30/50g
Measuring Axis	X
Zero Bias Stability (1s, 1σ)	20/20/50/50/50/100/200μg
Zero Bias Temperature Coefficient (full temperature)	10/10/30/30/30/50/100μg/℃
Monthly Repeatability	100~300μg
Impact Resistance	27000g,2ms,1/2 sine
Vibration Rectification Error (6grms)	0.15mg
Communication Protocol	SPI
Working Temperature	-55~+125℃
Output Signal	Analog/Digital
Pack and Size	8.89±0.25*8.89±0.25*2.7±.25mm

ACM-1700
TACTICAL GRADE

MEMS Accelerometer Chip





Measuring Range……±10~30/±30~50/±70~100/±150~200g
Measuring Axis……X
Zero Bias Stability (10s, 1σ)……50/100/200/500μg
Zero Bias Temperature Coefficient (full temperature)……50/50/100/200μg/℃
Impact Resistance……10000g,2ms,1/2 sine
Vibration Rectification Error (6grms)……0.4/0.15/0.05mg
Communication Protocol……I^2C/SPI/UART
Output Signal……Digital
Pack and Size……Chip, 7.8*5.8*3mm
Weight……1.5g

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ACM-100/200/300 INDUSTRIAL GRADE

MEMS Accelerometer Module

Measuring Range	±2/±8/±40g
Measuring Axis	X, Y, Z
Zero Bias Stability (10s, 1σ)	1.5/7.5/22mg
Zero Bias Temperature Coefficient (full temperature)	0.1/0.5/1.5mg/℃
Resolution	1/5/15mg
Impact Resistance	20000g,2ms,1/2 sine
Anti-Vibration	10grms,10~1000Hz
Communication Protocol	Rs232/Rs485/Rs422/TTL/CAN
Output Signal	Digital/Analog(current/voltage)
Pack and Size	Shell, 60*59*29mm
Weight	180g

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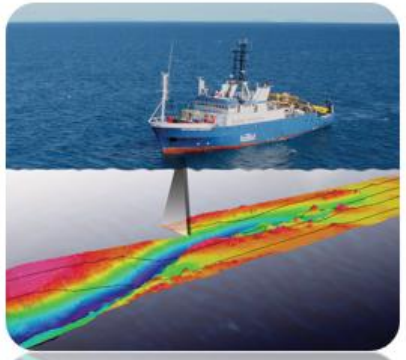

Maritime Echosounder Application

Petroleum Extraction and Exploration