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 Shenzhen Rion Technology Co., Ltd.

 Alice@rion-tech.net

 86-156-25295088



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IMU400-STD4 Professional Gyroscope IMU for Autonomous Driving Navigation Applications

Product Details

Place Of Origin: China

Brand Name: RION

Certification: CE, FCC,ROHS , ISO

Model Number: IMU400-STD4

Payment & Shipping Terms

Minimum Order Quantity: 100pcs

Price: US\$29.50

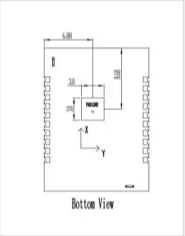
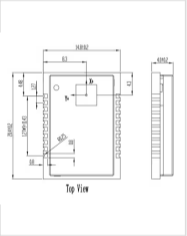
Packaging Details: Carton With Safety Sponge

Delivery Time: 5-10 Days

Payment Terms: T/T Or Paypal

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Specifications

Description

Specifications

Highlight: Professional Gyroscope IMU, Autonomous Driving Navigation IMU, IMU400-STD4 IMU

| | | | |
|---------------------------|--------|-------------------------|--------------------------------------|
| Resolution: | 0.01° | Size: | L20.4×W14.8×H4.1mm |
| Coupling Error: | ≤3.5' | Shell Material: | Magnesium Aluminum Alloy Anodizing |
| Heading Accuracy: | <1.5° | Operating Temperature: | -40°C To +85°C |
| Accelerometer Threshold: | ≤1mg | Installation: | Four M4 Screws |
| Gyroscope Coupling Error: | ≤3.5' | Accelerometer Accuracy: | 1mg |
| Shock Resistance: | 1000g | Application: | Marine Application |
| Weight: | 1 Gram | Output Rate: | 5Hz/15Hz/25Hz/35Hz/50Hz/100Hz Can Se |
| Bandwidth: | 100Hz | | |

Description

IMU400-STD4 Professional Gyroscope IMU for Autonomous Driving Navigation Applications

IMU400-STD4 Professional Gyroscope IMU for Autonomous Driving Navigation Applications

► GENERAL DESCRIPTION

IMU400-STD4 is a professional gyroscope IMU for autonomous driving navigation applications, with built-in industrial-grade three-axis gyroscope and three-axis accelerometer. The product can still output smooth attitude data in the case of high vibration characteristics. Developed based on the MEMS inertial measurement platform, the dynamic attitude algorithm is performed on the angular rate of the gyroscope to real-time output the dynamic inclination angle, horizontal azimuth angle, triaxial angular rate, triaxial acceleration and forward axis acceleration of the object; Also through the Z-axis single-axis integral output and real-time feedback counting output, the front wheel of the carrier can be turned with a precise angle. This product is specially used for automatic driving navigation, precise operation, and efficiency. It is an essential component of the new generation of automatic precise navigation and driving control.

► KEY FEATURES

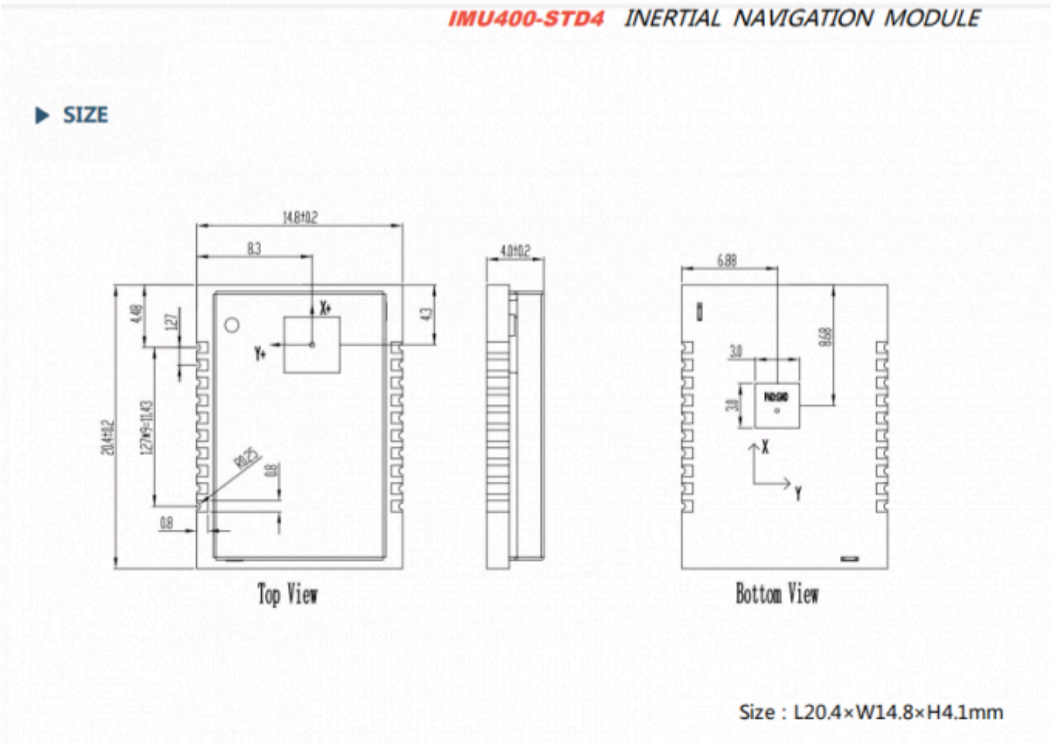
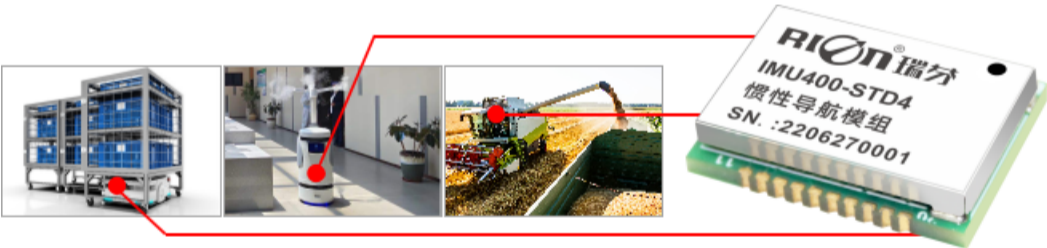
- ★ Horizontal azimuth angle & attitude angle output
- ★ Real time output angular rate
- ★ Light weight
- ★ Long life,strong stability
- ★ Forward axis acceleration output
- ★ All solid state
- ★ Compact & light design
- ★ TTL output
- ★ 3.3VDC power supply

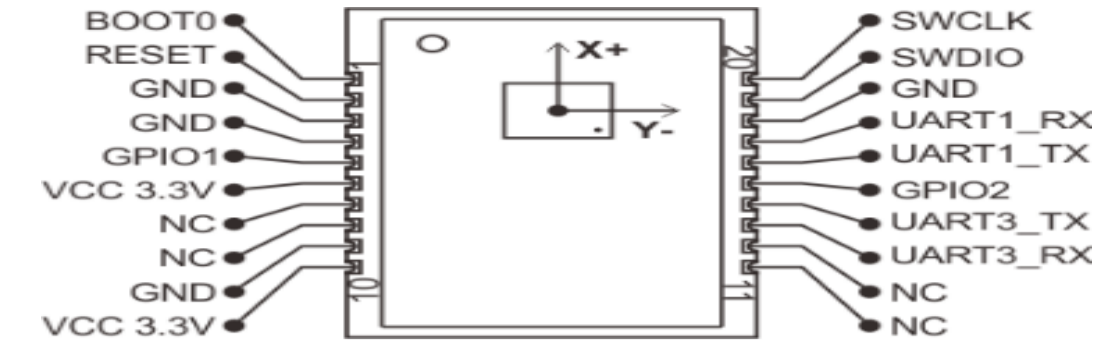
► APPLICATION

- ★ AGV car
- ★ Disinfection robot
- ★ Precision agriculture autonomous driving

► SPECIFICATION


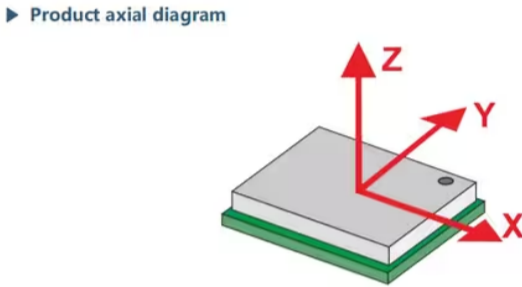

| | | | |
|-----------------------|--------------------------------------|------------------------------|---|
| IMU400-STD4 | | | Parameters |
| Triaxial attitude | | | Azimuth Angle ±180°,Roll ±180°,Pitch ±90° |
| Operational bandwidth | | | >100Hz |
| Resolution | | | 0.01° |
| Nonlinear | | | 0.1% of FS |
| Gyro | Triaxial gyro range | | 250°/s |
| | Bias instability(allan) | | 4.5°/h |
| | Angle random walk coefficient(allan) | | 0.25°/sqrt(h) |
| | Bias stability(10s mean value) | | 8.5°/h |
| | Gyro bias(@Temp. -10°C~+65°C) | | ±0.25°/s(RMS) |
| Accelerometer | Range | | ±4g / ±8g(optional) |
| | Resolution | | 0.001g |
| | Accuracy | Test conditions @4g range | 1mg |
| | Bias instability(allan) | | 0.05mg |
| | Speed random walk coefficient(allan) | | 0.015m/s/sqrt(h) |
| | Bias stability(10s mean value) | | 0.15mg |
| Starting time | | | 500ms |
| Input voltage | | | DC3.3V(Ripple<50mVpp) |
| Current | | | 70mA |
| Working temperature | | | -40 ~ +80°C |
| Storage temperature | | | -40 ~ +85°C |
| Vibration | | | 5g~10g |
| Impact | | | 200g pk,2ms,½sine |
| Working life | | | 10 years |
| Output rate | | | 5Hz,15Hz,25Hz,35Hz,50Hz,100Hz can set |
| Output signal | | | 3.3V-TTL |
| MTBF | | | ≥98000 Hours/time |
| Impact resistance | | | 100g@11ms,3 Axial Direction (Half Sinusoid) |
| Anti vibration | | | 10grms,10~1000Hz |
| Weight | | | ≤5g |





Tags: [High Resolution mems imu sensor](#) [IMU](#) [MEMS Inertial Measurement Unit](#)

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Contact Us

- [✉ Alice@rion-tech.net](mailto:Alice@rion-tech.net)
- [☎ 86-156-25295088](tel:86-156-25295088)
- [📍 Block 1, COFCO\(FUAN\) Robotics Industrial Park , Da Yang Road No. 90, Fuyong Distict, Shenzhen City, China](#)



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