



Powerful Sensing Solutions for a Better Life

IMU440

MEMS INERTIAL MEASUREMENT UNIT

The MEMSIC IMU440 is a high-reliability low power strapdown inertial system providing accurate measurement of angular rate and linear acceleration in dynamic environments, with output data also available in delta theta and delta velocity format. The IMU440 is offered in standard and high range sensor configurations to allow the best match for the user's application.



Navigation and Control



Vehicle Testing

The IMU440 combines highly-reliable MEMS gyros and accelerometers with high-speed DSP electronics to provide a fully calibrated dynamic measurement system in a small and rugged environmentally-sealed enclosure. The IMU440 provides consistent performance in challenging operating environments and is user-configurable for a wide variety of applications

Applications

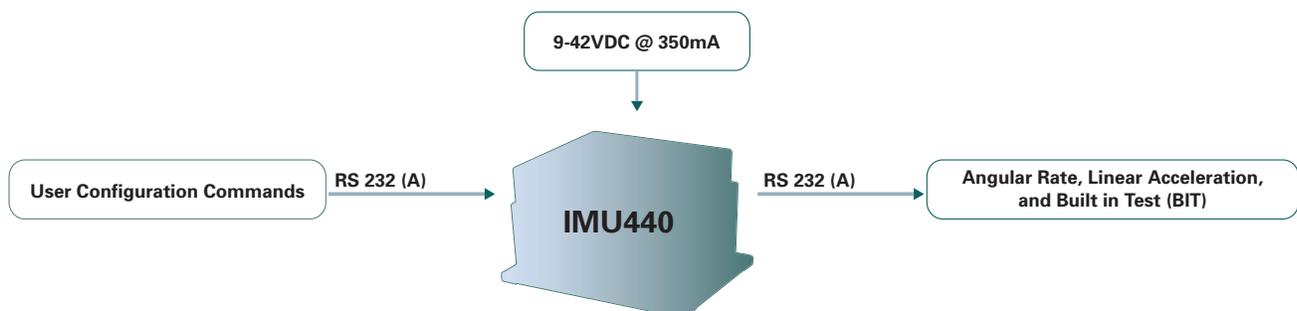
- Navigation and Control
- Vehicle Testing
- General Instrumentation

Features

- 3-Axis Angular Rate and 3-Axis Linear Acceleration Outputs
- Delta Theta and Delta Velocity Outputs
- Bias In-Run Stability < 10 deg/hr
- Output Data Rate > 100 Hz
- High-Range Sensor Options (400 deg/sec and 10g)
- Low Power < 3W
- High Reliability, MTBF > 25,000 hours
- Analog Output Option
- Rugged Sealed Enclosure

Certifications

- DO-160D Environments



Performance

IMU440

| Angular Rate | |
|---|--------------------------------|
| Range: Roll, Pitch, Yaw (°/sec) | ± 200 (± 400 option available) |
| Bias Stability In-Run ^{1,2} (°/hr) | < 10 |
| Bias Stability Over Temp ¹ (°/sec) | < 0.2 |
| Scale Factor Accuracy (%) | < 1 |
| Non-Linearity (% FS) | < 0.5 |
| Resolution (°/sec) | < 0.02 |
| Angle Random Walk (°/√hr) | < 4.5 |
| Bandwidth (Hz) | 25 |

| Acceleration | |
|--|-----------------------------|
| Input Range: X/Y/Z (g) | ± 4 (± 10 option available) |
| Bias Stability In-Run ^{1,2} (mg) | < 1 |
| Bias Stability Over Temp ¹ (mg) | < 4 |
| Scale Factor Accuracy (%) | < 1 |
| Non-Linearity (% FS) | < 1 |
| Resolution (mg) | < 0.5 |
| Velocity Random Walk (m/s/√hr) | < 1.0 |
| Bandwidth (Hz) | 25 |

Specifications

| Environment | |
|--------------------------------|----------------|
| Operating Temperature (°C) | -40 to +71 |
| Non-Operating Temperature (°C) | -55 to +85 |
| Enclosure | IP66 Compliant |

| Electrical | |
|-----------------------|---------|
| Input Voltage (VDC) | 9 to 42 |
| Power Consumption (W) | < 3 |
| Digital Interface | RS-232 |

| Physical | |
|--------------|-------------------------|
| Size (in) | 3 x 3.75 x 2.50 |
| (cm) | 7.62 x 9.53 x 6.43 |
| Weight (lbs) | < 1.2 |
| (kg) | < 0.55 |
| Connector | DB15, D-sub 15-pin Male |

Ordering Information

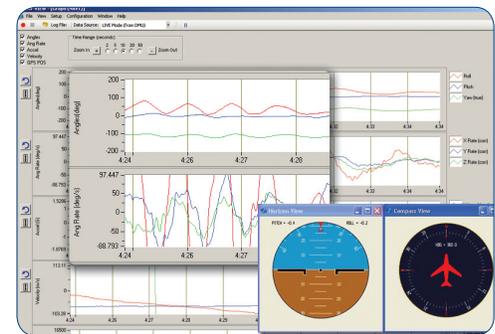
| Model | Description |
|--------------|--|
| IMU440CA-200 | Attitude & Heading Reference System (Standard) |
| IMU440CA-400 | Attitude & Heading Reference System (High Range) |

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Analog Output Option

MEMSIC offers the NAV-DAC440 analog interface adapter for customers wishing to use the IMU440 in analog data acquisition systems. The NAV-DAC440 converts the IMU440 serial digital data to 9-channel BNC analog outputs.

NAV-VIEW 2.0 Configuration & Display Software



NAV-VIEW 2.0 provides an easy to use graphical interface to display, record and analyze all of the IMU440 measurement parameters.

Other Components

Each IMU440 is shipped with an interface cable, MEMSIC's User's Manual and NAV-VIEW 2.0 configuration and display software.

Support

For more detailed technical information please refer to the 440-Series User's Manual available online at: www.memsic.com/Support

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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