



Compact 6-Axis SmartIndustrial™ MotionTracking MEMS Device for Industrial Applications



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Description

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The [IIM-42652](#) is a 6-axis SmartIndustrial™ MotionTracking device that supports an extended operating temperature range.

The IIM-42652 combines a 3-axis gyroscope and a 3-axis accelerometer in a small 2.5 mm × 3 mm × 0.91 mm (14-pin LGA) package. It also features a 2K-byte FIFO that can lower the traffic on the serial bus interface and reduce power consumption by allowing the system processor to burst read sensor data and then go into a low-power mode.

The host interface can be configured to support I3CSM slave, I²C slave, or SPI slave modes. The I3CSM interface supports speeds up to 12.5 MHz (data rates up to 12.5 Mbps in SDR mode, 25 Mbps in DDR mode), the I²C interface supports speeds up to 1 MHz, and the SPI interface supports speeds up to 24 MHz.

The device features an operating voltage range from 3.6 V down to 1.71 V.

Features:

- Digital-Output X-, Y-, and Z-axis angular rate sensors (gyroscopes) with programmable full-scale ranges of +15.62 to +2000
- Digital-Output X-, Y-, and Z-axis accelerometer with programmable full-scale ranges of +2g, +4g, +8g, +16g
- Low Noise, Low Power Consumption
- Digital-Output Temperature Sensor
- Supports SPI and I2C
- Extended Operating temperature range of -40 C to 105C
- Compact size 2.5 mm × 3 mm × 0.91 mm (14-pin LGA) package

About TDK InvenSense

InvenSense, Inc, a TDK Group Company: InvenSense is part of the Sensor System Business Company within TDK and is the industry leader in MEMS Motion, Audio, and Pressure Solutions for the consumer, industrial, automotive, and IoT market segments. TDK provides a very robust portfolio of MEMS 3/6/7/9 axis motion sensors, accompanied by the highest performing MEMS audio microphones, and pressure sensors. TDK continues to push the boundaries of performance and quality; setting new standards of innovation across multiple industries.

About Component Distributors, Inc. (CDI)

Component Distributors, Inc. (CDI) is a value-added distributor of high-performance LED, Power, RF & Microwave, Wireless and Sensor component technologies. CDI distributes globally and provides local application support and customer service across the Americas. CDI delivers cutting edge power electronics by wrapping application support, development tools and design services around high-performance products from industry leading manufacturers.

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