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Freescale Sensors Acceleration Low g RD3172MMA7456L

RD3172MMA7456L: ZSTAR3

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The ZSTAR3 development tool contains one accelerometer transmitter boards and one USB receiver node. A ZSTAR3 system can accommodate upto 16 accelerometer transmitter boards, connected through an RF ZigBee 2.4GHz communication to a single USB node connected to a PC. The accelerometer boards measured acceleration

in 3-axes using either a digital or analog sensor. The sensor sensitivity is defined by the selected accelerometer. The USB node is part of the ZSTAR and ZSTAR2 design, reprogrammed with dedicated SW supporting multiple nodes.

Features

- Sensing acceleration in 3-axes
- Support for digital and analog sensors
- Wireless communication with sensors through the 2.4 GHz band
- RF protocol supports 16 sensors on one USB stick (receiver)
- Configurable Sensor Data rate of 30, 60 or 120 Hz
- Auto calibration function of the sensor
- Typical wireless range is 20 m, two walls or one floor
- USB communication on the receiver part
- Virtual serial port - interface for GUI and serial port terminal
- HID class - mouse for windows
- HID class - keyboard (game controller)
- 8-bit/16-bit working modes 3 push buttons on the board
- Current consumption:
 - In normal run mode: 1.8 - 3.9 mA, depending on the actual data rate
 - In sleep mode: less than 900 nA
- Smart Power consumption: power cycling is dependent on the sensor's motion detection.
 - At a standstill, the board transmits only every 10th packet
- Sensor Board is powered by a coin-sized CR2032 3V battery

Related Software & Tools

[KIT3468MMA745xL: 3-axis Digital Output Accelerometer Evaluation Board](#)
[RD3965MMA7660FC: ZSTAR3 Featuring the MMA7660FC](#)
[KIT3468MMA745xL: 3-axis Digital Output Accelerometer Evaluation Board](#)
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- [Low g](#)

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Featured Documentation

[DRM103: The ZSTAR3 Reference Design Manual](#)
[ZSTAR3BOARDFS: Multiple wireless sensing triple-axis reference design](#)

Current Updates & Releases

[RD3172MMA7455L_SCH: ZSTAR3 SCHEMATIC](#)
[RD3965MMA7660FC: ZSTAR3 Featuring the MMA7660FC](#)

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