



## GENERAL DESCRIPTION

The MC3672, one of the world's smallest accelerometers with 1.29x1.09x0.74mm size, is an ultra-low power, low-noise, integrated digital output 3-axis accelerometer with a feature set optimized for wearables and consumer product motion sensing. Applications include wearable consumer products, IoT devices, user interface control, gaming motion input, electronic compass tilt compensation for cell phones, game controllers, remote controls and portable media products.

Low noise and low power are inherent in the monolithic fabrication approach, where the MEMS accelerometer is integrated in a single-chip with the electronics integrated circuit.

In the MC3672 the internal sample rate can be set from 14 to 1300 samples / second. Specific tap or sample acquisition conditions can trigger an interrupt to a remote MCU. Alternatively, the device supports the reading of sample and event status via polling.

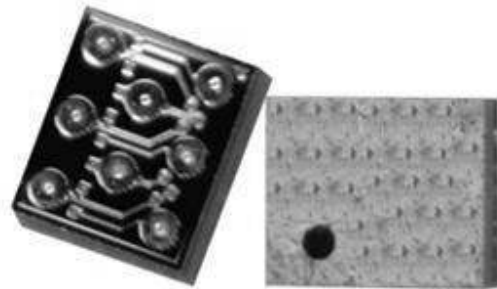
## FEATURES

### Range, Sampling & Power

- 1.29 x 1.09 x 0.74 mm CSP package
- $\pm 2$ ,  $\pm 4$ ,  $\pm 8$ ,  $\pm 12$  or  $\pm 16g$  ranges
- 8, 10 or 12-bit resolution with FIFO
  - 14-bit single samples
- Sample rate 14 - 1300 samples/sec
  - Sample trigger via internal oscillator, clock pin or software command
- Sniff and Wake modes
  - 0.4  $\mu A$  Sniff current @ 6Hz
  - Separate or combined sniff/wake
- Ultra-Low Power with 32 sample FIFO
  - 0.9  $\mu A$  typical current @ 25Hz
  - 1.6  $\mu A$  typical current @ 50Hz
  - 2.8  $\mu A$  typical current @ 100Hz
  - 36  $\mu A$  typical current @ 1300Hz

### Simple System Integration

- I2C interface, up to 1 MHz
- SPI Interface, up to 8 MHz
- Single-chip 3D silicon MEMS
- Low noise to 2.3mgRMS
- ROHS Compliant



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## GENERAL DESCRIPTION

The MC3635 is an ultra-low power, low-noise, integrated digital output 3-axis accelerometer with a feature set optimized for wearables and consumer product motion sensing. Applications include wearable consumer products, IoT devices, user interface control, gaming motion input, electronic compass tilt compensation for cell phones, game controllers, remote controls and portable media products.

Low noise and low power are inherent in the monolithic fabrication approach, where the MEMS accelerometer is integrated in a single-chip with the electronics integrated circuit.

In the MC3635 the internal sample rate can be set from 14 to 1300 samples / second. Specific tap or sample acquisition conditions can trigger an interrupt to a remote MCU. Alternatively, the device supports the reading of sample and event status via polling.

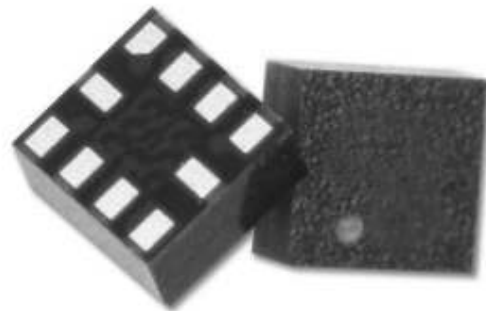
## FEATURES

### Range, Sampling & Power

- $\pm 2, 4, 8, 12$  or  $16g$  ranges
- 8, 10 or 12-bit resolution with FIFO
  - 14-bit single samples
- Sample rate 14 - 1300 samples/sec
  - Sample trigger via internal oscillator, clock pin or software command
- Sniff and Wake modes
  - $0.3 \mu A$  Sniff current @ 1Hz
  - Separate or combined sniff/wake
- Ultra-Low Power with 32 sample FIFO
  - $0.9 \mu A$  typical current @ 25Hz
  - $1.6 \mu A$  typical current @ 50Hz
  - $2.8 \mu A$  typical current @ 100Hz
  - $36 \mu A$  typical current @ 1300Hz

### Simple System Integration

- I2C interface, up to 1 MHz
- SPI Interface, up to 8 MHz
- $1.6 \times 1.6 \times 0.94$  mm 10-pin package
- Single-chip 3D silicon MEMS
- Low noise to  $2.3mg_{RMS}$
- ROHS Compliant



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## MC3630 3-Axis Accelerometer

### GENERAL DESCRIPTION

The MC3630 is an ultra-low power, low-noise, integrated digital output 3-axis accelerometer with a feature set optimized for wearables and consumer product motion sensing. Applications include wearable consumer products, IoT devices, user interface control, gaming motion input, electronic compass tilt compensation for cell phones, game controllers, remote controls and portable media products.

Low noise and low power are inherent in the monolithic fabrication approach, where the MEMS accelerometer is integrated in a single-chip with the electronics integrated circuit.

In the MC3630 the internal sample rate can be set from 14 to 1300 samples / second. Specific tap or sample acquisition conditions can trigger an interrupt to a remote MCU. Alternatively, the device supports the reading of sample and event status via polling.

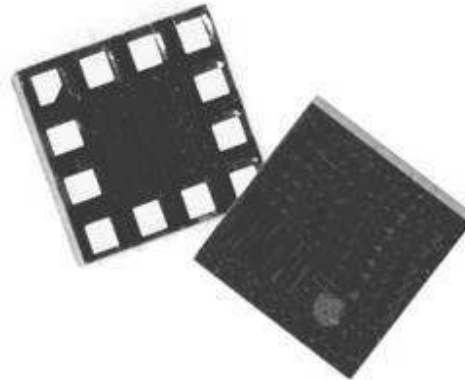
### FEATURES

#### Range, Sampling & Power

- $\pm 2, 4, 8, 12$  or  $16g$  ranges
- 8, 10 or 12-bit resolution with FIFO
  - 14-bit single samples
- Sample rate 14 - 1300 samples/sec
  - Sample trigger via internal oscillator, clock pin or software command
- Sniff and Wake modes
  - $0.4 \mu A$  Sniff current @ 6Hz
  - Separate or combined sniff/wake
- Ultra-Low Power with 32 sample FIFO
  - $0.9 \mu A$  typical current @ 25Hz
  - $1.6 \mu A$  typical current @ 50Hz
  - $2.8 \mu A$  typical current @ 100Hz
  - $36 \mu A$  typical current @ 1300Hz

#### Simple System Integration

- I2C interface, up to 1 MHz
- SPI Interface, up to 8 MHz
- $2.0 \times 2.0 \times 0.94$  mm 12-pin package
- Single-chip 3D silicon MEMS
- Low noise to  $2.3mg_{RMS}$
- ROHS Compliant



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## MC3479 3-Axis Accelerometer

### GENERAL DESCRIPTION

The MC3479 is a small form factor, integrated digital output 3-axis accelerometer with a feature set optimized for cell phones and consumer product motion sensing. Applications include user interface control, gaming motion input, electronic compass tilt compensation for cell phones, game controllers, remote controls and portable media products.

The MC3479 features a dedicated motion block which implements algorithms to support “any motion” and shake detection, tilt/flip and tilt 35 position detection.

Low power consumption and small size are inherent in the monolithic fabrication approach, where the MEMS accelerometer is integrated in a single-chip with the electronics integrated circuit.

In the MC3479 the internal sample rate can be set from 0.5 to 1000 samples / second. The device supports the reading of sample and event status via polling or interrupts.

### FEATURES

#### *Range, Sampling & Power*

- $\pm 2$ ,  $\pm 4$ ,  $\pm 8$ ,  $\pm 12$ ,  $\pm 16g$  range
- 16-bit single sample resolution
- 16-bit resolution with FIFO
- 0.5 to 1000 Hz Output Data Rate
- 4  $\mu A$  typical Standby current
- Low typical active current

#### *Simple System Integration*

- SPI, up to 10 MHz
- I2C interface, up to 1 MHz
- 2x2x0.92 mm 12-pin LGA package
- High reliability thru single-chip 3D silicon MEMS technology
- RoHS compliant

#### *Applications*

- Smartphone
- Wearable
- IoT & IoMT
- Remote controls, gaming
- Vibration in Cell phone
- VR & game controllers

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## GENERAL DESCRIPTION

The MC3419 is a small form factor, integrated digital output 3-axis accelerometer with a feature set optimized for cell phones and consumer product motion sensing. Applications include user interface control, gaming motion input, electronic compass tilt compensation for cell phones, game controllers, remote controls and portable media products.

The MC3419 features a dedicated motion block which implements algorithms to support “any motion” and shake detection, tilt/flip and tilt 35 position detection.

Low power consumption and small size are inherent in the monolithic fabrication approach, where the MEMS accelerometer is integrated in a single-chip with the electronics integrated circuit.

In the MC3419 the internal sample rate can be set from 0.5 to 1000 samples / second. The device supports the reading of sample and event status via polling or interrupts.

## FEATURES

### *Range, Sampling & Power*

- $\pm 2$ ,  $\pm 4$ ,  $\pm 8$ ,  $\pm 12$ ,  $\pm 16g$  range
- 16-bit single sample resolution
- 16-bit resolution with FIFO
- 0.5 to 1000 Hz Output Data Rate
- 4  $\mu A$  typical Standby current
- Low typical active current

### *Simple System Integration*

- SPI up to 10 MHz
- I2C interface, up to 1 MHz
- 2x2x0.92 mm 12-pin LGA package
- High reliability thru single-chip 3D silicon MEMS technology
- RoHS compliant

### *Applications*

- Smartphone
- Wearable
- IoT & IoMT
- Remote controls, gaming
- Vibration in Cell phone
- VR & game controllers

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## GENERAL DESCRIPTION

The MC3416 is a small form factor, integrated digital output 3-axis accelerometer with a feature set optimized for cell phones and consumer product motion sensing. Applications include user interface control, gaming motion input, electronic compass tilt compensation for cell phones, game controllers, remote controls and portable media products.

The MC3416 features a dedicated motion block which implements algorithms to support “any motion” and shake detection, tilt/flip and tilt 35 position detection.

Low power consumption and small size are inherent in the monolithic fabrication approach, where the MEMS accelerometer is integrated in a single-chip with the electronics integrated circuit.

In the MC3416 the internal sample rate can be set from 128 to 1024 samples / second. The device supports the reading of sample and event status via polling or interrupts.

## FEATURES

### *Range, Sampling & Power*

- $\pm 2$ ,  $\pm 4$ ,  $\pm 8$ ,  $\pm 12$ ,  $\pm 16g$  range
- 16-bit resolution
- 128 to 1024 Output Data Rate
- 4  $\mu A$  typical Standby current
- Low typical active current

### *Simple System Integration*

- I2C interface, up to 1 MHz
- 2x2x0.92 mm 12-pin LGA package
- High reliability thru single-chip 3D silicon MEMS technology
- RoHS compliant

### *Applications*

- Wearable
- IoT & IoMT
- Remote controls, gaming
- Vibration in Cell phone
- VR & game controllers

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