



**SENSING  
THE  
BEAUTIFUL LIFE**

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**memSic**

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MEMSIC Semiconductor is a world-leading IC product company, mainly engaged in MEMS sensor R&D, manufacturing and sales, providing "one-stop" sensor solutions of MEMS sensor chip, software algorithm and applications. MEMSIC now realizes large-scale production of world's most exclusive thermal accelerometer, AMR geomagnetic sensor, capacitive accelerometer, and micropower Hall Switch, that are widely applied to different fields such as automobile, industrial, medical, wearable, smart home, and consumer electronics.



## AMR 3D Magnetometer

- Ultra-Small
- Low Noise
- High Sensitivity
- High Accuracy



History of MEMSIC Magnetometers



Mobile & Tablets



Automotive Infotainment



Drone

- MMC5633NJL**  
**MMC5616WA**
- Monolithic integrated 3-axis magnetometers
  - Advanced AMR technology
  - Wafer level package size: 0.8×0.8×0.4mm
  - MMC5633NJL fully supports I3C interfaces
- MMC3630KJ**
- Mature process, stable and reliable performance
  - Low noise, strong anti-interference ability
  - Package size: 1.2×1.2×0.5mm
- MMC5983MA**  
**MMC3416xPJ**
- Low temperature drift, low noise, low hysteresis, high accuracy
  - High reliability, good stability, strong anti-interference ability
  - MMC5983MA is AEC-Q100 Grade 2 certified
  - MMC3416xPJ has ultra-low power consumption, support up to 8 I<sup>2</sup>C addresses



## Hall Switch

- Ultra-Low Power
- Ultra Small Package Size Multiple Package Types
- Ultra-Wide Operation Voltage Range
- Accurate Switch Control Multiple Package Types



- MHA100KN**
- Omni polar and dual output, ultra-low power consumption, high sensitivity
  - Package size: DFN 4 1.0×1.4×0.37mm



- MHA150N/S**
- Unipolar and single output, ultra-low power consumption, high sensitivity
  - Package size: SOT23-3L 2.9×1.6×1.1mm



- MHA160N/S**
- Unipolar and single output, ultra-low power consumption, high sensitivity
  - Package size: SOT23-3L 2.9×1.2×0.55mm



- MHA183AS**
- Unipolar and single output, ultra-low power consumption, high sensitivity
  - Package size: SOT23-3L 2.9×1.2×1.1mm



## Capacitive Accelerometer & 6-Axis IMU

- Low Power Consumption
- Ultra Small Package Size
- Multiple Functions & Algorithm Support



- MC3416**
- 16-bit high resolution, support I<sup>2</sup>C communication mode
  - Low noise, low offset, low temperature drift
  - Package size: LGA-12 2×2×0.95mm



- MC3419**  
**MC3479**
- 16-bit high resolution, support I<sup>2</sup>C/SPI communication mode, with FIFO cache
  - Low noise, low offset, low temperature drift
  - Package size: LGA-12 2×2×0.95mm



- MC3630**  
**MC3632**  
**MC3635**
- 14-bit resolution, support I<sup>2</sup>C/SPI communication mode, with FIFO cache
  - Ultra-low power consumption, supports a variety of low-power modes
  - Package size: LGA-12 2×2×0.95mm
  - MC3635 Package size: LGA-10 1.6×1.6×0.94mm



- MXC3500AL**
- 16-bit resolution, support I<sup>2</sup>C/SPI communication mode
  - 1.5KB ultra-large FIFO cache, multiple low power modes
  - Single/double/triple tap break, step counter
  - Package size: LGA-12 2×2×0.73mm



- MIC61XX**
- 16-bit high resolution, 3KB FIFO, support I<sup>2</sup>C/I3C/SPI communication mode, up to 2200Hz ODR
  - Gyro 0-rate offset +/-3%, offset over temperature +/-0.05dps/C, sensitivity error +/-1%
  - Package size: LGA 2.5×3×0.83mm



## Thermal Accelerometer

- Monolithic Integration
- Extremely Impact resistant
- Ultra-Small Size
- Ultra-Low Temperature drift



- MXC4005XC**  
**MXC6655XA**
- 3-axis monolithic integration, wafer level package, ultra-small size, stable performance, low failure rate
  - Used in consumer electronic devices such as mobile phones and tablets
  - MXC4005XC Package size: 1.2×1.7×0.95mm
  - MMC5566XA Package size: 2×2×1mm



- MXR7150VW**  
**MXR7999VW**
- 2-axis monolithic integration, the temperature compensations for the offset and sensitivity are done respectively, can be mounted flat or vertically, flexible installation
  - Analog output, MXR7999VW has +/- 2g range and 1000mV/g sensitivity
  - MXR7150VW has +/- -13.3g range and 150mV/g sensitivity
  - AEC-Q100 Grade 1 certified, widely used in active suspension, ESC and EPB systems
  - Package size: 5.5×5.5×2.7mm



- MXD2020EL**  
**MXD6235Q**
- 2-axis, PWM digital output
  - Good consistency of offset and sensitivity, easy for temperature compensations
  - MXD2020EL has +/- 1g range and 0.2mg/ SQRT (Hz) noise
  - MXD6235Q has +/- 1.5g range and 0.13mg/ SQRT (Hz) noise
  - Used in level gauge, home appliance and other industrial applications
  - Package size: 5.5×5.5×2mm



- MXR7205VW**
- 2-axis, the temperature compensations for the offset and sensitivity are done respectively, can be mounted flat or vertically, flexible installation.
  - SPI digital output, range +/- 5G, sensitivity 800LSB/g
  - AEC-Q100 Grade 2 certified, used in automotive ESC and EPB systems.
  - Package size: 5.5×5.5×2.7mm



## Image Stabilization Driver IC

- MSD2100WA**
- 10-bit DAC with ±100mA output current
  - Smart AAC(Automatic Actuator Control) algorithm embedded
  - Support I<sup>2</sup>C(1MHz)/I3C(12.5MHz) and 1.2V IO
  - Package size: 0.73 X 1.13 X 0.31mm (6-pin WLCSP)



- MSD4100WA**
- Linear hall sensor and advanced PID embedded
  - Constant Current Linear Driver (1-ch, I<sub>max</sub> = ±170mA)
  - Support I<sup>2</sup>C(3.4MHz)/I3C(12.5MHz) and 1.2V IO
  - Package size: 0.63 X 2.37 X 0.315mm (6-pin WLCSP)

