

**\* Under development**

MXM1160 is the advanced digital hall sensor with angle sensing function. It also provides various programmable system parameters such as sensitivity, resolution and operating functions.

The product detects the magnetic flux density and angle of rotating magnetic fields with 12-bit digital code, and gives incremental quadrature (A/B) and PWM outputs for rotating fields. MXM1160 provides interruption conditions selectable by user and smart low-power mode which automatically reduces power consumption.

MXM1160 supports various new UX designs available with its proximity and rotary sensing functions, which enables more flexible design and is suitable for mobile phone, consumer electronics and wearable application.

## Key Features

- Wide operating voltage range (VDD)
  - ✓ 1.65V ~ 3.6V
- Magnetic field ranges
  - ✓ Digital Hall sense function : 2mT ~ 40 mT
  - ✓ Angle sense function : 30mT ~ 90mT
- Digital Interface
  - ✓ I2C (standard, fast, and high-speed mode)
  - ✓ SPI (4-wire serial peripheral interface)
- ODR(Hz) / RPM
  - ✓ Digital Hall sense function : 5Hz ~ 1kHz
  - ✓ Angle sense function : 500 rpm (TBD)
- Current consumption
  - ✓ During sensor operation : TBD
  - ✓ Power down : TBD
  - ✓ Average in continuous measurement mode (5Hz) : Typ. 10uA
- Operating temperatures: -40°C to +85°C
- Package: SOP 8-pin

## Block Diagram

- To be updated

## Applications



Rotary/Swivel angle detection



Wearable devices



Rotary Knob



Magnet proximity detection