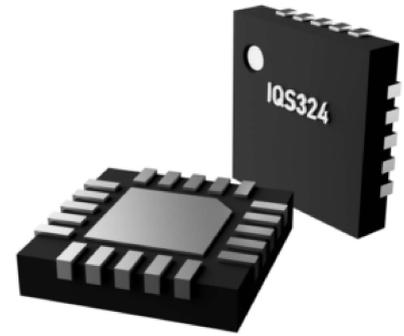


IQS324

The IQS324 ProxFusion® IC is a sensor fusion device for rotation and angle sensing applications using a diametrically polarised magnet in an off-axis configuration. The included ProxFusion® channel can be used for integrated UI applications or as a wake-up channel.



OVERVIEW

Main Features

- Highly Flexible ProxFusion® Device
 - Hall-Effect Angle Sensor
 - 4 Hall plates
 - Off-axis orientation
 - 16-bit absolute angle output
 - $<1^\circ$ angle error¹
 - Wide operational range
 - Automatic Tuning Implementation (ATI)
 - Automatic synchronisation with mechanical ratchets
- ProxFusion® Channel
 - Supports self-capacitive or inductive sensing
 - Automatic Tuning Implementation (ATI)
 - Button UI to detect large changes
 - Movement UI to detect small/rapid changes
- Interval UI
 - Configurable number of intervals per rotation
 - Configurable hysteresis between intervals
- I²C Interface With IRQ/RDY Signal
- Design Simplicity
 - PC software for configuration and debugging
 - Guidelines for magnet selection and mechanical constraints
- Supply Voltage: 1.8V to 3.6V
- QFN20 Package (3 × 3 × 0.5mm) – 0.4mm pitch

Applications

- Scroll wheels and thumb wheels for computer peripherals
- Applications requiring flexible UI options with sensor fusion
- Mechanical and optical rotary encoder replacements