

IQS397

The IQS397 is a ProxFusion® sensing device with an integrated haptics driver capable of driving Linear Resonant Actuator (LRA) motors. A ProxFusion channel event will trigger the haptic driver to allow effective feedback to the user. Standalone operation allows basic configuration via external strap options. The device also offers an I2C mode featuring configurable composite waveforms. The I2C mode features a closed-loop autoresonance algorithm. The autoresonance algorithm matches the resonant frequency of the driven motor in real time. Power consumption is optimised by automatic power mode management and an ultra-low power mode.



OVERVIEW

1.1 Main Features

- **Standalone Mode**
 - Sensor event triggers haptic feedback
 - Strap options allow for:
 - Sensitivity adjustment
 - Report rate adjustment
 - Digital output (active low, push-pull)
- **I²C Mode**
 - I²C interface - Up to Fast Mode Plus (1 MHz)
 - Convert to a standalone mode after power-on configuration
 - Fire-and-forget interface
 - Trigger haptic via sensor event or I²C command
 - Real-time closed loop autoresonance
 - Internal or external H-bridge
 - Selectable LRA drive frequency
- **Internal H-bridge protections**
- **Ultra-low power mode**
- **Automatic power mode management**
- **Design simplicity**
 - PC software for configuration and debugging
- **Supply Voltage:** 1.71 V to 3.6 V

- **QFN20 Package:** (3 × 3 × 0.55 mm) - 0.4 mm pitch

1.2 Applications

- **User interface touch buttons**
- **Doorbells and keypads**