

Press Release

Azoteq announces the IQS621, a combination sensor with ambient light sensing (ALS), capacitive proximity/touch, Hall-effect and inductive sensing capabilities.

Austin, Texas, March 1st. Azoteq, a pioneer in sensor fusion, today announced the release to market of the IQS621. The IQS621 ProxFusion® IC is a multifunctional, ambient light sensing (ALS), capacitive, Hall-effect and inductive sensor designed for applications for which any or all of the technologies may be required. The IQS621 is an ultra-low-power solution designed for short- or long-term activations through any of the sensing channels.

The IQS621 complements the existing part numbers in Azoteq's ProxFusion® combination sensor family and adds ambient light sensing to the portfolio. The device is available in a low-profile UOLG (2.8 x 2.5 x 0.6 mm) 9-pin package, with minimal external components required.

The ProxFusion® family builds on Azoteq's decade of capacitive-sensing experience and adds unique sensing capabilities in single-chip solutions.

"The IQS621 once again pushes the boundary in terms of sensor integration into a single IC," said Jean Viljoen, Azoteq's VP of Marketing. "For the first time, a designer is now able to employ four sensing technologies by using just a single component."

Samples, production quantities and evaluation kits are available through Azoteq's distribution channels and popular online distributors.

Features

• Unique combination of sensing technologies

- Capacitive sensing
- Ambient light sensing (ALS)
- Hall-effect sensing
- Inductive sensing

• Capacitive sensing

- Full auto-tuning with adjustable sensitivity
- 2 pF to 200 pF external capacitive load capability
- Down to 10 aF resolution
- Enhanced temperature stability

• Ambient light sensing (ALS)

- Absolute lux output
- Human eye response compensated
- ALS range output (0 – 10)
- Dual threshold detection for day/night indication with hysteresis

• Hall-effect sensing

- On-chip Hall-effect measurement plates
- Dual direction Hall switch sensor UI
- Two-level detection (widely variable)
- Detection range 10 mT – 200 mT

• Inductive sensing

- Two-level detection and hysteresis for inductive sensing
- Only external sense coil required (PCB trace)

- **Automatic Tuning Implementation (ATI)** – performance enhancement (10 bit)
- Minimal external components
- Standard **I²C** interface
- Optional **RDY indication** for event mode operation

- **Low power consumption:**

- 75 uA (100 Hz response, 1 ch inductive)
- 95 uA (100 Hz response, 2 ch Hall)
- 75 uA (100 Hz response, 3 ch capacitive)
- 60 uA (100 Hz response, ALS)
- 25 uA (20 Hz response, 1 ch inductive)
- 25 uA (20 Hz response, 2 ch Hall)
- 20 uA (20 Hz response, 3 ch capacitive)
- 18 uA (20 Hz response, ALS)
- 2.5 uA (4 Hz response, 1 ch cap. wake-up)

- **Supply voltage:** 1.8 V to 3.3 V

- **Low profile UOLG - 2.8 x 2.5 x 0.6 - 9-pin package**

Applications

- Mobile electronics (phones/tablets)
- IoT, security, home automation and lighting control
- White goods and appliances
- Wearable devices
- Human interface devices

About Azoteq (Pty) Ltd

Azoteq (www.azoteq.com) is a pioneer in sensor fusion. With more than 12 years of capacitive-sensing experience, the sensor offering is now expanded to include multi-sensor technologies on single ICs. The first generation of ProxFusion® offers capacitive, Hall-effect, IR, PIR, inductive and ambient-light sensing. Azoteq has design and manufacturing centers in South Africa and China, and sales offices and distributors in South Africa, Asia, Europe and the USA.

IQ Switch®, ProxSense®, ProxFusion®, LightSense™, AirButton® and DYCAL™ are trademarks of Azoteq (Pty) Ltd.

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