RA Ecosystem Partner Solution
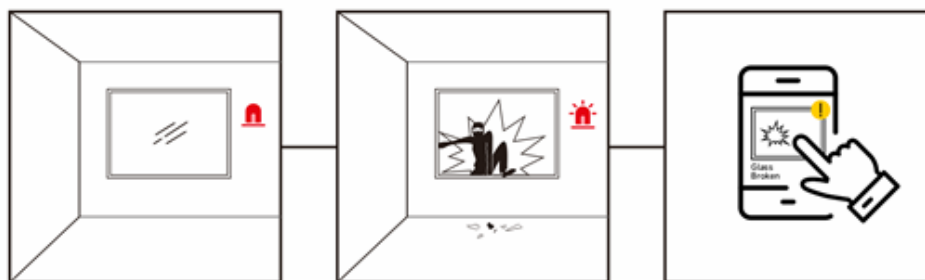
Aizip Glass Break Detection

Solution Summary

Aizip's glass break detection solution provides accurate detection of the glass break sound for home and office protection operating completely on the edge without Internet connection requirement. Once the sound of a glass break event is heard, the module sends an alarm to the system. The compact and efficient TinyML model has been tested for optimal operation on RA4E1 and RA6E1 group MCUs for a wide range of IoT applications. This turnkey solution can run on any Renesas RA MCU without any additional request.

Features/Benefits

- Edge operation eliminates the need for Internet connection to detect glass breaks
- Detection and inference are done locally on the device
- Provides continuous audio monitoring in home or office environment to detect a glass break event
- Inference engine model retrain allows to change type of sounds detected
- Aizip's leading efficient AI technologies deliver high accuracy and low false warnings

Diagrams/Graphics

Accuracy at 98% when tested against hard false positive sound

Target Markets and Applications

- Smart Cities
- Smart Homes
- Smart Sensors
- Building Automation
- Consumer Electronics

Robust Efficient Scalable AI, Everywhere - Aizip

Customer Focused

Aizip focuses on TinyML models for IoT market applications and provides its business customers with a total solution. Aizip technical team covers the full spectrum required for TinyML customers, from compact and robust model design to efficient deployment. The seasoned management team has established an excellent operation platform to enable on-time and high-quality delivery. Aizip is committed to support its customers' success.

Aizip Technologies

Aizip has developed extensive proprietary technologies in the TinyML area, including

- Automated design tools for fast development, speedy optimization, and excellent specs;
- Breakthrough neural networks for low-power TinyML applications with superior performance;
- High performance achieved with multimodal AI technology in a continuous monitoring setting.

These technologies allow Aizip to provide differentiated solutions with great ROI for its customers.

Product Portfolio

AIV: Aizip Intelligent Vision
- Visual wake word (VWW)
- Object detection
- Face recognition
- …

AIA: Aizip Intelligent Audio
- Keywords spotting (KWS)
- Speaker identification
- Deep noise reduction
- …

AIT: Aizip Intelligent Time-Series
- Predictive maintenance
- ECG and EEG
- Human activity recognition
- …

Value Proposition

Through its leading expertise, superior design platform, customer driven business model, and service focused culture, Aizip has proven to provide its customers worldwide with the following value:

- Superior specs
- Fast to market
- One-stop shopping
- Excellent ROI

www.aizip.ai