



RA Ecosystem Partner Solution

Aizip Defect Detection



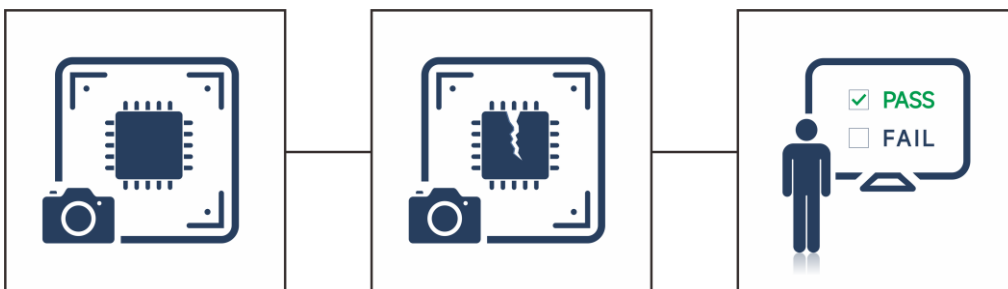
Solution Summary

The defect detection module from Aizip is a general-purpose solution that can be applied to diverse applications in industrial, agriculture, and other enterprise markets. High accuracy and fast detection is achieved through Aizip's leading and efficient tinyML technology. The compact, efficient TinyML model is suitable for a wide range of IoT applications. This turnkey AI solution is available for the Renesas [RA family of MCUs](#) and runs efficiently on [RA8D1 MCU](#) devices.

Features/Benefits

- The DNN-based AI module requires limited normal data for registration at the beginning of its service
- No abnormal data or labeling is required
- The pass/fail threshold can be easily adjusted without expertise in AI
- Detection and inference are done locally on the device, no cloud connection required
- This turnkey solution does not require model training or re-training by the user
- The model is ready for integration into a large variety of products

Tables/Diagrams



Accuracy as high as 99.5% can be achieved for product inspection in production line

Target Markets and Applications

- Manufacturing Industry
- Factory Automation
- Industrial IoT

[Robust Efficient Scalable AI, Everywhere - Aizip](#)



The powerful tiny AI engines for an intelligent world



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