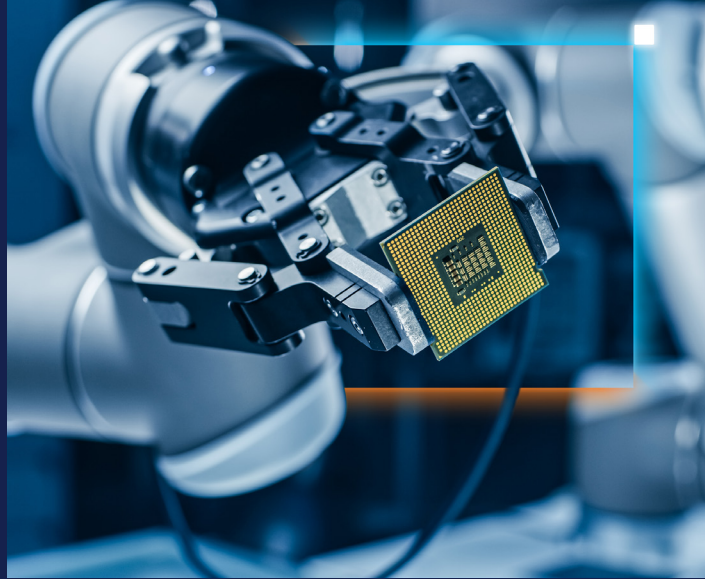
AI Powered Defects Detection and Classification

iWave ZeroDefect



Innowave Tech x ASUS x intel

By leveraging Intel technologies, iWave ZeroDefect by Innowave helps manufacturers overcome the limitations of manual inspection with AI-powered visual quality control, enabling real-time defect detection, reducing rework costs, and improving yield, product quality, and operational efficiency.

iWave Zero Defects is an AI-powered visual inspection platform enabling manufacturers to achieve near-zero defect production through real-time automated quality inspection. The solution combines computer vision, deep learning, and edge AI to detect surface defects, dimensional deviations, contamination, scratches, missing components, and assembly anomalies with high accuracy while reducing false rejects.

Deployed on ASUS NUC 14 Pro and optimized using Intel® Core™ processors and the OpenVINO™ toolkit, iWave Zero Defects delivers low-latency inference, accelerated AI model optimization, and efficient deployment on Intel-based edge devices without discrete GPUs. The platform integrates seamlessly with existing production lines, MES, PLCs, cameras, and industrial automation systems, providing centralized defect analytics, traceability, SPC monitoring, and continuous AI model improvement.

By enabling real-time decision-making and automated quality control, manufacturers can reduce inspection costs, improve yield, minimize defect escape, shorten production cycles, and accelerate digital transformation across semiconductor, electronics, precision manufacturing, and advanced packaging operations.

iWave ZeroDefect by Innowave delivers **AI-powered visual inspection for real-time quality control**, helping semiconductor and electronics manufacturers achieve near-zero defects, improve yields, and increase operational efficiency through intelligent edge computing.

Intel Products & Technologies

Accelerating AI and analytics at the edge

intel CORE ULTRA

Intel® Core™ Ultra Processors

OpenVINO™

OpenVINO™ Toolkit

Key Intel-Enabled Features

Real-Time AI and analytics make it easy

Real-Time Inspection

Defect Accuracy Boost

Adaptive Anomaly Scan

Scalable Edge AI Ops

Powered by Intel® processors and optimized with the OpenVINO™ toolkit, Innowave and ASUS deliver:

01

OpenVINO™-optimized AI inference for low-latency inspection

02

Intel® Core™ edge computing for real-time defect detection

03

Intel®-powered computer vision for precise defect analysis

04

Scalable Intel® architecture for cost-efficient AI deployment

That's the power of Intel Inside®.

Country/Geo:

US/Canada; Europe, Middle East, and Africa; Asia Pacific, Japan, Australia & New Zealand, PRC

Verticals:

Manufacturing & Industrial

Use Cases:

Quality Control
Operational Efficiency

About Innowave Tech

Innowave Tech Sdn Bhd is a Singapore-based Industrial AI company delivering AI-powered manufacturing solutions. Trusted by Tier 1 semiconductor manufacturers globally, it supports clients across Asia-Pacific, the U.S., and Europe. Specializing in Agentic AI, Innowave Tech enables intelligent automation, equipment orchestration, and autonomous operations that improve productivity, quality, and operational resilience.

www.innowave.com.sg

iWave ZeroDefects - Edge AI Partner Spotlight

intel ai
Intel® AI Edge Applications

About ASUS

ASUS is a global technology company driven by innovation and passionate about enhancing digital life. It designs and delivers a broad range of products and solutions that empower people and organizations, combining cutting-edge engineering, quality, and sustainability to create intuitive, reliable experiences for users worldwide.

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ASUS NUC 14 Pro - Edge AI Partner Spotlight

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