

Accelerating Aircraft Maintenance with Intelligent Inspection

AeroInspect - Smart Inspection System



By leveraging Intel® technologies, AeroInspect automates aircraft and component inspections, enabling faster defect detection, precise damage assessment, and consistent, traceable maintenance outcomes.

AeroInspect is an AI-powered aircraft inspection solution that helps aerospace MRO organizations improve inspection accuracy, consistency, and efficiency.

Deployed on ASUS NUC 15 Pro+ and powered by Intel® Core™ Ultra processors, AeroInspect uses a camera with YOLOv8 instance segmentation, optimized via OpenVINO™ toolkit and accelerated across the CPU, Intel® Arc™ GPU, and NPU to automatically detect, measure, and classify surface defects such as dents, scratches, corrosion, and wear. The solution delivers objective, millimeter-level measurements and standardized severity assessments, achieving a performance gain over baseline pipelines — reducing dependence on manual visual inspections and inspector subjectivity.

By automating defect identification, documentation, and reporting, AeroInspect helps organizations accelerate inspection cycles, improve regulatory compliance and traceability, and support faster maintenance decisions while reducing operational costs.

AeroInspect improves inspection accuracy, reduces turnaround times, and strengthens traceability with edge AI built on Intel's Manufacturing AI Suite.

Intel Products & Technologies

Accelerating AI and analytics at the edge



[Intel® Core™ Ultra Processors \(Series 2\)](#)



[Intel® Arc™ GPU](#)



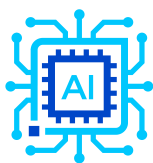
[OpenVINO™ Toolkit](#)

Key Intel-Enabled Features

Real-Time AI and analytics make it easy



AI Defect Detection



Precision Measurement



Edge AI Processing



Automated Reporting

Powered by Intel® processors and optimized with OpenVINO™ toolkit, Tata Technologies and ASUS deliver:

01



Real-time defect
detection with Intel®
Arc™ GPU

02



YOLOv8 inference
optimized with
OpenVINO™ toolkit

03



High-speed inference
on Intel® NPU at low
power

04



Runs fully offline

That's the power of Intel Inside®.

Country/Geo:

Worldwide

Verticals:

Transportation; Manufacturing;
Federal and Aerospace

Use Cases:

Operational Efficiency;
Operational Diagnostics;
Airports Infrastructure

About Tata Technologies

Tata Technologies (BSE: 544028, NSE: TATATECH) is a global product engineering and digital services company helping Aerospace, Automotive, and Industrial Heavy Machinery manufacturers design, develop, and deliver better products. Combining engineering excellence with digital transformation, it enables enterprises to accelerate time-to-market, optimize costs, improve operational efficiency, and build sustainable products.

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[AeroInspect - Smart Inspection System - Edge AI Partner Spotlight](#)

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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 15 Pro+ - Edge AI Partner Spotlight](#)

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Intel® AI Edge Systems

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