

## AI-Powered Defect Detection in the Micron Range

The A-side or design surface of rims places the highest quality demands on manufacturers, as it is directly exposed to the end customer. Achieving a flawless surface appearance is already a key objective during production. At the latest, final inspection before packaging must ensure that every wheel meets the required quality standards.

With AIT Rim Inspection, we provide a complete inspection module for the reliable detection of visual defects on the rim's visible surface. The system is specifically designed for seamless integration into existing rim manufacturing lines, enabling efficient and process-stable quality control without disrupting production workflows.



## Technical Highlights & Benefits

- **Innovative Lighting Technology:**
  - 2,5 surface information with micron-level precision
  - Excellent inspection results, even on highly reflective rim surfaces
- **Reliable Defect Detection:**
  - Ideal für detecting material and manufacturing defects down to 0,1 mm
  - Minimal false-positive rate for maximum process reliability
- **100% Inspection Coverage:**
  - Surface Inspection
  - Detection and evaluation of brightness-related and topographical defects
- **Seamless Production Integration:**
  - Standardized PLC interfaces and compatibility with common rim handling systems and manufacturing equipment
- **Intelligent Evaluation Strategy:**
  - Combination of rule-based machine vision algorithms and high-performance AI tools
- **Material-Independent Inspection:**
  - Perfect end-of-line (EoL) inspection of rims with varying geometries and surface finishes, including matte, diamond-cut, and black-painted rims

**>> 100% automated inline inspection for high-throughput production and a broad defect spectrum, for rim diameters up to 24".**