ADLINK
LEADING EDGE COMPUTING

USE CASE



NEON AI Smart Camera

All-in-one NVIDIA® Jetson based industrial camera for the edge

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Elevating Efficiency and Ensuring Quality with Edge Vision

In the era of smart manufacturing, machine vision technology efficiently executes defect detection and quality control. The AI Vision solutions surpass rule-based AOI limitations, offering enhanced flexibility and accuracy for various AI Vision applications. ADLINK provides a range of seamlessly integrated hardware and software, offering ready-to-use Edge Vision solutions that deliver unparalleled operational efficiency and value for our customers.



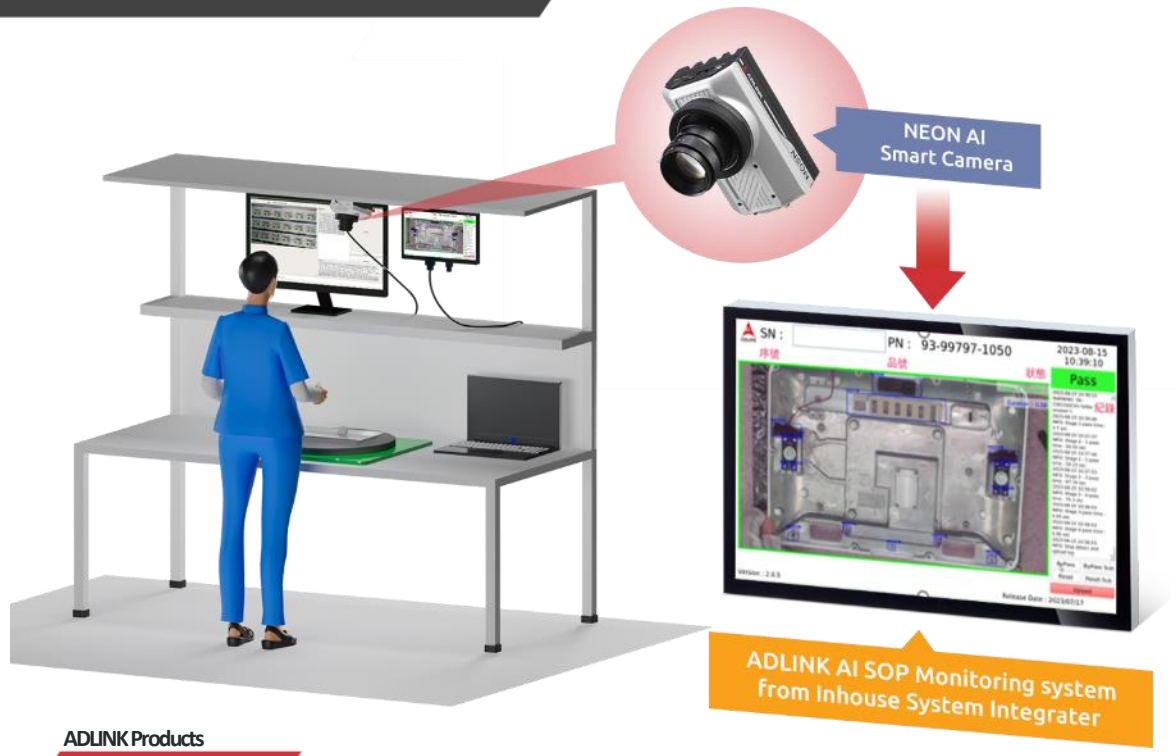
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Assembly SOP Compliance Monitoring Guarantees Yield Rate



Overview

Assembly line workers can sometimes forget to install components. Real-time monitoring for accurate assembly with immediate inspections and image records reduce testing and customer complaint costs. AI monitoring detects missing parts, ensures proper installation, and enables screenshot uploads for production records, improving yield rate and minimizing manual inspections.



Challenges/Requirements

- Detect assembly SOP (Standard Operating Procedure) sequence, object location, and type
- Alert when assembly is not completed within the allocated time
- Log and capture images for each assembly procedure for analysis
- Installation should be compact, without disrupting production line operations, and use simple cabling
- Edge computing devices manage different recipes across various production lines
- Reduce sampling rates and human error in outgoing quality assurance (OQA)

User Benefits/Why ADLINK

- Real-time monitoring of assembly SOP sequence, object location and type
- Alert for excessive assembly cycle time using DI/O
- Uploading cycle time logs and operational image records to the cloud for analysis and traceability
- Integrated NVIDIA Jetson Xavier NX, image sensors, and a visual software package in an all-in-one design, reducing wiring and maintenance for easy deployment
- When paired with ADLINK EdgeGO, remote AI model updates are enabled for flexible detection of diverse assembly procedures
- Ensures proper execution of SOP to enhance work efficiency and guarantee yield rate

ADLINK Products

- NEON-202A-JNX NVIDIA® Jetson Xavier™ NX-based industrial AI smart camera for the edge

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

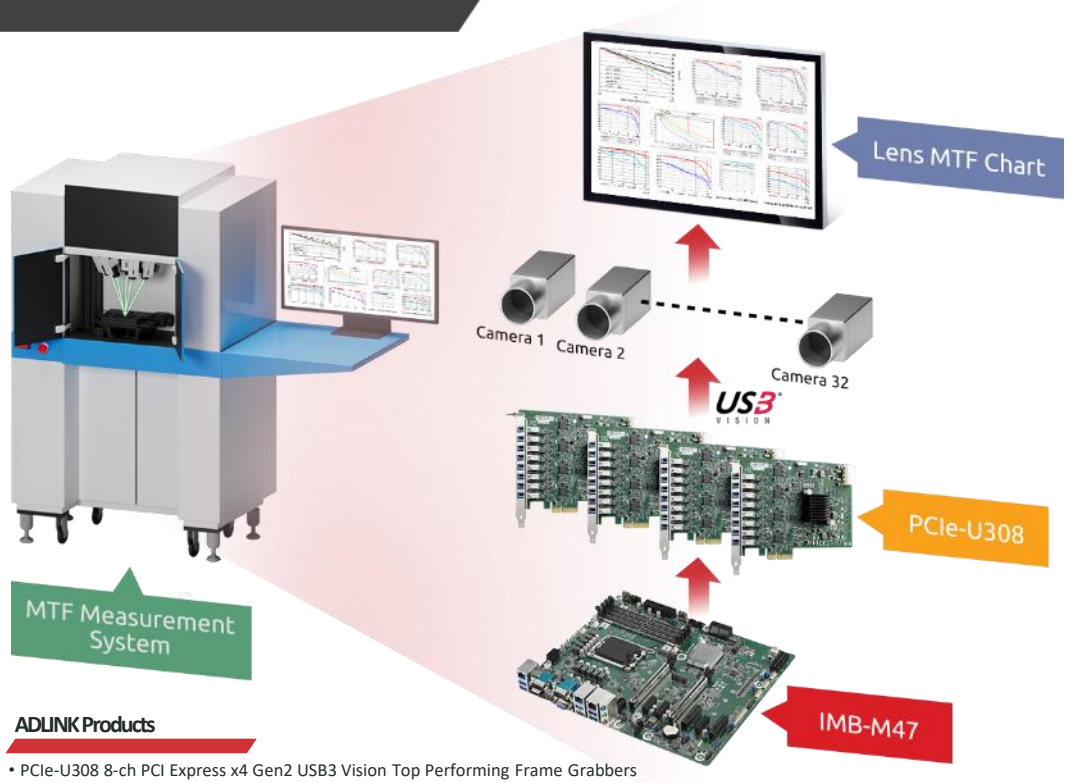
Multi-Camera Inspection System Ensures Smart Phone Lens Quality



Electronic Manufacturing

Overview

With the continuous improvement in mobile phone camera lens pixel count and quality, effective quality management and inspection of high-resolution smartphone optics are necessary. Simultaneously using multiple cameras to capture different areas ensures each lens meets quality standards from the center to edges, enabling fast defect detection and enhancing product quality.



ADLINK Products

- PCIe-U308 8-ch PCI Express x4 Gen2 USB3 Vision Top Performing Frame Grabbers
- IMB-M47 Industrial ATX Motherboard with 12th/13th Gen Intel® Core™ i9/i7/i5/i3 Processor

Challenges/Requirements

- 32 USB3 cameras with reliable and stable capturing performance
- Prevention of significant fluctuations in the Modulation Transfer Function (MTF), frame drops, and unstable grayscale values caused by an unreliable power supply
- IPC and cards must be compatible, aiming for a unified service window without needing to approach separate technical support windows in case of issues

User Benefits/Why ADLINK

- Four 8-port PCIe-U308 capture cards enable the precise imaging of 32 USB cameras
- Guaranteed 7.5W per port power coupled with excellent heat dissipation design and 4-pin Molex connector for stable voltage ensures consistent grayscale and MTF values with no frame drops
- ADLINK's IPC and capture cards undergo rigorous compatibility testing for high stability, offering a unified support window and one-stop service, enhancing efficiency

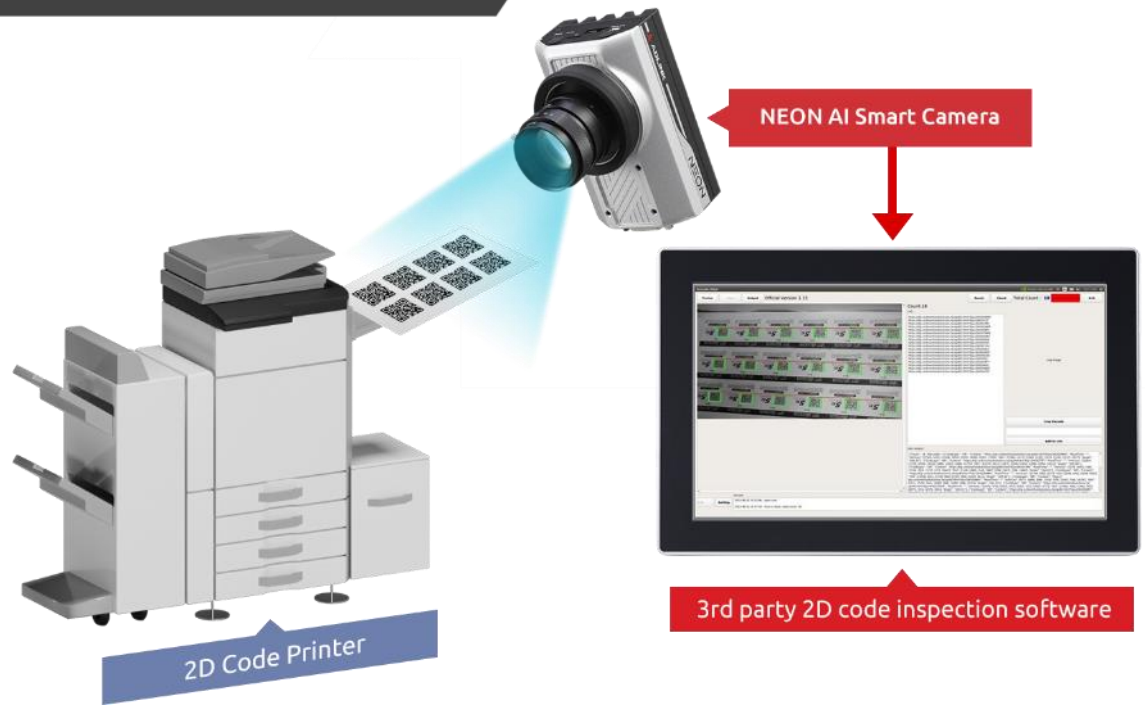
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Multiple 2D Code Verification Ensures Print Quality and Accuracy



Overview

2D QR Codes, generated by print providers, need accurate and readable labels, as errors can impact efficiency, customer perception, and sales. To enhance efficiency, new solutions read multiple barcodes simultaneously, while ISO/IEC 15415 quality scores help manage print quality, reducing errors.



Challenges/Requirements

- Read multiple 2D codes on A3 (297 x 420mm) printouts
- Ensure legible and readable 2D barcode prints, provide 2D barcode print quality grade
- Inspection to prevent repetitive barcodes
- All prints need to be photographed for production traceability
- Flexibility in inspecting various code types
- Ability to indicate the position of erroneous barcodes

User Benefits/Why ADLINK

- 8M CMOS NEON AI Camera features Large Field of View (FOV) with multi-code reading capability
- Provides ISO/IEC 15415 barcode quality score for print quality management
- Can recognize repeated barcodes
- Photo records and logs ensure printed output traceability
- Supports various inspection code types: Data Matrix, QR Code, 1D code
- Indicates error location for swift replacement and reprinting in 2D codes

ADLINK Products

- NEON-202A-JNX NVIDIA® Jetson Xavier™ NX-based industrial AI smart camera for the edge

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

NEON AI Smart Camera



NEON-2000-JNO
NVIDIA® Jetson Nano™ based

NEON-2000-JNX
NVIDIA® Jetson Xavier™ NX-based

NEON-2000-JT2-X
NVIDIA® Jetson™ TX2-based
IP67-certified

- Integration of NVIDIA® Jetson™ modules, image sensor and vision software suites, ready to deploy
- All-in-one design minimizes cabling, footprint and maintenance
- FPGA-based DI/O for accurate, real-time triggering
- USB Type-C port for video, power, and USB simplifies connectivity
- Choose from two different image sensors
- 1x LAN and 1x COM DI/O
- Supports C-mount lenses
- Supporting ADLINK EVA (Edge Video Analytics) reduces deep learning application development time

Scan QR code to get quote

Head Office

ADLINK Technology, Inc.
(Global Headquarters)

No. 66, Huaya 1st RD., Guishan Dist., Taoyuan City 333411, Taiwan
Tel:+886-3-216-5088
Fax:+886-3-328-5706
service@adlinktech.com

www.adlinktech.com

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000