# **Robot Inline Inspection System**

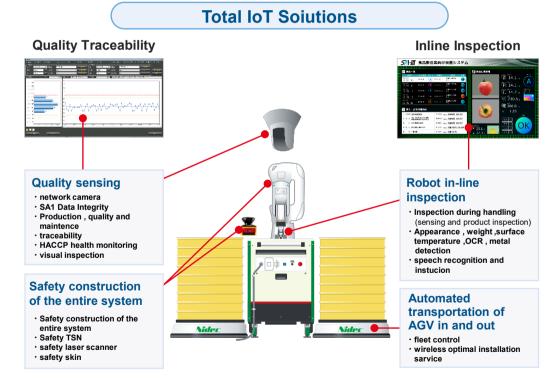
>> Features

>>> Diagram

Integrated IoT for soundness and data integrity of foods and pharmaceuicals through in-line inspection

Realization of a flexible system that integrates multiple processes using robots, AGVs, and sensing equipment

Realizing fenceless safety system by industrial robot combining safety laser scanner







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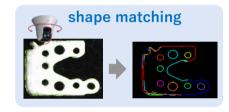
## In-line inspection by video analysis (robot + SA1-III + Vision Edition)

## Vision Edition

# Video analysis reduces manual labor

There are many situations and operations in which people judge with their eyes, and efficiency and labor saving are not promoted.

To promote manpower saving and load reduction by using image recognition technology.



screw loosening determination



### barcode reading



#### character matching



#### meter reading



### true-false determination



### lighting judgment

plolololo

determination of

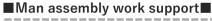
presence or absence

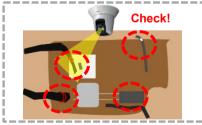
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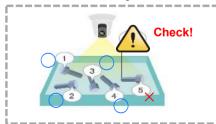
# Collect quality traceability information from video and images

- Judgment of the quality of products, parts and processed parts by shape analysis
- Reading text, QR code, meter, etc.
  Save as Traceability Information
- From the lighting/flashing status of the tower indicator light Collect operating and abnormal status

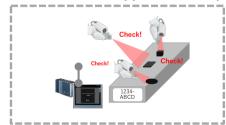




#### ■ Method Assembly Check ■



#### ■ Measurement Appearance Inspection







# **Robot Inline Inspection System**

## **Automation** and labor saving by robot and AGV

# Automation of low value manual transportation work

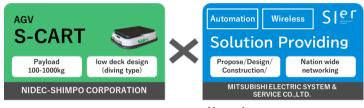
A field worker can use production free time

Find and deliver the package. In transporting heavy objects, the number of workers is limited and the burden on the body is large.

Promotion of production automation corresponding to COVID-19 and production population shortage

### **Automated Delivery with AGV**

- Operation plan, wireless LAN environment, and facility linkage total support
- For AGVs with fleet control optimal operation control
- Before and after transportation, such as incoming/outgoing shipment and goods managemen automation and digitization of operations



#### transport application





- ① Transport of materials and manufacturing
- Interoperation Deliveries (Assembly/Inspection)
  Packing and shipping area delivery of finished products
- (4) I/F remodeling with automation equipment and MES



- ① Transport and supply of corrugated cardboard and pallets
- ② Interprocess Deliveries (packing, loading, warehousing) ③ warehouse storage of products

