

# LEAPER Intelligent Logistics System Solution

LEAPER empowers logistics sorting with intelligent information acquisition technology based on machine vision to provide intelligent solutions for the logistics industry, replacing traditional manual sorting work, significantly reducing the labor cost of logistics sorting, parcel mis-sorting rate, improving work efficiency and increasing sorting accuracy.

## 01.Stereo Inventory System

- The gauge identification module plus the counting module together with the inventory software package can realize the fully automatic inventory of the storage space;
- The location module and empty space scanning module are designed for some imported palletizer manufacturers who cannot provide information interface, and can be added according to the actual situation.



### A.Visual Traceability Management

Comprehensively supervise key production nodes, accurately retrace visualized problem scenarios, and improve the efficiency of customer complaint processing.

### B.Logistics Perception

LEAPER performs technology empowerment based on AI, using deep learning and multi-dimensional perception technology to achieve barcode reading of parcels, recognition of OCR, and volume measurement.

### C.Automated Sensing Of Cargo Information

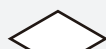
Relying on the AI Cloud technology framework, the parcels are automatically weighed, volume measured, barcode identified, and the data is fused and then transferred to the system server.

### D.Parcel Identification

LEAPER relies on deep learning algorithms and active binocular imaging technology using self-researched intelligent stereo cameras to accurately locate and identify parcels, realizing automatic parcel classification, separation, and uppacking.



Identification of Cargo Packaging Form



Out of stock



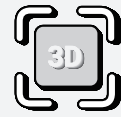
In stock



Identify The Barcode on The Bottom of The Shelf

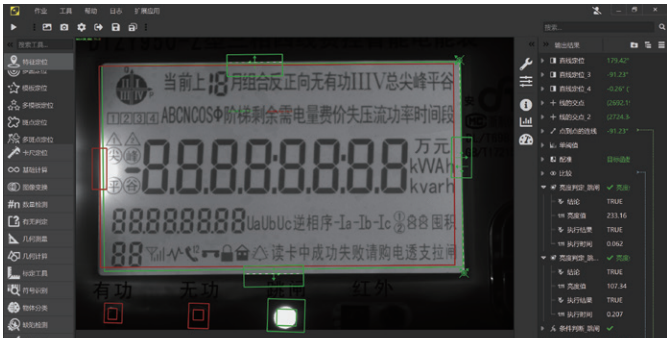


Read Images Taken by Smart Cameras



Real-time Statistics on The Number of Goods

## 02. Electricity Meter Lcd Inspection



**Inspection Content:** The character detection on the LCD is missing and the power LED shows detection.

**Inspection Speed:** 2s

**Inspection Program:** Using single-threshold image processing + alignment, the comparison algorithm detects discrepant characters and outputs them by comparing the current meter map with the template map.

## 03. Cigarette Case Brand Identification

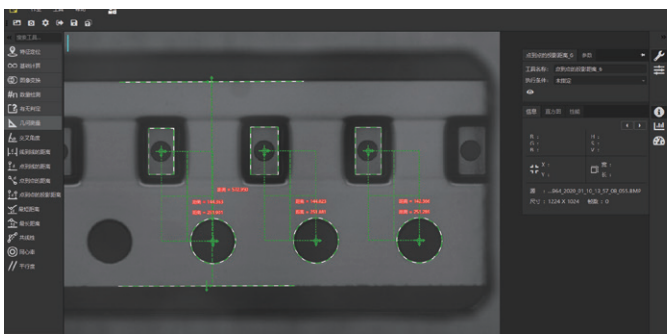


**Inspection Content:** Identify the cigarette case brand.

**Inspection Accuracy:** Comprehensive recognition rate  $\geq 99.99\%$

**Inspection Program:** By creating templates upfront and matching templates later, the cigarette case gauge models are identified.

## 04. Carrier Tape Size Inspection



**Inspection Content:** Detects the carrier tape edge size, the round hole size, and the hole center-to-center projection size.

**Inspection Speed:** 13.4m/s

**Inspection Accuracy:**  $\pm 0.01\text{mm}$

**Core equipment:** LEAPER 5MP mono industrial camera, telecentric lens, coaxial light source.

## 05. Wheel Type Identification Test



**Inspection Content:** Identifies the wheel type and outputs it to the customer PLC.

**Inspection Speed:** 1m/s

**Inspection Accuracy:** Comprehensive testing rate  $\geq 99.9\%$

**Inspection Program:** By creating templates upfront, we automatically generate thresholds that can perform classification, perform template matching, and identify models.

