



# **Automated Vision Inspection System for COVID-19 Kit/Carton Box**

# Project Overview

Automated Vision Inspection System development for COVID-19  
Cartonbox Kit Inspection before packing (Images for reference purpose only)

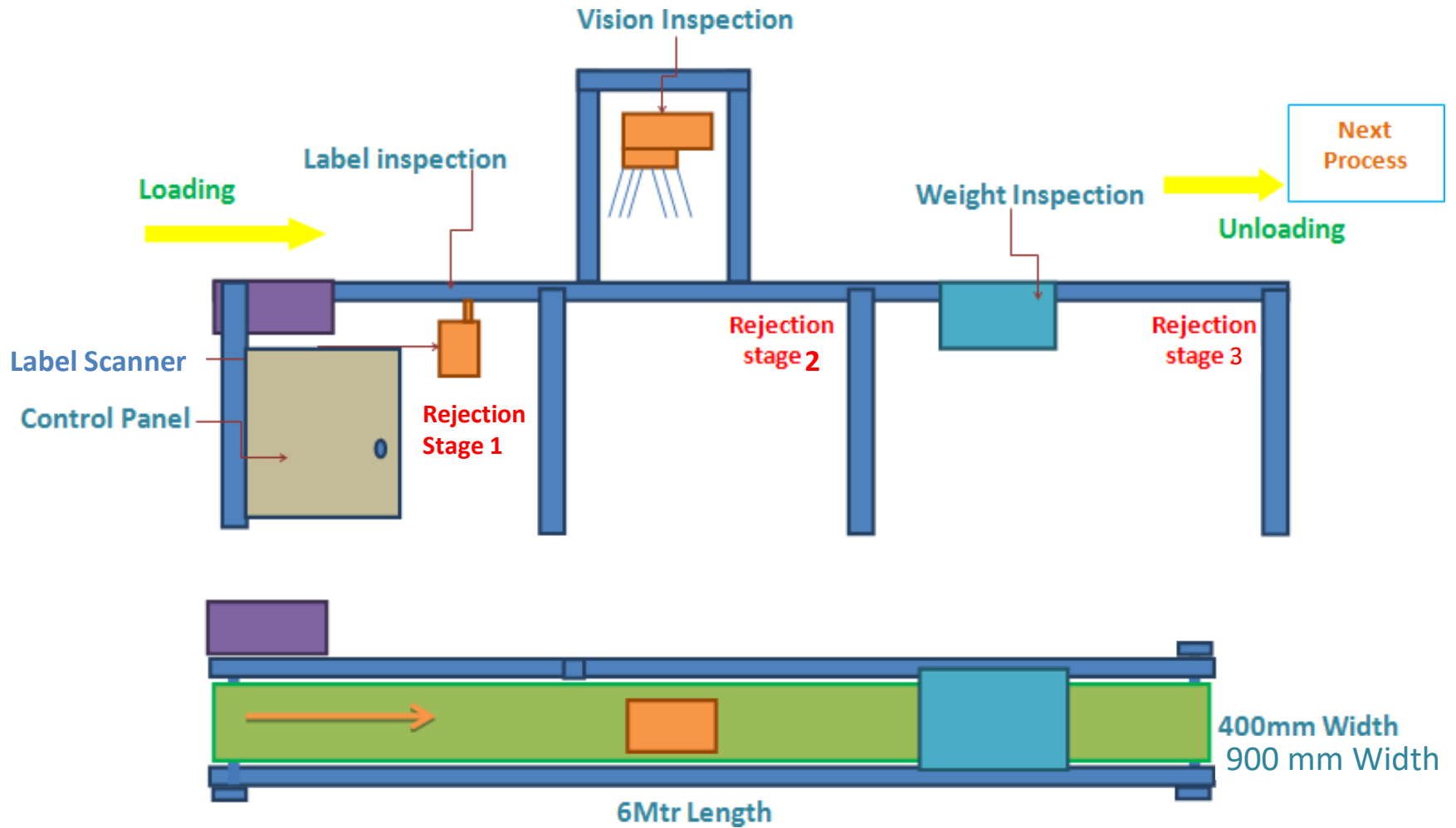


# Project Overview

## **Features:**

- ❖ Box movement on stop and go Belt conveyor of 6-meter length
- ❖ Manual loading & unloading
- ❖ Carton box label inspection by fixed label scanner
- ❖ Vision system for inspection (Test Parameters described below)
- ❖ Camera with wide angle lens for image capturing
- ❖ Camera Field of View considered is 300x300mm
- ❖ Carton box weight check by weighing scale
- ❖ Auto rejection mechanism by pneumatics at 3 stages
- ❖ Rejection arrangement can accommodate 4 to 5 boxes
- ❖ Inspection data, weighed data & images storage in the system
- ❖ Configurable settings in software
- ❖ Advanced Vision tools for high precision verification
- ❖ Data logging & report generation
- ❖ TAKT: 6.3 seconds/Box

# Concept Overview



## **Vision Inspection Parameters:**

- ❖ Quantity of bottles
- ❖ Cap presence
- ❖ Cap colors in respective positions (7 to 10 colors)
- ❖ Existing of extra bottles
- ❖ Missing of bottles

## **Carton Box Label Inspection:**

- ❖ LOT Number & expiry date print inspection by label Scanner
- ❖ Label Position should be same for all carton boxes

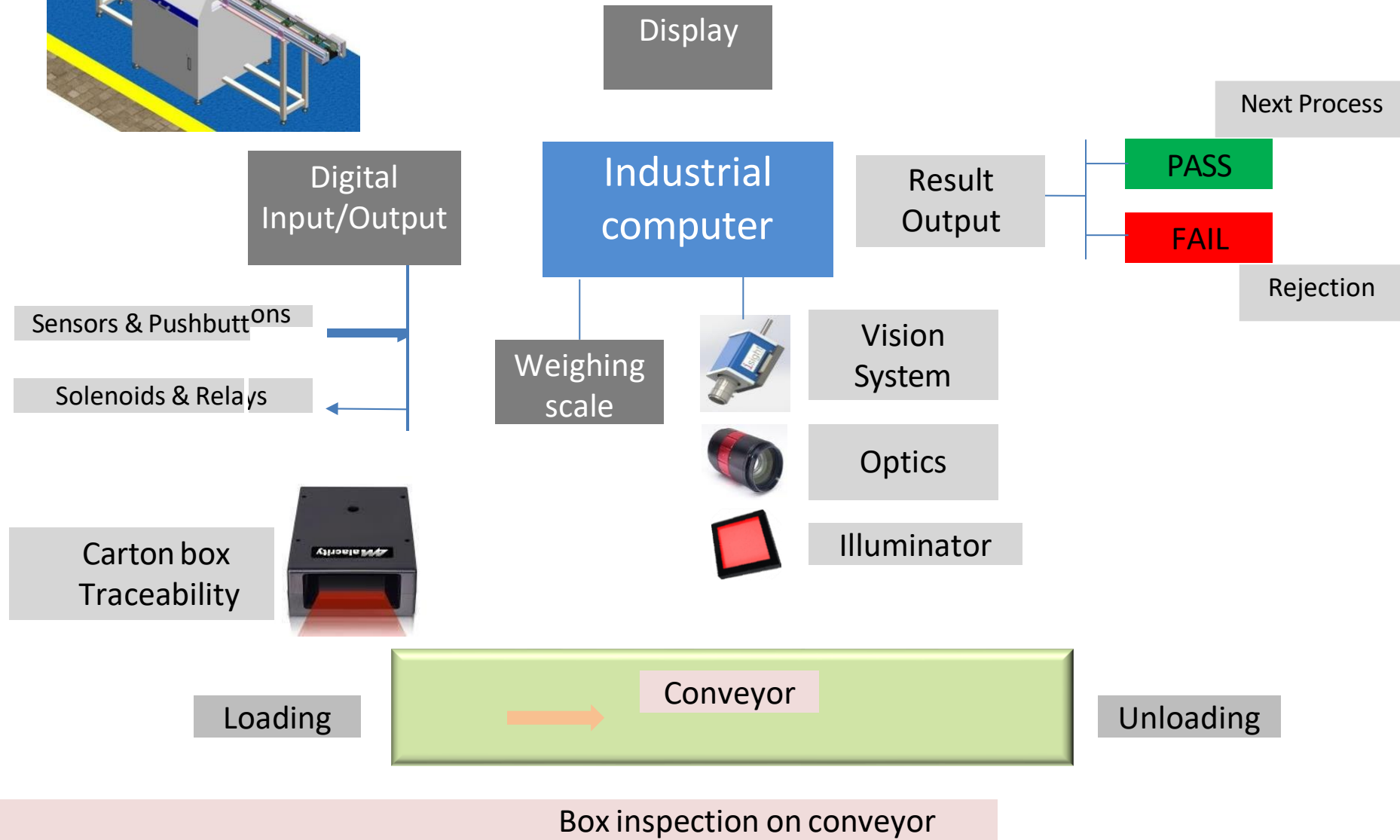
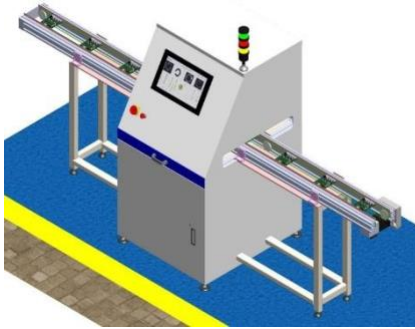
## **Carton Box Weight Check:**

- ❖ Weight check by weighing scale which will be fixed to conveyor
- ❖ Weighing range from 50 to 500gm

## **Shrink Tunnel Packaging:**

Wrapping machine for box 4 sides wrapping

# Architectural Block Diagram



# Reference Layout

## In-Line Vision Inspection



*\*Image shown only for indicative & reference*

## Major Key Components

SL#	Major Key Components
1	Fixed label Scanner
2	Weighing Scale
3	Automated Vision Inspection System. Camera Wide angle optics Illuminator with controller Vision license Camera enclosure Cables & accessories
4	Industrial Computer with Display, Keyboard, UPS & Mouse
5	Digital Input / Output Modules
6	Pneumatics for auto rejection mechanism 3set
7	Stop and go conveyor with motorized mechanism
8	Sensors for automation
9	Mechanical base structures, rollers, mountings & other accessories
10	Control cabinet arrangement with necessary electrical switchgear hardware
11	Shrink Wrapping Machine



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