OVERVIEW

Case Study: Automated Open-Flap Inspection on a High-Speed Personal Care Packaging Line

Summary

A global personal care brand needed to automate open-flap detection on a high-speed carton line running at 200 parts per minute. At the time, they did not use a vision system and had no tolerance for missed defects reaching final pack.

To solve this, we mounted the OV20i smart camera on the line and integrated it with the existing line sensor to trigger image capture at full production speed. We then built and trained a classification model, teaching the system to distinguish open from closed flaps, directly on-site using real production samples. By the end of the first day, the model was trained and the system was capturing every carton without missing a part. The line was validated at 200 ppm with 100% inspection coverage.

- **Industry:** Personal Care / Consumer Goods
- **Application:** Open vs. closed flap detection on carton line
- **Key Challenge:** 200 ppm, zero tolerance for missed open flaps

Success Metrics

200 ppm	Line speed validated at full throughput
Same day	Set-up and validation
100%	Inspection coverage across all cartons

Why this matters:

Multi-site deployment done in days not months
Same OV20i recipe deploys across every line globally. No IT infrastructure or cloud dependency. One platform for all facilities worldwide.

Speed without sacrifice
Validated at 200 ppm on day one, without slowing production.

No per-site license fees
Fully edge-based. No server room, no maintenance contracts, no per-inspection licensing. Facilities teams own and operate it directly.

Packaging inspection applications
Open/closed flap • Label presence • Cap/closure • Fill level • Date/lot code (OCR)



OV20i is small enough to hold in your hand, and powerful enough to inspect a whole line.