ARBOR
From Edge to Action

Smart Deposit-Refund Vending Machines

Overview

Poland is set to launch a nationwide deposit-refund system (DRS) to support EU environmental goals. A deposit is imposed on every product sold in glass, plastic, or can bottle.The initiative aims to encourage recycling and improve container recovery rates. Demand for reverse vending machines is rising, especially as large retail stores are required to participate, while smaller shops may join voluntarily.

Challenges

A leading Polish vending machine manufacturer, faced several critical challenges in meeting this regulatory-driven market shift:

Time-to-market Pressure

Deliver a fully functional solution as early as possible.

System Integration

Ensure compatibility with diverse POS systems and central operators.

Operational Resilience

Prevent fraud, accurately recognize returned packaging, and optimize storage management.

User Accessibility

Provide an intuitive, inclusive design suitable for all users, including people with disabilities.

Solution

The vending machine manufacturer selected ARBOR's SB-244-1N97 centric controller for its performance, integration capability, and innovative design features:

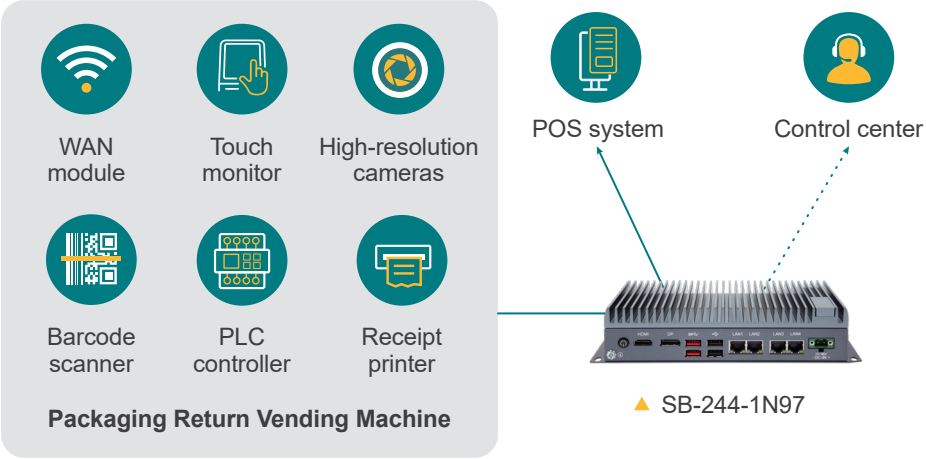
Speed & Support: ARBOR provided faster samples and superior technical assistance compared to competitors - critical given the tight regulatory deadline.

Support Multiple Components: Touch monitor, barcode scanner, PLC controller, receipt printer, WAN communication.

Remote Monitoring: For real-time status control, enabling service responses within 48 hours.

Optimized for Space: With all I/O ports on one side, the SB-244-1N97 simplified cabling and installation inside the smart deposit-refund vending machine's limited space.

Smart Serviceability: An external 4G SIM slot allows easy card replacement without opening the device, essential for nationwide remote monitoring.



Benefits

- **Competitive Advantage:** The solution secure a first-mover advantage by enabling a rapid time-to-market.
- **Streamlined Operations & Maintenance:** Remote monitoring significantly simplify maintenance and allow for a quick 48-hour service response.
- **Positive Environmental Impact:** Directly contributes to the circular economy by diverting waste from landfills.

Key Advantages

Faster time-to-market: Machines were ready before the official deposit-refund system (DRS) launch, securing the vending machine manufacturer early-mover advantage.

Competitive strength: Positioned as a Polish leader delivering complete solutions—from hardware to service and integration.

Environmental impact: Machines actively support the circular economy, diverting packaging waste from landfills.

Retailer benefits: Shops using this solution enjoy greater customer traffic.

ARBOR created a solution that drives sustainability, compliance, and profitability—proving how technology can empower environmental initiatives, and contributing to a smarter circular economy for Poland and beyond. Contact our team of experts today to learn how the SB-244-1N97 can revolutionize your RVM project.

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