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Case Study

Advancing Meat Processing with Darveen SPC-9150: Stainless Steel Panel PCs for Traceability and Continuous Operation

Automating mission-critical processes in modern food processing environments demands rugged, reliable computing solutions that can withstand harsh conditions while seamlessly integrating with existing production systems. In meat processing facilities, equipment must withstand constant washdowns, high humidity, and continuous operation, while supporting peripherals for barcode scanning and label printing to ensure full traceability.

At Harbin Dazhong Roulian Group Co. Ltd., a century-old leader in meat processing that has ranked among China's top ten meat producers nationwide, with world-class slaughtering lines and automated equipment, these demands are non-negotiable. To meet stringent reliability, hygiene, and traceability requirements, the company deployed Darveen SPC-9150 Stainless Steel Panel PCs across key production zones—including slaughter, weighing stations, and packaging lines—enabling integrated weigh-to-print labeling and real-time production tracking.

Background: Demanding Operational and Environmental Conditions

Founded in 1913, Harbin Dazhong Roulian Group Co. Ltd. has grown into one of China's most respected meat processing enterprises, combining advanced European-imported slaughtering and low-temperature processing technologies with comprehensive in-house quality control systems. Operating large-scale production lines in a high-

moisture, high-cleanliness environment requires industrial computing platforms that are:

- High-Reliability: Able to run 7×12 hours continuously with exceptional uptime
- Water-Resistant & Corrosion-Proof: To tolerate pressure washdowns and cleaning chemicals
- Hygienic & Durable: Stainless steel SUS304/316 construction suited for food processing environments

To address these needs, Harbin Dazhong evaluated rugged industrial PCs and ultimately selected Darveen's SPC-9150 Stainless Steel Panel PC as the core human-machine interface (HMI) for frontline operations.

The Darveen SPC-9150 Solution

Unlike standard industrial PCs, the 12th Gen Intel® Core™ i SPC-9150 is engineered specifically for wet, corrosive environments typical of food processing facilities:

- IP66-rated stainless steel housing protects internal electronics from spray, washdowns, and contaminants.
- Supports robust M12 I/O connectors for secure, industrial-grade connections with peripherals like barcode scanners and printers.

- High-reliability hardware design ensures stable, continuous operation under heavy workloads.
- Seamless design with an integrated molded back cover provides strong structure, and weld-free edges reduce dirt buildup for easier cleaning.

In Harbin Dazhong's deployment, the SPC-9150 was installed inside a custom stainless steel enclosure at key production stations. The panel PC integrated with:
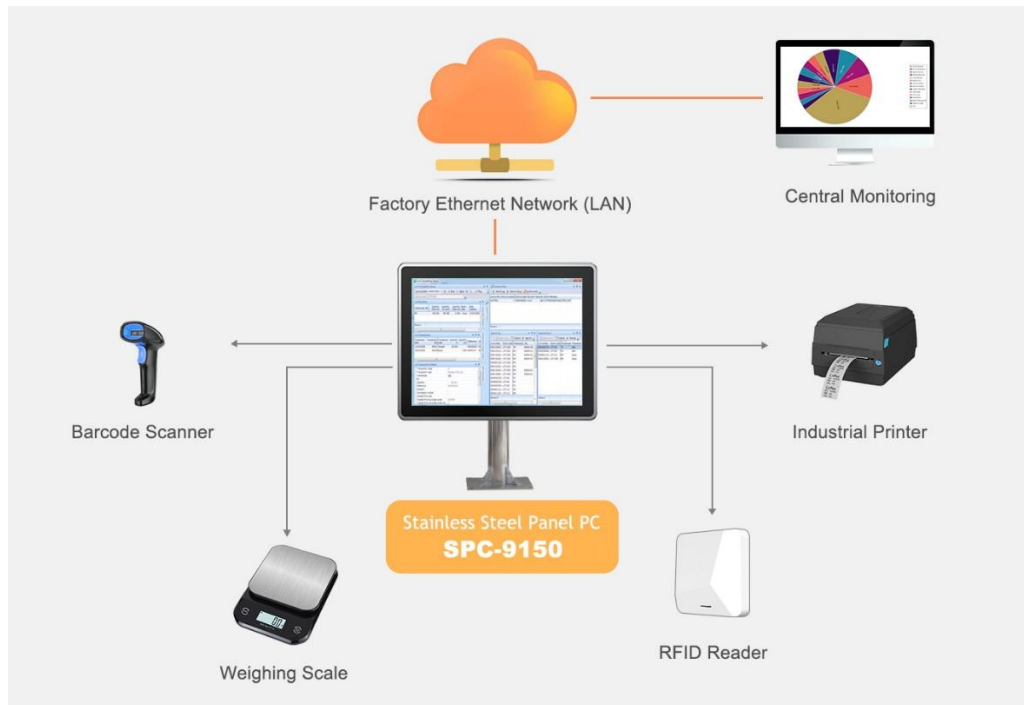
- Industrial weigh scales, mounted within the same enclosure;
- USB barcode scanners, capturing product IDs prior to packaging;
- Industrial printers, outputting traceable QR code labels;
- Serial (COM) interfaces, linking traditional equipment into a modern data workflow;

This tightly integrated setup allows frontline operators to weigh, scan, and print labels in one efficient flow. The combined solution provides real-time traceability, from individual product weight entries to batch record generation.

Reliable Operation in Harsh Conditions

By adopting the Darveen SPC-9150 Stainless Steel Panel PC, Harbin Dazhong successfully established an integrated, traceable production workflow that combines weighing, scanning, and labeling into a single streamlined operation. The solution delivers stable 7x12-hour continuous performance in harsh washdown environments, improves production efficiency at frontline stations, and strengthens

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product traceability through QR code labeling—
supporting higher food safety standards and more
efficient meat processing operations overall.

About Darveen

Established in 2007, Darveen is dedicated to developing rugged
industrial computing solutions tailored to the diverse needs of
vertical industries. Our product portfolio includes vehicle mount
computers, industrial panel PCs, industrial displays, embedded box
computers, and rugged tablets. With nearly two decades of
experience in product design and manufacturing, Darveen's
solutions are widely adopted in smart ports, warehousing and
logistics, and heavy-duty vehicle applications. Riding the Industry
4.0 wave, Darveen is expanding its reach into edge computing,
smart manufacturing, industrial automation, healthcare, and marine
sectors.

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