

Application Story

PC-Based Controller Integrates Billing System for Car Washes in Dubai



The client needed a solution for automated car washes to grasp control of the whole washing process and attend the needs of different types of cars while keeping the financial management in line through remote monitoring.

Overview

NEXCOM's PC-based controller NIFE 200 represents an integral solution to guide three different washing lines in an automated car wash system taking care of the billing system and water usage simultaneously. By employing the NIFE 200 controller, the client can provide a more customized service, increase the washing capacity, eradicate human errors, and better handle day-to-day financial operations through remote monitoring.

Challenges

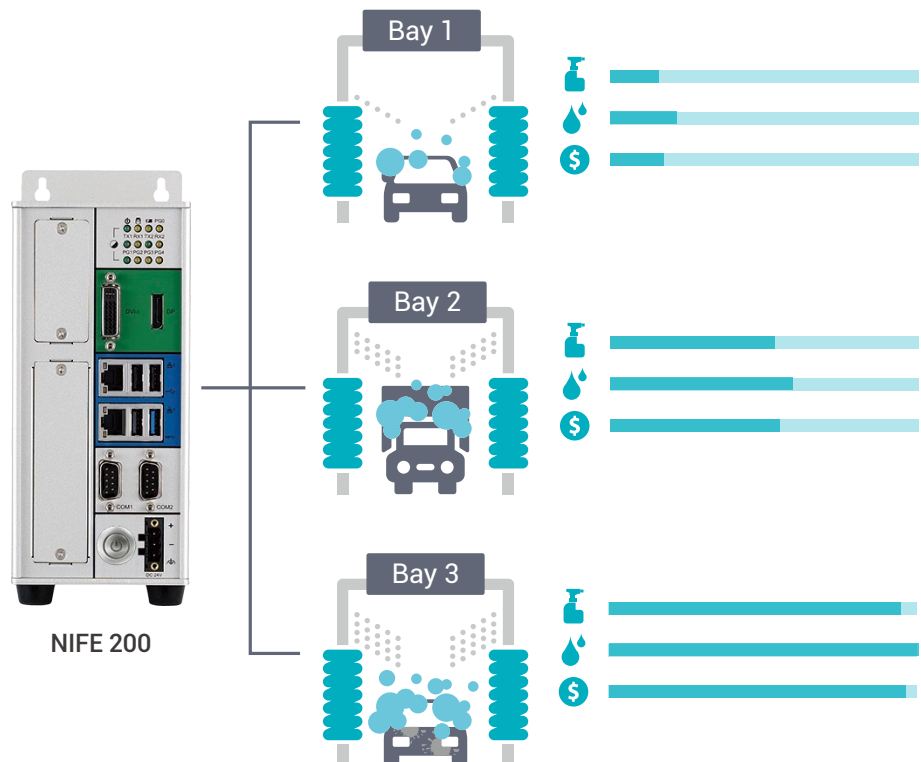
Weather conditions and lifestyle standards determine the success factor of automatic car washes. Even though the predominant dusty heat sets a high demand for this service in smart cities like Dubai, there is still a large amount of manual style washing offerings around the city where water is limited. Personnel are in charge of updating records and writing receipts for customers, slowing down operations for service providers.

In this application, the client needed a solution for automated car washes to grasp control of the whole washing process and attend the needs of different types of cars while keeping the financial management in line through remote monitoring.

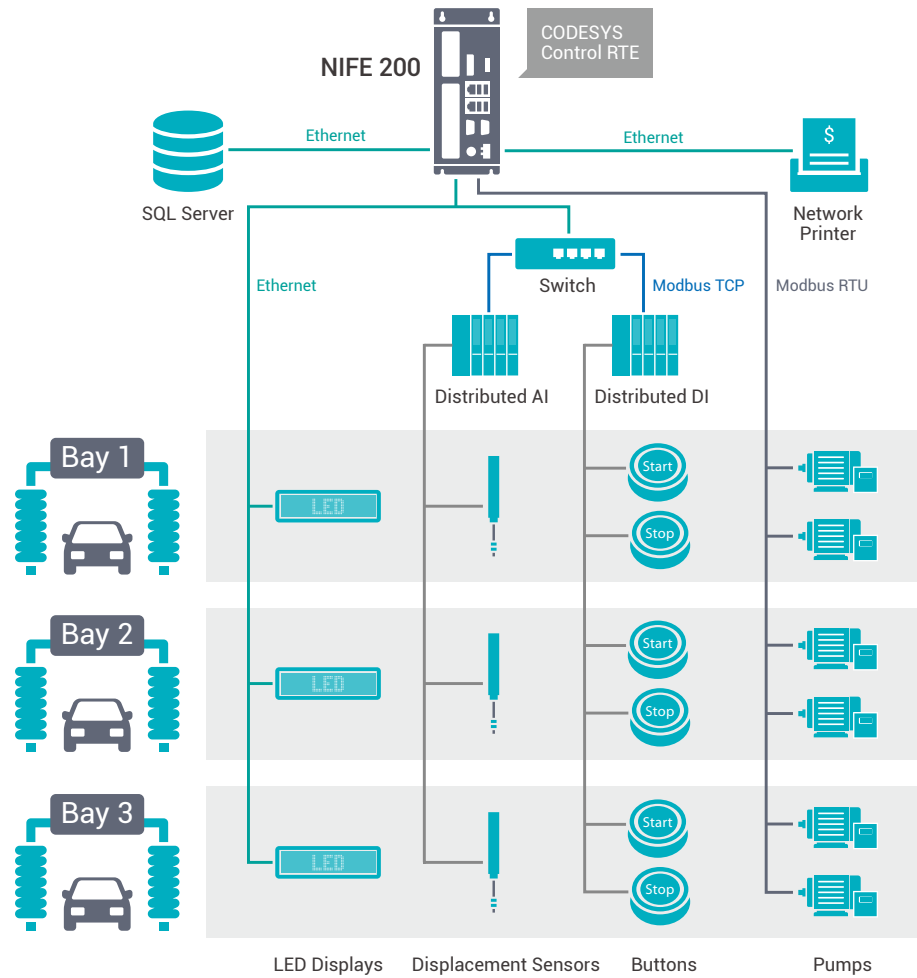
NEXCOM's Solution

The PC-based controller NIFE 200 is used to integrate the operational control of three washing lines and the billing system with SQL databases throughout the entire procedure. First, the operator selects the right program for a vehicle depending on size or dirt condition. Then, the NIFE 200 control system can upload data to SQL databases over internet to facilitate the billing process and print invoices enabling remote monitoring.

During the complete washing process, it simultaneously controls three different car washing machines. The NIFE 200 control system stores a variety of washing programs to use the right amount of chemicals and water for a



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successful result. It receives signals from capacitive displacement sensors to know when the cars advance to activate the pumps from the next stage. From pre-soaking to drying, as well as the several rinse arches in-between, the PC-based controller seamlessly automates the car wash system ensuring a better use of resources, especially given the water scarcity situation that affects the region.

Solution Benefits

The NIFE 200 assists to implement automated car wash systems with financial central monitoring that effortlessly may adapt to future trends. NEXCOM's PC-based controller with CODESYS Control RTE as the Modbus TCP and Modbus RTU controller can be in charge of a myriad of interfaces through all stages of three different washing lines

while utilizing water resources more appropriately. The internet connectivity allows for easy remote monitoring and better billing system through a web-based server to reduce costs and improve labor efficiency with updated records and invoice printing for customers.

Additionally, the PC-based solution gives room for function expansion to enhance the car wash system in case the evolving industry incorporates or replaces washing mechanisms to the existent process. System integrators can benefit from an integral solution that minimizes programming efforts while allowing high flexibility. Featuring CODESYS Control RTE and SQL function block for finance monitoring, the PC-based open architecture enables the NIFE 200 to avoid the limited expandability and poor flexibility that is characteristic of PLCs.



The Intelligent Systems

Founded in 1992, NEXCOM integrates its capabilities and operates six global businesses, which are IoT Automation Solutions, Intelligent Digital Security, Internet of Things, Intelligent Platform & Services, Mobile Computing Solutions, and Network and Communication Solutions. NEXCOM serves its customers worldwide through its subsidiaries in five major industrial countries. Under the IoT megatrend, NEXCOM expands its offerings with solutions in emerging applications including IoT, robot, connected cars, Industry 4.0, and industrial security.

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