



## “Soft” controls for palletization systems

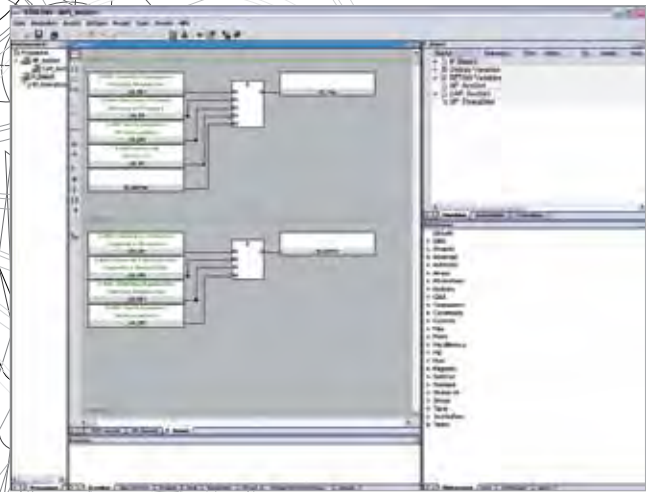
Thanks to the flexibility and the functionality offered by straton, Euroimpianti has developed a new PC-based controller to be used on palletization systems.

Euroimpianti is a well established company which has supplied integrated systems for end line automation under its own brand, Skilled, since 1973.

“In the beginning the palletizing machines available on the market were too complex and not competitive. So we decided to design controllers in-house”, explains Maurizio Calgaro, Automation Technical Manager at Euroimpianti. This choice offered undeniable advantages, above all in terms of cost: “We developed a product that had it all – just what was needed for our fast four axis control application.” But the choice of a completely proprietary approach also created certain problems: “Not being mass produced, our products were not able to achieve the technological maturity that translates into total reliability. Fur-

thermore, before making changes to the system, we had to wait for the costs for those changes to be completely written off.”

When the company decided to update its systems, these factors were taken into full account. “Today, the off-the-shelf solutions on the market have improved considerably: there are now suppliers who can meet our needs. However, after 35 years of experience, we did not wish to give up our project: it is one that has assured us significant market recognition”. Euroimpianti decided to move on to a PC-based architecture, with a real-time (QNX Neutrino) operating system and the Soft Logic straton by COPALP. “In this way we were able to free ourselves of the ties that bound us to particular hardware manufacturers and develop a more reliable and scalable system. Since we are able



to acquire our supplies freely on the market we are able to update our hardware configurations more often than we were capable of before,” Calgaro points out.

The controller uses CANbus as a field bus both for actuations and for the field I/Os. “In the future, we intend to take advantage of EtherCAT in order to eliminate the CANopen controller from the microprocessor board and use Ethernet in the field.

The software porting from the old control to QNX was simple. In six months we were able to finish the work and replicate the old control system on new hardware; from now on we are ready to exploit every opportunity with the open architecture. We also owe our success, in part, to the flexibility of straton: it was truly easy to integrate it into our product,” Calgaro remembers.

Indeed, straton offers a development environment based on the IEC-61131-3 programming standards; and the Run-

time is available for a vast range of operating systems, among which the real-time QNX Neutrino operating system is included.

### **STRATON APPLICATION WITH BINDING IN THE FOOD INDUSTRY**

One of the first projects in which Euroimpianti used the new controller was developed for a Spanish plant in the food sector, where puddings and cake mixes are made. According to the client specifications, the system had to be capable of palletizing a good 50 packages per minute.

Euroimpianti designed a line made up of three robots, a vehicle on rails or RGV (Rail Guided Vehicle) and a supervision and control system that sees to convey the production units interfacing with the bar code readers for the recognition of the single packages. The five CPUs exploit the potential of the binding protocol

– one of the features available with straton – enabling communication between the controllers by way of Ethernet.

“Communicating through the binding enabled us to eliminate certain hardware components that had been necessary before for the realisation of the connections between devices; also, the CPUs are capable of transmitting far more data. And that’s not all: thanks to binding it was possible to put the battery powered RGV in communication with the other units. The binding integrated in straton also works over the Wi-Fi network.”

The customer’s satisfaction with this application was clinched by the level of service offered by COPALP. “For us, the technical support received from COPALP has been decisive. Each time that we have had queries about development, we have received answers immediately. Within one or – at most – two days we have always been able to resolve any issue.”