

Colmobil is attaching an EPC Gen 2 RFID tag to the windshield of each of the 25,000 to 35,000 cars it imports annually, to expedite the processing of those vehicles.

By Claire Swedberg

Feb. 3, 2010—[Colmobil](#), Israel's largest importer of automotive vehicles, is employing an RFID system provided by [BOS](#) to reduce labor and expedite the movement of automobiles as they are brought into the country at two ports. Colmobil imports 25,000 to 35,000 cars each year—specifically, those made by [Mercedes Benz](#), [Mitsubishi Motors](#), [Mitsubishi Fuso](#) and [Hyundai](#)—and sells those vehicles to 1,500 dealerships throughout the nation.

The cars are brought into the Port of Eilat and Port of Ashdod, where they are first stored in each port's bonded open-air storage areas (prior to duty payments) for a month or longer. When Colmobil sells a new vehicle, the duty for that car is paid, and it can then be removed from the port's storage parking lot and shipped to one of the company's pre-delivery inspection (PDI) facilities. At the storage parking lot, each automobile is identified by its vehicle identification number (VIN), printed in text and bar-code form on a sheet of paper glued to the car's rear-left passenger window.

There are several challenges related to this system, however. In order for staff members to locate specific vehicles at one of the ports, they must go through the storage lot, which has as many as 37,000 parking spaces, and often that number of parked vehicles. Employees must locate the paper on the specific car's window to identify that vehicle. In extreme heat conditions, however, the print on that paper has often faded away. Such fading can take place in a matter of weeks, says Gil Katz, Colmobil's CIO, as temperatures can reach 45 degrees Celsius (113 degrees Fahrenheit) outside and 80 degrees Celsius (176 degrees Fahrenheit) inside the vehicle.

With the new system, installed in March 2009, the identification of cars can be accomplished more easily, the company reports. Each new vehicle is permanently fitted with a 3/4-inch by 4-inch EPC Gen 2 [UPM Raflatac](#) passive ultrahigh-frequency (UHF) RFID tag as it is being unloaded from the ship. Colmobil's staff use a handheld device, provided by BOS, that includes an [Intermec](#) CN3 handheld computer coupled with an Intermec IP30 RFID interrogator and a [Motorola](#) Symbol LS2208 bar-code scanner. According to Uzi Parizat, BOS' VP of sales, the system is used to first scan the VIN bar-coded on the paper ID sheet glued to the car's rear-left passenger window, as well as the RFID tag attached to the vehicle's windshield. The scanning links the VIN and the tag's unique ID number in Colmobil's back-end database. When the vehicle is parked in the storage area, the company's workers read the tag again and key in its location code (the parking space's identification number). Data is then transmitted to the Colmobil's [SAP](#) back-end system via a GPRS cellular connection.

When a vehicle is ordered from a customer, Colmobil locates that car on the bonded parking lot by using the VIN in the software to obtain data regarding its location. Workers can then utilize the handheld computer, upon arriving at the lot, to confirm they have the correct car before picking it up. The vehicle is then removed from the bonded lot and transported, via truck, to the PDI location.

As vehicles arrive at one of Colmobil's pre-delivery inspection facilities for final detailing, safety inspections and registration with the motor vehicle license bureau, it is removed from the truck and the RFID label on its windshield is read using a handheld RFID interrogator. The automobile is then parked or moved through the finishing process, and at each activity, the tag is read and information is input into the handheld device, updating that car's status in the back-end system. In that way, Colmobil knows the status of each car, and can provide that information to customers, if necessary.

With the system in place, Katz says, "Location of a new vehicle in the ports is much quicker and easier than before, as well as shipping management and PDI management." While it is too early to determine the rate by which man-hours were reduced using the system, he says, the annual stock taking (inventory count) of vehicles at a PDI or a port storage lot required only four hours of labor, rather than the two days needed for the manual method.

The next phase of the system will enable Colmobil to expedite the movement of vehicles out of the storage lot, which requires official approval by port authorities. When the cars are taken out of the lot on a truck, the driver must provide shipping manifests, customs release forms and port gate passes. All documents must be verified against the VIN by the port gate's staff.

"Traditionally, the verification process required the [port] supervisor to climb on the truck platform and read the VINs from the [paper] sheet," Katz explains, "or the engraved VINs on the vehicle chassis or under the hood." Once this phase of the system is approved by the ports and the system is installed, however, RFID scanners mounted on two 6-meter-tall (20-foot-tall) poles on either side of the exit gate could accomplish much of the work that is still being performed manually. The trucks will drive through the RFID gate, and the tag ID numbers will be read and sent via a cabled connection to the back-end system, which supervisors can then access on their computer, thereby verifying the documents electronically. "This solution is still under construction," Katz says, however, and he cannot predict when it will go live.

Colmobil also offers vehicle maintenance and repair services to car buyers, and RFID technology use is planned at servicing locations as well. In this case, the company wants a system to notify it that a particular automobile has arrived at the servicing center, as well as the identity of that vehicle's owner, so that employees can provide that individual with personalized service—for example, welcoming him or her by name.

Furthermore, Colmobil intends to mount fixed RFID interrogators at the entrances to its service centers. When a vehicle arrives, the ID number encoded to its RFID tag will be read and sent to Colmobil's database, where that number will then be linked to the customer's name. Staff members will see that information on their PCs within the service center. Installation of this system in some service centers may begin next year, Katz says, noting, "Since only new vehicles are tagged, we are waiting for a critical mass of new vehicles to visit the workshop. That is expected to happen in 18 to 24 months."