

RFID Portal for Tracking Custom Windows

Challenge: Every time the customer was loading their product onto the truck they were having to scan them, and they wanted to be able to have autonomy throughout this process since EMP had fitted them with RFID labels prior.

Solution: Create an RFID portal that includes a Zebra FX9600 reader, two standard circular antennas, and the computing power and software to convert from Hexadecimal to ASCII data.

Story: A custom window manufacturing company was looking to expedite and implement a "hands free" approach to tracking their product as it left the warehouse. An RFID portal was suggested as a solution to speed up operations and fully ensure that the correct orders were being loaded onto the delivery trucks. However, the customer already had a custom application running on a PC at the shipping dock that the barcodes were being scanned into meaning the data format would have to be converted. The challenge became taking the RFID data (which is encoded in Hexadecimal) and convert this to the ASCII data so their current application could log it. To make things more fun, you then have to take the ASCII data and keyboard wedge the data into the USB port on the PC. To help facilitate the data conversion, a simple Raspberry Pi was used along with an off the shelf serial to keyboard wedge adapter. Finally pieces were a photo eye to detect the operators



walking the windows past the RFID portal and a stack light to show that the system is powered up and successfully reads the RFID tag. Now the customers can walk their products straight to the truck without complications, sidesteps or misreads to ensure the right product gets delivered to the right location.