Solutions

RFID Portal for Automotive Tool Tracking

Challenge: An automotive manufacturer needed a reliable way to track tools in their parts cribs, as manual check-ins and check-outs were often neglected, leading to inventory management issues.

Solution: The EMP Team developed an RFID portal using Zebra's FX9600 reader and eight antennas, combined with wire mesh to prevent signal reflection. This setup allowed automatic tracking of tools as they moved in and out of the cribs, ensuring accurate inventory management.

Story: A long time customer approached EMP Tech Group with their tool tracking challenge. They needed a solution that could automatically track tools without relying on manual processes. EMP Tech Group's engineering team designed an RFID portal using Zebra's FX9600 reader and eight antennas, divided into two zones to determine whether the tools were entering or exiting the crib. They used wire mesh to prevent signal reflection and ensure accurate reads. The portal included a stack light for status indication and a screen to display tracked items. The system was tested and refined, with custom code written to communicate with the customer's current cloud infrastructure as well as ignore stray RFID tags. The customer will be piloting the solution, providing feedback for further improvements. The final product is a cost-effective, reliable RFID portal that met the customer's needs, showcasing EMP Tech Group's expertise in delivering tailored engineering solutions.







