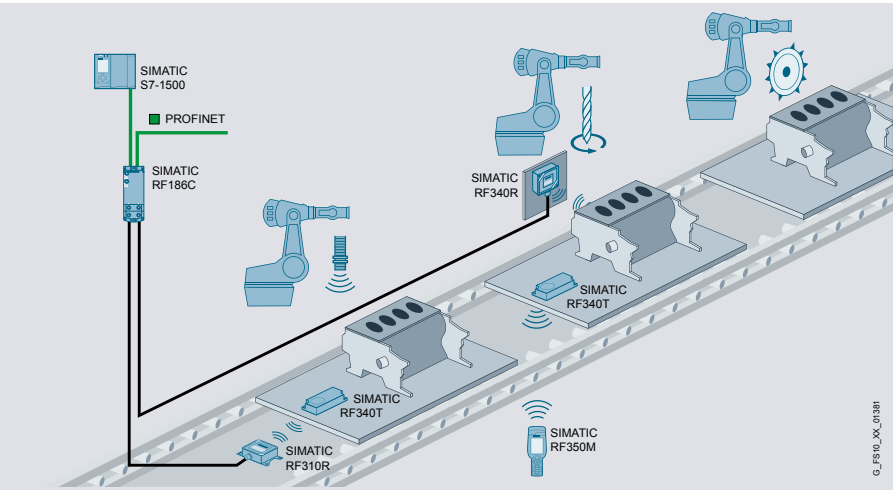
SIEMENS

SIMATIC RF300 USE CASE

Automotive Powertrain – engine manufacturing

Task

Combustion engines are manufactured from many complex individual parts in individual production steps during assembly. Process reliability and product quality are of top priority – at the highest possible cycle rates. With this complexity, complete traceability and quality control is vital, something that can be achieved through automated tool identification via RFID.



Solution

The engine blocks, mounted on metal plates, are transported on a conveyor belt to individual work-stations, where the engines are assembled piece-by-piece. The SIMATIC RF340T tag is attached to the bottom of the workpiece carriers during this process. The compact SIMATIC RF310R reader is integrated into the conveyor line in such a way that it can easily read and write to the transponders attached at the bottom. If the product data is needed to be available directly on the workpiece, the SIMATIC RF335T screw-on transponder can be attached directly to it. In doing so, the data of the entire production order (5000 bytes) is stored on the transponder and the status of the workpiece can be determined at all times at the individual stations - even if there is a fault at host level.

Benefits

- Short processing time for the RFID system thanks to high data rate, reducing cycle times and increasing plant productivity
- No additional data management required in higher-level systems to control production flow
- Decentralized data storage due to high capacity of the transponders
- Production order data can be read by the SIMATIC RF350M mobile handheld reader for maintenance purposes