

## Automotive Case Study

### Manufacturing Execution System For Trim Assembly Line at Jaguar Land Rover

On the introduction of the new F-Type sports convertible from the UK based manufacturer Jaguar Land Rover, Opensoft Systems were approached to enable the automatic execution of build specifications to their manufacturing facility.

Production schedulers would provide a requested build specification for individual vehicles, The bill of materials are then taken stored to a database where priorities queue the schedule for execution to the assembly production lines.

A SCADA system located in the trim assembly production area, receives and manages the schedule. The execution is initiated by a barcode scanner from each production and enables part consumption to be monitored in real-time.

The system then requests and passes the build requirements to each assembly stations PLC. Machine set up instructions are then displayed on an HMI panel at each station for selection by the operator.



Trim assembly components are updated back to the production schedule system which takes account of production units made and component usage. Following completion of the trim assembly the completed units are then transferred for vehicle assembly and final Quality Inspection.



#### Technologies Used

Ladder logic and function blocks for the PLC programming. Simatic Net and WinCC flexible for HMI programming terminals.  
InTouch SCADA software with ActiveX controls. .Net control for component prioritisation & Web Services. SQL Server database with SQL stored procedures for data management.