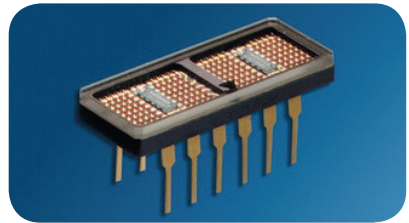


## COMPLEX OBSOLESCENCE MITIGATION WITHIN CIVIL AEROSPACE.

### Problem

Common with a lot of intelligent multi character displays, Osram made a range of their 4 character intelligent hexadecimal display obsolete. Unfortunately this display had been programmed to fly for another 10 years with 8 ship-sets rolling off of the aircraft build line per month.



### Constraints

In addition to the usual form fit and function constraints, especially the available size, which is encountered in any obsolescence mitigation. The application was destined for the fuel system of a civil passenger jet and this required all activities during the design and build to be subject to DO254 process and procedures.

### Solution

The solution was to replace the entire display module which contained two of the obsolete displays. Using a mixture of emulation and layered module design, the Osram display was replicated using over 280 individual LEDs controlled and managed by an FPGA. The solution included power and interface circuitry to enable full compatibility with the original board.

**PROJECT ACTIVITIES**

Problem Analysis

Solution Option Generation

Constraint Analysis

Schematic Generation

Hardware Requirement Specifications

Software Requirement Specifications

Detailed Hardware Design

Software Design

Software Test Bench Generation

Prototype Construction

Bespoke Test Set Design and Construction

Prototype Testing

Customer / End User / FAA liaison

Documentation to DO254 Standards

FAA Approval

Productionisation

Project Management

Production Delivery

Support