



# Case Study

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## OEM – Embedded Computers

### Technical situation

Customer required FIPS140-2 level 3 security for printed circuit assemblies.

Federal Information Processing Standards (FIPS) 140-2 is a publication standard for Cryptographic Modules used to protect sensitive government data in computer and telecommunication systems. FIPS specifies requirements to meet conformance with differing security levels. (U.S. government computer security standards).

FIPS 140-2 Level 3 adds requirements for physical tamper-resistance (making it difficult for attackers to gain access to sensitive information contained in the module).

### Solution

Customer believed the use of molds was the only solution for their application. PRS engineers recommended a “fence & fill” design that would provide superior security features at a fraction of the cost.

In addition, PRS implemented on-site testing at strategic locations throughout WIP to ensure product compliance and high first time yield. Potting compound selected for this design featured superior electrical insulation, thermal conductivity properties and UL non-burning requirements 94V-O. Customer was gratified by PRS’s macro approach to design, cost, delivery and quality.

### Benefits

PRS applies a multi faceted approach to achieve compliance with FIPS 140-2 Level 3. PRS supported this particular project from the initial concept idea thru completion of FIPS by:

- **Design**
- **Component placement**
- **Hardware recommendation & requirements**
- **Material Selection**
- **Engineering Support**

Customer achieved their FIPS validation certificate.