



## PROJECT PROFILE

### VEHICLE-MOUNTED DETECTION EQUIPMENT

#### CLIENT CHALLENGE

Our client develops specialized analytical detection equipment that is sold to governments and agencies around the world. The client foresees a demand for a vehicle-mounted detection system comprised of existing detection products resulting in improvements in functionality and portability. The client required timely New Product Development expertise in several stages of the New Product Development Cycle:

- Concept/Industrial design
- Knowledgeable COTS and Supplier sourcing
- Analysis to support the design
- Design for manufacturing
- Prototype CAD modeling
- Scheduling and Cost Controls
- Prototype build



#### SOLUTION

Palladium was retained for our expertise in analytical detection equipment and the New Product Development field. The following tasks were performed on the way to successful project completion:

- Concept path was quickly determined by a combination of CAD modelling, analysis, and knowledgeable COTS and supplier sourcing for the key components: frame, sheet metal, shock isolation.
- The design effort was supported by concurrent analysis for shock, vibration, and strength.
- Specialized detection equipment suppliers were involved early in the prototype design stage to produce a manufacturable design that also exhibits the required performance.
- Concept CAD Edrawing models, PowerPoint slide shows, Comparison Tables, and Calculations were produced to efficiently convey design information to a design team that was spread over several remote locations (Europe, United States and Canada).

#### PROJECT HIGHLIGHTS

Palladium delivered the project within time and budget constraints due to our :

- Previous Product Development experience and DFMA expertise minimized the development time.
- Knowledgeable COTS and supplier sourcing and experience dealing with OEM manufacturers.
- Careful consideration of backup sources for key components due to the tight schedule vs. delivery lead time risk.
- Use of up to date distance collaboration tools.
- Involvement of customized vehicle retrofits expertise at a key point in the project.

Palladium's work enabled the client to:

- Quickly produce a realistic design evaluation prototype.
- Mitigate design risks by intelligent use of early CAD space claim and simultaneous analysis.
- Provide a well documented path to more detailed design and production model development.