

Timothy J. Grove, P.Eng.

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SUMMARY OF QUALIFICATIONS

Technical Skills:

- 17+ years of electronics enclosure design experience for telecommunications server infrastructure equipment.
- Extensive design experience for various manufacturing processes including, sheet metal, metal extrusion, CNC machined metal, plastic, and metal injection molded parts.
- Parametric feature-based design methodology for MCAD.
- Design of robust enclosures capable to withstand all indoor and outdoor environmental conditions including vibration, shock, EMI/FCC certification, UL/CSA certification, CE, RoHS, and IP68 compliance.
- Thermal and environmental testing, design verification test planning and execution.
- Reading and extracting relevant design information from ECAD schematics and layouts.

Software Skills:

- CAD packages: Solidworks 2021, Solidworks Simulation, Solidworks PhotoWorks Rendering
- Productivity packages: Microsoft Project, Microsoft Office, Jira Project Tracking
- Familiarity with PADS and Altium ECAD software with focus on extracting mechanical design data
- Ability to rapidly learn new tools and software

Management Skills:

- Experience with Project Management methodology based upon PMBOK guidelines.
- Proven experience with managing projects with design, manufacturing, and customers located across multiple continents.
- Multiple project experience with developing project plans including project scope, schedule, resource, quality, and risk management.
- Continual reporting of project status to Executive Management to ensure they are aware of current project status.
- Experience with supervision and guidance of employees for both technical design purposes and multi-disciplinary project management related activities.
- Extensive experience with product BOM and materials procurement management.
- Excellent multi-tasking skills, often being assigned to multiple projects in various management and/or design roles.

Language Skills:

- Native English speaker, Intermediate Mandarin

EDUCATION AND CERTIFICATION

B.Sc. Engineering (Mechanical), University of Saskatchewan, Canada, May 2004

Association of Professional Engineers and Geoscientists of Saskatchewan (Canada), Certified Professional Engineer (P.Eng.) - Registration #13081, December 2011 to Present

Project Management Training, ACM online training, September 2012

Mandarin Language Training, National Taiwan Normal University Mandarin Training Center, September 2019 to Present

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EMPLOYMENT HISTORY

Self Employed

Contract Mechanical Designer (Apr 2020 to Present)

- Providing electronics enclosure design services to customer for use in telecommunications equipment.

Vecima Networks Inc. (2004 to 2019)

Senior Hardware Engineer / Project Manager (2013 to 2019)

- Continuation of all duties from the previous role.
- Creation of mechanical and environmental requirements for all new product developments.
- Worked with Product Architect to create preliminary design concepts and 3D design models using Solidworks and Solidworks PhotoWorks Rendering for use in customer product proposals, and presentations.
- Successfully managed a Commercial Video Distribution Server design project and customer trial with functional teams and stakeholders located across Asia, North America, and Europe.
 - Collaboration with Technical Director and Senior Product Architect for creation and refinement of product requirements in conjunction with Asia based JDM design partner.
 - Monitor JDM partner's design progress and manage project scope changes as additional information arises.
 - Travelled to JDM partner's facility for design verification witness testing by our internal technical team.
 - Supported European customer's evaluation process. When issues arose with integration of the product into their existing systems, managed communications back to JDM partner for investigation and resolution. Kept customer aware of issue resolution status with daily status meetings.
- Mechanical Team Manager in a cross functional team which designed and manufactured a Distributed DOCSIS Remote PHY/MACPHY Hybrid Fiber-Coax (HFC) Access Node, capable of providing customers with 10Gbps downstream data rates.
- Successfully managed the OEM vendor selection and qualification for a low-cost DOCSIS 3.0 mini-CMTS and worked to secure end-customer approval.
- Provided regular reports to senior management to ensure they are aware of the project status, company resource utilization, and risks which may affect the scope, cost, or schedule.
- Lead technical teams to develop and publish internal standards for design and manufacturing.
- Experience with international travel for both vendor and customer facing discussions.

Design Engineer - Mechanical (2004 to 2013)

- Primary Engineer responsible for the full mechanical design of telecommunications enclosures, from initial planning stages to completion of design verification testing with a focus on product quality, price, and reliability.
- Create mechanical design flow and scheduling for the project manager and provide regular status updates to ensure on-schedule performance.
- Design of electronics enclosures using multiple manufacturing methods including sheet metal, metal extrusions, CNC machined metal, die-cast metal, and plastic parts.
- Ensure design compliance to all environmental conditions/requirements (temperature, vibration, shock, EMI/FCC certification, UL/CSA certification, CE, RoHS).
- Selection of electro-mechanical components and integration into system design (fans, heatsinks, etc.).
- Creation and maintenance of mechanical 3D & 2D drawings and BOM using Solidworks.
- Completion of mechanical analysis of designs (thermal, stress).
- Development of test processes for validation of mechanical requirements.
- Provided guidance to junior employees on design.
- Worked in a multi-discipline environment directly with the Electrical Engineering team to design the PCB board size and component position layout, as well as PCB connector selection.