

# MATTHEW VERNON

See my portfolio at [www.vernshome.net/portfolio](http://www.vernshome.net/portfolio)

55 E Long Lake Rd #514  
Troy, MI 48085  
903-445-3928  
[matthew@vernshome.net](mailto:matthew@vernshome.net)

Self motivated leader who develops people and processes as well as products. A lifelong learner who finds fulfillment in guiding others through teaching and coaching.

## Highlights

- Manages a team of 4 engineers
- Manages multiple projects including scope, specification, and timeline
- Develops analog and digital hardware, firmware, PC software, procedures, test equipment
- Member of Vistage key executive peer group (2015-Present)

## Experience

**Apollo America**, Auburn Hills MI **2012-Present**

*Embedded Engineering Manager* 2016-Present

Manages electronics and firmware engineers in product development team. Responsible for personnel including hiring, performance, and training. Assigns work and manages projects including reporting status to upper management. Trains and coaches team members for both technical design skills and personal development. Develops processes and champions best practices including development of engineering release and change processes. Writes capital requests for equipment and manages contract designers.

Technical expert for smoke detection algorithms and RF transceiver design. Facilitated team meetings. Led efforts to implement bug tracking and shared data through JIRA and Confluence.

*Design Engineer* 2012-2016

Designed fire detection components including smoke detectors, notification appliances, control panel components, battery backup, wireless sensors, and protocol simulation. Responsible for full hardware design including circuit design, component selection, PCB layout, and embedded firmware. Products were designed to meet applicable UL standards and NFPA 72.

Championed process improvements including version control of engineering documents and standard design libraries. Co-led the first multi-year development project.

Key successes include:

- Personal mentor for operations manager and technical mentor for interns
- Technical leader on most projects and project leader on one project
- Designed life safety products including smoke and carbon monoxide detectors
- Participated in team training with executive management and participated in management decisions such as personnel selection and capital purchases

**ENQ**, Walnut CA (1-month contract) **2015**  
Developed CloudFormation templates for Amazon Web Services (AWS) to allow rapid web site deployment.

**ProdataKey**, South Jordan UT (6-month contract) **2014**  
Designed circuit boards for 1 door and 8 door access controllers.

**RH Systems**, Albuquerque NM **2009-2012**

*Engineer*

Performed design, troubleshooting, and calibration of humidity measurement and calibration equipment. Responsible for new product development and maintenance of legacy products. Provided technical support to customers for products and general humidity calibration problems. Responsible for calibration laboratory including maintenance of reference standards and documentation for traceability. Performed research related to humidity measurement and control, and developed product specifications.

Design work includes precision analog circuits for measurement, embedded processor hardware and software, PCB layout, control systems, and PC applications. Designed, built, and tuned process control systems for temperature, pressure, flow, and fluid levels. Designed mechanical and electrical refrigeration systems for precise low temperature control.

Key successes include:

- Designed hardware and firmware for the G9, the most accurate and versatile commercially available humidity calibration system in the world
- Implemented bug fixes and updates on every product in current production
- Detected and fixed a bug in the C compiler that was causing random crashes in a large custom calibration system
- Developed business cases and product specifications for two products in development

**Veris Industries**, Portland OR **2004 – 2009**

*Design Engineer, Design Engineer II*

Designed and updated products for the Environmental Sensors business unit. Designs involved product specifications, analog and digital hardware, firmware in C and assembly, parts selection, schematic capture and simulation, enclosure design, and manufacturing process.

Performed troubleshooting and cost improvements on existing designs, manufacturing improvements, and product qualification testing. Duties include test set design and manufacturing process including documentation and troubleshooting.

Administrator for MySQL server for tracking product information, version control using Subversion, and PHP web pages for production metrics. Performed extensive research in humidity measurement and calibration. Developed calibration management program for lab

standards including procedures, calibration tracking, documentation, and uncertainty analysis.

Key successes include:

- Redesigned CO2 platform to reduce parts cost and labor cost, reduce manufacturing time, improve performance, and improve user interface
- Designed economy CO2, humidity, and temperature sensors for low cost markets
- Outfitted metrology lab and designed lab procedures and quality system based on ISO17025
- Led development of software coding standard to improve software quality and maintainability
- Named on two US patents and one pending patent application

## Education

HALMA Management Development Programme (Fall 2014)

Introduction to Artificial Intelligence, Stanford (Fall 2011)

M.S. Level Electrical Engineering Courses, University of Texas at Arlington (2004-2007)

B.S. Engineering (EE and CE), ABET Accredited, Minor in Mathematics (2003)

LeTourneau University, Longview, TX

**Independent Projects:** Wrote free apps for Android to perform metrology calculations (<http://www.vernshome.net/software>).