

Hunter Browning

Electrical Hardware Engineer | Low-Noise Mixed-Signal | Instrumentation | V&V

Revision for use on

Hxntyr.com

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R&D engineer with experience designing embedded mixed-signal PCBs for optoelectronic metrology tools, low-noise analog systems, DAQ integration, and prototype debug. Additional high-reliability aerospace experience supporting ECN workflows, qualification-impact analysis, requirements closure, technical substantiation, and configuration-controlled processes.

Professional Experience

Honeywell Aerospace – Engines & Power Systems // Electrical Engineer Oct. 2025 – Oct. 2026

Completed engineering change deliverables for obsolescence-driven updates to high-reliability hardware across legacy commercial and military programs.

- Acted as a product engineer for component/assembly upgrades, owned the process through formal ECN/redline workflows, and maintained traceability/configuration integrity in Siemens TeamCenter.
- Performed qualification-impact and worst-case analyses for obsolescence-driven component changes, including digital timing, thermal and vibration test requirements, and alignment of drawings, BOMs, procedures, requirements, and substantiation records.
- Coordinated requirements and verification closure using JIRA and IBM DOORS, improving review readiness and reducing rework for update cycles.

KLA – MicroSense R&D // Hardware Design Engineer Feb. 2024 – Sep. 2025

Designed custom mixed-signal electronics for optoelectronic wafer-metrology and nanotopography instruments.

- Designed and released 12+ PCBs, routinely owning component selection, schematic capture, PCB layout, sourcing, and electrical architecture from sensor interface through computer connection.
- Developed low-noise photodetector, signal-conditioning, filtering, interface, and NI data-acquisition hardware while balancing analog performance, signal integrity, thermal management, enclosure constraints, manufacturability, and serviceability.
- Authored verification test plans and resolved 50+ prototype issues using circuit simulation and board-level measurements across analog, digital, power, and interconnect domains.

Education

Northern Arizona University – BSc. Computer Hardware Engineering Dec. 2023

- IEEE Chapter President – Led technical workshops, hackathons, industry events, and field trips
- Lab Equipment Manager – Maintained and repaired test equipment, 3D printers, and lab inventory
- Teaching Assistant – Mentored 15+ scrum teams on multidiscipline engineering projects

Georgia Military College – ASc. Mathematics Dec. 2017

- Peer Tutor – Math, physics, chemistry

Skills

- Analog/PCB – TIAs, instrumentation amps, active filters, ADC interfaces, shielding, EMI/ESD, SI/PI
- Test/V&V – SPICE, oscilloscope, logic analyzer, DMM, function generator, board bring-up, solder/rework, failure isolation
- Tools/Process – Allegro X, KiCad, PSpice, LTSpice, SolidWorks, DFM/DFX, TeamCenter, JIRA, DOORS
- DAQ/Embedded – NI DAQ/DIO, SPI, I2C, JTAG, USB, RS-485/422; C/C++, Python, MATLAB

Expanded Professional Experience

Honeywell Aerospace – Engines & Power Systems // Electrical Engineer Oct. 2025 – Oct. 2026

- White papers and substantiation for flight-critical and special-interest hardware changes, including ISA changes, MIL-STD screening, radiation-hard package requirements, conformal coating, memory timing, and related component changes.
- ECNs for direct hardware changes and component viability, including top-level assembly configuration/revision control, EBOM/PDM specifications, and assembly-procedure callouts.
- Qualification and test procedures for modified flight hardware under representative electrical loading and support for FAA/ODA-related substantiation activities.

KLA – MicroSense R&D // Hardware Design Engineer Feb. 2024 – Sep. 2025

- MCAD for wafer-handling hardware, MOKE-system revisions, PCB and cable mounting, and prototype assemblies; produced ANSI drawings, exploded views, and PDM-aligned documentation.
- Assembly BOM management, integration, testing, pneumatic-system maintenance, and cross-domain troubleshooting.
- Researched materials and coatings for use in corrosive or chemically aggressive environments.
- Developed a Python/OCR workflow to identify ~1,500 inventory items and compile supplier information into a searchable spreadsheet.

Northern Arizona University – CEIAS // [Lab Equipment Manager](#) • Paid c. 2020 – 2022

- Diagnosed and repaired test equipment and maintained CNC and 3D-printing equipment.
- Procured components and equipment for labs, upper-division projects, and senior capstones.
- Provided pre-review and hands-on support to multidisciplinary project teams, filling integration skill gaps through soldering, assembly, MCAD, chassis fabrication, and related workshop work.
- Developed MATLAB tools for project simulation and numerical analysis, including computationally intensive or parallelized analyses when required.

Northern Arizona University – CEIAS // Teaching Assistant • Paid c. 2021 – 2022

- Grading, exam oversight, project reviews, and technical mentoring for undergraduate circuit-analysis and project-based engineering courses
- Acted as simulated client for product projects using MSP430/Arduino/Raspberry Pi controllers
- Reviewed reports and presentations and guided teams through integration, debugging, and demonstrations.

Georgia Military College – Tutor • Paid c. 2017

- Tutored mathematics, physics, chemistry, and statistics; used Python, MATLAB, and R for numerical analysis and presentation of technical data.

IEEE – [President](#) • Unpaid c. 2019 – 2021

- Led hands-on workshops, hackathons, inter-university collaborations, and industry activities.
- Collaboration with [FRAU](#) on a CubeSat experiment investigating thermal and ionizing-radiation effects on memory technologies including MRAM.

Additional Technical Experience

- Created VB scripts/macros for Microsoft Office software
- Undergraduate mechanical engineering coursework through 2018/19
- Webdev for a database driven web-app under Inedo LLC using C#, ASP.NET, and MSSQL