

Senior Hardware Design Engineer

POSITION SUMMARY	
Title	Senior Hardware Design Engineer
Division	R&D
Location	Montreal or Vancouver, Canada
Industry	Electronic Test and Measurement Equipment
Employment Type	Full-Time
Experience	Senior Level

COMPANY OVERVIEW

Founded in 2012, **Introspect Technology** designs and manufactures innovative test and measurement equipment for high-speed digital applications. Whether it is the next augmented reality headset or the level-4 autonomy engine in a mobility solution, our award-winning tools are used to develop, test, and manufacture next-generation products. In short, we help the leading global technology companies **make tomorrow's technology today's possibility**.

WHY INTROSPECT

DRIVE TOMORROW'S TECHNOLOGY

At Introspect, we're solving the most difficult problems encountered in electrical engineering with a passionate team that is inventing the world's most innovative test instruments. You will have the opportunity to create state-of-the-art test and measurement equipment — tools which will empower engineers to produce their finest work. Not only will you make a meaningful difference in our customers' careers, but you'll also impact the lives of people around the world with work that propels global innovation forward.

COLLABORATE WITH DRIVEN COLLEAGUES

You will work with a team of diverse and intelligent colleagues as well as with customers at the top technology companies in the world. At Introspect, you'll gain a rich, multi-disciplinary experience with colleagues and mentors committed to helping you learn and achieve your career goals.

PURSUE YOUR PASSIONS

We'll provide the support you need to do what you love and help you pursue a career which aligns with your values, passions, and aspirations. We also offer a competitive employee benefits package that includes medical and dental coverage. Join us to achieve your maximum potential, produce the best work of your career, and deliver meaningful value to customers.

JOB DESCRIPTION

As the company is entering new markets and expanding its portfolio of products, Introspect Technology is seeking an experienced **Senior Hardware Design Engineer** to join the R&D team in Montreal or Vancouver.

As the Senior Hardware Design Engineer, you will lead the design of advanced hardware system PCBs from concept to schematic and layout, with a focus on microwave and high-speed signal processing and communications functions. You will interface with our ASIC designers, DSP engineers, and software engineers to identify analog and digital hardware requirements. You will design printed circuit boards containing the latest high-speed FPGAs, ASICs, high bandwidth memories, and high-speed interfaces up to 112 Gbps.

This position offers a unique opportunity to be on the forefront of high-speed hardware technology and to explore advanced solutions for highly complex mixed-signal and mixed-domain systems. The position also offers the opportunity to serve leading edge technologies such as MIPI, PCI Express, USB, HDMI, DisplayPort, DDR, and 100G/400G telecommunications standards. You will gain a rich, multi-disciplinary experience in electronic design, mechanical design, thermal design, and microwave simulation.

The ideal candidate is a driven, self-motivated, and highly cooperative top performer who thrives in a flexible continuous-improvement environment. The ideal candidate also possesses characters of good judgment, great communication, and effective leadership. He/she is very helpful to his/her peers.

RESPONSIBILITIES

- Become a key player in the development of all Introspect's hardware products
- Architect and design innovative analog solutions for voltage control, digitization, and synthesis
- Architect and design highly integrated power delivery networks, including DC/DC converters, LDOs, and PMICs
- Architect and design high-speed memory interfaces, microcontroller systems, and analog/RF systems
- Enable 3D field simulation of key high-speed hardware building blocks and provide guidelines for layout and placement of sensitive circuits
- Contribute to product characterization plans and test plans
- Contribute to product documentation and interface with the field applications engineers to support all Introspect hardware products

QUALIFICATIONS

- Minimum of 5 years of relevant experience in high-speed PCB design methodology with emphasis on signal integrity
- Minimum Bachelor's degree in electrical engineering
- Experience with system-level design including circuit design, system bring-up, integration, and debug
- Experience in mixed-signal board level design
- Experience with DC/DC switchers, LDOs, and PMICs
- Experience with 3D simulation of high-speed digital trace geometries
- Knowledge of modern FPGA architectures and their associated design techniques
- Experience with Cadence and Altium design tools
- Experience with ANSYS HFSS is an asset
- Experience with interfaces such as XAUI, PCIe, DDR4, USB3, I2C, and SPI
- Experience with high-speed test equipment such as oscilloscopes, VNAs, bit error rate testers, and AWGs
- Excellent written and verbal communication skills

APPLICATION PROCESS

Please email your resume to careers@introspect.ca with the subject line "AD-F015E-E-25006 – Senior Hardware Design Engineer". **Applications will be considered on a rolling basis.**