



Example of Circuit Design Engineer Job Description

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Our company is hiring for a circuit design engineer. Please review the list of responsibilities and qualifications. While this is our ideal list, we will consider candidates that do not necessarily have all of the qualifications, but have sufficient experience and talent.

Responsibilities for circuit design engineer

- Technical lead for the development and implementation of high speed interfaces and analog circuits, mainly focus on the development of high speed clocking circuits, such as PLL/DLL, phase interpolator, high speed clock driver and receiver, transmission line
- Hands-on experience taking creative integrated circuit designs at data rates of 25Gbps and higher from concept through silicon characterization
- Work with layout engineers by providing detailed floorplan and guidance for matching and high-speed routings
- Design, implement, and simulate the functionality and performance of sigma delta (delta sigma) analog-to-digital converters (ADCs), including the modulator and digital decimation filter
- Design, implement, and simulate the functionality and performance of other various low power high resolution analog circuits
- Design, implement, and simulate the functionality and performance of digital control circuitry, such as SPI and I2C with proper timing analysis and methodology of physical development
- Integrate the analog and digital IPs, and run simulations to ensure the functionality and performance
- Define and drive the overall Mixed Signal ASIC and system architecture requirements for interface and peripheral IP
- Work with and provide direction to the Chip and IP verification teams to develop, review, and approve pre- and post silicon validation/test plans

associated tradeoff

Qualifications for circuit design engineer

- Experience with circuit design and worst-case circuit analysis / simulation
- Experience using schematic-capture tools and circuit simulation tools
- Familiarity with Electromagnetic Compatibility issues associated with board layout and circuit design
- Experience with thermal constraints of circuit design and fundamentals of heat transfer
- Proficient in both analytical skills and hands-on work
- Familiarity with electronics manufacturing technologies (at the board level)