

# Tech Staff Engineer-ASIC Design



## Tech Staff Engineer-ASIC Design

Microchip Technology Inc. · Roseville, CA

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Posted by

**Shawn Taylor**

Associate Director at Microchip Technology

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### Company Description

Microchip Technology Inc. is a leading provider of embedded control applications. Our product portfolio comprises general purpose and specialized 8-bit, 16-bit, and 32-bit microcontrollers, 32-bit microprocessors, field-programmable gate array (FPGA) products, a broad spectrum of high-performance linear, mixed-signal, power management, thermal management, radio frequency (RF), timing, safety, security, wired connectivity and wireless connectivity devices, as well as serial Electrically Erasable Programmable Read Only Memory (EEPROM), Serial Flash memories, Parallel Flash memories, and serial Static Random Access Memory (SRAM). We also license Flash-IP solutions that are incorporated in a broad range of products.

### Job Description

Microchip offers a comprehensive portfolio of semiconductor and system solutions for data center, communications, aerospace and defense, and industrial markets. Microchip's *Data Center Solutions Business Unit (DCS)* offers industry leading performance, reliability, and security for Smart Storage Controllers, RAID Controllers, SAS/SATA IO Controllers, SAS Expanders, PCIe Switches, NVME SSD Controllers, and Memory Controllers.

As a **Technical Staff ASIC Design Engineer** in the Microchip Data Center Solutions group, you will get hands-on experience developing our next generation of storage and memory controller SOC products. This will involve taking products from initial concept to production form. Throughout you will work beside experienced engineers and be exposed to Microchip's Best-In-Class engineering practices. Working side-by-side with some of the brightest minds and most innovative people in the industry, you won't just fill a position, you will be given an opportunity to work on a team where your contributions matter.

Are you passionate about security and protecting customer data? MCHP is looking for an experienced **Technical Staff ASIC Design Engineer** with a background in security and cryptography who can work closely with internal and external customers and the engineering teams to lead the security IP of our next generation of storage and memory controller SOC's. The right candidate will take a leadership role in understanding security issues and threats for storage and memory compute SOC's. The candidate must be able to thrive in high pressure situations, drive engineering teams to take the right actions to mitigate security risk, know when to escalate and seek guidance and have a passion for investigative problem solving. The successful candidate will have a good mix of deep technical knowledge and a demonstrated background in ASICs, SOC's, and security as well as strong leadership.

You will be responsible to lead the security IP development team including design, verification, emulation, and/or validation of SOC's. The role will also include analyzing threat and attack models, staying up to date in industry trends in security and cryptography, establishing long term roadmaps for DCS products as well as establishing best in-class practices for development and manufacturing that meet our security requirements to safeguard our customers data. You will be challenged and encouraged to discover the power of innovation. Microchip fosters continuous learning in a challenging and rewarding environment. If this sounds like the kind of environment you'd like to participate in, we'd like to hear from you!

### Job Requirements

#### Job Responsibilities May Include Any Of The Following

- Learning and dynamically applying knowledge of the SoC, security, and cryptography
- Working with architects to define and document the requirements, architecture, and feature set
- Defining requirements for ASIC design, verification, and post-silicon validation test
- Analyzing, selecting, and configuring third party IP to meet our requirements
- Technical leader for security IP design and verification team
- Supporting internal and external customers as key security lead
- Cross functional technical leadership to engineering teams
- Supporting Emulation and debug of the IP and solution
- Supporting Post-silicon integration, bring-up, and validation

### Job Qualifications

- Bachelor's degree in Electrical or Computer Engineering
- 12+ years of relevant industry experience or a Master's degree in Electrical or Computer Engineering
- Experience with security and cryptography (DICE + RIoT security architectures, AES, SHA)
- Experience leading ASIC/SOC IP development
- Understanding of CPU, memory architectures, and embedded FW
- Strong programming/scripting skills
- Excellent analytical, communication (written and verbal), and documentation skills
- Excellent problem solving and debugging skills
- Experience with Verilog/System Verilog and/or VHDL
- Experience with all aspects of the SOC/ASIC design, verification, and implementation flow
- Experience with system buses such as AXI/AHB/APB is an asset
- Experience with RISC-V and/or MIPS CPUs is an asset