



## Senior Staff Engineer System Architecture

### Job description

As a Senior member in WLAN systems team you will play a key role spanning from development and implementation hardware accurate reference model for WLAN PHY baseband processing in pre-Silicon phase to PHY-Firmware bring-up in post Si phase.

Your key responsibilities in Pre-Si design phase would be:

- a. Design, analysis, development & maintenance of WLAN Physical layer reference model in C/C++, System C and Matlab
- b. Identify post-Si bring-up issues and articulate them into improvements in PHY layer design
- c. Use case definition and generation of reference vectors for pre-SiRTL verification of the PHY blocks and working with the PHY design team to complete design verification.
- d. Collaborating with RF and Analog design teams in creation of the specs of the RF and modelling it in the simulation environment.
- e. Working with various Cross functional teams like MAC systems, Firmware development, Hardware board design teams, RF design teams to define, document the interfaces to PHY layer and model them in reference design to enable verification.

In Post- Silicon phase, your core responsibilities would involve main tasks:

- a. Functional validation of WLAN PHY and its interfaces on simulation platform
- b. Hands on silicon bring-up and validation with characterization over PVT to meet KPI's in the datasheet in the test/productional environment.
- c. Debugging and solving cross layer customer issues – working across boundaries of WLAN PHY, MAC, RF and board – while staying focused on the underlying problem.

### Profile

- Solid knowledge of Communication Theory /Signal processing concept/Wireless Communication and ability to apply these concepts to analyze and solve system level issues.
- Knowledge of PHY layer blocks like Carrier detection, Timing and frequency synchronization, AGC, filters, demodulators, tracking loops, decoders and their practical implementations in a wireless/wireline modem
- Good understanding of RF impairments and system level understanding of RF architectures
- Hands on Post-silicon experience of bring-up of chips with familiarity of typical lab equipment like Spectrum analyzer, signal generators and general lab automation
- Hands on experience of programming in Matlab/C fixed point models is essential
- Good debugging skills in C, using gdb, analyzing crashes using stack trace are essential
- Familiarity with IEEE 802.11/11ax Communication system receiver& amp transmitter architecture and algorithm design
- Knowledge of C++/Tcl/Python/System C and HLS tools would be plus
- Capability of independent research and working with new technologies is required

### At a glance

Location: **Hsinchu (Taiwan)**  
Job ID: **342525**  
Start date: **as soon as possible**  
Entry level: **3-5 years**  
Type: **Full time**  
Contract: **Permanent**

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- Ability to work with large, global, cross functional team
- Good communication and presentation skills.

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