



JOB DESCRIPTION – Principal Engineer – RF HW
Location: Rolling Meadows, IL

Date: July 2021

Scope of Responsibilities & Position Expectations
<p>Cambium Networks is seeking an experienced and motivated Principal Engineer who is interested in contributing to the success of an exciting and fast-moving company. The candidate would have a passion for developing board-level analog and RF hardware related to wireless communications systems. The candidate should be experienced and interested in the entire hardware design cycle, from initial concept to final testing.</p> <p>Key Responsibilities:</p> <ul style="list-style-type: none"> • Technical leadership. <ul style="list-style-type: none"> - Manage technical development. - Develop man-hour estimates for feature work. - Help motivate project staff, mentor junior engineers, and actively seek out ways to help team members. • System Engineering <ul style="list-style-type: none"> - Drive product and feature requirements, architecture, design, and test. - Lead product and feature development, primarily in the embedded communications space. - Development of technology roadmaps. • Technical development <ul style="list-style-type: none"> - Lead the development of RF components and subsystems and contribute to development of wireless broadband systems including architecture development, requirements management, design/analysis, integration, and test. - Design knowledge of Radio Frequency transmitters, receivers, synthesizers, duplex/diplex filters and related RF circuits/systems - Create supporting technical documents and test procedures
Knowledge/ Skill Requirement
<p>Required Skills:</p> <ul style="list-style-type: none"> - Hands on experience on multiple air interfaces standards for wireless communications: <ul style="list-style-type: none"> - TDD/FDD - One of cellular standards: 5G or 4G or 3G or similar



- TX and RX line up analysis and calculation
- Hands on experience with RF de-sense for both RX and TX
- Design experience with some of the following:
 - RF low noise amplifier (LNA)
 - RF power amplifier (PA)
 - RF frequency synthesizer analysis / design (PLLs)
 - RF impedance matching (Smith chart)
 - RF filter design (lumped element and/or distributed)
 - RF modeling of sub-circuits and/or full system cascade analysis using ADS
 - Interfacing with microcontrollers (I2C, SPI, UART)
 - Circuit Design with high-speed A/D and D/A converters (serial / parallel)
 - High speed printed circuit board techniques.
 - Experience with at least one schematic capture / PCB layout package such as Mentor Graphics and/or Cadence
 - ESD protection for RF circuits

Desired Skills:

- Experience selecting, specifying, and ordering RF components
- Experience managing a product through FCC compliance and/or type acceptance testing
- Experience developing automated testing suites to verify hardware performance
- Programming experience (C / C++, Labview, HPVVEE, Python, Matlab, VHDL / Verilog, or others)
- Experience ordering PCBs and working with contract manufacturers
- Experience in wireless communications industry (cellular and/or software-defined radio experience a big plus)
- Experience with OFDM digital modulation schemes
- Ability to develop trouble shooting guides and to effectively train factory technicians
- Proficient at utilizing simulations tools such as Agilent ADS and Eagleware
- Experience with Agilent and Rhode & Schwarz RF test equipment

Additional Job Requirements:

- BS or MS in Electrical Engineering
- Minimum of 7-10 years of industry experience developing real-world products or systems
- Willingness / ability to travel occasionally for Factory visits / Customer visits / Supplier Visits
- Self-motivated personality and ability to work independently as well as on a team
- Ability to multi-task between two or more projects.