Position: RF Antenna System Engineer
Location: Harwell Campus, Oxford

Satraka is on a mission to connect the unconnected and serve the underserved with its innovative, cutting-edge tracking- and multi-beam antenna technology, providing broadband internet connections anywhere, anytime via 4G/5G-based terrestrial network (TN) and satellite-based non-terrestrial network (NTN).

Antenna is an exciting and challenging subject right at the core of all wireless telecommunication systems. This is particularly true in nascent, yet fast-growing high-data-rate broadband internet services, where both antenna performance, reliability and costs are put to the test.

Based at Harwell Science and Innovation Campus - the UK's Space Cluster, Satraka enjoys a highly dynamic and exciting environment and access to a range of world-class facilities & expertise such as RAL Space, Science and Technology Facilities Council (STFC) and Satellite Applications Catapult.

We are seeking a highly skilled and motivated RF Antenna System Engineer to join our dynamic engineering team. In this role, you will be responsible for the design, development, and testing of RF systems for a range of advanced tracking antennas. This includes design and hands-on work on various type of antennas, feed systems, filters, front-end components such as low noise blocks (LNBs) and block upconverters (BUCs), software defined radios, modems as well as related subjects such as link budget and radio wave propagations. You will collaborate with cross-functional teams across RF, embedded systems, mechanical, software coding and business development to deliver robust, optimized, and reliable user terminals and tracking antenna solutions.

Main Duties

- Define system-level and sub-system-level requirements; perform performance analyses including link budgets, G/T, and EIRP
- Define and qualify system components and interfaces, including telecom 4G/5G radios, satellite LNAs, and BUCs
- Integrate and test RF systems within tracking antennas and user terminals
- Optimize system-level Input/Output performance (IOPs) for real-time data communication and control
- Collaborate with hardware and software teams to ensure overall system performance, reliability, and integration
- Conduct lab and field testing of RF and embedded systems using RF test equipment (e.g., VNAs, spectrum analyzers, signal generators)
- Work closely with antenna and mechanical engineering teams to develop solutions for network acquisition, tracking, antenna control, and multi-network management
- Lead the full product development lifecycle: from system requirements and software architecture to embedded system design, integration, testing, optimization, and delivery

- Prepare detailed technical documentation, including design specifications, performance analysis, integration procedures, and test reports
- Support Business Development with technical expertise during proposal preparation and customer engagements
- Interpret and negotiate technical requirements with customers; define feasible solutions and perform trade-off analyses
- Manage work schedules, resources, and technical risks to ensure high-quality, on-time, and on-budget delivery
- Coordinate closely with Project Managers to ensure successful project completion

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Skills and Experience

- Degree in Physics, Electronic Engineering, Computer Engineering, or a related field
- Strong knowledge of RF, radio, and communication systems
- Hands-on experience designing RF systems with LNAs, BUCs, filters, and duplexers
- Proficient in link budget calculations and system performance analysis (G/T, EIRP, SNR, etc.)
- Practical experience with satellite systems, 4G/5G radios, tracking antennas, and network integration
- Proficient with RF simulation tools such as CST, HFSS
- Familiar with EMC/EMI compliance and relevant regulatory standards
- Understanding of Software Defined Radio (SDR) platforms like GNU Radio or USRP
- Knowledge of digital signal processing (DSP) techniques for modulation, filtering, and encoding
- Experinces in phased array and electronically steered antenna (ESA) systems
- Skilled in full product lifecycle development from requirements to integration, testing, and delivery
- Confident in system-level debugging and root cause analysis across hardware and software
- Able to write clear technical documentation and explain complex ideas to both technical and non-technical audiences
- Strong problem-solving skills focused on practical, innovative solutions
- Excellent written and verbal communication skills in English

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Personal Attributes

- Strong interpersonal and communication skills
- Self-motivated and driven to meet objectives
- Effective team player; able to work independently or collaboratively as required
- Able to work within defined timescales and meet programme milestones
- Capable of managing multiple projects simultaneously
- Passionate about technical challenges, problem solving, and practical innovation
- Willing to learn, share knowledge, and go the extra mile for the team

- Builds effective working relationships at all levels
- Excellent at planning and organising workload across projects to meet deadlines
- Quality-focused with strong attention to detail

Benefits:

Work with cutting-edge technology and innovation-driven projects

Competitive salary, holiday and pension contribution

Opportunities for fast career advancement and professional progression

If you are interested in working with Satraka, then please email your CV and a covering letter to info@Satraka.com with the job title you're applying for in the Subject line of the email.