

Position

Title	Senior Antenna and RF Design Engineer
Department	Group R&D
Reporting to	Group CTO
Location	Lincoln, Lincolnshire, United Kingdom

Description

Alaris, the RF Technology Group, is expanding by opening a new R&D capability based out of our site in Lincoln, UK. A small, highly capable team will be established to work directly with the Group CTO on the most challenging design problems that the Group has to face and grow our product offerings in the RF and antenna system space.

We are looking for the best-of-the-best - motivated and energetic individuals - to work on the most exciting new antenna and RF technologies. You will be working with customers based all over the world and collaborating closely with engineers based in our various sites in Europe, the USA and Africa. If your passion is to tackle difficult problems with an innovative and energetic spirit, then this is the place for you!

As a senior antenna and RF design engineer, you will lead the development of antenna and RF subsystems from HF to SHF frequencies, as well as more complex mixed signal electronic systems comprised of both antennas and RF subsystems. Our activities are expected to cover such diverse domains as active antenna systems; radio direction finding; phased array antennas and AESAs; electronic countermeasures; SATCOM and space-related RF and antenna developments. There will be an opportunity to develop your skills in systems engineering as part of the role.

We are looking specifically for individuals with a track record of solving difficult engineering problems with an innovative approach and who exhibit a high degree of personal resilience as the role will be demanding. Lab work and in-field measurement activities will be part of the role. Candidates should be open to occasional travel to our various sites and will be required to work on-site to foster learning and development of more junior staff assigned to support their development activities.

Hard Requirements

Education (minimum)	Bachelor's degree in electronic engineering
Education (ideal)	Master's or PhD in electronic engineering
Work experience	6 years+
Required nature of experience	<ul style="list-style-type: none"> • Experience as a design and development project technical lead • Strong understanding of and ability to use modelling tools such as MATLAB, CST, FEKO, HFSS etc. • Experience in antenna and/or RF subsystem design • Experience in antenna and/or RF subsystem testing • Experience in EMC testing and design for EMC • Experience modelling system performance e.g. in a tool such as MATLAB



	<ul style="list-style-type: none"> • Experience with product qualification including formulating and executing functional, environmental and EMC testing regimes • Experience working directly with customers
Computer literacy (required)	MS Office / Windows MATLAB CST / FEKO / HFSS / MWO / ADS or similar
Computer literacy (ideal)	Eagle / Altium or similar
Language(s)	English

Soft Requirements

<ul style="list-style-type: none"> • High degree of personal accountability and initiative
<ul style="list-style-type: none"> • Mission-oriented, can-do approach
<ul style="list-style-type: none"> • Innovative and creative problem solver
<ul style="list-style-type: none"> • Assertive nature
<ul style="list-style-type: none"> • Professional approach, comfortable dealing with customers and senior management
<ul style="list-style-type: none"> • Commercial acumen – comfortable with the concepts of profit margin and marketability
<ul style="list-style-type: none"> • Flexibility – prepared to work longer hours when critical work needs to be completed
<ul style="list-style-type: none"> • Work well under pressure and adhere to deadlines
<ul style="list-style-type: none"> • Attention to detail
<ul style="list-style-type: none"> • Exceptional understanding of electromagnetic theory and physics/mathematics
<ul style="list-style-type: none"> • Hands-on practical skills in fabricating prototypes, building electronics systems, soldering and general DIY
<ul style="list-style-type: none"> • Understanding of system engineering concepts

Key performance areas, weights and tasks

Area	Weighting	Tasks
Technical lead	20%	<ul style="list-style-type: none"> • Lead design and development project team • Solutions architect • Coordinating and managing project team activities • Technical hurdle taking – make the calls • Customer and management update meetings/reporting • Mentoring and training of junior staff
Antenna product development	20%	<ul style="list-style-type: none"> • Proposal generation and requirements development • Conceptual design and simulation • Optimisation and detail design • Overseeing prototype construction • Antenna measurements • Design handover and overseeing preproduction • Fault finding
RF product development	20%	<ul style="list-style-type: none"> • Proposal generation and requirements development • Conceptual design and simulation • RF circuit design (filters, switches, amplifiers) • Detailed RF design and documentation • Identification and sourcing of RF components • PCB layout, population and construction of prototypes

Area	Weighting	Tasks
		<ul style="list-style-type: none"> • Testing and qualification of RF designs • Design handover and overseeing preproduction • Fault finding
Mixed signal / System development	20%	<ul style="list-style-type: none"> • Digital control and power subsystem design • Custom testing hardware development • PCB layout, population and construction of prototypes • System performance modelling e.g. in MATLAB • Prototype system assembly and testing
Software development	10%	<ul style="list-style-type: none"> • System performance modelling e.g. in MATLAB • Testing and design software development e.g. in MATLAB
Reporting and writing	10%	<ul style="list-style-type: none"> • Technical reports detailing simulation and test results for customer consumption. • Developing and presenting technical content • Presenting of papers (e.g. at conferences)

About the Alaris Group

Founded in 1997, is a global radio frequency (RF) technology Group. The Group prioritises the creation of its own products and safeguarding its intellectual property. It delivers technologically advanced solutions and products to various sectors, including defence, aviation, marine, wireless, industrial, healthcare, research communities, and government institutes. The Group strives to become a dependable technical advisor and partner in the RF technology field, as reflected in its subsidiaries' customer-focused approach.

An acquisitive group, currently based in South Africa and until recently listed in the JSE, the group is currently exploring the opportunity to relocate its holding company to the UK with a possible relisting on the LSE AIM in the future to assist drive its growth strategy.

5 January 2024