

**Senior Signal Processing & Modem Development Engineer  
Person Specification**

<b>Job Title:</b>	Senior Signal Processing & Modem Development Engineer
<b>Job Reference:</b>	ENG.PSP.011
<b>Location:</b>	Welwyn Garden City
<b>Type of Role:</b>	<p>Our company works in Satellite Communications Equipment Design &amp; Development. Our team develops modems and other equipment to receive, process, analyse and send RF communications. We are seeking a senior engineer to take ownership of our modem specifications and modelling as part of a development team.</p> <p>The person will have several years of experience of developing digital signal processing solutions on relevant hardware, in the domain of radio communications.</p> <p>The person will be motivated by the opportunity to work on niche communications solutions incorporating hosting radio nodes on small airborne and satellite platforms.</p>
<b>Skills/Experience Required:</b>	<p>Mandatory:</p> <ul style="list-style-type: none"><li>• Detailed familiarity with radio communication air interface specifications; thorough understanding of digital modulation techniques; understanding of access technologies including CDMA, TDMA etc.</li><li>• Specification of RF modems.</li><li>• Modelling and simulation of digital signal processing systems in general and RF modems in particular.</li><li>• Development of modems in software defined radio (SDR) solutions, either in software or using hardware description languages (HDL).</li><li>• Use of tools to perform simulation-based validation of algorithm design e.g. through HDL-based test benches, MALAB/ Simulink, Octave.</li></ul> <p>Preferable:</p> <ul style="list-style-type: none"><li>• Definition and maintenance of link budgets.</li><li>• System design and development of FPGA System on a Chip (SoC) architecture definition and partitioning, algorithm implementation, HW/SW interfaces.</li><li>• Track-record in delivery of integrated SoC solutions for digital signal processing.</li></ul>

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	<ul style="list-style-type: none"><li>• Software development.</li><li>• Xilinx Design Tools (ISE/EDK/SDK, Vivado), C/C++, Windows and Linux environments.</li><li>• Xilinx background, Zynq SoC (e.g ZC702)</li><li>• Analogue Devices, e.g. AD-FMComms2 hosting AD9361</li><li>• Programming of DSPs in relation to modems.</li></ul>
<b>Qualifications:</b>	<ul style="list-style-type: none"><li>• Good honours degree.</li></ul>
<b>Personal Profile:</b>	<ul style="list-style-type: none"><li>• Professional engineering approach</li><li>• Proven ability to work within tight timescale and budgetary constraints</li><li>• Proven ability to produce clear, concise and unambiguous documentation confirming to applicable technical and quality standards</li><li>• Proven ability to work as an integral part of a highly-focused team</li><li>• Proven ability to take full responsibility for the delivery of critical system components</li><li>• Proven ability to develop innovative and efficient solutions to defined problems</li><li>• Proven ability to produce and present clear, concise and unambiguous presentations to customers and other clients</li><li>• Good communication skills</li></ul>