

JOB DESCRIPTION

Job title:	Software Engineer
Department:	Embedded Software
Reports to:	Software Team Lead
Responsible for:	None
Job purpose:	Development of signal processing application software to support our in-house software defined radio hardware. Working with cutting edge silicon to develop a hardware platform supporting the CommAgility 5G gNodeB developments.

Main duties and key responsibilities:

- DSP Software Specification
 - Identifying requirements and architecting DSP functions
 - Reviewing hardware requirements
- DSP Algorithm Design/Implementation
 - Filter Design
 - Adaptive processing design (e.g. DPD)
 - Development and validation in MATLAB
 - Conversion to NXP VSPA/Power Architecture
 - Deployment on hardware
- Development of supporting ARM Linux utilities
 - Userspace control/triggering of DSP processes
 - Test and development support apps.
- Test Specification
 - Providing test input for continuous integration
- Debugging
 - In system debugging of DSP with real data (RF)
- Control interfacing with Radio Front End hardware
 - Analog Converter interfacing
 - Hard Realtime control of RF peripherals
- Analysis and Profiling
 - Optimisation of binaries based on latency requirements and processing availability
- Working with existing TI C66xx based applications
- Interface Specification
 - Working with the 5G PHY team on inter-process communication specification and implementation
- Assisting other members of the software team with problem solving.
- Working closely with the hardware design team, production team and customers on early and evolving hardware.

- Informing team members and management of timescales for various work/support/projects
- Any other duties commensurate with the role, as may reasonably be requested by the line manager to support departmental goals.

Please note the purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

Start Date: Immediate

This position is based in Loughborough, UK.

To apply, please email your CV to jobs@commagility.com

Special conditions:

N/A or There are no unusual working hours except in rare cases to complete work. The same rare condition may cause restrictions on holiday, call-out liability or significant travel.

PERSON SPECIFICATION

Job title: Software Engineer

Essential	Desirable
Qualifications and training	
BEng in one of : Computer Science, Software Engineering, Signal Processing, Electronics and Telecom Engineering or related field	MSc or MEng Training or short courses attended for DSP hardware, or similar
Experience and knowledge	
Signal Processing experience in Software defined radio Industrial Experience with a focus on embedded software design Confident in coding in C on embedded platforms Experience with Perl, Python or another modern scripting language Experience with VCS such as Git and Bug Tracking tools such as JIRA Experience of Multicore or Multiprocessor architecture	Experience with NXP VSPA devices Experience of NXP CodeWarrior, TI Code Composer Studio or similar development environments Comfortable using Matlab to implement and analyse processes. Familiarity with GIT and Jira to manage multiple project issues or bugs Understanding of 5G New Radio RF and physical layer processing Understanding of Linux Architecture and experience with Board support packages development
Skills and abilities	
Good expertise in scripting, Software, Integration Testing Good communication skills and the ability to read technical specifications and datasheets Use own initiative and work well as part of a team with a flexible approach Ability to prioritise tasks and work under pressure to meet deadlines	Ability to comprehend, add features to and bug fix on legacy product on which you may not have worked on before Ability to detect issues before hand at review and provide valuable feedback in advance Ability to work with customers to understand feature requirements and resolve issues
Other requirements	
A willingness to undertake further relevant training if required. An understanding and commitment to equal opportunities	