# Position Description

## Technical Services – CSOF5

The following information is for applicants

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| Advertised Job Title**:** | ASKAP Electronics Engineer |
| Job Reference: | 62879 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | Australian/New Zealand Citizens, Australian Permanent Residents or a temporary Australian resident who has full work-rights for the duration of this contract.  *Visa sponsorship will not be provided.* |
| Percentage of Client Focus - Internal: | 90% |
| Percentage of Client Focus - External: | 10% |
| Reports to the: | ASKAP Principal Engineer |
| Number of Direct Reports: | 3 |
| How to apply: | Please apply online at [jobs.csiro.au](https://jobs.csiro.au/) and enter the requisition number**.** Internal applicants please apply via ‘Jobs Central’ through the ‘People Hub’ icon  |
| Contact details to discuss this position: | Brett Hiscock via email: Brett.hiscock@csiro.au*Please do not email your application directly to Brett Hiscock. Applications received via this method will not be considered.* |
| If you have difficulty applying please contact: | Call 1300 984 220 or email csiro.online@csiro.au between 8.30 am and 5 pm Australian east coast time. |

## Role Overview:

CSIRO Astronomy and Space Science have a requirement for a highly motivated and appropriately skilled Professional Engineer to lead a team of three technical staff.. The primary purpose will be to provide support for the radio frequency and digital electronic systems which form part of the Australian Square Kilometre Array Pathfinder (ASKAP) radio telescope. The teams efforts will ensure a high level of reliability of ASKAP and other operational systems at the MRO and MSF support facility.

The Engineer will contribute to the operation of ASKAP as a world class scientific instrument, and the Murchison Radio-astronomy Observatory (MRO) as a world class facility to host other Radio-astronomy instruments. The ASKAP instrument comprises modern Phased Array Feeds and Digital hardware to beam form and correlate received Radio Frequency wavefronts from astronomical sources. Support state-of-the-art digital and radio frequency electronic systems. This position requires both technical leadership and an ability to diagnose complex electronic systems.

This is an Engineering Operational position based at the Murchison Support Facility (MSF) in Geraldton..

## Duties and Key Result Areas:

* Provide professional engineering support for ASKAP electronic systems both radio frequency and digital processing hardware.
* Support the full range of MRO electronic systems.
* Under the guidance of the Site Leader MSF/MRO, supervise a small technical team performing engineering commissioning and maintenance work on the electronic systems that comprise and support the ASKAP Telescope. This will include:
	+ Technical leadership of the team,
	+ Identifying critical issues,
	+ Contributing to the resolution of routine and complex telescope operational problems,
	+ Scheduling, budgeting and planning maintenance activities for electronic systems on the ASKAP array at the MRO and support systems at the MSF.
* Ensure the availability of ASKAP electronic spares and consumables to minimise telescope downtime and other operational disruptions.
* Demonstrate effective liaison with professional peers, management and a pleasant manner in dealing with client stakeholders.
* Manage electronic workspaces to ensure safe and fit-for-purpose, including appropriately maintained and calibrated laboratory test equipment.
* Ensure electronic equipment faults and repairs are reported and tracked, maintain preventative maintenance documents, engineering documentation and drawings, and develop test/repair procedures when required.
* Contribute to the safe and efficient conduct of MRO and MSF activities, with Geraldton colleagues and MRO visitors, and other external stakeholders;
* Contribute to capability enhancements, resource savings, health, safety and environmental initiatives, including safe work methods.
* Frequent travel to the Murchison Radio-astronomy Observatory (MRO) where the ASKAP radio telescope is located, some 350km northeast of Geraldton.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## CSIRO Competencies:

1. **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
2. **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.
3. **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
4. **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
5. **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
6. **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

## Selection Criteria:

*Under CSIRO policy only those who meet all essential selection criteria can be appointed.*

1. An Engineers Australia-accredited four year electronic/electrical engineering qualification and work experience at the level of Professional Engineer.
2. A current driver’s license and willingness to travel to other CASS sites.
3. Ability and willingness to work at heights.
4. Demonstrated understanding and practical skills in analogue and digital electronics systems relevant to radio astronomical operations, with a specialisation in either low noise Radio Frequency electronics, or high speed digital processing electronics including both hardware and firmware for systems built around Field Programmable Gate Array (FPGA) technology.
5. Self-motivated, with demonstrated ability to apply professional engineering judgement in the course of commissioning, maintaining and/or designing & upgrading of electronics systems, from systems down to first-principles ‘hands-on’ board level;
6. Ability and willingness to lead a small technical team consisting of staff with various backgrounds and skill levels;
7. Demonstrated ability to identify the source of system deficiencies and applying innovative solutions to technical, logistics and team challenges whilst working in a remote area for extended periods;
8. Demonstrated ability to communicate technical information including interpret and prepare circuit diagrams, technical specifications, drawings and reports.
9. Commitment to safe work practices, to environmental sustainability and the principles of equity and diversity.

## Desirable Criteria:

* 1. Training and experience relevant to work in a remote area (eg. First Aid, 4WD).
	2. Prior experience with fault report and tracking systems, Altium Design tools and familiarity with the Linux operating system environment.

## Special Requirements:

The successful candidate will be required to frequently travel to the Murchison Radio-astronomy Observatory (approx. 350km northeast of Geraldton). Visits will be typically five days in duration and require overnight stays at the Boolardy accommodation facility.

The successful candidate will be asked to obtain and provide a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Information disclosed in a National Police Check will only be considered if it is relevant to the inherent requirements of the job.

## About CSIRO:

At CSIRO we solve the greatest challenges through innovative science and technology. See more [online](http://www.csiro.au/)!

Find out more about the CSIRO [Astronomy and Space Science (CASS)](https://www.csiro.au/en/Research/Astronomy)