



# ELECTRONICS & COMMUNICATIONS TECHNICIANS

ENGINEERING & FIELD OPERATIONS

# CANDIDATE INFORMATION PACK











Australian Government





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AIMS was awarded <u>Athena Swan Bronze status</u> in 2020 by the <u>Science in Australia Gender</u> <u>Equity (SAGE)</u> program. This award recognises AIMS' commitment to improving gender equity, diversity and inclusion in STEMM disciplines.

The Australian Institute of Marine Science acknowledges the Traditional Owners of the land and sea on which we work. We recognise the unique relationships and enduring cultural and spiritual connection that Aboriginal and Torres Strait Islander people have to land and sea, and pay our respects to Elders past, present and future.

Photographic credit: Shaun Hahn, Joe Gioffre, Christian Miller, Steve Clarke, Christian Miller, Chris Brunner, Nick Thake, David Deeley

### ABOUT AIMS

The Australian Institute of Marine Science is a corporate Commonwealth entity established under the <u>Australian</u> <u>Institute of Marine Science Act 1972</u> (AIMS Act). As Australia's tropical marine research agency, it is <u>our mission</u> to provide the research and knowledge of Australia's tropical marine estate required to support growth in its sustainable use, effective environmental management and protection of its unique ecosystems.

To accomplish <u>our mission</u>, AIMS delivers independent science to help realise three key long-term impacts for the nation:

- Improve the health and resilience of marine and coastal ecosystems across northern Australia.
- Create economic, social and environmental net benefits for marine industries and coastal communities.
- Protect coral reefs and other tropical marine environments from the effects of climate change.

Our research is focused on the priorities of our stakeholders, including Commonwealth, state and territory governments, industry and Traditional Owners. Our research continues to:

- Underpin Australia's environmental management of the Great Barrier Reef (GBR) to ensure that this World Heritage Area remains healthy and resilient.
- Support the sustainable development of coastal industries and ports across northern Australia.
- Provide the environmental baselines and condition and risk assessments required for current and future resource and industrial developments in Northern Australia.

At AIMS, <u>the way we work</u> guides our team members' on their collective journey towards the successful delivery our <u>AIMS Strategy 2025</u> targets.



### ABOUT OPERATIONS & INFRASTRUCTURE'S ENGINEERING & FIELD OPERATIONS TEAMS

Our Engineering and Field Operations team delivers innovative technological solutions to equip our researchers to provide the knowledge needed to empower our decision makers. It harnesses a team of marine engineers and technicians with the world leading science and field expertise of the Institute to deliver the next generation of tools for understanding, monitoring and managing tropical marine systems.

<u>AIMS Strategy 2025</u> focuses our direction on harnessing technology to deliver twice the information in half the time and at half the unit cost. To achieve this, we are looking beyond traditional marine science to world-leading space and data technologists, next-generation sensors, big data, artificial intelligence, machine-learning, robotics and autonomous systems.

We are taking a systems approach to delivering sustainable solutions. We are collaborating with peers, crosssector leaders, and industry to deliver the capability to adapt and scale to the needs of our rapidly changing ecosystem as well as to reduce human risk and allow more time for the critical, high-level tasks. Through the integration of leading-edge technologies with the Institute's cutting-edge science, backed up by almost fifty years of field operations, we look to deliver a set of new capabilities for generating the understandings required to protect and sustain topical marine systems.

AIMS recognises its mission is crucial to the survival of Australia's tropical oceans including the Great Barrier Reef. We are committed to injecting transformational technologies to achieve our mission and ensure a sustainable future for our tropical oceans; one where our coral reefs will be a national icon for generations to come.

The Engineering and Field Operations team are involved in the development, construction, and operation of engineering projects with scientists, with particular focus on the combination of electronics and mechanical engineering in a marine environment. AIMS technology teams work closely together to achieve AIMS objectives.



### ABOUT OUR ELECTRONICS & COMMUNICATIONS TECHNICIAN POSITIONS

#### **About these Opportunities**

Working with a team striving to design and develop the next generation of technological solutions for marine monitoring and survey systems, you will work alongside Electronics and Mechanical Engineers to design, build, test and deliver new field-based electronics systems. You will focus on taking designs and schematics and translating these into field-ready certified systems as per our clients' requirements.

You will manage the logistics of the design and fabrication process, working with suppliers and AIMS staff to manage components and equipment and forecast future ordering needs. You will also provide oversight of requests for workshop electronic support and coordinate workload within the workshop electronics team to ensure delivery.

These roles have the unique opportunity to undertake fieldwork for testing and evaluation of designs, which can at times mean working at sea for extended periods of time (7-14 days), as well as on small vessels. You will work with our clients to operationalise the equipment that has been created.

#### About you

These roles will suit someone with trade qualifications in Electronics or Communications and a restricted Electrical licence or Electrical Fitter/Mechanic workers licence, who is experienced in marine electronics or systems developed for similarly harsh environments. You will be able to program/code PLC's, Raspberry Pi, Arduino and dataloggers and build, configure, fault find and test electronics and electrical systems.

You will be familiar working in team that has a flexible and analytical approach and will be used to working on competing tasks and adapting to changes quickly. You be experienced working in a workshop environment and away on field trips at sea, with well developed technical and field report writing skills.

Previous experience working with remotely piloted, autonomous systems or uncrewed technology would be highly desirable, as would a recreational or commercial ship masters licence and radio operator's licence.

NB: Non-Australian Citizens must hold an appropriate Visa with working entitlements that allows paid employment with AIMS for the term of the appointment, depending on the <u>Department of Home Affairs</u> current policies.

If, after reviewing the position description (refer pages 8 - 12), you believe that your qualifications, experience and professional capabilities will enable you to successfully deliver these position responsibilities, we would be very interested in hearing from you.

**Apply now** and join a world leading organisation with attractive working conditions which are detailed in our <u>Enterprise Agreement</u>. The successful candidate for this exciting opportunity will be rewarded with:

- AIMS AOF Level 3E salary (\$79,663 to \$86,200 per annum) plus 15.4% superannuation
- Free Onsite Gym and Optional Fitness passport
- 9-day fortnight
- Flexible Work Arrangements considered (including tele-working where possible)
- Generous leave provisions
- Full-time, 2-year Fixed Term opportunities (x3) and 3-year Fixed Term opportunity (x1)
- Located in Townsville (Qld). Commuter car arrangements to site
- Relocation Assistance available

### HOW TO APPLY

Your application submission for our Electronics & Communications Technician opportunities should include the following documentation:

- Current Resume (including the contact details detail for two current referees);
- Document addressing the Key Selection Criteria (refer to page 7) within the scope of the position description (refer to page 8-12); and
- A short cover letter.

**NB:** Our preference is that you include a list of your qualifications, publications, certificates and/or licences in your resume. Do not attach these documents to your application as these will not be provided to the selection panel.

**Shortlisted applicants** may be asked to complete a Personal Outlook Analysis Questionnaire using the Birkman Method.

How to Apply: Please submit your application via our website (aims.gov.au).

Further information on the application process and tips for addressing Selection Criteria is available in our <u>Recruitment Application Guide</u>.

Closing Date: SUNDAY, 14 AUGUST 2022 (midnight, AEST).

Recruitment Contact: Position enquiries can be directed to Ben Fusco at B.Fusco@aims.gov.au

**NB:** Applicant survey: All applicants will be invited to complete a voluntary survey after the vacancy closing date. Your responses to this survey do not form part of your application for this position. Further information about the purpose of this survey will be provided to you in the invitation.



### **KEY SELECTION CRITERIA**

Your application submission should address the following Selection Criteria. Please address each Selection Criteria in a separate paragraph (maximum 250 words per criteria) and in a single document. The selection criteria and your CV are the documents against which we assess your suitability for the position.

Your responses to the following Key Selection Criteria must evidence your suitability for these exciting opportunities within the scope of the position description (pages 8-12).

#### **Essential**

- Formal qualifications in Electronics, Communications or similar.
- Restricted Electrical Licence or Electrical fitter/mechanic worker's licence.
- Proven ability to plan and manage workflow including but not limited to task prioritisation and allocation, budget management, and parts ordering.
- Proven ability to program/code PLC's, Raspberry Pi, Arduino, and dataloggers.
- Team orientated with a flexible and analytical approach and a commitment to quality and the ability to:
  - work effectively in a workshop environment and away on field trips, at sea, and at moderate heights such as weather station masts;
  - $\circ\;$  work on several tasks and adapt to changes in work readily; and
  - $\circ\,$  accept direction and provide cooperative assistance to supervisors and team members.
- Technical and field report writing skills.
- Strong commitment to and sound knowledge of principles and practices of Occupational Health and Safety.
- Current QLD C Class Open Drivers Licence with extensive driving experience.

#### Desirable

- Willingness to work at sea in often demanding conditions for extended periods.
- Formal qualifications in marine electrical work or experience working with marine electronics (vessels, navigation equipment).
- Recreational or Commercial Ship Masters Licence and Radio Operators Licence (VHF).
- Experience with remotely piloted, autonomous systems or uncrewed technology.



# POSITION DESCRIPTION: ELECTRONICS & COMMUNICATIONS TECHNICIAN

Team Membership:	Engineering & Field Operations (5401)
Program:	P7 Operations and Infrastructure
Primary Location:	Townsville, Queensland
Direct Supervisor:	Field Coordinator (21098)
Position Classification:	AOF Level 3 Enhanced
Functional Area:	Technical Services
Position Summary:	To apply technical expertise to the development and maintenance of remote observing and field equipment, in support of scientific and technological research in field, workshop and laboratory environments. Electronic and Communication Technicians may be allocated to individual projects and are expected to apply their skills, knowledge and experience in the research, design and development of bespoke systems in the support of project, team and organisational strategic targets.
Position Responsibilities:	<ul> <li>This position will support the implementation, deployment and maintenance of technology supporting AIMS research, engineering and operations activities.</li> <li>This position will support the development of the next generation of marine monitoring field systems.</li> <li>The position will also be responsible for managing the logistics of the design and fabrication process including working with suppliers and other parts of AIMS to ensure that components are available as required, including: <ul> <li>Work with internal specialist department to refine and optimise designs and ensure that the resulting equipment is fit for purpose and safe to use</li> <li>Work with end users and clients to operationalise the developed systems within their working environment, includes field trials of equipment</li> <li>Work to meet deadlines for equipment delivery including for field work trips</li> </ul> </li> <li>Actively participate in the planning, deployment, operation and maintenance of field-deployed scientific equipment and instruments to ensure all safety and legal standards are met and requirements for precision, accuracy and reliability are achieved.</li> <li>Manage requests for workshop electronic support and assist in coordination of workload within workshop electronics team.</li> <li>Plan and participate in fieldwork (including diving) to service, deploy, and recover equipment.</li> <li>Actively participate in maintaining the asset management and tracking system.</li> <li>Ensure all maintenance is completed to schedule and that equipment is reliable and available when required. Undertake troubleshooting and breakdown maintenance as required.</li> </ul>
	<ul> <li>Project dependant, this position may be expected to:</li> <li>manage the configuration, deployment and maintenance requirements of instrumentation supporting ReefWorks test ranges including smart moorings, communications links and assist with uncrewed vessel/aircraft operations and planning. This component will work closely with the ReefWorks test range coordinator to assist ensuring the test range meets user requirements.</li> </ul>

	<ul> <li>Work with the Technology Development Team to for the development, design, fabrication and testing of new underwater monitoring equipment including the adaptation and application of current and new technologies, in order to achieve research objectives.</li> <li>This position will enable AIMS to deliver on Strategy 2025 by fast-tracking Australia's autonomous systems industry, thereby enabling AIMS to achieve Enhanced Capability Target EC2: Employing technology to double our information output at half the unit cost and in half the time.</li> <li>Comply with AIMS' Code of Conduct ensuring the standards of conduct required of an AIMS staff member are upheld.</li> <li>Adhere to uphold and demonstrate the AIMS values.</li> </ul>	
Key Responsibilities and Perfo	formance Standards	
Science Outputs:	Assist scientific staff in the pursuit of research goals and objectives in and field environments through the development, fabrication, maintenance and deployment of remote observing equipment.	laboratory operation,
Occupational Health & Safety:	Comply with AIMS' workplace safety policies and procedures to ens workplace.	ure a safe
	In line with AIMS' Health and Safety Policy policies and procedures, so participate in Manual Task (Functional) Assessments and Fit for Wor assessments as required.	iccessfully k medical
	Minimum functional requirements:	· · · · · · · · · · · · · · · · · · ·
	Maximum lift expected (5kg, 10kg, 25 kg)	25 kg
	% role sitting	10 %
	% role standing	80 %
	% role diving	0%
	Work in offshore or remote locations for extended periods of time	NO od against
	COVID-19. Please note the sighting of proof of vaccination will be rec pre commencement requirement.	uired as a
	Identify workplace hazards and take corrective action with your su guidance.	ipervisor's
	Willingness and ability to participate in fieldwork activities at remote locations.	, off-shore
	Ensure visitors and staff for which you are responsible have comp necessary OH&S inductions.	bleted the
Intellectual Assets:	Ensure compliance with AIMS' Intellectual Property policies proce guidelines to ensure AIMS' intellectual assets are appropriately prot managed.	dures and ected and
Delegations:	In line with <u>Financial and Contract Delegation Policy</u> , which authorisation levels for Financial, Enterprise Agreement (supervisory), General Administrative activities.	includes HS&E and
Teamwork/supervisory:	Direct Reports: 0	
	To work as a member of a multi-disciplinary team that values diver ensuring the achievement of AIMS' goals and objectives.	rsity while

External Customer, Partner,	Liaise with external stakeholders to understand instrumentation requirements,
Collaborator and	capabilities and potential delivery methods.
Stakenolder Requirements:	
relationshins:	Reports to:
	Next Level Supervisor: Engineering & Field Operations Manager
	next Level supervisor. Engineering a new operations manager
	Scientific Research Staff: Provide the primary operational and technical support
	for remote observing equipment on field trips that use this equipment. Ensure that field-deployed equipment is reliable and available when required.
	Liaise with research staff on the design, manufacture, fabrication and implementation of field-deployed observation and other engineering equipment.
	Liaise with other internal engineering areas to co-ordinate the design and supply of components for the system builds.
Financial responsibilities and	Contribute to positional budget requirements.
accountabilities:	Manage AIMS funds in a responsible manner and within delegation.
	Comply with AIMS' Fraud Prevention Plan ensuring the standards of conduct and
	ethical behaviour required of an AIMS staff member are upheld and that
	suspected fraudulent activity is prevented and/or reported.
and continuous improvement	Assist in the design, fabrication and adaptation of marine monitoring equipment including transom mounted cameras, towed camera systems, drop cameras, weather stations, BRUVS and autonomous / semi-autonomous vehicles.
responsibilities:	Create solutions to immediate problems associated with the deployment and use of equipment on field trips.
	Work with end users to improve and optimise the systems developed and to help the end users operationalise the systems within their operational environment
	Assist in the improvement of the day-to-day operations, systems, and processes in the Field Operations Team.
Planning responsibilities:	Plan work activities to ensure achievement of timelines.
	Contribute positional requirements to operational planning.
	Performance Management:
	Plan work activities to ensure the achievement of timelines.
	Ensure timely and accurate completion of required tasks.
	• Actively participate in own personal performance planning and evaluation.
	Successfully participate in the AIMS annual Performance and Development program.
Communication responsibilities:	Communicate with scientific staff to gain an understanding of their needs and explain design specifications and safety requirements for usage in a clear and understandable manner.
	Interact with other team members to facilitate achievement of group goals.
	Work with the other parts of the AIMS workshops to ensure the co-ordination of work between the areas
	Communicate with Instrumentation Suppliers to achieve AIMS Goals.
	Prepare technical reports detailing service and calibration of equipment.

Skills and Knowledge		
Essential Skills and Knowledge:	Relevant trade qualifications, or equivalent, suitable for fabricating, maintaining, calibrating, testing and fault finding of electronic hardware and mechanical	
	components.	
	Ability to work at sea in orten demanding conditions and for extended durations.	
	Ability to work at heights (weather station masts, vessel masts).	
	locations.	
	Team orientated with a flexible and analytical approach and a commitment to quality and the ability to:	
	<ul> <li>work effectively in a workshop environment and away on field trips, at sea, and at moderate heights such as weather station masts;</li> </ul>	
	<ul> <li>work on several tasks and adapt to changes in work readily; and</li> </ul>	
	• accept direction and provide cooperative assistance to supervisors and team members.	
	Strong commitment to and sound knowledge of principles and practices of Occupational Health and Safety.	
	Experience with building, testing, and servicing electronic devices from engineering drawings and wiring schematics.	
	Ability to work with diverse stakeholders to achieve a mission objective.	
	Understanding of capabilities and limitations of operating instrumentation at sea, particularly in a real-time communications configuration.	
	Demonstrated ability to devise and apply innovative approaches to achieving mission objectives.	
	Ability to approach all tasks and activities from a risk management prospective.	
	Well-developed interpersonal and communication skills including the capabilities to effectively consult, collaborate and liaise with other team members on science/technical and non-science/technical issues for the purpose of achieving team objectives and maintaining a positive team environment.	
Desirable Skills and Knowledge:	Experience in building, maintaining, and fault-finding PC server systems with an understanding of the operation of KVM, remote desktop, serial device servers, UPS and NAS systems.	
Qualifications and Experience		
Essential Qualifications and	Formal qualifications in Electronics, Communications and similar.	
Experience:	Restricted Electrical Licence or Electrical fitter/mechanic worker's licence.	
	Workshop skills suitable for field maintenance work, calibration, and testing and fault finding of electronics hardware.	
	Workshop skills suitable for the operation and maintenance of electrical and mechanical systems in the field.	
	Proven ability to plan and manage workflow including but not limited to task prioritisation and allocation, budget management, parts ordering.	
	Proven ability to program/code devices such as PLC, Raspberry Pi, Arduino and dataloggers.	
Desirable Qualifications and Experience:	Open-water recreational dive qualifications to a minimum of Dive Rescue, or commercial diver qualifications to AS2815.1.	

	Documented evidence of diving history.
	Seagoing experience, especially back deck operations.
	MR Truck and Forklift (High Risk) Licence.
	Crane / slew crane licence.
	Recreational or Commercial Ship Masters Licence and Radio Operators Licence (VHF).
	Experience working with weather station instrumentation.
	Experience working with oceanographic instrumentation.
	Commercial UAV licence and or experience maintaining UAV's.
	Exposure to Maintenance Database systems.
	Formal qualifications in marine electrical work or experience working with a wide variety of marine instrumentation and marine electronics (vessels, navigation equipment).
	Formal qualification in rigging/dogging with proven experience in installing and maintaining telecommunication masts.
Technology and Equipment	
Technology & Equipment Used:	Includes, but not limited to: autonomous, semi-autonomous or towed under- water camera systems, USBL acoustic positioning systems, weather stations, oceanographic instrumentation, PC server systems, UAV and support equipment, SCUBA and small vessels (<8m).
	Winches, cranes, forklifts, trucks, and vessel deck machinery.
	Interfacing computers with instrumentation.
	Networked personal computer, Microsoft Office 365 applications and general office equipment.
Special Requirements	
Other Special Requirements	Current QLD C Class Open Drivers Licence with extensive driving experience.
	Strong commitment to and sound knowledge of principles and practices of Workplace Diversity and Inclusion.
	Non-Australian Citizens must hold an appropriate Visa with working entitlements that allows paid employment with AIMS for the term of the appointment, depending on the relevant <u>Department of Home Affairs</u> policies.

# **About the Location**

### Townsville (QLD) Facility

AIMS headquarters is south of Townsville, Queensland at Cape Ferguson. We are about 50 km from Townsville's CBD, is an international landmark in tropical marine science and home to the <u>National Sea Simulator (SeaSim)</u>. We are adjacent to the centre of the Great Barrier Reef and surrounded by a 207-hectare national park and marine reserve. The area is free from development, is biosecure and has access to clean seawater and a protected harbour.

#### Finding us (link to our Website page):

Head south from Townsville on the Bruce Highway (A1). Approximately 37 km from the city centre, turn left at the signposted turn-off to AIMS, onto Cape Cleveland Rd. Follow this road for a further 16 km until you arrive at the Institute.

Please note there is **no public transport** to the Institute however employee commuter car arrangements are detailed in our <u>Enterprise Agreement</u> (Part I – Commuting Arrangements – Cape Ferguson).

#### Townsville Traditional Owner Groups (link to Townsville City Council Website)

Our Traditional owners and custodians, the Bindal and Wulgurukaba People are the first people to have lived in the Townsville region.

#### **The Bindal People**

The Bindal people call the country "Thul Garrie Waja". An important symbol for the Bindal people is the shooting star. They believe that wherever the star fell, or the direction the star fell meant there was either danger coming or someone from that direction was in need of help or in danger.

#### The Wulgurukaba People

The Wulgurukaba people call their country "Gurrumbilbarra". Wulgurukaba means "canoe people". An important symbol of the Wulgurukaba people is the carpet snake. Wulgurukabas creation story tells the story of the creation snake that comes down from the Herbert River, went out to sea, creating the Hinchinbrook Channel, and down to Palm and Magnetic Islands. His body broke up, leaving parts along the coast. The tail of the snake is at Halifax Bay, his body is at Palm Island, while his head rests at Arcadia, Magnetic Island.

#### Living in Townsville

Townsville is a vibrant and rapidly growing city in North Queensland. Surrounded by the Great Barrier Reef, numerous coastal islands, the Wet Tropics rainforest and the outback, and less than two hours by plane from Brisbane, the region experiences a warm tropical climate with more than 300 days of sunshine each year.

A diverse economic base with strengths in government administration, health, defence, education, marine science, natural resource management, manufacturing and mining, ports and shipping and agriculture supports a current population of over 190,000 people.

Boasting a relaxed lifestyle, residents of Townsville enjoy access to world class educational, medical, sporting and recreational facilities. Townsville attracts high quality national and international festivals, cultural and sporting events.

For further information visit www.townsville.qld.gov.au.

