



Australian Government

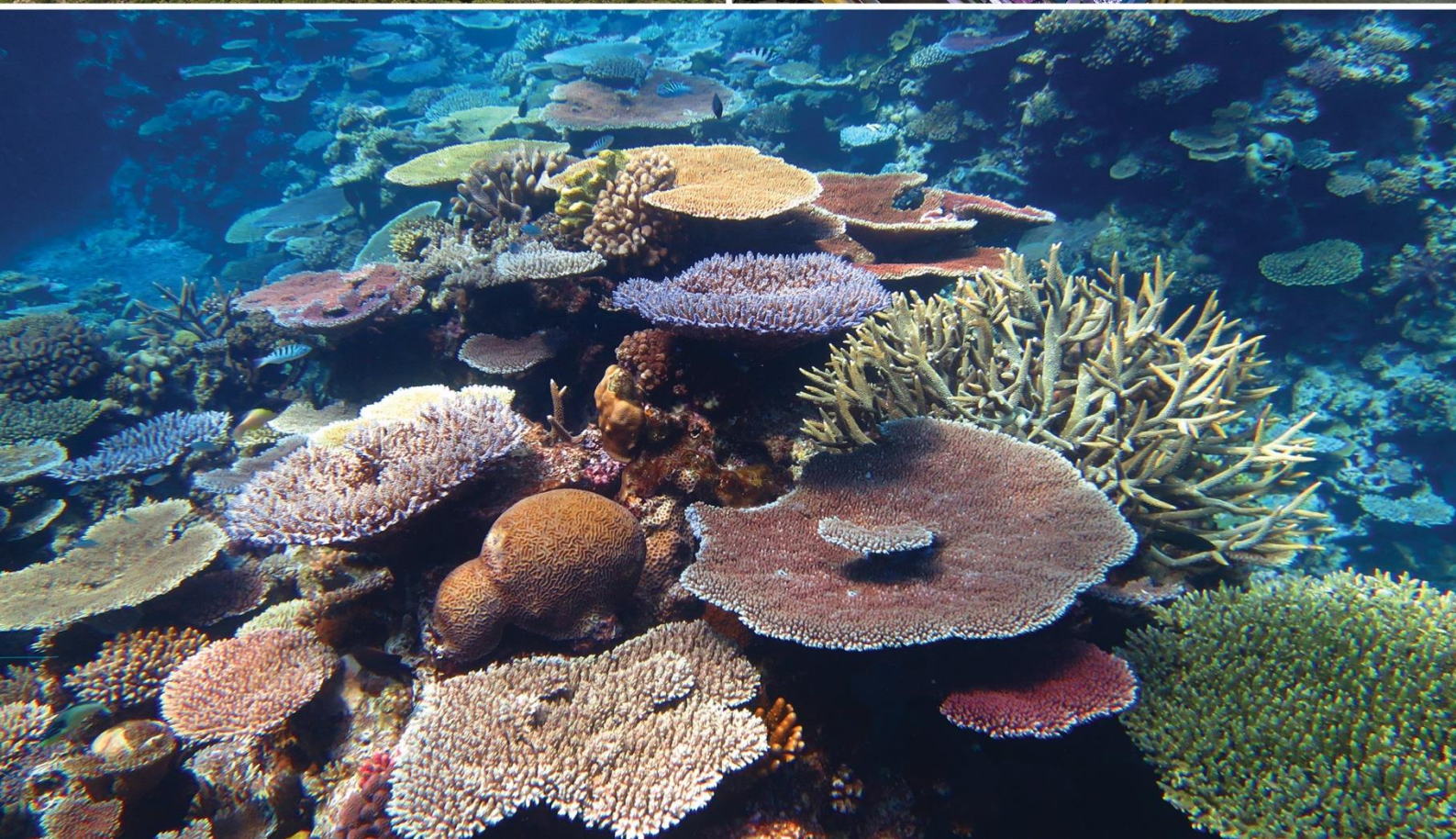


AUSTRALIAN INSTITUTE  
OF MARINE SCIENCE

ELECTRONICS AND  
COMMUNICATIONS TECHNICIAN

ENGINEERING AND FIELD  
OPERATIONS

CANDIDATE INFORMATION PACK





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*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.*



# About AIMS

The Australian Institute of Marine Science is a corporate Commonwealth entity established under the Australian Institute of Marine Science Act 1972 (AIMS Act). As Australia's tropical marine research agency, it is our mission 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.

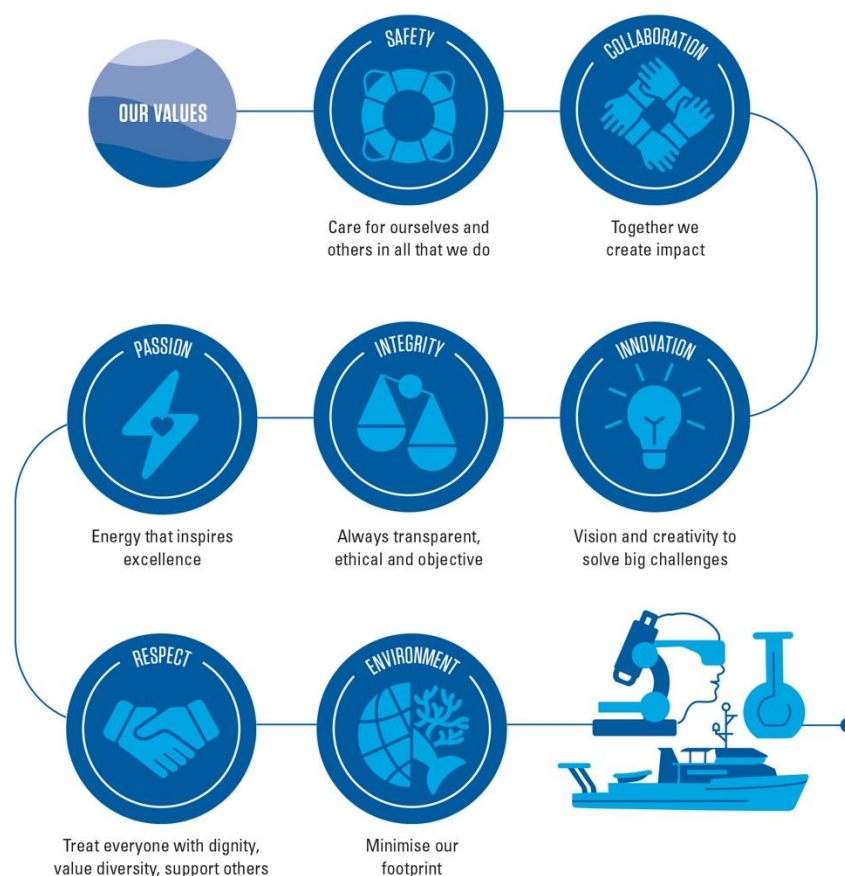
To accomplish our mission, AIMS delivers independent science to help realise three key long-term impacts for the nation:

- 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.

## THE WAY WE WORK



# Our Engineering and Field Operations Team

## **AIMS Operations and Infrastructure**

AIMS operates from four locations across Australia with a research base of 300 staff (including 60 outsourced functions), two major research vessels, and several significant research facilities including the world-class Sea Simulator (SeaSim). This enables us to deploy our marine research capability across northern Australia and in selected international engagements.

AIMS' headquarters are at Cape Ferguson, about 50 kilometres from Townsville in Queensland. Our Darwin office is located at the Arafura Timor Research Facility (ATRF) adjacent to the Charles Darwin University campus. AIMS in Perth is co-located within the Indian Ocean Marine Research Centre (IOMRC) at The University of Western Australia's Crawley campus. A small liaison office in Canberra facilitates, enables, and promotes interaction with the Department of Industry, Science, Energy and Resources, and other government departments and agencies.

A specialised research fleet, unique aquaria, sophisticated laboratories, operational workshops, extensive collections, analytical technology, and an array of marine observing equipment enable our scientists to examine subjects ranging from microbiology through to broad-scale ecology and coastal oceanography, both in the laboratory and in the field.

Further information on our Facilities including AIMS' National Sea Simulator, Operational Facilities, and Research Vessels is available on our [website](#).

## **AIMS Engineering and Field Operations Team**

Our Engineering and Field Operations team are an enabling resource for AIMS' Research Programs, and provide the following support functions:

- The **Engineering or Workshop Section** is involved in the development, construction, and operation of engineering projects with scientists, with particular accent on the combination of electronics and mechanical engineering in a marine environment. This section specialises in the integration of electronic units and mechanical housings to produce outstanding specialised equipment. Electronics, Mechanical and Carpentry workshops working together achieve a degree of synergy. The combination of a variety of skills and excellent facilities leads to a result difficult to achieve in the commercial environment. Specialisations include underwater housings, low power operation, remote operation (telemetry), underwater operation, sensors, instruments, data acquisition and control.
- **Transport** (Townsville) – AIMS Fleet and Commuter Car management.
- **Field Trips** - AIMS conducts field work in many ways in many locations. From land or at sea; using our vessels, charter, or other research vessels or vehicles. We work both independently and in collaboration with other Research Organisations. This section:
  - Facilitates Cruise Leader Inductions and approves Cruise Leaders subject to experience relative to the work planned,
  - Assists Cruise Leader with preparation of and final approval of LogReq, Passenger Manifest and Field Duties Allowance.
  - Ensures chartered vessels are in appropriate survey, fit for purpose, and where required liaise with Vessel Master.
  - Uses, services, and maintains diving equipment and associated safety equipment, and prepares diving and field equipment particularly pertaining to diving operations, including logistics.
  - Primary AIMS contact for emergency response.



# About this Opportunity

In the position of **Electronics and Communications Technician**, you will provide planning, operational, and technical support for AIMS' research related activities by providing assistance with the development, design, fabrication, deployment, and maintenance of AIMS' field-deployed scientific electrical and communication equipment and laboratory instrumentation. You will work closely with the electronics workshop team to manage workshop requests from concept design to development, testing, installation and servicing to ensure equipment and instrumentation is accurate, reliable and available, and that all safety and legal standards are adhered to. This will include maintenance of AIMS asset management and tracking systems, and completion of performance logs and reports.

You will also contribute to planning and participation in AIMS field-work activities, on both day trips and field trips for extended durations, to deploy, service, and recover field equipment and instruments in demanding conditions at sea and at moderate heights.

## About You

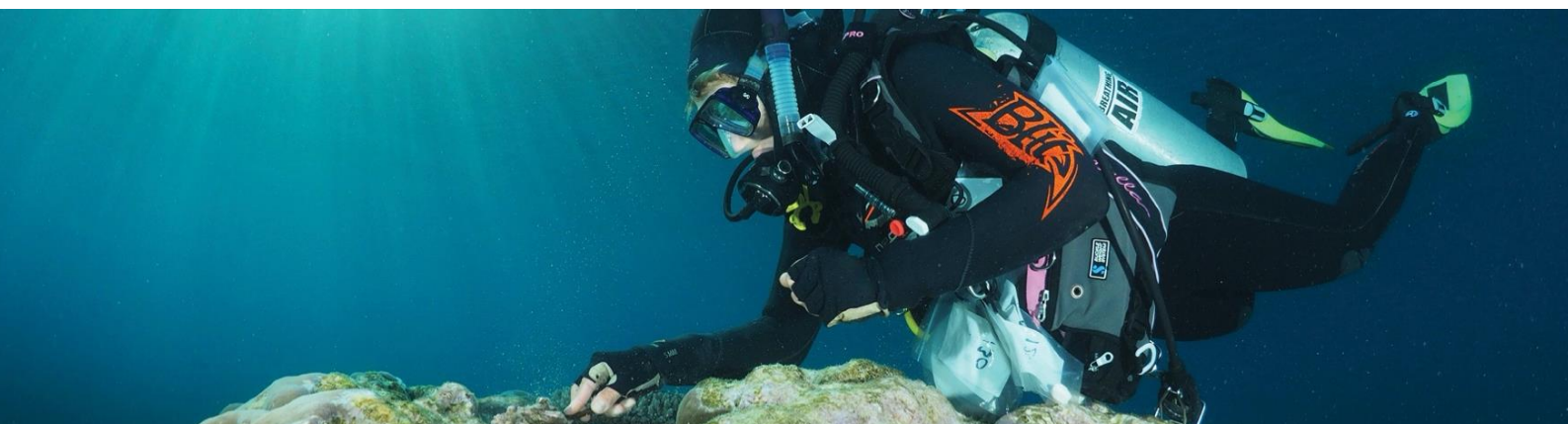
Underpinning your suitability for this position will be your relevant qualifications suitable for maintenance, calibration, testing and fault-finding of electronic hardware and mechanical components. You will also be able to demonstrate your:

- Proficiency and experience in the development, fabrication, and servicing of electronic devices from drawings and schematics;
- Experience and ability to install and test communication and data systems; and repair and service scientific instrumentation and equipment;
- Experience in planning and scheduling field work activities, including the ability to work at sea in often demanding conditions for extended periods, and at heights;
- Experience maintaining an asset management database and scheduled maintenance programs; and
- Excellent written and verbal communication skills and ability to work as an integral member of a small team.

**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 Department of Home Affairs policies.

Apply now and join a world leading organisation with attractive working conditions that are detailed in our Enterprise Agreement 2020 – 2023. The successful candidate for this exciting opportunity will be rewarded with:

- AOF Level 3 Enhanced Salary (\$67,411 – \$84,510 per annum)
- 15.4% superannuation
- Generous leave provisions
- Full Time, 3-year opportunity
- Located in Townsville, Queensland



# How to Apply

Your application for this **Electronics and Communications Technician** opportunity must include the following information:

- Current Resume (including two current references);
- Document addressing the selection criteria for this position within the scope of the position description (please refer to page 7 for the selection criteria to be addressed); and
- A short cover letter.

Shortlisted applicants may be asked to complete a personal outlook analysis questionnaire using the Birkman Method.

**Submitting your application:** Prior to clicking on the APPLY NOW button on our website, please ensure that you have your completed documents (selection criteria responses, CV, and cover letter) ready to attach to your on-line application form.

**How to Apply:** Please submit your application via our e-recruitment system on our [website](#).

Further information on the application process for this position is available via our [Recruitment Application Guide](#).

**Position enquiries** can be directed to Ben Fusco on [b.fusco@aims.gov.au](mailto:b.fusco@aims.gov.au).

**Applications close:** 11.59pm AEST, Sunday 19 September 2021.



# Selection Criteria

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

Please refer to our [Recruitment Application Guide](#) for tips on how to address selection criteria in your application.

## **Selection Criteria**

### **Essential:**

- Formal qualifications in Electronics and Communications (Cert 3,4, diploma) with experience in telecommunications (voice/video/data, 3G, 4G, satellite, fibre), data networks (ethernet, serial, mod/can bus, NMEA) and circuit level testing and repair.
- 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;
  - work on several tasks and adapt to changes in work readily; and
  - accept direction and provide cooperative assistance to supervisors and team members.
- Demonstrated ability to work at sea in often demanding conditions for extended periods.
- 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:**

- Formal qualification in rigging/dogging with proven experience in installing and maintaining telecommunication masts.
- 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).

# Position Description

<b>Position Title:</b>	<b>Electronics and Communications Technician</b>
<b>Team Membership:</b>	Engineering & Field Operations (5401)
<b>Primary Location:</b>	Townsville, Queensland
<b>Direct Supervisor:</b>	Field Coordinator (21098)
<b>Position Classification:</b>	AIMS AOF Level 3 Enhanced
<b>Functional Area:</b>	Technical Services
<b>Position Summary:</b>	To apply technical expertise to operate, deploy and maintain remote observing equipment, in support of scientific and technological research in field and laboratory environments, and to be involved in the design and creation of such instrumentation.
<b>Position Responsibilities:</b>	<p>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.</p> <p>Manage requests for workshop electronic support and assist in coordination of workload within workshop electronics team.</p> <p>Plan and participate in fieldwork (including diving) to service, deploy, and recover equipment.</p> <p>Assist with development, design and fabrication of field deployed scientific observation equipment, including adaptation and application of current and new technologies in order to achieve research objectives.</p> <p>Contribute to development and continuous improvement of preventative maintenance schedules.</p> <p>Actively participate in maintaining the asset management and tracking system.</p> <p>Ensure all maintenance is completed to schedule and that equipment is reliable and available when required. Undertake troubleshooting and breakdown maintenance as required.</p> <p>Contribute to development and review of operational procedures and manuals.</p> <p>Ensure that data collected in the field is quality controlled and managed using set data procedures.</p> <p>Complete performance logs and reports.</p>



	<p>Comply with AIMS' workplace safety policies and procedures to ensure a safe workplace.</p> <p>Comply with AIMS' Intellectual Property policies and procedures to ensure AIMS intellectual assets are captured, managed, and protected.</p> <p>Comply with AIMS' Code of Conduct ensuring the standards of conduct required of an AIMS staff member are upheld.</p> <p>Adhere to, uphold, and demonstrate the AIMS values.</p>
<b>Key Responsibilities and Performance Standards</b>	
<b>Science Outputs:</b>	<p>Assist scientific staff in the pursuit of research goals and objectives in laboratory and field environments through the operation, maintenance, deployment and development of remote observing equipment.</p>
<b>Occupational Health &amp; Safety:</b>	<p>Ensure all tasks are performed in a safe manner.</p> <p>Comply with AIMS' workplace safety policies and procedures to ensure a safe workplace.</p> <p>Report immediately any work-related accident, injury or near accident to your direct supervisor.</p> <p>Identify workplace hazards and take corrective action with your supervisor's guidance.</p> <p>Participate in inductions and training programmes.</p> <p>In line with AIMS' Health and Safety Policy policies and procedures, participate in Manual Task (Functional) Assessments and Fit for Work medical assessments as required.</p> <p>Ensure visitors and staff for which you are responsible have completed the necessary OH&amp;S inductions.</p>
<b>Intellectual Assets:</b>	<p>Ensure compliance with AIMS' Intellectual Property policies, procedures, and guidelines to ensure AIMS' intellectual assets are appropriately protected and managed.</p>
<b>Delegations:</b>	<p>Financial: \$5000 as per delegations manual.</p> <p>In line with Financial and Contract Delegation Policy, which includes authorisation levels for Financial, Enterprise Agreement (supervisory), HS&amp;E and General Administrative activities.</p> <p>Performance Planning &amp; Evaluation: Complete performance planning and evaluation annually.</p>

<b>Teamwork/supervisory:</b>	<p>Direct Reports: 0</p> <p>To work as a member of a multi-disciplinary team that values diversity while ensuring the achievement of AIMS' goals and objectives.</p>
<b>External Customer, Partner, Collaborator and Stakeholder Requirements:</b>	<p>Liaise with external parties as required, regarding instrumentation equipment and accessories.</p>
<b>Internal Organisational relationships:</b>	<p>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.</p> <p>Liaise with research staff on the design, manufacture, fabrication and implementation of field-deployed observation and other engineering equipment.</p> <p>Research Services and Corporate Services Staff: Liaise with relevant staff as required.</p>
<b>Financial responsibilities and accountabilities:</b>	<p>Contribute to positional budget requirements.</p> <p>Manage AIMS funds in a responsible manner and within delegation.</p> <p>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.</p>
<b>Innovation, problem solving and continuous improvement responsibilities:</b>	<p>Assist in the design and adaptation of remote observing equipment, including towed video, drop cameras, weather stations, BRUVS and autonomous / semi-autonomous vehicles.</p> <p>Create solutions to immediate problems associated with the deployment and use of equipment on field trips.</p> <p>Assist in the improvement of the day-to-day operations, systems, and processes in the Field Operations Team.</p>
<b>Planning responsibilities:</b>	<p>Plan work activities to ensure achievement of timelines.</p> <p>Contribute positional requirements to operational planning.</p> <p>Performance Management:</p> <ul style="list-style-type: none"> <li>• Ensure timely and accurate completion of required tasks.</li> <li>• Actively participate in own personal performance planning and evaluation.</li> <li>• Successfully participate in the AIMS annual Performance and Development program.</li> </ul>



<b>Communication responsibilities:</b>	<p>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.</p> <p>Interact with other team members to facilitate achievement of group goals.</p> <p>Communicate with Instrumentation Suppliers to achieve AIMS Goals.</p> <p>Prepare technical reports detailing service and calibration of equipment.</p>
<b>Skills and Knowledge</b>	
<b>Essential Skills and Knowledge:</b>	<p>Relevant trade qualifications suitable for maintaining, calibrating, testing and fault finding of electronic hardware and mechanical components.</p> <p>Ability to work at sea in often demanding conditions and for extended durations.</p> <p>Ability to work at heights (weather station masts, vessel masts).</p> <p>Experience in logistics, planning and scheduling fieldwork activities in remote locations.</p> <p>Team orientated with a flexible and analytical approach and a commitment to quality and the ability to:</p> <ul style="list-style-type: none"> <li>- work effectively in a workshop environment and away on field trips, at sea, and at moderate heights such as weather station masts;</li> <li>- work on several tasks and adapt to changes in work readily; and</li> <li>- accept direction and provide cooperative assistance to supervisors and team members.</li> </ul> <p>Technical and field report writing skills.</p> <p>Strong commitment to and sound knowledge of principles and practices of Occupational Health and Safety.</p> <p>Experience with building, testing, and servicing electronic devices from engineering drawings and wiring schematics.</p> <p>Experience installing and testing communication and data systems such as 3G/4G modems, satellite, and microwave links, wireless 2.4Ghz/5Ghz infrastructure DSL/VDSL and fibre optic ethernet systems.</p> <p>Required to assist in the repair and service of scientific</p>

	<p>instrumentation and laboratory electrical equipment.</p> <p>Required to remove and replace LV leads and components (like for like) and test and tag LV electrical equipment (Restricted Electrical Work).</p> <p>Required to assist in the writing/programming of code for devices such as PLC's, Arduino, Raspberry Pi and dataloggers.</p>
<b>Desirable Skills and Knowledge:</b>	<p>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.</p>
<b>Qualifications and Experience</b>	
<b>Essential Qualifications and Experience:</b>	<p>Formal qualifications in Electronics and Communications (Cert 3,4, diploma).</p> <p>Restricted Electrical Licence or Electrical fitter/mechanic worker's licence.</p> <p>Workshop skills suitable for field maintenance work, calibration, and testing and fault finding of electronics hardware.</p> <p>Workshop skills suitable for the operation and maintenance of electrical and mechanical systems in the field.</p> <p>Proven ability to plan and manage workflow including but not limited to task prioritisation and allocation, budget management, parts ordering.</p> <p>Proven ability to program/code devices such as PLC, Raspberry Pi, Arduino and dataloggers.</p>
<b>Desirable Qualifications and Experience:</b>	<p>Open-water recreational dive qualifications to a minimum of Dive Rescue, or commercial diver qualifications to AS2815.1.</p> <p>Documented evidence of diving history.</p> <p>Seagoing experience, especially back deck operations.</p> <p>MR Truck and Forklift Licence.</p> <p>Recreational or Commercial Ship Masters Licence and Radio Operators Licence (VHF).</p> <p>Experience working with weather station instrumentation.</p> <p>Experience working with oceanographic instrumentation.</p> <p>Commercial UAV licence and or experience maintaining UAV's.</p> <p>Exposure to Maintenance Database systems.</p>



	<p>Formal qualifications in marine electrical work or experience working with a wide variety of marine instrumentation and marine electronics (vessels, navigation equipment).</p> <p>Formal qualification in rigging/dogging with proven experience in installing and maintaining telecommunication masts.</p>
<b>Technology and Equipment</b>	
<b>Technology &amp; Equipment Used:</b>	<p>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 (&lt;8m).</p> <p>Winches, cranes, forklifts, trucks, and vessel deck machinery.</p> <p>Interfacing computers with instrumentation.</p> <p>Networked personal computer, Microsoft Office 365 applications and general office equipment.</p>
<b>Special Requirements</b>	
<b>Other Special Requirements:</b>	<p>Current QLD C Class Open Drivers Licence with extensive driving experience.</p> <p>Ability to Pass Annual Dive Medical, as required.</p> <p>Successfully participate in Manual Task (Functional) Assessments and Fit for Work medical assessments.</p> <p>Strong commitment to and sound knowledge of principles and practices of Occupational Health and Safety and Workplace Diversity and Inclusion</p> <p><b>Non-Australian Citizens</b> 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.</p>

# About the Location

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, 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](http://www.townsville.qld.gov.au)

## **Townsville Traditional Owner Groups**

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 Hichinbrook 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.

## **Townsville 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 [National Sea Simulator \(SeaSim\)](#).

It is 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.

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 Road. 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 [Enterprise Agreement](#) (Part I – Commuting Arrangements – Cape Ferguson).