

CNS communications engineer

A CNS communications engineer develops or sustains the links that let aviation organisations exchange information. The focus may be ground networks, voice infrastructure or aircraft-ground data communications. This is engineering support for aviation services, not an air traffic controller role. The two examples below deliberately show different specialisms and experienced-hire levels.

Other titles to compare: Aeronautical telecommunications engineer, CNS service engineer. Titles alone do not establish equivalent duties.

What the role does

- Develop technical requirements and assess communications solutions.
- Contribute to controlled infrastructure changes and verification evidence.
- Investigate reliability problems and communicate technical findings.
- Coordinate with operational users, suppliers and other engineering disciplines.

Where the work happens

Design offices and engineering project teams; some posts support round-the-clock operational services; The examples cover an Australian ANSP and a Madrid-based service provider, rather than one universal airport job.

Employer example 1

Airservices Australia • Australia • Senior Telecommunications Engineer

Active vacancy when checked • Checked 2026-10-27 [EMP1]

Category	What this employer states
Essential in this source	Engineering tertiary qualification and eligibility for relevant professional engineer registration. At least five years supporting fibre/cabling and microwave links; design, investigations, technical documentation and change-control capability. Australian citizenship, eligibility for NV1 clearance and employer screening.
Desirable in this source	System-integrity advice, legacy integration, industry frameworks, ACMA cabling licence and critical-infrastructure experience were highly regarded.
Other stated conditions	Senior infrastructure post supporting safety-critical services; located in Brisbane, Melbourne, Canberra or Sydney.

This specific employer example is not a worldwide entry rule. A closed or undated example is not an invitation to apply.

Employer example 2

European Satellite Services Provider (ESSP) • Spain • Communication Navigation Surveillance Service Engineer

Vacancy status unconfirmed not an offer • Checked 2026-10-27 [EMP2]

Category	What this employer states
Essential in this source	Engineering degree or equivalent; at least three years in aeronautical data-link and/or satellite communications. International multi-stakeholder project experience and availability for regular European travel.
Desirable in this source	Spanish is explicitly desirable.

Category	What this employer states
Other stated conditions	Profile also lists English B1-B2, analytical/reporting skills and CNS/data-link knowledge. These are profile items, not a separate labelled essential list.

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PREPARE AND VERIFY

Separate requirements from preparation

Australia - functions under CASR Part 171: Technician competence is regulated within the service-provider framework. Do not assume an engineering degree alone authorises operational technical work. [REG1, REG2]

Employer-specific engineering and security requirements: Professional registration eligibility and clearance conditions in EMP1 belong to that vacancy. They must not be transferred to ESSP or to every CNS role. [EMP1]

Queensland, Australia - professional engineering services: BPEQ explains registration is required for professional engineering services in or for Queensland, with direct-supervision and prescriptive-standard exceptions. This is not an Australia-wide rule for every technical job. [REG3]

Still to verify: A current hiring status could not be established for the undated ESSP PDF. No GCC employer example has yet been verified.

Explore a realistic entry route

- Choose a specialism before comparing courses: network infrastructure and aircraft data links are related but not interchangeable. Make a one-page vocabulary map of the service, users, interfaces and likely engineering discipline.
- Compare the academic route actually named in a target vacancy with your existing learning. A general engineering programme may build foundations, but ask whether the employer provides aviation-specific systems training and supervised task authorisation.
- For an early-career search, look separately for graduate engineering or technical trainee routes. The senior Australian and experienced ESSP examples are evidence of later-stage expectations, not a claim that beginners need those experience totals.

Build evidence of your skills

- Create a fictional communications service diagram showing users, dependencies and where an outage would affect service. Label it a learning exercise; use no real network addresses, frequencies, security architecture or employer material.
- Write a change-review checklist for a harmless classroom software project: requirement, test evidence, version record, rollback concept and approval question. Explain how traceability differs from simply making a device work.

Prepare for an interview

Reflection prompts only, not questions claimed to be used by an employer.

- Practise explaining a technical trade-off to a non-specialist, including uncertainty and what needs checking. Use a genuine study or work example; do not invent aviation experience.
- Prepare questions about supervised training, professional registration support, work location, travel and the division between engineering advice and authorised operational intervention. These are preparation prompts, not actual interview questions.

Investigate possible next roles

Possible directions to investigate include systems integration, communications architecture or technical assurance. Each may require additional experience or employer authorisation; progression is not automatic.

Sources and scope

[EMP1] [Airservices Australia Senior Telecommunications Engineer](#)

Active vacancy when checked. Australia. Checked 2026-10-27.

[EMP2] [European Satellite Services Provider \(ESSP\) Communication Navigation Surveillance Service Engineer](#)

Vacancy status unconfirmed not an offer. Spain. Checked 2026-10-27.

[REG1] [Civil Aviation Safety Authority, Australia Part 171 of CASR - Aeronautical telecommunications service and radionavigation service providers](#)

Provider framework includes technician competence. CASA marks this rule area as changing. This overview is not an exhaustive legal eligibility assessment. Checked 2026-10-27.

[REG2] [Civil Aviation Safety Authority, Australia AC 171-01 v2.2 - Aeronautical telecommunication and radionavigation service providers](#)

September 2024 guidance, section 4.3 on technicians. Advisory guidance must be read with current regulations, standards and applicable provider authorisations. Checked 2026-10-27.

[REG3] [Board of Professional Engineers of Queensland Become a RPEQ](#)

Professional engineering services in or for Queensland; registration and stated exceptions. Whether a particular task is a professional engineering service requires a task-specific assessment; an advertisement preference does not override law. Checked 2026-10-27.

Educational requirements guide, not operational instructions, professional approval or an employment guarantee. Verify current requirements with the relevant authority and employer. Examples are selective, dated and job-specific. Check the complete current vacancy and relevant authority before choosing paid training or assessing eligibility. No personal medical, nationality or immigration assessment is made here. No job guarantee.